INTERSECTORAL ACTION FOR HEALTH

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MARGA INSTITUTE
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This paper is a summarised presentation of the contents of the very comprehensive World Health Organisation background document "The role of Intersectoral Cooperation in National Strategies for Health for All" prepared for the technical discussions of the Thirty-ninth World Assembly, 1986. As such, it does not embody new thinking on intersectoral collaboration but endeavours to draw attention to vast areas in which conscious intersectoral cooperation for health lies unexploited or tapped only at their peripheries. It also points out that action has generally tended to be remedial and hence costly, whereas health problems should be anticipated and met by preventive means.
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1. Introduction

Historically, health planning has been perceived as a more or less self-contained exercise within the health sector, carried out principally by health professionals, in relative isolation from other development sectors. This isolation has been reinforced by the tendency of other sectors to perceive health mainly in terms of medical services and their output. This outlook tends to push health strategy basically towards a curative approach even though it is evident that much of the disease and ill-health which is prevalent can be prevented if the health sector acts together with other sectors to remove some of the conditions which produce ill-health. With the approach to health problems remaining principally curative, other development sectors, generally regard intersectoral collaboration for raising health levels of communities as a diversion of time and limited resources from their own sectoral priorities. In this situation, health services tend not only to be more costly in terms of resources but its impact on community health is rendered less effective.

With the Alma Ata Conference and the Global Strategy for Health, there has been a fundamental change in the approach to health which has given much greater emphasis to the multi-sectoral character of health development. In response to these initiatives, both the WHO and member states have sought to develop more integrated health policies and programmes embodying the primary health care approach and to design institutional mechanisms and administrative structures better suited to promote health related intersectoral efforts.

It cannot, however, be said that the new strategy has as yet led to a comprehensive intersectoral approach which adequately takes into account the impact which sectors other than health are continuously making on the well-being of communities - an approach which enables the health sector to collaborate with these sectors to shape and influence their health related components towards a positive outcome in health. There are several reasons why health strategies have not advanced far in this direction. Among them are the following:
i. As stated earlier, health planning has continued to be carried out in relative isolation from other sectors;

ii. Other sectors have been slow to incorporate health goals as part of their own sectoral goals and to articulate clearly the health-related components in their policies and programmes;

iii. The development planning system normally organises development activities vertically in sectors neglecting horizontal linkages with major impacts on development; this requires significant changes in the processes of development planning, resources allocation and budgetary procedures. This is often made difficult because of the lack of national mechanisms for intersectoral coordination and action for health;

iv. Insufficient appreciation of the fact that articulating the health related policy component of health-related sector activities is a collective task in which the relevant sectors must work closely together with the health sector in the leadership role;

v. Intersectoral cooperation has often failed to go beyond what has been typical of current efforts where the health sector seeks inputs from other sectors into its own health care programmes and services; the new effort calls on the health sector to move out and collaborate with other sectors in incorporating health goals and health criteria into strategies, policies and programmes of these other sectors;

vi. The failure to find feasible solutions that reconcile health goals with other sectoral goals where these are in conflict; in such instances, decisions must be taken with the full knowledge of the trade-offs between health and other goals and with the compensatory actions which might be needed clearly stated.

2. Concepts of health

The country's capacity to promote intersectoral action for health will depend vitally on the basic concepts of health which underlie the national health strategy. The chart below sets out in broad terms the main concepts as they have been defined in many of the discussions on health development. Each of these can give a particular emphasis. Each focuses on a given set of priorities in health care. These objectives can compete
with each other in a health strategy where one approach becomes predominant and neglects the role and place of the other. In a well-designed health strategy they must become complementary and reinforce each other. The International Conference on Primary Health Care at Alma Ata, and the Global Strategy for Health for All, launched by the WHO General Assembly in 1979, reordered the priorities as between these different components, and moved from a perspective of health, which was disease-oriented and curative to one which emphasized the prevention of ill-health, the removal of health risks and the promotion of health. The chart which follows presents some of the broad relationships between health concepts, the health strategies that are implicit in the concepts, and the intersectoral linkages relevant to each.

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<td>Medical: Therapeutic intervention at time of disease</td>
<td>- Pharmaceutical industry</td>
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<td>B. Prevention and control of disease and ill-health</td>
<td>Public Health: Separating and protecting the community and individual from sources of infection and carriers of disease</td>
<td>- bio-medical research</td>
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<td>C. Promotion of health and capacity to realise full physical and mental potential</td>
<td>Developmental: Improving health-related living conditions and promoting health development as an integral part of social and economic development</td>
<td>- manpower development</td>
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<tr>
<td></td>
<td></td>
<td>- the utilities needed for health services – power, water supply, buildings, transport</td>
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<td></td>
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<td>Linkages specific to disease:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- water</td>
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<tr>
<td></td>
<td></td>
<td>- sanitation</td>
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<td></td>
<td></td>
<td>- nutrition</td>
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<td>- health education</td>
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<td></td>
<td>- housing</td>
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<tr>
<td></td>
<td></td>
<td>Linkages with health development and other processes of development which raise incomes and reduce poverty, improve educational levels, increase food availability, and enhance the quality of the physical environment. Development processes can also have a negative impact on all these.</td>
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Linkages in A and B are already part of intersectoral action for health; however, linkages in C have yet to be incorporated effectively in health strategies.

The reason for the failure to develop effective interrelationship with other sectors with health-related activities may be in the nature of the intersectoral linkage in health. Any socio-economic sector producing goods and services has a vast range of exchanges and links with other sectors. In most commodity producing sectors and those providing physical infrastructure, such as transport, energy and communications, these links are quantified in terms of supply and demand and inputs and outputs. The intersectoral linkages are thereafter incorporated into their plans and programmes from the outset. Not so with the health sector; the curative component to some extent lends itself to qualification in terms of inputs and outputs, and the intersectoral linkages related to physical infrastructure, equipment, drugs and manpower can be specifically defined and identified. But as the health strategy moves from the curative component to the prevention of ill-health, and more particularly to the maintenance and promotion of health as well as capacity to resist disease, the factors which can interact to influence the outcome in health are to be found in all major sectors contributing to socio-economic development. These factors often contribute more to health or ill-health than the factors which are immediately within the control of the health sector.

When this is realised, health planners would need to identify clearly the intersectoral linkages and design the total health strategy in order to ensure that health related actions of other sectors contribute to the promotion of health and prevention of ill-health. Intersectoral action for health then becomes a means of mobilising all the available resources in the system which have relevance for health in order to improve the health status of the population. As a result it is possible to obtain the best outcome in health at the lowest cost. This means that both the manpower available outside the health sector as well as other resources are so coordinated and organised that while they are engaged in their own sectoral activities they automatically contribute to the health outcome.
3. Health in transition

In formulating strategies for bringing about a transition in health, intersectoral linkages have to be seen and managed in a dynamic situation. Historically, it is clear that the health situation changes with different levels of development and income in a country. This is evident when we examine the global disparities of health across countries and relate them to income levels. At the same time what is of great relevance to health policy makers and planners is the evidence that the correlation between good health and low income is not inevitable. Given the broad profiles of disease in relation to different levels in development, there have been singular exceptions which are of vital importance to health strategies. Set out below are the main characteristics of development related to disease and health strategies -

<table>
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<th>Development characteristics</th>
<th>Disease profile</th>
<th>Characteristics of health care</th>
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<tr>
<td>1. - Poverty</td>
<td></td>
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<tr>
<td>- Low income</td>
<td>Communicable diseases of micro-biological origin are the major causes of morbidity and mortality</td>
<td>infant and child groups are the most affected the key role of the mother, family, household.</td>
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<tr>
<td>- Under nutrition</td>
<td></td>
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<tr>
<td>- Low educational level</td>
<td></td>
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<tr>
<td>- Poor housing</td>
<td></td>
<td></td>
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<tr>
<td>- Poor sanitation</td>
<td></td>
<td></td>
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<tr>
<td>- Predominantly rural and agricultural</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. - Affluence/high income</td>
<td>Non-communicable diseases which originate from diet, addictions, life styles, micro-chemical causes and degenerative processes</td>
<td>The adult and aging are mainly affected the key role of workplace, school, social institutions.</td>
</tr>
<tr>
<td>- High levels of nutrition (over nutrition)</td>
<td></td>
<td></td>
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<tr>
<td>- High educational levels</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Well developed civic infrastructure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Predominantly urban</td>
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</tbody>
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In the transition from stage 1 to stage 2 in the developed countries, it is now widely accepted that delivery of health and medical care played a limited role. The major improvements in the environment, the advances in water and sanitation, the rising levels of education and other basic socio-economic changes were much more important in producing the transition.

What however of great significance is that many developing countries who are in terms of income, categorised among the lowest income countries have already succeeded in lowering mortality. Examples are China, Sri Lanka and the State of Kerala in India. They demonstrate the importance
of the interaction of wide-ranging developments in sectors other than health. At the low level of income in these countries, strategies which have been directed at satisfying the basic needs of the population in relation to food, housing, education and health-related infrastructure have combined with an equity-oriented health service to produce remarkable improvements in the health status. These countries did not have to go through the major urban industrial transformation which developed countries went through prior to the health transition but they combined a number of basic elements of an intersectoral strategy such as food, nutrition, education, sanitation, water and health. They are, therefore, useful examples of intersectoral action in given levels of development.

**China, Kerala, Sri Lanka - the interaction of health and development**

In all these cases there was a strong commitment to the goals of equity and concerted efforts at ameliorating the conditions of the disadvantaged and poorer social groups. In all important sectors, the development strategies contained elements for realising these goals.

The state and public agencies assumed an important role in meeting the basic needs of the people. In China, this was the norm, while in Sri Lanka and Kerala the supply and distribution of certain goods and services essential to basic needs, occupied a central place in public policy and was not left to market forces.

Development policies avoided the urban biases common to the strategies of most developing countries in the early phases of their planning. Consequently, resources for the social and economic infrastructure and investments in development were more equitably distributed. The differences in living conditions between rural and urban areas were not worsened by development. Civic amenities spread to rural areas. Sri Lanka, for example, was able to maintain a rural-urban balance containing internal migration to urban areas.

The political processes were designed to articulate demands at the community level and to respond to them. In China this was achieved with its structures of decentralised decision-making through the communes and lower units. In Sri Lanka and Kerala a highly competitive democratic parliamentary system helped to give forceful expression to community needs and elicit responses from the state.

In economic development programmes, strategies for raising productivity and income in backward parts of the economy, which contained the poor majority, receive priority. Examples are:

- diversification of the rural economy;
- the increase of productivity and output in agriculture and fisheries;
- energy;
- small-scale industry in China;
- the drive for food self-sufficiency through programmes for the improvement of peasant farming and small-scale fisheries in Sri Lanka.

In all these examples high priority was given to education. The strategies which were pursued brought education within reach of the whole school-going population through a school system which heavily subsidised education or provided it free. Here again, policies aimed at the equitable distribution of facilities to provide the rural population with access to education. In all cases there was a very high level of female participation in the school system.

The improvement in the status of women and the removal of forms of discrimination against females, as in the case of education, played an important role in enhancing the capacity of the population as a whole for social advancement.

Food security for all segments of the population became an essential objective of public policy. Different policy instruments were used in each case and ranged from state management in the trade in staple foods (China and Sri Lanka), free food supplements for target groups (Sri Lanka), to land reform to provide scope for food production in small allotments (Kerala).

4. National Development Strategies

What has been demonstrated in the case of China, Sri Lanka and the state of Kerala, is that a health strategy to be effective must form part of a total national development strategy in which all sectors give prime importance to the well-being of the people which includes their health. The national development strategy will have multiple impact on health, both positive and negative. Health policy-makers and planners should have the capacity to identify at least the major health-related components of a development strategy and to play an effective role in shaping these strategies towards health promotive goals. The chart below endeavours to depict broadly the relationship between national development strategies and health.
Impact of National Development Strategies & Sectoral Strategies in health

1. National development strategies and Macro-economic policies have an impact on health.

- Main characteristics & goals
  - Is the strategy growth-oriented neglecting distribution and reduction of poverty?
  - Is it export-oriented with possible adverse impact on production for domestic market, food, essential goods?
  - Does it have an urban bias with high priority for industrialisation that can increase urban poverty, rural to urban migration and neglect the rural poor?
  - What is the mix of market and state in the strategies - the relative priority of public services and welfare systems and state's responsibility for services such as health, education?
  - Is it equity-oriented and directed at satisfying basic needs, raising incomes & quality of life of the poor?

2. These are reflected in sectoral development goals which have impact on health.

<table>
<thead>
<tr>
<th>Agriculture</th>
<th>Habitat</th>
<th>Industry &amp; Technology</th>
<th>Education, culture &amp; Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food availability; Production policies &amp; cropping; Pricing</td>
<td>Water; Sanitation; Quality of environment; Housing</td>
<td>Environmental hazards; Occupational risks; Food Technology</td>
<td>Education; Media; Changes affecting values and lifestyles</td>
</tr>
</tbody>
</table>

Changes and developments in each of the clusters above have varying health impacts on population according to social class, age, genders, occupation, geographical location. This interaction leads to -

National Health Outcome and is best reflected in the health status of vulnerable groups.
5. **Main elements of intersectoral strategies**

In each country situation it is necessary to identify the main elements of the intersectoral strategy for health which will depend on the specific development characteristics and the health situation of that country. In identifying these elements, attention would have to be paid to five major issues which are critical for planning intersectoral action -

(i) What is the stage at which a particular country is in regard to the transition of health?

(ii) At the **national** and **sectoral** level, what are the health-related policy components of other sectors which require highest priority?

(iii) At the **project level**, the health impact analysis of all major projects need to be a regular feature of planning and implementation in all sectors;

(iv) At the **local level**, the health component must be incorporated in integrated development projects which are formulated and implemented at this level;

(v) Identification of the disadvantaged or vulnerable groups whose health status will be one of the most revealing indicators of the capacity of this total system to achieve the goals of health for all.
(i) The sequence in health development

At different levels of health development it is possible to identify the different combinations of socio-economic factors which play a decisive role in the improvement of the health status. The United Republic of Tanzania offers another example of an equity-oriented health strategy. Among the poorest African countries, with a per capita income of US $ 230/=, it has the third lowest infant mortality rate for sub-Saharan Africa. It has progressed to the threshold where the impact of literacy and equity-oriented development in rural areas can combine with the health strategy based on primary health care to attain a health status equal to Kerala, Sri Lanka and China. During the last two decades, it has been able to reduce infant mortality by 30 per cent. The country’s approach to health formed an integral part of a development strategy emphasising self-reliance and equity.

China, Kerala and Sri Lanka, on the other hand, have advanced beyond this stage into another health situation. In their cases, the development processes stressing satisfaction of basic needs of the population as a whole have led to an interaction of social and economic improvements and a dramatic reduction of mortality. But at the same time, where data on quality of life are readily available, these cases indicate that despite remarkable success in lowering mortality, high levels of morbidity and malnutrition persist. These problems appear to derive partly from the low level of income and resources, which an equity-oriented strategy by itself will not be able to overcome unless at the same time it is capable of generating rapid growth and further increasing the purchasing power of the poor. The experience in these cases demonstrates the complexity of the health problems of poor countries; while dealing with the urgent problems of survival in situations of high mortality, the development strategy and the health strategy within it will need to grapple constantly with the post-survival problems related to the quality of life.

Costa Rica, Jamaica and Cuba are three countries in the middle income range with per capita incomes between US $ 1,020/= and US $ 1,300/= which have achieved a health status above other countries at their income levels. Costa Rica, with the advantage of a higher
level of resources and well-being, was able to advance further. By the beginning of the 1970s, the cumulative impact of social improvement in Costa Rica produced conditions favourable to another dramatic improvement in the nation's health status. Costa Rica exploited this situation effectively and reaped even more health benefits from its equity-oriented strategies. While achieving a remarkable reduction in mortality and increase in life expectancy within the time-span of a decade, it reduced malnutrition to relatively negligible levels and provided its people with the opportunity for a healthy life.

The Costa Rican example helps to place health initiatives among important developments in health-related sectors that precede and prepare the ground for health initiatives, or act concurrently, meeting in the common objective of improving social well-being, as in Thailand. One remarkable feature of Costa Rica throws fresh light on the nutrition/health relationship. Studies revealed that nutrient consumption improved only slightly between 1966 and 1978 in rural households, and declined per household in the urban sector. Nevertheless, mortality declined dramatically and nutritional status and health continued to improve. Other factors such as the control of infection through education, hygienic practices, primary care, community organisation, and increased knowledge of food and nutrition, evidently contributed significantly to this phenomenon. Resistance to disease also meant more efficient nutritional absorption.

Further comparative studies of the health development experience of these countries at three different stages, which in many ways appear to be sequential, could yield insights for policy-makers. Such insight could provide guidance regarding the mix of priorities and policies that lead to the optimal health outcome in different development situations.

(ii) Tentative check lists for health-related policy components of other sectors

It would be possible on the basis of the knowledge that is now available, to develop basic policy criteria for the evaluation of macro-economic policies and the policies of 'non-health' sectors in relation to the goals of health. The health policy-makers and
health workers could collaborate with development planners to evaluate and define the macro-social, macro-economic and sectoral policy-mix conforming to health-related criteria. This can be done at the national, sectoral and micro-levels.

(a) **Agriculture and health**

The health-related elements in agricultural policies and programmes will have to be uncovered and identified in the following issues and questions:

**Product mix**

- What is the relative priority given to the production of staple food items, on the one hand, and non-food commodities, on the other?

- What are the priorities as among more expensive high quality products rich in nutrients which are beyond the purchasing power of the poor and low-priced high calories foods? (e.g. the poor get their proteins (usually adequately) from affordable cereals and pulses rather than costly animal products).

- Is the focus on high yielding varieties or on robust products more acclimatised to local conditions with lower costs?

- How is cash-cropping with its possible capacity for generating employment and improving incomes, but with probably adverse impacts on nutrition of the most vulnerable groups balanced with traditional farming for food production?

- What production policies are followed in relation to cropping issues revolving around seasonal considerations, dependent on storability and credit markets?

- What production policies are followed in relation to cropping issues revolving around seasonal consideration, dependent on storability credit and markets?

- To what extent does agricultural policy neglect traditional crops (local roots, beansprouts, melons, banana, non-staple gathered foods), thus reducing energy for the rural poor, particularly during pre-harvest seasons, in times of drought and famine and in the home gardens of the urban poor and plantation workers?
- To what extent do cheap staples drive out foods richer in nutrients, such as root crops replacing high protein cereals and pulses?
- Are home garden programmes encouraged to provide complementary nutrients in such instances?
- Is there awareness of health risks from dangerous products (e.g., tobacco) and are there efforts to deal with them?
- Are farmers of harmful crops, such as tobacco and narcotics, provided with other equally income yielding crops or alternate employment to enable regulatory interventions to be effective?
- To what extent does concerted action through public policies, propaganda, information and education, meaningfully endeavour to protect health by reducing the demand for them?

**Investment in agriculture**

- To what extent is investment at national level concentrated in areas where returns are highest at the expense of areas where the need is greatest?

**Pricing and food security**

- How do agricultural pricing policies take account of food and nutrition issues, specifically in regard to food prices? What is the impact of guaranteed prices and food subsidies on conditions and incentives relating to food production, on the one hand, and to food consumption and food security, on the other?

**Land ownership and tenure**

- What are the agricultural policies aimed at improving the access of poor farmers and landless to land and other productive resources?

**Technology**

- How are technological changes affecting labour, employment and use of human energy, particularly the women?
- What are the policy initiatives and safeguards adopted in regard to the health hazards of agro-chemicals, pesticides, etc.?
- Is scientific research directed at problems which can improve conditions of the poor farmers, e.g., variety improvements and crop mixes, to deal with problems of seasonal fluctuations, drought, flood, etc.?

(b) Issues relating to education and culture

The summary given below contains some of the main health-related issues in education and culture.

Formal education

- How far is primary education, at the very least, accessible to the population, especially to those segments of the rural poor living in isolated communities and in urban slums and shanty towns?

- To what extent do school curricula disseminate basic health education to the young, especially in such areas as personal hygiene and inculcation of sanitary and preventive health habits relating to the spread of common contagious diseases?

- As the education level of females is a decisive factor in health improvement, how far has health and education, as prime movers in a broader intersectoral programme, collaborated in promoting female literacy and female participation in education?

Non-formal education and functional literacy

- As universal formal education is a relatively long-term goal, in generally poor situations of female literacy, has sufficient effort been directed towards imparting functional literacy and non-formal education which includes health in the concrete life situations of illiterate women—efficiency of household and resource management in conditions of scarcity, lack of skills in family care, nutrition and diet in conditions of poverty, importance of child education, child immunisation and family planning?
School and health improvement

- Do collaborative health and education programmes make full use of the school as a centre for providing health care for the young and educating the young to healthy living in a planned policy designed to make the school a focal point for community health?

- To what extent have teachers been trained to participate in school health programmes with health authorities, to influence health behaviour, to monitor children's health in the classroom, recognise common diseases and deal with them, to detect physical disabilities and mental disturbances and alert the health authorities?

- To what extent have the health services, the education authorities and school principals, headmasters, teachers and students combined in making school buildings, their maintenance and their precincts a model for health which will serve as an example for the wider community for the well-being of their children.

Higher learning institutions and health

- Are health professionals being reoriented to be health educators as well?

- Have teaching professionals an understanding of the interaction of different sectors in achieving health goals so that these will possess the ability to promote interdisciplinary knowledge of health?

- Is the student population being taught to cope with the health risks in their vulnerable adult years?

- To what extent do these institutions provide health leadership and participation in health-related programmes which require motivation of the public?

Culture and health

- To what extent does health and education endeavour to wean the population away from cultural factors harmful to health and resistant to health care and health promotion?
- What is the extent of the effort made through intersectoral collaboration to alleviate the harmful effects on health through changing life-styles, patterns of consumption and addictions, acquired during and after industrialisation?

(c) Issues relating to the environment

Among the more important issues are the following:

Water supply and sanitation

- To what extent has health information and education been incorporated as an essential component of water and sanitation programmes so as to ensure close community involvement from the planning stage onwards and motivating behavioural changes through enhanced knowledge and skills in the proper usage and effective maintenance of the facilities provided?

- In large irrigation projects, to what extent has intersectoral planning in the early stages been undertaken to offset causing serious disturbances to the ecosystem involving parasitic and infectious disease cycles and long-term damage to the health of the population in project areas?

- To what extent have efforts been made by the health services in collaboration with other sectors to control the cumulative effects of pollution and a high rate of disease transmission as well as suffering from poor maintenance and problems of seepage which favours the proliferation of disease vectors?

- To what extent have efforts been directed intersectorally to control health hazards that exist outside development programmes and projects such as hazards relating to national waterways (e.g., the Ganges) and localities such as swamps, which are known to be caused by the cumulative effect of demographic and socio-economic changes in the entire region?

Housing

- In improving the quality of housing what is the extent of attention paid to eliminate health hazards through vector borne diseases, diarrhoeal diseases, respiratory infectious and communicable diseases?
- To what extent have policy changes and reorientation been undertaken to—
  
i) provide advice on meeting health and safety standards?
  
ii) make it obligatory for local and municipal authorities to be receptive to problems, especially of the poor, and to ensure the close involvement of these institutions in housing development?
  
(iii) revise public health laws and standards so as to be relevant to contemporary standards and within reach of the poor?
  
(iv) grant legal rights of tenure in some form to squatters?
  
v) revise building codes appropriate to the very limited resources of the poor?

- To what extent have intersectoral linkages in improving physical infrastructure taken into account the radical transformation taking place in the human habitat including shifts in the geographical distribution of population as a result of development?

Urbanisation

- To what extent is there a movement away from development strategies which favour industrial and commercial complexes in and around large cities and in locations where middle and upper income groups usually reside? And, how far is development being equity-oriented by being taken to where people are, rather than adopting processes which draw people to urban centres?

Industrialisation

- Has action been taken by the health sector in association with other concerned sectors such as for labour, environment problems, industries and social services to eliminate or minimise occupational hazards among workers?
  
- To what extent have meaningful measures been taken by the health sector in collaboration with these other sectors to protect communities who, due to industrial activity in their midst, live in a disadvantaged socio-economic environment with special attention being paid to groups at greater risks than others, as, for instance, women and children?
- Have measures been taken and with what degree of success against conditions of worsening pollution which pose serious health hazards resulting from policies for attracting foreign enterprise with minimum controls and the import of technologies far in advance of the technical know-how and scientific infrastructure of the host country and the ability to neutralise or otherwise render harmless pollutive waste and industrial effluents dumped indiscriminately into waterways and agricultural land?

- Has attention been paid by the health and agricultural sectors to the health hazards resulting from the widespread use in agriculture of toxic chemicals and pesticides which, though improving overall agricultural production, can be highly costly to human health in respect of consumers as well as agricultural operators?

- How far has the health sector succeeded in approaching through national legislation and continuous monitoring as well as collaboration with other sectors concerned in the food safety problem arising from the indiscriminate use of such substances such as hormones and other additives to fatten farm animals and poultry for increasing profits at the expense of human health?

- Has sufficient attention been paid by the health sector in collaboration with agencies responsible for controlling industrial production, to promote national policies which provide for adequate systems and safeguards and surveillance for greater security against errors or failures in systems of control of industrial plants which could result in catastrophic consequences; e.g., Bhopal?

The 'check lists' are by no means comprehensive or exhaustive, they illustrate the type of issues that need to be considered when identifying the health-related policy component in other sectors. The emphasis, the combination of problems, and the relative priorities will, of course, vary with each country situation. The task of formulating the health-policy components in other sectors will require close collaborative work between health planners and planners in other sector. The necessary analytical skills will have to be acquired through programmes of orientation and training and well-designed workshops which can impart the required interdisciplinary knowledge.
(iii) **Health Impact Analysis**

The continuing and cumulative impact which some large-scale projects have on health requires interventions of another nature, in which the health sector has to be actively involved. Large-scale water development projects, whether to provide irrigation or hydro-electric power, can benefit the overall population while causing a series of ecosystem disturbances involving parasitic and infectious disease transmission cycles, and result in serious long-term damage to the health of the population in the vicinity of the project. A notorious example is the spread of schistosomiasis, as shown in the table on page 20.

But this need not be so. It is possible through appropriate intersectoral planning in the early stages to introduce effective control measures and minimise the damages to human health.

Large water projects also give rise to a host of other health problems such as work accidents, malnutrition and other diseases of poverty among the displaced population, and an upsurge of malaria among the unplanned colonies of people who grow up around such projects.

While the health hazards grow with large schemes, the cumulative effects of small-scale projects are also significant. In rural areas the construction of small dams, ponds and impoundments is often widespread. Since such water sources must be used for many purposes, such as fishing, drinking water for humans and animals, irrigation and flood control, there is often a high degree of water contact by humans and animals, with a correspondingly high rate of disease transmission. Many small impoundments are constructed as a result of local initiative and suffer from poor maintenance and problems such as seepage, favouring the proliferation of important disease vectors.

Little attention has been paid in the past to these health effects of development projects. Most of the action taken has been remedial, after the projects have had their negative health effect, although methodologies for the appraisal of water projects in relation to their environmental and health impact are available.

It is necessary to identify and track down the health consequences of these projects at the planning and design stage. Both international agencies financing such projects and national planning authorities in developing countries need to make such impact analysis an essential
part of project appraisal and approval. The health sector has to participate in these and, where the health effects are likely to be negative, help in providing feasible alternative solutions. Such a system should also provide early warning of emerging health hazards.

**Examples of increased prevalence of schistosomiasis resulting from water resource development projects**

<table>
<thead>
<tr>
<th>Project</th>
<th>Pre-Project prevalence (%)</th>
<th>Post-Project prevalence (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Egypt Aswan Dam (1st) (1900)</td>
<td>6%</td>
<td>6% (3 years later)</td>
</tr>
<tr>
<td>Sudan Gezira Scheme (1925)</td>
<td>0%</td>
<td>30–60% /15 years later</td>
</tr>
<tr>
<td>United Republic Arusha Chini of Tanzania (1937)</td>
<td>low</td>
<td>53–86% (30 years later)</td>
</tr>
<tr>
<td>Zambia and Zimbabwe Lake Kariba (1958)</td>
<td>0%</td>
<td>16% adults, 69% children (10 years later)</td>
</tr>
<tr>
<td>Islamic Republic of Iran Dez pilot irrigation project (1965)</td>
<td>15%</td>
<td>27% (years later)</td>
</tr>
<tr>
<td>Ghana Volta Lake (1966)</td>
<td>low</td>
<td>90% (2 years later)</td>
</tr>
<tr>
<td>Nigeria Lake Kainji (1969)</td>
<td>low</td>
<td>31% (1 year later), 45% (2 years later)</td>
</tr>
</tbody>
</table>


(v) **Community Development and intersectoral action**

Most developing countries have adopted programmes of integrated rural development which provide considerable scope for incorporation of health and for mobilisation of intersectoral action for achievement of health goals. Any strategy of intersectoral action for health should therefore give high priority to this component. An illustration of effective integration of health into socio-economic development at the local level is available in many developing countries which have incorporated equity-oriented strategies. These provide useful guidelines for adapting the experience of countries and areas such as China, Sri Lanka and Kerala.
Thailand's "basic minimum needs" strategy illustrates health goals are incorporated in a larger social development strategy which reaches down to the community level to improve the quality of life of the less advantaged. It attempts to correct the imbalance in past development policies that have emphasised growth and neglected equity. Given a per capita income higher than that of Sri Lanka or China, but comparable rates of male and female literacy, the decisive factor for a major improvement in health in Thailand would be equitable distribution of income and health-related sources.

**Thailand - incorporating health improvements in social development**

Thailand, which is in the "lower middle income category" (as defined by the World Bank), had an estimated infant mortality rate of 50 per thousand in 1983 and a life expectancy of 63 years. It had enjoyed an uninterrupted period of economic experience during the previous 20 years, sustaining an annual average rate of growth between 7% and 8%. National planners, however, noted that "the social gap between the rich and the poor has been increasing" and that "social services such as health and education" have not been developed appropriately and sufficiently "to reach the low income population, especially in the rural areas".

The regional disparities in income and living conditions have continued to remain high. Between 1960 and 1980, the disparity between the poorest region, the northeast, and the richest, the central region, has widened. In 1979, the per capita income in the northeast was 40% of the national average and approximately one-sixth of that of the central region. The main pockets of poverty are in the northeast and north, where the proportions of the population below the poverty line have been estimated at 52% and 23% respectively.

The Prime Minister's office organised the Rural Poverty Education Programme in 37 provinces throughout the country assigning to four key ministers (agriculture and cooperatives, education, health, interior) the joint responsibility for formulating and executing the programme under the overall coordination of the National Economic and Social Development Board (NESDB). A key
strategy in the programme was job creation for the rural poor to narrow income disparity. At this juncture the NESDB established the Social Development Project to support the Rural Poverty Education Programme in problem identification, operational planning and management at the village, sub-district and district levels. The Social Development Project formulated basic minimum needs and their indicators and elaborated methods for their use as tools for identifying gaps and proposing priority activities at the village level. The Programme was not initially incorporated in the National Social and Economic Development Plan.

When the Fifth National Social and Economic Development Plan was formulated, the Rural Poverty Education Programme was incorporated and renamed the Rural Development Programme, the formulation of which was based on experience gained in the application of the basic minimum needs, mentioned above. Examples are "hygienic nutrition to meet physical needs", "adequate shelter and environmental conditions" and "development of pre-school children". The four key ministries were still jointly responsible for the preparation and implementation of the programme plan, with the continued coordination of the NESDB. Job creation was still its main strategy but in a wider scope and framework, and a larger proportion of the government budget was allocated to the programme. The Social Development Project was terminated at the beginning of 1985. The Government used outputs of the project, particularly the basic minimum needs and their indicators, as a basis for organising the National Campaign for the Quality of Life (1985-1986) and they have since been incorporated in the Sixth National Development Plan.

(v) Vulnerable groups as the main target of the Strategy for Health for All

The Alma-Ata Conference urged that high priority be given to the special needs of "those who are the most vulnerable or at greatest risk"; "who are least able for geographical, political, social or financial reasons to take the initiative in seeking health care", "women, children, working populations at high risk, and the underprivileged segments of society". The Strategy for Health for All had to "reach out into all homes and working places to
identify systematically those at highest risk to provide continuing care and to eliminate factors contributing to ill-health. The improvement of the health of vulnerable groups was singled out as one of the principal objectives of the health strategy. While the specific emphasis in this section of the Alma-Ata Declaration was on the coverage of health care services, the concern for vulnerable groups as the main target of health policies could not have been more forcefully expressed. The limited character of intersectoral cooperation which has been hitherto achieved could be partly attributed to the fact that while the health sector has generally recognised the importance of groups at risk, it has seldom approached the health problems through a systematic identification of vulnerable population groups and the conditions of risk in which they live. Such an approach immediately confronts the health sector with the health risks that originate in other sectors and the health-related concerns of those sectors.

This is clearly demonstrated in the hard-core ill-health of extreme poverty, which affects a large segment of the human population, and which has the highest priority for health strategies both nationally and globally. To eradicate hard-core ill-health, health strategies would have to rely heavily on the health-related contributions of other sectors. The Health-for-All Strategy is by its very nature equity-oriented. The most revealing indicator of the health status of a nation is that of its vulnerable groups. The health strategy, therefore, demands an approach and a methodology which focuses on and defines the disparities in health that prevail in the population as a whole, and thereafter systematically identifies the vulnerable population groups and the factors contributing to their vulnerability.

There is one lesson of fundamental importance that must be borne in mind in designing equity-oriented health strategy which pays special attention to the vulnerable groups.

Equity in health requires equity in development as a whole. Therefore, the equity-related component of the health strategy which focuses on primary health care has to be linked to the equity-oriented components in the development strategies of other sectors and form part of such strategies. This is illustrated both in the issues which have been enumerated in the illustrative check lists provided earlier in this
paper as well as in the examples of China, Sri Lanka, Kerala and Thailand, among others.

The disadvantaged or vulnerable groups will vary according to the situation in each country and its level of development. The vulnerable groups in developing countries which are at one stage in the health transition will be very different from those in the developed countries in terms of causes of ill-health and vulnerability of age groups.

In developed countries the mortality rate among infants is almost the same as the average for the whole population and the age group 1-4 is among the age groups with the lowest risk of death. On the other hand, in developing and low income countries the average rate of infant mortality is about seven times the average for population and the risk of death for children 1-4 years is higher than the average. Early death and risk of mortality for the very young in developing countries stem from diseases which have been brought well under control in developed countries.

The causation and mode of transmission of disease is also very different. In developing countries the main diseases are caused by living conditions created by poverty and are often transmitted by human contact, insects, animals, water, unsatisfactory housing and inadequate sanitation. In developed countries morbidity and early death are caused by poor working environment, unemployment, dietary habits, health hazards of traffic and habitat, psychological stress factors and excessive addictions. These differences reveal the link of affluence and poverty to health.

Demographic situations also create differences in health status. In developed countries, where much (approximately 79%) of the population is urban, fertility is low with populations growing at less than 0.5% a year. In these conditions the health status of women and children is far superior to that in developing countries where approximately 70% live in rural areas, where the social and economic infrastructures, including health services is markedly inferior to that available to the urban population. Within this setting the annual growth of population exceeds 2% for the large majority of developing countries, while total fertility rates range from 2% to 4% on the average. Thus, in sharp contrast to developing countries, health risks are concentrated among
the very young and women of reproductive age in rural areas though many of those living in sprawling urban slums are equally at risk.

6. Conclusion

The paper has outlined some of the main elements which go to form an intersectoral strategy for health. As has been reiterated at every stage of the presentation, the strategy will vary according to the specific characteristics of the health status and the development conditions of each country.

In all these national strategies, however, many of the elements that had been identified will occur as constants in different combinations; for example, the clusters related to agriculture, education and culture and the physical environment including water, sanitation, housing and habitat. In these combinations the priority for each element will vary. For instances, in a country where low incomes go together with high rates of female illiteracy, the intersectoral programmes which are directed at reducing poverty and raising levels of female education would command high priority for health.

The paper has surveyed a vast area which has potential for intersectoral action. However, the intersectoral strategy in each country situation will have to begin with meaningful selection of priorities and concentrate on areas where the impact would be most effective, taking into account the five key elements which have been discussed.