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POPULATION VERSUS RESOURCES-AN APPARENT PROBLEM
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-Anant R.S.

Many people believe that the increasing population in the world, specially in the Third World can not be properly supported because we just do not have enough resources to do this. According to this belief, unless the population-increase in the countries like India is rapidly and drastically controlled, we would not be able to achieve a descent life for all our countrymen; on the contrary we may end up in a catastrophe. In this somewhat hurriedly written note, it is my intention to critically examine this apparent problem of Population versus Resources-population eating so much into availability of resources that descent human life for everybody remains a pipe-dream.

The historical experience in the West

It would be quite revealing to go into the historical experience of the problem of population versus resources. Malthus put his theory of population explosion in 1798. It was used as a political weapon against the French Revolution and against various liberal, radical theories which sought to explain the poverty in Europe in terms of the decaying feudal order. Malthus's theory, however, explained poverty in the "Natural law" of population growth. The feudal oligarchy therefore used this theory in its political struggle. Malthus was rewarded with a professorship at the East India Company's College. History proved Malthus wrong. With the growth of capitalism, there was an all-round increase in food-production and there were not those kinds of famines due to shortage in food-production which Malthusian theory had predicted.

In the twentieth century, in the West, there was so much increase in food-production compared to the purchasing power of the mass of the people that the era of notorious schemes of giving incentives to farmers to reduce food production (to prevent the steep slump in food-prices and the resulting bankruptcies) began and banished Malthusian theory finally and once for all from Western Societies.

The Experience of Colonial India

Though disproved, laughed at and banished from the West, the Malthusian theory was imported into the Colonial countries to explain away the increasing poverty and hunger in these countries. It is now well-known and well-established that the increase in

poverty and hunger in India was due to the " Plunder " through different mechanisms, of the Indian society by the British Colonialists. But the defenders of this colonial rule attributed this poverty and hunger to overpopulation in India. Rajani Palme Dutt in his " India Today " (the famous, classic on British Rule in India and the movement against it) gives a classic account of this story of " overpopulation " in British India. I can not do better than quote him briefly. Vera Anstey, one Malthusian economist wrote " Where is the Indian Malthus who will inveigh against the devastating torrent of Indian children ? " (Anstey-Economic Development of India " p.475). Another such economist L.C.A.Knowles declared " India seems to illustrate the theories of Malthus....." /1-a/

Dutt gives incisive statistics and expert opinion by a number of British and other academicians (including those who believed in Malthus) to show how foolish it was to take a position that Indian poverty was due to overpopulation. I would only quote a couple of key statistics : During 1872-1931, the population increase in India was 30% whereas in England and Wales an increase of 77% took place, during the same period. In the rest of the Europe also, (except France) the population-growth was faster than that in India during this period. As for population density- in 1941, the population density was 246 per square mile in India as compared to 703, 702, 639, 348 per square mile for England and Wales, Belgium, Holland, Germany respectively. As for food production-the production of foodgrains increased by 19% during 1891-1931, as compared to a population-increase of 9.3 % during the same period. /2/ Along with economic exploitation, there was physical deprivation of the Indian people by the colonial rulers. In spite of famine conditions food-exports from India to Britain went on increasing from £ 0.86 million in 1849 to £ 3.8 million in 1858, £ 7.9 million by 1877, £ 9.3 million by 1901, and £ 19.3 million in 1914, or an increase of twentytwo times over ! /3/

Population Vs Resources in Independent India

Though proved once again to be in the wrong, even in the context of the Third World, this theory was once again revived in a revised form and is being propogated vigorously in India since the early sixties to explain away the increasing unemployment, poverty and hunger. But again facts belie the propogandists' hue and cry against the " crushing weight of the teeming millions." Before we briefly enumerate these facts, let me make it clear that

I am not assuming that relative rapid increase in population is not at all a problem. Even if development occurs not in a distorted and hence truncated form (as has been happening in India) but in a planned and healthy way, even then population-problem may perhaps be one of the obstacles in such a development. But to be sure, it is not at all a primary and one of the most important causes of increasing poverty even in today's social system. Even today, the " Population-explosion " is basically a symptom and not a cause of distorted and truncated development.

Let us now see whether the increasing unemployment, poverty...etc. in Independent India is due to
" Population - explosion. "

The population in India has increased from 46.1 crores in 1951 to 65.8 crores in 1981 - i.e. by 83% /4/ ; whereas the foodgrain production has increased from 48.1 million tonnes to 113.4 million tonnes during the same period, /5/ i.e. an increase of 135%. The per capita availability (which includes production plus imports, however, imports have been negligible during last 15 years) of foodgrains has increased from 395 Gms. per day to 454 Gms per day during the same period. /6/ But due to economic inequality, this food is not distributed evenly and hence there is extensive malnourishment due to extensive poverty.

The unemployment in India has increased many more times than the population-increase--The number of job-seekers registered with employment exchange increased from 3.29 lakhs in 1951 to 40.69 lakhs in 1970, to 165.84 lakhs in 1981; to 262.7 lakhs in 1985 ! /7/ Though there are many limitations to these data, (like any other Indian data) there is absolutely no doubt that the unemployment has increased at a fantastically faster rate than the population-increase. This unemployment problem is not due to population-increase but due to the very pattern of growth of the Indian economy.

Due to population-increase the population-density in India has increased from 117 per Sq.Km. in 1951 to 216 per Sq.Km. in 1981. /8/ It is still less than that of some of the rich countries--U.K. (224), West Germany (244) and of course Japan (327)./9/ Thus the propaganda that India is a terribly overpopulated country and hence is poor is false. Incidentally, there is no relation

between population-density of a country and its economic status. For example, most of the African countries are very thinly populated (e.g. Ethiopia 35 persons per Sq.Km.) and yet are extremely poor; so is the case with some of the Asian countries (e.g. Burma 54 persons per Sq.Km.) /10/ Many of the European countries are much more densely populated and still far better off.

The poverty, unemployment, that we see in India today is thus not because of " too much of population " as compared to the resources to support it. As seen above, per capita availability of food has increased; but yet there is extensive mal-nourishment because of the inequality in our existing system. The industrial production has, of course, increased many times compared to the production of foodgrains but the standard of living of the majority of the Indian people has hardly increased to any appreciable extent; for a large section, there has actually been a decline.

Comparison with China :-

Apart from inequality, the Indian economy suffers from the problem of distorted and hence truncated development. India has vast natural resources and trained human-power but these resources are not being utilized rationally because of a myriad of vested, exploitative interests. Since China and India are quite comparable for a number of reasons, a comparison with China would give an indication of what can be achieved by India. One finds that the people's Republic of China (PRC) has achieved a far rapid development of its resources as compared to India. It is difficult to measure the development of resources by a mere couple of indicators. But the following two tables would give some idea.

TABLE-I. /11/ : Sectoral Growth Rates
1965--1984.

(Annual percentage increase)

(Country)	Agriculture			Industry		
	1965-1973	1973-1980	1980-1984	1965-1973	1973-1980	1980-1984
(India)	3.7	2.0	2.8	3.7	5.0	4.2
(China)	2.8	2.8	10.1	12.1	8.6	9.3

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TABLE-II. /12/

Production of Coal, Steel and Crude Oil in
India and China.

(in Million tonnes.)

Country	COAL		STEEL		CRUDE OIL	
	1950	1985	1950	1985	1950	1985
India (1951-84)	34.90	144.80	1.10	5.70	0.26	30.20
China (1950-85)	70.00	813.00	2.00	47.00	1.00	125.00

In the Industrial sector as a whole, the industrial production in PRC has increased at an annual growth rate of 12.2% during 1950 to 1985, /13/ whereas in India, this rate was only 5.8 %. /14/ It is clear from these statistics that both in Agriculture and (much more) in Industry, the PRC has achieved a much more rapid increase in the development of its resources.

China has used this development of its productive capacities in a much more rational way. This is evidenced by the fact that though the average per capita income in PRC is not much higher compared to India, there is not the kind of poverty, hunger, squalor, unemployment as we see in India. This has been reported by all sorts of analysts and visitors to China.

I don't believe that the Chinese development is an ideal one; far from it, there are certain nagging problems with it. But if PRC has achieved this much, starting from a very backward economy encircled by a hostile capitalist world, India, (after its revolution) can now achieve far better, starting from a better base and with perhaps a better understanding also. The problem of " not enough resources " to support the increasing population is now potentially much more superfluous than hitherto.

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DRASTIC CHANGE IN CHINA'S POPULATION-POLICY
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The Chinese government, during last few years, has drastically changed its attitude to population-growth and has started a vigorous population-control programme. We must answer the question : Does not the new population-policy in China vindicate the view point that population must be vigorously controlled in developing countries ? Let me try to answer this question.....

Earlier Policy & New Policy :

The Policy of the Government of the newly liberated People's Republic of China (P.R.C.) was to denounce the " neo-malthusian bogey " of population explosion but at the same time to spread the knowledge of the contraceptive technology and even to control the rate of population-increase. According to Chi Lung, one of the representatives of the PRC in the 1973 ECAFE meeting in Tokyo--" Population increase in a planned way is China's established policy. We follow such a policy not because the question of 'Over-population' exists in China. In China, social production is carried out in a planned way and this requires that the population increase is planned too. It is also necessary to have a planned population increase in order to promote thorough emancipation of women, care of children, mothers and women; and bring up and educate the younger-generation well, and improve the people's health and bring about national prosperity....." /15/

But from 1970's, this policy has changed; pressure was put on the people to have not more than two children per couple. Further drastic change occurred from 1980,--the policy changed over to ' Only One Child Per Couple.' Does this new policy stem from a real resource constraint or a false limitation imposed on themselves by the decision-makers ? If we go into the reasons given by the Chinese demographers who advocate this new policy, we would get some inkling into this puzzling drastic change.

" China's population problems and prospects " is an official publication from China which takes a review of the Chinese population policy from the new angle and advocates : ' One Child Per Couple ' policy. It says : " Considering the present area of cultivated land, pasture-land and surface-water in China and taking into account the speed and level of agricultural development attained abroad over the last hundred years,

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we estimate that a century from now, China's total food production could increase to be 150 per cent above that of today. Taking into account both the average physical characteristics of the Chinese people and the proportion of protein in the diet of industrially and agriculturally developed countries, we estimate that each person in China should consume about 85 gms. of protein per day. (At present the level is about 56 gms.) Protein comes from both animal and plant foods. The proportion of animal protein in the French diet is 70% and in the United States, it is 80 %. In China today, the protein-intake is comparatively low. It should gradually increase, as production improves, to reach the amount adequate for each person each day, with animal protein making upto 70-80 per cent of the total. On this basis, a century from now, the population should not be more than 680 million."/16/ (Note that this figure is much lower than the current population of China of about 1000 million.)

Unscientific basis :

This estimation is unscientific-nutritionwise,healthwise. The average per capita availability of food in PRC today is sufficient-quantitatively and qualitatively. Vaclav Smil's calculations show that in 1983, the daily per capita availability of food energy in China was 2710 Kilo Calories with 77 grams of proteins including 11 Gms.(14%) from animal sources./17/ Ramesh Awasthi /17.a/ in a recent compilation, quotes the foodgrain availability in China in 1983 as 669 gms. per capita compared to 450 gms. in India. Smil has calculated the daily per capita energy and protein requirements of the Chinese population on the basis of FAO/WHO recommendations. These are: 2210 K.Cal. of food-energy. 55 grams of dietary proteins-with the assumption of the current Chinese pattern of diet./18/ It is clear that on an average the Chinese diet today is more than sufficient nutritionally. Where is the great need of increasing the protein-consumption to 85 grams per day ?

To be sure, 1983 was one of the best years as far as food-availability in PRC is concerned, because food-production in PRC has started rising very rapidly from 1978 onwards. But even during the earlier period of relatively rapid population growth accompanied by not much more rapid growth in food-production, the daily per-capita a v a i l a b i l i t y of food was 2075 K.Cal. in 1957, 1900 in 1960-61 (after a period of " probably world's worst drought.") 2045 in 1964-66 and 2125 in 1969-71. /19/

Because of much less inequality as compared to India, China didn't experience the kind of extensive malnourishment (except during 1958-61) as we see in India. There was a need to increase food production at a faster rate to abolish malnourishment altogether and to have safety margins for drought conditions. This has been achieved from 1978 with continuous rapid increase in food production through economic reforms in agriculture. There is thus no rationale for enforcing the one-child-norm except for this unwise, unhealthy projections by their policy-makers for protein requirements in the future.

The most important problem lies in the aim of of the China's new policy makers to get 70-80 % of the proteins from Animal source. This is clearly " aping af the West " since nutritionally so much of Animal protein is not at all required. On the contrary this much of animal food will produce ill-health. The American Medical Association has recommended a one-third reduction in the meat consumption of the American population ! Animal foods are ecologically extremely taxing as compared to vegetarian foods. It takes 20 & 8 Lbs. of grain to be fed to the animals to get 1 Lb. of beaf and pork respectively ! /20/ It is therefore necessary to keep the proportion of animal foods to the minimum necessary. If the Chinese decision-makers abandon the perspective of aping the dietary habits created by Agribusiness in the West, then they need not opt for the current dastardly policy of enforcing " One Child Per Couple."

As has happened elsewhere in the world with increasing modernization, education and general development, the Chinese population would increasingly adopt a small-family norm. That the birth-rate has already markedly come down from 41.3 per thousand in 1950 to 21.3 per thousand in 1982 has been confirmed by an independent American academic study./21/ A part of it has been due to incentives and disincentives from 1970s. But socio-economic development has certainly played a a direct or indirect role in the success of their population-control programme.

With these achievements on the food-front and in birth-control, there is no real need for PRC to adopt the drastic policy of 'one child per couple.' This new mistaken policy therefore does not prove that the theory of " population explosion " is valid.

THE PROBLEM AT THE GLOBAL-LEVEL

There are many statistical projections meant to frighten us to believe that if the population-increase in developing countries is not drastically curtailed, the world would face a catastrophe because " there are not just enough natural resources " to support the projected world-population of 48 billion by 2100 A.D. from the current level of 4.6 billion. Firstly it is wrong to make such purely arithmetical projections to draw strategic conclusions from them : Increasingly conducive socio-economic conditions and hence the desire to control births, as well as the means to do so is a part of modern social development. Why do we assume that the third-world people would continue to remain at the deprived end of the development process, as is happening today, and hence would continue to have high birth-rates ? Even if they do, even then the real threat to world's resources would not come from these marginalized toilers. Take for example, the case of energy. Schumacher in his famous book, 'Small Is Beautiful' has shown that in 1966, the " rich " countries accounted for 31% of the world's population but consumed 87% of the energy utilized in the world. He now argues--suppose the population of these developed and developing countries grows at a rate of 1.25% and 2.50% per year respectively and their fuel consumption per head increases at the annual rate of 2.25% and 4.5% respectively; with these rates, by 2000 A.D. the world would require thrice as much additional energy as in 1966 and out of this increase, more than two-thirds would be consumed by the rich countries !

I do not share Schumacher's overall perspective; but his calculations show how wrong it is to talk about the need for drastic reduction in the birth-rates in the third-world " to save the world from catastrophe." As far as India is concerned, even though we are the second most populous country in the world, our share in the World's commercial energy consumption is only 2.1 % (1985), whereas the share of the U.S.A., with a population amounting to not more than a third of India's, is 24.3 % ! /22/

The per capita availability of calories at the world-level was in 1985, 111% of the requirement./23/ But due to unequal distribution, millions and millions are underfed, lakhs of children die due to malnourishment on the one hand whereas the developed world consumes millions of tonnes of grain in a wasteful and unhealthy way. If the current state of affairs is changed into a sane and

egalitarian society, there is no need to increase food production any more. -Per capita energy demand increases many many times with industrialisation but the per capita food requirement should not increase beyond a level if we are not to fetch ill-health with extra calories.

MILITARY WASTES

Most of the conventional discussions on resource-constraints do not mention, leave aside question, the mind boggling military expenditures. "World Military and social Expenditures" 1985 by Ruth Sivard (just quoted above) gives a very good account of the military expenses the world over. Let me quote a few figures from this compilation :-

World military expenditure as expressed in the value of U.S. dollars in 1982 (thus eliminating the influence of inflation) increased from 339 billion dollars in 1960 to 709 billion dollars in 1983 i.e. it more than double. The share of the developing countries in the military expenses during the same period increased from 33 to 152 billion dollars (at constant-1982 prices) i.e. a more than four-fold increase. (p.34) Compare these figures with the requirement of only 20 billion dollars to provide safe water sanitation to all of those in the world who do not have it today ! (p.33) During this same period, arms-exports (most of which go to developing countries) by developed world increased from 2.5 to 33.5 billion dollars (p.34) whereas per capita aid (most of it is in the form of loans) from developed to developing countries did not rise in real terms (i.e. ^{if} we discount inflation) at all in these 24 years ! (p.23). In the developing countries, military expenditures per soldier in 1982 averaged 9810 US Dollars, compared to educational expenditures of only 91 US dollars per school-age child. (p.29)

India's military expenditure shot up from 312 crores in 1961-62 to 816 crores in 1963-64 ~~/24/~~ due to the Indo-China war. It however continued to rise rapidly in the late sixties and 70's. During last few years, there is again a fantastic rise from 2472 crores in 1975-76 to 7136 crores in 1984-85. /25/ This is due to "Modernization of the Indian Defence Capabilities." In reality India is becoming a big military power in Asia to protect 'Indian interest' here & abroad. India's military-expenditure in 1982 was more than its expenditure on education and more than three times its expenditure on Health. /26/

Even if there is partial disarmament.....

Some may argue that it is utopian to think that there will be complete disarmament. But even if partial disarmament occurs, plenty of resources would be released for abolishing poverty, unemployment, ill-health. At any rate, in any case, nuclear weapons must be abolished from this planet. The nuclear powers have today enough nuclear weapons to kill every person in the world 12 times ! /27/ The danger of nuclear war even by accident has been increasing day by day./28/ Nuclear disarmament is therefore an absolute must. There has been a great world-wide movement towards this goal and in the recent Rikjavik Summit, the USA and USSR almost came to an agreement to reduce nuclear weapons by 50% (!) to begin with. Billions of dollars would be set free even if only nuclear disarmament takes place and hundreds of millions of dollars more, if disarmament of conventional weapons also takes place.

There have been many estimates of the impact of partial disarmament. Let us see a couple of typical of such estimates : " The U.N. experts estimate that 8-10 per cent of world military expenditure would be enough to eliminate hunger, disease, illiteracy.....it would be possible to finance eight major projects similar to the WHO-programme for eliminating smallpox on earth solely with the funds allocated by the U.S. Air-force for developing and designing the F-16 fighter. The cost of one Trident Submarine equals that of teaching 16 million children in developing countries for one year./29/ A comprehensive study made by a study-group of the United Nations in 1980 has registered that " by the year 2000 even a modest degree of military restraint-the scenario modelled only assumed a progressive decline from current levels in the share of military expenditure in gross national product (GNP), not a decline in the level of world military expenditure in absolute terms-could result in 3.7 % increase in world GNP, a larger capital stock, and an increase in world agricultural output, to mention only a few of the mere obvious economic gains." /30/

In conclusion, one may say that the talk of " Population-Explosion " leading to the problem of ' resource-constraint ' is only a bogey to hide the bankruptcy of the existing social-order.



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