REPORTS OF THE WORKING GROUP ON HEALTH

FOR

THE ELEVANTH FIVE YEAR PLAN (2007 – 2012)

VOLUME No. 3.

GOVERNMENT OF INDIA
PLANNING COMMISSION
2006

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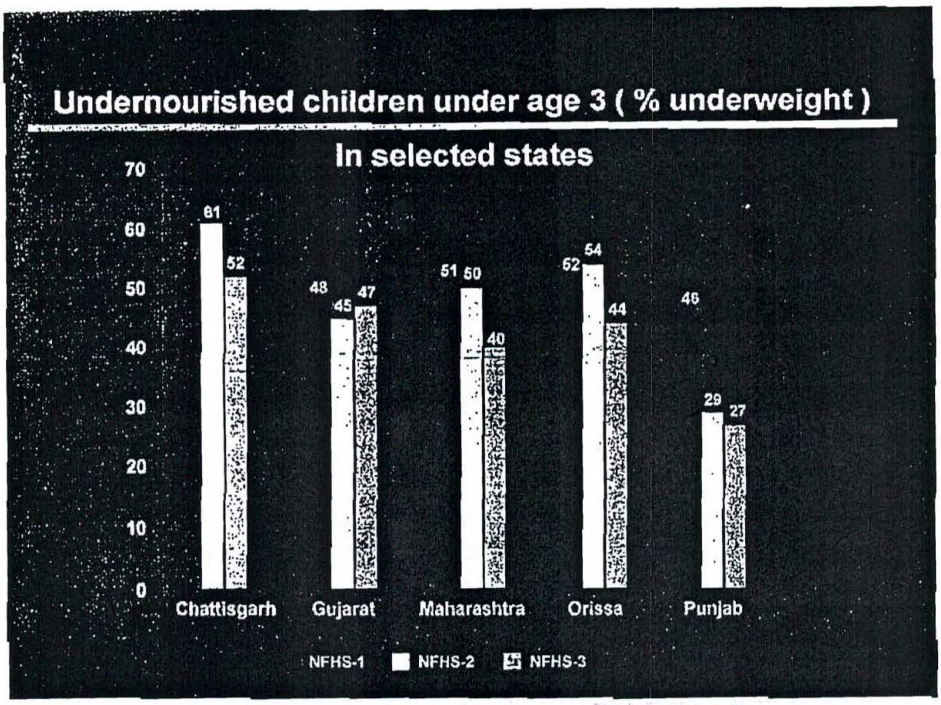
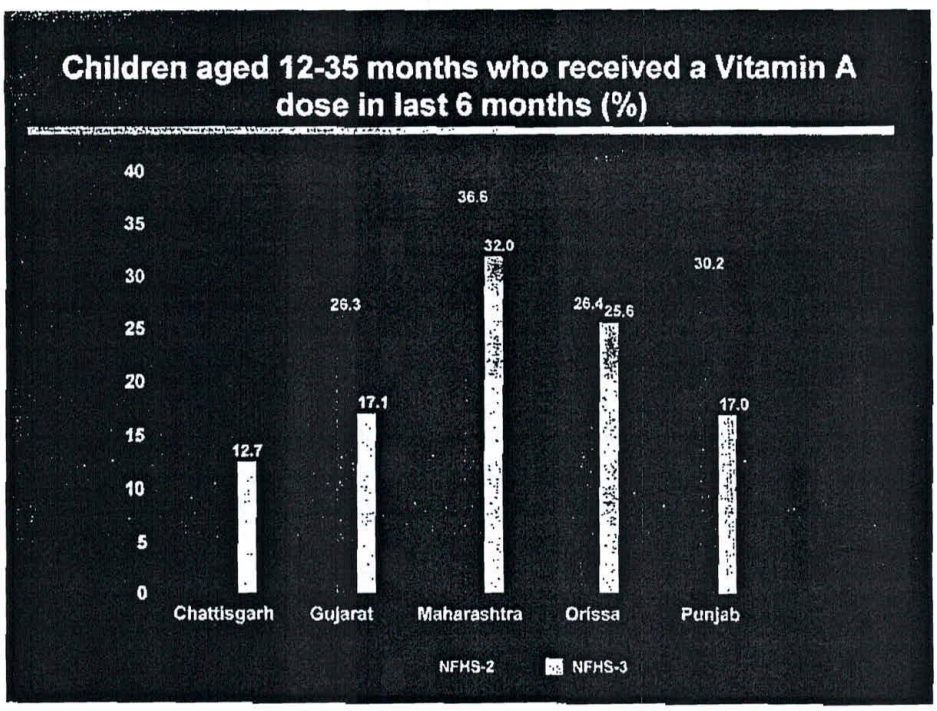
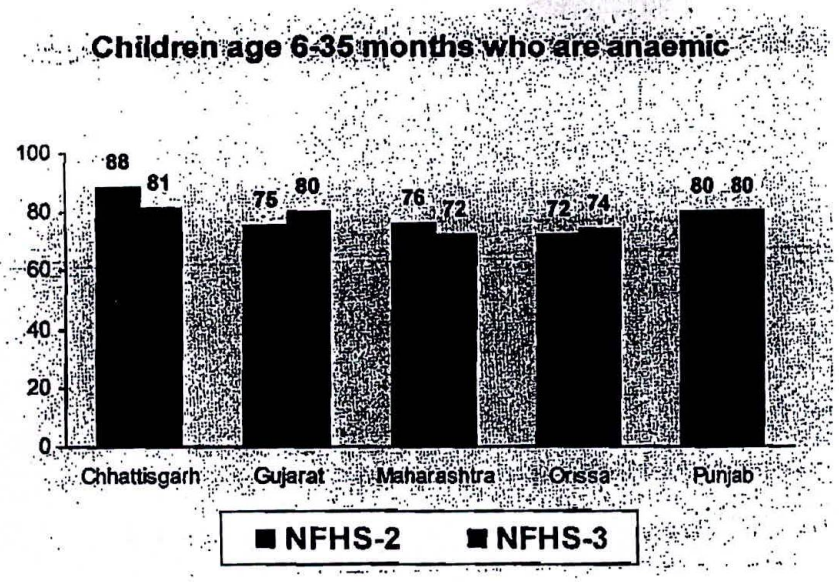
REPORT OF THE
WORKING GROUP ON
INTEGRATING NUTRITION WITH HEALTH

11th FIVE-YEAR PLAN
(2007-2012)

GOVERNMENT OF INDIA
MINISTRY OF WOMEN AND CHILD DEVELOPMENT
NOVEMBER 2006


Undernourished children under age 3 (% underweight)
In selected states
70
60
50
40
30
20
10
0
61
52
48
45
47
51
50
40
62
54
44
46
29
27
Chattisgarh
Gujarat
Maharashtra
Orissa
Punjab
NFHS-1
NFHS-2
NFHS-3


Children aged 12-35 months who received a Vitamin A dose in last 6 months (%)
40
35
30
25
20
15
10
5
0
12.7
26.3
17.1
36.6
32.0
26.4
25.6
30.2
17.0
Chattisgarh
Gujarat
Maharashtra
Orissa
Punjab
NFHS-2
NFHS-3

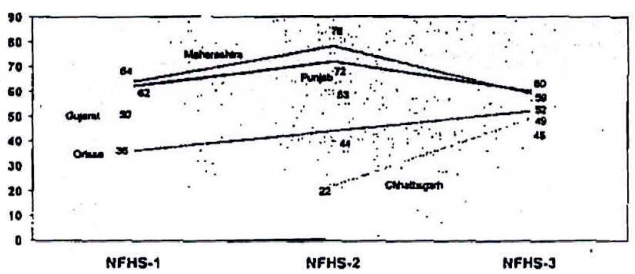


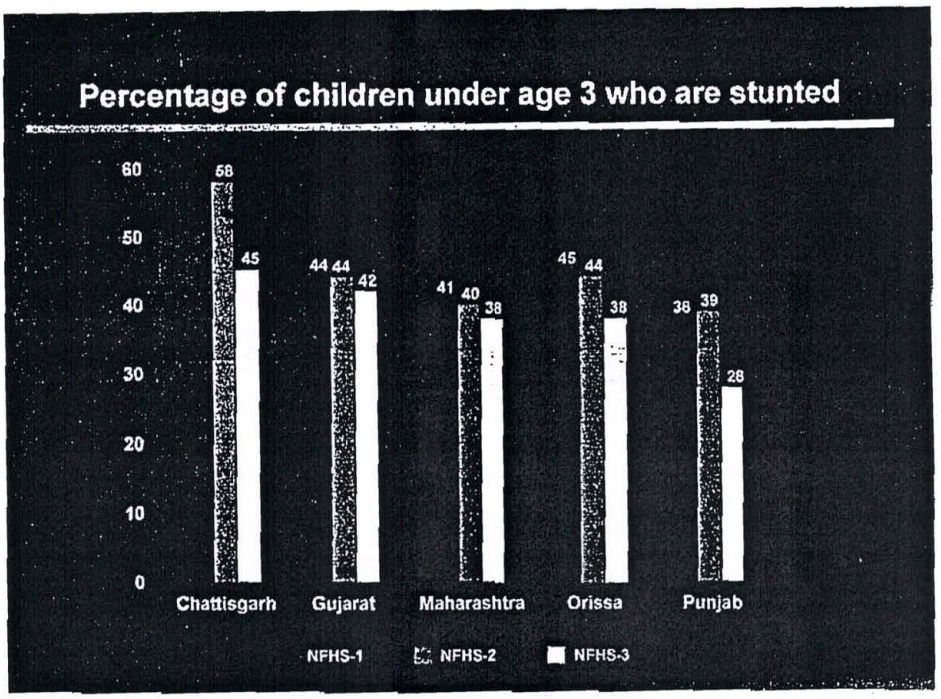
2005-2006 NATIONAL FAMILY HEALTH SURVEY-3 (NFHS-3)

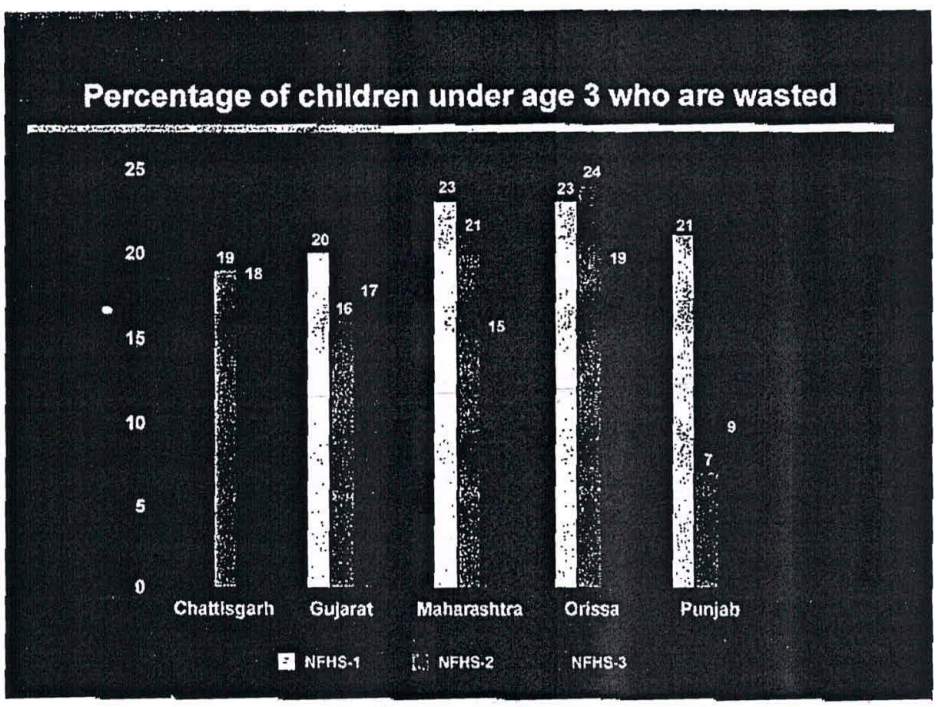
Child Immunization

Impressive gains in immunization coverage have been made in Chhattisgarh and Orissa, but in Maharashtra, Punjab and Gujarat there has been a substantial deterioration in full immunization coverage in the last seven years, due to a decline in vaccination coverage for both DPT and Polio.

Children fully immunized




Percentage of children under age 3 who are stunted
60
50
40
30
20
10
0
58
45
44 44
42
41 40
38
45 44
38
38 39
28
Chattisgarh
Gujarat
Maharashtra
Orissa
Punjab
NFHS-1
NFHS-2
NFHS-3


Percentage of children under age 3 who are wasted
25
20
15
10
5
0
19
18
20
16
17
23
21
15
23
24
19
21
9
7
Chattisgarh
Gujarat
Maharashtra
Orissa
Punjab
NFHS-1
NFHS-2
NFHS-3

Chapter 3

EXISTING NUTRITION AND HEALTH INTERVENTIONS AND GAPS

3.1 Malnutrition being a multi-faceted problem requires a multisectoral approach for its prevention and control. A number of direct and indirect nutrition interventions are being undertaken by different sectors of the Government with a view to promote nutrition of the people. Some of the **direct nutrition interventions** are as under:

Department of Women and Child Development

- Integrated Child Development Services (ICDS) Scheme.
- Nutrition Programme for Adolescent Girls (NPAG)
- Nutrition Advocacy and Awareness Generation Programmes of Food and Nutrition Board (FNB)
- Follow up action on National Nutrition Policy (1993)

Ministry of Health and Family Welfare –

- Iron and Folic Acid Supplementation of pregnant women
- Vitamin A supplementation of children of 9-36 months age group.
- National Iodine Deficiency Disorders Control Programme

Department of Elementary Education and Literacy

- Mid Day Meal for primary school children

Some of the **Indirect Interventions** include:

Department of Agriculture and Cooperation

- Increased Food Production
- Horticultural Interventions

Food and Public Distribution

- Targetted Public Distribution System
- Antodaya Anna Yojana
- Annapurna Scheme

Rural and Urban Development

- Food for Work Programme
- Poverty Alleviation Programmes
- Safe Drinking Water and Sanitation
- National Rural Employment Guarantee Scheme

Ministry of Health

- National Rural Health Mission
- Integrated Management of Neonatal and Childhood Illnesses (IMNCI)
- Various Public Health Measures

Department of Elementary Education and Literacy

- Sarva Siksha Abhiyaan
- Adult Literacy Programme

- Rural Development and Public Distribution System should state explicit nutrition goals.
- Panchayati Raj Institutions to be empowered to serve as focal point for all developmental schemes.
- Families and communities to be sensitised towards prevention of malnutrition among infants between the age of 0-2 years, adolescent girls, pregnant and lactating women, delaying the age of marriage, education of girl child, hygiene and sanitation and utilising timely medical care
- The Education sector to include nutrition in all its formal and non-formal activities.
- The nutritional requirements of the country should be met before decisions to export any commodities are taken, e.g., sugar, oil, pulses etc.
- Agriculture sector to promote production of coarse grains, pulses, red palm oil, fruits and vegetables.
- Horticulture interventions for nutritional improvement to be taken up at all levels.
- Home Science Colleges (numbering about 101 in the country) to be strengthened and actively involved in nutrition training of functionaries and nutrition advocacy and communication.
- Nutritionists to be positioned as advisers at various levels by Central and State Governments.
- Nutrition Monitoring and Surveillance System to be established utilising ICDS infrastructure - ICDS to be universalised to take on this responsibility.
- NNMB to be expanded to cover all States for supporting nutrition surveillance.
- Nutrition to be reviewed as a separate subject in the State/UT development reviews. An Annual nutrition review to be instituted at national level and Nutrition Awards to be given to best District/State.
- Food & Nutrition Board bearing nodal responsibility for coordinating the implementation of National Nutrition Policy to be strengthened.

5.10 For the first time the X Five Year Plan had set goals for infant and young child feeding indicators and reduction of undernutrition in children including micronutrient malnutrition. Many of the X Five Year Plan Goals are yet to be realized. Keeping in view the mandate of the Millennium Development Goals and the unmet goals of X Five Year Plan, the **following National Nutrition Goals are recommended for the XI Five Year Plan** to be met by 2012. The State specific goals would need to be identified accordingly.

- Reduce the prevalence of underweight in children under 5 years to 20%.
- Eradicate the prevalence of severe undernutrition in children under five years.
- First hour breastfeeding rates to increase to 80%.
- Exclusive breastfeeding rates to increase to 90%.
- Complementary feeding rate at six months to increase to 90%.
- Reduce prevalence of anaemia in high risk groups (infants, pre-school children, adolescent girls, pregnant and lactating women) to 25%.
- Eliminate vitamin A deficiency in children under 5 years as a public health problem and reduce sub-clinical deficiency of vitamin A in children by 50%.
- Reduce prevalence of Iodine Deficiency Disorders to less than 5%.

5.11 The achievement of the National Nutrition Goals for the XI Five Year Plan would require a multi-pronged action on various issues. A number of policy decisions at the macro and micro level would be required at center and state levels to achieve the goals.

5.12 The Food and Nutrition Board, MWCD has been undertaking nutrition advocacy of policy makers at central and state levels on strategies for promoting nutrition of the people. Five Regional Consultation Meets on Nutrition have been organized during 2005-06 for North Eastern States at Shillong in February, 2005, Western States at Pune in May, 2005, Eastern States at Bhubaneswar in July 2005, Northern States at Chandigarh in January, 2006 and Central States at Bhopal in June 2006. The Recommendations of three high level advocacy meets are given in **Annexure XIV.**

Strategies for achieving the nutrition goals in the XI Five Year Plan are discussed in the following chapter.

Chapter VI

STRATEGIC RECOMMENDATIONS FOR THE XI FIVE YEAR PLAN

6.1. Articulating malnutrition as number one public health problem in the country.

61.1 All available data conclude that malnutrition is the only single most important contributory factor towards high infant and under 5 mortality rates and maternal mortality. Further, foetal and early childhood nutrition not only determines the growth, development, nutrition and health of the child but has life long consequences for the health of a human being throughout his life span because of poor metabolic programming during this critical period. Currently most of the public health programmes are directed for control of specific nutritional deficiency, infectious disease, emerging problem of diet related chronic diseases like diabetes, hypertension, cardiovascular diseases, cancer etc. Very little attention is given to preventive aspects or to say to the nutritional issues working as indirect causes of disease and mortality.

6.2 Greater emphasis on Nutrition Action by Health Sector at all levels

6.2.1 The Health sector needs to give due emphasis to 'nutrition' at all levels, such as:

6.2.2 Strengthening Nutrition in Medical, paramedical, AYUSH and Agriculture education

- There is an urgent need to strengthen and update nutrition curricula of medical and para medical education in the country involving Medical Council of India and similar bodies.
- Optimal infant and young child feeding (IYCF) practices in medical books need to be updated incorporating the Resolutions of the 55th World Health Assembly, Global Strategy on IYCF and Innocenti Declaration, 2005.
- The second edition of the National Guidelines on Infant and Young Child Feeding (FNB, MWCD, GOI, 2006) released in May 2006 needs to be incorporated in all such curricula. Adequate emphasis on national problems like delayed initiation of breastfeeding, poor exclusive breastfeeding and delayed and inadequate complementary feeding of infants and young children needs to be addressed. Micronutrient malnutrition, food and nutrition security issues for different age groups, social causes of malnutrition and shared parenting also needs to find a place in medical and para medical curricula.
- There is no separate subject of nutrition in the MBBS courses at graduate level. Nutrition is taught through Preventive and Social Medicine and Paediatrics. Medical graduates, therefore, do not have adequate knowledge of food based approaches to the problem of malnutrition. Nutrition needs to be made a separate subject at graduate level in medical and para medical courses.
- National guidelines on IYCF need to be built into implementation of their medical and nursing teaching curriculum.

- Core Nutrition Module need to be integrated in all agriculture and rural development training programmes.
- Nutrition advocacy and education for agriculture students and scientists need to be undertaken.

6.2.3 Training Programmes for Health Personnel

- All training programmes for different level functionaries should equip the trainees to address the problem of malnutrition, low birth weight, nutritional efficiency disorders and issues concerning breastfeeding, complementary feeding, nutrition and health education etc. A core Nutrition Module needs to be integrated into the training curricula of various training institutions under health and family welfare, namely National Institute of Health & Family Welfare, State Institutes of Health & Family Welfare and in-service and pre-service training courses. Crash courses on critical issues like infant feeding and child survival, micronutrient malnutrition, under-nutrition, stunting and wasting in children under-5 years, home based care of low birth weight babies and severely malnourished children needs to be organised for health personnel with a view to address the problem of malnutrition effectively.
- Define skills training needs of health care providers at different levels, integrating breastfeeding education effectively in existing programmes, their curriculum should include at least three days of training in infant and young child feeding counselling. Existing ICDS workers should be given additional training. Similarly, in the context of the recently-launched National Rural Health Mission, the accredited social health activist (ASHA) must be properly trained in all areas, but should have at least three days of training in infant and young child feeding counselling.. This will ensure basic education to impart correct information, and help all women to solve the 'not enough milk' problem and other common problems related to feeding. The ASHA should also be trained to refer women to a higher level for complicated problems like breast infection and abscess. This higher level support could be established by creating breastfeeding support centres /clinics at block level run by trained women, after having received 7 days training.
- **Integrated Management of Neonatal and Childhood Illnesses (IMNCI)** *launched under the RCH II programme in 125 districts is* another opportunity to promote infant feeding skills. Urban hospitals staff and HIV counsellors should also be trained for counselling on breastfeeding. For those health workers from whom it is expected that *they will counsel on breastfeeding, complementary feeding as well as* HIV and infant feeding, the training package of 7 days would be necessary. All these packages are based on WHO/UNICEF training courses on the three subjects and have been adapted in India by the Breastfeeding Promotion Network of India (BPNI). Needless to say, this component must also be included in pre-service training.
- **National Rural Health Mission (NRHM):** Framework of implementation of the NRHM and the Indian Public Health Standards (IPHS) *should clearly reflect nutrition inputs through action at village* level, cluster of 4-5 villages and 30 villages, and at the Block level. Nutrition inputs can only be ensured through building of Infant and

Nutrition inputs can only be ensured through building of Infant and young child feeding support centres/clinics at the cluster level and block level by a skilled female workers. ASHA at village level should actively engage in promotion of Breastfeeding and provide support within one hour at birth to begin Breastfeeding. (Details in the Annex).

The project implementation plans at district level under NRHM should include details micronutrient malnutrition control programme namely Iron & Folic Acid Supplementation, Vitamin A Supplementation and National IDD Control programme. The District Media Officers under NRHM need to be sensitised towards the problem of malnutrition including micronutrient malnutrition and equip to undertake nutrition orientation, awareness generation and IEC activities on various nutritional issues. At present the job responsibility of the District Media Officers do not include nutritional issues.

6.2.4 Primary Health Care to include Nutrition as important service

- An ICMR study undertaken during 1989 revealed that although nutrition is an important part of job responsibility of health personnel, many of them do not even know about it and those who know fail to give adequate attention to these aspects for want of supervision of nutritional inputs into the primary health care. Recognizing the importance of nutrition in prevention, the management and treatment of disease, it is important that all the contact points with the people either at PHC, hospital or immunization days, are utilised for communicating nutrition messages to the people. Needless to say, a word from the doctor's mouth is a bible truth for the patient. Many of the anganwadi workers have expressed that they were promoting optimal norms for breastfeeding and complementary feeding, but for want of support from the medical personnel of PHC, district hospital or registered medical practioners, they find it difficult to convince the community about the correct norms for IYCF.
- Nutrition needs to be recognized as an important service under primary health care.

6.2.5 Clinic/beds for severely malnourished children at PHC, CHC and district hospitals

- Severely malnourished children and low birth weight babies contribute significantly to the IMR and Under-5 mortality rates in the country. It is, therefore, imperative that severely malnourished children are given special attention by the primary health centres, community health centres and district hospitals. A separate set up with an OPD clinic and a few beds for severely malnourished children should be made available at all PHCs, CHCs and district hospitals in the country. This is urgently needed to reduce infant and child mortality due to malnutrition. It needs to be appreciated that severe malnutrition is often accompanied with infection and such children may require parental nutrition, treatment of infections with antibiotics and treatment of any other complication which could be interfering with the weight gain of such children on dietary regime.

- The Government of Madhya Pradesh under their *'Balsanjivini'* programme through *'Balshakti'* component has shown convincingly that with modest expenditure on malnourished children through the health system, it is possible to reduce malnutrition levels in an accelerated manner. The Government of Rajasthan has also demonstrated management of severely malnourished children involving the health infrastructure.
- Nutrition rehabilitation centres have contributed significantly to reduction of malnutrition in Bangladesh.
- At present there is no generic system in the country to handle severely malnourished children through hospital set up on a regular routine basis. This important service needs to be created in XI Five Year Plan.

6.3 Establishing Nutrition Information System in the country

6.3.1 There is no system to reveal the current status of under-nutrition, micronutrient malnutrition and diet related chronic diseases among the people in the country at present. Many a times one is faced with an embarrassing situation with reports from international and UN agencies quoting India as worse than even the countries of the developing world as far as data on nutrition and health are concerned.

6.3.2. The country must assess the outcome of the precious resources being spent. In other words, whether the valuable inputs into the existing nutrition and health interventions are bringing desired results or not and what mid course corrections are needed. The existing data on nutrition and health is available from the following sources although all have their own limitations:

- **National Nutrition Monitoring Bureau** (NNMB) undertakes diet and nutrition surveys periodically in 8-10 States in the country and projects the State level scenario for these States. NNMB continues to function in a project mode under ICMR since 1972 resulting in heavy turnover of staff, and poor staff strength. The National Nutrition Policy adopted by the Government in 1993 mandated that nutrition monitoring and surveillance system should be established in the country and that the National Institute of Nutrition entrusted with this responsibility and to be made accountable to MWCD for nutrition surveillance. In order to achieve this, it is imperative that NNMB is established in all States and UTs and is assigned the task of establishing a system of nutrition monitoring, mapping and surveillance.

  NNMB should also undertake district level food and nutrition surveys including survey on prevalence of diet related chronic diseases every five years in the country to enable area specific planning and programming using disaggregated data.
- **Management Information System** (MIS) of various services under NRHM and ICDS also provides useful information on the coverage under various programmes. The MIS of various services need to be improved and utilised to serve as an important source of information for enabling nutrition monitoring, mapping and surveillance.
- **National Family Health Survey** (NFHS) undertaken by International Institute of Population Sciences are coordinated by the Ministry of Health & Family Welfare and are undertaken at an interval of 5-6 years. In fact this is the only source of nation wide data on under-nutrition among children under 5 years and anaemia

among women and children. In fact, anaemia was added at NFHS 2 stage (1998-99) while NFHS currently in progress has taken a little more indicators on nutrition. However, NFHS will not be able to supply any information at the district level and information on prevalence of important micronutrient deficiencies like vitamin A deficiency in children, anaemia in adolescent girls in the age group of 10-15 years, prevalence of iodine deficiency disorders and other nutritional deficiency diseases. Still it is important that NFHS should include nutritional indicators to a great extent and provide district level data for atleast the backward districts of the States/UTs.

- **District Level Health Survey** (DLHS) covers all districts in a phased manner and is an important resource for projecting district level nutrition and health scenario in the country. Presently very few indicators on nutrition are included under the DLHS. Due emphasis to nutrition under DLHS and making reports available to all every two years is required. Infant and young child feeding indicators should be the lead ad first indicators

6.3.3. The Ministry of Health & Family Welfare has Central Bureau of Health Intelligence, Statistical Division, ICMR, NIN, NNMB, NFHS and DLHS etc. The need of the hour is that efforts of all these institutions, including ICDS and NRHM are pooled together to design a Nutrition Information System for the country so that the country has the following:

- Annual Nutrition and Health Reviews instituted at national, state and district level with best State, best district in each State and best village in each district awards annually.
- Annual publication on nutrition and health status of the people with special emphasis on children under-5, adolescent girls, pregnant and lactating women, elderly and tribal population.
- District wise disaggregated data on nutrition including micronutrient deficiencies and health status every 5 years.
- Review of malnutrition in monthly development reviews by the Chief Secretaries in States/UTs.
- District level and if possible block level mapping of high malnutrition areas with the help of software like GIS (Geographic Information System) of NIC, KIM of FAO, Dev Info of UNICEF or any other utilising district level electronic network of NIC under health, WCD and related sectors.
- NIN under ICMR to undertake training and capacity building of States for the purpose.
- Nutritional status of children under 3 years and IYCF indicators to be the key progress indicators in NRHM, State/District plans.

6.3.4 Surveillance on Folic Acid deficiency related birth defects needs to be undertaken atleast in institutionalized deliveries, in view of the increased ases of NTD's and *spina bifida* cases being reported.

6.3.5 Developing a National Nutrition Information System through community based monitoring mechanism has been illustrated in the Figure at **Annexure IX**.

6.4. Infant and Young Child Feeding and Nutrition Security for Infant Survival

- Infant and Young Child Feeding (IYCF) counselling to be taken as a component of 'service delivery'. This is crucial to make the functionaries aware of their key responsibilities, or Core job both in ICDS and NRHM/RCH II (MOHFW & WCD). The objective should be clear to achieve high rates of **initiation of Breastfeeding, exclusive breastfeeding within first hour of** birth for the first six months and complementary feeding at six months, thus ensuring mainstreaming Infant and young child feeding in all sectors and implementation of the National guidelines on Infant and Young Child Feeding and the Infant Milk Substitutes, Infant Foods and Feeding Bottles (Regulation of Production, Supply and Distribution) Act 1992, as Amended in 2003 (IMS Act).
- **Job Responsibility of Health care providers**: It should include home visits during last trimester of pregnancy, **first hour at birth,** first week, 6-8 months, 9-11 months 12 to 18 months. Skilled support at birth for early and exclusive breastfeeding: Provision of skilled support service at birth, for the first 1 hour to ensure timely initiation of breastfeeding within one hour, should be made an entitlement both at family level and facility level, and in public as well private sector. In fact first one-hour support should be made an entitlement.
- **Legislative support /entitlement:** Dealing these issues is important to ensure rights of mothers and babies: Prioritize food and care for pregnant and lactating women. **Maternity entitlements (leave and other benefits)**, which allow the women to absent herself from work for six months after the birth of child without economic loss should be provided. Otherwise women are forced to adopt inappropriate feeding practices, which cause diarrhoea, and perpetuate poverty. This should include enough food supply during pregnancy, **skilled support at birth to ensure initiation of breastfeeding within one hour,** cash benefits for all working women, 6 months maternity leave for those in organized sector. It should be a minimum essential package on a universal basis.
- **Create clear adequately resourced budget head on nutrition** including IYCF in NRHM.
- **Create a network of resource centres/institutions** for promoting optimal IYCF viz National level IYCF resource centre, State resource centre and district resource units. A flow chart for the purpose is given in **Annexure X.** The existing training resources of Breastfeeding Promotion Network of India (BPNI) to be utilised to create decentralised training capability for IYCF in both NRHM and ICDS.
- **Making the under 6 months visible in NRHM and ICDS**
  - The criticality of addressing the first day, week, month (neonatal care) and early infancy is well recognized as a key strategy for accelerating reductions in neonatal and infant mortality and malnutrition. The 0-6 months infant is often left out of initial weighing/ child care counseling sessions, because most deliveries take place at home, mothers are superstitious about new borns being weighed, and also because 0-6 months infants are to be exclusively breastfed and hence no SNP is to be provided to them – and most ICDS records/ reporting is SNP centred.
  - The inclusion of extent of exclusive breastfeeding practiced by the for the first 6 months of life in the ICDS MPR – as recommended by GOI, as an outcome variable, is already being practiced in States such as Rajasthan is another way of ensuring adequate attention to these crucial early months of life, and

the care practice of exclusive breastfeeding – for better young child survival growth and development outcomes.

- Create Nutrition and breastfeeding support centers, initially in all district hospitals- and followed by at CHC, PHC levels in a phased manner – manned by skilled counselors to provide lactation management support, and management of severe malnutrition.
- Preventing the onset of malnutrition by adopting a life cycle approach needs to be emphasized in the NRHM. Six months to three year old children have to be targeted with special attention on feeding advice. Preparations of complementary foods from family pot have to be reinforced through interpersonal communication at various contact points. *Sattu* like cereal-pulse mixes need to be demonstrated for feeding of infants and young children. Due care of adolescent girls with special emphasis on iron and folic acid supplements, balanced diet, family life education, mother and child care education and skill development training is essential to break the inter-generational cycle of malnutrition. Gender sensitive nutrition indicators need to be adopted in the health services as well as NRHM.

6.4.1 A framework in which Nutrition and Health Integration could be conceptualized, implemented and monitored is at **Table 1.**

6.5 Creating Nutritional Awareness at all levels

6.5.1 A **National Nutrition Education Programme** (NNEP) **needs to be launched** to create a climate of nutritional awareness at different levels so that the invisible and silent emergency of malnutrition could be addressed effectively. Currently only the infrastructure of Food and Nutrition Board (FNB) of Ministry of Women & Child Development is taking up nutrition advocacy and awareness generation as a service. In all other nutrition related interventions, nutrition and health education is treated as an appendix and is not given due emphasis. The Tenth Five Year Plan recognized the importance of nutrition and health education and mandated intensifying nutrition and health education to reduce malnutrition in children by enhancing IYCF rates.

- Expanding nutrition education through FNB of MWCD enlisting cooperation of Home Science and Medical Colleges, Nehru Yuvak Kendra Sangathan, Panchayati Raj Institutions and NGOs besides strengthening FNB in large States like Uttar Pradesh, North Eastern States and at the centre would be required in the XI Five Year Plan.
- The most important change agents for nutrition are the anganwadi workers and the ANMs. It is important to enhance the capacity of the States and their institutions to train the anganwadi worker, ASHA, ANM and different functionaries under ICDS to enable them to focus on malnutrition.

6.5.2 A comprehensive National Nutrition Education Programme would include the following:

- **Advocacy and Sensitisation** of Parliamentarians and senior policy makers at Centre and State level with a view to create 'political will' and 'administrative will' respectively for addressing the problem of malnutrition with high priority.
- **Nutrition orientation** of programme managers and implementers of various direct and indirect nutrition interventions of the Government.

- **Capacity building** of field functionaries of health, women and child development, education, rural development, food and public distribution, civil supplies etc, on various nutrition issues.
- **Nutrition Education** of the public by launching a vigorous awareness campaign on nutrition in the form of '*Poshan Jagriti Abhiyaan*' on the lines of Pulse Polio and HIV/AIDs campaign is needed to create awareness among different target groups on the issues of consequences of malnutrition on growth, development and learning ability of children, the importance of micronutrients, promoting correct norms for infant and young child feeding, providing information on existing nutrition and health services and the role of family and community towards nutrition promotion.

  Awareness generation on nutrition to be undertaken through newspaper columns, a daily programme of *Poshan Charcha* on radio and T.V. and mass awareness campaigns through melas, fairs etc. Development of nutrition software for different target groups, its production in all languages and dissemination to remote corners of the country is a gigantic task and needs to be undertaken.

6.5.3 A diagram at **Annexure XI** would reveal as to how these four components of Nutrition Education Programme could be undertaken and what would be their outcomes. The ultimate goal is to have a Self Sustaining Development Model where people are empowered with nutrition and health awareness to take care of their nutrition and health.

6.5.4 In addition to the NNEP primarily to be undertaken jointly by FNB of MWCD and NRHM of Ministry of Health & Family Welfare, Nutrition Education needs to find a place in the following:

- Nutrition education to be included as a service under primary health care.
- The Central Health Education Bureau and IEC Bureaus of Ministry of Health and
- Family Welfare needs to focus on malnutrition through nutrition education.
- Nutrition Education to be an important component of CHEB, SHEB and NRHM.
- Nutrition component of medical education to be strengthened.
- Nursing curricula to include appropriate norms on infant and young child feeding, prevention and management of various forms of malnutrition including micronutrient malnutrition.
- All contact points for antenatal care and immunization to be utilised for imparting nutrition to the community.
- A core module on nutrition can be included in the induction training programmes *of all Government officers and staff, including IAS officers.*
- Launching a People's Movement through country wide campaign for making malnutrition visible is needed.
- A policy decision to include a degree in community nutrition at graduate level in all universities, available to both boys and girls, would be required so that the country has nutrition literate citizens and enough supply of nutrition qualified people to serve the basic nutrition and health related interventions of the Government.
- Nutrition also needs to be included in all formal and non-formal educational systems, namely the curricula of school children from III to X standards, as a

subject in BA (Pass) and B.Sc (Genl.) courses and in various adult education and functional literacy programmes etc.

- Nutrition needs to be included in various Agricultural and Rural Development training programmes so that nutrition orientation of agricultural and poverty alleviation programmes is possible.

6.6. Micronutrient Malnutrition Control through Intensified Programmes

6.6.1 Micronutrient malnutrition is not only most devastating for pre-school children and pregnant women, it is debilitating in all age groups. It is also debilitating for the national economy as well. A World Bank study states that micronutrient malnutrition robs many countries 5% of their national income, while addressing the problem would cost only 0.3%. The control of vitamin and mineral deficiencies offers an opportunity to improve life at a very low cost and in a short time. With political will and financial support, micronutrient malnutrition could be reduced significantly within this generation.

6.6.2 The **National Nutrition Policy** adopted by the Government in 1993 had directed controlling micronutrient malnutrition particularly anaemia due to iron and folic acid deficiency, vitamin A deficiency and iodine deficiency disorders through intensified programme. The nutrition scenario reveals that anaemia continues to be a cause of concern resulting in high prevalence of low birth weight babies, maternal mortality, poor cognitive development of children and low work capacity and productivity of adults resulting in poor purchasing power and food insecurity at the household level.

- **Double Fortification of Salt** (DFS) – The Tenth Five Year Plan had given directions to utilise DFS (common salt fortified with both iodine and iron) for controlling anaemia. The technology of DFS developed by the NIN is based on a simple method of dry mixing of iodised salt with iron and does not involve elaborate or expensive measures. Large scale production of DFS (upto 60 MT) was successfully demonstrated in factories. NIN formulation of DFS contains refined common salt (100%), potassium iodate (0.0067%), ferrous sulphate hepta hydrate (0.508%) and sodium hexa meta phosphate (1%) as a stabilizer so as to provide 40 ppm iodine and 1000 ppm iron. NIN formulation of DFS showed good stability under the most adverse testing conditions. Sensory acceptability trials carried out using several commonly consumed Indian foods containing DFS indicated that the DFS compared well with control salt in attributes such as taste, colour, flavour and overall acceptability. Bioavailability studies demonstrated that iodine and iron are well absorbed and utilized in the body under dietary conditions prevailing in the country. Production, long-distance transportation and distribution in 0.5/1 kg pouches or 50 kg sacs were found to be feasible.

  The Government of India has already accepted the formulation of NIN for DFS and is in the process of releasing the guidelines for use of DFS in the country. On the recommendation of the ICMR, the MWCD had directed all State Governments to utilise DFS, if available, in supplementary feeding programmes under ICDS.

  The Government of Chattisgarh has been utilising DFS since 2003 and the NFHS 3 has clearly demonstrated that Chattisgarh has dramatically reduced malnutrition and anaemia levels in its population. The group strongly recommended that DFS should be adopted and utilised in the country. The Department of Women and Child Development, Government of Chattisgarh has

been providing 500g packet of DFS/month free of cost to each ICDS beneficiary as take home ration.

- A **national programme of manufacturing and distributing salt fortified with iron, iodine, vitamin A and folic acid** for which proven technology is available was recommended by the Group.
- **Fortified Wheat Flour and RTE foods** - Instead of supplying rice and wheat in major food based programmes like TPDS, Antodaya Anna Yojana, Anapurna scheme, Food for Work programme etc, enriched foods should be supplied. Micronutrient enrichment of ICDS and Mid Day Meal was also necessary.
- The **formation of Nutrition Development Corporation** as an adjunct to Food Corporation of India - This Corporation can procure *ragi* and other millets on the same line as FCI is procuring rice and wheat, and support the manufacture and sale of different food mixes enriched with vitamin premix.
- **Self Help Women Groups to prepare food mix to serve as complementary food for children**, for marketing in rural areas.
- **Horticultural Interventions** – Although India is the largest producer of fruits and vegetables in the world, the per capita availability of these protective foods is far from satisfactory. Horticultural interventions have long been recognized as an important strategy for achieving nutrition security for the people. Talking of kitchen gardens, a school garden etc alone is not sufficient. A comprehensive approach to promote production of these foods at household and community level is needed. The foremost task would be to assess the requirements of fruits and vegetables with special emphasis on green leafy vegetables for the population and plan for ensuring production of that amount for domestic consumption. Household and community level horticultural interventions need to be promoted through agricultural extension and nutrition and health education efforts. Provision of 'cool chambers' at the community/village level would be necessary for ensuring the safe storage of these perishable foods.

  Every school to have drumstick tree and nutrition garden of greens. Propogation of growing green leafy vegetables in empty tins or as creepers on the roof tops of the households on the pattern of Thailand's experience, needs to be taken up.

  The Self Help Women Groups (SHWG) would need to be trained in home scale preservation of fruits and vegetables so that they could preserve the produce when available in plenty for use during the lean seasons. Marketing link up would also be necessary to help the SHWG to sell their products over and above their own community requirements.
- A **National Programme of Dietary Diversification** needs to be implemented utilising services of Home Science Colleges who could disseminate dietary guidelines in local languages and train the self help women groups and NGOs to help the households in diversifying their diets. Proper counselling on basic and primary biotechnology tools in improving the quality of diets like fermentation, using parboiled rice, sprouted grains, leafy vegetables is also necessary.
- **Strengthening the existing Iron & Folic Acid and Vitamin A Supplementation programmes was universally recommended.** In case of iron and folic acid supplementation the two high risk groups, namely infants and young children and adolescent girls are still not covered under this national programme. Iron deficiency during infancy can cause permanent brain damage while iron deficiency during preschool years can inhibit their learning ability and concentration power thus affecting school performance. In fact, IFA

supplementation of pre-school children in the age group of 2-5 years through paediatric IFA tablets receives very low priority. IFA supplementation of infants and young children in the form of syrup needs to be taken up on priority. Similarly, adolescent girls in the age group of 10-19 years need to be provided with weekly IFA supplements both through schools as well as out of school adolescent girls. Kishori Shakti Yojana (KSY) has been identified as a viable scheme for providing iron and folic acid supplements to adolescent girls. Since KSY has a universal reach and is implemented by WCD Departments of the States/UTs through ICDS, modest financial support for IFA supplementation of adolescent girls through this scheme could give fruitful results. Incidentally, financial support is necessary since the existing financial norms of the KSY scheme are very weak. Deworming tablets should also be given to adolescent girls every six months.

Fortified supplementary food need to be given to ICDS beneficiaries since the gap in the existing diets and the RDAs are too high. For infants and young children, fortified complementary foods in the form of take home ration needs to be given since children in the age group of six months to three years do not need to visit anganwadi on daily basis. The existing nutritional norms and the financial norms do not permit fulfillment of RDAs by ICDS beneficiaries. The calories and protein norms for children in age group of six months to six years need to be enhanced to 500 calories and 10g protein/child/day from the existing 300 calories and 8-10g protein. Severely malnourished children in this age group need to be given 600 calories and 20g protein/child/day. Financial norms for normal children for supplementary food per day should be enhanced to Rs. 4.00 while for severely malnourished children to Rs.10. A severely malnourished child requires nutrient dense food 5-6 times a day. The background of the child reveals that such nutritional inputs are not feasible with the existing financial condition of the family. Rs.5.00 for double the ration and Rs. 5.00 for take home ration/child/day is required. Similarly, for pregnant and lactating mothers 500 calories and 20g protein with a financial norm of Rs. 4.00/beneficiary/day is recommended. Only when the financial norms are raised to this minimum level that one can expect provision of nutritionally dense supplementary food for ICDS beneficiaries to create an impact on nutritional outcome. Incidentally, the Ministry had revised the nutritional norms for ICDS beneficiaries in January 2006 with a view to provide 50% of the RDA of various micronutrients through supplementary food under ICDS.

Flexibility to districts to provide nutritionally dense supplementary food to ICDS beneficiaries in the form of cereal-pulse combination supplemented with vegetables and fruits or micronutrients was also considered necessary. Fortification of supplementary food with soyabean flour in the range of 5-10% has also been made compulsory in Maharashtra to enhance protein and mineral content.

- An **Inter Ministerial Coordination Committee on Micronutrient Malnutrition Control** has been constituted in the MWCD under the chairpersonship of the Secretary to look into various issues connected with the problem of micronutrient malnutrition and suggest an action plan. The first meeting of the Committee was held on 30th May, 2006 and the **recommendations** that emerged are at **Annexure XV**.

6.6.3 A **Committee of Secretaries** under the Chairpersonship of the Cabinet Secretary has been meeting regularly to deliberate on the need to accelerate programmes to overcome micronutrient deficiencies. In the last meeting held on 17th October, 2006. The Ministry of Women & Child Development was asked to prepare the Agenda Papers for the meeting. The **Issues of Concern** prepared by MWCD and considered by the Committee in the aforesaid meeting are as under:

Issues of Concern

- Micronutrient Malnutrition continues unabated in the country leading to heavy economic loss.
- Existing programmes do not address the problem in a holistic manner. Only nutrient supplementation programmes are in existence and that too not covering the entire high risk group.
- There is no monitoring of micronutrient deficiencies in the country. NFHS undertaken every six years covers only anaemia levels in women and children under 3 years and project only state level picture. NNMB exists only in 10 States giving State level projections for the 8 States only.
- Food fortification has not been given adequate attention.
- Nutrition oriented horticultural interventions to promote production of fruits and vegetables at household and community level is yet to be taken.
- Awareness generation on consequences of micronutrient malnutrition, its prevention and management is not being addressed adequately.

6.6.3(i) The Committee observed that the problem of micronutrient deficiencies continues to be unabated in the country. The existing programmes did not address the problem in a holistic manner. The data available was inadequate and very little monitoring was being done. There was a need to prioritize food fortification, horticultural interventions and generating awareness in the people regarding this problem.

6.6.3(ii) A **five pronged strategy** had been advised to accelerate the programmes to overcome micronutrient deficiency in the country. These related to (i) **Dietary Diversification** Awareness Creation concerning the Ministries of Health & Family Welfare, women & Child Development and Information & Broadcasting. This needed to be attempted through intensive IEC; (ii) **Nutrient Supplementation** concerning the Ministries of Health & Family Welfare, Women & Child Development and Department of School Education and Literacy. This could be achieved through biannual campaigns for administration of vitamin A to children between 6 months to 6 years, providing iron and folic acid supplements to children from 6 months to 2 years and to adolescent girls 10-19 years, administering iron tablets to all pregnant and lactating women and by emphasizing breastfeeding of infants upto 6 months under the NRHM Project Implementation Plans; (iii) **Food Fortification** involving the Ministries and Department of Health, Food Processing Industries, Food & Public Distribution, Consumer Affairs,

Finance, Panchayati Raj and State Governments. This would be achieved by providing the composition and quantity of fortificants to meet the micronutrient needs in different foods, by providing incentives to industry for production and identifying appropriate channels for distribution; (iv) **Horticulture Intervention** involving the Ministry of Agriculture for the supply of seeds, extension and storage support; and, (v) **Public Health Measures** involving the Ministries and Departments of Health & Family Welfare, Women & Child Development, Commerce, Rural Development and Urban Development. This would require streamlining procedures of procurement and supply, building institutional capacity in organizations for monitoring and mapping micronutrient deficiencies and provision of safe drinking water and sanitation.

6.6.3(iii) To achieve the above goals, nutritional security needs to be prioritized during the XI Plan with the provision of earmarked funds. Estimated costs per day per beneficiary would be around 16 paise and with 50% cost sharing with the States, the total expenditure will be around Rs. 500 to 600 crores per month. The issues involved need a high degree of Inter Ministerial Coordination necessitating a Mission Mode for achieving synergies for the best delivery of facilities. Panchayati Raj bodies would also need to be made partners in this endeavour. On these issues being decided, Planning Commission will be approached for funds for this Mission.

6.6.3(iv) The Committee also noted that overcoming micronutrient deficiency was internationally accepted as one of the major goals of rural development initiatives, second only to fighting infant malnutrition, both being linked. The direct cost benefit ratio was 1:37 for this programme and accounting for indirect benefits will make the multiplier many times higher. The time had come when the country needed to seriously address this problem as one of the core issues affecting the quality of rural life and for developing strategies to fight rural poverty. There was need to segregate the short term and long term plans to implement the scheme in a decentralized manner in the States. It will require appropriate financial backing from the Government of India. For effective implementation the programme will need to be monitored at the highest levels for ensuring synergies between the Ministries/Departments as also for ensuring quality. Upgrading the level of awareness about the importance of overcoming micronutrient deficiency would add to the effectiveness of the project. An hour long session on this important subject in the next Chief Secretaries conference was also suggested.

6.6.3(v) The Committee also observed that fighting micronutrient deficiency was important for ensuring a better quality of life, specially for children and women in the rural areas. A fast growing/globalizing economy like India could not ignore such issues. A Mission Mode Project was needed to achieve the best results, which would include inputs from Ministries/Departments of Health & Family Welfare, Food and Public Distribution, Food Processing Industries, School Education & Literacy, Rural Development, and others proposed by the Secretary, Ministry of Women & Child Development. The project could be implemented during the XI Plan with appropriate budgetary support from the Government.

6.6.3(vi) After detailed deliberations, the Committee of Secretaries recommended that:

i) A Mission Mode Project would be launched during the XI Plan with appropriate budgetary support from the Government for overcoming micronutrient deficiency in the country. Ministry of Women & Child Development

will prepare a detailed plan for this in consultation with the concerned Ministries/Departments and the Planning Commission.

ii) The technical issues involved with respect of fortification of rice, wheat, vegetable and edible oils and salt will be sorted out by the Department of Food and Public Distribution in consultation with representatives of Asia Micronutrient Initiative for upscaling these operations.

iii) The Committee of Secretaries will review the progress made every quarter.

6.7 Strengthening Inter Sectoral Coordination Mechanism

6.7.1 A high level inter agency coordination mechanism is required to enable policy directions to the concerned sectors. A multi-pronged action by various key sectors of the Government is possible only when a high level coordination mechanism is set under the Prime Minister/Cabinet Secretary at Centre and Chief Minister/Chief Secretary in States. The main function of this high level coordinating body should be to make policy decisions required for promoting nutrition of the people for concerned sectors. The Role of concerned sectors towards nutrition is given in **Annexure XII**.

6.7.2 A regular coordination between health and women & child development is essential since these two key sectors implement the largest health and nutrition programmes in the country. It would be desirable to have a Coordination Committee on Nutrition and Health under the joint Chairpersonship of Secretary (Health) and Secretary (WCD) so that the Secretaries of these two sectors could be the chairpersons of the same committee alternately. Such a committee can evolve tools for joint supervision and monitoring of the health and nutrition interventions.

6.7.3 Similar joint coordination committees at State and District levels are also required. At programme implementation level, the programme managers could form small task force of key officials and meet frequently for implementation and monitoring of the programme.

6.8 Enhancing Investment in Nutrition and Health

6.8.1 An analysis of the expenditure at different stages of the life cycle in the country reveals that there is a mismatch between the allocation and the requirement. Infants and pre school children who are most vulnerable and where maximum physical and brain development takes place have the least budgetary provision. **Figure 3** illustrates this mismatch.

6.8.2 The National Common Minimum Programmes mandates health care as one of the seven thrust areas wherein it is proposed to increase the expenditure in health sector as proportion of GDP from 0.9% to 2 to 3% over the next five years. The percentage expenditure on nutrition is still lower. As per the calculations of the Planning Commission, the expenditure on SNP component of ICDS accounts for only 0.05% of the GDP during the years 2002-05.

6.8.3 Investment in nutrition promotion programmes needs to be viewed as an investment in human resource development, higher economic growth and overall development. Adequate funds, atleast equal to 6% of GDP should be the minimum

allocation since without basic human development no amount of expenditure on education and other sectors will yield positive results. Imposition of nutrition cess could also be considered for the XI Five Year Plan.

6.8.4 The budgetary requirements for the Nutrition Schemes proposed to be taken up by the FNB of MWCD during the XI Five Year Plan would be Rs. 370.00 crores as detailed in Annexure **XIII**.

6.8.5 Recognizing the magnitude of the problem of micronutrient malnutrition in the country, the Committee of Secretaries (CoS) under the chairmanship of the Cabinet Secretary has recommended a Mission Mode Project during the XI Five Year Plan with appropriate budgetary support from the Government for overcoming micronutrient deficiency in the country. The estimated cost per day per beneficiary would be around 16 p and with 50% cost sharing with the States, the total expenditure will be around Rs. 500-600 crores per month. The Ministry of Women & Child Development has been asked to prepare a detailed plan for this in consultation with the concerned Ministries/Departments and the Planning Commission. CoS will be reviewing the progress made every quarter.

6.8.6 The existing programmes of IFA supplementation, vitamin A supplementation and National IDD Control programme being implemented by the MHFW need to be strengthened and budgetary allocation enhanced for these programmes.

6.8.7 In order to give thrust to nutritional issues in the **XI** Five Year Plan, adequate budgetary provision would be prime pre-requisite. Building institutional capacity for nutrition action is also essential and would require adequate budgetary provision for the purpose.

6.9. Building Institutional Capacity for Nutrition Action

6.9.1 There has been very little attention given to building institutional capacities during the last five decades. The national institutes in the field of nutrition have not expanded over the years, rather their structures have shrunk. To quote a few, National Institute of Nutrition, National Nutrition Monitoring Bureau, Food and Nutrition Departments of Home Science Colleges and Food and Nutrition Board of MWCD. To take forward the gigantic task of promoting nutrition and health of the people, nutrition has to be brought to centre stage with adequate capacity building for various actions. The following is recommended to build institutional capacity for nutrition action.

6.9.2 Nutrition Foundation of India

The National Institute of Nutrition with its present structure cannot undertake the amount of work in the field of surveys, research and training for the entire country. The Nutrition Foundation of India (NFI), an NGO of international repute could be adopted by the Government to serve as an institute of nutrition for carrying out surveys, research and training in Northern and Central part of India. During the X Five Year Plan there had been a lot of dialogue between the Cabinet Secretariat, PMO and the Ministry for utilising the services of NFI on a regular basis for improving nutrition profile of the country. NFI could serve as a resource centre for the MWCD as well as health and help promote issues like bringing out nutrition scenario publication annually, development of

educational and training material and capacity building of programme managers of the concerned sectors.

6.9.3 National Nutrition Monitoring Bureau (NNMB)

The NNMB of the National Institute of Nutrition has its field units only in 10 States in the country which continue to work in project mode even after 34 years of existence. The NNMB units need to be established in all State/UTs to assist the Ministries of WCD and Health & Family Welfare in undertaking nutrition monitoring, mapping and surveillance and to be made permanent to ensure effective functioning.

6.9.4 Breastfeeding Promotion Network of India (BPNI)

Recognising the importance of infant and young child nutrition (IYCN) for promoting nutrition and health of the people, an exclusive institute for promoting IYCF would be required. There is no institute or NGO specialized in this area other than BPNI. The BPNI has a network in States and Districts with paediatricians working honorarily for the cause of IYCN. BPNI with its national network needs to be adopted by the Government to serve as an institute for promoting IYCN in the country.

Needless to say, adopting an existing set up may be much easier, economical and faster than creating a new structure for the purpose.

6.9.5 Food and Nutrition Board (FNB) of MWCD

The infrastructure of FNB comprising of 488 Group A to D officers in the country was transferred with the orders of the Prime Minister in pursuance of the National Nutrition Policy (NNP) in 1993 from Ministry of Food to the MWCD. Over the years it's strength has reduced to less than 400 while the mandate of coordinating the implementation of NNP had been entrusted to it. The NNP Review 2004 reveals that a number of initiatives were taken up by FNB since 1993.

The proposed National Nutrition Mission (NNM) constituted under the chairpersonship of Hon'ble Prime Minister vide Gazette Notification in July 2003 includes implementation of NNP and National Plan of Action on Nutrition among its Terms of Reference. FNB needs to be strengthened to serve as a secretariat for NNM as well as to intensify creation of nutritional awareness at different levels.

A Nutrition and Diet Council of India is needed on the pattern of Medical Council of India to ensure quality education in the field of nutrition and dietetics and their utilisation in Government programmes.

6.9.6 Home Science Colleges

The Food and Nutrition Departments of Home Science Colleges in the country could be strengthened for their support in training and capacity building, research and nutrition extension in respective areas.

Building institutional capacity for nutrition in the country needs to be viewed as infrastructure development for ensuring nutrition and heath of the people for

accelerating national development. Nutrition and health of the people will determine the strength of the nation when the country will be one of the leading economies in the world.

EPILOGUE

Malnutrition is a complex problem, the determinants of which vary from food adequacy, literacy levels, conditioning infections, access to health care, empowerment of women, access to safe drinking water and sanitation to economic growth.

No single organisation can ever address the multifaceted problem of malnutrition alone.

Many inputs in different spheres are required from different sectors both public and private.

Policy decisions at macro level and integrated planning and programming at different levels would be required in each of the important areas like nutrition monitoring and surveillance, nutrition advocacy and public education, infant and young child nutrition, micronutrient malnutrition control etc.

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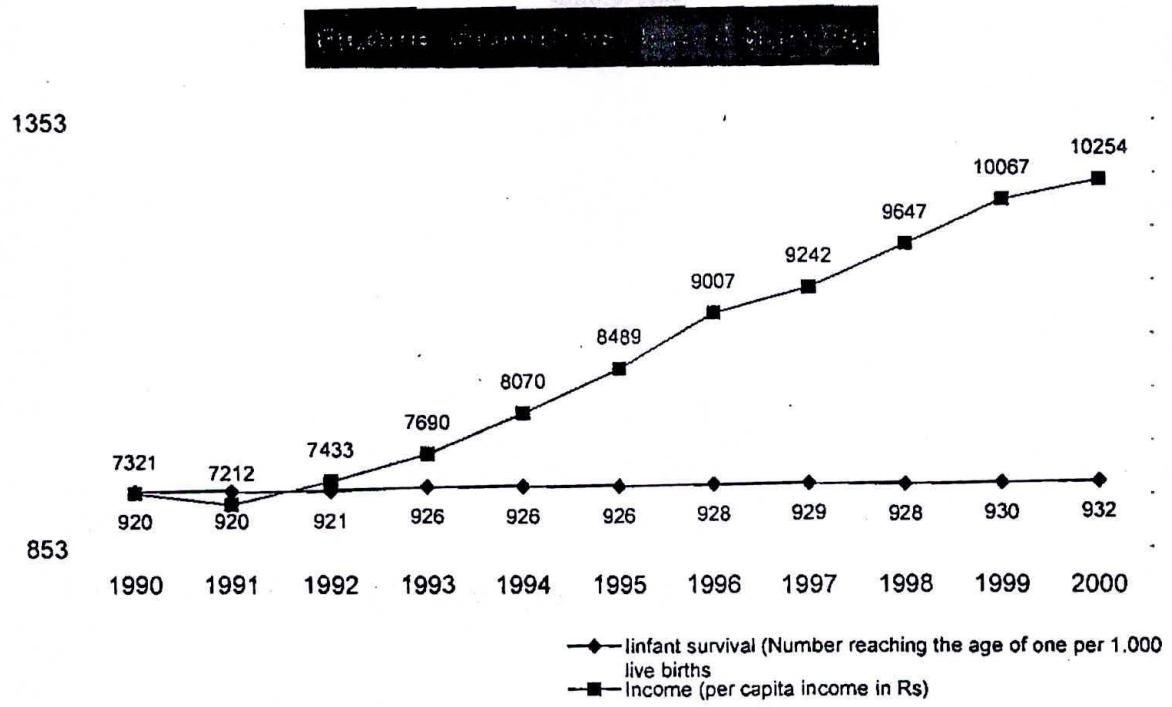

Source : Selected Socio –economic Statistics, India 2001 and Sample Registration System

Figure 2

Critical Period In Brain Development – Financing Gap

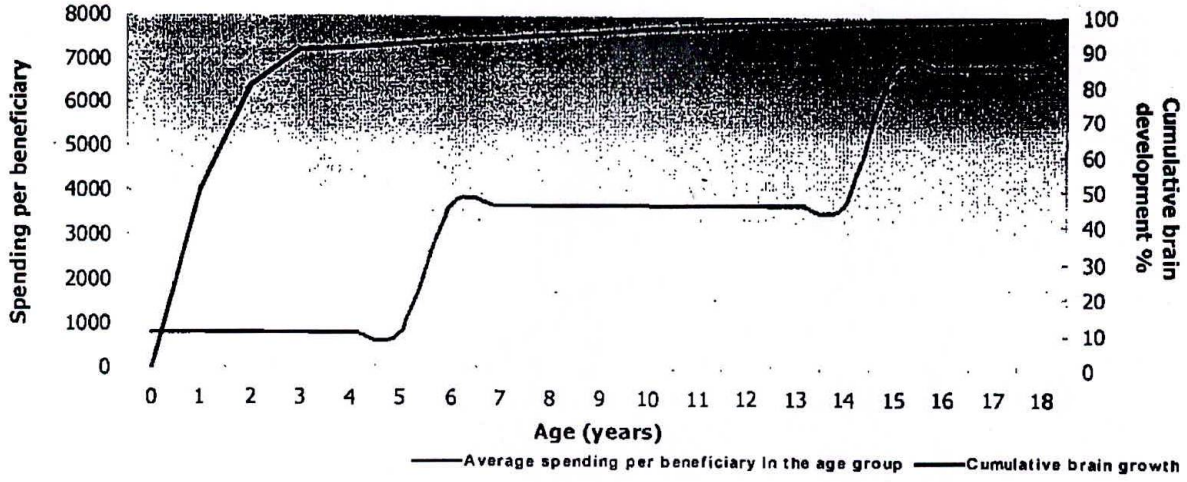

Figure 3

World Bank, 2004

Table.1

INTEGRATING NUTRITION WITH HEALTH IN THE XI PLAN

Framework in which Nutrition and Health integration could be conceptualized, implemented and monitored.

	What is missing Some examples of	What should be done in XI Plan (some examples)
Program level		
The packages Skills of providers	*ICDS* Feeding of LBW not adequately reflected *Health* ANC contact: No advice on early, exclusive BF IMNCI contact: AWW Issues such as care of LBW babies (warmth, assisted feeding) not explicit ASHAs Training materials don't provide enough lactation counseling skills to the ASHAs ANMs	1) Skill development joint training of AWW, ANM, and ASHA on IYCF, new born care, kangaroo care for LBW etc. 2) Ensure stronger, problem oriented pre-service training of new AWWs 3) Include lactational counseling skills in ASHA training program
	Male workers Inadequate skills in nutrition counseling	Ensure crash courses on Nutrition and Health Education.
	Doctors MOs Govt Private Specialists General AYUSH providers	Develop education tools on IYCF for MBBS course
	Nurses	
Coverage	*ICDS* Contact coverage soon after birth is very low	Revise job responsibilities of AWWs to include this
	Health Post-natal / post partum contact coverage is very low.	Regular and frequent contact during the first month and periodical contacts for the entire infancy to be emphasized.
Supervision Managerial	Program managers of health at the district level donot see promoting BF and CF as their responsibility Convergence system at the district level needs strengthening	Joint Supervision, Joint Coordination Committee of Health and ICDS to be chaired alternately by the Secretary (Health) and Secretary (WCD) at Centre and State levels will improve convergence.

Monitoring	Common health and nutrition indicators should be owned by both the health and ICDS	
Facility level	Care of the child with severe malnutrition under-emphasised Feeding / nutrition counseling often not seen as a responsibility Expertise for feeding of LBW babies poor	Nutrition rehabilitation of severely malnourished children to become an important service under Health and ICDS.
IEC	IEC messages often do not link health and nutrition	Nutrition to be an integral part of all health education efforts of IEC bureauxs, CHEB, SHEBs etc.
Community participation		
Policy level	RCH II Recommendations on iron supplementation not identified Zinc supplementation not included	Iron syrup for infants and IFA for adolescent girls already recommended by ICMR expert group to be implemented as a measure to cure diarrhoea, t be recommended. ICDS to support IFA, vitamin A and zinc supplementation.
	ICDS	
	Higher profile of health and nutrition required at the State and District level	Nutrition to be made a subject of Development reviews at State Level. District Nutrition Cells to be created to enable microplanning, monitoring, mapping and surveillance.
Resources	Health Resources for breastfeeding promotion not earmarked in State PIPs ICDS – no separate budget head.	A separate budget head with adequate resources to be created under RCH II and ICDS for promotion of IYCF as committed under Innocenti Declaration 2005.
Accountability	ICDS Progress measured through Process Indicators Health Not accountable to reduce malnutrition levels	Accountability and flexibility to be Introduced.

Annexure I

No.2(13)/06-H & F.W
Government of India
Planning Commission
(Health, Family Welfare & Nutrition)

Yojana Bhavan
Sansad Marg
New Delhi
25th May, 2006

ORDER

Subject: Constitution of Working Group on integrating nutrition with health for the Eleventh Five-Year Plan (2007-2012).

In the context of formulation of the Eleventh Five Year Plan (2007-2012), it has been decided to set up a Working Group on integrating nutrition with health under the Chairpersonship of Secretary, Ministry of Women & Child Development. The composition of the Working Group will be as follows:

1.	Secretary, Ministry of Women & Child Development, New Delhi	Chairperson
2.	Representative, Department of Health and Family Welfare, New Delhi	Member
3.	Representative, Department of Food Processing & Industry, New Delhi	Member
4.	Dr. K.V.Rao, DG, NSSO, RK Puram, New Delhi	Member
5.	Secretary, Health & Family Welfare, Government of Orissa, Bhubaneswar, Orissa	Member
6.	Secretary, DWCD, Government of Chattisgarh, Raipur	Member
7.	Secretary, Department of Women & Child Development, Government of Maharashtra, Mumbai	Member
8.	Salt Commissioner, Government of India, Jaipur	Member
9.	Dr. B.K. Tiwari, Adviser (Nutrition), DGHS, New Delhi	Member
10.	Director, National Institute of Nutrition, Hyderabad	Member
11.	DDG, Social Statistics Division, CSO, New Delhi	Member
12.	Director, NIPCCD, New Delhi	Member
13.	Dr. Vinod K Paul, Dept of Paediatrics, AIIMS, New Delhi	Member
14.	*Prof. Amitabh Kundu, JNU, New Delhi*	*Member*
15.	Shri Ambrish Kumar, Director (H&FW), Planning Commission, N. Delhi	Member
16.	Shri K.M. Gupta, Director, Ministry of Finance, New Delhi	Member
17.	Director (WCD), Planning Commission, New Delhi	Member
18.	Dr. Umesh Kapil, Department of Human Nutrition, AIIMS, New Delhi	Member
19.	Dr. Rajagopalan, MS Swaminathan Research Foundation, Chennai	Member
20.	Dr. Prema Ramachandran, Director, Nutrition Foundation of India	Member
21.	Dr. Kamala Ganesh, D-I, Gulmohar Park, New Delhi	Member

22.	Dr. Indu Capoor, CHETNA, Ahmedabad	Member
23.	Prof. Mehtab Bamji, Nutrition Expert, Hyderabad	Member
24.	Dr. Arun Gupta, National Coordinator, BPNI	Member
25.	Dr. Saraswati Bulusu, National Programme Manager, Micronutrient Initiative, New Delhi	Member
26.	Smt. Shashi Prabha Gupta, Technical Adviser, Ministry of Women & Child Development, New Delhi	Member
27.	Joint Secretary, Ministry of Women & Child Development, New Delhi	Member Secretary

2. The terms of reference of the Working Group will be as follows:

1) To assess the magnitude of under nutrition, micro-nutrient deficiencies, other nutritional disorders and associated health problems in different segments of the population in different regions of the country,

2) To assess the progress achieved as a result of intervention strategies and programmes aimed at reduction of the prevalence of nutritional disorders, review the findings of evaluation studies and suggest remedial actions to effect desired improvements,

3) To suggest institutional mechanism for nutritional monitoring and surveillance, legislation, if any, required for improving nutritional status,

4) To define mechanism for improving the implementation of ongoing nutritional interventions through intersectoral coordination between various Central and State Departments and collaboration among Government, Voluntary and Private Organizations, the Panchayati Raj Institutions and the Community,

5) To assess progress towards achievement of food security at the national, state and household levels,

6) To review the progress in implementation of Action Plan of National Nutrition Policy,

7) To assess the magnitude of the emerging life style related nutritional problems of obesity and over nutrition, its associated health hazards, adolescent nutrition, nutritional problems in the elderly and ongoing programmes aimed at prevention and management of these problems,

8) Based on the review, draw up priority areas of research, intervention strategies and programmes required during the 11th Plan Period for improving nutrition of the population especially of all the vulnerable groups,

9) To review funding for nutrition in center and state sectors during different plan periods and State-wise investment in nutrition during X Plan; analyse the problem of mismatch between outlays and needs (as identified by prevalence of poverty and under-nutrition) and suggest remedial measures for the 11th Plan,

10) To deliberate and give recommendations on any other matter relevant to the topic.

3. The Chairperson may form sub-groups and co-opt official or non-official members as needed. The Working Group will submit its report by 31st August, 2006.

4. Ms. Radha R. Ashrit, SRO (H & FW), Room No.343, Planning Commission, New Delhi-110001 will be the nodal officer for all further communications (Tel. No.23096666-2383, Email radha-pc@nic.in)

5. The expenditure on TA/DA in connection with the meetings of the Working Group in respect of the official members will be borne by the parent Department / Ministry to which the official belongs as per the rules of entitlement applicable to them. The non-official members of the Working Group will be entitled to TA/DA as permissible to Grade I officers of the Government of India under SR 190 (a) and this expenditure will be borne by the Planning Commission.

(Sd/-xxxx)
(Ambrish Kumar)
Director (H & FW)
23096530
(ambrish.kumar@nic.in)

To Chairman and Members of the Working Group.

Copy to:

1. PS to Deputy Chairman / MOS (Planning)/ Members (KP)/(AS)/(VLC)/ (BLM)/ SH/(BNY)/(AH)/ Member-Secretary, Planning Commission, New Delhi
2. All Pr. Advisers/ Advisers/ HODs in Planning Commission,
3. Prime Minister's Office, South Block, New Delhi,
4. Cabinet Secretariat, Rashtrapati Bhavan, New Delhi
5. US (Admin.I) / Pay & Accounts Officer/ Accounts-I-Section, Planning Commission / DDO, Planning Commission,
6. Information Officer, Planning Commission

(Ambrish Kumar)
Director (H & FW)

Annexure II

Working Group on Integrating Nutrition with Health for the XI Five Year Plan (2007-2012)

Composition of the four Sub Groups

Sub Group I

Chairperson

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Annexure III

Minutes of the first meeting of the Working Group on Integrating Nutrition with Health for the XI Five Year Plan (2007-2012) held on 14th July, 2006.

The **first meeting of the of the Working Group on Integrating Nutrition with Health for the XI Five Year Plan (2007-2012) constituted by the Planning Commission was held on 14th July, 2006 at 11.00 a.m.** in Shastri Bhavan. The List of Participants is annexed. Incidentally, the State Representative from Maharashtra, Orissa and Chattisgarh could not participate. Although Dr. B.K. Tiwari, Adviser (Nutrition), DGHS attended the meeting, there was no representation from Ministry's side for maternal and child health programmes.

Shri Chaman Kumar, Joint Secretary (CDN), MWCD and **Member Secretary of the Working Group** welcomed the members and highlighted the Terms of Reference (TOR) set by the Planning Commission for this Working Group. He expressed that there was some overlap in TOR of different working groups for XI Five Year Plan, such as food and nutrition security which figures in this working group also. It was, therefore, important that while dealing with food and nutrition security issues, greater emphasis is laid on the health perspective. This was following by self introduction and discussion.

Smt. Reva Nayyar, Secretary, MWCD and Chairperson of the Working Group highlighted the importance of nutrition. She said that health interacts with several areas of growth and development as well as with lives of everyone. The broad perspective for giving recommendations for this Working Group would be to promote integration of nutritional concerns in every dimension of health at every level. Creation of health awareness could be considered as an important responsibility of the health infrastructure since many of the nutrition and health disorders could be alleviated if people were made aware about basic nutrition and health facts. She requested the members to give their best for this Working Group, which is coming after 60 years of independence, since this would help in formulating the draft XI Five Year Plan in the area of nutrition and health which needs to address malnutrition and health problems.

There was a general discussion on all TOR of this Working Group. **Dr. Mahtab Bamji, Nutrition Expert, Dangoria Charitable Trust, Hyderabad** expressed concern as to why with different nutrition related programmes in the field, there was no impact or say there was programme failure. According to her the biggest lacuna in the failure of these programmes was lack of nutritional awareness and there was very little attention given to this aspect. The group should deliberate in detail as to which Ministry/Ministries should look into these issues.

Dr. S. Rajagopalan from M.S. Swaminathan Research Foundation, Chennai highlighted the need to translate food security into nutrition security at the grass root level. He observed that the focus of nutrition interventions has changed drastically over the years. The vertical programmes are not being synergised at the grassroot level. He also highlighted the need for expanding the National Nutrition Monitoring bureau

(NNMB) in all States/UTs to enable nutrition monitoring, mapping and surveillance in the country.

Dr. Rajagopalan highlighted the structure of Food and Nutrition Board (FNB) in early 70s when it undertook a number of food processing and fortification projects through Modern Food Industries, Roller Flour Millers, research on iron fortified salt etc. Today when the need is even much more, it has shrunk to a very small size and that there was need to strengthen FNB to effectively serve as the Secretariat for the National Nutrition Policy.

The Chairperson stated that FNB was brought to this Ministry in pursuance of the National Nutrition Policy and it is only the FNB which is undertaking nutrition education and awareness generation while health and other sectors should also devote equal attention to this important factor.

Dr. Arun Gupta, National Coordinator, Breastfeeding Promotion Network of India, New Delhi expressed that while the important issues like integrating nutrition with the health is being discussed, the presence of a senior representative from the Ministry of Health & Family Welfare was absolutely essential. He stated that there was no active mechanism that dealt with nutrition across the key sectors.

The question of legislation in nutrition and health was also discussed. **Dr. Prema Ramachandran, Director, Nutrition Foundation of India, New Delhi** expressed that food processing and preservation is increasing in a big way. Additives, labeling, colors and many other food safety issues may require legislation.

Dr. Indu Kapoor, Director, CHETNA, Ahemdabad expressed that the diagnosis of the problem of malnutrition has to be correct if we really want to solve it. She stated that nutrition supplementation alone can never solve the problem. Nutritional status was the end result of many variables like poverty, food availability, access to health care and other social services and to equate it to food supplementation was rather simplification of the entire problem.

Dr. B.K. Tiwari, Adviser (Nutrition), DGHS, Ministry of Health & Family Welfare stated that National Rural Health Mission (NRHM) takes care of various nutrition and health issues although the worker ASHA is available only in 18 States.

Prof. Amitabh Kundu of Jawaharlal Nehru University, New Delhi highlighted the importance of National Sample Surveys and stated that the unit data from the 61st Round of National Sample Survey (NSS) could be made available to different organisations dealing with nutrition and health. He expressed that it was possible to map nutrition situation utilising the data on socio-economic parameters from NSS. He emphasized that food security was essential but not sufficient to address the problem of malnutrition. According to him, with the decline in poverty, 77% of the people were in a position to buy adequate food but they were not doing so. There are, therefore, certain factors which create this imbalance. Fast foods, food processing were other important issues to be dealt with.

Dr. Umesh Kapil, Professor, Department of Human Nutrition, AIIMS, New Delhi stressed that Health Ministry was implementing the micronutrient malnutrition

control programmes since long and is responsible for these programmes. The other Ministries particularly MWCD need not direct what the Health Ministry could do. It was clarified by the Chairperson and Smt. Shashi P. Gupta, Technical Adviser (FNB), MWCD that there is a National Nutrition Policy adopted by the Government under the aegis of MWCD in 1993 which assigns the responsibility of coordinating the implementation of various nutrition related interventions of the other sectors to the MWCD. The Chairperson further expressed that for this reason only it was necessary to have a high policy making body in the country in the field of nutrition like the National Nutrition Mission, with the Prime Minister as the Chairperson, so that directions for promoting nutrition through sectoral programmes of the Government could be given at the highest policy making level to enable effective implementation.

While the 9th TOR relating to the funding for Centre and State sectors during different time periods and state-wise investment in nutrition during X Plan was being discussed, **Dr. Saraswati Bulusu, National Programme Manager, The Micronutrient Initiative** informed that they had carried out such an exercise a few months back for the Planning Commission and that The Micronutrient Initiative could provide the requisite data to this Working Group.

Realising that there was no nation wide data on nutritional status of the people, there was a strong recommendation from various members of the Group that the scope of NNMB should be expanded to all States/UTs as well as to include nutrition surveillance. The Group noted that for several years the need for expanding NNMB to all States/UTs had been felt and recommended at various fora but it has not been implemented so far.

Dr. G.N.V. Brahmam, Deputy Director, National Institute of Nutrition, Hyderabad explained that the NNMB was undertaking only nutrition monitoring at present and that nutrition surveillance was a continuous activity.

After detailed discussions on different TOR, it was decided to constitute **four Sub Groups** of this Working Group to enable concrete suggestions on important issues. Considering that there was some overlapping in the TOR, the same were clubbed under different groups. The following four Sub Groups were constituted:

Sub Group I

Assessing the magnitude of various nutritional disorders and associated health problems and suggesting institutional mechanism for nutrition monitoring, mapping and surveillance, legislation if any required for improving nutrition status (TOR 1, 3 & 10)

Chairperson

Dr. B. Sesikeran, Director, National Institute of Nutrition, Hyderabad

Members

i) Dr. K.V. Rao, Director General, NSSO, New Delhi
ii) Mr. K.D. Maiti, Director (MH), MHFW
iii) Shri Ambrish Kumar, Director (HFW), Planning Commission

iv) Dr. G. Sanjeevan, Social Statistics Division, CSO, New Delhi.
v) Prof. Amitabh Kundu, JNU, New Delhi.
vi) Dr. Prema Ramachandran, Director, NFI
vii) Dr. P.N. Mari Bhat, Director, International Institute of Population Sciences, Mumbai
viii) Dr. G.N.V. Brahmam, Deputy Director, NIN, Hyderabad.
ix) Ms. Radha Ashrit, SRO, Planning Commission
x) Dr. Umesh Kapil, Department of Human Nutrition, AIIMS, New Delhi

Sub Group II

Reviewing the progress achieved as a result of interventions strategies, National Nutrition Policy and suggesting remedial actions and mechanism for intersectoral coordination at different levels (TOR 2, 4, 6 & 10)

Chairperson:

Dr. Prema Ramachandaran, Director, Nutrition Foundation of India

Members

i) Shri Ajay Singh, Secretary cum Commissioner, Department of WCD, Government of Chattisgarh
ii) Shri R.N. Senapati, Principal Secretary, Department of Health & Family Welfare, Government of Orissa
iii) Dr. B.K. Tiwari, Adviser (Nutrition), DGHS, MHFW
iv) Dr. Sangeeta Saxena, Assistant Commissioner (MH), MHFW
v) Dr. Dinesh Paul, Additional Director, NIPCCD, New Delhi.
vi) Dr. Vinod Paul, Department of Paediatrics, AIIMS, New Delhi
vii) Shri S. Sunderesan, Salt Commissioner, Ministry of Industries, Jaipur, Rajasthan
viii) Dr. Arun Gupta, National Coordinator, BPNI
ix) Dr. G.S. Toteja, Deputy Director General, ICMR
x) Shri Surinder Singh, Assistant Director, Ministry of Food Processing Industries, Panchsheel, New Delhi
xi) Smt. Shashi Prabha Gupta, Technical Adviser (FNB), MWCD.

Sub Group III

Food and Nutrition Security including micronutrients (TOR 5 & 10)

Chairperson

Dr. S. Rajagopalan, M.S. Swaminathan Research Foundation, Chennai

Members

i) Shri Vijay Prakash, Commissioner & Secretary, Department of Social Welfare, Government of Bihar
ii) Shri Balvinder Kumar, Secretary, Department of WCD, Government of Uttar Pradesh
iii) Smt. Vandana Krishna, Principal Secretary, Department of WCD, Government of Maharashtra

iv) Smt. Anita Chaudhary, Joint Secretary, Department of Food and Public Distribution, GOI.
iv) Dr. S.K. Nanda, Secretary, Department of Food & Civil Supplies, Government of Gujarat
v) Dr. Saraswati Bulusu, National Programme Officer, The Micronutrient Initiative, New Delhi.
vi) Dr. S.N. Shukla, Assistant Director General (Food Crops), ICAR, Krishi Bhavan
vii) Dr. Mehtab Bamji, Nutrition Expert, Hyderabad
viii) Prof. M.M.A. Faridi, Department of Paediatrics, GTB Hospital, Delhi

Sub Group IV

Community Awareness on Nutrition (TOR 7, 8, 9 & 10)

Chairperson

Dr. Indu Capoor, CHETNA, Ahemdabad

Members

i) Dr. Kamala Ganesh, Consultant (Obstetrics) and Gynaecologist, New Delhi.
ii) Prof. Aneja, Kalavati Saran Children Hospital, New Delhi
iii) Dr. S.K. Satpati, Director, Central Health Education Bureau, New Delhi
iv) Dr. Arun Gupta, National Coordinator, BPNI, New Delhi
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ix) Smt. Shashi P. Gupta, Technical Adviser (FNB), MWCD, GOI

All the Chairpersons of the Sub Groups were requested to deliberate in their sub groups both electronically as well as through meetings which would be facilitated by FNB at Shastri Bhavan. It was informed that the TA/DA for participation in the sub group meetings would be borne by the MWCD. The Chairpersons were requested to submit the Sub Group reports latest by 10th August, 2006 so that the reports could be consolidated for the final report of the Working Group and discussed in the meetings of the Working Group before finalization and submission.

The meeting ended with a vote of thanks to the chair.

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First meeting of the Working Group on Integrating Nutrition with Health for the XI Five Year Plan (2007-2012)
14th July, 2006 at 11.00 a.m.

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Annexure IV

Minutes of the second meeting of the Working Group on Integrating Nutrition with Health for the XI Five Year Plan (2007-2012) held on 8th September, 2006.

The second meeting of the Working Group on Integrating Nutrition with Health for the XI Five Year Plan (2007-2012) constituted by the Planning Commission was held on 8th September, 2006 at 10.30 a.m. under the Chairpersonship of **Smt. Deepa Jain Singh, Secretary, Ministry of Women & Child Development at Shastri Bhavan.** The List of Participants is annexed.

The Chairperson welcomed the members and highlighted the importance of the Working Group on Integrating Nutrition with Health elaborating as to how nutritional levels of the population, particularly of the vulnerable groups were influencing the health and mortality indicators. She added that various scientific studies reveal that malnutrition accounts for more than 60% of child deaths while nutritional anaemia takes heavy toll of pregnant women. It was, therefore, imperative that nutrition is given due emphasis at every level by the health and family welfare infrastructure. She talked about the diversity in the country, grassroot level problems and hoped that the deliberations of this Working Group would be able to bring out some doable suggestions. This was followed by self-introduction.

Shri Chaman Kumar, Joint Secretary, MWCD narrated the developments since the first meeting of the working group held on 14th July, 2006.

The first presentation was made by **Dr. S. Rajagopalan of M.S. Swaminathan Research Foundation**, the **Chairman of Sub Group III** on Food and Nutrition Security including micronutrients, taking care of TOR 5 & 10 of the Working Group. He enumerated the emerging nutrition scene in which micronutrients and phytonutrients had acquired the central stage in the field of nutrition. Phytonutrients in the foods have biological property for disease prevention and health promotion, thus making nutritious diet an essential instrument for promoting health and preventing diseases. He talked of Article 47 of the Constitution of India, the need for adopting a life cycle approach followed by identified strategies for addressing the nutritional requirements across all phases of human life. He enumerated the double burden of childhood malnutrition and diet related adult diseases. He projected the time trend in malnutrition levels in the country. He advocated a comprehensive approach for addressing micronutrient malnutrition involving food based approach, synthetic nutrient supplements and fortification of foods. Some of the **recommendations** for the XI Five Year Plan made by **Sub Group III** are as under:

- Strengthening existing iron and folic acid and vitamin A supplementation programmes.
- A national programme on manufacturing and distributing salt fortified with iron, iodine, vitamin A and folic acid for which proven technology is available.
- Horticultural Interventions – every school to have drumstick tree and nutrition garden of greens.
- Self Help Women Groups to prepare food mix to serve as complementary food for children, for marketing in rural areas.

- The formation of Nutrition Development Corporation as an adjunct to Food Corporation of India. This Corporation can procure ragi and other millets on the same line as FCI is procuring rice and wheat, and support the manufacture and sale of different food mixes enriched with vitamin premix.
- Instead of supplying rice and wheat in major food based programmes like TPDS, Antodaya Anna Yojana, Anapurna scheme, Food for Work programme etc, enriched foods should be supplied. Micronutrient enrichment of ICDS and Mid Day Meal was also necessary.
- The National Programme of Dietary Diversification to be implemented utilising services of Home Science Colleges who could disseminate dietary guidelines in local languages and train the self help women groups and NGOs to help the household in diversifying their diets. Proper counselling on basic and primary biotechnology tools in improving the quality of diets like fermentation, using parboiled rice, sprouted grains, leafy vegetables was necessary.

Dr. Rajagopalan concluded by saying that micronutrient malnutrition was most devastating for pre-school children and pregnant women, but it was debilitating in all age groups. It was also debilitating for the national economy as well. He quoted a World Bank study stating that micronutrient malnutrition robs many countries 5% of their national income, while addressing the problem would cost only 0.3%. The control of vitamin and mineral deficiencies offers an opportunity to improve life at a very low cost and in a short time. With political will and financial support, micronutrient malnutrition could be reduced significantly within this generation.

Dr. Prema Ramachandaran, Director, Nutrition Foundation of India & Chairperson of Sub Group II on Reviewing the progress achieved as a result of interventions strategies, National Nutrition Policy and suggesting remedial measures, mechanism for intersectoral coordination at different levels, taking care of TOR 2, 3, 6 & 10, highlighted the paradigm shift in the Tenth Plan, improvement in nutritional status over the last three decades and the short falls, and role of intersectoral coordination for improving nutritional status. Maternal undernutrition and consequences and corrective interventions were enumerated in detail. The **current concerns highlighted** by her **included reducing low birth weight, improving exclusive breastfeeding for the first six months and timely and appropriate complementary feeding, and reducing nutritional anaemia in high risk groups.**

The relationship between birth weight and health was highlighted by quoting studies that reveal that low birth weight is associated with increased risk of hypertension, diabetes and coronary heart diseases in later life. Mother Child dyad was an inseparable unit and to reduce low birth weight, nutrition and health care of mother was essential. She quoted the World Bank 2006 Report highlighting the need to address foetal and early childhood nutrition as that is the only window of opportunity for addressing malnutrition. She advocated the need for giving high priority to infant and young child feeding in XI Plan so that universal breastfeeding, early initiation of breastfeeding, exclusive breastfeeding for first six months, complementary feeding initiated at six months, continued breastfeeding for 24 months or longer could be achieved. Setting State specific goals for IYCF were also recommended by her.

The relationship between nutrition and infection was also highlighted. The **focus for the XI Plan as recommended by Sub Group II** was as under:

- Prevention of undernutrition through nutrition education by inter-personal communication by ANM/AWW/ASHA aimed at –
    - Ensuring appropriate IYCF practices, appropriate intra-family distribution of food
    - Dietary diversification to meet the nutritional needs.
    - Strengthening health components and integrated approach under ICDS through convergence of services.

She concluded by saying that poverty was no longer the driving force behind undernutrition nor affluence the reason for over nutrition. The country has knowledge, technology and resources, including human resources, to combat the dual burden of malnutrition.

Dr. G.N.V. Brahmam, Deputy Director, National Institute of Nutrition, Hyderabad made a presentation on **Sub Group I** on Assessing the magnitude of various nutritional disorders and associated health problems and suggesting institutional mechanism for nutrition monitoring, mapping and surveillance, legislation if any required for improving nutrition status taking care of TOR 1, 3 & 10. The monitoring of nutritional status of the people particularly the preschool children through existing interventions was highlighted by Dr. Brahmam. He narrated the nutrition surveillance model developed for Andhra Pradesh on behalf of the MWCD during 1994-98 under which a quarterly progress report for nutrition monitoring was advocated. He explained the various sources of data on nutrition in the country which included ICDS, NNMB, NFHS and NSSO. Since ICDS was in operation in more than 80% of the area and has regular growth monitoring of children under six years, data on nutritional status of children should be utilised for monitoring nutrition situation and creating a Nutrition Information System in the country.

Some of the important **recommendations of Sub Group I** included:

- Establishment of a State level Surveillance Cell consisting of a Nutritionist and a Programmer to monitor the activities and bring out reports periodically.
- Early warming system to be established to forecast impending nutritional disaster due to natural calamities (drought, floods, famines etc) and initiating timely and appropriate remedial measures to minimize the harm.
- NNMB service to be made a permanent activity.
- NNMB operating in 10 States has to be strengthened and extended to remaining States and entrusted with the nutrition monitoring and surveillance in the country as mandated in the National Nutrition Policy, 1993.

Dr. Indu Capoor, Director, CHETNA, Ahemdabad, the Chairperson of Sub Group IV and Vd. Smita Bajpai of CHETNA could not participate in the meeting because of floods. **Dr. (Mrs.) Adarsh Sharma** made a presentation of **Sub Group IV** on Community Awareness on Nutrition taking care of TOR 7, 8, 9 & 10 on behalf of CHETNA. Dr. Sharma highlighted the nutritional concerns in life cycle particularly during infancy, adolescence, maternal malnutrition and nutritional status of elderly, particularly the elderly females. She advocated the need for a "National Nutrition Education Programme" linked to all pubic health services provided to the people. Optimal use of existing structures like FNB, CHEB, NCERT, ICDS, Primary Health Care

for impacting Nutrition and Health Education to various sections of the society was advocated. Social mobilization, involving adolescents and young people as changed agents, school based approach for achieving nutrition goals were considered critical by Sub Group IV. Nutrition and Health Education particularly on infant and young child feeding, micronutrient malnutrition, infant milk substitutes act, growth monitoring, etc were highlighted.

After the four presentations, the Working Group deliberated in depth on the recommendations made by these Sub Groups. Smt. Deepa Jain Singh, the Chairperson and Shri Chaman Kumar gratefully acknowledged the practical suggestions given by the four Sub Groups.

The Chairperson summed up the discussions and invited the volunteers from different Sub Groups for constituting a drafting committee for preparing the Report of the Working Group on Integrating Nutrition with Health for the XI Five Year Plan. The Drafting Committee including the following:

- Dr. Prema Ramachandran
- Dr. S. Rajagopalan
- Dr. G.N.V. Brahmam
- Ms. Deeksha
- Dr. Adarsh Sharma
- Smt. Shashi P. Gupta as member-convener.

The Secretary requested the Drafting Committee to sit for half an hour or so and strategize the line of action for preparing the Report of the Working Group so that the group could work electronically and the Working Group Report could be produced at the earliest.

The meeting ended with a vote of thanks to the chair.

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Second Meeting of the Working Group on Integrating Nutrition with Health for the XI Five Year Plan (2007-2012) held on 8th September, 2006.

List of Participants

1. Smt. Deepa Jain Singh, Secretary, Ministry of Women & Child Development Shastri Bhavan, New Delhi — In Chair

2. Shri Chaman Kumar, Joint Secretary, Ministry of Women & Child Development Shastri Bhavan; New Delhi

3. Smt. Rita Teaotia, Joint Secretary, Ministry of Health & Family Welfare, Nirman Bhavan, New Delhi.

4. Dr. Prema Ramachandran, Director, Nutrition Foundation of India, New Delhi-110 016.

5. Dr. S. Rajagopalan, M.S. Swaminathan Research Foundation, Chennai.

6. Dr. G.N.V. Brahmam, Deputy Director, National Institute of Nutrition, Hyderabad-500 007.

7. Dr. Saraswati Bulusu, Nation Program Manager, The Micronutrient Initiative, New Delhi.

8. Dr. Kamala Ganesh, Consultant (Obs. & Gyen.), D-1, Gulmohar Park, New Delhi-110 049

9. Shri S. Sundaresan, Salt Commissioner, Jaipur

10. Shri Srikara Naik, Director (WCD), Planning Commission,

11. Ms. Radha R. Ashrit, SRO, Room No.393, Health Division, Planning Commission.

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12. Shri Surinder Singh,
Assistant Director,
Ministry of Food Processing Industries,
Panchsheel, New Delhi

13. Smt. Neelam Bhatia,
Joint Director, NIPCCD, New Delhi.

14. Shri Pratik Khare
Joint Director (ICDS)
Government of Raipur
Chattisgarh.

15. Shri Ujwal Uke,
Commissioner (ICDS), Government of Maharashtra
Raigarh Bhavan, Belapur, Navi Mumbai.

16 Ms. Deeksha
BPNI, New Delhi.

17. Smt. Shashi P. Gupta,
Technical Adviser (FNB), MWCD.

18. Dr. Jai Singh,
Deputy Technical Adviser (FNB), MWCD.

19. Shri Ravi Shankar,
Deputy Technical Adviser (FNB), MWCD.

20. Shri J.H. Panwal,
Deputy Technical Adviser (FNB), MWCD.

Annexure V

INTEGRATING NUTRITION WITH HEALTH FOR THE XI FIVE YEAR PLAN (2007-12)

SUB GROUP 1

Assessing the magnitude of Nutritional disorders & associated Health problems and suggesting Institutianal Mechanisms for Nutrition Monitoring, Mapping and Surveillance, Legislation if any required for improving the nutritianal status.

MEMBERS

Dr. B.Sesikeran., Director, N.I.N., Chair Person
Dr. K. V. Rao, Director General, N.S.S.O.,
Shri. K.V.Moiti., Director, (NH), N.H.F.W.,
Shri. Ambresh Kumar, Director (HFW), Planning Commission,
Dr. G. Sanjeevan., Social Statistics Division, C.S.O.,
Prof. Amitabh Kundu, J.N.U.,
Dr. Prema Ramachandran., Director, N.F.I.,
Dr. P.N.Mari Bhat, Director, I.I.P.S.,
Dr. Umesh Kapil, Prof. Of Nutrition, A.I.I.M.S.,
Ms. Radha Ashrit, S.R.O, Planning Commission, and
Dr. G.N.V.Brahmam, Dy. Director, N.I.N.,

TERMS OF REFERENCE

1. To Assess the magnitude of undernutrition, Micronutrient Deficiencies, other Nutritional Disorders and associated health problems in different segments of the populations in different regions of the country.
3. To suggest Institutional Mechanisms for nutritional monitoring and Surveillance, Legislation if any, required for improving the Nutritional status.
10. To deliberate and give recommendations on any other matter relevant to the topic.

NUTRITION MONITORING

"Nutritian monitoring is the measurement of changes over time in the nutritional status of a population or a specific group of individuals."

EVALUATION

Evaluation is a process of reaching a judgment, an the basis of clearly defined criteria, about the success of any operation. This includes consideration of effectiveness and efficacy.

SOURCES OF DATA ON NUTRITION MONITORING IN THE COUNTRY

- INTEGRATED CHILD DEVELOPMENT SERVICES (ICDS)
- NATIONAL NUTRITION MONITORING BUREAU (NNMB)
- NATIONAL FAMILY HEALTH SURVEYS (NFHS)
- NATIONAL SAMPLE SURVEY ORGANIZATION (NSSO)

INTEGRATED CHILD DEVELOPMENT SERVICES (ICDS)

- Established under the aegis of Department of Women and Child Development , GoI.
- Growth monitoring of children < 6 yrs at regular intervals is one of the important activities.
- Data on Nutritional status of children based on weight for age is generated at various levels (from AWC to State level).

ICDS

MERITS

- It is in operation in more than 80 % of the area.
- Steps are being initiated for its universalization, covering all habitations.
- Regular growth monitoring of children <6 yrs helps the AWW in early identification of undernourished and growth faltered children and timely initiation of interventions.

ICDS

LIMITATIONS

- There are lacunae and delay in collection, reporting, collation and analysis of data.
- No mechanism to utilize the data for monitoring and initiation of mid-course corrections at different levels of program implementation, if needed.

NATIONAL NUTRITION MONITORING BUREAU (NNMB)

- Established under the aegis of Indian Council of Medical Research, in 1972.
- Operating in 10 States viz., A.P., T.N., Karnataka, Kerala, M.P., Maharashtra, Gujarat, Orissa, U.P., & W.B
- Collects information on a regular basis on nutritional status of communities and prevalence of morbidities along with household demographic and socio-economic particulars.

NNMB

MERITS

It is the only organization that generates information on

- Food and nutrient intakes at both household and individual levels.
- Nutritional status in terms of
  - Anthropometry
  - Prevalence of Clinical signs of nutritional deficiency
  - Prevalence of Obesity, Hypertension, Diabetes
  - Blood levels of Hb and Vitamin A in target groups
- Covers different age, gender and physiological groups.
- Time trends

NNMB

LIMITATIONS

- It is currently operating in only ten States.
- Provides only State level estimates but not disaggregated data at district level.
- Operating on ad-hoc basis since it's inception in 1972, leading to very high turn-over of staff

NATIONAL FAMILY HEALTH SURVEYS (NFHS)

- Initiated under the aegis of GoI, in the year 1992-93
- Repeated once in 5 yrs to assess nutrition and health status of women in reproductive age group and their children.

NFHS

MERITS

- NFHS generates information from all parts of the country except Union territories.

LIMITATIONS

- Women aged 15-49 yrs and their children < 3yrs old only are covered.
- No data on food and nutrient intakes is generated.

NATIONAL SAMPLE SURVEY ORGANIZATION (NSSO)

- It assesses consumer expenditure on food and non-food items and estimates average per capita food intake at household level, once in 5 yrs .

NSSO

MERITS

- Covers all regions of the country.
- Provides time trends in the pattern of food consumption.

LIMITATIONS

- Does not provide information on intake of Proteins and Energy but not other Nutrients
- Does not provide data at the household and individual levels.
- Does not provide information on nutritional status in terms of anthropometry, clinical and sub-clinical undernutrition.

NUTRITIONAL SURVEILLANCE

" To watch over nutrition in order to make decisions which will lead to improvement in nutritional status in populations".

Nutritional surveillance provides information about nutrition in population on a continuous basis. The data is drawn from most suitable sources that are already available.

FAO/WHO/UNICEF EXPERT COMMITTEE (1976) AND ELABORATED UPON BY MASON et al, 1984

APPROACH TO NUTRITION SURVEILLANCE

ESTABLISHMENT OF NUTRITION SURVEILLANCE SYSTEM

"Triple A" Approach

- ASSESSMENT OF CURRENT SITUATION
- ANALYSIS OF THE CAUSES/REASONS
- ACTION TO IMPROVE THE SITUATION

NUTRITION SURVEILLANCE (contd.)

- GoI under National Nutrition Policy (NNP) recommended to establish a National Surveillance System (NSS), to achieve the nutrition goals so as to promote the nutritional status of the populations.
- National Institute of Nutrition on the request of DWCD developed NSS using 'Triple A' approach in Andhra Pradesh utilizing the ICDS infrastructure.
- NSS was later extended to five other States namely, Rajasthan, Madhya Pradesh, Meghalaya, Maharashtra and Karnataka.

REASONS FOR SELECTING ICDS INFRASTRUCTURE

1. DWCD IS THE NODAL AGENCY FOR IMPLEMENTATION OF NATIONAL NUTRITION POLICY.
2. ICDS COVERS MORE THAN 80% OF THE POPULATION, BEING EXTENDED TO COVER ALL RURAL, TRIBAL AND 50% OF URBAN AREAS.
3. IT HAS INFRASTRUCTURE FROM VILLAGE LEVEL TO STATE LEVEL.
4. MOST OF THE NUTRITION GOALS RELATES TO ICDS ACTIVITIES.
5. IT HAS A REPORTING SYSTEM.

IT IS EASIER TO IMPROVE AN EXISTING SYTEM HAVING NECESSARY INFRASTRUCTURE, RATHER THAN ESTGABLISH A NEW SYSTEM

Modification of Existing MPRs of AWWs

To enable :

- Identification of individuals as well as AWCs/ Sectors/ Projects/ Districts with,
  - High rates of Undernutrition, morbidity, mortality
  - Low coverage for various services under ICDS viz., Immunization, Supplementary feeding , Suppln. of Massive Dose Vitamin 'A' & Iron folic acid tablets
- Analysis of the underlying causes and
- Action taken

To be prepared and submitted as Quarterly Progress Reports coinciding with "Survey month", once in three months

Triple – A Cycle

MERITS OF NSS

- It helps the AWW to identify individual children who are malnourished, identify probable underlying causes and facilitate appropriate remedial actions at household level by counseling the mother and regular monitoring of the child .
- It provides information on nutrition and health status of children and helps to identify and map the areas under nutritional stress at the village, sector, project, district and State levels.
- It assists in management and evaluation of nutrition and health related services such as Vitamin A & iron-folic acid supplementation.

MERITS OF NSS (contd.)

- Provides early warning of impending nutrition stress and helps in early initiation of appropriate interventions for prevention
- Enables planners to design and conceive appropriate action plans and the programme implementers to translate them in to action at various levels.

LIMITATIONS OF NSS

- Since it is based on ICDS infrastructure, information on nutritional status of preschool children only are generated while nutrition information of other age and physiological groups are not collected.
- Information on food and nutrient intakes is not generated.

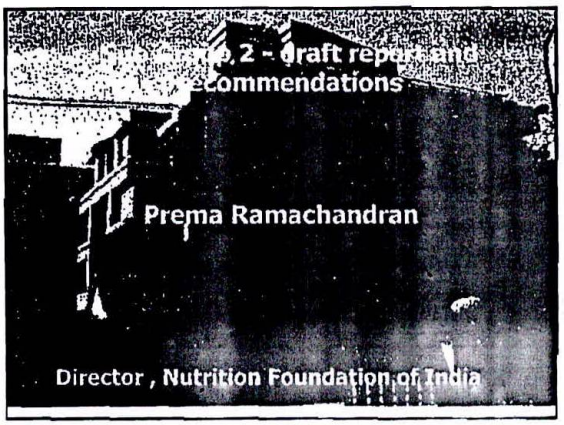
RECOMMENDATIONS OF THE SUB GROUP 1

- As NNMB operating in 10 States need to be strengthened and extended to the remaining States, in a phased manner
- NNMB surveys should be made a permanent activity.
- Nutritian surveillance system to be made an integral part of ICDS, facilitating best use of data generated in targeting interventions to the needy.
- Early warning system to be established ta forecast impending nutritional disasters due to natural calamities (droughts, floods, famines etc) and initiate timely and appropriate remedial measures to minimize the harm.

RECOMMENDATIONS OF THE SUB GROUP 1 (Contd...)

- Early warning system to be established to farecast impending nutritional disasters due to natural calamities (droughts, floods, famines etc) and initiate timely and appropriate remedial measures to minimize the harm.
- To provide camputers and data entry operators at Project/District and State level for efficient and accurate management of data and analysis.
- To establish a State level Surveillance cell consisting of a nutritionist and programmer to monitor the activities and bring out reports periodically.

Annexure VI



TERMS OF REFERENCE

REVIEW THE PROGRESS ACHIEVED

- **AFTER NATIONAL NUTRITION POLICY & NAP**
- **AS A RESULT OF INTERVENTION STRATEGIES,**
- **PROBLEMS IN IMPLEMENTATION OF INTERVENTIONS**
- **SUGGEST REMEDIAL ACTION AND MECHANISMS FOR IMPROVING NUTRITIONAL STATUS**
- **ROLE OF INTER-SECTORAL COORDINATION AT DIFFERENT LEVELS IN IMPROVING NUTRITIONAL STATUS**

COMPOSITION OF THE GROUP

Dr. Prema Ramachandaran, Director, NFI
Secretary, Department of WCD, Chattisgarh
Secretary, Department of Health & Family Welfare, Orissa
Dr. B.K. Tiwari, Adviser (Nutrition), DGHS, MHFW
Dr. Sangeeta Saxena, Asst Comm, MHFW
Dr. Dinesh Paul, Additional Director, NIPCCD,
Dr. Vinod Paul*, Department of Paediatrics, AIIMS
Shri S. Sunderesan*, Salt Commissioner
Dr. Arun Gupta*, National Coordinator, BPNI
Dr. G.S. Toteja, Deputy Director General, ICMR
Shri Surinder Singh, Ministry of Food Processing
Smt. Shashi P Gupta*, Technical Adviser ,FNB
MWCD &(Dr Sesikeran* Director NIN)

Over the last three decades there has been

- Substantial reduction in severe grades of chronic energy deficiency (CED),Kwashiorkor, marasmus
- Vitamin A deficiency blindness is rare

BUT

- 1/3rd of children weigh < than 2.5 kg at birth,
- half of the pre school children suffer from mild and moderate under nutrition.
- More than 2/3rd of women and children are anaemic.
- Vitamin A deficiency and iodine deficiency disorders still remain public health problems

PARADIGM SHIFT IN THE TENTH PLAN

- **household food security& freedom from hunger to *nutrition security for the family and the individual;***
- **untargeted food supplementation *to screening of all the persons from vulnerable groups, identification of those with various grades of under-nutrition and appropriate management;***
- **lack of focused interventions on the prevention of over-nutrition *to the promotion of appropriate lifestyles and dietary intakes for the prevention and management of over-nutrition and obesity.***

Conceptually correct. Progress in modification of programmes from social welfare mode to nutrition mode of implementation- rather slow but improving

INTERSECTORAL COORDINATION TO IMPROVE NUTRITIONAL STATUS

- **improving purchasing power of the poorer segments of population through poverty alleviation and employment guarantee scheme**
- ***support for agriculture/food* processing sectors to address supply side**
- **demand creation for consumption of balanced food in adequate quantities through nutrition and health education**
- **universalizing the coverage, improving the content and quality of ongoing programmes**
  - **for improving nutritional status of vulnerable groups under the ICDS**
  - **combating anaemia, IDD & VitaminA deficiency**

Nutrition security has wider connotation than mere food security and freedom from hunger.

For nutrition security it is important to meet the macro and micronutrient requirements .

To ensure adequate protein intake from pulses, there is a need to increase access to pulses at affordable cost (perhaps through PDS) to the poorer segments of the population.

For preventing IDD it is desirable to improve access to iodised salt – perhaps through PDS .

There is an urgent need to invest in prevention of anaemia (affecting over 75% of Indian population), through dietary diversification and access to iron and iodine fortified salt through PDS .

CURRENT CONCERNS

Low birth weight – how to reduce

How to improve exclusive breast feeding for the first six months and timely appropriate & adequate complementary feed

What is responsible for continued low dietary intake& high under-nutrition rates in preschool child

What can we do to reduce anaemia in children

Massive dose Vit A -Where do we go now ?

Can we achieve universal access to iodised salt by 2010

What should we do to tackle over- nutrition

What are the priority areas for R&D

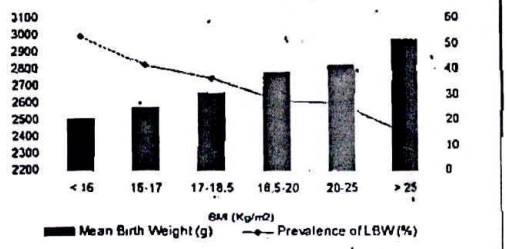
Maternal under nutrition –consequences and corrective interventions

Effect of pregnancy on nutritional status

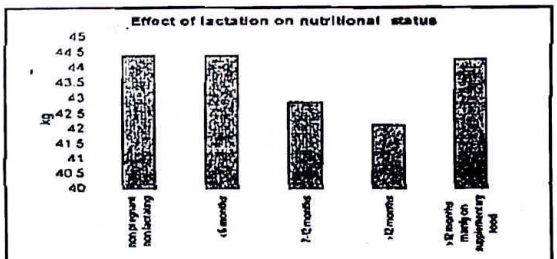
	Weight (kg)	MUAC(cm)	FFT (mm)
NPNL	42.3	22.5	10.5
1st trimester	41.5	22.2	9.6
2nd trimester	44.6	22.1	9.7
3rd trimester	46	21.7	9.2

- Women from poor households subsist on 16-1800kcal/day; there is no increase in dietary intake during pregnancy.
- Mean weight gain during pregnancy is 5-8 kg. There is a reduction in FFT indicating that there is mobilisation of fat.

Birth weights in relation to maternal BMI



Source: Tenth Five Year Plan 2002



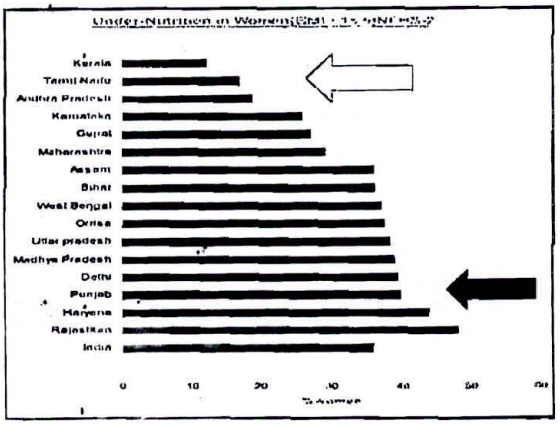
- There is no increase in dietary intake during lactation.
- There is reduction in body weight and FFT during first year of lactation suggesting that there is mobilisation of fat to meet the energy needs. Body weight improves after 12 months

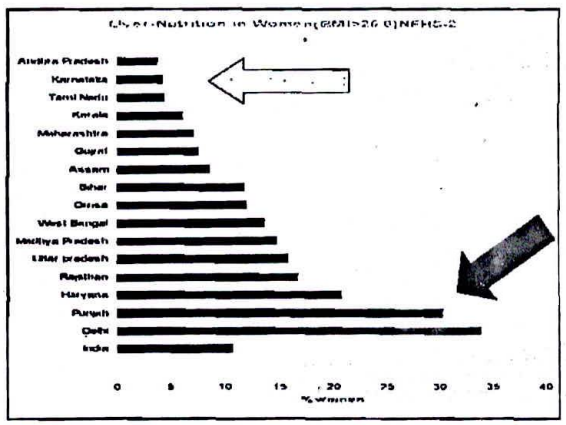
To sum up

Pregnancy and lactation impose additional nutritional demands;

Situations associated with deterioration in maternal nutrition and reproductive performance are:

- Pregnancy in undernourished adolescent girls
- Pregnancy in young adolescent girls
- Pregnancy in lactating women
- Pregnancy within two years of last delivery
- Dual stress of work at and outside home





Suggestions for 11 th Plan

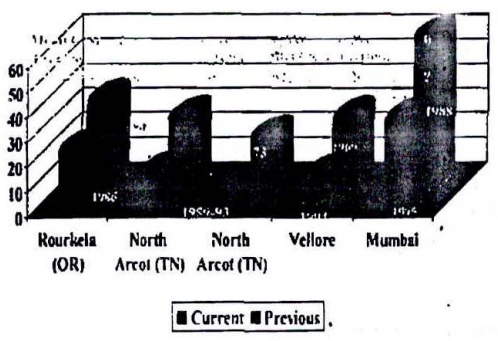
India has entered the era of dual nutrition burden; so it is important to identify undernourished and provide them with food supplements

Universal weighment of pregnant and lactating women

Identify pregnant women with weight below 45 kg provide 6 kg food grains for the remaining period of pregnancy

Identify lactating women below 40 kg and provide 6 kg food grains for three months or until she completes first year of lactation

Trends in Low Birth Weight



Low birth weight – 10 Plan strategy

- anganwadi workers to report all births in village,
- weigh all neonates delivered at home soon after birth and
- refer those weighing less than 2.2 kg to a hospital with a pediatrician.

Current status

- Feasibility demonstrated in small studies
- Anganwadis should have a 10kg tubular Salter scale for reasonably accurate weighing of neonate
- Need to have information about nearest hospital with a pediatrician
- Unfinished agenda - action will help in ⇩ NNMR

Birth weight and health

With improvement in survival new questions emerge.LBW is associated with

- Low growth trajectory; what is its contribution to under nutrition in later life
- ?Increased risk of obesity, diabetes and coronary heart disease in later life

R&D to assess these are needed

Mother child dyad is an inseparable unit
To achieve reduction in LBW and further decline in IMR, there is a need to to improve nutrition and health care for Mother

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Breast feeding – protection from under and over nutrition

How far have we succeeded in protection and promotion of breast feeding

Emerging challenges

Exclusive breast feeding in first six month of life is advocated because it provides

- appropriate nutrients in adequate quantity and promotes optimal growth in infants
- reduces the prevalence of infections
- protects against pregnancy

during the critical first six months.

It also provides protection against over-nutrition in infancy, childhood and in adult life

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Progress since then

1990 Innocenti declaration

1995 Bellagio consensus

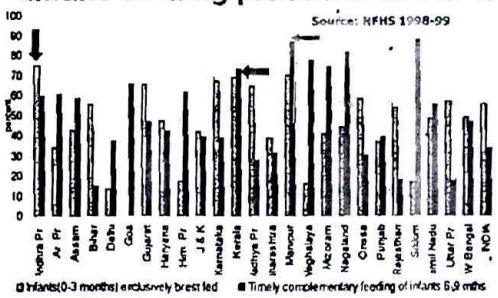
2000Assessment of Innocenti declaration

2001Global consultation on EBF and complementary feeding

2002WHA approval of the Global Strategy on Infant and Young Child Feeding

2002 Tenth Five year Plan strategies for IYCF – state specific goals for IYCF

Infant feeding practices -NFHS -2



Breast feeding is universal in India but exclusive breast feeding upto six months and introduction of complementary feeds at six months is not common

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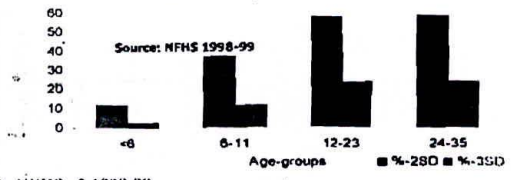
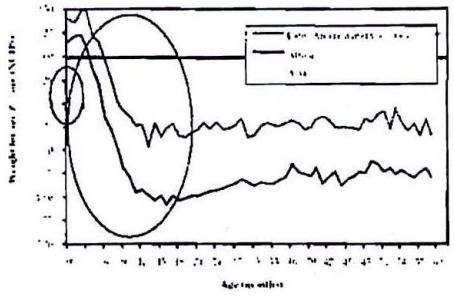
Prevalence of undernutrition (Weight for age % below -2 SD)



NFHS –2 1998-99

As a result of these faulty infant feeding habits there is steep increase in under nutrition between 6-23 months of age. Data from DLHS shows a similar picture . Urgent need to implement Tenth Plan strategy to achieve X Plan goals for IYCF and improvement in nutritional status.

Window of Opportunity for Malnutrition ?



Shrimpton et al (2001) In Repositioning Nutrition as Central to Development, World Bank, 2006

IYCF IN THE ELEVENTH PLAN

Universal breast feeding, early initiation of breast feeding, exclusive breast feeding for the first six months, complementary feeding initiated at six months, continued breast feeding for 24 months or longer.

Specific strategies for promotion of appropriate IYCF.

State specific goals for IYCF taking into account the current status.

Under nutrition in Preschool children

Role of poverty and poor caring practices

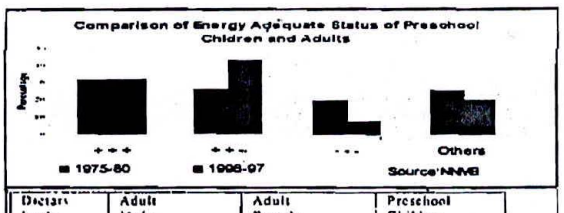
Screening , early detection and effective management can change the scenario

Mean Energy Consumption- NNMB 2000

Age groups	Males			Females		
	Kcals	RDA	% RDA	Kcals	RDA	% RDA
Pre-school	889	1357	65.5	897	1351	66.4
School Age	1464	1929	75.9	1409	1876	75.1
Adolescents	2065	2441	84.6	1670	1823	91.6
Adults	2226	2425	91.8	1923	1874	102.6

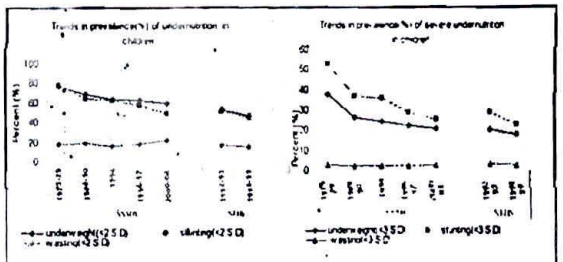
The gap between RDA and the actual energy intake is greatest in preschool children and lowest in adults

Poor caring practices rather than poverty appear to be the major factor for low energy intake in children in APL households



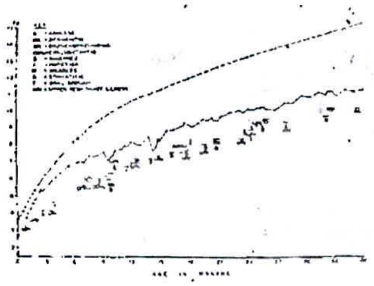
Dietary Intake	Adult Male	Adult Female	Preschool Children
+ + +	Adequate	Adequate	Adequate
+ + -	Adequate	Adequate	Inadequate
- - -	Inadequate	Inadequate	Inadequate

Over years there has been a increase in the number of *households where adults are getting adequate food but* children are not; this confirms that poor child feeding and caring practices rather than poverty is becoming the common cause of of undernutrition in preschool child



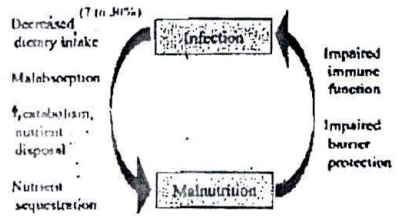
Over years there has been a decline in severe under nutrition (weight for age and height for age) ?due to better access to health care but not in wasting.
Health implications of wasting are not well documented
Does low wasting rate explain the South Asian paradox ?

Observational Evidence: Infection and Growth



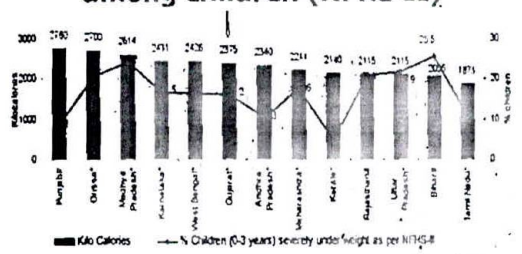
Mata *et al. Ciba Foundation Symposium* 1976; 42: 311.

Relationship Between Nutrition and Infection



Brown KH. J Nutr 2003; 133: 328S

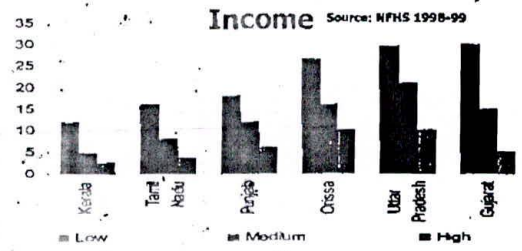
Energy Intake (INP) & Undernutrition among children (NFHS II)



Higher family dietary intake is not associated with lesser child under nutrition unless infections are controlled

Nutritional Status of children by Income

Source: NFHS 1998-99



Undernutrition rates among poor in Kerala are similar to undernutrition rates among the rich in UP. Appropriate IYCF and caring can lead to steep fall in undernutrition rates in preschoolers

Tenth Plan Goals

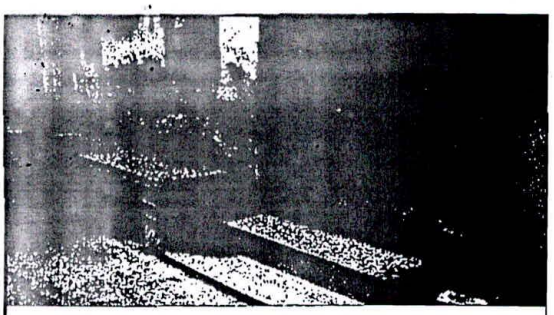
Reduce prevalence of

- severe undernutrition in children in 0-6 age group by 50%
- Mild and moderate under-nutrition from current level of 47% to 40%

Orissa has demonstrated that these goals are achievable with in the existing constraints if the suggested strategies are followed

Tenth Plan recommended strategies for reduction of undernutrition have not been operationalised

Available data from DLHS Phase I does not indicate that there has been much change in undernutrition since 1998-99.



Door step of the anganwadi in Delhi – children stand on the door step to get take home food supplements of Dalia , Murmura and Channa .Very small room serves as Anganwadi

INTERSECORAL COORDINATION AND CONVERGENCE OF SERVICES

What can an AWW do to reduce IMR

Weigh home born babies soon after birth; refer those who weigh less than 2.2 kg

Ensure early initiation of breast feeding

Ensure exclusive breast feeding for first six months

Collect infants in AWC on immunisation days so that infants get immunised on schedule by the ANM

Provide nutrition education and enable the mother to give adequate quantities of appropriate *complementary feeds from home food*

Advise regarding feeding during illness and convalescence

Act as depot holder for ORT,

Convergence of services

AWW can

- identify undernourished pre-school children by weighing them at least once every three months and give food supplements on priority to them;
- act as depot holder for ORS.
- assist in emergency referral
- Remind pregnant women to take IFA

Convergence of services

ANM will

- Immunize all infants, pregnant women and children as per schedule.
- Screen children – especially the under nourished ones for health problems and manage/ refer those with problems.

AWW will

- Assist ANM in organizing immunization health check ups in anganwadi;
- Assist ANM in administering massive dose Vitamin A

Immunisation rates can go up rapidly if there is good coordination between the AWW and the ANM

During immunisation days the AWW and ASHA can collect the children and pregnant women

ANM can immunise them in the anganwadi

PRI can help in awareness building and community mobilisation efforts

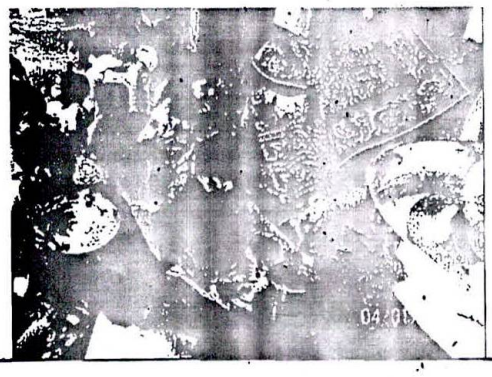
Supportive services through intersectoral coordination

Improved access to safe drinking water and sanitation will reduce infections

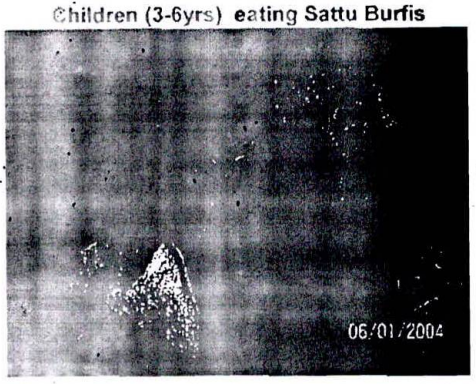
Improved access to health care for early detection& effective treatment of infections on health and nutrition days can reduce adverse impact of infection on nutritional status

Facilities for child care in the form of crèches, day care centres (perhaps through self help groups) can be made available at affordable cost for women working in formal & informal sectors

ANGANWADI IN HARIDWAR: majority are children in 3-6yrs



Children (3-6yrs) eating Sattu Burfis



Take home supplements

Pregnant and lactating women cannot come daily and so need once a month take home supply of food grains

Under threes

Stomach capacity is small in under three children

If they need additional food, it has to be given in small quantities in 3-5 sittings

Those with moderate and severe undernutrition irrespective of age

They can increase their intake substantially only if food is made energy dense and is given repeatedly in small quantities

Focus during the XI plan

Prevention of under-nutrition through nutrition education by interpersonal communication by ANM/AWW/ASHA aimed at:

- **ensuring appropriate infant and young child feeding practices**
- **promoting appropriate intra-family distribution of food;**
- **dietary diversification to meet the nutritional needs of the family**

Operationalising universal screening of all infants, preschool and school children for under-nutrition

INTERVENTIONS FOR THE MANAGEMENT OF UNDERNUTRITION

Normal children- encouragement to sustain the good infant feeding and caring practices

Mild undernutrition-- teach mothers care of these children with home available foods;

Moderate undernutrition: appropriate health and nutrition advice. If needed provide once a week take home food supplements (roasted cereal pulse oil seed mixed and powdered);

Severe undernutrition : give appropriate nutrition &health care; give take home food supplements; closely monitor these children; identify those who fail to improve under home management, those with infections and other complications and refer them to hospitals for care

COMBATING UNDER- NUTRITION THROUGH ICDS

- **Universalise access to ICDS services both in urban and rural areas**
- **Enhance quality & impact of ICDS through**
  - **improving the knowledge and skills of the AWW through effective training**
  - **creating nutrition awareness through IEC at all levels establishing effective supervision of the ICDS functioning**
  - **ensuring inter-sectoral coordination and *strengthening nutrition action by the health sector***
  - **improving monitoring so that problems in implementation of the programme are identified and appropriate mid course correction**

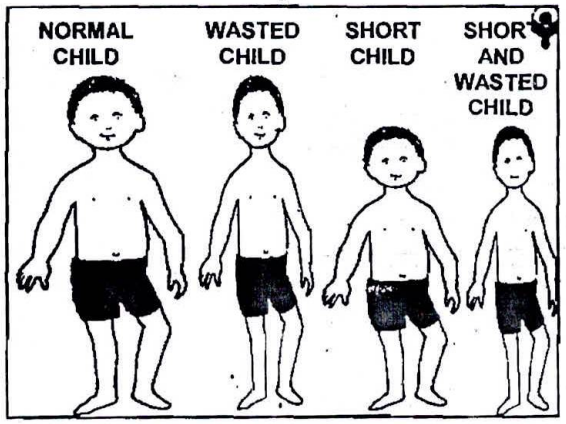
Assessment of nutritional status in dual nutrition burden era

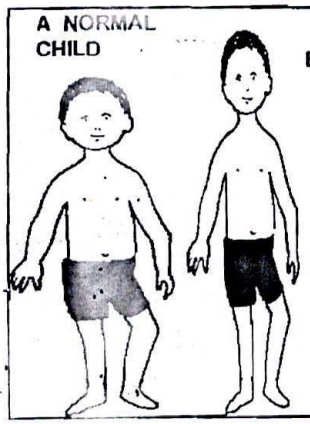
Are we using the right indices for early detection of both under and over nutrition?

Assessment of nutritional status in children and adolescents

Indices used for assessment are
- Height for age
- Weight for age and
- Weight/Height^2 for age

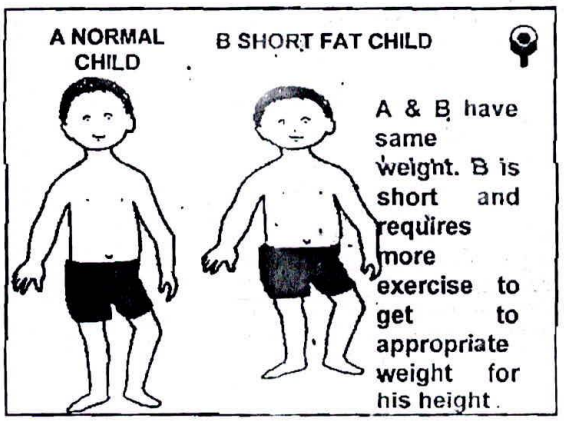
Of these weight for age is the most commonly used Weight/Height^2 for age has not yet found wide usage





A & B have same bodyweight.

B should get more food to reach appropriate weight for his height and continue linear growth



A & B have same weight. B is short and requires more exercise to get to appropriate weight for his height.

Weight for age and BMI for age

The WHO norms for BMI for age have been published

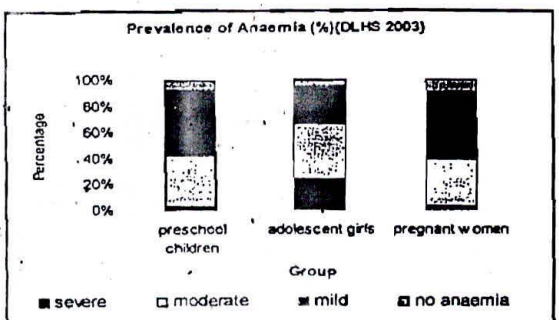
In clinical settings it worth while to put in the additional effort to compute BMI for age to assess nutritional status in children & adolescents because it will enable early detection of both under and over nutrition and appropriate management so that these children grow into healthy adults.

Micronutrient deficiencies

All effort for combating anaemia

Review Vitamin A supplementation

Universal access to iodised salt



Anaemia is a major problem right from childhood; it worsen during adolescence in girls

Advent of pregnancy further aggravates anaemia

Combating anaemia

Promote breastfeeding, improve complementary feeding

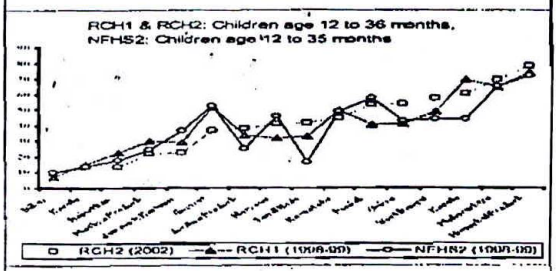
Dietary diversification

Double fortified salt

Screen all children and pregnant women for anameia

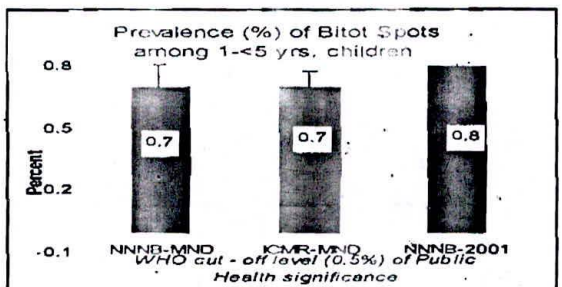
Detect and treat anaemia vigorously

Coverage Under Massive dose of Vitamin A



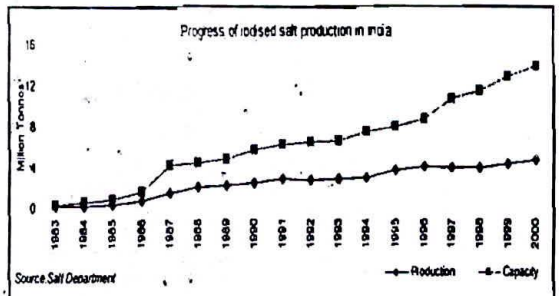
Coverage can be improved -Orissa, UP

But overall coverage remains low



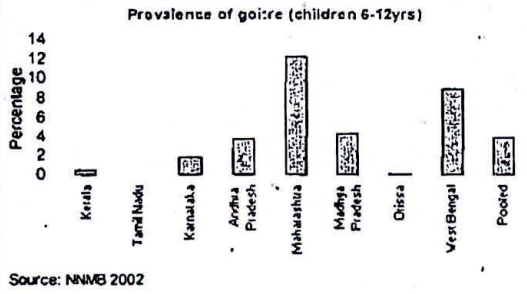
Prevalence of Bitot spot has declined

Is this the right time to review the massive dose vitamin A programme ?



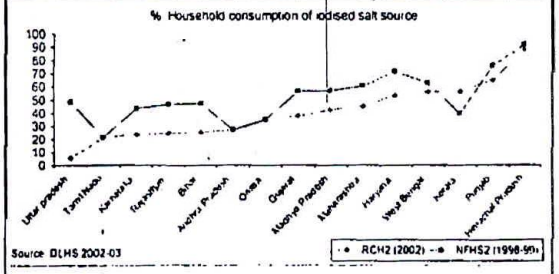
Huge installed capacity for producing iodised salt

This is under utilised. We supply iodised salt to other countries who attain high rates of iodised salt use



Source: NNMB 2002

Many coastal , salt manufacturing states with good health indices have low iodised salt use. Prevalence of goitre in these non endemic states is high



Decline in household access to iodised salt seen after the ban on sale of non- iodised salt was lifted can now be reversed . We can achieve 10thplan goals

Other initiatives needed

We are in the early phase of over-nutrition epidemic and can prevent its escalation by promotion of appropriate dietary intake and lifestyles

Nutrition monitoring and surveillance to enable the country to track changes in the nutritional and health status of the population to ensure that:

existing opportunities for improving nutritional status are fully utilized; and

➢emerging problems are identified early and corrected expeditiously.

Tenth Plan strategy

Research efforts to be directed towards:

➢review of the recommended dietary intake of Indians;

➢building up of epidemiological data on:

•relationship between birth weight, survival, growth and development in childhood and adolescence;

•body mass index norms of Indians and health consequences of deviation from these norms.

•Role of body fat and its distribution as determinants of cardiovascular diseases and diabetes

•Calcium and Vit D – and bone health

Poverty is no longer the driving force behind undernutrition nor affluence reason for overnutrition.

We have the knowledge, technology and resources including human resources to combat the dual nutrition burden

We should use this opportunity window effectively, to ensure that we improve the nutritional status of the population

Annexure VII

Eleventh Five Year Plan 2007-2012 To Treat and Prevent Micronutrient Deficiencies

Group III Members
Dr.S. Rajagopalan, Chairperson
Smt. Vandana Krishna, Shri Vijay Prakash, Dr. S.K. Nanda, Shri Balvinder Kumar, Smt. Anita Chaudhary, Dr. S.N. Shukla, Dr. Mahtab S. Bamji, Dr. Saraswati Bulusu & Dr. M. A. Farldi.

The State shall regard the raising of the level of nutrition and the standard of living of its people and the improvement of public health as among its primary duties

– Article 47 of the Constitution of India

Emerging Nutrition Scene

In recent years micronutrients and phyto nutrients have acquired central stage in the field of nutrition. Phyto nutrients in the foods have biological property for diseases prevention and health promotion. Truly nutritious diet is one which promotes health and prevents diseases.

Thus there is considerable interaction as between different micronutrients with respect metabolic function. From available data it may be reasonable to argue that in a healthy state, a dynamic equilibrium between micronutrients is achieved according to Dr.C.Gopalan. How exactly equilibrium is achieved is not yet well understood. Perhaps it is a god given gift. Some kind of auto regulatory mechanism may be helping the body to keep the dynamic equilibrium, necessary to maintain health as suggested by Prof. P.V.Sukhatmae.

Dr. Gopalan graphically describes that all nutrient in the food act collectively, synergistically, each nutrient playing part in an orchestra. "It will be poor strategy to converge, what is essentially an orchestra in to solo". In a real life situation, diets of the poor, even of some rich people, may be deficient in a number of nutrients.

The life cycle approach involves clear recognition of all the socio-biological phases in a human life, followed by identifying and addressing the nutrition requirements across all phases of human life from before conception to old age. Nutrition challenges vary as one progresses through the life cycle.

A new paradigm of the life cycle based nutrition must consider the double burden of childhood malnutrition and diet related adult diseases.

13 major studies and 600 published papers demonstrates clearly that the national nutrition goals articulated in 1995 namely a) reducing anaemia among pregnant woman to 25% b) eliminating blindness due to vitamin A deficiencies and iodine deficiency disorders to 10% each by the year 2000, are still unmet.

Nutritional anaemia is one of the India's major public health problem. Prevalence is high in all vulnerable groups (children adolescent girls, pregnant and lactating mothers) in all the states of the country."

The present review reveals that high prevalence has changed very little in the last 50 years indicating need for reviewing the current policies and programmes.

An overview of current micronutrient deficiency and steps to mitigate them in the country.

Nutrient	Current Estimated Status of deficiency in India	Current status of protection
Iron	Prevalence of iron deficiency anaemia in children under 3 years: 75% Prevalence of iron deficiency in women aged 15-49 years: 51% Annual deaths from severe anaemia: 22,000	Pregnant women consuming at least 90 iron-folate tablets: 30% Adolescent girls receiving weekly iron folate supplement: 10% Consumption of iron-fortified food (wheat flour/cereal flour/ salt). <1%
Iodine	Annual number of children born unprotected from mental impairment due to iodine deficiency: 6.6 million	Estimated households using adequately iodised salts (15 ppm) 37%

Contn....

Vitamin A	Percentage of children under 5 with sub-clinical Vitamin A deficiency: 57% Number of child deaths precipitated annually 330,000	Children under 5 receiving at least one dose of Vitamin A per year 50% Consuming of Vitamin A fortified foods oils/fats/others: <1
Zinc	Population at risk of inadequate zinc intake 26% Stunting in children under 5 years of age 47%	No significant intervention
Folic Acid	Number of neural tube birth defects per year. 50,000	No significant intervention

Percentage of adults and children whose nutrient intake is below 50% of RDA in rural areas. India 2001

ADULTS					CHILDREN				
Age	Protein	Cal	Iron	Vit A	Age	Protein	Cal	Iron	Vit A
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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Overview of Under nutrition status in India 1999

Percentage of Mothers					Percentage of children			
Age Group	Height <145cm	Anaemia	BMI <18.5	LBW 33%	Age Group	Under Weight	Stunting	Anaemia
35-49	13.7	50.5	31.1		<6months	4.9	15.4	71.7
32-34	12.3	50.5	35.0		11 month	17.5	30.0	71.7
25-29	12.4	51.4	39.1		12-23 month	58.5	57.0	77.0
20-24	13.0	53.8	41.8		24-36 month	58.4	56.5	72.0
15-19	14.7	56.0	38.8		4-6 years	60.1	49.3	60.0
					6-9 years	73.2	NA	60.0
					10-13 years	83	NA	60.0
					13-17 years	75.8	NA	60.0

Strategies for Control of Micronutrient Malnutrition

a a. Foods based approach

B b. Synthetic nutrient supplementation

c. c. Food based approach supported by limited use of synthetic nutrients as adjuncts.

d. Fortification of foods.

4 Recommendations for the 11th five year plan

1 Distribution of Iron and Folic Acid tablets and pharmacopical dose of Vitamin A in the 10th plan may be continued in the 11th five year plan. This will cover only at risk mothers and children with low hemoglobin, low intake of iron and vitamin A

2 A National programme of manufacturing and distributing salt fortified with iron, iodine, Vitamin A and Folic acid for which proven technology is available

3 Horticulture intervention - under this programme every school should have some important trees like Muringai and nutrition garden of greens

Contn....

4 Development of food mix and manufacture by women self help group for marketing in rural area. A food mix developed to serve as a complementary weaning food for TINP of Tamil Nadu is given below.

Complementary weaning food

Component	Grams
Wheat flour/Maize flour	35.0
Malted Ragi flour	9.0
Bengal gram roasted flour	15.0
Sugar (powdered)	25.0
Vegetable oil	15.0
Vitamin premix – 150 mg	
Calcium carbonate – 700 mg	1.0
Ferrous sulphate – 150 mg	
Total	100.0

Contn...

5. Formation of a nutrition development corporation as an adjunct to Food Corporation of India. This corporation can procure Ragi and other millets on the same lines FCI procuring rice and wheat. Using ragi and millet procured rice corporation will support the manufacture and sale of different food mixes enriched with Vitamin premix.

Contn.....

- 6. Major food based nutrition programme in India are
  Public Distribution System
- Antyodaya Anna Yojana
- Annapurna Scheme
- Sampoorna Gramin Rozgar Yojana
- Food for work

In stead of supplying rice and wheat in these programmes should supply enriched foods

Micronutrient enrichment of ICDS and Noon Meal Scheme

Contn...

7. A national programme to utilize services Home science colleges to develop dietary guidelines in the local language and guide women self help groups and NGOs in helping the households in the diversifying their diets. In addition with proper counselling to use basic and primary biotechnology tools in improving the quality of diets. These may be fermentation, using parboiled rice, use of sprouted grains, use of leafy vegetables etc.

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Concluding:

Micronutrients malnourishment is most devastating for preschool children and pregnant women, but it is debilitating for all age groups. It is also debilitating for the national economy as well. One of the important findings from the study of world bank that miero nutrient malnourishment robs many countries 5% of their national income through death and disabilities. Yet addressing this problem could cause as little as 0.3% of national income. The control of vitamin and mineral deficiency is most extraordinary development in the recent years. No other technology offers as large an opportunity to improve life in such a low cost in such a short time. With political will and adequate financial support micronutrient malnutrition can be reduced significantly within this generation.

Annexure VIII

Report of the Sub-group IV: Community Awareness on Nutrition

Working Group on Integrating Nutrition with Health for the XI Five Year Plan (2007-2012)

Members of Working Group

Chair Person
Ms. Indu Capoor, CHETNA
Members
Dr. Kamala Ganesh, Consultant (Obstetrics and Gynecologist) New Delhi
Prof.Anuja, Kasturi Sapan Hospital, New Delhi ,
Dr. Satpati, Director,Central Health Education Bureau, New Delhi
Dr. Arun Gupta, National Coordinator, RPNI, New Delhi
Shri. K.M Gupta,Director, Ministry of Finance, GOI
Shri Srikara Naik, Director (WCD) Planning Commission, GOI
Ms. Radha Ashrit,SRO ,Planning commission
Smt.Neelam Bhatia, Jt.Director,NIPCCD
Smt. Shashi P Gupta, Technical Adviser (FNB),MWCD,GOI

Contribution and Compilation by
Ms. Smita Bajpai and Ms. Rahat Bahl
CHETNA

Present Nutritional Scenario

- Malnutrition is a problem of considerable magnitude across various sections of the society.
- Incidents of diabetes, obesity and cardiovascular problems are escalating in urban areas.
- Calorie, protein and micronutrient deficiencies affects large segments of the population
- It contributes to greater economic and health burden particularly of urban society
- Infants, pre-school children, adolescent girls, expectant and nursing mothers and aged are among the most vulnerable groups.

Contributing Factors

- Mal nutrition is a social problem linked to the web of economic, political, cultural, biological and social factors particularly linked to the production and distribution of food, economic and gender inequalities.
- Poverty and ignorance continues to be major contributing factors.
- Recurring natural calamities affects the nutrition availability and intake of the population.
- Dietary changes compounded by lifestyle changes result in chronic degenerative diseases
- Limited access to food and under utilization of locally available nutritious foods

Nutrition concerns in life cycle

- **Infancy**
- Nearly 30% of all children born in India weigh less than 2.5 kg
- Low birth weight accounts for 50% of the infant mortality rates.
- Malnourishment during intrauterine state, to three years after birth impacts the cognitive, intellectual and physical development of human resource.
- Efforts to communicate the importance of exclusive breast-feeding in the first six months of life and timely introduction of adequate quantity of energy dense complementary food after six months have been initiated on a war footing

Contd....

- **Nutritional status of adolescents**
- There has been increase in the prevalence of obesity and micronutrient deficiencies.
- Gender discrimination in health care and nutritional intake among girls especially from poor families compounds the problem of nutritional intake.
- Under nutrition and anemia in adolescent girls leads not only to maternal mortality and morbidity but also to a higher incidence of low birth weight and peri-natal mortality

Contd....

- **Maternal Malnutrition**
- Anemia is pervasive among women in the India, nearly, 40-88% pregnant women are anemic, and suffer from its effects.
- **Nutritional Status of elderly**
- Old age population is likely to increase from 70 billion in 1995 to 141 million by 2020 and 508 million by 2100 according to World Bank Project.
- Challenge before us is to prevent physiological ageing getting converted into pathological ageing with chronic disease.

Recommendations

- National Nutrition Education Programme linked to all the public health services provided to the people
- Optimal use of the exisiting structures like the CHEB, NCERT, ICDS, PHS, to impart nutrition education across various sections of the country.
- Right based approach
- Life cycle approach
- Nutrition education
- Social mobilization
- Involve adolescents and young people as change agents
- School based approach

Contd....

- Nutrition should be incorporated into health, education and agricultural policies.
- Promotion of home and school gardening, fruit trees, fisheries and production of milk to combat micronutrient deficiencies. Advocacy and sensitization of parliamentarians and policy makers
- Mobilization of Development Machinery of Government and potential partners.
- Nutrition orientation programme can be developed for Programme managers
- Capacity building of the functionaries can be done by organizing awareness camps and community meetings

Monitoring and Evaluation

- **Policy level**
- National Infant and Young child Feeding Scheme(IYCF) with specific plan of action and allocated budget to expedit implementation of national Guidelines on IYCF
- The National Nutrition Mission(NNM) will be held accountable at Central level for the implementation of National Infant and Young Child Feeding Scheme.
- Hold six-monthly review meeting by State DWCD with all assigned authorities and take immediate action on divisions
- Set state inspection and monitoring committee facilitating state level nutrition monitoring ans survillance.

Contd.....

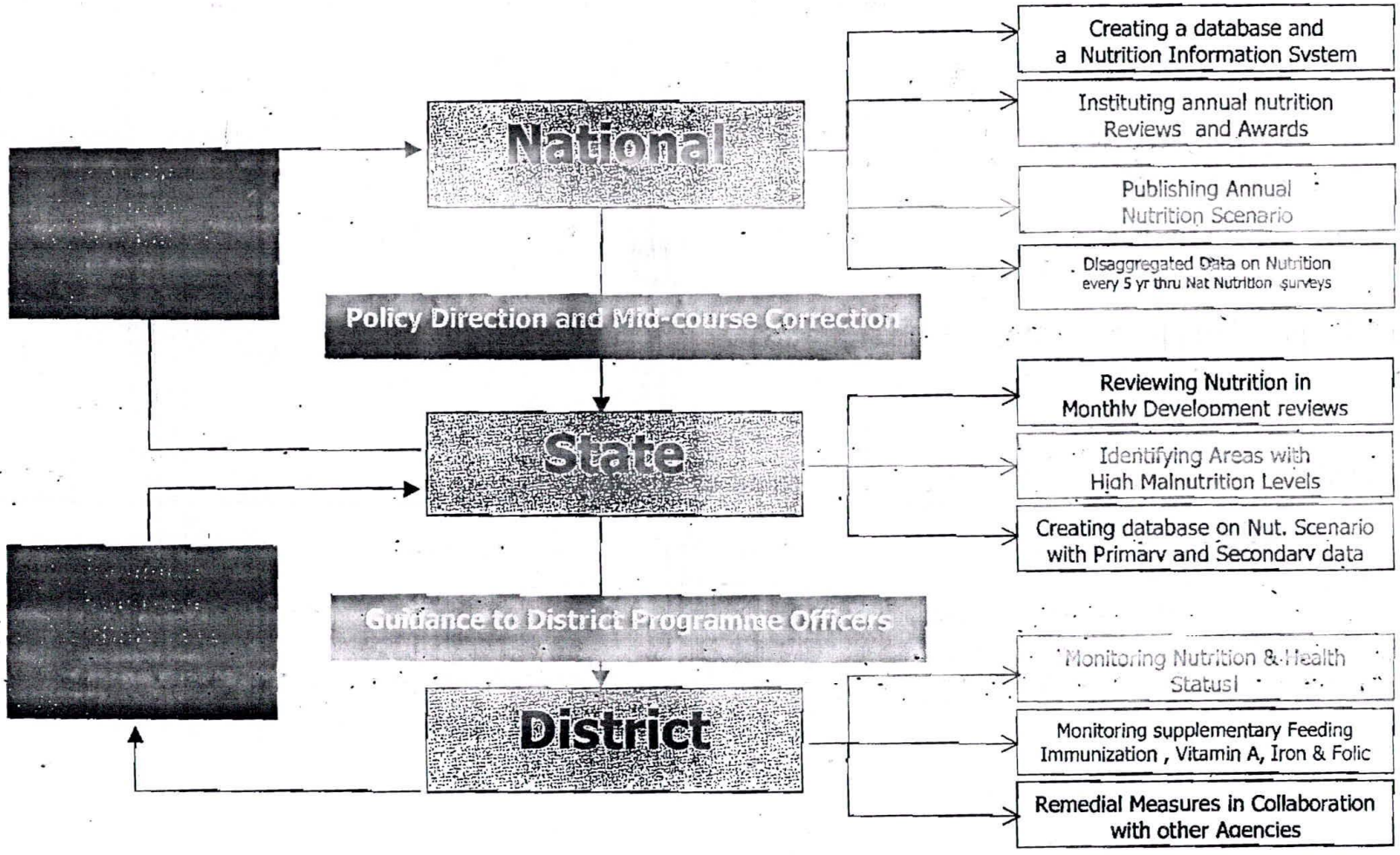
- **Operational level**
- Key indicators of state level goals include , early breastfeeding, exclusive breastfeeding for 6 months and timely complemetary feeding and mother's nutritional status.
- Investigate mechanisms to facilitate assessment of first hour support and baby friendly practices prior to renewal of registration of clinics.
- Effective implementation Infant Milk Substitute Act by notifying state nodal officers and CDPOs to act as Block resource persons to educate public and AWW on provosions of IMS Act and monitoring and reporting of the same.

Contd...

- The 'triple A' approach (Assessment, Analysis and Action) is important
- Proper monitoring has to be followed by evaluation mechanism, which can bring in the inputs into the ongoing nutrition and health programmes

Annexure IX

COMMUNITY BASED NUTRITION MONITORING MECHANISM



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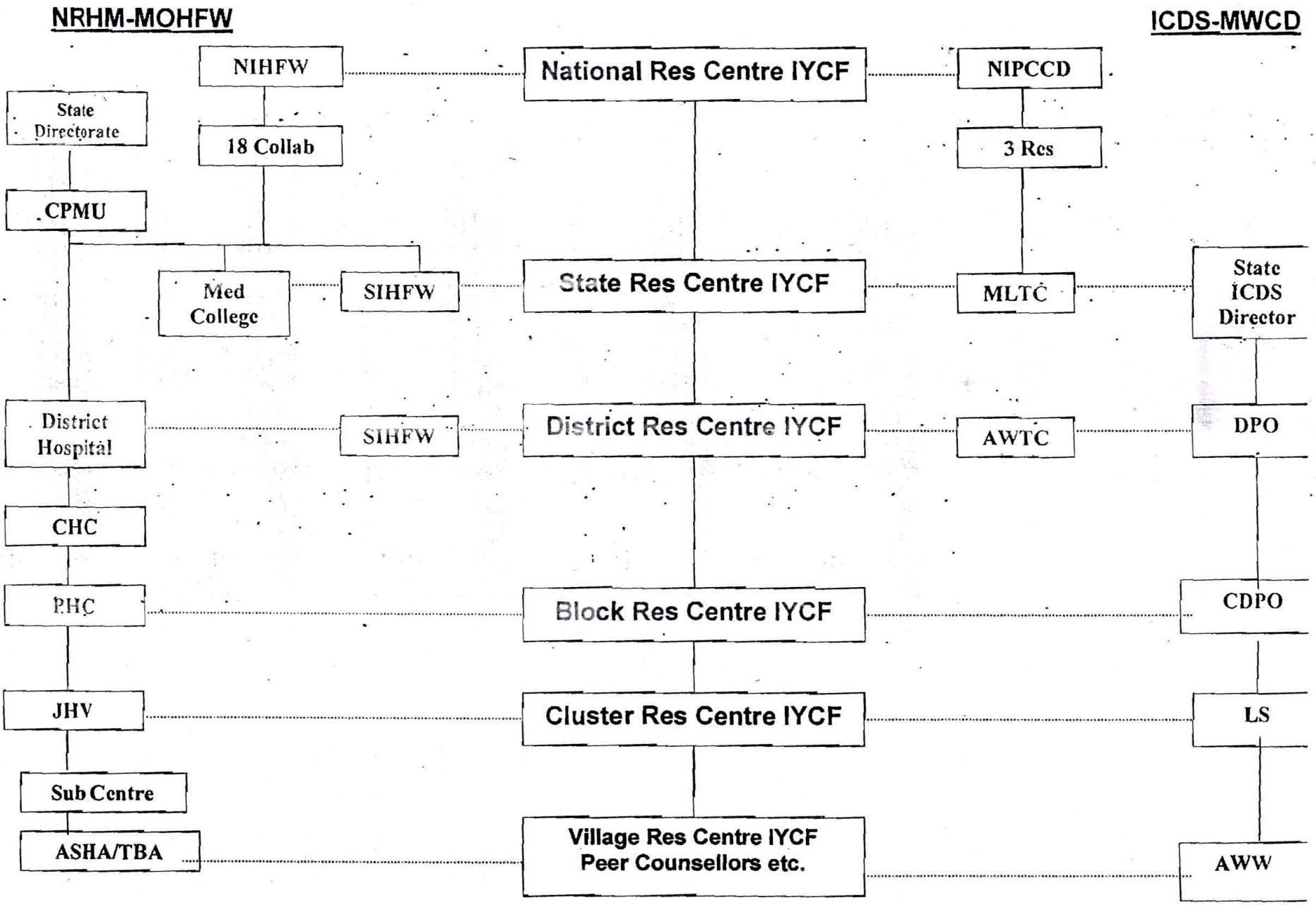
Source : Shashi P Gupta, Nutrition Module for WHO 2005

Annexure X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ICDS-MWCD
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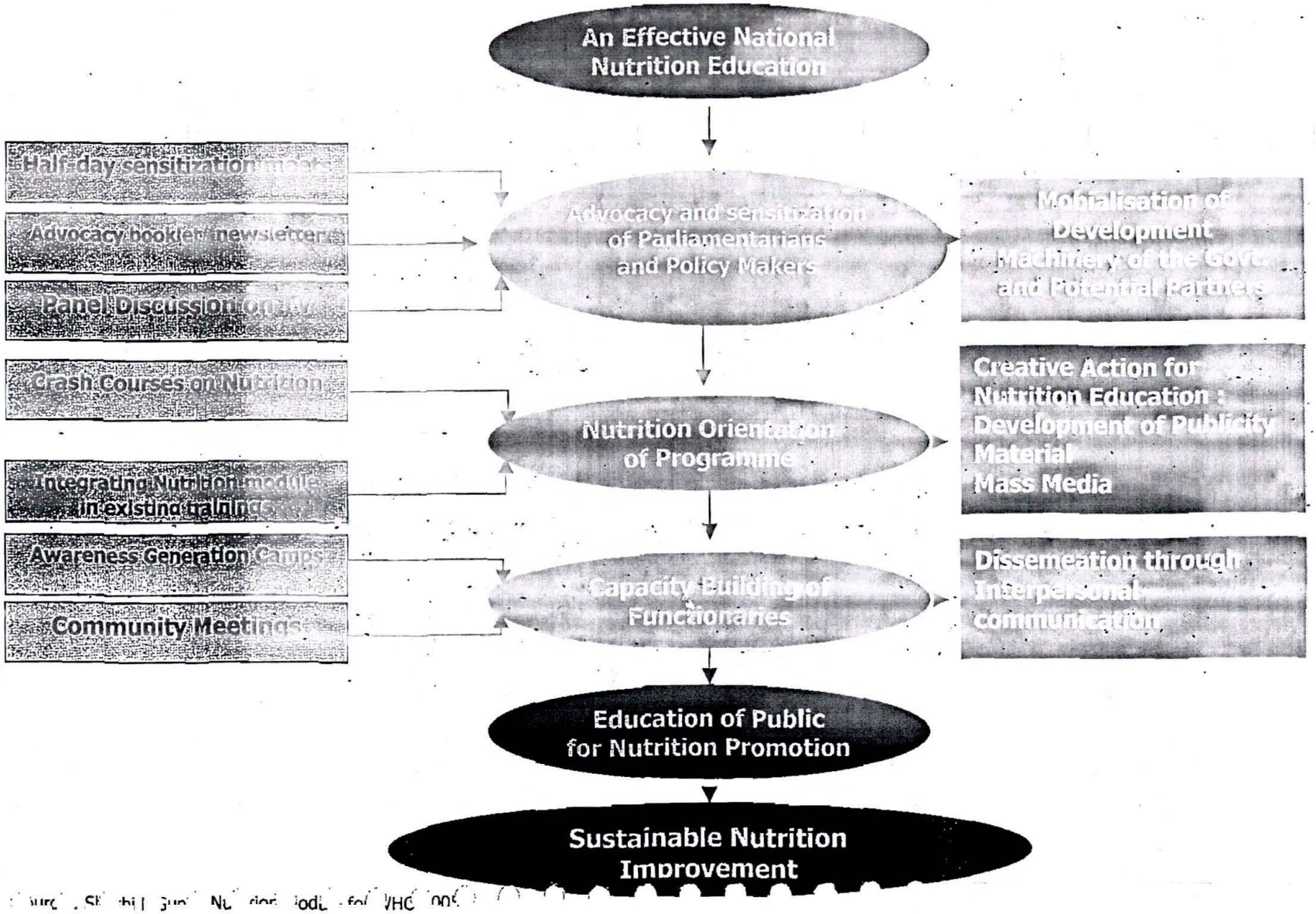
National Res Centre IYCF
NIPCCD
State Directorate
18 Collab
3 Res
CPMU
Med College
SIHFW
State Res Centre IYCF
MLTC
State ICDS Director
District Hospital
SIHFW
District Res Centre IYCF
AWTC
DPO
CHC
PHC
Block Res Centre IYCF
CDPO
JHV
Cluster Res Centre IYCF
LS
Sub Centre
ASHA/TBA
Village Res Centre IYCF Peer Counsellors etc.
AWW

NUTRITION EDUCATION FOR THE NATION



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Source : Shubhi Gupta, Nutrition Toolkit for VHC

Annexure XII

ROLE OF CONCERNED SECTORS TOWARDS NUTRITION

¤ Women and Child Development

- To reach all eligible children under six years, pregnant and lactating women in 14 lakh habitations with appropriate supplementary nutrition alongwith nutrition education.
- To reach information on appropriate infant and young child feeding practices for children under two years to every household.
- To screen grade II, III and IV malnourished children and concentrate on rehabilitating them by organising camps and supplying *sattu* like instant food for a period of about 3 months.
- To reach all adolescent girls from BPL families with food and micronutrient supplements.
- Launch a national level Nutrition Programme for pregnant women and girl child.
- To expand nutrition advocacy, sensitisation, capacity building and education of public to a national scale enlisting cooperation of Home Science Colleges, established NGOs etc.

¤ Agriculture

- To promote production of coarse grains, pulses, fruits and vegetables, milk, nuts and oil seeds.
- To promote nutrition oriented horticulture at the community and household levels.
- To undertake fortification of milk with vitamin A (Department of Animal Husbandry and Dairying).

¤ Food and Public Distribution

- To ensure food and nutrition security at the household level.
- **Antodaya Cards** for all households at risk of hunger to be introduced and all Antyodaya households to be supplied with either a vitamin-mineral premix or multiple fortified salt with a view to launch a frontal attack on hidden hunger caused by the deficiency of micronutrients.
- To set up **grain banks** in chronically food insecure areas and some tribal areas in Madhya Pradesh, Maharashtra and Andhra Pradesh which tend to remain isolated during monsoon season. 1000 Community Grain Banks to be established at the rate of Rs. 2.00 lakhs per grain bank with the help of Gram Sabhas and managed by Community Grain Bank Self Help Groups of Women.
- Households with vulnerable age groups like infant, pre-school child, adolescent girl, pregnant or lactating women to receive additional quota of foodgrains under TPDS.
- Including iodized salt, *sattu* like low cost instant infant food mixes, pulses, coarse grains and oil under public distribution system.

¤ Food Processing Industries

- To undertake fortification of wheat flour, cereal products, RTE energy foods for children with iron, folic acid, vitamin A etc.
- To promote production of health foods based on traditional foods of India.

¤ Education

- "Feeding Minds Fighting Hunger" – an initiative of FAO as a follow up of World Food Summit, involves introducing Food and Nutrition issues in primary, secondary and high school curricula needs to be given due consideration.
- To include nutrition in curricula of all formal and non-formal educational systems.
- To introduce B.Sc./B.A. degree in 'Community Nutrition' in all universities so that both boys and girls have equal opportunities for becoming nutrition literate.
- Mid Day Meal scheme and school health programme to include nutrition education as an integral component.

¤ Health and Family Welfare

- To give due emphasis to nutrition at every level.
- Nutrition and health education to be made an integral part of job responsibility of different level health functionaries.
- Joint Trainings and supervision of RCH and ICDS functionaries need to be evolved.
- Integrated planning and programming to address various forms of malnutrition need to be adopted.
- To ensure universal coverage under IFA and Vitamin A supplementation.

¤ Rural Development and Urban Development

- To ensure universal access to safe drinking water and sanitation.
- To improve purchasing power through poverty alleviation programmes.

¤ Information and Broadcasting

- To help create a climate of nutritional awareness in the country by launching a daily programme on 'Poshan Aur Swasthya' on AIR and Doordarshan.

Annexure XIII

PROPOSED NUTRITION SCHEMES FOR XI PLAN

	Schemes	Funds requirement (Rs. In crores)
1.	National Nutrition Education Programme (NNEP)	250
2.	Training and capacity building for improving IYCF practices.	50
3.	Development of District Nutrition Profiles to enable area specific planning.	20
4.	Establishing Nutrition Information System through ICDS (nutrition monitoring, mapping and surveillance).	30
5.	Strengthening FNB to serve as Secretariat for the NNM.	20
	Total	370 crores

Annexure XIV

RECOMMENDATIONS OF THE NORTH EAST CONSULTATION MEET ON NUTRITION HELD AT SHILLONG, MEGHALAYA

Recommendations

1. The picture that emerged from several expert presentations both by the Department as well as by eminent experts from other institutions and UNICEF is not very optimistic. The nutrition and health status of children and women in North East is far from satisfactory. For instance, the anaemia levels in women are quite high. The infant mortality rate and under-5 mortality rates in many of the North Eastern States are rather high and most surprisingly the percentage of children vaccinated against all diseases (all the six vaccine preventable diseases in children), is low inspite of high female literacy and matriarchal society of the North East. The North East, therefore, deserves more focus through various nutrition and health interventions of the Government.

2. The nutritional status of the vulnerable groups is the outcome of complex and interrelated set of factors. Many of these factors relate to health care, hygiene, sanitation, safe drinking water, public health measures etc. Needless to say, if the non-food factors are not taken care of, the supplementary food given to children through ICDS will have no impact. It would be just like a 'leaky pot' where food provided through mouth finds the way out through various infections.

3. The hilly terrain of some of the regions probably makes it difficult for the population to access health and welfare services. Innovative interventions of reaching health care, immunisation, health and nutrition education to the people need to be evolved on priority. Deworming of children and women in areas with high anaemia levels need to be implemented.

4. Capacity building of field personnel, training institutions and professional organisations in the region also deserve due attention.

5. Six critical areas were identified for action by the State Governments:

   i. Bringing nutrition issues centre stage.
   ii. Strengthening inter-sectoral coordination and creating synergy.
   iii. Establishing Nutrition Monitoring, Mapping and Surveillance System.
   iv. Ensuring Optimal Infant and Young Child Feeding practices.
   v. Addressing Micronutrient Malnutrition due to deficiencies of vitamin A, iron, folic acid and iodine through intensified programmes.
   vi. Creating nutritional awareness at different levels utilizing all available channels of communication.

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RECOMMENDATIONS OF THE REGIONAL CONSULTATION MEET ON NUTRITION AT PUNE, 19-20 MAY, 2005

The important **Recommendations** that emerged from the two-day Regional Consultation Meet on Nutrition for Western Region, covering the States/UTs of Maharashtra, Gujarat, Goa Dadra & Nagar Haveli, Lakshadweep and Daman & Diu, are enumerated here:

1. Giving high priority to malnutrition control

Nutrition is an input into development. Nutrition was considered critical for human and economic development and its neglect would adversely impact on health, cognitive development of children, productivity of the people, economic growth and slow pace of national development. Nutrition agenda, therefore, needs to be given high priority with greater investment for accelerating human, economic and national development.

A proactive approach for prevention and control of malnutrition was needed.

A revolution in nutrition programming to reach all infants and young children, to address every stage of the life cycle including adolescent girls, to strengthen micronutrient malnutrition control programmes and to monitor behavioural change was required.

2. State Nutrition Mission

Every State should have a State Nutrition Mission to reduce malnutrition and mortality rates among children and women on the pattern of Maharashtra Nutrition Mission. The Mission should focus on eradication of malnutrition among children and women, motivation and training of the cadre, accountability and flexibility, addressing mother child dyad and empowering community to address the problem of malnutrition on their own. After antenatal registration of the pregnant women, each case should be followed up to ensure child survival as well as optimal infant and young child feeding, immunization etc. Village Health Committees and Panchayati Raj Institutions need to be empowered.

3. Convergence for synergistic impact

Achieving convergence between Departments implementing developmental programmes was crucial for achieving the synergistic impact. The village level community based micro planning was essential to involve all the available functionaries, numbering about 17-20, in nutrition related services. A resource team was needed to build alliance between Government functionaries and the community so that Assessment, Analysis and Action could become a regular activity. Training institutions like NIPCCD, YASHADA etc could be utilised in micro planning exercise.

The Department of WCD being the nodal Department for implementing the National Nutrition Policy in the country needs to establish stronger linkages with Ministries of Agriculture, Food and Public Distribution, Elementary Education and

Literacy, Health & Family Welfare, Information & Broadcasting, Rural and Urban Development, Tribal Affairs to ensure improved food and nutrition security and access to health care. "Community Grain banks" in hunger hot spots to be managed by Gram Sabhas, Women Self Health Groups utilising grain surpluses should also be set up.

4. Utilising Civil Registration System

Civil Registration System need to be gainfully utilised to provide valuable information on sex ratio, low birth weight of the new borns as was being done in Gujarat. Computerised civil registration at district level interlinked to State level needs to be set up. Audit of all deaths needs to be undertaken.

5. Urban Malnutrition

The problem of malnutrition was invariably much worse in urban slums than in rural areas. Urban malnutrition, therefore, needs to be addressed more effectively.

6. Tribal Areas

Special attention was required to address the problem of malnutrition in tribal pockets.

7. Infant and Young Child Nutrition

National Guidelines on Infant and Young Child Feeding needs to be integrated in the curricula of various training institutions particularly for health and ICDS functionaries. A diploma in Lactation management needs to be instituted. Certification of crèches was necessary to prevent bottle feeding and other harmful practices concerning breastfeeding and complementary feeding.

The ICDS needs to focus on children under three years with due emphasis on the care of the pregnant women, new born care, breastfeeding issues, complementary feeding, hygienic practices for feeding infants and psychosocial stimulation through active feeding. Skill development training of ICDS personnel was an important prerequisite to focus on IYCF issues.

8. Nutrition and Health Education

A paradigm shift was required from Nutrition and Health Education (NHE) to Nutrition & Health Education and Communication (NHEC) in ICDS. Empowerment of women is an important objective of ICDS but NHEC from an empowerment and behaviour change perspective was one of the weakest links in ICDS.

NHEC has great potential to improve infant and young child feeding practices, improve utilization of services and reduce malnutrition in women and children under-three years. Reorientation of ICDS was needed to make time and resources available for NHEC on a regular and sustained basis, strengthening supervision and monitoring of NHEC. Adequate budget allocation for development, production and dissemination of quality NHEC materials was required. Training in communication and counselling and ensuring outreach of services through home visits also needed strengthening.

NHE should focus on communication for behaviour change, should address family as a whole and not just the women, and should have gender sensitivity built into it.

NHEC has not been given a chance so far. It needs to be taken up as a service and successful experiences giving cost benefit analysis and operations for best practices need to be documented.

Strong networking between Government, Home Science and Medical Colleges, international organisations, private sector etc was needed. The role of media and opinion leaders in NHEC need to be recognized and their representation ensured in various nutrition and capacity building workshops etc so that they serve as the secondary target group and contribute to the communication and advocacy efforts by covering nutrition issues regularly.

9. Networking with Home Science Faculties and Colleges of Standing

Home Scientists with foods and nutrition specialization were a large untapped human resource that needs to be utilised for improving the nutritional status of families and communities. Premier nutrition teaching institutions need to be identified and regional and zonal centres for nutrition promotion established. These centres should help in building the capacities of extension Home Scientists/Nutritionists in improving the nutrition situation in their state or region. International organisations working in the area of food and nutrition could come forward and support the setting up of such centres by providing necessary infrastructure, expertise and support.

Good nutrition and dietetic practices need and must be a part of daily life if people are to be healthy. It was, therefore, important that those who do not pursue a professional career in food and nutrition must have **"NUTRITION LITERACY"** so they do not fall a prey to wrong mass media advertisements. A compulsory course on **"NUTRITION LITERACY"** needs to be included by UGC in all academic courses for all students.

It is high time to work towards **"NUTRITION REVOLUTION"** in the country.

10. Improving status of Training Centres.

The present status of Middle Level Training Centres (MLTC) deserved strengthening in terms of honorarium, career management, motivation and recognition to attract properly qualified trainers and Principals on a sustainable basis (currently the Principal was drawing only Rs. 4900/- and Trainer Rs. 4500/- per month)

11. Involvement of Women's Technical Education and Research Institutes

The area of work of Women's Technical Education and Research Institutes of Ministry of HRD has been currently extended to cover BPL population of urban areas including physically and mentally challenged people although it is basically a rural based project. There are 450 community polytechnics in the country (Maharashtra

having 37 each) with a fund allocation of Rs. 7.00 lakhs. Networking with community polytechnic of India would help reach nutrition and health information to villages. Rural Diet Counselling Centres could be started in each extension centres of these Institutes.

12. Formation of Nutrition/Diet Council of India

A Nutrition or Diet Council like the Medical Council of India is needed to promote the cause of nutrition and dietetics in the country. Quality management of various courses and training programmes in this field, employment potential, recruitment details for this important paramedical course, associated matters like nutrition/health tourism and hospitality industry, intellectual property rights, nutraceuticals etc factors could be looked into by such a Council. All these are needed for improving the quality of teaching in this area and its utilization in the overall nutrition and health delivery system of the country.

13. Micronutrient Malnutrition Control

A holistic approach for addressing the widespread problem of micronutrient malnutrition was required. The prevalence of vitamin A deficiency (VAD) being still of public health significance required concerted efforts for its elimination. The prevalence of VAD was high in 3-6 year age group also besides 1-3 years and hence it was necessary that Vitamin A Supplementation Programme was extended to children upto the age of six years, as was being done in other South East Asian Countries also.

Nutritional Anaemia continued to be a cause of concern as its prevalence was above 70% in high risk groups namely infants and young children, adolescent girls, pregnant and lactating women.. Iron and folic acid supplementation for adolescent girls needs to be undertaken on a national scale on top priority. Similarly, IFA supplementation for infants who were not covered so far under the programme deserved top priority.

The Ministry of Consumer Affairs, Food and Public Distribution need to make adequately iodized salt available through the Targetted Public Distribution System. Supplementary Feeding Programmes under ICDS and Mid Day Meal to use only adequately iodized salt.

14. Fortification of Common Foods

Fortification of common foods is one of the important strategies for addressing the problem of micronutrient deficiencies in a short time in cost effective manner. Fortification of wheat flour with iron and folic acid and double fortification of salt with both iron and iodine need to be taken on priority.

The supply of wheat through various Government schemes, PDS needs to be changed to fortified wheat flour. States with some reservations could initiate a pilot project.

Roller Flour Milling industry needs to be motivated to wheat flour fortification till mandatory provisions are enacted.

The Integrated Food Law being enacted may include micronutrient fortification of foods as per the CODEX guidelines.

The Information, Education and Communication (IEC) on wheat flour fortification was also required to create awareness among the people. States could examine accessing funds for Staple Food Fortification Programme from GAIN (Global Alliance for Improving Nutrition) through their State Nutrition Mission/Fortification alliance.

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RECOMMENDATIONS OF THE REGIONAL CONSULTATION MEET ON NUTRITION HELD AT BHUBANESWAR ON 18-19 JULY, 2005

The important Recommendations that emerged from the two-day Regional Consultation Meet on Nutrition for Eastern Region, covering the States of Bihar, Jharkhand, Orissa and West Bengal, are enumerated here:

1. **Malnutrition is a drain on Economy and a silent emergency requiring urgent multipronged action**

   - Malnutrition is a drain on economy and adversely affects national development. Thus, malnutrition was a Silent Emergency and required innovative measures for its prevention and control. A multipronged action involving all developmental sectors was required urgently to address the problem of malnutrition in a time bound manner.
   - The action and progress to be monitored in months and not years.
   - Urban malnutrition was as bad as rural picture if not worse, and deserved due emphasis.

2. **Panchayati Raj Institutions for convergence and effective delivery of services at periphery**

   Out of the six services provided through ICDS, three and a half services concerned health sector. Convergence of services was important and the Panchayati Raj Institutions could be utilized to achieve convergence. Interface between Government and PRI system needs to crystallize.

3. **Food and Nutrition Mission at the State Level**

   State Level Coordination Mechanism is essential for policy initiatives and greater synergy between various programmes. A centrally sponsored Food and Nutrition Mission at State level could be the best option to address the problem of malnutrition in a mission mode.

4. **Better Linkages between ICDS and Department of Elementary Education and Literacy**

   - "*Balwarg*" comprising of 3 – 6 year old children need preschool education as well as supplementary feeding and micronutrient supplements. Such children covered under '*Sarva Shiksha Abhiyan*' should be provided quality preschool education and nutrition through convergence between MID Day Meal and ICDS as Education has a separate teacher for '*Balwarg*'.

   - The existing training institutions under Education like Block Resource Centres (BRCs), Cluster Resource Centres (CRCs) (for a group of villages in good middle school) and DIETs should be utilized for training ICDS personnel too. One training centre could take care of two ICDS projects.

- Joint Committee of Education and ICDS should look after both programmes for better convergence.
- Nutrition Education should become an important service under ICDS.
- Syllabi of all formal and non-formal educational systems should have basic nutrition information. The syllabi should be reviewed and nutrition content incorporated utilizing the expertise of FNB and NIN.
- School children can prove to be the best change agents. NIN has converted FAO "Feeding Minds Fighting Hunger" publication to suit Indian system. The Indian module on Feeding Minds Fighting Hunger should be incorporated in primary, secondary and senior secondary school curricula.

5. Effective positioning of Infant and young child Feeding in ICDS, RCH, NRHM etc.

- Optimal breastfeeding i.e., early initiation, exclusive breastfeeding for the first six months and continued breastfeeding upto two years and beyond alongwith complementary feeding introduced at six months of age, was considered critical for child survival, development and health. Exclusive breastfeeding for first six months and continued breastfeeding for another six months along with adequate complementary feeding has shown to reduce infant mortality rate by 16% (Lancet 2003).
- Priority to infant and young child feeding has to be reflected in national/state/local plan resources and goals.
- Effective positioning of infant and young child feeding in ICDS, Reproductive and Child Health, National Rural Health Mission and others – focusing on best possible start to life, survival, growth and development, maternity protection and family support is required.
- Adopting / translating National Guidelines on Infant and Young Child Feeding, integrating these in the training curricula under ICDS, Reproductive and Child Health, Panchayati Raj Institution and Rural Development needs to be undertaken on priority.
- ICDS monitoring to include indicators on early initiation of breastfeeding, exclusive breastfeeding for first six months, complementary feeding with home based foods from six months along with continued breastfeeding up to two years or beyond.
- Facts like breastfeeding prevents obesity, it has economic value; exclusive breastfeeding prevents HIV in infants, etc. need to be utilized in Behavioural Change Communication.
- Reposition ICDS with a focus on under twos. Deliver IYCF counseling as a service in ICDS.
- BPNI's network in States and Districts to be utilized for skill development training, capacity building and awareness generation on IYCF.

6. Promoting production of low cost processed and fortified complementary foods for infants and young children at District, Block and Village levels

- Production of low cost processed and fortified blended foods for ICDS beneficiaries utilizing Self Help Women Groups needs to be promoted at district and block levels.

- Self Help Women Groups to be the owners of such production units (2 MT capacity/day) with one time financial assistance as has been done in Orissa.
- Public – Private partnership for reaching 'Sattu' like instant infant mixes at village shops should also be explored.

7. Addressing critical stages of life cycle adopting life cycle approach

- Focus on prenatal care and counseling, under threes, pregnant and lactating mothers and adolescent girls.
- Emphasis on early action and preventive approach is required.

8. Joint Training and Supervision of ICDS and Health personnel for synergetic impact

- Joint training of ICDS and health personnel is essential.
- Using a common mother-child growth and development card by RCH and ICDS and an entitlement card for unreached population would be desirable.

9. Monitoring of performance under ICDS to be based on "Outcome indicators" and not "Process indicators" alone

Monitoring of ICDS through Monthly/Quarterly Progress Reports to be based on "Outcome" indicators like improvement in nutritional status of the children rather than "process" indicators like receiving supplementary food, preschool education etc.

10. Ensuring 100 % weighing efficiency in ICDS

- Weighing efficiency was reported to be directly proportional to reduction in malnutrition levels.
- Universalisation of ICDS should also mean 100 % registration of all children under three years, all under threes to be weighed and all under three families to be provided with mother child card.

11. Addressing micronutrient malnutrition in a holistic manner

- Micronutrient malnutrition control requires concerted action on all the five major strategies viz. Dietary Diversification, Supplementation, Food Fortification, Horticultural Interventions and Public Health Measures.
- Ensuring universal coverage under Iron and folic Acid supplementation programme and extending the anaemia control programme to cover infants and adolescent girls needs to be taken up on priority.
- ICDS workers could identify moderate and severe anaemia through pallor of mucosal membranes and take remedial measures.
- Importance of iodine in brain development to be emphasized in communication efforts.
- Vitamin A supplementation coverage should be universalised for children under 3 years and all efforts made to cover children up to 6 years. Household and community production and consumption of red, yellow and

green coloured fruits and vegetables besides milk and eggs needs to be promoted.

12. Fortification of Foods

- Multipronged strategies with due focus on fortification is required for addressing micronutrient malnutrition.
- Micronutrient malnutrition has been effectively addressed through fortification in West and also in some South American and African countries. Fortified wheat flour in Darjeeling district of West Bengal demonstrated a significant reduction in anaemia (15 – 16 % in adolescent girls) in 18 months period.
- Supplementary foods for ICDS beneficiaries and Mid Day Meals for primary school children should be fortified with essential micronutrients.
- Iodised salt and fortified supplementary foods should be made available to people through fair price shops.
- Fortification of cereals with iron and folic acid, salt with iron and iodine needs to be adopted on priority.

13. Vigorous Awareness Campaign on Nutrition

- The link between nutrition education and health needs to be emphasized. Awareness on consequences of malnutrition on physical and mental growth, school performance, productivity and economic growth needs to be generated.
- Nutrition education should address family as a whole and not just the women. Nutrition education should focus on communication for behavioural change.
- Advocacy and sensitisation of policy makers and Parliamentarians should be undertaken to create "Administrative" and "Political" will.
- Networking with professional institutions like Food and Nutrition departments of Home Science Colleges, Medical Colleges and NGOs was needed to extend the coverage under nutrition education.
- Electronic media to be involved in Advocacy and Behavioural Change Communication.
- All commercial advertisements need to be censored and celebrities need to dissociate themselves from the same.

14. Achieving Convergence between ICDS and RCH

- Observe Nutrition and Health days in AWCs to increase outreach coverage with focus on ANC, weighment, immunisation and micronutrient supplementation.
- Regular subcentre level meetings for better coordination between AWWs, ANMs and PRI functionaries.
- Continuous capacity building of AWWs and ANMs.

15. Nutrition Monitoring, Mapping and Surveillance

- The successful experiences of West Bengal and Orissa on reducing malnutrition through Nutrition Monitoring, Mapping and Surveillance need to be replicated in other States.
- Community based monitoring to be adopted and Social audit at the village level using social maps/para-maps done on a regular basis.
- Resources available with the ICDS could be utilized effectively for monitoring and data analysis.
- The **Monitoring Procedure** could be as under:
    - Data compilation at the Project level by CDPO.
    - District level compilation by the DPO
    - Electronic transmission and state level compilation at the Directorate.
    - Data analysis with various indicators
    - Nutritional and growth monitoring on the basis of these indicators and available resource maps.
- Coordination Committees at State and District levels, monitoring Committees at Subdivision and Project levels and Village Level Committee at the AWC should be the **Monitoring Infrastructure**.

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Annexure-XV

RECOMMENDATIONS OF THE FIRST MEETING OF THE INTER MINISTERIAL COORDINATION COMMITTEE ON MICRONUTRIENT MALNUTRITON CONTROL HELD ON 30th MAY, 2006 AT 11.00 A.M.

1. Micronutrient Malnutrition continues to be unabated in the country. Ensuring adequate vitamin and mineral status to maximize human potential should be considered a priority.

2. The National Nutrition Policy advocated the need for intensified programmes for reduction and elimination of micronutrient deficiencies way back in 1993. Several recommendations from national and international organisations have emerged thereafter for addressing micronutrient malnutrition adopting a holistic approach, on priority, to improve productivity and economic growth of the country.

3. Food fortification has been successfully adopted by the West. In India also some States have taken up food fortification in a big way with convincing results like wheat flour fortification in Gujarat. The States of West Bengal, Andhra Pradesh, Chattisgarh and Bihar have also adopted food fortification in different ways with good results. There is need to adopt food fortification in a big way in the country to accelerate the reduction in malnutrition levels in the population.

4. Nutrition Monitoring, Mapping and Surveillance particularly of micronutrient deficiencies are also negligible. The MHFW should take up this task with the help of NNMB and NIN and create a database on micronutrient deficiencies. NNMB must be expanded to all States/UTs to provide State level as well as disaggregated data up to district level of various micronutrient deficiencies. The FIVIMS experience of Department of Food and Public Distribution should also be utilised in developing a system for nutrition monitoring, mapping and surveillance.

5. IFA supplementation for infants and adolescent girls recommended since long should be initiated immediately by the MHFW.

6. The Public Distribution System should include pulses, soybean, and soya fortified wheat flour so that poor people could be provided food with important nutrients at reasonable rates.

7. The Ministry of Agriculture should consider fixing minimum support prices for pulses also so that the production and consumption of pulses could be promoted in the country.

8. The Ministry of Food Processing Industries may extend financial support to the industries for production of fortified food by way of meeting the cost involved in purchase/modification of equipments.

9. The MHFW should provide specifications for DFS under the PFA so that the rate contract for the same could be fixed for the benefit of different States/UTs.

10. There is need to regulate the prices, concentration of micronutrients, safety, packaging of fortified foods so that the shelf life of the product is ensured and the consumer is not cheated. The Central Monitoring Body for food fortification with adequate budget allocation needs to be set up.

11. Awareness about the consequences of micronutrient malnutrition was extremely important for people to make efforts to prevent and control the same. The Ministries of Health & Family Welfare and Women & Child Development should create such awareness utilising all available channels of communication.

12. Ministry of Information and Broadcasting should contribute effectively in creating a climate of nutritional awareness in the country.

13. A National Workshop on Food Fortification should be organised to inform various States/UTs about the importance of food fortification and how it could be made feasible.

14. The MHFW, which is implementing the three major programmes on micronutrients, should include specific programmes in the XI Five Year Plan for addressing micronutrient malnutrition in a holistic manner.

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Working Group on

"Access to Health Systems including AYUSH"

Government of India
Planning Commission

D.O. No.G-20018/3/2006-P&E

July 31, 2006

Dear

Planning Commission has constituted a Working Group on " Access to Health Systems including AYUSH" under the chairmanship of Secretary (AYUSH). Secretary (AYUSH) in turn had constituted Sub-Groups on following five issues:

(i) AYUSH Education.
(ii) Standardization and Quality Control of AYUSH drugs.
(iii) Research & Development.
(iv) Medicinal Plants.
(v) Mainstreaming of AYUSH.

The above Sub-Groups have submitted their reports which were discussed in the meeting of the Working Group chaired by Secretary (AYUSH) recently (Minutes enclosed). On the basis of a discussion in the Working Group and the Sub-Groups the Department has formulated its 11th Five Year Plan proposals. The change in priorities and schemes in the 11th Plan are reflected in the introduction chapter. The Department proposes to scale up Plan provision for Department of AYUSH from Rs.1057.26 crore (actual expenditure of first four years of the 10th Plan and B.E. of 2006 – 2007) to Rs.2473.45 crore in 11th Plan. The Department has been very cautious and realistic in making its Plan projections and it is hoped that by improving utilization of Plan funds and the quality of Plan expenditure the Department would be able to come back to the Planning Commission for raising its Plan provision midway during the 11th Plan.

Please find enclosed herewith the proposals of the Department of AYUSH for 11th Five Year Plan for AYUSH sector which have been duly approved by Secretary (AYUSH).

I am also enclosing the copies of the reports of the 5 Sub-Groups constituted by Secretary (AYUSH) on the above mentioned five subjects. The 11th Five Year Plan proposals alongwith the 5 reports of the Sub-Groups may be treated as report of the Working Group on "Access to Health Systems including AYUSH" constituted by the Planning Commission under the chairmanship of Secretary (AYUSH)..

With regards,

Yours sincerely,

(SHIV BASANT)

Prof. N.K. Sethi,
Adviser (Health), Planning Commission,
Yojana Bhawan,**New Delhi.**

INTRODUCTION

Department of Indian Systems of Medicine and Homoeopathy (ISM&H) was established in 1995 and renamed as Department of Ayurveda, Yoga & Naturopathy, Siddha, Unani and Homoeopathy (AYUSH) in November, 2003. There has been a three fold increase in the Plan budget of the Department in the 10th as compared as 9th Plan, most of which was on account of scaling up of the budget provision in the last two years of the 10th Five Year Plan i.e. 2004 – 2005 and 2005 – 2006 in line with the declared policy of the Central Government to increase the budgetary provision for AYUSH sector for mainstreaming it in the national health care delivery network.

Department has utilized the increased budget provisions in the 10th Plan for raising standards of AYUSH education, upgradation of national institutes set up by the Department to lay down benchmarks for teaching, research and clinical practices of different systems. With a view to prevent the mushroom growth of sub-standard colleges, the Indian Medicine Central Council and Homoeopathic Central Council Acts were amended in 2003 to provide for prior permission of the Central Government for establishing new colleges, starting new and higher courses, increase in the admission capacity in Ayurveda, Siddha, Unani and Homoeopathy colleges. The Centrally Sponsored Schemes of Strengthening of Institutions was effectively utilized for providing assistance to Government and Government aided colleges for ensuring conformity with the minimum infrastructural standards laid down by the statutory bodies. The Department would like to develop Government, Government aided and private but not for

profit AYUSH colleges to the level of Centre of Excellence by providing enhanced scale of assistance on the basis of college specific upgradation plan which will clearly outline the responsibility of the college management and the State Governments for effective utilization of central assistance to be provided in the 11th Plan for the upgradation of these colleges.

Department of AYUSH attaches very high priority to laying down of pharmacopoeial standards for single and compound formulations, scientific validation of herbo-metallic compounds, standardization and quality control of AYUSH drugs. It is proposed to set up a Pharmacopoeial Commission for Indian Medicine in the 11th Plan which will be housed in the newly constructed building of the Pharmacopoeial Laboratory of Indian Medicine, Ghaziabad. The basic objective is to create an independent scientific body which will undertake laying down of pharmacopoeial standards and their revision from time to time on a more permanent footing. The Centrally Sponsored Scheme of Drugs Quality Control in the 10th Plan was utilized for providing financial assistance to the State Drug Testing Laboratories and State Pharmacies. The experience has not been a happy one as inspite of provision of financial assistance, State Drugs Testing Laboratories have been functioning at a sub-optimal level due to a variety of managerial problems. Offtake under the strengthening of enforcement mechanism component has also been very poor. The Department would like to shift the emphasis in the 11th Plan from strengthening of State Drug Testing Laboratories to utilization of a vast network of NABL accredited laboratories all over the country for random testing of Ayurveda, Siddha and Unani drugs and Homoeopathic mother tinctures for ensuring quality control of AYUSH medicines. It is proposed to modify the existing drug quality control scheme to provide financial assistance to States in terms of reimbursement of expenditure incurred by them on random testing of AYUSH medicine through NABL laboratories. The Department has enforced

Good Manufacturing Practices and mandatory testing of heavy metals for export of purely herbal Ayurveda, Siddha and Unani medicines. Hon'ble Members of Parliament and informed sections of the public are also pressing for mandatory testing of AYUSH medicines for domestic consumption as well which would require in-house quality control laboratories in most of the AYUSH manufacturing units. A large number of AYUSH manufacturing units fall in the small and medium scale, it is felt that without a liberal financial assistance from the Government they would not be able to purchase costly equipments like Atomic Absorption Spectrometer for testing of heavy metals, TLC/HPTLC/GLC for testing of crude drugs. Therefore, it is proposed to provide backended subsidy of Rs.50.00 lakh or 50% of the project cost whichever is less to Ayurveda, Siddha and Unani drug manufacturing units for acquisition of requisite equipments and instruments for enabling them to test their ingredients, their raw materials and finished products inhouse. The subsidy would be released only through scheduled banks on the basis of a certificate to be issued by State Licensing Authority or any NABL Laboratories to the effect that the concerned manufacturing unit has obtained the requisite equipments and has started inhouse testing of raw materials and medicines. This assistance will be provided only to those units which has an annual turnover not exceeding Rs.25.00 crore. Units whose annual turnover exceeds Rs.25.00 crore should be able to avail of soft known facilities under the Pharma Development Fund which is administered by the Department of Science & Technology. As regards the State Drug Testing laboratories for which 1st instalment of upgradation grants has been released in the 10th Plan would be eligible for 2nd and 3rd instalment in the 11th Plan on proper utilization of funds.

Mainstreaming of AYUSH is one of the key strategies under the National Rural Health Mission (NRHM) under which it is envisaged that all PHCs/CHCs would be provided AYUSH

facilities under the same roof. While the AYUSH manpower would be arranged either by relocation of AYUSH doctors from existing dispensaries or from contractual hiring of AYUSH doctors under NRHM funds. The other infrastructure and supply of medicines to PHCs/CHCs would be done through the Centrally Sponsored Scheme of Hospitals and Dispensaries which has received a very good response from States in the last two years of the 10th Plan. Hence, it is proposed to substantially increase the Plan provision for this scheme to Rs.625 crore in 11th Plan. A minor modification in the scheme for providing upgradation and assistance to existing AYUSH hospitals and dispensaries is also proposed.

The need for in-situ conservation and promotion of ex-situ of medicinal plants cannot be over emphasized. On the basis of the recommendations of the Task Force of Planning Commission the National Medicinal Plants Board (NMPB) was set up in the 10th Plan which is still grappling with infrastructural constraints. However, the National Medicinal Plants Board has been able to provide a strong impetus to medicinal plants sector through promotional and contractual farming schemes. Keeping in view the vast experience and constraints in the implementation of these two schemes, it is now proposed that the promotional and conservation scheme of the NMPB would be continued as Central Sector Scheme while the contractual farming scheme should be converted into a Centrally Sponsored Scheme for better monitoring and implementation by the State Medicinal Plants Board (SMPB). It has been felt that the States have not strengthened their Medicinal Plants Board as NMPB has been directly implementing the contractual farming scheme as a Central Sector Scheme. Conversion of this into Centrally Sponsored Scheme will provide the right impetus to the States to strengthen their SMPBs for better planning, implementation and monitoring of the contractual farming scheme which has a huge potential of generation of additional

employment and income to the farmers through crop diversification. The Central Sector Scheme of the NMPB will concentrate on conservation/regeneration through joint forest management committees in forest areas, establishment of Gene Bank and community herbal gardens, etc. Whereas the Centrally Sponsored Scheme would encourage cultivation by farmers and provision of post harvest management and marketing support by State Medicinal Plants Boards and other State agencies in collaboration with National Medicinal Plants Board. Accordingly it is proposed to scale up the plan financing of the NMPB from approximately Rs.134.64 crore to Rs.465 crore in the 11th Plan.

AYUSH research councils have done a lot of research based on survey of medicinal plants and observatory clinical trials. Department has been emphasizing on focused, protocol based and peer reviewed research in a specified time frame and with specified outcomes. The major hindrance in the working of the AYUSH research councils has been non-implementation of the flexible complimentary scheme made applicable to other scientific institutions for in-situ Assured Career Progression as a result of which AYUSH councils are not able to attract talent. This matter has been taken up with the Department of Personnel & Training and Ministry of Finance on a number of occasions without much success. It is hope that the Sixth Pay Commission on the anvil will be able to address this anomaly. Another area of weaken of the AYUSH research councils has been lack of adequate equipments and good laboratories for standardization and quality control work. The Department has now entrusted the Pharmacopoeial work to the AYUSH research councils so that laying down of pharmacopoeial standards and SOPs can be attended to on a sustained basis in a scientific environment. Keeping in view the requirements for upgradation of various peripheral units of the research councils, it is proposed to scale up the Plan provisions** of Central Council for

Research in Ayurveda and Siddha (CCRAS) from Rs.54.37 crore to Rs.100.00 crore in 11th Plan, for Central Council for Research in Unani Medicine (CCRUM) from Rs.59.45 crore to Rs.90.00 crore and for Central Council for Research in Homoeopathy (CCRH) from Rs.37.39 crore to Rs.77.50 crore.

** *Plan Provision indicates actual Plan expenditure of that 1st four years of 10th Plan and Budget Estimates of 2006-07.*

Suitable scaling up of Plan outlays for other Central Sector Schemes of the Department, namely, IEC and International Exchange is also proposed. The proposal for setting up of a National Ayurveda Hospital in Delhi and North-Eastern Institute of Ayurveda and Homoeopathy was conceived in the 10th Plan. Land has also been acquired for the National Ayurveda Hospital in Delhi and detailed project reports for these projects are being revised keeping in view the advice received from Expenditure Finance Committee. A Plan provision of Rs.75.00 crore for National Ayurveda Hospital in Delhi and another Rs.75.00 crore from out of that 10% NE corpus for North-Eastern Institute of Ayurveda and Homoeopathy is proposed in the 11th Plan.

The Department has showed in the last two years of the 10th Plan that it has the capacity to plan for and utilize higher Plan allocation in priority areas of strengthening of AYUSH institutions, standardization and quality control of AYUSH medicines, mainstreaming of AYUSH in national health care delivery network and focussed research for meeting national health goals. Keeping in view the enhanced Plan provisions a second post of Joint Secretary was sanctioned in the Department for strengthening planning, coordination and monitoring of various Central Sector and Centrally Sponsored Schemes. The posts of Directors, CCRUM/CCRAS/CCRH and the posts of Director of National Institutes were upgraded in the last two years of the 10th Plan and the proposal to upgrade the post of Director, PLIM to the Joint Secretary level is on the anvil. Due to sustained efforts, the Department has been able to find regular Directors for its

research councils and autonomous institutions and fill up such vacancies timely. The Department of AYUSH has been maintaining a constant dialogue with all the stakeholders including the AYUSH industry. Successful launching of the Golden Triangle research initiative in collaboration with the ICMR, CSIR and creation of Traditional Knowledge Digital Library (TKDL) for defensive protection of ASU classical formulations from misappropriation are indicative of the fact that the Department of AYUSH has been providing effective leadership and momentum to the scientific validation and mainstreaming of AYUSH systems in the national health care delivery network. Keeping in view the tremendous potential of these systems for better health care for Indian citizens and for obtaining a better share of the world herbal market, these systems need to be supported by a quantum jump in Plan funding of the various Central Sector and Centrally Sponsored Schemes of the Department of AYUSH. Accordingly, it is proposed to scale up Plan provision for Department of AYUSH from Rs.1057.26 crore in the 10th Plan to Rs.2486.45 crore in the 11th Plan. The Department has been very cautious and realistic in making its Plan projections for 11th Plan and it is hoped that by improving utilization of Plan funds and the quality of Plan expenditure the Department would be able to come back to the Planning Commission for raising its Plan provision midway during the 11th Plan.

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DEPARTMENT OF AYUSH

MODIFIED SCHEMES IN XI FIVE YEAR PLAN

CENTRALLY SPONSORED SCHEMES

1. DEVELOPMENT AND UPGRADATION OF AYUSH INSTITUTES/COLLEGES

This is one of the Centrally Sponsored Schemes being implemented by the Department for Development of AYUSH Institutions. This Scheme has been in operation since last three plan periods and the present plan period. The scheme has following components:-

(i) Development of UG colleges.
(ii) Assistance to P.G. Medical Education
(iii) Re-orientation Training Programme for AYUSH Personnel.
(iv) Renovation and strengthening of Hospital wards of Govt./ Govt. aided teaching
(v) Establishment of computer laboratory.
(vi) (vi) Up-gradation of academy institutes to the status model Institutes of AYUSH.

(i) Development of UG colleges.

Assistance for equipment (Rs. 10 lakhs per college), library books (Rs. 2 lakhs per college), capital works (Rs. 50 lakhs per college) and a corpus fund Rs. 5 lakhs (one time assistance) is provided under the Development of UG College scheme. There is provision for another add-on component of Pharmacy and Nursing Education but the same would be implemented only after the Pharmacy and Nursing Education is regulated by statutory council. Only Govt./ Govt. aided colleges are eligible for assistance for capital The assistance under this scheme is to be provided only once in the 10^{th} Plan period.

(ii)Assistance to PG Medical Education

Under this scheme only new Department for new Government aided institutes are eligible to receive grant for a period of five years. The assistance is given for staffing, stipend and also to meet sum non-recurring expenditure.

(iii)Reorientation Training programme of AYUSH Personnel

Government/Pvt./NGO AYUSH institutions are eligible to take up this training programme teachers and doctors though from Government/Government aided private and non-aided pvt. Institutions AYUSH are also available, preference will be given Government, colleges. Under this scheme rate of assistance as well as size of batch varies from category to category.

(iv)Renovation and strengthening of Hospital wards of Govt./ Govt. aided teaching Hospitals of AYUSH.

One time financial assistance upto Rs. 20 lakhs for hospital will be admissible for Government. Institutions and Rs. 10 lakhs for Government aided institutions.

(v) Establishment of computer laboratory.

Use of information technology in promoting the educational standards is main aim of the scheme. Rs. 10.00 lakhs is provided as assistance to existing Government PG colleges for setting up small computer laboratory with five P.C. alongwith other prescribed equipments.

(vii) Up-gradation of academy institutes to the status model Institutes of AYUSH.

The scheme envisages development of one Model Institute of AYUSH per system per state during the 10th plan. Government Institutes recognized by the Central Council at least for 10 years and fulfilling at least 50% Council norms are eligible for assistance. A total of Rs. 3 crores is admissible for capital works (Rs. 1.5 crores) Machinery, equipment and computers (Rs. 1 crores), Books etc. (Rs. 10 lakhs) and staffing (Rs. 60 lakhs).

The total outlay for the scheme during the 10th Plan was Rs. 120 crores. During the first four years of the 10th Plan, the total expenditure was Rs. 98.08 crores. Thus the total expenditure is likely to exceed the original outlay for the 10th plan. During the first four years the number of colleges assisted under the scheme was 434. 2 statement indicating the physical and financial achievements are enclosed as **Annexure I & II.**

XIth Plan Proposal

So far continuation of these schemes during the XIth Plan is concerned, it is felt that existence of so many components for the same purpose is not required. In view of the past experience of implementing these schemes, this Department is of the view that instead of attending to a small component of assistance required for various AYUSH Institutions, it would be appropriate to concentrate on the overall development of these Institutions so that they may be in a position to impart quality education in AYUSH systems and also contribute to the effectiveness and spread of the Indian Medicine Systems. This would result in better utilization of the funds and the results are likely to be tangible.

To achieve the above goal it is felt that instead of existing 6 components, the department may assist only two categories colleges i.e. U.G. Colleges & P.G. Colleges and provide for fixed amount of assistance to be spent on the items actually needed by them on the basis of a master plan. All colleges would be accredited and only those colleges which are viable and can maintain proper standards would be supported. For this purpose a detailed list of the activities /items can be drawn and the colleges should have flexibility in choosing from the same as per their needs. Besides we may have a third component pertaining to model institutes. Under this component some good colleges may be selected and developed into model institutes which would be utilized as Centre of Excellence. For U. G. Colleges the assistance may be Rs. 2 crores per college and for P.G. Colleges the limit may be Rs. 3 crores. So far as development of model institutes is concerned the amount will be decided on the basis of the college specific plan with an upper limit of Rs. 5 crores. Then under fourth component one time capital grant of Rs. 10.00 crores for institutions to States for starting AYUSH Pharmacy/Para Medical Courses in the existing AYUSH colleges is proposed to be provided during XIth Plan.

In effect we will have a scheme "Development of AYUSH institutions" with following four components:-

S No	Schemes	Rate at which assistance is to be given (Rs. in crores)	Tentative No. of Institutions to be assisted.	Likely expenditure (Rs. in crores)
1	Assistance to UG colleges	2.00	60	120
2	Assistance to P.G. Medical Education	3.00	40	120
3	Development of Model Institutes	5.00	25	125
4	One time capital grant to States for starting AYUSH Pharmacy/Para Medical courses in existing AYUSH colleges.	10.00	5	50
	Total			**415.00**

Yearwise financial projection is as follows:

Financial Year	Amount (Rs. in crores)
2007-2008	83.00
2008-2009	83.00
2009-2010	83.00
2010-2011	83.00
2011-2012	83.00
Total	**415.00**

The existing component of ROTP and CME shall be dealt under a Central Sector Scheme and a hence a Central Sector Scheme is proposed separately.

ANNEXURE - I

Grant-in-aid released during 2002-03 to 2005-06 for four years under Centrally Sponsored Scheme of Development of Institutions

(Figure in lakh)

Financial Year	UG Scheme	PG Scheme	ROTP/CME	Renovation	Model College	I.T.	Total
2002-2003	815.00 (34)	204.93 (16)	19.96 (15)	--	--	--	**1039.89** **(65)**
2003-2004	653.79 (25)	119.78 (4)	71.08 (27+15=42)	269.61 (14)	1286.00 (8)	50.00 (5)	**2450.26** **(98)**
2004-2005	800.00 (39)	200.00 (9)	54.17 (32 + 16 = 48)	100.00 (6)	1589.80 (16)	80.00 (8)	**2823.97** **(126)**
2005-2006	1256.52 (41)	208.04 (10)	124.95 (34+28=62)	220.09 (12)	1604.70 (12)	80.00 (8)	**3494.30** **(145)**
Total	3525.31 (139)	732.75 (39)	270.16 (167)	589.7 (32)	4480.50 (36)	210.00 (21)	**9808.42** **(434)**

Note: figure given in parameters shows the no. of institutions assisted under the scheme.

Annexure - II

Physical Targets and Achievements during first four years of Tenth Plan under Centrally Sponsored Scheme of Development of Institutions

Sl.No.	Name of the Scheme/ Project/ Programe	Unit	Tenth Plan approved Target (colleges to be assisted)	2002-03		2003-04		2004-05		2005-06	
				Target (colleges to be assisted)	Achievement (colleges assisted)	Target (colleges to be assisted)	Achievement (colleges assisted)	Target (colleges to be assisted)	Achievement (colleges assisted)	Target (colleges to be assisted)	Achievement (colleges assisted) (I^{st} quarter)
1	2	3	4	5	6	7	8	9	10	11	12
1	UG		140	35-40	34	40-45	25	20-25	39	28-30	41
2	PG		30	12-15	8+9*	18-20	1+3 *	6-7*	10	10-12*	10
3	ROTP/ CME		250	15	15	12-15	42	50-52	38	50-52	62
4	Renovation		70	--	--	12-15	14	14-16	6	35-40	12
5	State Model College		25	--	--	6	8	5-6	8	8-10*	12
6	IT			--	--	5-6	5	6-8	8	6-8	8

* New Colleges

2. HOSPITALS AND DISPENSARIES

The scheme has been designed with a view to make available the benefits of Ayurveda, Unani, Siddha, Yoga & Naturopathy and Homoeopathy to the public at large, so that people can exercise their choice in accessing the health services and to achieve this, it was felt necessary to encourage setting up of general and specialized treatment centers of ISM&H in the allopathic hospitals. Through this scheme the Central Government intends to encourage setting up of general and specialized treatment centers of ISM&H in allopathic hospitals and support the efforts of State Governments to improve the supply position of essential drugs in dispensaries situated in rural and backward areas, so that the faith of people in ISM&H could be enhanced.

During the Tenth Plan period so far, the Department sanctioned an amount of Rs 108.00 crores for setting up of 183 ISM Wings in District Hospitals, 44 Special Therapy Centres with Indoor facility and 348 Special Clinics of ISM&H with Specific Outdoor Treatment. An amount of Rs 145.00 crores has been sanctioned for supply of essential drugs to 26,000 AYUSH dispensaries during the period in the country.

In the implementation of this scheme has been observed that the implementing agencies i.e. the concerned hospitals and dispensaries complain about the delay in the receipt of money from the State Govt channels. To avoid this delay, the Planning Commission has approved distribution of funds through the State Govt Health Societies from the next Plan period onwards.The State Govts complain that they are finding it difficult to provide the manpower in the absence of any fund for this purpose.

XI PLAN PROPOSAL

The various components under the scheme Hospitals & Dispensaries are as follows:

Setting up of Speciality Therapy Centres and Speciality Clinics of ISM&H:

It was felt that the physical achievements relating to these schemes had been less than satisfactory which may be mainly due to the reason that State Governments were not able to provide for manpower component/ experts which are essentially needed for operationalization of these schemes. It is therefore essential to provide for manpower component on outsourcing or contractual basis. Hence, it is proposed that 10% of the grants given to States under the Scheme of Hospitals & Dispensaries may be used by States for hiring contractual Medical/Para Medical personnel during the XIth Plan period. The responsibility of the recurring expenditure beyond XIth Plan period will have to be borne by the States.

Setting up of ISM&H Wings in District Allopathic Hospitals:

Since operationalization of this scheme also depends on available of medical and paramedical staff which the State Governments are not normally able to provide for, it will be important to keep provision for manpower component viz medical and paramedical staff and enhance the overall ceiling of the scheme to Rs 40.00 lakhs in place of Rs 35.00 lakhs per ISM&H Wing.

At present, the execution of the scheme depends on the initiative of the state Government and is on pick and choose basis. If integration is to be effected in a realistic fashion and if a choice

is to be provided to the common man, opening of an AYUSH wing be made mandatory for all District Hospitals and for which funds should be given for all the District hospitals to all the States.

Strengthening of existing AYUSH healthcare facilities:

The Scheme of Hospital and Dispensaries should be extended to existing AYUSH Hospitals & Dispensaries also since at present it caters to only allopathic facilities. This will help in recovering and strengthening certain ailing Treatment and Patient care units which need equipment, infrastructure, medicine and training etc but the State Governments find it difficult to support. It is proposed to provide an assistance of Rs. 50.00 lakhs to AYUSH hospitals and 15.00 lakhs to AYUSH dispensaries for their upgradation.

Supply of essential medicines:

This is one of the very good schemes under which funds for providing AYUSH drugs in rural, backward and remote area dispensaries are given to the States. Under this scheme, an amount of Rs 25,000/- per annum, per dispensary is given which comes to only Rs 2083/- per month per dispensary and Rs 69/- per day per dispensary. Even if a meager strength of an average of 20 patients per dispensary per day is taken into account, the allocated sum comes to Rs 3.45 per patient per day. It is obvious enough that the amount is quite less and therefore it is recommended that it should be increased to Rs 50,000 per annum per dispensary. Besides, at present it is only the 'rural and backward area dispensaries' which are eligible for grant under this scheme despite Planning Commission agreeing to giving grants to all the AYUSH dispensaries, the requisite amendment in the scheme was not reflected and hence there is need to do so in the 11th Plan. It is also proposed to cover all dispensaries including CHCs/PHCs/District Hospitals having AYUSH wing and also existing AYUSH hospitals at those levels for supply of essential medicines. Even mobile dispensaries are proposed to be covered under this. Accordingly, it is proposed to provide essential AYUSH medicines to PHCs @ Rs. 1.00 lakh per annum, CHCs @ Rs. 2.00 lakh per annum and District Hospitals having AYUSH Wing/AYUSH Hospitals @ Rs. 3.00 lakhs per annum.

Since there is a proposal to provide funds for manpower also and to extend the scheme to cover not only Allopathic Hospitals but also for strengthening AYUSH Hospitals, the annual provision for the next plan period is tentatively projected as given below.

Year	Total Outlay during XIth

	Plan (Rs in crores)
2007-08	115
2008-09	120
2009-10	125
2010-11	130
2011-12	135
Total	**625**

This Scheme will re-enforce the Rural Health Mission by providing financial assistance to States both for mainstreaming of AYUSH in allopathic facilities as well as for upgradation of existing AYUSH hospitals and dispensaries.

3. DRUGS QUALITY CONTROL OF ASU & H DRUGS

The Scheme was implemented in the year 2000-01 of 9th five year plan with two sub-schemes.

1. To strengthen state Drug Testing Laboratories
2. To strengthen state Pharmacies of ASU&H drugs.

Under the scheme maximum of Rs.100.00 lakhs were provided to each State DTL and Pharmacies for following components i.e. renovation of building, procurement of sophisticated instruments and machines and human resource on contractual basis (for DTL only) The scheme was revised during the mid term appraisal of 10th five year plan and two more sub-schemes were added in the scheme with slight changes in original two sub-schemes which are as under:-

1. To establish/strengthen the State Drug Testing Laboratories for ASU&H drugs.
2. To establish /strengthen the State Pharmacies of ASU&H drugs.
3. To strengthen state Drug Controllers on ASU&H enforcement mechanism.
4. To assist AS&U drug manufacturing unit to improve their infrastructure to meet GMP requirement.

Under the sub-scheme No.1, State Drug Testing Laboratories for ASU&H drugs maximum of Rs. 150.00 Lakhs were assisted to each SDTL for the three components (Building, Machinery/equipment and manpower on contractual basis) Apart from the State Drug Testing Laboratories eminent Laboratories/universities laboratories/ research councils are also eligible for grant-in-aid to strengthen their AYUSH Department with a maximum of financial assistance of Rs. 85.00 Lakhs.

Under the sub-scheme No.2, to strengthen the State Pharmacies of ASU&H drugs. maximum of Rs. 200.00 Lakhs were provided to each state Pharmacies for two components i.e. Building as well as Machinery and Equipments. Apart from State Government Universities/ Institutions of ASU&H drugs, co-operative Pharmacies and Research Councils are also eligible for the Central assistance.

Under the sub-scheme No. 3, to strengthen state Drug Controllers on ASU&H enforcement mechanism, each State Government/Union territory are eligible for Grant-in-aid for five year for the salaries of one drug controller/Licensing Authority of ASU&H drugs, drug inspectors (one for 500 units), data entry operator, purchase of computer with printer and fax etc. expenditure on TA/DA/training and stationary etc.

Under the sub-scheme No.4, to assist AS&U drug manufacturing unit to improve their infrastructure to meet GMP requirement, every AS&U drug manufacturers were assisted with 20% incentive on the expenditure incurred by him for the infrastructure in terms of building and equipments made by them for getting GMP certificate. The maximum limit of the subsidy is Rs. 5.00 Lakhs.

During the Xth Plan, against the total outlay of Rs 45.40 crores under this scheme the expected expenditure/revised outlay is Rs 55.28 crores. During the 4 years of the 10th plan 8 State Drug Testing Laboratories, 15 State Pharmacies of ASU&H drugs were assisted, and till date 26 ASU State Drug Testing Laboratories and 43 State ASU&H Pharmacies were assisted. In addition 13 States have been assisted to start Enforcement Mechanism of ASU&H drugs and incentives to 45 AS&U drug manufacturers for getting GMP license have been given under GMP Scheme.

Fund have been released through respective state Governments but till date only 30% of the grantee institutes are functional/ partly functional due to the reasons as under:-

i) State Governments are not releasing the Grant-in-aid to the concerned grantee institute well in time.

ii) Grantee institute have to award building contract to Government body like PWD etc. after completing the codal formalities from their respective Government.

iii) Regarding procurement of sophisticated machinery and equipment grantee institute have again asked to their respective State Government to procure the instruments by tender basis or by rate contract basis.

XI PLAN PROPOSAL

To modify the scheme in 11th five year plan, following changes are proposed:-

1. Regarding sub-scheme No.1 and 2, the scheme may not be continued as such. Only second and third instalment will be released to States for completing the work of upgradation of Drug Testing Laboratories/State Pharmacies which were taken up during the Xth Plan.

2. Regarding sub-scheme No.3 no more grant will be released for manpower on contractual basis. Concerns have been expressed in the Parliament as well as in the media regarding weak quality control of AYUSH medicines. Emphasis on strengthening of State Drug Testing Laboratories has not yielded results intended. In the XIth Plan, it is proposed to institute a random testing of AYUSH medicines at the Central as well as at the State levels by involving NABL accredited laboratories spread over the country. It is proposed to assist the State by actual reimbursement of expenditure incurred on random testing of AYUSH medicines through NABL laboratories @ Rs. 500 to Rs. 1000 per sample depending upon various parameters. Under this Scheme, Department of AYUSH's laboratories PLIM, Mohan HPL will also be eligible to do the testing and avail the assistance.

3. Under the existing Drug Quality Control Scheme in Xth Plan a meager assistance of Rs. 5.00 lakhs as subsidy was provided to AYUSH manufacturing units for becoming GMP compliant.

Now, the Department of AYUSH has made testing for raw materials/finished products/heavy metals etc. mandatory for which manufacturing units require costly equipments like Atomic Absorption Spectometer, HPTLC, HPLC, GLC etc. Accordingly, it is proposed to provide a back ended subsidy of Rs. 50.00 lakhs or 50% of the total project cost whichever is less, on establishment of in-house Drug Quality Control/R&D laboratory. The assistance to be provided only to those ASU units having annual turnover below Rs. 10.00 crores. This subsidy will be released to AYUSH manufacturing units through a Scheduled Bank on installation of the requisite equipment and on submission of report by any State Licensing Authority or a NABL laboratory to the effect that the such unit has started testing of its raw materials/finished products in their in-house drug quality control/R&D labs.

The projected outlay for the XIth Plan is as following:

Year	2007-08	2008-09	2009-10	2010-11	2011-12	Total
Outlay(Rs crores)	20.00	25.00	30.00	35.00	40.00	150.00

CENTRAL SECTOR SCHEMES

STRENGTHENING OF DEPTT. OF AYUSH

1. Secretariat Social Services

This is to meet the need of the Secretariat Services (salaries, travels, office expenses, rent etc.). To be continued to provide Secretariat support to the implementation of AYUSH programmes. The expenditure including B.E. 2006-07 in Xth Plan period is Rs. 21.88 crores. The projected outlay for XIth Plan is Rs. 30.00 crores.

2. Strengthening of Pharmacopoeial Committee on ASU

This is to lay down and update pharmacopoeial standards of Ayurveda, Siddha, Unani and Homoeopathy drugs and to prepare and update formulary of the drugs of these systems. The outlay/expenditure in Xth Plan is Rs. 5.37 crores.

To be continued as laying down pharmacopoeial standards of compound poly-herbal formulations is a priority area for development and acceptability of AYUSH systems. It is proposed to constitute a Pharmacopoeial Commission of Ayurveda/Siddha/Unani drugs. For this, a Plan expenditure of Rs. 8.00 crores is proposed for the XIth Plan.

EDUCATIONAL INSTITUTIONS

3. Institute of Post-Graduate Training & Research, Jamnagar (IPGTR).

The Institute of Post-Graduate Teaching & Research in Ayurveda(IPGTRA), Jamnagar is one of the constituents of Gujarat Ayurved University(GAU). It is one of the oldest P.G. teaching centre of Ayurveda. The institute is fully financed by the Government through grants-in-aid for its maintenance and development.

There are six teaching departments in the institute, which provide facility for teaching and research in 13 specialties for post-graduate degree and decorate degree. The admission capacity is 34. The institute also renders clinical patient care. During the X Plan , it provided medical treatment to more than 7 lac patients at IPD and OPD level, and produced more than 150 PG Ayurvedic doctors.

Expenditure in X Plan and XI Plan Outlay

Tenth Plan approved outlay	Expenditure/Outlay	XI Plan outlay proposed
Rs.5.50 crore	Rs.3.8 crore	10.00 crore

The savings has accrued on account of non-filling up of certain faculty posts, non-procurement of equipment/furniture, non-execution of some capital works.

The scheme may be continued during XI PLAN as it fulfills its objectives of imparting teaching, training and research in Ayurveda and also renders clinical patient care through OPDs, IPDs, and a 150-beddd hospital. This is one of the oldest institutes of Ayurveda in the country.

Break-up of XI Plan Outlay

Rs.in crores)

2007-08	2008-09	2009-2010	2010-2011	2011-2012	TOTAL
1.50	1.75	2.00	2.25	2.50	10.00

4. National Institute of Ayurveda, Jaipur (NIA)

The National Institute of Ayurveda established in 1976 at Jaipur is an apex Institute of Ayurveda for evolving high standard of teaching, training, research and patient care activities. It imparts education at the level of UG, PG and Ph.D.The admission capacity is 60 for U.G., 55 for P.G. and 12 seats for Ph.D. in 6 Specialities. The Institute is also involved in research activities and researches on Diabetes, Cancer, Vitiligo, AIDS have been started recently besides others.

The Institute has a 180 bedded hospital having OPD with Pathological, Bio-Chemical, ECG, CTMT, Spirometery, Sonography, Dental, Audio-meter facilities etc. There is a separate Panchakarma Hospital for specialised treatment. . Medical Camps are organised in the SC/ST inhabited districts of Rajasthan. During X Plan so far, the institute organized 145 mobile camps of variable durations; produced 400 graduates and post-graduates in Ayurveda and rendered clinical patient care at OPD and IPD levels to more than 4.50 lac patients. A Diploma Course in Ayurveda Compounder/Nurse Training has been started from 2004-2005.Post-Graduate Course started in 2 more subjects viz. Swastha Vritta and Panchakarma from 2004-2005.Panchakarma Department has been developed and furnished and necessary facilities are being provided to the patients.An international seminar on "Plant Based Medicine" was organized.

The scheme may be continued during XI Plan as it fulfils its objectives. Some of the Plans of the institute for XI Plan are:to acquire land for Herbal Garden and develop it for cultivation of rare and useful medicinal plants for teaching and research purpose;to establish National Repository

of Ayurvedic Drugs;to start short-term courses for foreign students;to start PG and regular Ph.D. courses in the remaining subjects;Construction of Panchakarma Hospital. ;Construction of PG(Girls) Hostel; Modernization of Yoga Unit to introduce Vyadhikshamatava (Immunology) and Swasthya (Mental Health) Unit for children To develop museum in Rasa Shastra Department etc

Outlay/ Expenditure in X Plan and Projection for XI Plan

Tenth Plan approved outlay	Expenditure	XI Plan outlay Projection
Rs.25.00 crore	Rs.28.96 crore	37.00 crore

Break-up of XI Plan Outlay

(Rs. in crores)

2007-08	2008-09	2009-2010	2010-2011	2011-2012	TOTAL
7.50	7.50	7.50	7.50	7.00	37.00

5. Rashtriya Ayurved Vidyapeeth, New Delhi (RAV)

Rashtriya Ayurveda Vidyapeeth (RAV) is an autonomous organization under the Department of AYUSH and fully funded by the Government of India. It started functioning from the year 1991.

The Vidyapeeth was established with the main aim to preserve and arrange transfer of Ayurvedic knowledge from eminent scholars, and traditional Vaidyas who do or do not have formal qualifications but trained under Gurukula system, to the younger generation through the Indian traditional system of education 'Guru Shishya Parampara" and to prepare experts in Ayurveda with clinical skills.

Guru Shishya Parampara is the traditional method of residential form of education wherein the Shishya remains with his Guru as a family member and gets the education as a true learner. This system gradually vanished with the disappearance of Gurukuls. However, it is still a very effective means of transfer of knowledge from the Gurus (teachers) to Shishyas (students). RAV is making efforts to revive the system through its courses.In colleges and institutions only relevant portions of the Samhitas (texts of Ayurveda) are being taught in the form of syllabus. Guru Shishya Parampara programme of RAV provides the students to study whole text and get adequate knowledge of selected Samhita and its Teeka (commentary) and traditional skill of the Ayurvedic clinical practice. The Shishyas get sufficient time for interaction and discussion on the issues taken for study.

RAV is running two types of courses:

Acharya Guru Shishya Parampara : Two-year course of Member of Rashtriya Ayurveda Vidyapeeth (MRAV). During the 10th Plan, RAV trained 18 scholars in this course:

Chikitsak Guru shishya Parampara : One-year course of Certificate of Rashtriya Ayurveda Vidyapeeth (CRAV):

During the 10th Plan RAV produced 120 young graduates trained under these Vaidyas.

During the current Plan 52 scholars and Vaidyas have been awarded Fellow of Rashtriya Ayurveda Vidyapeeth (FRAV). Vidyapeeth conducts a Conference/ Seminar/ Workshop every year on a topic that requires discussion and exchange of the views and clinical experience on the diagnosis and treatment of the disease. So far Conferences/Seminars have been conducted on Kshara Sutra, Heart diseases, Ayurvedic Education, Training and Development, Nadi Vigyan, Fast Acting Ayurvedic Medicines and Techniques, Cancer, Shothahara Avam Jeevanu Nashak Ayurvedic medicines, AIDS, Thyroid disorders, Rasayana, Ayurvedic management of kidney and urinary disorders , Management of Hepato-biliary & Splenic disorders, Diabetes Mellitus and Mental Health through Ayurveda. On all the occasions the souvenirs with selected papers have been published.RAV has conducted 8 Interactive Workshops during the 10th Plan and released books of Questions and Answers.

PROPOSALS FOR XITH PLAN:

Continuation of Present activities: Attempts will be made to enroll more vaidyas and institutions that are practicing clinical skills that are required to be transferred.

Recognition of the courses: One of the main issues related to these courses is recognition of the courses. During the next Plan period attempts will be made to get the courses recognized by any university.

Teachers Training Centre: RAV may take up teacher training activity initially in different identified institution and later on the new campus of the institute.

Expenditure in X Plan

Tenth Plan approved outlay	Expenditure	XI Plan outlay proposed
Rs.3.00 crore (including salary component)	Rs. 4.80 crore	5.00 crore(excluding salary component*)

*It is submitted that its salary component may now be transferred to Non-Plan Budget in XIth Plan.

Break-up of XI Plan Outlay

(Rs. in crores)

2007-08	2008-09	2009-10	2010-11	2011-12	TOTAL
0.80	0.90	1.00	1.10	1.20	5.00

The institute fulfilled its objectives of promoting knowledge of Ayurveda, organizing workshops, seminars etc. and trained UG/PG students through informal method of training and hence

need to be continued during XI plan as well. It is submitted that its salary component may now be transferred to NON-PLAN Budget w.e.f. 2007-08.

6. National Institute of Siddha, Chennai (NIS)

The Siddha the oldest system of traditional medicine is widely prevalent and practised in Tamil Nadu. The only institute of national character in Siddha system fulfilling the mandate of National Health Policy of establishing the national institutes in all systems of AYUSH National Institute of Siddha is a premier institute for education, research and development of Siddha System of Medicine. The proposal to establish a National Institute of Siddha(NIS) was taken up during the 9th Five Year Plan period with the Govt. of Tamil Nadu by Govt. of India for which State Govt. of Tamil Nadu provided 14.78 acres of land at Tambarrm, Chennai.The Institute is being developed by the Government as a joint venture with the Government of Tamil Nadu and share the capital expenditure in the ratio of 60:40 and the recurring expenditure in the ratio of 75:25.

The Institute has been become functional during 2004-05 Till date, 32 faculty posts (including Director) and 97 posts for Para Medical and administrative staff have been created/approved by the Ministry of Finance. The Institute imparts P.G. education in 6 subjects with admission capacity of 30 students per year from 30.9.04. Outdoor Patient Department and Pathological laboratories are functioning in full swing. There would be a 120-bedded hospital with OPD/IPD facility. It is expected to produce best quality physicians, teachers, researchers of Siddha who will be able to raise the standards of clinical care, education, research in Siddha system of medicine.

This Ministry has also accorded approval for construction of a 60-Seat Girls' Hostel at an estimated cost of Rs.1.89 crore. The Standing Finance Committee in its meeting held on 19.7.06 approved the construction of a 4-room guest house through CPWD at an estimated cost of Rs.99.00 lac. The construction may be completed during 06-07 and 07-08.

The scheme may be continued during XI Plan as well to fulfill its objective of producing post-graduate Siddha physicians, treating sufficient humanity, conducting research, etc. During XI Plan following facilities such as creation of Anatomy laboratory ,Animal House, Yoga Hall , Green House, Drug Testing Laboratory,etc to strengthen NIS are proposed to be established .

Outlay/Expenditure in X Plan and Outlay for XI Plan

X Plan outlay	Expenditure during X Plan	XI Plan Projection
Rs.25.00 crore	Rs.27.75 crore	20.00 crore

Break-up of XI Plan Outlay

(Rs. crores)

2007-08	2008-09	2009-10	2010-11	2011-12	TOTAL
3.00	3.50	4.00	4.50	5.00	20.00

7. National Institute of Homoeopathy, Kolkata (NIH)

To evolve and demonstrate high standard of teaching, research, treatment to the poor patients through Homoeopathic system of medicine.

To be continued as the Premier Institute of Homoeopathy imparting teaching, training and conducting research in Homoeopathy and rendering the tertiary hospital and clinical care.The Xth Plan outlay/expenditure is Rs. 36.50 crores. It is proposed for an outlay of Rs. 40.00 crore in XIth Plan.

8. National Institute of Unani Medicine, Bangalore (NIUM)

To promote the growth and development of Unani Medicine, to produce Post-Graduate and Research in Unani Medicine, to provide medical relief to the suffering humanity on no profit no loss basis etc.

To be continued as the Premier Institute of Unani imparting teaching, training and conducting research in Unani and rendering hospital and clinical care. On completion of the first phase the teaching has commenced in four subjects and 100 bedded hospital has become operationalised.. The construction activity of second phase has been taken up and on completion of second phase the Institute will have Post-Graduate teaching in another four subjects.

The Xth Plan outlay/expenditure is Rs. 21.00 crores. It is proposed to have an outlay of Rs. 25.00 crores in XIth Plan.

9. Morarji Desai National Institute of Yoga, New Delhi (MDNIY)

It acts as a centre of excellence in Yoga and is to develop, promote and propagate the science of Yoga. It also provides scientific education in Yoga leading to diploma and degree courses. It is to be engaged in treatment and research, clinical, fundamental and literary research in the field of Yoga.

To be continued as being a premier Institute of Yoga engaged in developing, promoting and propagating the science of Yoga and also imparting education in Yoga. In XIth Plan, a new scheme for Yoga Centre is to be started.

The outlay/for Xth Plan was Rs11.00 crores. It may be increased to Rs. 20.00 crores in XIth Plan including a token provision of Rs 2.00 crore for the yoga project being coming up at Gaziabad.

10. Vishwayatan Yogashram, New Delhi

A premier Institute of Yoga engaged in developing, promoting and propagating the science of Yoga and also imparting education in Yoga. Also engaged in clinical, fundamental and literary research in Yoga.

To be continued as in compliance with the Court Order salary/wages are being paid or to be paid till further court order to the employees of J&K unit accommodated in the premises of MDNIY, New Delhi.

As in Xth Plan, an outlay of Rs. 1.00 crores is projected for XIth Plan.

11. National Institute of Naturopathy, Pune (NIN)

It is for promotion and propagation of Naturopathy and also to encourage research in the field of Nature Cure treatment to prevent/cure diseases.

To be continued or handed over to the Govt. of Maharashtra if they are willing. Central Govt. has left it to the States to regulate Naturopathy.

The outlay/expenditure in Xth Plan is Rs. 7.68 crores. The projected outlay for the XIth Plan is Rs. 8.50 crores.

STATUTORY INSTITUTIONS

12. Central Council of Indian Medicine, New Delhi (CCIM)

Maintains Central Register of Ayurveda, Siddha and Unani. Responsibilities to lay down the minimum standards of education in these fields to recommend regarding permission of a new college, increase of seats or starting of a new or higher course Also responsible for laying down the standards of professional conduct, etiquette and code of ethics to be observed by the practioners of these systems.

To be continued as this is a statutory body for regulation of standards of education in the Indian Systems of Medicine.

The outlay for Xth Plan was Rs. 0.60 crores. It is proposed to increase to Rs. 0.70 crores in XIth Plan.

13. Central Council of Homoeopathy, New Delhi (CCH)

Maintains Central Register of Homoeopathy.. Responsibilities to lay down the minimum standards of education in this field to recommend regarding permission of a new college, increase of seats or starting of a new or higher course Also responsible for laying down the standards of professional conduct, etiquette and code of ethics to be observed by the practioners of these systems.

To be continued as this is a statutory body for regulation of standards of education in Homoeopathy.

The expenditure/outlay in Xth Plan is Rs. 0.20 crores. A provision of Rs. 0.25 crores is projected for XIth Plan.

14. Central Pharmacy Council for AYUSH

To regulate the education and practice of pharmacy in Indian Medicines and Homoeopathy. A Bill for the establishment of the Council is pending with Parliament. A provision of Rs. 2.00 crores is proposed for the XIth Plan.

RESEARCH COUNCILS

15. Central Council for Research in Ayurveda & Siddha, New Delhi (CCRAS)

For Clinical research including health care research, drug research, survey of medicinal plants, drug standardization, literary research and family welfare research programmes.

To be continued.This is an apex council for research in Ayurveda and Siddha. Research is a continuing process and CCRAS being the only organization in the Govt. sector for conducting research in Ayurveda and Siddha system of medicine needs to carry out its work to fulfill the

objectives. In the process of conducting research through its regional CRIs/RRIs/units spread all over the country, it is not only conducting research but also providing clinical facilities in Ayurveda and Siddha to the general public.The Xth Plan outlay/expenditure is Rs. 54.37 crores.

In view of the permission granted to CCRAS to fill up the vacancies arisen since last three years, the provision for payment of the salaries of scientific and administrative staff recruited for the plan units has to be made. Also increase in the number of Extra Mural Projects, research activities is expected. It is also proposed to get the NABL accredition of its five laboratories and hence these laboratories are to be equipped with high value equipments and instruments. Also, the capital works in six places of its institutes for having own building has to be undertaken in the XIth Plan.

In view of the above proposals, an outlay of Rs. 100.00 crores for XIth Plan is projected. The year-wise outlay is as follows:

Year	Outlay in Rs. crores
2007-08	18.00
2008-09	19.00
2009-2010	20.00
2010-2011	21.00
2011-2012	22.00
Total	**100.00**

16. Central Council for Research in Unani Medicine, New Delhi (CCRUM)

The Central Council for Research in Unani Medicine which was established in the year 1979 is a premier institution of research in Unani System of Medicine. This Council is inter-alia engaged in multi-faceted research activities in the areas of Clinical Research including Clinico-Pharmacology, Drug Standardization and Quality Control, Literary Research including Medico Historical Research and Survey and Cultivation of Medicinal Plants, through a network of 25 research centres functioning in different parts of the country.

During the 10th Five Year Plan there have been some significant leads where the Council have finalized Clinical Studies on 20 drugs out of which monographs on 12 were published and 8 have been applied for patent rights. 17 other formulations out of Kit Medicines have been filed for patents and have also been commercially exploited. Besides continuing General OPD, Mobile Clinical Research, School Health and the OPD at Dr. RML Hospital, New Delhi the Council have completed Phase-I study of the fundamental research pertaining to Humors and Temperaments. SoPs are being worked out for Regimental Therapy.

In the collaborative research programme with CSIR on development of bio-active molecules for Unani formulations, 54 formulations were passed on to the CSIR in which in-vitro and in-vivo activities have been observed in 16 samples. The work is in progress. The Council have been able to finalize Pharmacological and Toxicological studies on 10 drugs during this plan period. Under the EMR Programme, 15 projects have been allotted during the plan period and work on 11 projects has been completed and the reports have already been sent for printing.4050 medicinal folk claims have been collected and documented. In the Literary Research Programme 20 manuscripts/books have been translated from Arabic and Persian Languages and have been published.

With a view to streamline the functioning and to accelerate the pace of work, the Council is presently in a mode of re-organization of different research schemes and number of centres is being brought down from present 25 to 12. The Council would like to continue the research work in 3 Central Research Institutes and 9 Regional Research Institutes and Drug Standardization Research

Institutes. These institutions will be further developed to provide for optimum facilities for multi-faceted research programme, as envisaged in the documents for the 11th Five Year Plan. However, based on the availability of funds, the Council would like to develop independent institutes for molecular pharmacology and upgrade different Institutes in terms of Equipments and Manpower. Apart from designating the existing institutes for fundamental research, for Regimental Therapy, for Metabolic Disorders, Skin Disorders and Musculo-Skeleton disorders and cardiac ailments.

The Drug Standardization Research Programme shall include the standardization of classical formulations included in the National Formulary of Unani Medicine. 300 formulations will be taken up for quality standards during XI five year plan. The work shall include standardization of classical formulations, safety studies and upgradation of three laboratories. The Council will also take up DNA finger printing and HPTLC of single and compound formulations and this will be an important segment of this programme.

The survey and cultivation of medicinal plants programme would be continued with more emphasis of having pharmacological survey of medicinal plants and raw drugs. The collection of information of Unani Medicinal Plants in different forests areas in establishing a separate referral centre for confirmation of botanical identity will be an important segment besides setting up of 2 Tissue Culture Labs at Srinagar and Hyderabad attached to Council's Institutes.The Council will take up construction of buildings for CRIUMs at New Delhi and Lucknow, RRIUMs at Silchar, Bhadrak, Allahabad and Patna during the 11th Five Year Plan.

The X Plan expected expenditure for the full period is Rs 59.45 crores. An outlay of Rs.90.00 crores is projected for the 11th Five Year Plan.

The year-wise outlay is as following

Year	Outlay in Rs. crores
2007-08	16.00
2008-09	17.00
2009-2010	18.00
2010-2011	19.00
2011-2012	20.00
Total	**90.00**

17. Central Council for Research in Yoga & Naturopathy, New Delhi (CCRYN)

The objective of the Council is to conduct Scientific Clinical Research to verify the efficacy of Yoga & Naturopathy in treatment of various disorders; Publication of ancient Yoga & Naturopathy texts and meaningful standard literature based on modern scientific research. To disseminate the knowledge of Yoga & Naturopathy among common public as well as professionals. To disseminate the knowledge of Yoga & Naturopathy among common public as well as professionals.

(e) Evolve and notify Good Agriculture Practices (GAPs), Good Collection Practices (GCPs), Good Storage Practices (GSPs) for medicinal plants. These will consists of two sets of guidelines. There will be generic guidelines followed by species specific GAPs/GCPs/GSPs for the major medicinal plants under cultivation for which monographs are proposed to be prepared with the help of the Research Institute/ Universities having expertise in the subject. In all 100 monographs are proposed to be prepared during the 11th Plan. It is also proposed to fund R & D so as to develop protocols for sustainable harvest of such medicinal plants which should include such plant parts which may not involve destructive harvesting. It is proposed to cover 20 species during the 11th Plan.

(f) It is proposed to identify agencies in the government and non-Government sector, backed up by independent certification, which will be used as focal points for raising nurseries and supplying Quality Planting Material to the farmers and cultivators.

(g) Independent Certification mechanism is proposed to be put in place which will not benefit the growers but also the manufacturers and users of medicinal plants. For small and marginal farmers, group certification of GACPs and organic farming backed by government support may have to be considered. It is proposed to provide financial support for strengthening testing labs where they already exist and set up new ones preferably through a public private parternership mechanism.

(h) A network of storage godowns and semi processing facilities near the major collection centres and cultivation areas, managed either by government, PSU, Co-operative Federations or Panchayats will go a long way in quality aw material being made available to the manufacturers besides improving the safety and efficacy of the final product. It is proposed to take up projects for post harvest management and capacity building the thrust areas of the sector in areas not covered by MPZs.

(i) R&D activity is being supported in a substantial way by CSIR, DBT, DST, ICFRE and ICAR through their research institutes, regional research institutes, research laboratories also. This is expected to continue during the 11th Plan.

(j) A Venture Capital fund/Technology Upgradation fund of the size of Rs. 200-300 crores is required to be created for modernization of Ayush/Herbal industry. The scope of the scheme of crop insurance should be enlarged to cover medicinal plants. It is proposed that the uniform exemption of VAT/sales tax regime should be introduced for medicinal plants to give a boost to the sector and its trade within the country. This would be in line with the Government exemption of essential food related commodities from VAT incidence.

(k) In order to fulfill the large mandate of the Board the existing organizational structure of the Board is under review through a Consultant. Based on the report of the consultant, the matter is proposed to taken up with the Cabinet for appropriate decision.

MODIFIED SCHEME IN XI PLAN.

The existing Central Sector Scheme of Medicinal Plants Board is proposed to be bifurcated into **two schemes** as follows:

A. **Central Sector Scheme for conservation, promotion and development of medicinal plants.** This scheme will be 100% centrally funded and cover the follows activities:

- In-situ/Ex-situ conservation.
- Community herbal gardens (including Vanaspati Vans).
- Research & Development.

- Monographs on Good Agriculture/Collection Practices (GACP), Good Storage Practices (GSP), Good Harvesting Practices (GHP).
- Independent certification of planting material, cultivation practices and quality of raw material.
- IEC.
- Monographs on medicinal plants and registration thereof in major importing countries.
- Market surveys.

B. Centrally Sponsored Scheme for cultivation, processing, value addition, marketing of medicinal plants. This scheme will be 100% centrally funded. As a Centrally sponsored scheme this will ensure better planning, appraisal and implementation by the State Government while at the same time, the Central Government retaining the authority to control and monitor the outputs and outcomes. Following activities will be supported under the Scheme:

- Contractual Farming/cultivation.
- Support for processing, semi-processing/Value addition, ware houses and packaging.
- Marketing support by way of minimum support price.
- Support for brand promotion.

(I) <u>Financial outlays:</u>

A. Central Sector Scheme on Conservation, cultivation, processing, value addition, marketing of medicinal plants.

#	Activity	Rate Per Unit (in Rs.)	Physical Target	Outlay (Rs. in Crores)
i.	Conservation/Regeneration hectares)	20,000/-	20,000	40
ii.	Gene Banks (100 hectares each)	20,000/-	50	10
iii.	Community herbal gardens (500 hectares each)	10,000,000/-	10 nos.	10
iv.	R & D		Lump sum	15
v.	Quality control, standardization and certification		Lump sum	15
vi.	IEC		Lump sum	10
vii.	Organisation, IT etc.		Lump sum	15
	Total			**115**

B. Centrally Sponsored Scheme for cultivation, processing, value addition, marketing of medicinal plants.

#	Activity	Rate Per Unit	Physical Target	Outlay (Rs. in Crores)

		(in Rs.)		
i.	Cultivation (hectares)	30,000	1,00,000	300
ii.	Post Harvest Management and Marketing support		Lump sum	50
	Total			**350.00**

YEARWISE OUTLAY

#	Scheme	Year wise Outlay					Total (Rs. in Crores)
		2007-08	2008-09	2009-10	2010-11	2011-12	
i	**Central Sector** Scheme on conservation and development of medicinal plants	15	25	25	25	25	115
ii	**Centrally sponsored** scheme on cultivation etc.	60	65	70	75	80	350
	Total	**75**	**90**	**95**	**100**	**105**	**465**

STRENGTHENING OF PHARMACOPOEIAL LABROATORIES

27. Pharmacopoeia Laboratory of Indian Medicine, Ghaziabad (PLIM)

PLIM is a National level laboratory set up for laying down standards for identification of Ayurvedic drugs etc. and for testing of these medicines for enforcement of quality control to implement Drugs & Cosmetics Act and Rules at the Central level. It is a recognized Drug Testing Laboratory for Ayurvedic, Unani and Siddha medicines for whole of India. It is also recognized as a scientific and technological institute/organization by the Department of Science & Technology. The laboratory is also engaged in work pertaining to survey and introduction/cultivation of medicinal plants.

In the Xth Plan, an outlay of Rs. 1.78 crores was made. A new building has been constructed and set of equipments has been purchased from the Scheme of Strengthening of PLIM and eight new posts have also been sanctioned for the same purpose.

During XIth Plan, it is proposed to build training hostel from guest house and also the toxicological/ pharmacological laboratory.

In view of above, the projected outlay for XIth Plan is Rs. 19.50 crores. The year-wise outlay is as follows:

Year	Outlay in Rs. crores
2007-08	6.49
2008-09	3.65
2009-2010	3.75
2010-2011	2.80

2011-2012	2.81
Total	**19.50**

28. Homoeopathic Pharmacopoeia Laboratory, Ghaziabad (HPL)

HPL is a national level laboratory set up for laying down standards for identification of Homoeopathic drugs and for testing of Homoeopathic medicines for enforcement of quality control to implement Drugs & Cosmetics Act and Rules at the Central level. It is recognized Drug Testing Laboratory for Homoeopathic drugs for whole of India. It is also recognized as a scientific and technological institute/organization by the Department of Science & Technology. The laboratory is also engaged in work pertaining to survey and screening of formulations and drugs, introduction and cultivation of medicinal plants. The laboratory is also recognised as Central Drug Laboratory for testing of Homoeopathic Drugs. During Xth Plan, the outlay was Rs. 0.97 crores. A new building has been constructed and set of equipment has been purchased from the Scheme of Strengthening of HPL and four new posts have also been sanctioned.

The proposed outlay for XIth Plan is Rs. 3.00 crores. The year-wise outlay is as following:

Year	Outlay in Rs. crores
2007-08	0.50
2008-09	0.55
2009-2010	0.60
2010-2011	0.65
2011-2012	0.70
Total	**3.00**

29. Strengthening of PLIM/HPL

This scheme is discontinued as a separate scheme and it stands merged with the above two schemes, viz., PLIM/HPL.

30. Public Sector Undertaking (IMPCL, Mohan, U.P.)

To manufacture quality medicines of Ayurveda, Unani and Siddha.

This is the only PSU of Department of AYUSH in a remote backward area. It needs to focus on brand building/marketing and creating a niche for itself. The unit is not making cash losses for last three years. There is need to develop IMPCL for laying down bench marks for Ayurveda, Unani and Siddha drugs. With this objective in view, modernisation plan of this unit is under implementation. It needs to be made clear to the management and labour that if the unit relapses into cash losses then it may be privatized or closed down. An assistance of Rs. 5.00 crore was provided to IMPCL in the Xth Plan for its modernisation activities. Another Rs. 5.00 crore is proposed in the XIth for Surveys/Exhibitions.

31. Information, Education & Communication

31.1 Awareness building on merits of AYUSH through surveys/exhibitions/roadshows, print and electronic media in India and abroad.

To create awareness about the efficacy of the AYUSH systems, their cost-effectiveness and the availability of herbs used for prevention and treatment of common ailments at their door-steps through various channels including the production of audio-visual educational material to achieve the objectives of health for all.

Under the Scheme, the Department is organizing AROGYA fair in Delhi since 2001 to generate awareness among the general public and to give a boost to the AYUSH drug manufacturing industry as well as to create awareness among the industry about Good Manufacturing Practices (GMP). Various provisions of the Enforcement Mechanism for ASU& H drugs. In view of the popularity of the fair and demand from various quarters, it was decided to organize regional AROGYAS also. The first regional AROGYA was organized at Chennai in January, 2005 and later during 2005-06. Regional AROGYAS have been organized at Hyderabad and Chennai. For this purpose, both audio-visual and print media is also being utilized. The Department proposes to continue to organize AROGYA fairs in metro cities during XIth Plan.

Under the Scheme, some video spots and films and documentary films on all the systems, viz., Ayurveda, Yoga & Naturopathy, Unani, Siddha and Homoeopathy as well as films on home remedies in Ayurveda and Unani have been prepared. The spots have been released through Radio and T.V. and the films have been utilized in AROGYA fairs as well as at other National/International fairs/exhibitions. The Department proposes to continue to prepare audio-visual and print material during XIth Plan.

The services of NGOs have been utilized for generating awareness about the strengths of AYUSH systems among general public and for creating awareness among the practitioners of AYUSH systems to practice their own systems as well as creating awareness among farmers for cultivation of medicinal plants at District/Block level.

Getting utilisation certificates from NGOs is the major constraint in the implementation of NGO Scheme.

The three components of the scheme are to be merged and to have following two modified components in the XIth Plan:

i) Awareness building through AROGYAS and print and electronic media through DAVP/media agencies/ITPO/FICCI/PHARMAXECIL and other reputed organizations.

ii) Awareness generation in State capitals and other places other than metro cities by organizing mini AROGYAS through reputed, identified media agencies/other organizations.

A provision of Rs. 19.00 crore was kept for IEC in the Xth Plan which is proposed to be increased to Rs. 25.00 crores in the XIth Plan.

OTHER PROGRAMMES AND SCHEMES

32.1 International Exchange Programmes on AYUSH and Scholarship scheme for foreign students in AYUSH

For supporting visits of officials/experts to foreign countries to participate in meeting/seminars/workshop/exhibition for propagation of AYUSH systems abroad and providing scholarship to students from foreign countries to study in AYUSH institutions in India. An outlay of Rs. 8.00 crores was made in Xth Plan.

To be continued in modified form. The modified scheme would help in promoting and propagating AYUSH abroad. A provision of Rs. 10.00 crores is projected for XIth Plan.

32.2 Assistance for organizing national/international Seminar/Conference/Workshop on AYUSH.

To create and increase awareness among the community about the preventive, promotive and curative aspects of ISM & H systems, its cost effectiveness and provide opportunity for intellectual interactions and deliberation through Seminar/Conference/Workshop.

To be continued with modifications as it serves very important purpose of creating awareness about ISM&H and providing opportunity for high level intellectual interaction through seminar/conferences/workshop for scientific development of these systems.

The projected provision for XIth Plan is Rs. 5.00 crores.

32.3 Organization of Trade Fairs/Exhibition/Roadshows/Conference abroad

This is a new scheme with aim towards popularization of AYUSH medicines in U.K., U.S.A., Europe, Middle East/Africa/South East Asia by holding trade fairs/roadshows by the Department of AYUSH/Research organizations/PHARMAXCIL/CII/FICCI/ITPO and other organizations. This would help significantly in promoting and propagating AYUSH systems and medicine abroad.

The provision of Rs. 5.00 crore is projected for XIth Plan.

32.4 Programme for training/fellowship/exposure visit/up-gradation of skills etc. for AYUSH personnel

To promote AYUSH systems through educational institutions as there is demand from many foreign countries to depute teachers for teaching AYUSH systems in their institutions. Therefore, to be continued with modifications. In Xth Plan, the provision was of Rs. 3.00 crores. The projected provision for XIth Plan is Rs. 5.00 crores.

32.5 Incentive to AYUSH industry for participation in fairs/conducting market study for creating a developing market opportunity in India and abroad.

To encourage AYUSH industry to develop markets in India/abroad, there is need to give incentive AYUSH industries for participating in trade fair/exposition for popularizing Indian Medicine in India and abroad and conducting market study for developing market opportunity.

The scheme to be continued in modified form. A provision of Rs. 5.00 crore was kept in the Xth Plan. The provision in XIth Plan is proposed to be at Rs. 5.00 crore.

33. Acquisition and Publication of Text Books & Manuscripts

To prepare and publish good quality text book written by highly experienced teachers of ISM & H colleges. To acquire, preserve and publish manuscripts and out of print books, which will provide easy access on the manuscripts of ISM.

The response for submitting the proposals under the scheme is very poor. As the sufficient literary staff is available in the respective councils-CCRUM/CCRAS and the proposals relating to manuscripts has been evaluated by the Steering Committee of the respective councils before placing it to the Screening Committee. The scheme may be transferred from the Department of AYUSH to Research Councils. They will implement the schemes from their Plan grant-in-aid.

May be transferred from the Department of AYUSH to AYUSH Research Councils. A provision of Rs. 7.00 crore was made in the Xth Plan. The projected outlay for XIth Plan is Rs. 7.00 crores.

34. North Eastern Institute of AYUSH

It is proposed to establish a North-Eastern Institute of Ayurveda and Homoeopathy at Shillong, Meghalaya. The proposal envisages the establishment of the institute in two phases spread over four years with the setting up of an Ayurvda college with an admission capacity of 60 students and a Homoeopathy college with an admission capacity of 50 students along with a 200 bed hospital, laboratories etc. The teaching infrastructure in Ayurveda and Homoeopathy is almost negligible in north-eastern states. There are 1 ayurvedic college and 3 homoeopathy colleges in Assam and 1 homoeopathy college in Arunachal Pradesh. In order to propagate the AYUSH educations and systems one national level institute need to be opened. It is with this end in view a proposal initially formulated for Arunachal Pradesh was considered by the EFC in its meeting held on 29th June, 2005 wherein after detailed discussions, the EFC recommended it subject to certain observations. In the meanwhile a draft CCEA note seeking approval of the cabinet was prepared and circulated to Ministry of Finance, etc. seeking their comments. The Ministry of Finance expressed doubts about the need and viability of the present. After considering the observations, it was decided to establish the institute at Shillong, Meghalaya in the campus of North Eastern Indira Gandhi Regional Institute of Health & Medical sciences, Shillong, where adequate land has been made available for the project.

The proposal was considered in the meeting of Cabinet Committee of Economic Affairs in its meeting held on 2nd June, 2006. However, the outcome of the proposal is not yet known.

Expenditure in X Plan

X Plan outlay	Expenditure	XI Plan outlay proposed
Rs.0.05crore	Rs. Nil	75.00 crore

It is submitted that there is adequate provisions of fund under Lumpsum Provision for North-Eastern States & Sikkim, if approved, requisite funds available under this head would have been re-appropriated to meet the expenditure.

Break-up of XI Plan Outlay(tentative)

Rs. in crores)

2007-08	2008-09	2009-2010	2010-2011	2011-2012	TOTAL
20.00	20.00	10.00	12.00	13.00	75.00

The scheme may be continued into 11th Plan so as to enable the Department to implement the proposal.

35. Re-orientation Training Programme of AYUSH Personnel/Continuing Medical Education (ROTP/CME)

These AYUSH practitioners usually remain unaware of the scientific developments and recent trends and advances in clinical practice. As a result the clinical competence of the practitioners declines over the years which may adversely affect their professional skill and deprive the masses from the benefit from recent health sector developments. There is also a need to keep them trained in the National Health Programme so that they can contribute in achieving the objectives of programme.

The ROTP/CME being implemented in X Plan is as a component under Centrally Sponsored Scheme on Development of Institutions. The total expenditure under this component in X Plan is Rs 2.70 crores

XI PLAN PROPOSAL

It appears that it would be appropriate if this scheme is taken up in the Central Sector since the purpose would be effectively served as the money will reach the user directly and it will reduce time in implementation/achievement of the scheme. It is proposed to to make a provision of Rs 10.00 crores in XI Plan. The year wise break up is as follows:

(Rs Crores)

2007-08	2008-09	2009-10	2010-11	2011-12	TOTAL
2.00	2.00	2.00	2.00	2.00	2.00

Department of AYUSH

Scheme-wise Projected Outlay for XIth Five Year Plan

Sl No.	Scheme	Tenth Plan Outlays	Tenth Plan Expenditure BE/R.E for 2006-07	Projected Outlays
	Centrally Sponsored Schemes			
1	Development and upgradation of AYUSH Institutes/Colleges	120..00	144.06	415.00
2	Hospitals & Dispensaries	59.00	284.41	625.00
3	Drugs Quality Control	45.40	55.28	150.00
	Central Sector Schemes			
	Strengthening of Deptt. of AYUSH			
1	Secretariat Social Services	17.50	21.88	30.00
2	Strengthening of Pharmacopoeial Committee on ASU	5.00	5.37	10.00
	Educational Institutes			
3	IPGTR, Jamnagar	5.50	3.85	10.00
4	NIA, Jaipur	25.00	23.96	37.00
5	RAV, New Delhi	3.00	3.05	5.00
6	NIS, Chennai	25.00	27.75	20.00
7	NIH, Kolkata	25.00	36.50	40.00
8	NIUM, Bangalore	15.00	21.00	25.00
9	MDNIY, New Delhi	11.00	9.56	20.00
10	Vishwayatan Yogashram, New Delhi	1.00	1.00	1.00
11	NIN, Pune	6.00	7.68	8.50
	Statutory Institutions			
12	CCIM, New Delhi	0.60	0.51	0.70
13	CCH, New Delhi	0.05	0.20	0.25
14	Central Pharmacy Council for Indian Medicine and Homoeopathy	2.00	0.45	2.00
	Research Councils			
15	CCRAS	45.00	54.37	100.00
16	CCRUM	42.00	59.45	90.00
17	CCRYN	10.00	8.63	25.00
18	CCRH	22.00	37.39	77.50
19	Central Combined Building Complex	6.00	7.92	15.00
20	Extra Mural Research	10.00	30.86	35.00
21	TKDL	1.50	7.67	1.50
22	Survey on Usage & Acceptability of AYUSH	1.00	1.18	2.00
23	National Ayurvedic Hospital in Delhi	15.00	29.11	75.00
24	Expansion of CGHS Dispensaries	7.00	0.89	7.00
25	Ayurveda Hospital, Lodhi Road, New Delhi	6.50	1.61	6.50
26	Setting up of National Board for Medicinal Plants	93.50	134.64	451.00

	Strengthening of Pharmacopoeial Laboratories			
27	PLIM, Ghaziabad	1.78	0.77	19.50
28	HPL, Ghaziabad	0.97	1.00	3.00
29	Strengthening of PLIM/HPL	20.00	3.81	0.00
30	IMPCL, Mohan	5.00	5.00	5.00
31	Information, Education and Communication 31.1 Awareness building on merits of AYUSH through surveys/exhibitions/road shows, print and electronic media in India and abroad.	19.00	19.26	25.00
	Other Programmes and Schemes			
32.1	International Exchange Programmes on AYUSH and Scholarship scheme for foreign students in AYUSH	8.00	4.86	10.00
32.2	Assistance for organizing national/international Seminar/Conference/Workshop on AYUSH	-	-	5.00
32.3	Organization of Trade/Fairs/Exhibition/Roadshows/Conference abroad.	-	-	5.00
32..4	Programme for training/fellowship/exposure visit/upgradation of skills etc.	3.00	0.11	5.00
32.5	Incentive to AYUSH industry for participation in fairs/conducting market study for creating a developing market opportunity in India and abroad.	5.00	0.56	5.00
33	Acquisition and Publication of Text Books and Manuscripts	7.00	1.65	7.00
34	North Eastern Institute of AYUSH	0.05	0.01	75.00
35	ROTP/CME	-	-	10.00
	TOTAL	**695.35***	**1057.26**	**2473.45***

***Lumpsum provision for North Eastern States and Sikkim is not included.**

Minutes of the First Meeting of Working Group for Eleventh Five Year Plan (2007 - 2012) on "Access to Public Health including AYUSH" held on 24th July, 2006

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The First Meeting of Working Group for Eleventh Five Year Plan (2007-2012) on "Access to Public Health including AYUSH" was held under the Chairmanship of Shri Vijay Singh,Secretary(AYUSH) on 24th July,2006 at 11.00 AM in Committee Room, IRCS Bldg, New Delhi. The list of participants is **annexed**.

At the outset, Secretary (AYUSH) welcomed the members of the working group and other invitees. In his introductory remarks, he briefed the participants about the terms of reference of the working group and pointed out that this Department had started with a modest budget in 1995 which has grown manifold in the last decade. At this stage, there is a need to review and analyze AYUSH sector priorities and different schemes that could be carried forward in the XIth plan.

Shri Bala Prasad, Director (AYUSH) made a presentation covering the recommendations of the various task force constituted on **AYUSH Education; Standardization and Quality Control of AYUSH Drugs; Research and Development; Mainstreaming of AYUSH; and Medicinal Plants.** Dr. G.S. Lavekar, Director, Central Council for Research in Ayurveda and Siddha (CCRAS) and Shri B.S. Sajwan, Chief Executive Officer, National Medicinal Plants Board (NMPB) elaborated the recommendations of task force on Research and Development and Medicinal Plants respectively. Shri Verghese Samuel, J.S. (VS) clarified that task force on education has felt that AYUSH professionals with very high academic credentials should only be nominated or elected in CCIM and CCH.

Shri Shiv Basant, J.S. (SB) explained the process of physical integration of AYUSH at PHC/CHC level under NRHM and expressed the hope that the States would provide for provision of AYUSH facilities in 100% PHCs/CHCs under NRHM in the 11th Five Year Plan for integration in health delivery system. For the purpose of smooth integration of AYUSH in health care delivery there should be a common Directorate at state level with due representation of AYUSH. Dr. S .K. Sharma Adviser (Ayurveda) and Dr. H.M. Chandola, Reader, Institute of Post Graduate Teaching & Research in Ayurveda (IPGT&RA), Gujarat Ayurveda University, Jamnagar, felt that separate Directorates for AYUSH at State level provide a better impetus to the growth of AYUSH in the States. Secretary (AYUSH)

supported the creation of separate AYUSH Directorate at the State level but also highlighted the need for proper coordination between AYUSH and Health Directorates for convergence and synergy in health care services.

Shri B.S. Sajwan, CEO, NMPB explained the achievements in the 10th Five Year Plan of the Central Scheme for the development, conservation and cultivation of medicinal plants. Further, explaining about Vanaspati Van, Community Herbal Garden, to use of modern agro-techniques to increase quality production of medicinal plants, he informed that modalities for taking over the Vanaspati Van scheme from the Department of Family Welfare are being worked out by the National Medicinal Plant Board. Preparation of monographs, R & D collaboration with CSIR, ICAR and DBT through their research institutes are some important areas which need to be given impetus in 11th Plan. Recalling the discussion in Department related Parliamentary Committee meeting in which relevance of NMPB was questioned, probably because of the small scale of its operation, Secretary (AYUSH) was of the view that there is a need for a quantum jump in the plan funds for medicinal plants sector and Chief Executive Officer, National Medicinal Plants Board may work out a comprehensive proposal for the 11th Plan.

Dr. B.L. Gaur, Vice-Chancellor, Rajasthan Ayurved University, Jodhpur emphasized that universities should be empowered to maintain the standards of medical education in AYUSH colleges/institutes and CCIM should provide only core curriculum. He suggested that recruitment of teachers should be done by a Centralized Board to ensure proper standard of teaching. He also stressed the need of publishing ancient AYUSH literature and their commentaries of in different languages otherwise people would not be able to translate them properly later on. Proper access to reserved forest and Good Collection Practices should be formulated for harvesting medicinal plants to ensure sustainable supply of medicinal plants products to the industry and practitioners. Teaching Institutions should have separate research wing as the teachers normally do not have knowledge of research methodology.

Dr. Darshan Shankar, Director, FRLHT, Bangalore supported autonomy to Ayurveda Universities and Centres of Excellence in different regions in deciding the curricula. Uniform curriculum across the country can only be at the expense of regional excellence. He also supported flexibility in curricula of PG education. He pointed that the Professionals of AYUSH are not aware of public health issues. Therefore, there is need to prepare them for substantial contribution in public health care system. For reorienting them there is need for

creation of public health institutions. He also pointed out that research in AYUSH has been sub-critical in size; and therefore, there is less impact. There is need for all India coordinated research projects. According to him, AYUSH research should not be confined to drugs, which has been the focus of research in allopathy. As AYUSH system is based on holistic approach, their research should also develop new framework of validation of complete set of therapeutic regime including diet and drugless therapies. National Medicinal Plants Board should also address the need of medicinal fauna and role of metals and minerals used in AYUSH. He also suggested public and private partnership to support buy-back arrangements. He specifically proposed higher plan allocation in the XIth Plan and provision of Plan funding to Universities and other Centres of Excellence working in medicinal plants/AYUSH systems.

Dr. Katiyar, Director, Herbal Division, RANBAXY emphasized the need for upgrading quality of AYUSH education to make Ayurveda an attractive carrier option. He emphasized a certification mechanism for quality control AYUSH medicines. He also suggested establishment of a National Repository of crude drugs and marker compounds.

Dr. H.M. Chandola, Reader, IPGTRA emphasized on minimum prescribed syllabus by CCIM to which universities can add additional modules. He also proposed restructuring of syllabus. He cited an example on research paper by Japanese on Prakarti, according to which diabetes can be identified through colour of skin and proposed research on diagnosis based on Prakriti. He also suggested supporting cooperatives in medicinal plants sector as it has been successfully demonstrated in milk sector. He supported encouragement to "Ayurvedic Medical Tourism"

Dr. Mattoo, President, Natural Resources India Foundation emphasized that different Govt. Agencies are working on medicinal plants with little or no coordination. There must be one nodal agency to coordinate with all stakeholders for better development of medicinal plants sector. He suggested separate Commissionerate at Centre and State level. He pointed out need for undertaking survey of Medicinal Plants.

Dr. Vasantha Muthuswamy, Senior DDG, ICMR emphasized the need to focus on what can be achieved in coming five years. She pointed out the need for sensitization of students and practitioners of different medical systems regarding the strengths of other systems to cultivate a scientific temper for cross system referrals for providing a patient the

best treatment. However, she regretted that most AYUSH physicians are only indulging in allopathic practice. She also explained the need for coordinated research and clinical trials and informed that ICMR has established an institute at Belgaum devoted to traditional medicines. CCRAS/CCRUM should build linkages with that institute.

Prof. Shakheel Jamil, Dean, Faculty of Unani medicine, Jamia Hamdard pointed out that most of the Unani Institutions have come up in the private sector and there is need for one time funding for upgradation of their infrastructure. He also emphasized the need for fundamental research, particularly, on Regimental Therapy.

Vaidya Devendra Triguna, President, Ayurvedic Congress, New Delhi pointed out that in Government sector AYUSH colleges are not being opened. After a lot of efforts, one college is going to be opened in Delhi by Delhi Government. In private sector colleges are coming up. But they do not meet the minimum standards as their threshold is very high. He emphasized that minimum standards laid down by the Government should be realistic. He underlined the need to have proper vision and focus in AYUSH research. He also suggested the need to promote Ayurvedic veterinary care products.

Dr. V.K. Khanna, Former Principal, Nehru Homoeopathy College, Delhi pointed out that most Homoeopathic colleges do not have a proper IPD, OPD and students do not get adequate clinical experience. There is very little clinical training. There is a need for enforcing some basic minimum standards for AYUSH educational institutions.

Dr. P.R. Ramesh, Chief Physician, Kottakkal Arya Vaidya Sala laid emphasis on standardization of Ayurvedic raw materials, optimizing of formulations and dosage forms, modernization and updating of formularies, starting Ayurvedic scholarship schemes and setting up a multi-disciplinary research centre capable of undertaking research work at molecular level.

Dr. R. Vijay Kumar, Commissioner, ISM&H, Tamil Nadu emphasized the need for clinical research, statistics and research methodology component in AYUSH education. He suggested introduction of training for AYUSH physicians and training of teachers. The expertise of local healers like bone setters needs to properly evaluated for inclusion in AYUSH/modern medicine curricula as well coopting local healers in the health care delivery. Moreover, mainstreaming of AYUSH should be extended to urban areas. He suggested broadening of scope of Reorientation Training and Continuous Medical Education.

Dr. Mohd. Qasim a noted Homoeopathic practitioner and former Professor, B.R. Sur Homoeopathy College brought out the need to have teacher training programmes and upgradation of professional knowledge of teachers to contemporary relevance. He emphasized comprehensive clinical training for students. He specifically mentioned the need for research-oriented training.

Dr. S.K. Sharma, Advisor (Ayurveda), Department of AYUSH mentioned that some States have no AYUSH college, such States should be supported for opening of AYUSH College in Govt. Sector with one time lumpsum funding from the Central Government. Secretary (AYUSH) expressed the view that the Central Government can only respond to locally felt needs and concerned States should come up with specific proposals indicating their own commitments for recurring and non-recurring expenditure and Central Government can at best do gap filling for capital expenditure. Adviser (Ayurveda) also supported creation of a AYUSH Pharma Development Fund. J.S. (SB) mentioned that the Pharma Development Fund administered by Department of Science and Technology is also available to AYUSH Pharma Units. The need for increasing the corpus would arise only when more and more viable proposals are submitted to Department of Science & Technology by AYUSH Pharma Units than they can fund from the existing corpus. He suggested a meeting with Department of Science & Technology and AYUSH Pharma representatives to sort out this issue.

Dr. Jiyalal of Rashtriya Guni Mission emphasized the need for validation of treatment given by Gunis and their cooperation in the national health delivery network.

Shri G.P. Singh Jhala, Rashtriya Guni Mission suggested the need for proper documentation of their practices. He also suggested establishment of herbal gardens in public places and schools and cautioned against haphazard cultivation of medicinal plants.

Dr. A. A. Ansari, Adviser (Unani), Department of AYUSH emphasized that the conditions of Government Colleges should be improved. Assistance to five Centres of Excellence in Unani Medicine, which were identified during 10th Five Year Plan should be assisted in the 11th Five Year Plan. According to him, Government grants should be confined to State Government Institutions.

Shri B.P. Sharma, Joint Secretary, Ministry of Health and Family Welfare generally supported the recommendations of the Task Force on mainstreaming of AYUSH. He, however, mentioned that National Rural Health Mission (NRHM) funding is limited and contractual hiring of AYUSH doctors would be possible only for CHCs/PHCs and not for sub-centers. According to him, this proposal would need approximately Rs. 1000 crore, which would not be feasible from NRHM budget at this stage. J.S. (SB) clarified that States were asked to examine this proposal in the joint letter issued under the signature of Secretary (Health) and Secretary (AYUSH).

JS (SB) requested all the members to send their suggestion by e-mail quickly so that the report of the Working Group could be sent to Planning Commission.

The meeting ended with the Vote of thanks to the Chair.

ANNEXURE
LIST OF PARTICIPANTS
IN THE Ist MEETING OF WORKING GROUP HELD ON 24.7.2006 AT 11.00 A.M. IN THE COMMITTEE ROOM IN IRCS BUILDING, NEW DELHI

Sl. No.	Name, Designation & Address
1.	Shri Vijay Singh, Secretary, Department of (AYUSH)
2.	Shri Shiv Basant, Joint Secretary, Deptt. of AYUSH
3.	Shri Verghese Samuel, Joint Secretary, Deptt. of AYUSH
4.	Shri B.P. Sharma, Joint Secretary, Deptt. of Health
5.	Shri B.S. Sajwan, CEO(NMPB)
6.	Dr. S.K. Sharma, Adviser (Ay)
7.	Dr. S.P. Singh, Adviser (Homoeopathy)
8.	Dr. Anis A. Ansari, Adviser (Unani)
9.	Dr. V.V. Prasad, Director, RAV, New Delhi.
10.	**Dr. G.S. Lavekar, Director, CCRAS, New Delhi.**
11.	**Dr. D.R. Lohar, Director, HPL/PLIM, Ghaziabad**
12.	**Shri Bala Prasad, Director, Deptt. of AYUSH**
13.	**Dr. N.P. Singh, Director, Deptt. of AYUSH**
14.	Dr. G.P. Garg, Chief Chemist, Medicinal Plants Board.
15.	Shri A.K. Harjani, Deputy Director(PW), Deptt. of AYUSH.
16.	Shri T.S. Bhatia, Deputy Secretary, Deptt. of AYUSH.
17.	**Dr. D.C. Katoch, Dy. Adv.(Ay.), Deptt. of AYUSH**
18.	Dr. M.A. Kumar, Dy. Adv.(Siddha), Deptt. of AYUSH.
19.	Dr. S.N. Sahu, Dy. Adv.(Homoeo), Deptt. of AYUSH.
20.	Dr. Abhimanyu Kumar, Associate Professor, National Institute of Ayurveda, Jaipur.
21.	**Dr. M. Qasim, (Homoeo), B-36, Nizammudin West, New Delhi-13**
22.	Dr. S.K. Gupta, Research Officer, Planning Commission, New Delhi.
23.	Shri Rajeev Lochan, Director, Planning Commission, New Delhi.
24.	Shri K. Kalaivovi, Director, Incharge, National Institute of Health & FW., New Delhi.
25.	Dr. Vasantha Muthuswamy, Sr. DDG, ICMR, New Delhi.
26.	Dr. R. Vijay Kumar, Special Commissioner, ISM&H, Govt. of Tamil Nadu, Chennai.
27.	Dr. N.S. Dharmshaktu, Director General, Directorate General of Health Services, New Delhi.

28.	**Dr. Darshan Shankar, Director, FRLHT, Bangalore.**
29.	**Dr. C.K. Katiyar, Director, Herbal Division, RANBAXY**
30.	**Dr. K.S. Rawat, Deputy Director, Ayurvedic & Unani Services, Uttaranchal.**
31.	**Dr. V.K. Khanna, Principal, Nehru Homoeopathy College, Delhi.**
32.	**Dr. Anirban Pal, Scientist, CIMAP(CSIR), Lucknow.**
33.	**Prof. Shakir Jaimir,**
34.	**Dr. G.P. Singh, Jwala Jagaran Jan Vikas Samiti**
35.	**Vaidhya Jiyalal, Rashtriya Guru Mission.**
36.	Vaid Devendra Triguna, President Ayurvedic Congress, New Delhi.
37.	Dr. R.P. Mattoo, President, Natural Resources India Foundation.
38.	Dr. Ramesh P.R., CMOPSUDENT, Arya Vaidya Sala Ay. Hospital Karkerdooma, Delhi-110099.
39.	Dr. H.M. Chandela, Reader, KC, Institute of Post Graduate Training and Research in Ayurveda, Jamnagar.
40.	**Dr. B.L. Gaur, Vice Chancellor, Rajasthan Ayurveda University, Jodhpur.**

Government of India
Department of AYUSH

Report of the Task Force on AYUSH Education

1. Present status of AYUSH Education

1.1 The Regulatory System

Medical education in the Ayurveda, Siddha and Unani Systems is governed by the Indian Medicine Central Council Act, 1970 (IMCC Act) while medical education in the Homoeopathy System is governed by the Homoeopathy Central Council Act, 1973 (HCC Act). Both these Acts, which are broadly similar in nature, have provisions for the setting up of autonomous regulatory Central Councils which have wide ranging powers to prescribe the courses of study and their duration and the conduct of examinations in medical colleges. The major source of power for the Councils in the past lay in their discretion to grant permission for the setting up of new colleges and the starting of higher courses of study and the increase in admission capacity in existing colleges. Neither the IMCC Act or the HCC Act gave the Councils the power to grant such permissions, but this did not in any way inhibit the Councils from processing cases and granting permission for the opening of hundreds of medical colleges in the country in recent years. The mushroom growth of sub-standard new colleges became so alarming that the Government was forced to amend both the IMCC and HCC Acts to specifically empower the Central Government to grant permission for the opening of new medical colleges, etc. It is also noticeable that the role of the Universities in AYUSH education has progressively become more and more limited given the wide ranging and extraordinary powers wielded by the Central Councils with respect to all academic matters. There is no Central legislation for the regulation of Naturopathy and Yoga medical education.

1.2 The availability of AYUSH medical colleges

At present, there are 450 AYUSH medical colleges in the country, of which 99 colleges offer post-graduate courses. The admission capacity at Under Graduate level is 24880 while the admission capacity at Post Graduate level is 2325. The details are given below:-

	Ayurveda	Unani	Siddha	Naturo pathy	Homoeop athy	Total
Under Graduate Colleges	219	37	6	10	178	450
Admission Capacity (UG)	9865	1525	320	385	12785	24880
Post Graduate Colleges	57	8	3		31	99
Exclusive PG Colleges	2	1	1		2	6
Admission Capacity (PG)	905	73	110		1040	2128
Admission Capacity (Exclusive PG)	40	28	30		99	197

1.3 Course design

The Graduate and Post Graduate courses in Ayurveda, Siddha, Unani, and Homoeopathy and the Degree course in Naturopathy and Yoga are based on the corresponding Allopathic medical courses and are designed to lead to the award of Degrees from the Universities to which the colleges are affiliated. In all these systems there is a uniform five and a half year Degree course which includes one year of internship training. There are three year Post Graduate courses in 22 specialties of Ayurveda, 6 specialties each of Unani and Siddha and 7 specialties of Homoeopathy which are offered by various colleges. Admission to these Post Graduate courses is generally on the basis of a qualifying test. There is no Post Graduate course in Yoga and Naturopathy. The course design for both Under Graduate and Post Graduate courses is blindly imitative of the corresponding courses in Allopathic medicine.

1.4 Pharmacy and Para medical Education

There is no Central regulation of Pharmacy and Para-medical training in AYUSH systems. There are 14 Ayurveda pharmacy colleges, 2 Siddha pharmacy colleges, 4 Unani pharmacy colleges and 8 Homoeopathy pharmacy colleges which offer Pharmacist training courses at Certificate, Diploma and Degree levels. The duration of these courses ranges between 10 months to 4 years and the minimum qualification for admission is Matriculation or Senior Secondary. The course content and curriculum vary widely from state to state and the quality of the training is by and large unsatisfactory These colleges turn out only 915 Pharmacists every year which is only a fraction of the present demand. The position of para medical education is more or less the same.

1.5 Quality of AYUSH medical education

There was a consensus in the Task Force that in spite of the tremendous expansion in AYUSH education facilities in recent years or, perhaps, because of it, the general quality of AYUSH medical education remains very unsatisfactory. With some honourable exceptions, most AYUSH educational institutions do not provide quality medical education and the products of these institutions lack knowledge of the fundamentals of the concerned system of medicine. It was recognised that AYUSH education is just producing half baked practitioners who are barely able to practice in the best traditions of their systems. More importantly, this lack of quality in the AYUSH practitioners is responsible for the decline in the quality of AYUSH health care delivery and is preventing AYUSH systems from playing an active role in the national health programmes.

1.6 Attempts by Government to improve the quality of AYUSH education

In recognition of the fact that the quality of AYUSH education had to be upgraded, the Government of India is implementing a Centrally Sponsored Scheme "Development of Institutions" under which financial assistance is provided for the expansion and renovation of buildings; purchase of library books, equipment and scientific instruments; the strengthening of teaching hospitals; the development of computer laboratories and internet facilities; the development of postgraduate departments; for conducting re-orientation training programmes; and, for the development of model colleges. However, the scheme does not cover private colleges as far as capital works are concerned and the financial assistance provided has not always managed to improve the educational standards to the desired extent. The scheme cannot be said to have improved the quality of AYUSH educational institutions to any significant extent.

2. Problem Areas

2.1 Breakdown of the regulatory system

The regulatory system created by the IMCC and HCC Acts has clearly been perverted by the regulatory Councils themselves in their single minded concentration on enabling more and more sub standard new colleges to be set up. This has ensured that the elected seats on the Council have been effectively captured by non academic persons who run colleges or have a direct interest in the management of colleges. The Councils do not even go through the pretence of being concerned about academic standards or about the manner in which the medical colleges are being managed. The only issue which concerns the Councils nowadays is the opening of new colleges and, more importantly, the attendant activity of conducting inspections of the candidate colleges. The idealistic experiment of having autonomous regulatory Councils has most certainly broken down.

2.2. Poor infrastructure

The general quality of the AYUSH teaching infrastructure in the country is far from satisfactory. The major reason for this is the lack of investment. In the case of government institutions, there is benign neglect as the finances of the State Governments do not permit adequate funding. This is a particular problem since many old and reputed institutions are in

the government sector. Even when funds are available, proper utilisation does not take place because of problems with financial and procurement procedures. In the case of private institutions, the promoters are often unwilling to invest in any facility which will not give a commercial return on investment. The position of the newer colleges set up in recent years is particularly bad since the promoters rarely make any attempt at setting up sufficient academic infrastructure in terms of the minimum standards prescribed by the Councils.. The situation has deteriorated to such an extent that most promoters of AYUSH medical colleges now feel that there is no need to create infrastructure in terms of the minimum standards since it is perfectly possible to ensure that a student obtains a degree purely on the basis of classroom instruction.

2.3. Lack of qualified and committed teachers

The Task Force felt that the lack of teachers and, more importantly, the lack of good quality teachers was a major problem affecting not just the development of the AYUSH education but also the development of the entire AYUSH sector. In the government sector, the poor financial condition of the State governments and the accompanying stringent budgetary controls have ensured that posts are not created whenever required and that even existing posts are not filled up. In the private sector, the promoters of medical colleges have realised that they can manage with far fewer teachers than stipulated in the regulations by either hoodwinking or colluding with the Councils. The widespread practice in the private sector of teachers being engaged on contract basis has also had a very adverse effect on the quality of teaching. Another problem in the private sector is the low salaries paid to teachers as a result of which only below average persons are attracted to teaching jobs. The quality of the existing teachers remains less than satisfactory in spite of the Central scheme for the re-orientation training of in-service teachers having been in existence for quite some time. It is felt that the teachers are not conversant with the latest thinking in research and that their professional knowledge has not been updated. They are also perceived as being ignorant of the larger world of science. Demotivation of teachers is a serious problem.

2.4. Mushroom growth of sub standard colleges

The greatest threat to AYUSH education in recent years has been the extraordinary growth of sub-standard private medical colleges. During the period 1996-2006, as many as 198 new colleges were set up, the vast majority being in the private sector. To put it in perspective, it

must be remembered that this constitutes a full 44 percent of the total number of AYUSH medical colleges in the country. These colleges in general have little or no infrastructure in terms of the minimum standards prescribed; staffing levels are generally inadequate; and the quality of instruction is poor. Most of these newly opened colleges are churning out ill trained and barely educated AYUSH practitioners. The responsibility for this appalling situation rests entirely with the statutory Councils which actively colluded with the promoters to ensure that these colleges were set up in violation of the regulations issued by the Councils themselves with regard to minimum standards, staffing, infrastructure, etc.

2.5. Unsatisfactory curriculum and course content

There is a general consensus that curriculum and course content of the AYUSH Degree and Post Graduate courses require significant improvement. The existing curriculum is imitative of the Allopathic curriculum to the extent that the very character of the Ayurveda, Siddha, Unani and Homoeopathy systems gets compromised. The load on undergraduate students in terms of subjects and papers at Degree level appears to be excessive and unnecessary when compared to the load for MBBS students. The Allopathic medicine component at Degree level appears to be disproportionately large for no apparent reason. The examination system is compromised by the fact that not enough suitably qualified examiners are available. The problems in this area are due to the fact that it is the CCIM and the CCH which exclusively regulate the curriculum and course content and the role of the Universities is restricted to the conduct of examinations.

3. Recommendations

3.1. The regulatory system

3.1.1 The role of the Councils to be re-defined

There is an imperative need for root and branch reform of the regulatory Councils. The simplest option would be the IMCC and HCC Acts to be amended to ensure that only academics and persons of high repute can get elected to the Councils and, more importantly, to ensure that the Councils cannot be captured by commercial interests with deep pockets. Amendments are also required to restrict the membership of the Councils to a fixed tenure of five years. The regulatory Acts should also have provisions enabling the Government to give directions to the Councils on matters of public policy and to enforce

these decisions. In extreme cases, the Government should also have the power to dissolve the Councils. The Bills to amend the IMCC and HCC Acts which have been introduced in Parliament contain many of these provisions. The Department of AYUSH should attempt to get these Bills enacted as quickly as possible.

3.1.2 The role of the Universities

The Universities should be given a significant role in regulating AYUSH education. The Universities could prescribe course curricula and syllabi, training modules and organize the examination system. The Councils should prescribe the broad outline of the curriculum and the Universities should prescribe the subject content, the duration and phase wise break up of courses, pass standards, required faculty levels and required infrastructure, etc. It is obvious that the Universities should be given the responsibility of maintaining and enforcing educational standards as this is not something which cannot be done with any effectiveness in a centralized manner as has been successfully demonstrated by the Councils.

3.1.3 Setting up of Regional AYUSH Universities

In the long run, the Task Force is of the opinion that the cause of AYUSH education would be best served by setting up 4 regional AYUSH universities which would be Centrally funded including the existing Ayurveda Universities of Gujarat and Rajasthan to which all the AYUSH institutions could be affiliated. The various National Institutes could also be affiliated to these Universities or alternatively could be given Deemed University status. The proposed decentralization of regulation in academic matters would definitely result in higher standards of training and this would certainly have a beneficial effect on the development of AYUSH systems in the country.

3.1.4 Setting up of an Accreditation system

The setting up of the regional AYUSH Universities will take a certain amount of time given the need for Central legislation. Since educational standards are declining rapidly and given the drift in the policies of the CCIM and the CCH, it is necessary to adopt certain measures outside the existing regulatory system to check the decline in educational standards. The Task Force is of the opinion that a formal accreditation system for the ranking and gradation of colleges on the basis of the quality of their teaching and training facilities and infrastructure should be set up. The accreditation system will not only inform the public about

the standards of education in different colleges but also help the Government to identify institutions which can be given financial assistance for further development of academic standards. The accreditation mechanism should be operated by the Department of AYUSH through a Board comprising eminent academics and experts.

3.1.5 Regulation of Yoga and Naturopathy

The issue of whether a separate statutory regulatory authority should be set up for Yoga and Naturopathy on the lines of the existing Councils was discussed. It was noted that there were only 10 colleges offering BNYS courses at present. The number of practitioners is also quite low. This being the case, there does not seem to be any justification for setting up a separate statutory regulatory system for Yoga and Naturopathy. That said, there is still a case for regulating Yoga and Naturopathy education by means of alternative institutions. At the moment it is the Universities which are setting the curriculum and course content and conducting examinations. Since there are only a few such Universities and since the intellectual content of Naturopathy makes it inherently more liable to be misused, it is essential that some kind of standardization and rationalization of the curriculum and course content be imposed. The optimal solution appears to be an accreditation system for institutions and a registration system for practitioners to be to be implemented by the CCRYN or NIN for Naturopathy and by MDNIY for Yoga.

3.2 Improvements in professional training

3.2.1 Training at Degree and Post Graduate levels

There is an urgent necessity to improve clinical training. The emphasis should be on starting clinical training as early as possible in the Degree courses. The basic objective of AYUSH education should be to produce professionally competent doctors who are thorough with the fundamentals of their systems and who have undergone intensive practical clinical training. The training should enable AYUSH doctors to handle patients and to diagnose conditions purely in terms of the accepted principles of the system concerned without unnecessarily taking recourse to the diagnostic techniques used in Allopathic medicine. It is also important that the doctors do a compulsory rural posting of two years before they are considered for post graduation.

3.2.2 In service Training

The need for a complete overhaul of the in service training system cannot be overemphasized. Given the rapid changes in scientific and technical knowledge, it is imperative that an opportunity be given to all practitioners to update their professional knowledge. The existing system which has been funded through a component of the Centrally Sponsored Scheme for the Development of Institutions has not been particularly successful. A change of strategy may therefore be considered and dedicated training centres may be designated or set up where necessary. National Institutes, the Rashtriya Ayurveda Vidyapeeth and certain Universities or premier AYUSH institutions should be designated as Training Centres where Continuing Medical Education and the periodic re-orientation of practitioners and teachers would be provided throughout the year.

3.3 The financing of Medical Colleges

It is clear that the Centrally Sponsored Scheme for the Development of Institutions was conceptually flawed since It was too rigid and the quantum of financial assistance was not adequate. Given the crisis in AYUSH education, it is essential that the scheme be reformulated so that it can be more flexible such that it can take account of the requirements of individual institutions while at the same time ensuring that larger amounts of money are made available to the institutions. This would also mean that it would be necessary to focus on a smaller number of institutions rather than spread the money thin as at present. The Government should select around 20 or 30 good institutions and fund development schemes for improving infrastructure and facilities and the hiring of quality staff. The ultimate aim should be to produce world class institutions by the end of the 11th Plan period. Institution specific development plans should be implemented rather than the one-size-fits-all plans now being implemented. There should also be no distinction between government owned and privately owned institutions for the purpose of receiving funding under the scheme. The outlay on the scheme should be increased threefold

3.4 Preventing the opening of sub-standard medical colleges

3.4.1. Legal provisions to be strengthened and better enforcement

The strict enforcement of the provisions of the IMCC Act and the HCC Act regarding the grant of permission for starting new medical colleges, starting higher courses of study and

increasing admission capacity is probably the only way to prevent the mushrooming of sub-standard medical colleges. The regulations to govern the enforcement of section 13A of the IMCC Act are inadequate and require immediate replacement or extensive amendment. The regulations should be realistic and the intention should be to ensure that minimum standards of staffing, infrastructure and facilities are in place before a medical college is permitted to admit students. Regulations for the enforcement of section 13C of the IMCC Act are urgently required so that the formal permission required under the Act for the medical colleges which were in existence when the IMCC Amendment Act was amended in 2003 can be processed. The position regarding new Homoeopathy medical colleges is more problematic since the CCH has blatantly defied the Government by refusing to notify the regulations framed under section 12A of the HCC Act. It is urgently required that regulations be notified to govern the enforcement of the amended provisions of the HCC Act relating to the starting of new colleges, etc.

3.4.2 State Governments and Universities to be responsible when giving No Objection certificates and Affiliation to new medical colleges.

State Governments and Universities should act responsibly when granting No Objections and Affiliation to new colleges. The indiscriminate grant of No Objections by the State Governments and the routine grant of Affiliation by the Universities is one of the reasons for the mushroom growth of AYUSH medical colleges during the past ten years. New colleges should be allowed to come up only when there is a gap in the availability of AYUSH medical practitioners in that particular state which cannot be filled up in any other way. It must be remembered that the total annual output of AYUSH medical graduates and post graduates in the country is around 27000. The comparative figure for Allopathic medical graduates and postgraduates is around 29000. It can therefore be seen that there is no critical shortage of AYUSH doctors such that the standards of training require to be lowered or compromised to enable greater output. The blatant commercialization of AYUSH education must be checked before it affects the development of the systems themselves.

3.5 Monitoring the standard of instruction in Medical colleges

3.5.1 Regulatory Councils to monitor the standard of instruction

Monitoring the quality of instruction in medical colleges is probably one of the most important regulatory functions of the CCIM and CCH. Unfortunately, this is something which gets very

low priority with the Councils which concentrate shamelessly on the grant of permission for new colleges for very obvious reasons. The impact of this non-concern is evident in the declining standards of AYUSH education. Amendments must be made to the relevant regulations to ensure that the Councils are duty bound to monitor the standard of instruction in colleges. It must also be ensured that a qualitative assessment is done rather than a mere counting of the number of teaching staff available, the number of class rooms, etc. The Universities must also be involved in this exercise by the Councils.

3.5.2 Punitive action to be taken against colleges where the quality of instruction is unsatisfactory

One reason why colleges do not bother about maintaining academic standards is that there is no compulsion to do so. The IMCC Act contains a provision for de-recognition which is precisely meant for situations where a college is not maintaining the prescribed academic standards. For reasons which are not clear, this provision is rarely, if ever, invoked against erring medical colleges. It is essential that the inspections proposed at para 3.5.1 should identify the colleges which are not maintaining appropriate academic standards. These colleges should then be given an opportunity to take suitable corrective action and in the event no action is taken or if the action taken is insufficient de-recognition should be resorted to. If the provision for de-recognition is fairly and ruthlessly enforced, there is little doubt that there will be a perceptible improvement in academic standards.

3.6. Pay structure for Teachers

One of the reasons why AYUSH medical colleges do not attract quality teachers is the fact that most colleges do not offer satisfactory pay scales for teachers. It should be recognized that unless pay scales are improved it would not be realistic to expect good teachers to work in AYUSH colleges. UGC scales should be available to teachers in AYUSH colleges subject to the introduction of appropriate accreditation systems for ensuring that teachers acquire higher qualifications, etc.

3.7 Post graduate education

The strengthening of Post Graduate education is vital for the development of teaching and research. There is a shortage of good teachers and there has to be focus on research if the systems are to achieve a high degree of scientific credibility. It is therefore essential that

Post Graduate education be given the necessary attention it requires There is an immediate need to strengthen Post Graduate departments and this can be done as a part of the new scheme for the creation of institutions of excellence to be introduced in the 11th Plan. Post Graduate education requires rationalization because a large number of irrelevant courses have been introduced, particularly in Ayurveda, in an attempt to mimic the specialities in Allopathic medicine. In the interest of the development of AYUSH systems, it is essential that specialization should only be in classically recognized areas of the systems and not in artificially created areas merely on the analogy of specializations in Allopathic medicine. Opportunities should also be created for the admission of Ayurveda, Unani, Siddha and Homoeopathy graduates in system-neutral non-clinical Post Graduate medical courses like Anaesthesia, Radiology, Anatomy, Physiology, Optometry, Hospital management etc. offered by Allopathic medical colleges and other institutions instead of trying to create AYUSH versions of these specialities. It would also be necessary to start Post Graduate diploma courses in specialities for AYUSH medical graduates at University level.

3.8 Pharmacy education

There is an urgent necessity to regulate Pharmacy training in AYUSH systems so as to provide adequate numbers of Pharmacists for manufacturing units and hospitals. The ISM &H Pharmacy Bill which has been introduced in Parliament would be sufficient for this purpose. The Department of AYUSH should take urgent steps to get the Bill approved by Parliament.

3.9 Para Medical education

Para medical education requires to be systematized and standardized. Ideally, para medical courses should be started by existing AYUSH teaching institutions. Without adequate numbers of para medical personnel, it will not be possible to popularize or expand the reach of AYUSH systems. This particularly relevant given the participation of AYUSH systems in the NRHM and other national health programmes and the expansion of AYUSH dispensaries and hospitals envisaged under the Centrally Sponsored Schemes in the 11th Plan. The provision of Central assistance for encouraging AYUSH institutions to start para medical courses should also be considered by the Department of AYUSH.

REPORT OF 11th PLAN WORKING GROUP ON STANDARDIZATION & QUALITY CONTROL OF ASU & H MEDICINE

To publish Pharmacopoeial standards for Ayurveda, Siddha and Unani and Homoeopathy (ASU&H) medicines both for single and compound drugs is one of the priority work of the Department of AYUSH. The Ministry had taken up the task of developing pharmacopoeial standards through Pharmacopoeia Committees. Four different Pharmacopoeia Committees are working for preparing official formularies/pharmacopoeias, to evolve uniform standards in preparation of ASU drugs and to prescribe working standards of single drugs as well as compound formulations. Pharmacopoeial standards are important and are mandatory for the implementation of the drug testing provisions under the Drugs and Cosmetics Act, 1940 and Rules thereunder. These standards are also essential to check samples of drugs available in the market for their safety and efficacy.

The Department of AYUSH launched a Central Scheme to develop Standard Operating Procedure of manufacturing processes, to develop pharmacopoeial standards and shelf life studies of Ayurveda, Siddha & Unani Compound drugs under 10th Five Year Plan. and achieved significant results, but still lots of work have to be done in the field of standardization and quality control. For this strengthening/upgrading of various drugs testing laboratories (Government/ autonomous/states/ other accredited laboratories), ensuring of availability of genuine raw materials of commonly available drugs as well as rare and endangered drugs of plants/animals/minerals origin, substitutes of similar species have to taken up in the 11th Plan to handle the task of drugs quality control. New area relating to drugs e.g. strengthening of Drugs Control department of States and Central, Developing Herb garden/Museum/herbarium are essential requirement for quality medicines. For this Planning Commission has constituted a Working group headed by the Secretary, AYUSH, to access the Health System, Department of AYUSH, further constituted a task force on "Standardisation and Quality control of AYUSH Drugs". The following members participated in the meeting:-

1. Dr. S.K.Sharma, Adviser, Deptt. of AYUSH, New Delhi
2. Dr. G.S. Lavekar, Director, CCRAS, New Delhi
3. Dr. C.K.Katiyar, Ranbaxy, Gurgaon
4. Dr. P.K.Warrier, Arya Vaidya Shala, Kotakkal,
5. Dr. (Mrs.). S.K. Khanrasad, Scientist -F, Deptt. of Science & Technology
6. Dr. D.R.Lohar, Director, HPL/PLIM, Ghaziabad, Member Secretary,

Special invitees

7. Dr. Padma Venkat, Jt. Director, FRLHT, Bangalore
8. Dr. Y.K.S. Rathore, Jt. Director, CRCL, New Delhi.

The TASK FORCE held two meetings on 3rd July ,2006 and on 14th July,2006 at CCRAS, Janakpuri, New Delhi. discussed various issues and after detailed deliberations on Standardisation and Quality control on AYUSH drugs, made the following recommendations.

RECOMMENDATIONS OF THE WORKING GROUP ON QUALITY CONTROL & STANDARDISATION OF ASU & H DRUGS.:

1. LAYING DOWN OF PHARMACOPOEIAL STANDARDS:

To undertake testing of multiple ingredients compound formulations, it is necessary first to have the test for single drugs going in the formulation. Therefore, Ayurvedic, Siddha, Unani & homoeopathic Pharmacopoeia Committee have undertaken this work at priority and has made significant achievement in case of single drugs. Five Volumes of Ayurvedic Pharmacopoeia of India containing 418 monographs and one volume of Unani Pharmacopoeia of India containing 45 monographs has been published. There is an urgent need to complete the major single remaining ASU drugs. The number of such drugs is about 200 to be worked in 11th Plan. Nine volumes of Homoeopathy Pharmacopoeia containing 1000 Drugs have been published. Work on finished Products (Mother tincture) need to be taken up in 11th Plan.

The Standardized monographs on minerals and metals to be used as raw-materials are equally important before developing the SOP and Quality Standards of Bhasmas. Therefore, the work initiated in 10th Plan need to be continued in the 11th Plan. The animal bye-products, marine products are also used in ASU drugs for which the standards are to be developed.

Although, the Pharma industry is making use of extracts in various dosage forms yet there are no pharmacopoeial standards of extracts to be used as intermediate raw material. Therefore, it is necessary to develop the Quality Standards along with their Safety Profile for the extracts of the most common drugs used in ASU system. It is also necessary to develop pharmacopoeial & quality standards for Indian medicinal plants used for the purpose of food and cosmetics and official substitutes of non available drugs/ plants/animals. This work should be give priority in the 11th Plan. Thin Layer Chromatography (TLC/GLC) technique are quite relevant to identify the marker compound as well as major ingredients. Therefore, there is a need to prepare chromatograms/finger-printing Atlas of the single drugs used in ASU system.

All these Pharmacopoeial activities will be carried out with the help of PLIM/HPL, CCRAS, CCRUM, CCRH, University Laboratories, CSIR & other laboratories capable of undertaking this work.

Pharmacopoeial Standards of Multiple Ingredient Compound formulation is one of the priority area wherein the work has been initiated in the 10th Plan for 300 formulations. This needs to be taken more vigorously

in the 11th Plan and target should be to publish SOPs and Quality Standards, Shelf Life monographs for at least 100 compound formulation per year to complete the work on 500 ASU drugs in the 11th Plan.

There is an urgent need to revise and up-date the various volumes of Pharmacopoeias and Formularies. This needs constant documentation and networking of the laboratories. The existing arrangement of Ayurvedic Pharmacopoeia Cell in the Department of AYUSH/ and CCRAS is inadequate to provide technical and scientific assistance to the Pharmacopoeial work.

Keeping in mind the increasing demand of AYUSH & plant based drugs, there is a need to give top priority to the Pharmacopoeia work of Ayurveda, Unani, Siddha and Homoeopathy. This work can be systematically carried out with the help of an Autonomous body **'Ayurvedic Pharmacopoeia Commission'** fully supported and staffed by the Department of AYUSH. This could be housed in the new campus of PLIM, Ghaziabad.

For Pharmacopoeial, Quality Standard work as well as setting up of Ayurvedic Pharmacopoeia Commission, an allocation of **Rs. 20 crores** will be required for 11th Plan.

2. Capacity Building:

Strengthening of DTLs for ASU & H for the acceptability of the ASU & H drugs:

It is necessary that the Pharmacopoeial Standards published by Government of India are complied by the manufacturers as well as DTLs. There are about 10,000 manufacturing units preparing lakhs of classical and P&P formulations. As per new provisions of the Drugs & Cosmetics Act various labeling provisions for domestic and export purpose require huge infrastructure of laboratories. Department of AYUSH has supported 22 State Government DTLs in tune of Rs. 1 crore each, but their functioning capacity is very limited. There is acute shortage of trained experts as there is constraint of regular employment of scientists in the State DTLs etc. The new GMP provisions require regular testing during the process of manufacturing as well as for the products. Therefore, there is a need of developing and supporting large number of DTLs for ASU &H systems. The following categories of institutions/ laboratories will be supported for this purpose:-

i) PLIM & HPL/ CCRAS/CCRUM/CCRH
ii) State DTLs

iii) Eminent Laboratories/Institutions having good infrastructure to undertake testing of AYUSH drugs in the Universities as well as other such institutions.
iv) All the PG teaching Departments of Dravya Guna, Ras Shastra, Bhaishajya Kalpana, Gun Padam, Ilmul Advia and Materia Medica & Good Pharmacy Departments
v) In-house DTL of the industries
vi) Labs run by Associations of ASU&H drug industry
vii) Co-operative Labs run by a group of drug industry
viii) Development or identification of a lab dedicated to isolation of marker compounds.

All such institutions require generous funding to develop infrastructure as well as expert human resource. This work can be carried out with the help of an Autonomous body 'Ayurvedic Pharmacopoeia Commission' fully supported by the Department of AYUSH. This will require an amount of **Rs. 100 crores** during the 11th Plan.

3. Centre for Safety Evaluation/Toxicity Studies for Ayush Drugs:

Although, the most of the classical ASU medicines are used in the human being for centuries in India and they are considered safe. However, there is a felt need to establish the safety of various single drugs as well as formulations containing poisonous ingredients in various dosage forms. To implement the concept of Pharmaco-vigilance, it is essential to pick-up the samples of the products containing heavy metals as well as poisonous ingredients and confirm their safety. In the present scientific era, the Indian consumer also want to re-ensure the safety profile of ASU&H drugs. Therefore, there is a need to set-up and support national facilities for safety evaluation of ASU drugs. The institutions like PLIM/HPL/CCRAS can also have Pharmacology/Toxicological Department with Animal House facilities etc. **PLIM should have a centre for conducting pharmacology toxicology on AYUSH products. This centre should have expertise in both *in-vitro* and *in-vivo* pharmacological experiments suitable for AYUSH drugs. Special emphasis should be laid down on molecular pharmacology with a view to elucidate the mode of action of these products to the maximum possible extent.** A Centre for Pharmaco vigilance may also be created in 11th five year Plan.

An amount of **Rs. 20 crores** will be required to support/establish the facilities at couple of places in the country.

4. National Herbarium, Museum, Herbal Garden for ASU&H Drugs:

For R&D purpose, as well as for reference purpose, there is a need to establish/strengthen a couple of medicinal plant garden containing all the medicine plant Species used in ASU & H system. These gardens will act as

Demonstration Garden as well as source of authentic raw-drug samples. Some of the gardens established by State/Institutions like Himachal Pradesh Garden at Joginder Nagar, CCRAS Garden at Pune & Jhansi, 4 Gujarat Government Gardens at Ahmedabad and other places and other such gardens having predominant species of ASU plants needs financial support.

A proper documentation of the herbarium sheets and samples in the form of herbarium and museum at various places require financial assistance. Various survey material & Herbarium sheet samples collected by CCRAS/CCRUM/CCRH need proper preservation as well as documentation. The herbarium at PLIM/HPL and research Councils and at our National Institutions also needs an up gradation.

This will require **Rs. 20 crores** in the 11th Plan.

5. Training and provisions of Scholarships/Fellowship in ASU&H Pharmaceuticals, Quality Control & Standardization:

Degree, Post Graduate & Post Doctorate training is required in ASU&H drug sector. CME & various short-term/long term training courses for Quality Control, Standardization etc. are required to up-to-date the skills of the Scientists. Courses like B. Pharma (ASU& H), M. Pharma (ASU & H), P.G. Diploma in testing procedures, various MS/MSc/Ph.D programmes on ASU drugs require financial assistance. There is a lot of scope to float Junior/Senior Research Fellowships as well as P.G. & Ph. D. Fellowships for students undertaking research in the area of ASU & H drugs. Similarly training is required for working Scientists, Drugs insectors, Drugs Analysts, Pharmacists, Manufacturing Chemists, Pharmacy Professors, medical officers and Quality enforcement agencies in latest development in quality control. This will require strengthening of infrastructure as well as HRD related issues, fellowships etc and will require **Rs. 20 crores** in the 11th Plan.

6. Strengthening of PLIM/HPL, Ghaziabad

Buildings of HPL and PLIM Ghaziabad have been completed. This require proper latest equipment. In the new building there is a need to establish toxicology laboratory. Similarly, PLIM/HPL are conducting regular training programmes for all India level, and there is no provision for staying of these trainees. Therefore provision for toxicology Laboratory and a guest house may be kept in 11th five year Plan. The laboratory should also be provided adequate scientific staff. The pay scale & promotions of PLIM/HPL should be on the pattern of CSIR laboratories/institutions. This will require **Rs. 10.00 crores** in the 11th Plan.

7. Scheme to work on Metal Based Bhasmas & Ras Aushadhis:

There is lot of scope and urgent need to work on different aspects of preparation , standardization, safety, efficacy, doses forms and Pharmacology of metal based Bhasmas and Ras Aushadhis. One Hundred most common Ras aushadhis will be taken up for R&D. This will require participation of various institutions in the 11th Plan. An amount of **Rs. 20 crores** will be required for this activity in the 11th Plan.

8. Scheme relating to ASU Drug Industry:

ASU drug industry is a green industry, cause minimum pollution, make use of all indigenous material and giving job opportunities for needy people. There are about 10000 manufacturing pharmacies. Most of them are medium scale and small scale. Government is bringing new rules & regulation for the manufacturing process, Quality Control etc. which require lot of investment. The annual turnover of this sector is about Rs 5000 crores out of which only Rs. 2000 crores belong to medium and small scale industry. To support the R&D based production of classical and P&P drugs, there is a need to allocate ASU& H "Pharma Industries Support Corpus" fund of **Rs. 100 crores** to meet the bank interest (amount of interest difference between the bank rate and soft loan rate of interest) which will be recoverable in 10 year period. Similar Scheme already implemented by the Department of Science & Technology. The details of the various components under the Scheme could be worked out. Other R&D Schemes relating to AYUSH drug like clinical trials support, Revise Pharmacology of Chemical ASU medicine, industry will require **Rs. 100 crores.**

9. Availability of the Raw-material of Endangered Species of Plant and Animals:

ASU system fundamentally believe to work in harmony with the nature. There is a symbiosis of human race with the plant and animal kingdom. Ayush system fully believes to work for protection of endangered species. However, bye-products of the nature are used in ASU drugs for centuries and shown lot of beneficial effects. In the last couple of years, the various departments like Wild Life Protection etc has banned number of items which are bi-products of animal like deer antlers, Kauri Shells, Dead corals, musk deer etc. Deleting such ingredients from ASU medicines has deprived number of very good formulations for treating complicated problems. Therefore, rearing of musk and deers for various bi-products need to be taken-up in collaboration with the Department of Environment, Wild Life and Marine Department etc. The cultivation of such plant/animal species need to be undertaken in the 11th Plan. The countries like China, Mongolia are already rearing

musk deer and other deer species to meet the medicinal requirements. System of registration of vendors and certification of raw material and finished products should be developed and a 'Ayush product certification board/agency' may be set up to certify the quality of the Ayush products like Agmark for food.

An amount of **Rs. 20 crores** is needed for this activity in 11th Plan.

10. Scheme to Supply of authentic raw-material for ASU&H Drug Industry:

ASU drug industry is facing the problem on availability of authentic raw-material with proper knowledge on source and test reports of quality etc. It is suggested that the sale of raw-drugs should also be regulated in the Drug & Cosmetics Act and Quality Pharmacopoeial Standards should be applicable at the sale point of raw-drugs. This initiative require procurement, gradation, storage, quality certification and packaging of the raw materials. This will require the co-operation of Warehousing Corporation, National and State Medicinal Plants Boards and other private agencies dealing with the business of Medicinal Plants sector. Further, the support for Quality Testing facilities near such Mandies/Trade Centres need the support of the Department of AYUSH. This initiative will require input of **Rs. 20 crores.**

11. Strengthening of the Drug Control Division in Centre and States:

There is utter lack of infrastructure, human resource expertise and other requirements to regulate the provision of Drug & Cosmetics Act at Centre and State. The AYUSH component has negligible visibility in terms of Drug Controller, Drug Inspectors, Drug Analysts and other manpower required to regulate the provision of Drugs & Cosmetics Act. There is an urgent need to strengthen Centre and State Licensing & Regulatory Authorities. There is a need for comprehensive review of regulatory provisions of AYUSH products. To begin with, regulatory changes can be started by implementing a system of registration on AYUSH products on the basis of proper product dossier with State licensing authority on the basis of proper guidelines developed by the Central Government. There is an urgent need to support technical experts in Drug Control Section of AYUSH along with supporting staff. This will enable to enforce the provision of drug Act effectively. This will require **Rs. 20 crores** in the 11th Plan.

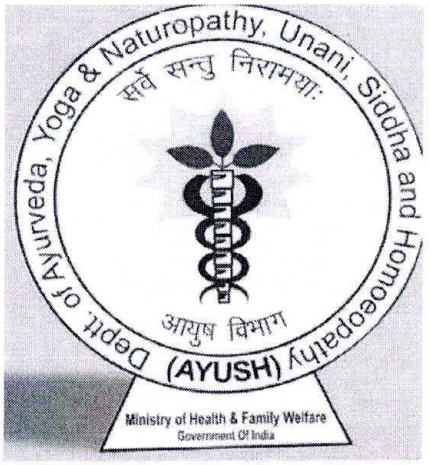
Summary of the Proposal:

S. No.	Activity	Financial Requirements Rs. In Crores	Implementing Agency
1.	Laying down of Pharmacopoeial Standards e.g. single	Rs. 20.00	PLIM/HPL, CCRAS, CCRH, CCRUM, University Labs, CSIR & Other capable

	&compound drugs, Bhasmas and Extracts .		Labs/institutions
2.	Strengthening of DTLs for ASU & H for the acceptability of the ASU&H drugs	Rs. 100.00	PLIM/HPL, CCRAS, CCRUM, CCRH, State DTLs, eminent Labs, PG teaching Deptt. of Dravya Guna, Ras-Shastra and Pharmacy Deptts., National Institutes of ASU & H.
3.	Centre for Safety Evaluation/Toxicity Studies for Ayush Drugs	Rs. 20.00	PLIM/HPL and at other couple of institutions engaged in the field in different parts of the country
4.	National Herbarium, Museum, Herbal Garden for ASU & H Drugs	Rs. 20.00	PLIM/HPL, State Garden at Joginder Nagar (H.P.), CCRAS Garden at Pune & Jhansi and 4 Gardens of Gujarat Government
5.	Training and provisions of Scholarship/ fellowship in ASU&H Pharmaceuticals, Quality Control & Standardization	Rs. 20.00	Degree , PG and Post Doctorate, training in the country, infrastructure and HRD related issues at Centres like NIPER, RRL, Jammu, NBRI, CIMAP, BHU, IPGTR etc. and other Universities
6.	Strengthening of PLIM/HPL Ghaziabad	Rs. 10.00	Equipments, toxicology laboratory and Guest House at PLIM/HPL along with scientific manpower
7.	Scheme to work on Metal based Bhasmas & Ras Aushadhis	Rs.20.00	Preparation, standardization, safety, efficacy, dosage forms and Pharmacology of metal based Bhasmas and Ras Aushadhis at SASTRA, Thanjavur, BHU, Sriram Institute, CCRAS and other Industries
8.	Scheme relating to ASU Drug Industry	Rs. 100.00 (for soft loans) Rs. 100.00 for R &D work	To support the R&D based production of classical and P&P drugs. Soft loan to the medium and small scale ASU industry.
9.	Availability of the Raw-material involving endangered Species of Plant and Animals	Rs. 20.00	Cultivation of plant and raring of animal species with the help of Deptt. of Environment, Wild Life and Marine Department etc.
10.	Scheme to supply of authentic raw-material for ASU & H industry	Rs. 20.00	Procurement, storage and quality certification of raw-material for ASU & H drugs

			with the co-operation of Warehousing Corporation, NMPB, State MPBs and other like-wise agencies
11	Strengthening of the Drug Control Division in Centre and States	Rs. 20.00	Infrastructure, HRD and expertise etc. to be provided to Centre and State Licensing & Regulatory Authorities in different States of the country
12	Traditional quality standards on manufacturing & testing	Rs. 10.00	Expert Institutes/Industries
13.	Survey & Marketing of Raw materials, Documentation/ Pharmacovigilance	Rs. 05.00	Expert institutes/ PLIM/ HPL Research Councils
	Total financial implications during the 11th Plan	**Rs. 485.00**	

Recommendations
of
Task Force
on
"Research and Development (AYUSH)"
for
11TH Five-Year Plan
(2007-2012)



CONTENTS

Introduction

The Indian Systems of Medicine (Ayurveda, Siddha, Unani, Yoga and Naturopathy) & Homoeopathy have been in vogue in the country from earliest times and catering the medical needs of most of our people. During last decade the use of these systems has expanded globally and gained popularity. They have not only continued to be used for primary health care of poor and developing countries, but have been used in where conventional health care system is predominant in National Health Care Delivery.

The Deptt. of AYUSH, Ministry of Health & Family Welfare has established the Research Councils as apex bodies for formulations of research in Ayurveda, Siddha, Unani, Homeopathy & Yoga and Naturopathy on scientific lines. These research councils are focusing on major areas viz. Literary and Fundamental Research, Drug Research comprising of cultivation, collection, standardization and safety profile evolution, Clinical Research including RCH, Nutraceuticals, Cosmetics and Biomedical Instrumentation Research being executed through a network of field Units, Laboratories throughout the country.

For sustainable utilization, potentials of these systems and sensitizing the public, the R & D activities are to be disseminated among masses through well-designed IEC material, health melas, exhibitions and other health awareness programmes.

Research on National Priorities and the areas where these systems have potential are to be stressed. The emphasis should be projected on life style disorders and refectory conditions viz. Cancer, AIDS, Diabetes etc. including quality of life concerns. Exploration and validation of knowledge in public domain, ethno-botanical and tribal folk claims find place in the projection of the research Councils and research Institutes. For quality research in AYUSH the infrastructure as well as the promotional avenues in research councils is to be strengthened.

Currently the quality of research is hampering due to insufficient human resources and lack of proper infrastructure facilities in the research comment under AYUSH as well as in the other AYUSH setups viz. academic Institutions and Universities all over India.

1. Priority Areas: The Research areas needs to be identified on the basis of national priority and considering the strength of AYUSH system; comprising of Life Style Disorders, Psychosomatic conditions, Refractory conditions, Degenerative conditions.

1.1 National Priority Programmes: Emphasis should be given to National Priority programmes viz. Malaria, Filariasis, HIV/AIDS and conditions viz. Diabetes mellitus, Hypertension, Cardiovascular diseases, Cancer etc.

1.2 Fundamental Research: The AYUSH systems are based on certain unique concepts and philosophies. Scientific exploration of fundamentals (*Prakriti/Mijaj* -Bio-identity, Pharmaco-kinetic principal-*Rasa, guna* etc.) is essential to evolve objective parameters for diagnosis and management. Biomedical instrumentation is to be developed to rationalize these basic concepts. Need is also felt to modernize therapeutic procedure based therapies like Panchakarma etc. to achieve clinical success through maintaining controlled conditions. The expertise and facilities etc from reputed national institutes, teaching institutes etc may be well utilize for this purpose.

1.3 Drug Research: With tremendous expansion in the use of these systems worldwide, safety, efficacy and quality control of these medicines and procedures based therapies have become important concerns for both health authorities and public. The quality assured drugs play a pivotal role in achieving clinical success

1.3.1 Focus needs to be emphasized on Safety aspects of ASU & H drugs to induce confidence among consumers besides enhancing the acceptability of these drugs globally. A data bank of safety profile of most commonly used ASU & H drugs indexed in respective formularies may be generated. This can be used as referral safety margins.

1.3.2 Pharmaco-dynamics of the AYUSH drugs needs to be studied viz., half-life, drug receptor interaction and therapeutic index etc. to understand the possible mode of action. Simplified parameters may be evolved to create gross evidence.

1.3.3 Isolation of marker compounds and a library of such compounds may be developed to meet the quality assurance requirements of ASU & H drugs. This can be executed through strengthening the existing councils institutes.

1.3.4 The Primary screening of safety and efficiency of AYUSH drugs / new therapies / claims using cell lines, in vitro techniques may be focused to evaluate their action rapidly.

1.3.5 As the drugs of metal/mineral and marine origin are required in lesser doses, fast acting, more efficacious, patient compliant and prevalent among the prescribers, research is to be focused in this area to create evidence on safety, efficacy and quality assurance. At present parameters are lacking in this area from raw to finished products as these data are needed for quality checks and licensing. For

this purpose suitable protocols are essential. One existing center of Research councils under AYUSH may be developed as centre of excellence with modern sophisticated instruments like ICP – MS etc. for Metal based drug research. This institute will execute and coordinate research with other institutes having such expertise.

1.3.6 User friendly, commercially available kits may be developed for rapid screening of adulterants like steroids, heavy metals etc. A project should be initiated at CCRAS in collaboration with the institutes having such expertise to evolve methodology and development of kits during the plan period. This will help the licensing authorities, policy makers, industries and public for checking safety of ASU & H drugs.

1.3.7 National Medicinal Plants Repository; The information and technical know how related to proper identification, availability, distribution, abundance, threat status, growing techniques, collection, utilization and other related aspects of wild as well as cultivated medicinal plants may be provided through this centre for the benefit of AYUSH researchers and industry.

1.4 Clinical Research:

1.4.1 Observational Research: Gross information on efficacy and clinical safety of classical ASU & H drugs may be generated to create evidence through observational research. A concise case record form may be designed to generate the information. For first instance, 50 most commonly prescribed drugs may be studied involving 100 ASU & H physicians in 20 hospitals /teaching institutions. This will create primary evidence on clinical safety, efficacy, and prevalence of use and patient compliance of ASU and H drugs and generate leads for further research. A centralized computerizing monitoring setup may be established to co ordinate the work

1.4.2 Contraceptive agents: In recent years greater emphasis is being laid to find out a safe, effective and reversible drug for control of fertility the major advantage in developing an antifertility agent from ASU & H drugs is cost effectiveness, and low toxicity. Emphasis is to be focused on various ASU & H drugs and folklore claims for safe and effective contraception.

1.5 Promotional Health:

1.5.1 Nutraceutical Research: The ASU & H systems offer numerous potential immunomodulatory, antistress; antioxidant and nutritive agents. Focus may be emphasized on development of ASU & H Nutraceuticals for school going

children, and sports personnel, geriatric population, military personnel working in adverse climatic conditions to improve their physical and mental endurance, and improvement of quality of life etc.

1.5.2 Promotive medicine: As ASU & Homoeopathy systems are having potential in preventive and promotive medicine, the R&D in this area may be stressed. . Certain drugs may be developed as preventive agents in various common chronic conditions (e.g. Cardio-protective drugs). Besides this certain Naturopathic and Yoga measures need to be validated to create scientific evidence.

2. Strengthening of Research Councils under AYUSH

2.1 Promotional Avenues: The Government of India Ministry of Health and Family Welfare, Research Councils under AYUSH for formulation of research on scientific lines as per the pattern of ICMR. Even though the Research councils are executing research in respective AYUSH system more than 35 years, the scientists who are engaged in the research are not being benefited by a time bound promotional avenues. Many of them are even retiring in the same post after serving for more than 30 years. This is causing great dissatisfaction frustration and discrimination among the researchers as their contemporaries in other organization are benefited with time bound promotions. Besides this the research councils failed to attract of intellects and the scientist who are joining are leaving the council since there is no different carrier advancement prospectus. This ultimately affecting the quality of Research. Considering this, a definite time bound promotional policy may be evolved for the Research councils under AYUSH, which presently non -exists. The existing promotional policies adopted by other sister councils, Viz., ICMR, may be implemented in AYUSH Research Councils. This would definitely improve the quality of research in AYUSH Research councils.

2.2 Reorganization: The peripheral units of Research councils have been scattered in various states with insufficient infrastructure, insufficient technical expertise and supporting staff. This is hampering the quality research output. In view of increasing popularity of AYUSH systems globally and to execute the research work at per global standards need is being felt to develop specialty centres in various sub specialties of AYUSH. Keeping in view the above issues the need is felt to reorganize the field units by merging some of them to develop centers of excellence. These centers would be focusing on research in specific aspects. These centers of excellence will have to be facilitated with centralized networking for effective functioning and monitoring.

2.3 Establishment of New Peripheral Institutes under CCRYN: Central Council for Research in Yoga & Naturopathy so far does not have any peripheral Institutes. Thus this Council has to establish 5 Central Research Institute (CRIs) and 10 Regional Research Institutes (RRIs) in different parts of the country. *The CCRYN would manage to get 5-10 acres of land free of cost from the State Govts. or from the private organizations. These CRIs and RRIs certainly would make a break through in the research of preventive, promotive, curative aspects of Naturopathy & Yoga.*

3. HRD activities and Development of Infrastructure for R&D:

3.1 Selected existing centres under AYUSH may be developed as a NABL certified laboratories. These Institutes will screen the ASU & Homoeopathy drugs for their quality. Once this setup is successful, it will help in formulation of policy.

3.2 To update the knowledge and skills among the AYUSH Researchers, teachers, and students and supporting technical staffs, need is felt to impart periodical trainings. One existing Institute of the council may be developed as a training Institute in AYUSH Research & Teaching. This will also provide Continuing Medical Education (CME)/Re Orientation Training Programme (ROTP) to physicians of ASU and H/conventional medicine/teachers and students. Data management is a prime requirement of clinical research and for this purpose one existing centre under AYUSH councils may be developed as a centre of excellence in biostatistics.

3.3 The past and present work of M.D. and Ph.D research of AYUSH institutes /colleges may be indexed. A central data bank may be generated and the same should be updated in yearly basis. For first instance, one nodal AYUSH institute in each state is to be identified to index the data.

3.4 IEC cell in AYUSH Research Councils: For dissemination of concept and research finding of AYUSH system, each council may establish an IEC cell. This setup will be responsible for preparing IEC material, organizing camps, health melas, health awareness weeks, campaigns etc. for sustainable utilization of AYUSH system and sensitizing the mass.

3.5 Collaborations would be established with National and International Universities and Colleges, institutions, Pharmaceutical industries etc to carry out research in various aspects of AYUSH system by making use of their expertise in related fields. Projects may

be invited from international organization in line with existing extra mural projects with appropriate modification and hike in the budget.

3.6 Support for development of R&D infrastructure in AYUSH medical colleges & Pharmacy colleges: Financial assistance to selected AYUSH /Medical Colleges and Pharmacy Colleges may be extended for development of infrastructure for research in AYUSH systems to educate & initiate the research activities. Establishment of Integrated Research Departments in major institutes viz., Medical Colleges, Universities, AYUSH Colleges may be encouraged to boost the integrated and interdisciplinary research as existing in USA /UK etc. The research councils should extend proper guidance, consultancy and Scholarship to Post graduate and Doctoral scholars for appropriate designing and executing the research.

4. Focus on Amchi system of Medicine (Sowa- Rigpa) and Tribal Health Care:

The Amchi system of Medicine is an integral part of Ayurveda has further developed during Buddha's period. Besides Ayurvedic Philosophy and concepts, certain more information on diagnosis and therapeutics has been added. This system is prevalent in confined regions of India viz. Himalayan region and other countries. To preserve the cultural heritage and proper utilization of benefits of this system, more focus is required during the next Five Year Plan. The existing centre under AYUSH (CCRAS) at Leh may be upgraded with all facilities.

The Research councils are maintaining Tribal Health Care Research Projects at different parts of country, engaged in study the living conditions of tribal people ,Collect folk medicines used by them, availability of medicinal plants of the area, Propagation of knowledge about hygiene, Prevention of diseases, Use of common medicinal plants of the area, Provide medical aid at their door steps, Collect information related to health statistics, Geographical picture, climate and environmental profile, Study of dietetic habits and of prevalence of diseases. More focus needs to be accorded on the issue to protect the knowledge in public domain.

Summary and budgetary details

S.No.	Activity	Financial Requirements	Implementing Agency
1.	**Priority Areas** ***1.1 National Priority***		Research councils under AYUSH
	1.2 Fundamental Research	20 Crores	Research councils under AYUSH / Academic institutes
	1.3 Drug Research		
	1.3.1 Safety studies ASU and H Drugs	30 Crores	Research councils under AYUSH / Academic institutes
	1.3.2 Pharmacodynamics Kinetics of AYUSH drugs	30 Crores	Research councils under AYUSH / Designated Collaborative Institutes
	1.3.3 Isolation of marker compounds of AYUSH drugs	15 Crores	Research councils under AYUSH / Designated Collaborative Institutes
	1.3.4 In Vitro Rapid screening of AYUSH drugs for Safety.	15 Crores	Research councils under AYUSH / Designated Collaborative Institutes
	1.3.5 Research on Metal and Mineral/ Marine AYUSH drugs	20 Crores	CCRAS
	1.3.6 Rapid screening kits for ASU and H drugs	4 Crores	CCRAS
	1.3.7 National Medicinal plant Repository	10 Crores	CCRAS
	1.4 Clinical Research		

	1.4.1 Observational Research	25 Crores	Research councils under AYUSH / Designated Collaborative Institutes
	1.4.2 AYUSH Contraceptive drug development	5 Crores	CCRAS/CCRUM Designated Collaborative Institutes
	1.5 *Promotional Health*		
	1.5.1 Nutraceuticals Research	15 Crores	CCRAS/CCRUM Designated Collaborative Institutes
	1.5.2 Promotive Medicine	5 Crores	Research councils under AYUSH / Designated Collaborative Institutes
2.	**Strengthening of Research Councils Under AYUSH**		
	2.1 Promotional Avenues		AYUSH Dept. / Research Councils under AYUSH
	2.2 Re organization	60 Crores (@ of 20 Crores for each of CCRAS/CCRUM and CCRH	CCRAS/CCRUM and CCRH
	2.3 Establishment of New Institutes under CCRYN	**115Crores** -5 CRI@ of 11 Crores each = 55 Crores -10 RRI@ of 6 Crores each = 60 Crores	CCRYN

3.	**Support for HRD related activities to R&D and Development of Infrastructure**		
	3.1 Up gradations of AYUSH Labs	50 Crores	CCRAS/CCRUM /CCRH
	3.2 Training for AYUSH Personnel	2 Crores	CCRAS
	3.3 Indexing of Research	5 Crores	Research Councils under AYUSH
	3.4 IEC Cell in research councils	5 Crores	Research Councils under AYUSH
	3.5 Collaborative studies	25 Crores	Research Councils under AYUSH
	3.6 Development of R&D Infrastructure in other institutes	15 Crores	AYUSH Dept. and Research councils
4.	**Focus on Amchi system of Medicine (sowa-Rigpa)and tribal health care**	10 Crores	CCRAS
	Total	**481Crores**	

CONCLUSIONS

- **Focus on stream lining of AYUSH research so as to get quality output of scientific evidences for global acceptance.**
- **focus on safety and quality concerns of ASU and Homeopathic drugs.**
- **Validation of basic and fundamental aspects and certain unique procedure based medical and Para surgical therapies of AYUSH systems.**

- **To accelerate the research, national and international networking as well as collaboration is to be established through physical and functional integration.**
- **The AYUSH setups viz., councils, universities, medical colleges ,industries are to be strengthened in terms of R&D to streamline the research.**
- **Streamlining the AYUSH research through Integrated Drug Development.**
- **To improve the professional efficiency of the researchers, the promotional avenues in AYUSH councils should be implemented in line with ICMR patterns.**

Meeting of Task Force (R&D) of AYUSH Dept. for 11th Five Year Plan

Venue: - CCRAS HQrs. Date: - 4th July, 2006 at 11.00 a.m.

The following attended the meeting

Experts

Dr.G.S.Lavekar, Director, CCRAS
Dr.S.K.Sharma, Advisor (Ay.), Dept. of AYUSH
Prof. Shakir Jameer, Dean, Jamia Hamdard
Dr.C.K.Katiyar, Director, Herbal Division, Ranbaxy
Dr. G.P. Dubey, Former Dean (Ay), BHU, Varanasi (Not Attended)
Dr. Vasantha Muthuswamy, Sr. DDG, ICMR, New Delhi (Not Attended)
Dr. Muhammed Majeed, CMD, Sami Labs, Bangalore (Not Attended – Attended by Dr. S. Natarajan Executive Vice President, R&D, Sami Labs)

Invited Experts

Dr.Padma Venkat, FRLHT, Bangalore
Dr.Y.K.S.Rathore, Director I/C, Central Revenue Control Lab., New Delhi
Dr.M.K. Siddiqui, Director, CCRUM, New Delhi
Dr.B.T.C.Murthy, Director, CCRY& N, New Delhi
Dr.C.Nayak, Director, CCRH, New Delhi
Dr.G.Veluchamy, Director, CRI (S), Chennai

Secretariat

Sh R.S Yadav , A.D.(Doc)
Dr.S.Venugopal Rao, A.D. (P'cology) CCRAS
Dr.N.Shrikant, A.D. (Ay.) CCRAS Dr.A.C.Kar, A.D. (Ay.) CCRAS
Dr. M.M. Padi A.D. (Ay.), CCRAS
Dr.V.P.Singh, A.D.(Hom.) CCRH
Dr. Shamshad A.Khan, A.D. (Chemistry) CCRUM
Dr.Rajiv Rastogi, A.D. (Nat.), CCRY&N
Dr. Sulochana Ro(Ay)
Sh Rk.Shingal S.O
Dr.Khalid Mahmood Siddiqui, R.O. (U), CCRUM
Dr.Bishnupriya Dhar, R.O.(Botany) CCRAS
Dr.G.V.R.Joseph, R.O. (Botany), CCRAS
Shri Ravinder Singh, R.O. (Chemistry), CCRAS
Dr.Alka Aggarwal, R.O. (Chemistry), CCRAS
Dr.Pramila Pant, R.O. (Chemistry), CCRAS
Dr.Sudesh Gaidhani, R.O. (P'cology), CCRAS
Dr.Ritu Sethi, Consultant, GTP, CCRAS

NATIONAL MEDICINAL PLANTS BOARD
DEPATMENT OF AYUSH

Report of the Task Force on Medicinal Plants for the Eleventh Five Year Plan

17th July 2006
New Delhi

CONTENTS

ABBREVIATIONS

AEZ	:	Agri Export Zone
APEDA	:	Agricultural and Processed Food Products Export Development Authority
AYUSH	:	Ayurveda, Yoga & Naturopathy, Unani, Siddha and Homoeopathy
ASU	:	Ayurveda, Siddha and Unani
CSIR	:	Central Scientific Industrial Research
CITES	:	Convention on International Trade in Endangered Species of Wild Fauna & Flora
DBT	:	Department of Bio-Technology
DST	:	Department of Science and Technology
GAP	:	Good Agriculture Practices
GACP	:	Good Agricultural and Collection Practices
GCP	:	Good Collection Practices
GHP	:	Good Housing Practices
GSP	:	Good Storage Practices
ICFRE	:	Indian Council of Forestry Research & Education
ICAR	:	Indian Council for Agriculture Research
IIFM	:	Indian Institute of Forest Management
ISMH	:	Indian Systems of Medicine and Homoeopathy
MDAF	:	Market Development Assistance Fund
MPCA	:	Medicinal Plants Conservation Areas
NRHM	:	National Rural Health Mission
NMPB	:	National Medicinal Plants Board
QPM	:	Quality Planting Material
SMPB	:	State Medicinal Plants Board
WHO	:	World Health Organisation

TASK FORCE REPORT FOR THE ELEVENTH PLAN

Background

1.1 The World Health Organisation (WHO) estimates that 80% of the population in developing countries relies on traditional medicines which are mostly plants based. Also, modern pharmacopoeias contain at least 25% drugs derived from plants and many others, which are synthetic analogues, built on prototype compounds isolated from plants. Transition from synthetic drugs and microbially produced antibiotics to plant based drugs is rapidly gaining acceptance.

1.2 While modern medicines has in many parts of the world, replaced traditional medicinal practices for the benefit of individual and public health, people world over are becoming increasingly aware of their limitations i.e. ineffectiveness in dealing with large number of diseases conditions, the often unforeseen negative side effects of synthetic drugs and the ever – rising cost of medical treatment. As a result, the public and public health specialists throughout the world are taking second look at alternative or complementary medicine in general and traditional plant based drugs in particular.

AYUSH Systems of Medicine

2.1 The Indian Systems of Medicine viz. Ayurveda, Siddha, Unani, Yoga, Naturopathy & Homoeopathy cover both the systems, which originated in India and outside but got adopted and adapted in India in course of time. Originating from the Vedas, Ayurveda is the oldest surviving medical system in the world which is about 5,000 years old. These systems are based on theory, formal education and a traditional pharmacopoeia which emphasizes the **"Holistic approach"**.

2.2 The features of Indian Systems of Medicine, namely, their diversity and flexibility, accessibility, affordability, a broad acceptance by a large section of the public, comparatively low cost, a low level of technological input and growing economic value have great potential in the larger sections of our people's need. It is estimated that about 500 million people in India wholly or partially rely on traditional systems for their health care.

2.3 Ayurveda, Yoga & Naturopathy, Unani, Siddha and Homoeopathy **(AYUSH)** offer a wide range of preventive, promotive and curative treatments that are both **cost-effective** and **efficacious**. There is need for ending the long neglect of the system in our health care strategy. The resurgence of interest in Ayurveda, Yoga and in other Indian Systems of Medicine in India and abroad and the opportunities created by such interest have been well perceived by the Government. The ISM industry has also to play a key role in the overall growth of the health care system and, therefore, under NRHM government has taken steps for mainstreaming of AYUSH. Also, the Research and Development activity has to keep pace with the growing demand and expectations of the people.

Trade in Herbal & Medicinal Plants

3. International market of medicinal plants is estimated to be over **US $ 60 billion** per year, which is growing at the rate of **7%.** It is estimated to grow to US $ 5 trillion by 2050. Indian herbal exports valued at about Rs. 874 crores in 2001-02 constitute about 73% in the form of crude drugs and extracts and 27% as finished products. Medicinal plants constitute nearly 13% of the global market. There is thus an enormous scope for the India to also emerge as a major player in the global herbal product based medicines. However, this requires a grand strategic plan, which takes a holistic view of the entire situation to boost exports.

Medicinal Plants

4.1 India is one of the 17 mega bio-diversity rich countries and has 7% of the world's bio-diversity. There are 15 agro-climatic zones, 45,000 different plant species out of which 15,000 are medicinal plants. About 8,000 plants are used in Indian Systems of Medicine and folk medicines. Out of these **1,700 medicinal plants**, have been documented in Traditional Medicines of which about **500 species** are mostly used in the preparation of drugs.

4.2 In a wider context, there is a growing demand for plant-based medicines, health products, pharmaceuticals, food supplements, cosmetics, etc., in the national and international markets. Conservation and sustainable use of medicinal plants are issues on which immediate focus is required in the context of conserving biodiversity and promoting and maintaining the health of local communities, besides generating productive employment for the poor with the objective of poverty alleviation in tribal

and rural areas. It is estimated that medicinal plants, their collection creates 35 million mandays of employment.

4.3 At present, about 90% collection of medicinal plants is from the wild, generating millions of mandays employment (part and full) and since 70% of plants collections involve destructive harvesting many plants are endangered or vulnerable or threatened. Currently medicinal plants are collected without paying attention to the stage of maturity and their sustainability. They are stored haphazardly for long period of time under unhygienic conditions. This results in deterioration in quality. Such materials are not acceptable to importers and standard manufacturing drug units. Promoting cultivation of medicinal plants on an extensive scale, therefore, assumes importance for conservation of bio-diversity, uniformity of the quality of raw material in terms of active ingredients, quality of drugs and standardisation.

National Medicinal Plants Board

5.1 The National Medicinal Plants Board was set up through a Government Resolution notified on 24th November, 2000 under the Chairmanship of Union Health & Family Welfare Minister.

5.2 The Board is guided by an apex body headed by Minister of Health & Family Welfare as its Chairperson and Minister of State for Health & Family Welfare as its Vice-Chairperson. The other members are:

- **Secretaries** of Ministries/Departments of AYUSH, Environment & Forest, Scientific and Industrial Research, Bio-technology, Science & Technology, Commerce, Industrial Policy and Promotion, Expenditure, Agricultural and Cooperation, Agricultural Research & Education and Tribal Affairs as Ex-Officio members.
- **Four** nominated members having expertise in the field of medico-ethnobotany / pharmaceutical industry of ISM, marketing and trade, legal matters and patents.
- **Four** nominated members representing exporters of ISM&H drugs, NGOs responsible for creating awareness and increasing availability of medicinal plants, growers of medicinal plants, and research and development industry groups in the area of medicinal plants.
- **Two** nominated members representing federations/co-operatives dealing with medicinal plants,
- **One** member from Research Councils of Department of AYUSH, One member from Pharmacopoeial Laboratory of Indian Medicines /Homoeopathic Pharmacopoeia Laboratory, Ghaziabad , and **Two** members representing State Governments (by rotation every two years).
- CEO as the Member Secretary.

5.3 The term of nominated and other non-official members is for 2 years.

Functions of the NMPB

6. Co-ordination with Ministries/Departments/Organisations/State/UT Governments for development of medicinal plants in general and specifically in the following fields:

(i) Assessment of demand/supply position both within the country and abroad.
(ii) Advise concerned Ministries/Departments/Organisations/State/UT Governments on policy matters.
(iii) Provide guidance in the formulation of proposals, schemes and programmes etc.
(iv) Identification, inventorisation and quantification.
(v) Promotion of ex-situ and in-situ cultivation and conservation.
(vi) Promotion of co-operative efforts among collectors and growers and market their produce effectively.
(vii) Setting up of database system for inventorisation, dissemination of information and facilitating the prevention of Patents.
(viii) Undertaking and awarding Scientific, Technological research and cost-effectiveness studies.
(ix) Development of protocols for cultivation and quality control.
(x) Encouraging the protection of Patent Rights and IPR.

Main Features of the Schemes Implemented by NMPB

7.1 ***Promotional Schemes:***

Grants can be provided for following activities:

- Survey and inventorisation,
- In-situ conservation and ex-situ cultivation,
- Production of quality planting material,
- Extension activity (IEC),
- Demand & Supply studies,
- R&D,

- Value addition

7.2 *Commercial Schemes*

Grants can be provided for following activities:

- Production of quality planting material,
- Value addition,
- Innovative marketing mechanism,

7.3 *Contractual Farming Schemes*

Financial Assistance is provided for Cultivation of identified medicinal plants by farmers.

7.4 *Eligibility*

7.4.1 Promotional and Commercial Schemes:–

GovernmentOrganisations/NGOs/ Universities/Co-operatives, etc.

7.4.2 Contractual Farming Scheme: –

Registered growers, association/federation of growers, traders, manufacturers, society, pharmaceutical company, NGO & recognized research institutes Public Sector Undertakings (PSUs) or any group of people who have three years experience in medicinal plants.

Funding Pattern:

8.1 For Promotional Scheme of R&D, technology transfer, production of QPM, In-situ conservation/Ex-situ cultivation – A grant of **Rs. 10 lacs per year** subject to the maximum of **Rs. 30 lacs** over a period of three years and a maximum of **Rs. 25 lacs** for R&D projects.

8.2 For training, workshop and seminars **Rs. 2 lacs for State level**, **Rs. 3 lacs for Regional level, Rs. 5 lacs for National level** and **Rs. 10 lacs for International level**.

8.3 For Contractual Farming schemes there is a subsidy of **30%** of the project cost subject to a maximum of **Rs. 9 lacs**.

Priority Species of Medicinal Plants

9.1 The Board has identified 32 species of medicinal plants based on their commercial value for overall development through its schemes. The identified 32 plants are:-

S. NO	COMMON NAME	BOTANICAL NAME	ENGLISH NAME
1.	Amla	*Emblica officinalis* Gaertn	Indian gooseberry
2.	Ashok	*Saraca asoca* (Roxb.) de wilde	Ashok
3.	Ashwagandha	*Withania somnifera* (Linn.) Dunal	Winter cherry
4.	Atees	*Aconitum heterophyllum* Wall. ex Royle	Aconite
5.	Bel	*Aegle marmelos* (Linn) Corr.	Stone apple
6.	Bhumi amlaki	*Phyllanthus amarus* schum & Thonn. (*P. niruri* Linn.)	Bitter gooseberry
7.	Brahmi	*Bacopa monnieri* (L.) Pennell	Thyme leaved gratiola
8.	Chandan	*Santalum album* Linn.	White sandalwood
9.	Chirata	*Swertia chirata* Buch-Ham.	Chirata
10.	Daruhaldi	*Berberis aristata* DC.	Indian barberry
11.	Gudmar	*Gymnema sylvestre* R. Br.	Ram's horn
12.	Guduchi	*Tinospora cordifolia* Miers.	Heart leaved moonseat
13.	Guggal	*Commiphora wightii* (Arn.) Bhandari	Indian bedellium tree
14.	Isabgol	*Plantago ovata* Forsk.	Physilium husk
15.	Jatamansi	*Nardostachys Jatamansi* DC.	Musk root
16.	Kalihari	*Gloriosa superba* Linn.	Malabar glory lily
17.	Kalmegh	*Andrographis paniculata* Wall. ex Nees	Kreat
18.	Kesar	*Crocus sativus* Linn.	Saffron
19.	Kokum	*Garcinia indica* Chois.	Kokum
20.	Kuth	*Saussurea costus* C. B. Clarke (*S.lappa*)	Costus

21.	Kutki	*Picrorhiza kurroa* Benth ex Royle	Picrorhiza
22.	Makoy	*Solanum nigrum* Linn.	Black night shade
23.	Mulethi	*Glycyrrhiza glabra* linn.	Liquorice
24.	Pathar chur (Coleus)	*Coleus barbatus* Benth.	Coleus
25.	Pippali	*Piper longum* Linn.	Long pepper
26.	Safed Musli	*Chlorophytum arundinaceum* Baker (C. borivillianum)	Musli white
27.	Sarpgandha	*Rauwolfia serpentina* Benth. ex Kurz	Rauwolfia
28.	Senna	*Cassia angustifolia* Vahl.	Senna
29.	Shatavari	*Asparagus racemosus* Willd.	Indian asparagus
30.	Tulsi	*Ocimum sanctum* Linn.	Holy basil
31.	Vai Vidang	*Embelia ribes Burm. f.*	Butterfly pea
32.	Vatsnabh	*Aconitum ferox* wall.	Indian aconite

9.2 The Board, however, entertains projects covering species other than those listed above based on local demand.

Major Achievements:

10.1 The National Medicinal Plants Board has so far sanctioned 3888 projects involving financial assistance of Rs.89.22 crores under **Contractual Farming Scheme** which are being implemented in different parts of the country. **(Annexure I)**

10.2 About 33,190 hectares of area covered under cultivation of various prioritized medicinal plants.

10.3 739 projects involving financial implication of Rs.89.19 crores sanctioned under **Promotional Scheme** since the year 2001-02.

10.4 More than 23,000 hectares of land has been covered under programmes for conservation of medicinal plants/herbal gardens.

10.5 35 State Medicinal Plants Boards (SMPBs) have been set up in States/UTs and financial assistance provided for their functioning.

10.6 In order to ensure availability of raw material of quality and safety, the Board has sanctioned 141 projects under its promotional scheme for production of quality planting material.

Budget /Expenditure

11. Information regarding the budget allocation and expenditure during the 10th Five Year Plan period is as under

S. No.	Year	Budget Estimate (Rs. in lacs)	Revised Estimate (Rs. in lacs)	Actual Expenditure (Rs. in lacs)
1	2002-2003	2316.00	1500.00	1580.12
2.	2003-2004	2000.00	1500.00	1829.09
3.	2004-2005	2305.00	2310.00	2755.38
4.	2005-2006	3000.00	3000.00	3491.98
5.	2006-2007	3800.00	3800.00	1162.36 (upto June,2006)
	Total	**13421.00**	**12110.00**	**10818.93**

Achievements during the 10th Plan Period

12.1 Information regarding the expenditure incurred, number of projects sanctioned etc under Promotional Schemes during the 10th plan period is as under:

#	Year	Expenditure	No. of Projects	Activities undertaken
1	2002-03	735.26	109	In-situ & Ex-situ conservation, in-situ & ex-situ cultivation, QPM, Herbal Garden, R&D, Value addition or survey & inventorisation
2	2003-04	450.70	65	-do-
3	2004-05	988.70	178	-do-
4	2005-06	1252.15	229	-do-

5	2006-07	169.85	22	QPM, Herbal Garden, R&D, Value Addition, IEC

The details are indicated at **Annexure II.**

12.2 Information in respect of Contractual Farming Scheme is as under:

#	Year	Expenditure (Rs. in Lacs)	No. of Projects	Area of land covered (in acres)
1	2002-03	193.07	63	3917.50
2	2003-04	836.32	688	8645.45
3	2004-05	1576.02	1316	43933.00
4	2005-06	1608.81	1233	17481.00
5	2006-07 (Part)	1116.91	588	8999.00

Monitoring and Evaluation

13.1 The Medicinal Plants Board has facilitated setting up of 35 State Medicinal Plants Boards (SMPBs) in States/UTs. Proposals for financial assistance are to be submitted (relaxable in case of govt. organisations) through these SMPBs.

13.2 With a view to strengthening the capability for monitoring, evaluation and project management of funds to the tune of 5% of the amount released during the previous year to a State/UT are provided to SMPBs for the purpose of monitoring and evaluation. This is being released to the State/UT governments based on the demands received.

Evaluation Study by IIFM, BHOPAL and ICFRE, DEHRADUN:

14.1 Evaluation study was carried out by IIFM, Bhopal and ICFRE, Dehradun with a view to assessing the impact of the programme, the constraints with regard to organizational and financial aspects and delivery of subsidy and marketing. The study was carried out by sampling methodology.

14.2 Under the Commercial Projects the emphasis has been on a few species like Safed Musli, Amla, Isabgol, Senna and Ashwagandha. The other prioritized species have been cultivated over less than 30% of the total area covered.

14.3 The average success rate of commercial projects is more than 77%. The average per acre production was recorded as the highest in Chhattisgarh and lowest in Rajasthan. The production in Rajasthan is lowest due to the harsh soil and climatic conditions.

14.4 Most of the In-situ conservation projects under Promotional Schemes were implement by Forest Departments and regeneration of targeted species were found satisfactory. However, survey and inventorisation of endangered species was not properly carried out.

14.5 Though the Quality Planting Material was raised under the Promotional projects, there was no proper networking for its supply to the cultivators.

14.6 The Commercial projects resulted in 36% of the cost being incurred on employment. More than 50% of the cultivators were those with area more than 6 acres. In other words the beneficiaries were mostly medium and large farmers. The average representation of women was 17%.

14.7 Satisfaction level of flow of loan and subsidy and service provided by State Medicinal Plants Boards (SMPB), Banks and other Departments was recorded as unsatisfactory.

14.8 Community participation in In-situ/Ex-situ/QPM production projects was recorded as very low.

14.9 MoU between the Buyer and Seller was a very weak link. More than 50% of the cultivators claimed to have sold 100% of their production. Only less than 7% were not able to sell their products. 30% of the growers sold their products after some processing. Marketing, therefore, remained a constraint. However, there were Farmers Federation in some states which had taken the responsibility of marketing and such innovations were found useful and therefore, needed to be replicated.

14.10 Most of the farmers wanted the Contract Farming supported by National Medicinal Plants Board (NMPB) to continue by better networking between corporate, retailers, manufacturers and the farmers.

14.11 The National Medicinal Plants Board (NMPB) promoted projects had a positive impact in terms of production of medicinal plants, which has increased quantitatively. Performance of the projects implemented by some of the NGOs was noteworthy.

14.12 Monitoring by the SMPBs was found to be either absent or weak except in some of the states like Rajasthan and Madhya Pradesh.

14.13 Requirement of certification of UCs by a Chartered Accountant has been a cause of delay in submission of UCs by farmers, affecting delay in release of next installment. This in turn delayed the project implementation.

14.14 There were isolated cases of SHGs providing linkage for implementation of Promotional projects. This had a positive impact on the project implementation.

14.15 The organisation structure of SMPB is generally weak. Mostly the SMPBs are located in the ISM&H Departments headed by ISM&H officials. There are also states where SMPBs are located in the Forests/Horticulture Departments. In states where either the SMPBs are in the Forest Departments or where IFS officer are on deputation with ISM&H Department, the functioning of SMPB is much more effective.

14.16 On the whole, the implementation and achievement of objectives presents a mixed picture. There is, therefore, need to critically look at the shortcomings so that the progarmme achieves the objectives of increasing availability of quality raw material for industry, improved economy for the farmers, employment generation and better health security for the people.

APPROACH DURING THE 11th PLAN

15.1 The Medicinal Plants Board has been able to implement various programmes for cultivation, conservation and overall development of medicinal plants sector throughout the country. It is observed that there is good awareness created among the government/non-government organizations and individuals regarding the medicinal plants and their development due to the activities of the Board. There is, however, an urgent need for a quantum jump in its activities both qualitatively and quantitatively in view of the emerging challenges that the herbal sector faces globally. India has the strength and potential which needs to be harnessed.

15.2 The Board is thus required to discharge its functions to ensure sustainable development of the medicinal plants, related knowledge and the trade of plant products at national and global level and thus play a major pivotal role in development of national economy and public health. The Board also needs to develop policies and strategies to facilitate achieving such objectives, and implement the same through concerned agencies including the Central/State/UT governments. Along with it, the Board is to provide financial support as well as technical guidance for collection, cultivation of raw material, its marketing and production of finished product. The Board, in conjunction with other Ministries/Departments and other stake holders, will have to work towards eliminating export of raw herbs and medicinal plants by the end of the 11th plan so that only valued added items and finished products are exported out of the country. Another equally important goal for the 11th Plan will be to reduce the dependence on forest for the raw material from present 90% to close to 50%.

Thus the thrust Areas for Medicinal Plants Sector during XI Plan will be;

(i) Survey and inventorisation of data regarding demand and availability of medicinal plants at national level at the first instance and successively establish such data in respect of other countries.

(ii) Identification of medicinal plants for development and cultivation on priority, and implementation of programmes in this regard, keeping in view the requirement of industry at national level and for export separately.

(iii) Development of Good Agriculture Practices for prioritized plants.

(iv) Development of data base regarding availability and trade of medicinal plants in wild.

(v) Conservation along with sustainable collection and re-generation of medicinal plants in the wild.

(vi) Cultivation on an intensive scale preferably in clusters with facilities for value addition, processing and marketing through the mechanism of Processing Zones in identified regions

(vii) Measures to ensure conservation and re-generation especially of rare, threatened, endangered plants.

(viii) Development of suitable cultivars, agro-technologies and availability of sufficient quality plantation material.

(ix) Setting up of e-network and Web Portal for complete information on demand, supply, markets, plant varieties, availability of plantation material, agro-technologies, market demand, GAP monographs, trade and prices etc.

(x) Implementation of programmes for large scale cultivation and sustainable harvesting of identified medicinal plants as well as coordination with other departments and organizations in government/non-government sector for this purpose.

(xi) Development of Good Collection Practices to ensure sustainable harvesting and proper utilization of wild sources.

(xii) Preparation of monographs of important medicinal plants

(xiii) Development of techniques to assess and objectively state a sustainability index of given forest area.

PROPOSALS FOR THE 11TH FIVE YEAR PLAN

Conservation/regeneration of medicinal plants in forest areas

16.1 Out of about 800 species of medicinal plants only less than 30 species are cultivated to any significant degree. Most of the other species are still sourced from the forests. In-situ conservation of medicinal plants therefore has been an important plank of the strategy so far. During the 10th Plan, 20,000 hectares of forest area was covered with survey & inventorisation and in-situ conservation of medicinal plants occurring in different forest types. During the 11th Plan it is proposed to cover 50,000 hectares of forest area in different forest types and agro-climatic zones. This is sought to be achieved through Joint Forest Management Committees/Van Panchayats who will be actively associated in planning, identification of species of medicinal plants to be regenerated/ planted and supported with infrastructure for value addition and marketing. At the State level the programme will be supervised and coordinate by Forest Department and at District level by the Forest Development Agencies (FDAs).

16.2 In addition, Medicinal Plants Conservation Areas (MPCA) need to be established to conserve rare, endemic and endangered medicinal plants which will be used as a germ plasm for future scientific study and a source of authentic seed material in different forest types of India. One of the major constraints in the cultivation and production of quality raw material for industry is the authentic seed material of certified quality. During the 11th plan it is proposed to establish 100 such gene banks in different agro climatic regions and forest types targeting top 300 species of medicinal plants identified on the basis of their conservation status, and market demand.

Community Herbal Gardens

17.1 Whereas In-situ conservation seeks to conserve/regenerate rare and endangered medicinal plants in forest areas where they occur, ex-situ conservation aims at propagation and multiplication of medicinal plants outside their normal habitat. Community herbal gardens seek to serve the twin objective of creating a germ plasm of rare and endangered medicinal plants outside their normal habitat on the one hand and propagation and multiplication of medicinal plants in vacant public lands, panchayats and government lands with active participation of the local community and thereby serve not only the health care need of the

community but also produce raw material of quality. During the 10th Five Year Plan 4,000 hectares of area has been brought under the herbal gardens.

17.2 During the 11th Five Year Plan it is proposed to cover 30,000 hectares of area with community Herbal Gardens in 10 states. This is proposed to be done by merging the Vanaspati Van scheme with the NMPB scheme as indicated in **Para – 23.**

Cultivation

18.1 Unsustainable harvest from forest areas, growing demand of domestic AYUSH/herbal industries for the raw material, increasing export demand for herbal extracts, phytochemicals and other plant based products, dietary supplements, neutraceuticals, cosmeceuticals and the increasing emphasis on quality, safety standards of herbal products makes it essential to go in for large scale cultivation of medicinal plants. During the 10th Plan, 35,000 hectares of area was brought under cultivation under the Contractual Farming scheme of the Board. Although the Board has prioritized 32 species of medicinal plants based on their demand in domestic as well as in export market, more than 50% of the area was covered with four species, namely, Isabgol, Senna and Safed Musli and Aonla.

18.2 During the 11th Five Year Plan it is proposed to cover 1,50,000 hectares of area under Contract Farming with financial support from the Board. Out of this, 1,20,000 hectares is proposed to be done in six Medicinal Plants Processing Zones and the balance 30,000 hectares in States/areas not covered under MPZs.

18.3 Ministry of Agriculture on the initiative of Medicinal Plants Board has decided to include medicinal and aromatic plants within the scope of National Horticulture Mission (NHM). Considering the higher outlays available under NHM it is proposed to suggest additional 1,50,000 hectares to be covered with medicinal and aromatic plants under NHM during the 11th plan. Thus, in all total area proposed to be brought under cultivation with medicinal and aromatic plants during the 11th Plan will be 3, 00,000 hectares.

18.4 Cultivation under contractual farming scheme under the existing operational guidelines is a part of the Central Sector Scheme which the Medicinal Plants Board operates. Based on the experience gained during the 10th plan, it is proposed to take up this activity as a Centrally Sponsored Scheme, with 100% Central share. This is being suggested to ensure greater

involvement of State Governments and to devolve responsibility for planning, implementation and monitoring at the State level.

Medicinal Plants Processing Zones

19.1 During the 10th Plan emphasis has been on cultivation. However, such cultivation has been sporadic. As a result cultivation and post harvest management could not be synergized in a holistic manner. The concept of MP processing zones attempts to take a comprehensive look at a particular produce/range of products located in a contiguous area for the purpose of development and sourcing the raw material, their processing/packaging leading finally for marketing and export. The entire effort is thus centered on clustered approach for identifying potential products, their geographical region in which these products are grown and adopting an end to end approach of integrating the entire process right from the stage of production till it reaches the market.

19.2 Agriculture Produce Export Development Agency (APEDA) under the Ministry of Commerce during the 10th Plan has set up two Agri Export Zones for medicinal plants in Kerala and Uttaranchal. There are in all 60 AEZs for fruits, vegetables, flowers etc. in the country. Their implementation however has several short comings. These short comings have to be addressed while setting up Medicinal Plants Processing Zones. It is proposed to set up six Medicinal Plants Processing Zones during the 11th Five Year Plan with the following activities:

(viii) Setting up six Medicinal Plants Processing Zones in different agro-climatic zones.
(ix)Identification of 20 species of medicinal plants for different agro-climatic zones.
(x) Cultivation @ of 20,000 hectares per zone = 1, 20,000 hectares.
(xi)Post Harvest Management (Storage cum drying, grading, sorting etc.).
(xii) Marketing (Price support, setting up mandies, brand promotion etc.).
(xiii) Extension (Quality Planting Materials, training and farmers' mobilization).
(xiv) Explore possibility of creation of additional infrastructure in existing Agri-Export Zones to make them suitable for requirements of medicinal Plants Sector.

19.3 The activities will involve an outlay of Rs. 85 crores for each of the MPZs during the 11th Plan.

Prioritized List of Medicinal Plants

20.1 The Board has prioritized 32 medicinal species for cultivation/ conservation. During 10th Plan the cultivation has, however, been limited to about 20 species. Out of these four species, namely, Isabgol, Senna, Aonla and Safed Musli covered more than 50% area brought under cultivation programme.

20.2 The inclusion of plants in prioritized list has to be on the following grounds:

(i) Demand from domestic ASU/herbal industry.
(ii) Criticality for ASU formulations.
(iii)Status in the wild – endangered, critically endangered, threatened etc.
(iv)Demand in International market.

20.3 Based on the above parameters the prioritized list is under revision.

Pattern of Subsidy

21.1 The existing Operational Guidelines provide for 30% subsidy for projects under Contractual Farming scheme. Selection and prioritization of plant species for financial assistance under the schemes of National Medicinal Plants Board (NMPB) should however be based on the demand in domestic and international markets, their availability in the wild and their conservation status (critically endangered, threatened, vulnerable etc.). Priority should also be accorded to plants which are presently imported. Also, the quantum of subsidy should be

different for trees which have long gestation period as opposed to crops that are annuals, bi-annuals and perennials but start yielding after 1-2 years. In order to encourage cultivation of plants of long gestation period the matter needs to be pursued with the state Forest Departments / Ministry of Environment & Forests to cover about 50% of trees/perennials of medicinal use in their afforestation programmes implemented through Joint Forest Management. Also, the existing level of subsidy under Contractual Farming scheme needs to be reviewed considering that trees have long gestation.

21.2 The species like Isabgol and Senna, included presently in the prioritized list of 32 plants, are extensively cultivated in the states of Rajasthan, Gujarat and Tamil Nadu and have got integrated in the farming systems in these states. In the light of this, the crops like Isabgol, Senna and Safed Musli should be accorded lower priority and subsidy reduced from the present level of 30%.

21.3 There are other species like Guggal, Ashok, Arjun, Bael, Harad, Baheda, Nagkesar, Amla which have long gestation period and, therefore, will require support during the gestation period. Also, there are species which are on CITES Appendix I and II, Schedule VI of Wildlife (Protection) Act, and plants presently imported negative list of plants for export which need to be supported through cultivation. The Technical Committee of medicinal Plants board after deliberations decided to recommend graded pattern of financial assistance by way of subsidy as detailed below:

(i) 10% subsidy for plants which are under commercial cultivation largely like Senna, Isabgol and Safed Musli.

(ii) 50% subsidy for cultivation of plants which are presently imported and require specific technology expertise and greater inputs.

(iii) 75% subsidy for species of plants which are included in CITES list, schedule VI of Wildlife Protection Act and negative list of exports. This will convey strong bias in support of conservation of medicinal plants and protection of bio-diversity.

(iv) 30% subsidy for other identified and prioritized plants.

21.4 At present, subsidy is chanelised through banking institutions who carry out the appraisal and also advance loan. The minimum requirement of loan is 10% of the project cost. Suggestions have been received that as an alternative, the subsidy could also be chanelised through the industries or producer companies. A producer company as per amendment in the Company's Act in 2002 is company in which the farmers are the share holders. Such mechanisms for flow of subsidy need to be considered on a pilot scale with necessary safe guards.

21.5 Subsidy should, also, be linked to the adoption of quality standards, conservation of rare and threatened plants, propagation of long gestation crops like trees and other perennials and cultivation on marginal and waste lands. Also, to make the whole value chain quality conscious, the subsidy as well as loan should be targeted only to those farmers, processors and manufacturers of value added products and traders who deal with certified materials.

Standardization and Quality Control

22.1 At present 90% of the medicinal plants (in numbers) are sourced from the forests collected from different forest areas with different soil, climatic conditions and forest types. Even the season of collection for the same species could vary from forest type to forest type. Also the system of harvesting, drying, storage could vary from place to place. These affect the quality of the raw material which may vary in its active ingredients, potency, presence of microbial contaminants, heavy metals etc. Standardization of raw material quality and the finished products, therefore, are crucial to the quality, safety, efficacy of the finished products. This will depend upon standardization in agricultural practices, collection, harvesting and storage practices.

Developing Good Agriculture and Collection Practices (GACPs)

22.2 WHO has evolved Good Agriculture and Collection Practices (GACPs) for medicinal plants. Some of the countries like China, Japan and European Union have also evolved their own GACPs for medicinal plants. It is proposed to evolve and notify Good Agriculture Practices (GAPs), Good Collection Practices (GCPs), Good Storage Practices (GSPs) for medicinal plants during the 11th Plan. These will consists of two sets of guidelines. There will be generic guidelines followed by species specific GAPs/GCPs/GSPs for the major medicinal plants under cultivation for which monographs are proposed to be prepared with the help of the Research Institute/ Universities having expertise in the subject. In all 100 monographs are proposed to be prepared during the 11th Plan.

22.3 Promotion of organic farming and introducing the use of bio-fertilizers and bio-pesticides as a component of GAP will have to be a major initiative during the 11th Plan.

Development of Monographs for important medicinal plants

22.4 Comprehensive monographs on important medicinal plants backed by scientific research on quality, efficacy and safety standards is crucial to acceptance of our herbal/medicinal plants products in the developed countries where regulatory laws are very strict. Through a collaborative programme it is proposed to prepare monographs of important medicinal plants and registration thereof in the positive list of plants in the main importing countries.Yearly monitorable targets for preparation of monographs and their registration in the positive list will have to be worked out.

22.5 A large number of medicinal plants which are perennial (like shrubs and climbers) and tress which have long gestation period do not have protocols for sustainable harvest. Almost 70% of the medicinal plants are harvested by destructive means involving uprooting of plants, debarking of trees or complete felling of trees. It is proposed to fund Research & Development activities so as to develop protocols for sustainable harvest of such medicinal plants which should include such plant parts which may not involve destructive harvesting. It is proposed to cover 20 species during the 11th Plan.

Quality Planting Material

22.6 For any cultivation programme to succeed, it should be backed by a strong network of nurseries which will produce planting material of certified quality. For medicinal plants it is essential that while selecting the variety/genotype due regard is paid to the presence of active

ingredients, disease resistance and growth in the agro-climatic conditions where cultivation of plants is proposed to be taken. During the 11th Plant it is proposed to identify agencies in the government and non-Government sector, backed up by independent certification, which will be used as focal points for raising nurseries and supplying Quality Planting Material to the farmers and cultivators.

Certification

22.7 Independent Certification of the quality and safety standards right from the stage of seeds, planting material to GAPs, GCPs, GSPs and eventually the raw material produced is key to securing remunerative price for the produce. At present there is no institutional mechanism for independent certification of the quality of seeds used in the nurseries, quality of planting material, GAPs, GAPs and GSPs and the raw material produced. During the 11th Plan an Independent Certification mechanism is proposed to be put in place which will not benefit the growers but also the manufacturers and users of medicinal plants. For small and marginal farmers, group certification of GACPs and organic farming backed by government support may have to be considered.

Setting up laboratories for quality testing

22.8 APEDA has schemes for reimbursement of quality testing charges for horticulture, agriculture and animal products. They also have an infrastructure for testing facilities. These subsidies, reimbursements and use of quality assurance structures should be available to the entire value chain of medicinal plants, both for exports as well as domestic consumption.

22.9 Price of raw material produced by growers is intimately linked to the quality. At present the quality testing labs are few and far between. It is proposed to provide financial support for strengthening testing labs where they already exist and set up new ones preferably through a public-private parternership mechanism.

Vanaspati Van Scheme

23.1 In order to augment availability of medicinal plants for Reproductive and Child Health Programme (RCH) under the Indian Systems of Medicine, the scheme of Vanaspati Van was started during the 9th Plan and continued during the 10th Plan. The scheme is being implemented by the Department of family Welfare. Though the scheme was to be transferred from Department of Family Welfare to the Department of AYUSH, the transfer could not materialize.

23.2 Under the scheme plantations of medicinal plants are proposed to be raised over waste lands and denuded forest lands of 3,000 – 5,000 hectares of contiguous area. The scheme is implemented in states which agree to constitute a state level body, registered as a society under the Societies Registration Act. The guidelines provide for the societies to be headed by forest officials with representatives of Department of Family Welfare and Department of Indian Systems of Medicine as their executive members. Each Vanaspati Van is rligible for financial assistance not more than Rs. 5 crores @ Rs. 1 crore per year.

23.3 At the time of formulation of the scheme, it was recognized that it should be administered by the ISM&H Department. However, the scheme was kept with the Department of Family Welfare in view of the inadequate infrastructure with the Department of ISM&H at that point of time.

23.4 So far, the Department of Family Welfare has financed 9 Vanaspati Vans and released Rs. 18.65 crores with Rs. 26.35 crores to be released during the remaining period of 10th Plan and 11th Five Year Plan.

23.5 In view of the fact that the scheme of Vanaspati Van and the schemes of Herbal Garden that are being implemented by National Medicinal Plants Board (NMPB) have identical objectives, it is proposed that the scheme of Vanaspati Van may be merged with scheme of National Medicinal Plants Board (NMPB) along with the outlays that are proposed for the scheme with enhanced coverage during the 11th Plan. The modalities for transfer of scheme from Department of Family Welfare to Department of AYUSH are being finalized with the

department of Family Welfare and the transfer is expected to materialize in the next few months.

23.6 During the 11th Five Year Plan it is proposed to cover 30,000 hectares of area with Community Herbal Gardens(as vanaspati van) in various panchayats, government and public lands. These community herbal gardens, which should focus on perennials and trees, will be managed with active participation of the community through the institution of joint forest management committees/ van panchayats

Post Harvest Management

24. For cultivation programme to succeed it must have forward linkage with the infrastructure for value addition, processing, drying and storage network and a market. During the 10th Plan the emphasis has largely been on in-situ conservation and cultivation programme. One of the estimates suggests that on an average 30 to 40 % of the raw material received by the manufacturers gets rejected at the factory site on account of the presence of microbial contaminants, moisture, soil, dust, stone chips and even heavy metals. While extensive training to the collectors/cultivators/farmers will be a major activity, a network of storage godowns and semi processing facilities near the major collection centres and cultivation areas, managed either by government, PSU, Co-operative Federations or Panchayats will go a long way in quality raw material being made available to the manufacturers besides improving the safety and efficacy of the final product. It is proposed to take up projects for post harvest management and capacity building the thrust areas of the sector during the 11th Plan.

Marketing

25. The activities that are proposed to be taken up for marketing during the 11th Plan are as under:

(i) Online registration and trading of medicinal plants through a e-portal developed by National Medicinal Plants Board (NMPB).

(ii) Periodic reporting of information on medicinal plants traded in different mandies in the country with volumes and prices. This will create a transparent system of information, dissemination of information on market and prices of medicinal plants traded across different regions. This will also impart transparency to an otherwise unorganized trade.

(iii) Most of the manufacturers source their raw material from traders. There are a number of intermediaries involved between the basic collector and the manufacturer. Consequently, it becomes difficult to ascertain the correct source of the raw material, whether cultivated or collected from the wild and the period of collection. In order to establish traceability it is proposed to initiate a system of registration of traders and manufacturers and mandatory maintenance of records by the manufacturers and traders with regard to the raw material used, purchased and sold. It is proposed to put in place an institutional mechanism with necessary statutory support, if required, during the 11th Five Year Plan.

(iv) Medicinal plants cultivation being a new and up coming activity in agriculture sector, there are risks and uncertainties about the markets and prices. It is proposed to provide support price to cultivators of medicinal plants to insulate them from the vagaries of market fluctuations and unfavourable climatic factors. This is proposed to be done by providing financial support to state level organisations identified for the purpose of marketing of medicinal plants in the state.

(v) There is a Market Development Assistant Fund (MADF) available with Ministry of Commerce. It is proposed that fund should support brand and market development initiatives of the Ayush sector in view of its unique niche market. This will require higher investment and expenditure to gain market penetration and exporters should be assisted to enable them to participate in trade fares and as well as sale promotion activities. On the lines of support to horticultural

produce, APEDA pavilion in international trade fares should also promote medicinal plants.

Research & Development

26.1 Under the Promotional scheme, NMPB has been supporting Research & Development projects through various research institutes/agricultural universities. The nature of the projects financed and their outlays are indicated at **Annexure – III.**

26.2 R&D activity is also being supported in a substantial way by CSIR, DBT, DST, ICFRE and ICAR through their research institutes, regional research institutes, research laboratories also. This is expected to continue during the 11th Plan.

NMPB will in particular support R&D in following areas:

(a) Implementation of specific projects to ensure basic and strategic research for developing information on processes/products and patenting of active molecules of important plants so as to provide leadership role to India in the emerging IPR regime.

(b) Development of plant varieties for important, endangered and threatened medicinal plants based on their usage in Ayurveda and other Indian Systems of Medicine.

(c) Identification of gaps in documentation of medicinal plants resource data, different agro-climatic zone-wise, detailed inventory of medicinal plants, their region-wise occurrence and preparation of a National Atlas on medicinal plants.

(d) Development of agro-techniques, Good Agriculture and Collection Practices (GAP), Good Collection Practices (GAP), Good Storage Practices (GSP) for important medicinal plants species and preparation of monographs. 100 species are proposed to be covered.

(e) Development of protocols for micro propagation (Tissue culture) for species of plants which are otherwise difficult to propagate.

(f) R&D on value addition, sustainable harvest and storage.

(g) Bio-prospecting of new medicinal plants for desired activities to switch over to species not covered in Red Data book but with activity and target molecules similar to those present in the endangered species.

(h) Studies on inter-cropping of medicinal plants with agri/ horticultural crops and evolve models of different crop combinations for different agro-climatic conditions.

(i) Converting new leads into commercial technologies – the missing link with high tech science and the traditional knowledge.

(j) Scientific studies on uptake of heavy metals by medicinal plants and technologies to remove/minimize such contamination.

Information, Education and Communication

27. The activities proposed to be covered under IEC during the 11th Plan are proposed to be as under:

(a) Training of primary collectors in Good Collection Practices (GCPs) and Good Harvesting Practices (GHPs).

(b) Awareness through audio-visual aids, talks, seminars, training, workshops etc.

(c) Training & visit of growers and collectors to demonstrations plots, research centres and other related organisation in the country.

(d) Training of farmers and cultivators of medicinal plants in GAPs and GSPs.

(e) Extension/Publicity material on medicinal plants.

(f) Participation of progressive farmers, cultivators, collectors, manufacturers and other stake holders in important trade events/exhibitions and expositions in Herbal/Medicinal plants sector in India and abroad.

Other policy initiatives

28.1 There are about 9,000 Ayush pharmacies/manufacturing units. Most of the pharmacies of the units are not GMP compliant. In addition, there are herbal units manufacturing extracts and

other herbal products. For these units to be competitive in the world market, they have to be GMP compliant. There is a lot of technological upgradation required even in respect of medium and large industries. Therefore, a Venture Capital fund/Technology Upgradation fund of the size of Rs. 200-300 crores is required to be created for modernization of Ayush/Herbal industry.

28.2 Considering that most collection from forest areas is in an unsustainable manner without due regard to the conservation status of medicinal plant, the industry using material collected from forest areas needs to contribute towards conservation which could be contributed by way of a cess. In other words, industry using raw material collected from forest could be imposed a cess where as those using cultivated medicinal plants could be given incentive. This would harmonize pricing of medicinal plants and give better returns to growers of medicinal plants.

28.3 Special rates of interest for agricultural/horticultural crops (7% announced recently by the Government) should be available to medicinal plants also. Besides, the scope of the scheme of crop insurance should be enlarged to cover medicinal plants in view of the risks that a new crop like medicinal plants is subjected to due to climatic and market related factors.

28.4 Electricity rates in most states are charged at commercial rates for energy used in cultivation of medicinal plants as opposed to electricity rates for agricultural/horticultural crops which are subsidized. This needs to be taken up with appropriate authorities to permit same tariffs for cultivation of medicinal plants as for agricultural crops.

28.5 The wide variety in medicinal plants usage (about 500 species which are actively traded) make them vulnerable to variation in taxation norms under state sales tax/VAT rules. It is proposed that the uniform exemption of VAT/sales tax regime should be introduced for medicinal plants to give a boost to the sector and its trade within the country. This would be in line with the Government exemption of essential food related commodities from VAT incidence.

Organizational Issues

29.1 A comprehensive study is presently being undertaken to recommend the organizational structure, its size, the number of administrative and technical posts required and whether the Board should be an administrative board as at present, or a statutory/autonomous Board

created under an Act of Parliament or a registered society under the Societies Registration Act. Based on the report of the consultants, the matter is proposed to taken up with the Cabinet for appropriate decision.

Role of other Ministries

30. NMPB has a role of coordinating with other ministries/departments. Some of the important ministries/departments where close coordination will be required are as under:

(a)	Conservation and sustainable harvesting/cultivation friendly Forest/wildlife laws	**Ministry of Environment & Forests.**
(b)	Cultivation of Medicinal & Aromatic plants which have an established market at national and international level; Market networking, Support for warehouses, buy-back arrangements, extension of information under NHM	**Ministry of Agriculture/NHM/ICAR**
(c)	Research and Development, identification of suitable cultivars, SOPs, monographs, pharmacological certification, documentation, IPR related research etc	**Ministry of Science & Technology/ CSIR/ICAR/ICFRE**
(d)	e – network: Centre – State – Village level	**Ministry of Information & Technology**
(e)	MPZs (Creation of infrastructure of Laboratories, warehouses, processing facilities etc)	**Ministry of Commerce**

Financial Outlays

31.1 The financial outlays for the activities proposed during the 11th Plan are as under:

Sl No.	Activity	Rate per unit	Total coverage	Outlay (Rs in (Crores
1	Conservation/re-generation (hectare)	@ Rs. 20,000 per/ha	50,000	100
2	Gene Banks 100 hectare each (nos.)	@ Rs. 20,00,000 per/gene bank	100	20
3	Vanaspati van / Herbal gardens (nos.)	@ Rs. 5,00,00,000/garden	10	50
4	Cultivation (hectare)	@ Rs. 30,000	30,000	90
5	Medicinal Plants Processing Zones(6), covering cultivation(1,20,000 ha) and PHM infrastructure	1. Cultivation : Rs. 60 crores/MPZ 2. PHM : Rs. 15 crores/MPZ 3. QPM/Certification : Rs. 5 crores/MPZ 4. Marktg & Project Mgmt etc. Rs. 5 crores/MPZ	1,20,000 ha. (@ 20,000 ha. per MPZ)	510
5	Post harvest management	Lump sum		50
6	R & D	Lump sum		100
7	IEC including capacity building and training	Lump sum		50
8	Organization, marketing, IT etc.	Lump sum		30
	Total			**1000**

Yearly phasing of outlays

31.2 The year – wise outlays will be as under

Financial Year	**Financial outlays proposed (Rs. in crores)**
2007-08	150
2008-09	175
2009-10	200
2010-11	225
2011-12	250
Total	**1000**

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REPORT

OF

TASK FORCE ON MAINSTREAMING OF AYUSH SYSTEMS IN XITH PLAN

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Introduction

1. There is global resurgence of interest in Indian Systems of Medicine, particularly Ayurveda and Yoga. Homoeopathy also is getting popular in India and abroad. There are many indicators, which underline the shift towards global acceptance of complementary/alternative systems of medicine because of their holistic approach, cost effectiveness, cultural-friendliness and virtually no side effects. Though modern medicine has played a critically important role in reducing drastically the morbidity and mortality due to communicable diseases, Allopathy (modern medicine) falls short of patients' expectations in non-communicable and life style related disorders.

2. The National Health Policy (1983) envisaged integration of Indian Systems of Medicine & Homoeopathy with the modern medical system for the first time. This was intended to pave the way for improved outreach & delivery of health services. The Government of India established a separate department under the Ministry of Health & Family Welfare in 1995 for giving focused attention to the development and optimal utilization of Ayurveda, Yoga & Naturopathy, Unani, Siddha and Homeopathy (AYUSH), which are officially recognized systems of medicine in India. The highest policy-making body for health sector- Central Council for Health & Family Welfare resolved several times the need to have integration of different medical systems for improving health delivery. The 10th Five Year Plan reiterates the need for integration and mainstreaming of ISM&H with modern systems of medicine

so that people have access to both modern as well as time tested Indian systems of health care.

3. Presently, the state of policy, regulation and development of AYUSH systems in the country is by and large in accordance with the WHO guidelines for utilization of traditional medicine in national health system. Recognizing the inherent strengths of the Indian systems of medicine, the National Policy on Indian Systems of Medicine and Homoeopathy-2002 underlines the need for integration of AYUSH in health care delivery system and national programmes and optimal use of the vast infrastructure of hospitals, dispensaries and trained practitioners. The policy is aimed at promoting comprehensive & holistic health and expand the outreach of health care to the masses through preventive, promotive and curative interventions by improving the quality of clinicians and teachers by revising curricula to contemporary relevance and to re-orient and prioritize research in ISM&H to gradually validate therapies and drugs to address in particular the chronic and emerging life style diseases.

EXISTING STATUS

4. The Indian Systems of Medicine and Homoeopathy (ISM&H) include Ayurveda, Siddha, Unani, Homeopathy and drugless therapies such as Yoga and Naturopathy. The major strength of the systems is their easy accessibility, wide acceptability, cost effectiveness, simple technological inputs for manufacture of medicines, and use of natural products. India has a vast network of governmental and private AYUSH institutions. There are 458 AYUSH colleges with admission capacity of 23,555, 98 colleges with post graduation facilities, 3,100 hospitals with over 65,000 beds, 22,300 dispensaries, 6,95,024 registered practitioners and 9,257 licensed pharmacies. In the central sector apart from 45 hospitals there are 81 dispensaries under CGHS, 54 dispensaries under central research councils, 162 under Ministry of Railways, 159 under Ministry of Labour, 28 under Ministry of Coal and 2 Ayurveda dispensaries under Ministry of Defence. The primary health network comprises of 1,42,611 Sub-centres, 22,974 PHCs and 3,215 CHCs. The number of PHCs is comparable to 22,300 AYUSH dispensaries, which are otherwise not symmetrically distributed.

5. As per an estimate, about 70% Indian population uses traditional medicine for health care. The rate of population coverage through AYUSH is Health about 7

doctors per 10,000 population. The regulatory, administrative and institutional set ups of AYUSH are by and large similar to that for allopathic system. As far as the acceptability of indigenous medical systems is concerned, Ayurveda is popular in Kerala, Gujarat, Himachal Pradesh, Rajasthan, Karnataka, Maharashtra, Madhya Pradesh, Jharkhand, Chhattisgarh, Uttar Pradesh, Uttranchal and Orissa. The prevalence of Unani system is comparatively higher in Andhra Pradesh, Karnataka, Tamilnadu, Bihar, Maharashtra, Madhya Pradesh, Uttar Pradesh, Delhi and Rajasthan. Siddha system is well established in Tamilnadu and of late is spreading to other southern states. Homeopathy is more or less equally spread all over the country but in higher demand in Kerala, Uttar Pradesh, West Bengal, Orissa, Andhra Pradesh, Maharashtra, Punjab, Tamilnadu, Gujarat, Bihar and North Eastern states.

THE PROBLEM

6. The full potential of AYUSH still remains to be realized due to varied reasons. The foremost among them are lack of essential staff, infrastructure, diagnostic facilities and drugs in the existing health care network of AYUSH. The other important reasons are inadequacies in quality of training of practitioners and their non-involvement in the national health and family welfare programmes. Treatment meted out to the institutions & manpower of these systems is not at par with that being given to allopathic system. Not only there is a strong justification for the coexistence of both allopathic and AYUSH systems in PHCs/CHCs and district hospitals, but that every effort must be made to bring about functional integration without compromising the ethical purity of either system. Many valuable insights into the best possible management of many chronic ailments may well come from non-allopathic systems of health care. However, it would be essential to take steps to ensure that the AYUSH systems grow in a pristine form by research and development of their own concepts. While use of modern diagnostic tools and quality control techniques is an absolute must to place these systems on a sound evidence base, modernization process should not be allowed to reduce these systems to a mere appendage to allopathy. We must not try and produce a hybrid doctor who has the strengths of neither system and the faults of both

Mainstreaming of AYUSH.

7. The concept of mainstreaming of AYUSH revolves around optimal use of all available human resources for health care provision in the country. Mainstreaming has essentially two aspects. Firstly, qualified AYUSH practitioners can fill the manpower gaps in Primary Health Care, particularly at the sub-centre/PHC level. Secondly, there should be a cafeteria approach of making AYUSH and Allopathic systems available under one roof at the PHC/CHC/District Hospital level for facilitating patient choice and cross-system referrals. Apart from improving peoples access to health services, it will also provide choice of treatment to the patients. There are areas, where the traditional system has overwhelming evidence of better cure and / or disease management e.g. Ayurveda has better cure for piles, fistula, jaundice, arthritis; Unani in menstrual disorder, psoriasis; Homoeopathy in allergic disorders. Similarly Yoga has proven strength in managing life style disorders and psycho-somatic diseases. Therefore, there is a need for service integration by providing the best from each system to patients as a Complementary/ Alternate/ Adjuvant therapy. Efforts should be made to provide quality education in each of the system to develop confident physicians of each systems, visionary teachers and researchers for a need based health care. Health care involves curative, preventive, promotive and rehabilitative aspects. Therefore the education, research, drug development and practice should address all these aspects.

8. As far back as in 1920, the Nagpur Session of the Indian National Congress recommended that there should be an Integrated System of Medicine & Research which should be combination of both our Ayurveda, Unani Tibb, Siddha and Modern Medicine system choosing the best out of the all and thus supporting one system by another to serve mankind to its best. For the purpose of promotion and education of Integrated Medicine, first such college was started in 1934. After Independence, the Chopra Committee, Pandit Committee, Dave Committee & Uduppa Committee etc. constituted by Central Government also recommended Integrated System of Medicine.

9. FACTS IN MEDICINE

- Every medical discipline has something to offer in Health care- The objective of education and Research should be to harness these strengths.
- No system can tackle all the health concerns of the society- Encourage different systems to bring their best remedies in the menu on offer to patients.
- Several diseases are self limiting; no medication is needed- Educate public.
- Every system can tackle few diseases effectively- Integrate this in the Health care delivery. Public shall have a choice to avail what they want.
- No system has credible treatment option for few diseases- Try the benefit of different systems as adjuvant. Enhance the medical research in those areas.
- Majority of the health problems are at primary level. Increase the out reach of health care delivery at the village level
- Most of these can be managed with any one of the systems of medicine
- Each of the systems has its own unique strength to tackle few diseases for which there is no effective treatment in other systems. Educate people and professionals through the IEC programmes through Government media.

Status of Mainstreaming of AYUSH

Centrally Sponsored Scheme on Hospital and Dispensary

10. Centrally Sponsored Scheme under the plan head of 'Hospitals & Dispensaries' administered by the Department of AYUSH is being utilized for creating AYUSH facilities in allopathic hospitals / dispensaries. The scheme has following components:

I.	Establishment of Specialized Therapy Centre with hospitalization facility for Panchkarma / Kshar Sutra therapy of Ayurveda or Regimental Therapy of Unani Medicine or Siddha or Yoga & Naturopathy or Homoeopathy as the case may be;
II.	Establishment of Specialty Clinic of ISM&H i.e. system specific outdoor treatment center;
III.	Setting up of ISM&H wing in District Allopathic Hospitals – Outdoor as well as

	Indoor facility of one or two systems of ISM&H is required to be set under this component of the scheme; and
IV.	Supply of essential drugs to State rural & backward area dispensaries.

The provision of 100% Central assistance under the scheme has facilitated States in relocation/creation of AYUSH outdoor facility in PHCs and specialized therapy facility in CHCs and AYUSH wing in District/Sub-divisional hospitals. **However, the scheme does not provide for supporting salary component of manpower required to run such facilities.** As detailed in **Annexure – 1**, many States have implemented the scheme. Under the NRHM operational frameworks States would be able to utilize NRHM funds for hiring AYUSH doctors for providing AYUSH facilities at PHC/CHC level. States would be able to dovetail AYUSH components in their State's Specific action plans.

MAINSTREAMING UNDER NATIONAL RURAL HEALTH MISSION (NRHM)

11. The National Rural Health Mission (NRHM) has been launched with a view to bringing about improvement in the health system and the outreach of health facilities for the benefit of people living in the rural and backward areas of the country. The mission seeks to provide universal access to equitable, affordable and quality health care, which is accountable as well as responsive to the needs of the people, reduction of child and maternal deaths, population stabilization, gender and demographic balance, etc. Revitalization of local health traditions and mainstreaming of AYUSH have been incorporated in visions, goals and strategies of the National Rural health mission. The objective of the integration of AYUSH in the health care infrastructure is to re-enforce the existing public health care delivery system, with the use of natural, safe and eco-friendly remedies, which are time tested, accessible and affordable. The roadmap of mainstreaming of AYUSH has been conveyed to the States through a joint letter dated 12.08.2005 from Secretary (AYUSH) and Secretary (Health) (**Annexure – 2)**. The roadmap seeks provisioning of AYUSH facilities in PHCs and CHCs with placement of AYUSH doctors and providing medicines.

12. NRHM is fully committed to mainstreaming AYUSH within the mainstream health delivery system. This involves support to the physical and functional integration of the systems so that both systems flourish under one umbrella. In line with its commitment to mainstream AYUSH activities the Department has agreed that in the current year at least 2000 AYUSH doctors in the eight EAG states and in J&K, would be located either at the PHC or the CHC. Of that 1000 would be by relocation from the existing AYUSH doctors in Government. Service. The remaining one thousand would be contractual doctors whose remuneration would be supported trough NRHM funds. The state wise break up of the 2000 doctors would be based on the number of PHCs/CHCs existing in the State. In the IPHS standards for CHCs, which has been finalized by the Department of Health and Family Welfare, there is already a provision for an AYUSH wing. The Standard has been disseminated to the States. NRHM is committed to the upgradation of CHCs to IPHS. However, the matter can be communicated to the States after due approval of the Cabinet of the Implementation Framework of NRHM. The MoU which is under preparation for the XIth Plan would also provide for mainstreaming of AYUSH on the suggested lines.

Can Qualified AYUSH practitioners be utilized for delivery of National Health Programmes?

13. Recognized AYUSH training courses provide basic knowledge to under-graduates regarding anatomy & physiology/biochemistry in addition to clinical knowledge of their own systems. In some States e.g., Maharashtra, Punjab, Himachal Pradesh, Madhya Pradesh, Uttar Pradesh, Gujarat, Chattisgarh and Uttaranchal, these doctors have been authorized by the State Governments to practice modern medicine and are posted in PHCs. As per the judgements of the Hon'ble Supreme Court in Mukhtiar Chand and Poonam Verma cases, a medical practitioner is expected to bring a certain degree of expertise and training to his practice and could be expected to understand the indications/contraindications etc. of the medicines he prescribes to patients. These judgements basically define what is medical negligence. It is the considered view of a study carried out by National Law School, Bangalore that these judgements do not bar cross system practice as long as the same is specifically permitted by a State Government (if the State Medical

Register recognizes qualified AYUSH practitioners as part of that medical register (Annexure-3)). Therefore, subject to a State Government authorizing AYUSH practitioners to prescribe certain categories of Allopathic medicines and AYUSH practitioners being provided proper orientation training, they could be utilized in the delivery of National health programmes like Malaria/TB/HIV-AIDS etc. When these programmes can be administered by ANMs there is no reason why AYUSH doctors should not be roofed in to strengthen the nation-wide implementation of these programmes.

Recommendation

14. Physical Integration

14.1 Mainstreaming under NRHM is being pursued by facilitating convergence of AYUSH infrastructure with that of modern medicine. It has been decided to have AYUSH facilities in PHC and CHC either through relocation of AYUSH dispensaries or contractual appointment of AYUSH doctors. On account of asymmetrical budgetary provisions and infrastructure of AYUSH in the states, the task of physical as well as functional integration of AYUSH with modern medical system is progressing slowly. NRHM guidelines for supporting salary component/contractual appointment of AYUSH doctors in PHCs/CHCs are likely to be issued shortly. Relocation of AYUSH dispensaries to the nearest PHCs and creation of AYUSH facilities in remaining PHCs has also not been undertaken by the states to the desired extent. In a recent meeting with State Directors/Licensing Authorities it has come to light that AYUSH dispensaries could be shifted to not more than 25% PHCs, remaining 75% PHCs will have to be provided with required infrastructure and AYUSH doctors & paramedical staff. **Hence, to fast track mainstreaming creation of AYUSH facilities in 25% of such PHCs each year in each state should be supported for next three years under NRHM with a view to achieve 100% coverage of PHCs/CHCs in the 11th Five Year Plan.**

14.2. **Hospitals and Dispensaries Scheme of Deptt. of AYUSH should be used to scale up provision of requisite Ayush infrastructure in PHCs/CHCs/District Hospitals while salaries of Ayush doctors would come from NRHM, other infrastructure and Ayush medicines should be provided under the Centrally Sponsored Scheme of Hospitals & Dispensaries.**

Functional Integration

14.3 AYUSH manpower after proper training should be utilized in National Health and Disease control programmes to fulfill the unmet needs of the health sector and augment health delivery & outreach. Department of Health needs to issue directions to the NIHFW and to the states to prepare need based training modules for AYUSH doctors and identify training centres. Similarly ASHAs, ANMs and Anganwadi workers and even Allopathic doctors working in PHCs & CHCs should be given adequate orientation training about the local health practices, simple AYUSH remedies/therapies for common ailments and uses of medicinal plants. **National Institute of Health & Family Welfare and Department of AYUSH should operationalize this and bring out an action plan implementable in a specified time frame.**

14.4 Proper utilization of AYUSH practitioners in health delivery in small villages, clusters and tribal pockets is a feasible proposition, if sub-centers are manned by AYUSH doctors. Presently, the sub-centers are the first points of institutionalized health delivery under the supervision of ANMs. **There is a strong case for posting an Ayush doctor to a cluster of 3 sub centers with each sub center being visited twice in a week which will improve not only the quality of health delivery but also the outreach.** ANMs would be in a position to spare more time for preventive and RCH activities. AYUSH doctors apart from attending to the patients in the sub-centers could be involved in public health education/awareness activities as well.

Revision of AYUSH and Medical Education

14.5 **The AYUSH course curricula also needs modification with inclusion of orientation modules related to National Health Scenario, National Health & Family Welfare programmes,** Regulatory Acts, pharmaceutical industry, global perspectives in Traditional Medicine, Complementing the public health programmes etc. There should be regular mechanism in place for imparting periodic updates on professional knowledge to the AYUSH Practitioners and Para-medics.

Similarly, AYUSH modules should be included in the MBBS course-curriculum for sensitizing medical students about basic principles of Indian systems, which are time-tested, cultural friendly and aimed at preventing diseases and promoting health care. AYUSH wings may be promoted in existing medical colleges for effective integration of AYUSH within the existing health care infrastructure. Thus, The undergraduate (and perhaps the postgraduate) curricula of both these systems must have a component of orientation of the other system. The purpose is not to encourage cross system quackery but sensitize practitioners of one system regarding the strength of the others. The purpose must be to build a system of respect for the other systems and an understanding of how they can mutually complement each other to provide the most comprehensive and cost effective care.

Scientific validation of AYUSH systems.

14.6 Integration of Research Programme for scientific validation and R & D on AYUSH relevant to the national health needs should be evolved and encouraged. **Duly researched and validated AYUSH therapies and remedies with evidence of safety and efficacy should be considered for introduction in National Health Programmes. ICMR/CSIR laboratories/institutions should also undertake need-based research on AYUSH remedies for diseases of national and global importance. Ayush Research Councils must be integrated with the new Department of Medical Research which is proposed to be set up for bringing about synergy in the function of ICMR and Ayush Research Councils.**

14.7 **AYUSH Research Councils should undertake collaborative protocol based peer reviewed researches in collaboration with reputed research institutions in public and private sector.** Emphasis should be on collaborative studies aimed at standardization/quality control and building an evidence base for national and global acceptance of Ayush systems so that they should become central to national health care delivery and not remain at the margins.

14.8 **Research in AYUSH systems needs to be prioritized with equal emphasis on fundamental and applied researches. AYUSH Research Councils need to be completely revamped and professionalised and brought under the umbrella of Flexible Complementary Scheme of in situ promotions for attracting and retaining talents.** If the Central Government is not prepared to treat them as Scientific establishments for purposes of time bound promotion, it would be far better to merge them with ICMR.

Ayurveda/Siddha/Unani Drugs Development

14.9 Standardization and quality control of Ayurveda, Siddha, Unani drugs is a problem area as botanicals do not lend themselves to as precise a quality control as synthetic molecules manufactured under controlled laboratory conditions. This requires State of the art research for developing chemical/biological markers/chromatogram fingerprints/standardized operating procedures and phyto-chemical characterization of Bhasmas. **A state of the art Ayurveda/Siddha/Unani Drug Standardization and Development laboratory should be set up jointly by the Deptt. of AYUSH and CSIR for development of pharmacopoeial standards of ASU drugs for India to capture a fair share of the approx. $ 70 billion international herbal market.**

15. Action plan for Central Government.

(i) **National Institute of Health and Family Welfare, Indian Council of Medical Research (ICMR), Central Council for Research in Ayurveda and Siddha (CCRAS) and Central Council for Research in Unani Medicine (CCRUM) should be tasked to evolve an operational framework for mainstreaming of AYUSH in**

national health care delivery network based on the underlying philosophy of providing choice of treatment to the patients at Sub-centres/PHCs/CHCs/district level and to facilitate cross system referrals complimentary and adjuvant uses of drugs and drugless therapies of various systems with a view to provide cost effective and comprehensive health care. Indian public health standards should accordingly be modified.

(ii) There should be a **proper integration of AYUSH in Directorate General of Health Services (DGHS), Central Government Health Scheme (CGHS), National AIDS Control Organization (NACO) and the proposed Department of Medical Research. AYUSH Research Councils should be brought under the umbrella of the proposed Department of Medical Research for encouraging collaborative and need based research for addressing India's health care problems in a cost effective and comprehensive manner**

(iii) **Keeping Sub-Centres and PHCs without doctors either due to vacancies or absenteeism should not be allowed to continue any further. All such vacancies should be filled by qualified AYUSH doctors.** A cluster of three Sub-Centres should be provided the services of a qualified AYUSH doctors who should visit each Sub-Centres twice in a week. The first resort of majority of patients in rural areas is traditional medicine instead of leaving patients to find for themselves and be fleeced by quacks, it is better to institutionalize AYUSH systems in sub-centres as a first point of reference for institutionalized health care. AYUSH doctors at sub-centres should also be involved in the administration of National Health Programmes like TB/HIV AIDS/Cancer for which they should be properly trained. This should be a priority area under the newly launched National Health Mission and States should be assisted on a 50:50% matching basis for meeting the expenditure on posting of qualified AYUSH doctors at sub-centres on contractual basis.

(iv) **At present 7 Ayurveda and 5 Unani medicines have been included for distribution in 9 States and 4 cities under the Reproductive and Child Health Programme of the Department of Health and Family Welfare. This course of action should be taken to its logical conclusion.** This list should be expanded

more and more to include Ayurveda, Siddha, Unani and Homoeopathic medicines which have proven efficacy in treatment of various diseases and which have been standardized. ICMR, CCRAS, CCRUM and CCRH should be tasked to take this initiative further.

(v) **Under-graduate and post-graduate courses of various systems should be modified to reflect the global resurgence of interest in traditional and alternative medicine. Medical students of various disciplines need to internalize the basic truth that every system has something to offer and no system can tackle all the health problems.** Various systems of medicine are complimentary to each other and their complimentarity should be fully utilized in providing a cost effective and comprehensive health care. Statutory bodies charged with the responsibility of regulating the education of various systems of medicine are not likely to take the lead in this direction. Sensitization/orientation modules should be developed by the National Institute of Health and Family Welfare in collaboration with ICMR/CCRAS/CCRUM/CCRH for introduction in under-graduate courses of all systems.

16. Action Plan for States.

Most States have expanded Ayurveda, Siddha, Unani and Homoeopathy infrastructure mostly at primary heath care level in response to locally felt needs and gaps in the existing health care infrastructure. This does not necessarily mean that they have mainstreamed Ayurveda, Siddha, Unani and Homoeopathy in their health care delivery at primary and secondary level. There is a lot of dysfunctionality in the functioning of facilities of various systems at various levels. Functional rigidities are being noticed in most States where there is little coordination between Directorates of Health and AYUSH systems.

Having separate Directorate of AYUSH or even separate Department of AYUSH at State level is not the right approach. There should be functional integration between allopathic and AYUSH systems at the State, District, Sub-district and PHCs level with the single line administration at each level. To begin with, allopathic

doctors can be expected to head Directorate, District, Sub-District and PHC set up with an Addl. Director at the Directorate level and an Addl. CMO at the District level and so on but in due course at all public health administrative positions should be filled on the basis of inter-sa seniority and administrative capability should be the criteria for managerial positions in public health.

Integration of AYUSH with allopathy under single line administration at primary, secondary and tertiary level is crucially important for the purposes of bringing about synergy and of economy.

Conclusion

17. The long term process of mainstreaming of AYUSH has been initiated with remarkable success in the last decade. However, this has been a more or less bottom up State driven initiative in response to felt needs for health care at the District/CHC/PHC level. There is a need to spell out an overarching strategy to ensure that available resources are optimally utilized for achieving national health goals and outcomes. Given due emphasis on safety of drugs, drug standardization, evidence base, quality education infrastructure and strong regulatory systems, AYUSH systems would in due course get public acceptance in India as mainstream systems of health care. The draft approach paper for the 11th Plan rightly accepts the centrality of AYUSH systems for meeting the gaps in the primary health care. It notes "across States 6% to 30% posts of doctors remain vacant and random checks showed that from 29% to 67% doctors were absent. The trained ISM practitioners represent a valuable human resource at village and block levels. This could be leveraged and co-opted into providing primary health care".

Year -2003-2004

Details of specialist Wings/clinics/Centers for which grant-in-aid released under the scheme for AYUSH Hospitals

S.No.	Name of the State/U.T.s	Details of specialist Wings/clinics/Centers for which grant-in-aid released.						Total amount sanctioned.
		ISM & H Wings in district Hospitals @ Rs.35.00 lakhs		**Sp. Therapy Center with indoor facility @ Rs.22.00 lakhs**		Sp. Clinic of ISM & H Specific out door treatment @ Rs.10.00 lakhs		
		No. of Wings	**Amount**	No. of Centers	**Amount**	No. of Clinics	**Amount**	
1.	Andhra Pradesh					**Unani - 1**	**10.00**	**10.00**
2.	Arunachal Pradesh	Ay.-1	30.24			**Hom - 5**	**46.76**	**77.00**
3.	Maharashtra					Ay - 2	19.52	19.52
4.	Manipur	Hom. - 1	35.00					35.00
5.	Meghalaya	Hom.- 7 Ay. - 1	150.78 15.82					166.60
6.	Rajasthan					Hom - 1	10.00	10.00
7.	Tamil Nadu	Siddha - 4	100.00			Siddha - 6	60.00	160.00
8.	West Bengal	Ay.- 4	100.00					100.00
		Ay.- 6 Hom. – 8 Siddha -4	431.84			Ay.- 2 Siddha –6 Unani - 1 Hom. – 6	146.28	578.12

Year 2004-2005

STATE-WISE RELEASE OF FUND TO THE STATES/UTs UNDERCENTRALLY SPONSORED SCHEMES (CSS) Hospital & Dispensaries

Rs. in Lakhs

S.No.	Name of the State/U.T.s	ISM Polyclinic	Specialty Clinics in Allopathic Hospitals	ISM Wing In District Allopathic Hospitals	Supply of Essential Drug for dispensaries	Total
1.	Andhra Pradesh	22.00	100.00		112.25	234.25
2.	Arunachal Pradesh		40.00			40.00
3.	Assam				86.50	86.50
4.	Bihar					
5.	Chhattisgarh	22.00	-	174.32	147.25	343.57
6.	Delhi					
7.	Goa					
8.	Gujarat				146.25	146.25
9.	Haryana	22.00	30.00		59.75	111.75
10.	Himachal Pradesh				202.00	202.00
11.	J & K				100,00	100.00
12.	Jharkhand					
13.	Karnataka	42.50	14.62	70.00	63.50	190.62
14.	Kerala	43.47	07.00			50.47
15.	Madhya Pradesh	22.00		27.68	243,00	292.68
16.	Maharashtra	17.89				17.89
17.	Manipur	44.00				44.00
18.	Meghalaya					
19.	Mizoram			350.00		350.00
20.	Nagaland		9.52	280.00	6.25	295.77
21.	Orissa				123.00	123.00
22.	Punjab				18.75	18.75
23.	Rajasthan				382.00	382.00
24.	Sikkim					
25.	Tamil Nadu		118.00	28.00	60.50	206.50
26.	Tripura			140.00	7.50	147.50
27.	Uttar Pradesh				179.25	179.25
28.	Uttaranchal				134.75	134.75
29.	West Bengal		30.00		65.25	95.25
					2137.75	
	Home Remedy Kit (2nd installment)				**37,14,200**	**37,14,200**
	TOTAL	**235.86**	**349.14**	**1070.00**	**2174,89,200**	**3829,89,200**

Year -2005-2006

Details of specialist Wings/clinics/Centers for which grant-in-aid released under the scheme for AYUSH Hospitals

S. No.	Name of the State/U.T.s	Details of specialist Wings/clinics/Centers for which grant-in-aid released.						Total amount sanctioned.
		ISM & H Wings in district Hospitals @ Rs.35.00 lakhs		**Sp. Therapy Center with indoor facility @ Rs.22.00 lakhs**		Sp. Clinic of ISM & H Specific out door treatment @ Rs.10.00 lakhs		
		No.	**Amount**	**No.**	**Amount**	**No.**	**Amount**	
1	Andhra Pradesh	Ay. - 20	Rs.700.00 lakhs	Ay. & H-1 Y & N. - 1	Rs.44.00 lakhs	Ay - 14 Unani - 8 Hom - 13	Rs.350.00 lakhs	Rs.1094.00 lakhs
2	Assam	ISM &H - 24	Rs.840.00 lakhs	-		-		Rs.840.00 lakhs
3	Chattishgarh	Ay – 10	Rs.350.00 lakhs	Ay – 22	Rs.484.00 lakhs	Ay - 40 Unani - 1 Hom - 1	Rs.420.00 lakhs	Rs.1254.00 lakhs
4	Jammu & Kashmir	Ayurveda/ Unani-14	Rs.490.00 lakhs					Rs.490.00 lakhs
5	Karnataka	Ayurveda- 1	Rs.35.00 lakhs	Ayurveda- 1	Rs.22.00			Rs.57.00 lakhs
6	Kerala			Ayurveda- 2 AYUSH- 1 Hom. - 1	Rs.88.00	Hom. - 1	Rs.10.00 lakhs	Rs.98.00 lakhs
7	Maharashtra			Ayurveda – 3 Y & N - 1	Rs.88.00			Rs.88.00 lakhs
8	Madhya Pradesh	Ayurveda – 8 Homoeo. - 1	Rs.279.37 lakhs					Rs.279.37 lakhs
9	Meghalaya	Ayurveda – 3	Rs.101.30 lakhs					Rs.101.30 lakhs
10	Manipur			Hom. - 1	Rs.10.87			Rs.10.87 lakhs
11	Nagaland	Ayurveda - 3	Rs.105.00 lakhs			Ay - 19 Hom - 50	Rs.690.00 lakhs	Rs.795.00 lakhs
12	Rajasthan	ISM & H – 26	Rs.910.00 lakhs					Rs.910.00 lakhs
13	Sikkim					Amchi - 1	Rs.10.00 lakhs	Rs.10.00 lakhs
14	Tamil Nadu	Ayurveda- 13	Rs.455.00 lakhs			Siddha - 135	Rs.1350.00 lakhs	Rs.1805.00 lakhs
15	West Bengal	Ayurveda – 4	Rs.140.00 lakhs			Hom - 2 Ay. - 18	Rs.200.00 lakhs	Rs.340.00 lakhs
16	Uttaranchal	Hom – 8	Rs.280.00 lakhs			Ayurveda - 1 Y & N - 1 Hom – 7	Rs.90.00 lakhs	Rs.370 lakhs
	Total	ISM & H - 64 Ayurveda – 62 Homoeopathy – 9	Rs.4685.67 lakhs	Ay - 22 AYUSH- 3 Hom - 1	Rs.736.87 lakhs	Ay - 93 Y & N - 1 Siddha - 135 Unani - 9 Hom - 73	Rs.3080.00 lakhs	Rs.8542.54 lakhs

Year - 2005-2006

No. of AYUSH Dispensaries covered under the scheme for AYUSH Dispensaries (Supply of Essential Drugs) (as on 31.3.2006)

Sl. No.	*Name of the State*	*No. of Dispensaries covered*				*Total No. of Disp. covered.*	*Amount released in Rs. (in lakhs)*
		Ay.	*Siddha*	*Unani*	*Homoe*		
1	Andhra Pradesh	550		193	283	1026	256.50
2	**Arunachal Pradesh**	**4**			**37**	**41**	**10.25**
3	Chhatishgarh	632	6		52	690	172.50
4.	Delhi	26				26	6.50
5	**Meghalaya**				**3**	**3**	**0.75**
6.	Himachal Pradesh	1101			4	1105	277.25
7	Kerala	1521	15	2	525	2063	515.75
8	Uttranchal	475			71	546	136.50
9	Maharashtra	490		25		515	128.75
10	Madhya Pradesh				498	498	124.50
11	Meghalaya	Supply of home remedy kits					4.85**
12	Gujarat	640			216	856	214.00
13	Haryana	495				495	123.75
14	J & K	474		235		709	177.25
15	Jharkhand	110		18	42	170	42.50
16	Karnataka	**541**		**51**	**42**	**634**	158.50
17	Nagaland	**64**		**58**	**78**	**200**	50.00
18	Orissa	350			300	650	162.50
19	Rajasthan	685				685	171.25
20	**Sikkim**	**12**			**8**	**20**	**5.00**
21	Tamil Nadu		442			442	110.50
22	Uttar Pradesh	1235		100		1335	333.75
23	West Bengal	280			480	760	190.00
	Total	9685	463	782	2639	13469	3372.60

** Total amount is Rs.4,85,150/-

Annexure 2

Ministry of Health and Family Welfare

Dated the 12th August, 2005

Dear Shri

Subject: Roadmap for Mainstreaming of AYUSH under NRHM

Mainstreaming of AYUSH (Ayurveda, Yoga & Naturopathy, Unani, Siddha & Homoeopathy) is an important strategic intervention under the National Rural Health Mission (NRHM). The objective of the integration of AYUSH in the health care infrastructure is to reinforce the existing public health care delivery system, with the use of natural, safe and friendly remedies, which are time tested, accessible and affordable. The Indian Systems of Medicine have age old acceptance in the communities in Indian and in most places they form the first line of action in case of the common ailments. No initiative which seeks to provide cost-effective health care to the rural communities can ignore the vast local knowledge base available in India in the form of the Indian Systems of Medicines.

Mainstreaming of AYUSH under NRHM was discussed in a series of meetings jointly held by both Departments. It is proposed that the following steps for appropriate utilization of AYUSH at the various level of health care set up be considered for implementation as part of the NRHM:

A. : Integration of AYUSH in the Health Care infrastructure

1. All Primary Health Centres (PHCs) ought have an AYUSH doctor. If space permits, the AYUSH dispensary may be relocated in the existing building of the PHC. In places where the AYUSH infrastructure is good, the feasibility of shifting the PHC to the same building be examined. Although there could be constraints in the availability of spaces, at lease 10% of the PHCs with adequate space could accommodate AYUSH dispensaries. Action to shift the AYUSH dispensaries to such PHCs may be taken on priority during the first year of the mission period.

2. Where relocation of AYUSH practitioners is not feasible due to lack of AYUSH dispensaries, qualified AYUSH practitioners may be hired on contractual basis and funds for which would be provided from NRHM budget.
3. The guidelines for IPHS for CHCs, which have been disseminated to the states are being updated so as to adequately address the parameters applicable to the AYUSH component also. Once the guidelines are received, priority should be given for upgradation of AYUSH facilities to those standards.
4. While constructing new PHCs as per IPHS, adequate space should be provided for locating the AYUSH dispensary within the same premises.

B. : Integration of AYUSH with ASHA

1. The Accredited Social Health Activist (ASHA) is the main pillar of the NRHM and is to provide the first response of the Public Health Care chain to any illness at the village level. The first training module for ASHA includes the ASHA component as well. The in-service training modules for ANMs and MOs are also being updated to incorporate information on AYUSH.
2. As of now the ASHA drug kit would contain only one AYUSH preparation in the form of the iron supplement. However, the drug list could be expended in due course to include more AYUSH medicines. Suggestions in this regard are invited from the State Governments.

C. : Other initiatives

1. As of now, the Sub-Centres are no manned by qualified medical doctors. Suggestions have been received about making available and AYUSH practitioner at the Sub-Centre level at least on part-time basis. The feasibility of this proposal should be examined by the State Government.
2. The guidelines to include AYUSH practitioner at all levels in the NRHM

including the State Health Mission, District Health Mission and Rogi Kalyan Samitis have been issued earlier. The action in this regard should be expedited.

3. It is intended to provide for flow of funds under the relevant Centrally Sponsored Schemes for the Department of AYUSH through District Health Societies for convergence at the District level under NRHM. Chief District Medical Officer would be the over-all coordinator of AYUSH related initiatives under the NRHM at the District level.

It is proposed to have total functional integration between the AYUSH dispensaries / hospitals and the health care facilities under the allopathic system so that the entire spectrum of treatments is made available to the rural poor at affordable costs. The enthusiastic participation of the states in this initiative is imperative for the success of the NRHM. We would, therefore, request you to ensure that the AYUSH component of NRHM is adequately addressed at the grass root level. We solicit you whole hearted cooperation in the matter.

(PRASANNA HOTA)
Secretary (Health and Family Welfare)

(UMA PILLAI)
Secretary (AYUSH)

Annexure 3

LEGAL POSITION REGARDING PRESCRIBING MODERN MEDICINE BY AYUSH PHYSICIANS

- "IMCC Act 1970 Sec.2 (1) e, which states that the Indian Medicine means the system of Indian Medicine commonly known as Ashtang Ayurved, Siddha or Unani Tibbia whether supplemented or not by such modern advances as the Central Council may declare by notification from time to time". Under this provision the CCIM vide the Resolution of its Executive Committee dated 30-08-1996 and a Press Note released on the same date and Notifications No. 8-5/96-Ay(MM) dated 30-10-1996, No. 8-5/2002-Ay(MM) dated 22-11-2004 and No. 28-5/2004-Ay(MM) dated 19-05-2004 supports that the institutionally qualified ISM doctors are authorized to practice allopathic medicine by virtue of their teaching and training in modern scientific system of medicine.

- The provision of IMCC Act under Sec.17 (3) (b) that the privileges (including the right to practice any system of medicine) conferred by or under any law relating to registration of practitioners of Indian Medicine for the time being in force in any State on a practitioner of Indian Medicine enrolled on a State Register of Indian Medicine. Accordingly the Supreme Court in Dr. Mukhthiar Chand & Others Vs The State of Punjab & Others No. AIR 1999, SC 468, dated 8-10-1998 declared that an Ayurvedic practitioner of a State is eligible to practice/use modern medicine if the State Act, under which he is registered, allows for the same. The provision to allow practitioners of ISM to practice allopathic medicine was allowed by the State of Punjab vide The Punjab Ayurvedic and Unani Practitioners Act 1963 and the State of Maharashtra by The Maharashtra Medical Practitioners Act 1961 and the Maharashtra Medical Education & Drugs Department by two Government Notifications dated 25-11-1992 and dated 23-2-1999, the latter for the purpose of the Sub-clause (iii) clause (ee) of rule 2 of the Drugs and Cosmetics Act, 1940 (23 of 1940).

- The Hon'ble Supreme Court of India in its decision in Subhash Bakshi and State of West Bengal in January 2003 has stated 'while recognizing the rights of Vaids and Hakims to prescribe allopathic medicines this court also took into account of the fact that qualified allopathic doctors were not available in rural areas and the persons like Vaids/Hakims are catering to the medical need of residence in such areas. Hence, the provision which allows them to practice modern medicine was found in public interest'.