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Poverty and health: aligning sectoral programmes with national health policies

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Division of Intensified Cooperation with Countries in Greatest Need

ICO

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Poverty and health: aligning sectoral programmes with national health policies

by

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Debra J. Lipson
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EXECUTIVE SUMMARY

Health improvement of the poor and poverty reduction are two sides of the same coin. Better health makes it more likely that the poor can take advantage of economic opportunities. And improvements in the poor's standard of living will contribute to better health. Health policy-makers tend to focus their attention on the first part of this equation by seeking to improve the health of the population through the provision of health care. Yet, they may be missing important opportunities for health improvement of the poor by not actively participating in poverty reduction efforts with other sectors.

This paper is designed to stimulate national policy-makers and advisers in developing countries to consider the value of intersectoral action for poverty reduction as a strategy for easing demands on limited health *system* resources. It also provides guidance to national policy-makers and their advisers on how to set priorities among other sectors with which to work in reducing poverty, so as to use limited resources most productively.

To set priorities among other sectors, the paper stresses the need to understand the characteristics of the poor in each country and the major causes of poverty which help identify the potential contribution of various sectors to its amelioration. It discusses methods for identifying the major determinants of health among the poor specifically, which can help point to specific sectors for coordinated efforts. These methods seek to identify common risk factors for diseases affecting the poor, and effects of other sectors' development policies on their health.

Setting priorities among other sectors should be based on which ones present the greatest risks to health or are most likely to improve health. However, given common limitations in data and information needed to determine this in most developing countries, a number of other criteria for choosing among sectors are proposed that are less data-dependent. The paper stresses that all affected stakeholders be involved in choosing the criteria for deciding which sectors deserve highest priority, and in applying the criteria to the selection of potential intersectoral activities.

Examples of intersectoral programs in five key areas are described to show that such efforts have reduced poverty or improved the health of the poor in developing countries. These include community economic development, agriculture and food policy, education, macroeconomic policy, and environmental and infrastructure projects for safer water and sanitation.

The paper concludes by briefly discussing the biggest challenge to intersectoral action: how to get the process started and keep it going. The ability of the health policy-makers to align other sectors' development programs *for* health depends on several prerequisites. Health professionals must recognize that poverty reduction is a key strategy for improving the health of the poor. The public must understand that better health is an integral part of community and economic development and the poor must be ensured opportunities to participate in initiatives on their behalf. Public and private organizations must put pressure on policy-makers to make health considerations more central to development policies. Finally, the Ministry of Health must have the technical capacity to advise other sectors about modifications to their activities that would improve health and reduce poverty more effectively.

INTRODUCTION AND PURPOSE

Improving equity in access to health care for all is the cornerstone of nearly every country's health policy. Yet, the contribution of health services to improved health *status* is relatively modest compared to other factors (Evans, Barer and Marmor, 1994). The key determinants of health are higher income, higher levels of education, better nutrition, access to safe water and sanitation, and safe and adequate housing. For the poor in particular, investment in health care will be less effective in improving their health without adequate attention to improving their *human* capital generally, via nutrition, education, and enhancing their income-earning potential, and to the immediate environment in which they live and work (Gunatilleke, 1995). Thus, to improve health of the poor, one must pursue a broad array of strategies, many of which do not involve direct provision of health care services.

1 *Health status improvements require more than health services alone*

> Sweden's long and steady decline in infant mortality, "was initially attributable to gradual improvements in nutrition, hygiene and environmental conditions. In other words it began long before specific medical interventions such as mass vaccinations and anti-bacterial therapeutics were introduced." (WHO, 1997b, p.1)

Though the need for intersectoral action for health has long been recognized and promoted, it has not been widely implemented. Often, other sectors do not appreciate the impact of their actions on health or are unwilling to change to ameliorate the damage caused to health, or contribute to its improvement. But in many instances, those in the health care system itself are to blame. The problems and inadequacies of the health care system can be so overwhelming that health leaders may believe they cannot spare the time to work with other sectors. In many cases, health professionals do not have sufficient information about the impact of other sectors -- positive or negative -- on the health of the population to know which ones are most critical to address. Or, health leaders may believe their resources and capacity to address the health consequences of other sectors are insufficient.

Yet, the failure of health policy-makers to become involved in intersectoral activities designed to reduce poverty may actually increase the demands on the health care system. Since poverty is a major contributor to disease and death, working with other sectors to reduce poverty should help to lower the prevalence of illness among the poor, easing the burden on the health care system. At the same time, raising the poor's standard of living will make it easier to treat disease, by ensuring that those who are sick have the basic prerequisites for recovery-- food, adequate shelter, safe water, and a healthy environment. In recognition of this, WHO's

renewed Health for All policy stresses that in addition to developing sustainable health systems, organized efforts to improve health require *making health central to development* by combatting poverty and aligning sectoral policies for health (WHO, 1998).

The purposes of this paper are: 1) to stimulate national health policy-makers and advisers in developing countries to consider the value of intersectoral action for poverty reduction as a strategy for easing demands on limited health *system* resources, and 2) to provide guidance to national health policy-makers and their advisers on how to set priorities among other sectors with which to work in reducing poverty, so as to use limited resources most productively. Since the links between health and development, and intersectoral action for health generally, have been covered extensively in other WHO reports, this report focuses on the "analytic frameworks and tools needed to move the field beyond a heavy reliance on anecdotal, descriptive accounts to more quantitative indicators and results associated with health gains," as recommended by a recent WHO conference (WHO, 1997a).

This report is organized into five sections. Following this introduction, **Section1**briefly reviews poverty characteristics and major causes of poverty in order to identify the potential contribution of various sectors to its amelioration. **Section 2** discusses methods for determining the major causes of death and ill-health among the poor, which can also help point to specific sectors for coordinated efforts at risk-reduction. **Section 3** suggests a number of criteria for setting priorities among various sectors and discusses how they can be used. **Section 4** contains specific examples of intersectoral programs or policies that have either reduced poverty or improved the health of the poor specifically. **Section 5** briefly discusses the biggest challenge to intersectoral action: how to get the process started and keep it going.

1. POVERTY ASSESSMENT

In order to determine which strategies for poverty reduction are most appropriate to each country, it is important to understand the characteristics of the poor, why they remain or become poor, and the impact of various systems -- economic, political, cultural, social, etc. -- on the poor. Such information is essential for designing and targeting interventions, and it can also help in monitoring progress.

1.1 Participatory poverty assessment

One of the most important sources of information about the nature and causes of poverty include NGOs which have direct contact with the poor and poor communities, and the poor themselves. Qualitative sources of information, such as participatory poverty assessments that involve informal interviews with the poor, may be especially helpful. These can provide important insights into how the poor cope with the effects of ill-health, and what the poor regard as prerequisites in gaining access to jobs, credit or capital, health and social services, and political participation. For example:

2: *How to define poverty?*

Poverty is defined in many ways. The World Bank, other international donors and many governments, usually define the poverty level using income-based measures. But many would argue that poverty encompasses a much broader set of factors relating to basic human needs that are not taken into account in simple income-based measures. UNDP defines poverty as the "denial of opportunities and choices most basic to human development." Thus, poverty has social and political dimensions as well. Furthermore, the amelioration of poverty requires that certain material aspects of living be provided, often as a matter of basic human rights. This report does not restrict the definition of poverty to income alone. For a more detailed discussion of these and other definitional issues, see the paper: *Poverty and Health: Who Lives, Who Dies, Who Cares?*, by M. Sköld, published by WHO, ICO Division, 1998

- A participatory poverty research study was recently undertaken in **Pakistan**. People in low-income communities were asked to identify household characteristics that were more common among the poor. In addition to those that lacked adult men or had a large number of dependents, they cited those with sick or disabled adults unable to engage in paid work and those with debt bondage to landowners, employers, or informal money lenders. Powerlessness, helplessness, insecurity, absence of choice, and lack of faith in official poverty alleviation programmes were also common factors among the poor. The findings of the study compliment those of a quantitative poverty assessment undertaken at the same time by the World Bank. (Wratten, E., 1995)

- In a qualitative assessment of causes of poverty in **Lesotho,** those interviewed named alcoholism as the most important single factor leading to poverty and poverty-related

conditions. Alcohol abuse was placed higher than unemployment, drought, hunger, or laziness as a cause of poverty. (Sechaba Consultants, 1994)

1.2 Official poverty assessments

Poverty assessments have become a regular component of the World Bank's process for developing country assistance strategies and for determining the appropriateness of its loans. By the end of Fiscal Year (FY) 95, 62 country-specific poverty assessments were completed, covering 80 to 90 percent of the world's poor (World Bank, 1996). The Bank relies on household surveys to develop their poverty profiles, supplemented by other data. They have also begun to involve NGOs in the process and the poor themselves. The Bank's poverty assessments not only answer the questions about who is poor and why are they poor, but also examine the effect of economy-wide policies and targeted interventions on the poor to look for ways to improve or change them. They can be, and in some instances, are used to set cross-sectoral priorities. For example:

- In a group of **12 African countries**, in the early 1990s, 84% of the poor lived in rural areas and most were smallholders. Self-employment in agriculture is the predominant occupation, with a large share of "income" being the food produced and consumed by them and their families. Thus, efforts to promote growth in agriculture, and allow the price of produce from rural farms to increase while ensuring that smallholders are able to produce enough food to feed their families, are most important in these countries.

- In **Mexico**, a poverty analysis found that public expenditures favoured better-off States; as a result, loans support reforms aimed at equalizing spending across States and Bank loans were targeted to the four poorest states to invest in physical infrastructure, and improve basic education and health services. Because the study found that extremely poor people could not take advantage of economic opportunities, the Bank financed a health and nutrition project for the poorest groups. (Boer and Rooimans, 1994)

1.3 Enhancing poverty assessments for health

While official poverty assessments can be valuable in understanding the scope, nature, and underlying causes of poverty, they may not address all the questions that health policy-makers might ask if they were determining where to invest *their* resources. For example, how and to what extent does ill-health affect the ability of the poor to take advantage of expanding economic opportunities? Are improvements in the availability or quality of education focused on communities with the poorest birth outcomes? If loans are contingent on maintaining levels

of social and health expenditures by the public sector, or targeted to the poorest groups, how can the health professionals be involved in facilitating or monitoring implementation progress at the community level?

To address these questions, it is important to examine country-specific materials from a variety of sources. A study of the interface between health and poverty in **Bangladesh** found that the hard core poor had more morbidity than the moderate and non-poor. Because those living in extreme poverty often have only their labour to generate income, protecting the health of heads of households becomes a critical strategy for reducing poverty (Sen, 1997). Other UN agencies, especially UNDP and UNICEF, as well as WHO can provide valuable information about the characteristics of the poor, and the effectiveness of various economic and human development projects in reducing poverty or reaching the poor. This is important for distinguishing which socio-economic groups within each country benefit or are harmed by current policies. For example:

- UNDP and UNICEF reports indicate that since 1986, **Viet Nam** has made great strides in reducing poverty. Still, income poverty remains high (20% using a nationally determined level, 50% based on international comparisons). Remaining poverty is linked to five key problems: geographic, linguistic and social isolation of ethnic minorities; high exposure to risks such as typhoons, floods and illness; lack of access to productive resources, particularly land and credit; unsustainable financial and environmental conditions; and inadequate participation of people in planning and implementing development programs. Efforts to reduce poverty, therefore, focus on land reform by making more credit available, targeted rural infrastructure investments, and social assistance for those left out of economic development. (UNDP, 1997)[1]

- The Bank's poverty assessment in **Sri Lanka** reported an increased incidence in malaria and continuing undernutrition in young children. The report asserted that food stamps target too broad a population to be effective, and need to be better targeted to the poorest segments of society. Yet, the Bank does not address malaria, which contributes to slower economic growth by lessening the strength and productivity of those who contract the disease. WHO studies show that 90% of the global burden of malaria is attributable to environmental factors (WHO, 1997b), but the Bank's proposals do not address the environmental consequences of economic growth. Thus, industrial development, agricultural policies, or other environmental projects that allow malaria to increase might be appropriate targets for intersectoral action.

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[1] This conclusion is consistent with the World Bank's 1995 Viet Nam poverty assessment, but the Bank's first priority is improving the incentive framework for savings and investment to sustain rapid economic growth. (World Bank, 1995)

2. ASSESSING DETERMINANTS OF HEALTH AMONG THE POOR

In addition to understanding what contributes to persistent poverty, it is important to identify the major determinants of health or illness among the poor. By considering which strategies or interventions outside of the health care system can best prevent their spread or development, opportunities for intersectoral action can be more clearly identified.

Identifying the key determinants of health among the poor at the national level can be difficult in many developing countries. In part this is because of deficiencies in basic health statistics and in cause of death data, which are characterised by under-registration and misclassification of cause of death. Even when data are available, they often fail to distinguish health status of different socioeconomic groups (WHO, 1996b). Assuming some data is available for the country as a whole, five techniques are suggested to identify the underlying determinants of health among the poor, or the impact of other sectors' development policies on the health of the poor. These five are described in order of least to most data dependent, and are listed in Table 1 along with the type of data needed to perform each one.

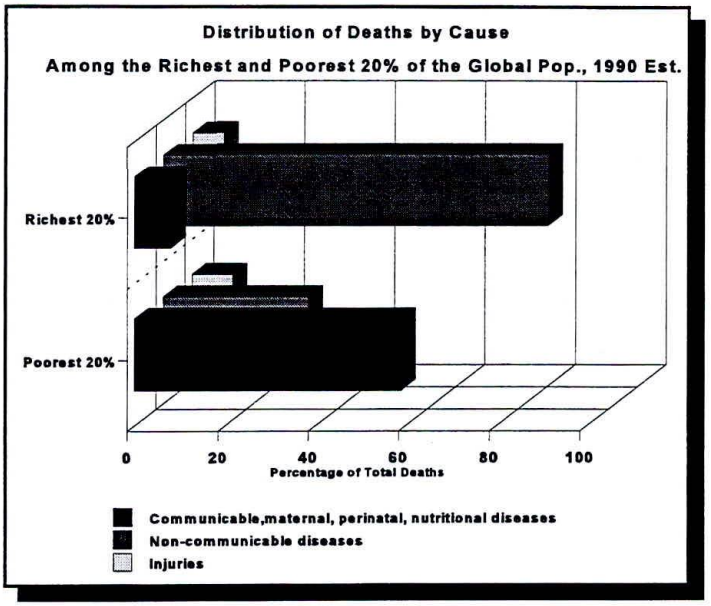
Table 1 Methods for determining key determinants of health problems of the poor

Analytic method	Data requirements
1. Grouping cause of death data into *common risk factors*	Trend data on causes of death, from either vital registration systems or special surveys
2. Analysing health and social indicators together to identify those that fall behind expected levels for countries at similar stages of development	Poverty and educational levels from census data. Safe water and sanitation coverage from census or sanitation records. Comparative data from *Health, Nutrition and Population Sector Strategy*, World Bank, 1997 and *World Health Report*, WHO, 1997
3. Mapping health indicators and socio-economic disparities across regions within a country	National surveys on income, educational levels and other important indicators of socio-economic status by province, district, or other regions. Health data (cause of death, illnesses, immunization levels, etc.) for same regions.
4. Linking disease burden to poverty-related risk factors	Data on causes of death, morbidity, and disability, distribution of selected risk factors, and measures of exposure in the population to the risk factors. Causes of death and disability may be estimated from epidemiological models of the cause of death.
5. Assessing effects of other sector development policies/projects on health of the poor	Epidemiological and economic studies that measure the impact of various policies on health

2.1 Grouping causes of death into common risk factors

Data on causes of death for different years can reveal important information about poverty-related illness. Are the major causes of death primarily related to infectious diseases? Or, has economic development begun to change the major causes of death to those related to chronic disease? Even where a country is undergoing rapid economic growth, with relatively steep drops in fertility and increases in life expectancies, the overall cause of death profile may still exhibit the disease patterns of the least developed countries: communicable diseases, undernutrition, and high maternal and infant mortality. See Figure 1. Since these diseases are more prevalent among the poor, their prevention should continue to have high priority in most developing countries.

Figure 1



Although cause of death statistics commonly cite one major cause, the poor rarely die from a single cause of death as poverty and malnutrition contribute to many diseases. Thus, it may be better to group mortality data in broad categories that relate to underlying risks, rather than specific disease categories. This way of examining mortality data can *promote* an intersectoral view of risk reduction. For example, programs designed to address an underlying contributor to poverty (e.g. education) will probably help to

3 *Diseases of the poor <u>and</u> the rich?*

One should use some caution in making inferences about the extent to which certain diseases are concentrated in the poor. For example, the spread of HIV-AIDS is changing the traditional connection between poverty and infectious diseases. While those in lower socioeconomic groups may be more vulnerable to the virus and to death from it, HIV/AIDS cuts across all socioeconomic groups. Another example is environmental health risks. In the least developed countries, these risks continue to be the "traditional" ones, such as unsafe food and drinking water, inadequate sanitation, and poor housing, which disproportionately affect the poor. But as a country progresses in its economic development, the more "modern" environmental risks, such as air pollution, chemical exposures and traffic accidents, can rise rapidly. These latter risks do not limit themselves to any particular class or income group, though they may disproportionately affect the poor in certain situations. As countries develop economically, differences in health status by socio-economic status will change.

stem the spread of communicable diseases in poor communities, *and* make it more likely that parents will bring their children to be vaccinated.

Identification of underlying risk factors relies on basic knowledge about epidemiology of diseases; such information has been comprehensively summarized (Jamison, Mosley, et al., 1993). Then, one has to link these underlying, or proximate, causes to various sectors that may contribute to their reduction. For example, one study identified the key proximate determinants of child survival in developing countries as: a) maternal risk factors such as educational status, b) nutrition and diet, c) the physical environment, d) injury, and e) personal illness control (i.e. health seeking behaviour and health care provision) (Mosley and Chen, 1984). These would point to interventions by the education sector, the agriculture and food security sectors, environment and public works sector, and possibly the transportation and energy sectors that contribute to injuries, respectively. Risk factors common to several clusters of causes of death would attain a higher priority in this approach. If one could reduce malnutrition, for example, childhood communicable diseases would decline and pregnancy outcomes would improve.

2.2 Analysis of key health and socio-economic indicators

Another method for identifying the major determinants of health among the poor involves analysing some key indicators as an interrelated group -- health status, education, and income. By comparing these indicators with those of a similar group of countries in the same region, or at similar levels of average per capita income, the indicators that are lagging behind point to priority areas for attention. (Gunatilleke, 1995 and WHO, SEARO, 1997c) In other words, by looking for irregularities in the simultaneous upward movement of key indicators, problems and avenues for action are more readily identified. The "laggard" indicators "becomes the trigger to renew the process of poverty alleviation." For example:

- **Sri Lanka** has high life expectancy and high levels of female literacy for countries with the same or even higher per capita income, due largely to a long history of welfare programmes, education for girls, and universally accessible maternal and child health care services.. But it has more child malnutrition and higher rates of poverty compared to others in the region. This suggests that a better balance between social and health programs, and those that promote income-generating capacity and employment, might be able to address the continuing problems with child malnutrition.

- **Thailand,** by contrast, has three times the per capita income of Sri Lanka, but lower life expectancy and higher infant and maternal mortality rates. Even though its

macroeconomic policies have promoted high rates of macroeconomic growth, its policies and interventions have not been implemented to ensure development and growth that are "poor friendly". In the wake of the recent economic crisis in Asia, poor workers who migrated to the city for jobs are among those who will hurt the most. *(IHT, 1997)* The failure of Thailand and many other Asian countries to invest in social security systems is likely to affect the health of the poor over the next decade.

For countries with high mortality, high fertility, and low female literacy, the most important interventions might be enrollment of girls and women in education, improved accessibility of reproductive health services, and more equal distribution of income-earning assets (land, credit, equipment). In situations of high literacy and high fertility, greater emphasis on disseminating information about reproductive options and making employment opportunities available to women may be more appropriate. High social indicators (educational status, low fertility rates) combined with continued high levels of poverty, unemployment and undernutrition, suggest that it is important to focus on efforts that enhance the income-earning capacity of poor households, in addition to nutrition and health programs. Where such data is available on a sub-national basis, one could perform a similar analysis to identify areas of the country where certain areas need more emphasis.

2.3 Sub-national "Mapping" of health disparities

To compensate for the fact that few developing countries have data on health status disaggregated by income or other indicators of poverty, analysis of differences in health status *across regions* within a country may provide some clues about key health problems affecting the poor. When regional cause of death data is compared to more general socio-economic indicators by region, the health problems of the poorest *regions* should point to health problems among the poor that deserve focus. For example, some national surveys collect data on incomes, educational levels, housing conditions, nutritional status, and other important indicators of socio-economic status by province and districts (e.g. **Zimbabwe, Sri Lanka**), Countries may even have such information disaggregated for even smaller census tracts, postal zip codes, or neighbourhoods, which can be very useful for identifying which local communities are in greatest need. If health statistics are available for the same geographic areas, the comparison of health problems in areas with lower socio-economic indicators can reveal much about health issues affecting the poor. Recent country-specific or city-specific examples of this type of analysis include:

- **South Africa**. Analysis of data at the provincial level showed "higher mortality rates and lower life expectancies in the poorer provinces. . .". Due to the unavailability of similar

data at the magisterial (lower) level, a similar analysis could not be performed for local communities. However, for at least some magisterial districts where data was obtained, it found a "higher percentage of deaths due to infectious and parasitic illness . . .in the poorer quintiles [of magisterial districts]."(McIntyre, 1997)

- **Zimbabwe** -- The WHO-SIDA Initiative on Equity in Health and Health Care analysed data from a 1995 Poverty Assessment Survey. It showed the distribution of poverty by province, by type of area (commune, small-scale commercial farms and resettlement areas, large-scale commercial farms, and urban areas) and by districts within the provinces. Health status and health care utilization indicators were available at that level from 1982 and 1992 Censuses, and 1988 and 1994 Demographic and Health Surveys. The analysis showed wide geographical disparities in certain illnesses. (Chandiwana, et. al., 1997)

- A study of death rates among people living in different socio-environmental conditions in **Accra, Ghana**, and **Sao Paolo, Brazil** found age-adjusted death rates up to 3 times higher in the most disadvantaged areas of the metropolitan communities. It found that the poor not only die more from infectious diseases affecting children, but also from certain diseases affecting adults (e.g. circulatory and respiratory diseases). (Stephens, et.al., 1997) The latter finding may be due to misclassification of causes of death among the poor, for whom ill-defined causes were often ascribed to "heart failure".

2.4 Attributing disease burden to risk factors associated with poverty

One disadvantage of using cause of death data alone is that the prevalence of illness and disability from injuries or disease is not taken into account. The development of "composite indicators", such as quality-adjusted life years (QALYs) and disability-adjusted life years (DALYs), overcomes this problem by combining mortality and morbidity into one measure, sometimes referred to as disease burden. This type of analysis can reveal very different patterns of illness than mortality alone, and as a consequence, point to a set of causes that suggest other sectors which might be involved in their amelioration. In developing countries generally, the greatest share of mortality, morbidity, and disability is due to inadequate water and sanitation and undernutrition (Murray and Lopez, 1996). But depending on the development stage of each country, and unique economic, political or social factors, the profile may be different. For example:

- A disease burden analysis was recently performed in **South Africa**, which showed that in 1990, the major causes of potential years of life lost (due to death) were accidents,

poisoning and violence (22% of potential years of life lost), followed by perinatal conditions (17%), and infectious diseases (15%). According to the authors of the study, the underlying conditions that contributed to such deaths included: poverty, unemployment, overcrowded or inadequate housing, and inadequate access to primary care services. (Bourne, D., 1994)

- A burden of disease analysis in **Indonesia**, revealed a "double burden" pattern of disease, in which infectious diseases related to poverty and underdevelopment co-exist with chronic and degenerative conditions of a growing middle and upper class. A DALY-based analysis showed that the five diseases that contributed most to productive years of life lost were, in descending order of magnitude: pneumonia, pulmonary TB, intestinal infectious diseases, neoplasms, injuries. (Kosen, S., 1996) By contrast, main causes of death were: infectious diseases, cardiovascular disorders, perinatal problems, injuries, and neoplasms. Burden of disease data suggest a need to begin shifting more resources towards prevention and treatment of respiratory infectious disease, via smoking reduction efforts and pollution control.

Performing such analyses in most developing countries, however, is very difficult since morbidity information is often unavailable. Estimates can be derived by extrapolating trends in disease burden calculated from surveys in cities or communities to other countries in the same region (Murray and Lopez, 1996). But the assumptions built into these models can introduce substantial uncertainty about the resulting estimates.

If disease burden data expressed in QALYs, DALYs, or other composite measures is available for a country, however, they can be linked to underlying risk factors. Sectors that can help to ameliorate those risk factors that disproportionately affect the poor would become the focus for possible intersectoral actions for health. For example, a study linked Sub-Saharan Africa's disease burden to underlying determinants of health that roughly corresponded to various sectors (Yach, 1997). See Table 2. It emphasizes the importance of addressing malnutrition, which accounted for 32.7% of the total disease burden in the region, suggesting that a focus on the agricultural sector and food security is especially important.

Table 2: Sectoral burden of disease, by percent (%) of total DALYs

DETERMINANTS	Sub-Saharan Africa	Established market economies	World
In non-health sectors	70.5	53.1	49.6
Water and sanitation	10.1	0.1	6.8
Food/diet -- overnutrition -- undernutrition	 1.0 32.7	 13.0 0.0	 4.5 15.9
Behaviour	9.7	26.4	10.2
Transport	1.9	4.4	2.5
Energy	1.4	0.7	1.4
Occupational	1.7	5.3	3.2
Violence	2.4	3.2	2.6
Rural development (malaria)	9.6	0.0	2.5
Health services -- Eradicable -- Immunizable -- Treatable	17.2 1.0 8.3 7.9	12.6 0.0 0.1 12.6	14.9 0.6 4.1 10.2
Total DALYs (thousands)	295,294	98,794	1,379,238

Source: (Yach, 1997)

2.5 Health impact assessments of development projects

Often, it is not enough to examine recent data on causes of death and illness, since new risks to health may arise quickly as a result of particular development activities. Thus, it is important to assess the health impact of development projects. One of the most thorough reviews of the quality of evidence regarding the impact of other sectors' development policies on health paid particular attention to effects on the poor. (Cooper Weil, et.al., 1990) Since that work was so comprehensive, it is strongly recommended as a starting point for health impact assessments. However, that study did not provide exact quantitative relationships between general types of development activity and health which could be used to gauge the expected impacts elsewhere. This is because the activities studied were project-specific which makes it hard to generalize the findings, or the links between some sectors (especially macroeconomic policies) and health are so numerous and complex, that one cannot prove direct causality.

If one were to undertake country-specific health impact studies of development policies, some research can provide a good starting point. For example, for a set of diseases related to "poor household environments", such as TB, diarrhoea, and respiratory infections, one study estimated the reduction in *global* disease burden that could be achieved through improved sanitation, housing, and water supply, or wider use of less polluting heating and cooking fuels (World Bank, 1993, p.90). But because there are so many development policies that have health impacts, and within each sector, several activities that may be of particular importance to the poor, it is important to select which policies or projects should be studied further. Then, experts from various fields can be asked to study specific aspects of the proposed policies. Their findings must then be synthesized to help policy-makers understand the health impacts of previous development policies, or the potential health implications of proposed policies, so that those with the greatest risk to health or the greatest potential contribution to health can be identified.

3. SETTING PRIORITIES AMONG SECTORS

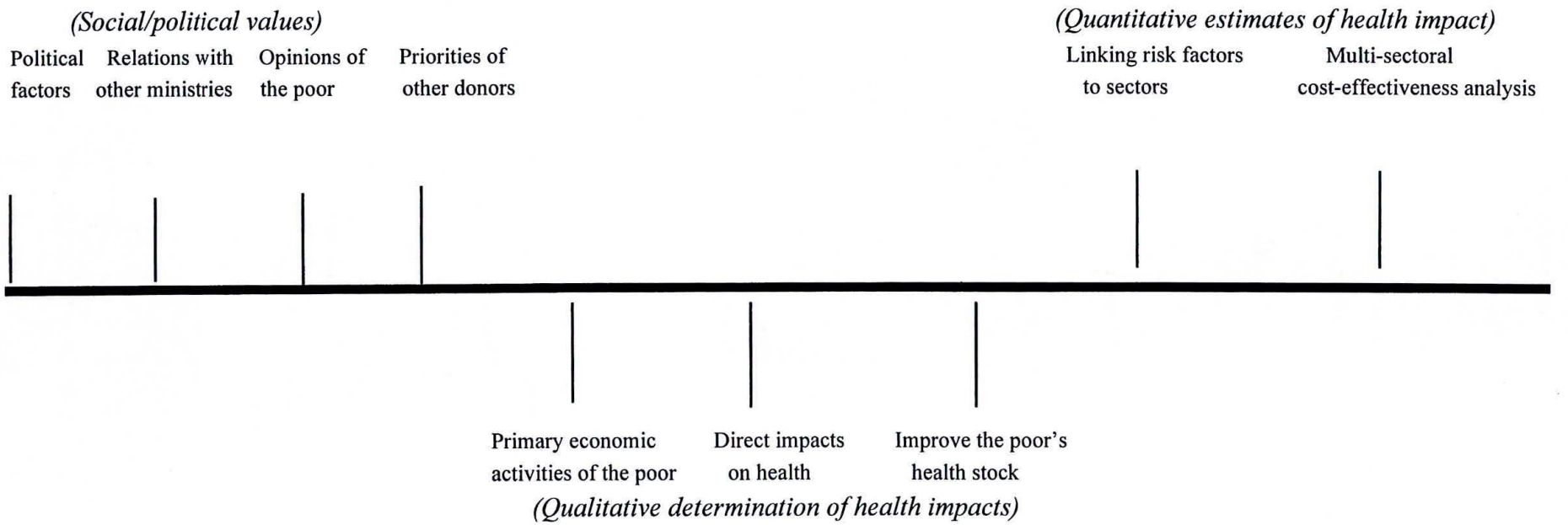
Once the major contributors to poverty and the major causes of death or illness among the poor have been identified, one is likely to have identified numerous underlying problems: poor sanitation and unsafe water, low educational levels among women, malnutrition, inadequate housing, unemployment or lack of income, poor land productivity, or hazardous working conditions. This suggests that the sectors one could involve in intersectoral action are many: environment, water supply, agriculture, education, training, housing, industry, finance and credit, and even the media. With so many potential sectors to involve and limited resources and time available, how can one select the most important?

In general, the choice of appropriate sectors for health policy-makers to involve should be based on those that present the greatest risks to health or are most likely to improve health status. And, since poverty reduction is an equally important goal, the choice should be based on those that can reduce poverty most effectively. However, as noted, in many developing countries, it is very difficult to measure the health risks associated with each sector, and equally hard to assess the potential contribution that each sector could make to health improvement and poverty reduction. Furthermore, the realities of most low-income countries, such as very scarce resources, political uncertainty, and donor pressures may limit the range of choices that can be considered for potential intersectoral action (Baah, 1995).

Due to these difficulties, a range of decision-making criteria are suggested from which policy advisers and policy-makers can pick that go across a continuum, shown in Figure 2 on the next page. Displayed from less to more data-dependent, the criteria fall into three sets:
1) those that are based on social or political values, or on donors' priorities; 2) those based on qualitative assessments of impact; and 3) those that use quantitative data to estimate disease burden avoided, or an economic comparison of the benefits of various interventions. Criteria that depend on quantitative data are not necessarily value-free, as most data analysis methods involve value-based assumptions and judgment is still required in whether and how to apply the results. After explaining these criteria, suggestions for how to use these criteria to actually set priorities are discussed.

FIGURE 2

CONTINUUM OF CRITERIA FOR SETTING PRIORITIES AMONG OTHER SECTORS FOR INTERSECTORAL ACTION



3.1 What the poor regard as most important to their health

The poor themselves may be among the most important informants when it comes to decisions about which sectors need to be involved in improving their health and ending the cycle of poverty. For example, in a Participatory Poverty Assessment conducted by the World Bank in **Zambia** in 1994, after health care, poor people's highest priorities for assistance included all-weather roads, for marketing purposes as well as increasing access to clinics and hospitals during the rains, suggesting the need for collaboration with the transportation sector. One caution, however, is that if the poor have uninformed opinions about the health risks of various activities, the results may be less useful than if they had more complete information about the actual risks.

3.2 Ministries with which you are on good terms

Clearly, cooperation from other sectors is critical to the successful implementation of any joint activity. Thus, it is worth considering which other sectors have close ties with the Ministry of Health , as a result of previous successful efforts due to overlapping jurisdictional boundaries at the local level or simply good relationships between the ministers. But this has significant risks. Ministers change often and their tenures may be shorter than the intended intersectoral projects. If a project is too closely associated with the ministers and one or the other leaves, the project itself may lose the support of whomever replaces the ministers. This problem may be minimized by developing intersectoral committees or groups at all levels of the Ministry (from national to district to local), but the risk is still there.

3.3 Political factors

If there are a number of development activities that might represent good investments, the decision about which sector(s) to collaborate with might rest on which other ministries have more political power. For example, if the Ministry of Agriculture is very powerful, collaborating with it to ensure that food subsidies are properly targeted and result in better nutrition might increase the chances for support from the Ministry of Agriculture for extra resources to be allocated to the Ministry of Health to provide health and nutrition education. Or, since the Ministry of Trade is often very influential, a joint project to ensure that trade policies take into account health impacts, may be very fruitful.

3.4 Priorities of donors

In developing countries, much of the development agenda is driven by external donors.

If country officials believe that they have little power to change existing priorities as determined by external donors, or if they agree with the existing priorities, the projects that are receiving priority attention by those donors, which tend to be sector-specific, may be the most appropriate ones for intersectoral action.

3.5 Distributional impact on the poor's health "stock"

Some analysts suggest the importance of looking at activities that correspond to the notion of health-related *capital* or health-promotive *assets*, such as an educated society (which would point to the education sector), safe water supply and sanitation (which suggests the public works sector), transportation and housing, each of which correspond to specific sectors. Others extend the notion of health-related capital further to define contributors to individuals' health "stock", which include food intake, health care services, health behaviour, and exogenous environmental conditions (Anand and Chen, 1996). Since the poor and disadvantaged will typically have lower individual health stock or reserves, it becomes critical to examine policies (economic, development, social, etc.) in those sectors that will have a disproportionate impact -- both negative and positive -- on the poor's intake of food, on their health behaviours, or on their physical environment.

3.6 Distributional impacts on economic activity of the poor

One could also examine sectors that affect the largest area of economic activity in which the poor are engaged. For example, in many developing countries, between 60 to 85 percent of all workers are employed in agriculture, small industries, or other small enterprises. Thus, while large factories or mines may be a highly visible or growing sector of the overall economy, they would not employ the majority of the population, or the majority of the poor. Assessment of occupational health hazards, for example, would be better targeted to those arising from changes in agricultural policies than to those in large-scale industries. This was the case in **Guatemala**, where the health and welfare of migrant Indian workers were the focus of intersectoral efforts amongst health, social security, and agricultural sectors. Since the dominant economic activity varies by region within countries, local intersectoral actions might also differ accordingly.

3.7 Direct impacts on health

Some analysts argue that the domains for health priorities should be limited to those that have *direct* effects on the health of the poor (Bobadilla, 1996). In other words, educational

programs alone might not constitute a health priority, but health education programs within the schools would. Or, activities that generate income *unrelated* to health might be considered outside the scope of influence of the health system, whereas programs that seek to train community health workers to give indigenous people a source of income might be within the range of options. Within particular sectors, the principle of aiming for direct health impacts can also be applied. For example, within the agricultural sector, activities that directly contribute to improved nutritional status, that minimize human exposure to harmful pesticides, or that focus on malaria control, might be the most appropriate targets.

3.8 Multi-sectoral balance sheets

Another way to select other sectors for collaborative action involves quantifying both the amount of disease burden (as described in Section 2.4) and the potential contribution to health attributable to each sector. One would then combine the two sets of data into a "multi-sectoral balance sheet", which would show each sector their positive or negative impact on health (Yach, 1997). As noted, it is very difficult to compile all the data needed to compile such balance sheets on a country-specific basis. Still, if one has basic information about the direction and relative *degree* of harm or potential good that can come of activities by other sectors, the balance sheet approach *may* have merit in making more informed decisions. It is important to note, however, that the use of QALYs or DALYs for allocating resources has been discouraged by a WHO Working Group based on methodological problems that result in inequities (WHO, 1995).

3.9 Multi-sectoral cost-effectiveness (CE) comparisons

One of the drawbacks to the "balance sheet" approach is that it does not take into account the costs of implementing various activities. As such, does not reflect the advantages of investing in activities that provide the most gain for the same cost. But, "if a government is motivated to improve child health in its population, it will help to be able to compare the relative cost-effectiveness of investing in girls' education, making specific infrastructure improvements, introducing food pricing policies, and school health programmes." (WHO, 1996a) Since resources are always limited, an alternative decision criterion might be the economic costs of each approach. The choice of activities for intersectoral action could thus be made based on which are most cost-effective, expressed in cost per health "impact" (e.g. death averted or illness avoided).

There are several problems with this criterion. First, there are few cross-cutting, intersectoral comparisons of the effects of various interventions on health outcomes, generally

and among the poor. One study examined the marginal contribution of nutritional programs, medical care, maternal education, and job creation to the control of Vitamin A deficiency among children in **Nepal**. It found that health interventions were effective but, "they were secondary to community development characteristics [e.g. roads], agricultural patterns [e.g. having a home garden, growing pulses], the nutritional status of children, and the overall sanitation level of the ward." (Tilden, et.al., 1994) However, it did not compare the costs of these interventions. A second problem relates to the difficulty in choosing a single health indicator for comparing the cost-effectiveness of cross-sectoral interventions, and the likelihood that in practice, it is the combination of interventions that make a difference (see Box 4). Furthermore, cost-effectiveness studies often fail to consider that the costs of various interventions are borne by different sectors of society. It may be more cost-effective to provide water and sanitation, but if consumers are required to pay for these services, the result will be inequitable to the poor.

4 *Limits to Cross-Sectoral CE Analysis*

The relative scarcity of multi-sectoral cost-effectiveness (CE) studies relates in part to problems in deciding on one effectiveness measure that allows for intersectoral comparisons. "If one is simply assessing the relative attractiveness of alternative means for achieving a single, specific health objective -- for example, reducing infant mortality -- this measurement problem disappears, and one can judge intervention cost-effectiveness simply in terms of, say, cost per infant death averted." (Jamison, 1993, note 9) In the real world, however, interventions will have effects on several health conditions. Even for one overriding problem such as infant mortality, the practical question is: Which **mix of interventions** is most appropriate? Cost-effectiveness criterion is not particularly useful in such situations. It can help to ensure each element of the intervention mix is effective, but rarely can it analyse the overall impact of several complementary interventions.

An analysis performed for the World Bank's 1993 *World Development Report* compared 47 health interventions based on their CE ratios (the ratio of unit cost of a DALY). While all of interventions were health or health-related, the report recognized that "for some [non-health] interventions (for example, family planning and girls schooling), the cost per DALY is sufficiently low to make them attractive on health grounds alone; other benefits [such as increased income and status later in life] only strengthen the case." This points to a potentially serious drawback to making decisions based on DALY and similar indicators. "If mother's education, or improving water supply and sanitation conditions, generate a bigger "bang for the buck", then the health budget should be redirected to the Ministry of Education, or of public utilities." (Anand and Hanson, 1997) This implication would be difficult for most health advocates to accept.

3.10 Using the criteria to set priorities

Priority-setting in health care is not usually applied to allocation of health resources (time and money) amongst other sectors. It is far more commonly applied to choices in allocating health resources within the health care system itself -- between different levels of care or types of services or geographic regions of a country. However, the basic *process* of priority setting is the same regardless of what is being prioritized: the importance attached to various activities by all relevant stakeholders -- government, the public and the poor in particular, private sector institutions and organizations -- must be reconciled. Rather than relying on political influence alone, the approach recommended is to provide all stakeholders with evidence on health needs and effectiveness of various interventions to ensure that their opinions are based on factual information. Clearly, priority setting will always be a political process. But, conflicts among stakeholders can be mediated by information and technical input about the actions most likely to achieve the intended outcomes, or those that are more effective in doing so. "At the very least, sound policy analysis places limits on the discretion of decision-makers who have to consider the costs of ignoring the available data." (Frenk, 1995)

5 *Data synthesis and presentation tips*

Several techniques can help to synthesize large and complex information for busy decision-makers. One approach involves showing each sector's impact on health in the "**balance sheet**" approach described previously, in order to display the relative degree of estimated harm and potential contribution to health of each sector. Another approach is to display the determinants of health in a type of "**visual health information profile**" which graphically shows the difference between current performance and agreed upon goals, for example, the current proportion of the population with access to safe water and sanitation versus the proportion established in as a national goal in a five-year plan. **Geographic Information System** (GIS) mapping tools may also be used, if sufficient information is available, to see how villages compare with respect to access to basic services, such as safe water sources, schools and health facilities, or proximity to industrial sources of pollution.

The planning or policy analysis unit of the Ministry of Health has an important role to play in gathering and analysing the information described earlier -- the causes of poverty, major morbidity and mortality among the poor, effects of other sectors on health status, effectiveness of various interventions in improving health status, and the development priorities within other sectors. Then, the challenge is to assemble and present this information in a manner that is clear and understandable to decision-makers. See Box 5. These and other tools are essential to help busy decision-makers synthesize large amounts of information, and quickly understand how activities they are asked to prioritize were identified.

All stakeholders that can contribute to poverty reduction and health improvement of the poor should be involved in reaching consensus on which criteria to use to make choices among

potential intersectoral activities. They can propose other criteria that might be added to those that will be used to make the choices, such as improved equity in access to economic opportunity. As a practical matter, the lack of country-specific "hard" data on disease burden or cost-effectiveness of various interventions in the poorest countries suggests that the criteria chosen will rely more on social and political values. But if regional information is available, it might be used to alert policy-makers to issues that would influence their decision if country-specific analyses were available.

The final step is to rate proposed intersectoral activities on the basis of the degree to which they meet the criteria that are chosen. This can be judged by an existing intersectoral committee of various ministries or a special advisory group that includes non-governmental representatives, or by using a Delphi technique[2]. Involvement of representatives from other ministries and from NGOs in selecting the criteria and rating the options against them not only enhances the transparency of the decision-making process, but builds political support for the actions that are subsequently chosen.

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[2] The Delphi technique is a decision-making method that seeks consensus through consultation with experts, when adequate hard data is lacking. Experts are given all relevant information and asked to make a choice. Their opinions are consolidated and relayed back to others in the group. Group members can then modify their decision on the basis of other members' opinions, until consensus is reached.

4. INTERSECTORAL ACTION FOR HEALTH -- CASE EXAMPLES

The most effective poverty reduction strategies include both labour-intensive economic growth and human development investments (Boer and Rooimans, 1994). While numerous countries' development plans reflect this fundamental lesson, it is less common to find projects that combine such approaches *within the same setting* where a coordinated strategy might have even more impact on the poorest populations. This section highlights poverty-reduction projects or policies that have had both a health component and at least one other component, from either economic growth or human development strategies. It features many projects that have demonstrated improved health status of the poor, or that have targeted the poorest groups, in order to have maximum impact.

Because of the wide range of development activities, this section discusses a selected set of sectors and their associated development activities. The five selected for this review were based on their significance to economic growth and to health status improvements as suggested in previous sections: 1) community and microenterprise economic development; 2) agriculture and food policies, 3) education policies, 4) macroeconomic policies, and 5) environment or infrastructure investments to improve the supply of safe water and basic sanitation. This selection does not imply that other sectors are unimportant, but rather that a limited number of areas could be covered here.

Common to all these strategies is the need to design programmes to reduce structural, cultural, and political barriers that often impede the poor from taking advantage of opportunities for economic, health, and social improvement. This implies that all poverty reduction efforts must strive to distribute benefits *equitably* based on communities most in need (Gunatilleke, 1995). Methods for identifying the poorest communities within districts or sub-regions of a country should be used to decide where to locate projects, as WHO's Division of Intensified Cooperation with Countries in Greatest Need has encouraged with health service programs in **Bangladesh** (WHO, 1997e, draft) and health insurance programs in **Vietnam** (Ron and Carrin, 1996). In addition, the reality of poor households must be taken into account by ensuring, for example, that they do not bear extra costs for transportation to programs. A related WHO-ICO document *Poverty and Health: Who Lives, Who Dies, Who Cares*? discusses these issues in more detail.

4.1 Microenterprise development and community economic development

Community and individual economic development activities encompass a range of programs that improve the income-generating capacity of the poor. Microenterprise development

focuses more on the individual, and includes financial services (credit schemes), training in marketing and accounting, and solidarity groups that serve purposes of providing loan collateral and social support (Rodriguez-Garcia, Macinko, and Waters, et. al., 1996). Community economic development, focuses more on the entire community be it a poor rural village or an urban slum neighborhood, and involves the creation of community-owned, cooperatively-managed enterprises that strive improve community welfare.

Microcredit and health. Incorporating health-directed activities into credit schemes can improve their health "capital" which strengthens the ability of creditors to repay loans, and increases their earnings potential. Some detractors challenge the notion of combining health or social services with credit/savings services by arguing that loan defaulters might be cut off from the health or social service program and its benefits. If they are not cut off, then it reduces incentives for loan repayment. A compromise may be a "piggyback" approach which allows a social or health organization to provide services to the existing networks of credit groups. Examples of such programs in the field include:

- The Grameen Bank in **Bangladesh**, which serves more than two million people (94% are women) provides loans to self-employed people, about half of whom "graduate" from poverty after 8 successive loans. The Bank offers emergency health loans, but because ill-health is the single largest cause of loan default, a pilot health program was developed in 1994-95 for both members and non-members in 7 areas. Operating like a prepaid health plan, the program charges $1.25 (USD) per year in advance for all family members to receive a range of health services. (Khairul Islam, 1996)

- Freedom from Hunger (a US-based NGO) developed a "Credit with Education" program that currently operates in 7 countries (**Bolivia, Burkina Faso, Ghana, Honduras, Mali, Thailand and Togo**). In most countries, the organization develops partnerships with financial institutions that provide credit to women in poor, rural areas. Field agents hold educational sessions on breastfeeding, infant and child feeding practices, diarrhoea prevention and management, family planning, and immunizations. The cost of the sessions is covered by the interest borrowers pay for their loans. Evaluations found that relative to comparison groups, women participants were more likely to practice a number of health/nutrition behaviors promoted by the program. Young children of participants had better diets than non-participants (MkNelly, 1996).

Community economic development and health. Some economic or industrial development projects have explicitly recognized that the health of people in the community is essential to the success of local development efforts. For example:

- The Population and Community Development Association (PDA), an NGO in **Thailand**,

has convinced more than 85 private companies to "adopt" rural villages by providing seed funds for industrial or agricultural projects (e.g. shoe factories, gem-polishing, gardening cooperatives) and training for community members in project management. These efforts are linked to health-related PDA activities such as community gardens, irrigation projects and environmental education programs. Because of the growing prevalence of HIV/AIDS infection, many of the projects now allow workers who become infected to do piecework at home so that they can continue to earn money. (Viravaidya and Sacks, 1997).

- The Gonosasthya Kendra (GK) health care system in Savar, near Dhaka, **Bangladesh** provides health care through a system of subcentres and a 70 bed referral hospital for about 165,000 persons. In addition, it runs vocational training programs for women and handicapped persons, and provides small loans to over 2,000 poor families.

4.2 Agriculture and food policy

Several types of agricultural policies have particular significance for poverty reduction and health: land reforms, irrigation and pesticide projects, food subsidies, and efforts to tie agricultural productivity to nutrition. Land reforms include land redistribution that gives the poor greater access to arable land, tenancy reform involving changes in the way land is leased or sold so as to make it easier for the poor to make payments and retain profits from crop surpluses, as well as land titling.

- Land reform has been cited as a major factor contributing to **Kerala State, India**'s impressive health and social indicators. In 1969, 1.5 million tenants received full title to the rice fields they worked, the household compound land, or both. Tenants who received rice paddies were able to produce about half of their families' basic food requirements. Land reform did not protect the poor from declining prices, nor did it give them access to capital to convert their land to more profitable uses. But, by removing the threat of eviction, tenants had more incentive to engage in political processes related to community development (Franke and Chasin, 1992) Slum dwellers in **Brazil** and **Lima, Peru** who were given land rights also showed greater participation in community efforts designed to improve neighborhood health and educational facilities (Harpham and Stephens, 1992, p. 115).[3]

[3] Land rights and allocation of land for various purposes involves various competing purposes: domestic and cash crops, forestry, industrial development, infrastructure, energy development, etc. These competing interests must be weighed against each other, as well as against the health and environment

Disease prevention measures have been incorporated into *irrigation schemes*. For instance, the Government of **Mexico**, fearing the effects of spreading cholera throughout Latin America, prohibited the use of sewage water for irrigating fruit and vegetables. As a result, the average number of diarrhoeal episodes among under-5 year olds decreased from 4.5 to 2.2 in the next two years. If not proper designed, irrigation schemes can increase the probability of schistosomiasis and malaria, indicating the need for health professionals to be involved in the design of water resources development.[4]

Food subsidies targeted to the poor can direct subsidies to those regions with the greatest concentration of the poor. They can also be pegged to a basic or rationed set of foods, take the form of food stamps in which vouchers for the poor can be cashed in for specific food items, or free food can be distributed directly to the poor through schools, health centers, etc. For example:

- A study conducted by **Indonesia**'s Directorate General of Community Health, in collaboration with the National Institute of Health Research and Development and Bogor Agriculture Institute showed that most school children in poor villages were suffering from insufficient caloric intake. The children often went without breakfast, affecting school performance. In 1996, the government has launched a national program to provide supplementary food for school children, focusing on poor villages.

Efforts to *tie agriculture productivity improvements to nutrition* include policies that a) encourage substitution for crops that harm health and b) ensure the production of safe and sufficient foods. For example:

- A WHO study in the early 1980s examined the interaction between changes in health status and development processes in countries with low per capita incomes, but high health and social indicators, e.g. **Sri Lanka** and **Costa Rica**. The agricultural policies that contributed most to improved nutritional status were those that increased productivity in the agricultural sector, those that encouraged diversification, those that increased access by the poor to credit, and those that promoted land equity . When incentives for production were combined with food subsidies, they produced steady increase in both agricultural output and nutritional status (WHO, 1986).

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impacts that result from reallocation and redistribution of land.

[4] See Hunter, J. et.al., 1993. *Parasitic Diseases in Water Resources Development: The Need for Intersectoral Negotiation,* WHO, for technical measures that can control malaria, schistosomiasis, and lymphatic filariasis in water development projects. It also proposes financing strategies and contains practical advise on how to negotiate effectively with other sectors.

4.3 Education policies

The equation is remarkably simple: greater education attainment translates into improved health status. Investment in the education of girls had a particularly high pay-off; girls who have some education are more likely to delay childbearing, have better pregnancy outcomes, have fewer children, and have more healthy children than those with less or no education. The World Bank found that in Africa, increasing literacy among women and girls by 10% could lower infant mortality by an equal proportion (World Bank, 1993). Three years of education (particularly for women) is associated with a 20-30% decline in the mortality of children under age 5 (World Bank, 1992b).

To complement these long-term strategies, education sector initiatives directly relating to health are quicker ways of influencing the health of the poor. School programs for health care, nutrition, the monitoring of health and immunization, health education at an early age, and the promotion of habits, attitudes and practices conducive to health, have formed parts of national strategies in many countries. School health programs include: teaching health education in the schools; providing health services and nutritional supplements in schools, especially those with higher concentrations of poor children; marketing health insurance through the schools as in **Vietnam** (Ron and Carrin, 1996), improving the health environment of the school (water, sanitation, minimizing exposure to harmful substances).

- **Egypt** has a comprehensive approach to school health, based on the belief that education is "the vehicle of preventive medicine". The Ministry of Education has the lead for a program that includes school nutrition, particularly in rural areas, regular medical check-ups for children, comprehensive health insurance for schoolchildren, healthy environments for schools, health education in the curriculum, and summer health clubs. (Bahaa El-Din, 1998).

- **Thailand's** success in reducing undernutrition was based largely on a coordinated strategy with the education system. Nutrition education and encouragement of breastfeeding were combined with food supplements. School lunch programmes were established in 5,000 schools and community education programs promoted home gardening, fruit trees, and fish ponds. Pre-school children were weighed and checked every three months. (UNDP, 1997) More recently, the Prime Minister required health and education ministries to institute a far-reaching AIDS education program.

4.4 Macroeconomic policies

Clearly, many aspects of macroeconomic policy and structural adjustment have an impact on health, but research on the effects of such policies (individually and in combination) has

produced inconsistent results. Some studies suggest that economic growth has provided the means by which social conditions and health status have improved. Others have found that standard structural adjustment program changes (e.g. reductions in public expenditures, price reforms, wage restraints, trade liberalization) have worsened many social problems and contributed to declining health status, particularly among the poor.

There are several reasons for these mixed results. Some macroeconomic changes have delayed effects; for example, clean water supplies and sanitary conditions do not deteriorate immediate following a recession and while food intake may decrease, nutritional status may decline more slowly (Carrin, Jancloes and Ajay, 1993). In addition, most studies to date do not show how macroeconomic policies affect the determinants of health status that are not within the health system (Anand and Chen, 1996). Thus, to fully understand the effects of macroeconomic policies on health, particularly that of poor populations, such studies must also consider how they affect determinants of health outside the health system.

- The creation of social emergency funds in several **Latin American** countries hints at the impact they can have. Such funds have helped to cushion the expected adverse effects of economic restructuring and have been used to fund a variety of social services, most of which have direct or indirect effects on health. These include education, sanitation and rural development programs, in addition to health care services. In **Bolivia,** social emergency funds supported the construction of sewers and provision of clean water to rural areas (Carrin, et. al., 1993).

- In **Malawi**, changes in agricultural policy -- specifically price liberalization -- led to higher food prices, which for most households caused a decrease in real incomes and a shift from food crops to cash crops. In addition, the government removed fertilizer subsidies, which caused a drop in agricultural productivity among smallholders. These changes led to decreased nutritional status (Ngalande-Banda, 1993).

4.5 Environmental and infrastructure projects to improve water and sanitation

A review of findings from 100 studies about the health impact of improvements in the quality or availability of water, or in disposal of human waste, found that improved water supplies (quality and quantity) and sanitation can have a 26% reduction in the incidence of diarrhoea, 28% reduction in the incidence of roundworm, 76% reduction in cases of guinea worm, and 73% reduction in cases of schistosomiasis (Esry, et. al., 1991). One study estimated that "well-designed projects combining water supply, excreta disposal, and hygiene education may achieve reductions of 35 to 50% in diarrhoeal morbidity" (Martines, et. al, 1993)

Comparing the two strategies, a recent study demonstrated that improvements in sanitation had a greater impact on reduction in diarrhoeal prevalence than improvements in water but that providing sufficient amounts of water for good hygiene may be just as or more important than providing good quality water (WHO, 1997b, p. 141). Good management and effective strategies are critical in ensuring that such improvements actually reach the poor.[5] Furthermore, several projects have demonstrated that installation of latrines and boreholes must be combined with education to promote the use of these facilities and relevant behaviors. In addition, such efforts are most effective when they are part of large-scale efforts to improve overall socioeconomic and environmental conditions of communities. For example:

- The township development program in **Myanmar** began over 20 years ago to construct sanitary latrines for each household, provide safer supply for tube wells for every village, ensure immunization and deliveries by trained health personnel, and prevent and control leprosy and plague. Sinking of tube wells increased irrigation capabilities as well, which resulted in increased agricultural productivity. Replacement of firewood by waste materials for domestic energy production improved the environment. (WHO, 1997a, Background Materials)

- The **city of Jakarta, Indonesia** undertook a poverty alleviation effort nearly 30 years ago that focused on upgrading of kampongs (shanty towns). Initially it replaced temporary dwellings and made improvements in roads, drainage, and water supply. As the program grew, it took on solid waste disposal, construction of sanitary facilities, promotion of horticulture, health training, and vocational and non-formal education.

- **WHO's Healthy Cities Programme** (and related Healthy Villages, Islands, and Markets) which operates in thousands of communities around the world seeks to include all development sectors and agencies at the community level, including local residents, in the planning and implementation of activities that improve the physical, social and economic environment. (See Tsouros, 1992, and WHO, 1996c, for a review of strategies and structures for integrated approaches to local health and development.)

Other infrastructure investments, especially in rural areas, may also have important health benefits. For example, rural electrification in **South Africa** has been one of several poverty alleviation projects of the new Government. In addition, it was expected to have important

[5] The Water Supply and Sanitation Collaborative Council, with representation from several UN agencies, serves as a resource to developing countries and external support agencies to accelerate provision of sustainable water supplies, and sanitation and waste management services, particularly to the poor.

health benefits: reduction of air pollution, of the number of house fires and burns to children, and cases of paraffin poisoning in homes that rely on this fuel. Research demonstrated that the health system alone would save more than US$200 million by avoiding the cost of treating respiratory illnesses, burns and poisoning (WHO, 1996a and von Schirnding, 1997) In many other countries, intersectoral action on a broad array of health-and-environment issues (not limited to water and sanitation) has been inspired by a UNDP-WHO initiative that helps governments integrate such considerations into national development plans. These efforts are reflected in the plans of **Jordan, Guatemala, Guinea-Bissau, Iran, Nepal** and the **Phillippines.**

5. INITIATING AND MAINTAINING INTERSECTORAL ACTION

Assuming that health policy-makers want to stimulate intersectoral actions and that they have identified the sectors they want to target, many challenges lie ahead of those who want to start intersectoral projects. "Often few or no mechanisms are available to enable health policy-makers to have a significant role in the national development policy-making process . . . [and as a result], problems that increasingly require multi-sectoral approaches do not receive adequate attention and are thus compounded." (Rodriguez-Garcia, et. al., 1994) The premise of this paper has been that the marshalling of information, and analysis of data on the health impacts of other sectors, will go a long way toward empowering health ministers to become involved in the design and implementation of development strategies and policies in other sectors. However, data alone is rarely enough to make a difference.

5.1 Prerequisites for intersectoral action

The ability of the health policy-makers to influence development policies of other sectors *for* health requires at least five critical prerequisites: 1) instilling the belief among health professionals in both the public and private sectors that a key strategy for improving the health of the poor is to work with other sectors on poverty reduction; 2) pressure from NGOs, private businesses, local governments, and international agencies to make health considerations more central to development policies aimed at the poor; 3) recognition among the general public that better health is an integral part of community development; 4) commitment to ensuring that the poor are involved in intersectoral decision-making and implementation; and 5) having or developing the technical capacity to advise other sectors about modifications to their activities that would improve health and reduce poverty more effectively. The last is particularly important since "setting priorities on paper, when the capacity to implement them is weak, is clearly a futile planning exercise." (Bobadilla, 1996) If the analytic capacity does not exist with a Ministry of Health, linkages with research centers can help fill the gap. Responsibility for acting on their findings and bringing stakeholders together to set priorities, however, remains with the government.

5.2 When to initiate intersectoral action for health ?

In considering when to restructure or reorient health policies to incorporate intersectoral action and poverty reduction, *timing* can be critical. In some countries that have recently undergone profound political change or civil war, the founding of a new government or the

aftermath of civil war may create new opportunities to take a new approach to health planning and policy making that strongly incorporates poverty reduction and intersectoral action. **Mozambique** is an example of a country that used its post-war reconstruction efforts as a starting point for reexamining national health policy (Noormahomed and Segall, 1994). Most countries, however, will have to take a more incremental approach to changing the way they look at health policy's contribution to poverty reduction. A new overall development plan (not just a health plan) may present a good opportunity to re-examine how the health system can contribute to a country's overall development goals, and in turn, how the goals and projects proposed for overall development will impact or contribute to health. The adoption of policies at international organizations and meetings, including WHO's recent global health policy, may provide another impetus for reexamination of health priorities within a country.

5.3 How to initiate and plan intersectoral action

Part 4 of this paper suggests an approach for assessing opportunities to improve health *through* poverty reduction efforts, and for selecting priorities among potential projects with all relevant stakeholders. Once priorities are established through that process, the development of strategy and implementation plans requires that structures and processes be established for creating long-term partnerships. As in considering the problems and setting the priorities, all relevant stakeholders must be involved in such partnerships to define their respective roles and responsibilities. Clear and measurable objectives must be set, implementation plans developed, budgets and staff allocated, and technical assistance obtained if necessary to put plans into action. Monitoring, evaluation and feedback are important to refine approaches and overcome new obstacles that arise. Lessons from intersectoral experience for each of these steps are described elsewhere (WHO, 1997d).

5.4 Implementing and maintaining intersectoral action

Maintaining the momentum of intersectoral action requires above all political commitment and leadership. Often, a single highly visible and powerful leader's commitment has been the decisive factor in intersectoral action's success. But when specific intersectoral activities are large in scope, or have long-term time frames for implementation, it is better to set in motion a mutually reinforcing approach that uses more broad-based bottom-up and top-down planning and decision-making structures (WHO, 1997d). The result of a bottom-up process that identifies intersectoral threats and opportunities at the local level might be used to develop a national strategy or action plan, while a top-down approach might set forth the national strategy that provides the impetus and structure for regional or local intersectoral activities. In **Guinea-**

Bissau, for example, efforts by WHO to strengthen district-level management led to elaboration of a national health plan based on regional priorities (ICO, 1996).

The advantage of carrying out both approaches simultaneously is that national strategies will reflect greater input and involvement from people at the local level, while local actions will can be coordinated to achieve greater overall effect than if they were conducted in a vacuum. Such approaches also build broader public support, political constituencies, and bases of experience that each level can use to help each other in carrying out agreed upon actions and priorities.

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