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Overview of Issues in the Sustainability of EPI

by

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I. OVERVIEW OF ISSUES IN THE SUSTAINABILITY OF EPI, by Pierre Clauquin¹

A. INTRODUCTION

During the past five years, talks on the sustainability of health interventions benefits have progressively crept into international aid forums. These concerns were first expressed by donor agencies because of the rising costs of health interventions and of some acceleration strategies in a context of competing demands for development resources.

In the past the World Health Organization (WHO) Expanded Programme on Immunization (EPI) Global Advisory Group (GAG) technical recommendations have not always been coordinated with the availability of resources to implement and sustain them. Last year, following the discussions among its participants on the sustainability of EPI, the GAG made the following recommendations on the overall program status:

" .. the future of the EPI is by no means assured. Social and economic problems are likely to constrain the further development of health services in developing countries, and application of existing technology is far from complete. Unless continued specific priority is accorded to the program, its gains to date could be jeopardized. Support from outside sources will be required for the foreseeable future to sustain and achieve high coverage. In the least developed countries, this will need to include recurrent costs. For new or improved vaccines to be added to developing country programs, substantially increased support will be required.

Basic health service needs for raising and sustaining immunization coverage include:

improving the management of the health services by decentralizing responsibilities and providing training and supportive supervision to the health workers who provide immunizations;

making health services more accessible; and

informing and motivating the public , specifically recognizing that fathers, as well as mothers, have important health roles to play. "

¹ This paper was prepared jointly by The Resources for Child Health Project (REACH) and The Canadian Public Health Association (CPHA). Many colleagues have contributed to this paper, either by submitting their own ideas or by reviewing different drafts. The active participation of Ed Reagan, Louise Gallarneau and Margaret Hilson from the Canadian Public Health Association in the drafting of the present document is gratefully acknowledged. The staff of the Resources for Child Health has provided useful comments and reviews, particularly Diane Hedgecock, Rebecca Fields, Mary Harvey and Mike Favin. The author is solely responsible for the shortcomings of the present document.

The 1990 GAG agenda shows it has taken the current concerns about the sustainability of EPI seriously enough to dedicate half a day to the topic. Four presentations will give us an opportunity to refine our thoughts, come to some consensus and propose concrete recommendations to the different partners in EPI.

Financial sustainability is often equated with program sustainability. Fifteen century French author Francois Rabelais' comment "Les nerfs des batailles sont les pecunes" (Money is the sinews of war) still holds true. However, a difference must be maintained between the financial and the other aspects of sustainability. Each is subtly interwoven with, and often dependent upon, the other but is nevertheless of a different nature. The presentation on financial sustainability will be the last of this session on sustainability and will add a realistic pragmatism to the earlier contributions.

Sustaining (and, still in some cases, creating) the demand for immunization services among parents, families and communities continues to be, for all EPI partners, THE challenge of the decade. It goes far beyond social mobilization. Sustaining the demand requires high quality services and this is a major part of the challenge. Examples from places like Kerala and Sri Lanka show that wherever there is an educated and expectant public demand for services, politicians and planners eventually assign resources. Providers are pressured to deliver quality services. This morning another presentation to the GAG is devoted to this apparently formidable task: changing human behavior by making immunization a routine practice.

EPI promotes decentralization as an efficient management approach and emphasizes the key role of supervision in program implementation. Unfortunately, supervision is too often sporadic and the health staff, whether EPI or curative, is still not playing the catalytic role it should. The morning presentation on supervision will propose strategies to improve the present situation and create an environment which can foster the contribution of health workers to the health of people in the community. Among them we shall discuss ways to provide EPI staff with the means for supervision and to develop accountability.

The following overview presents the main factors of sustainability. It will not specifically elaborate, however, on the topics presented by other colleagues later this morning.

B. OUR WORLD TODAY

In recent years, much has been written on the world economic crisis and the insufferable burden of debt which stymies development efforts, on the widening gaps in the quality of living between North and South, the increasing and conflicting demands on donors' aid, and the needs for "structural adjustments with a human face." Beyond the rhetoric remain the grim facts of the economic and health status of most people of our planet:

1. Declining government disbursements - both in real terms and as a percentage of government expenditures - on such basic services as education and health. The presentation on financial sustainability will show that for many governments, the current paradox is to do more with less resources.

2. Decreases in family incomes and rises in commodity prices (especially for food as food subsidies are reduced in many countries).
3. A noted stagnation of infant and children mortality rates in many countries and a marked deterioration in several others.

Immunization programs do not operate in a vacuum. EPIs are sensitive to the national and international political and socio-economic context which affects the availability of resources. Because the situation differs from one WHO region to the other and among countries, it would be misleading to make broad generalizations. Nevertheless, strains have emerged and to remain sustainable, immunization programs must adapt to the rapidly shifting demographic and epidemiological scene. The main changes are: increased urbanization, aging of populations, and changing epidemiological patterns of transmission of some diseases like measles and AIDS.

C. TOWARD A COMMON UNDERSTANDING OF THE SUSTAINABILITY OF EPI

Since its beginning, EPI has been a successful program. The acceleration strategy has achieved progress in vaccination coverage. EPI has shown flexibility and adaptability. Demographic Health Surveys (DHS) have shown that, in the countries studied, children are now immunized closer and closer to the minimum age of eligibility. There are reasons to believe that the quality of the cold chain is improving. EPI is often described as the most cost-effective of child survival interventions. What then are our concerns?

The word "sustainability" now exists in the 1990 addendum to the Oxford English Language dictionary. Sustainability is generally understood as the ability to continue, to maintain or to be maintained over time. However, in discussing the sustainability of EPI, EPI partners are often under the illusion that they speak a common language - which, until now, they did not. What is expected to be sustained is not clearly defined and, in discussing sustainability, DIFFERENT questions are raised and from different perspectives. Not unexpectedly this illusion led to misunderstanding and confusion. Therefore, what are the different partners' perspectives on sustainability?

The Country Perspective. This can be summarized in one question: "Whose EPI priorities?" Although EPI partners agree unanimously on the goals of EPI (the welfare of children), opinions differ on the strategies to reach such a goal, as well as on their timing. For example, some countries have declined campaigns and optimistic acceleration targets. In some regions, polio eradication efforts are planned with a more manageable time frame than initially suggested. Many countries feel, at times, that global EPI targets and strategies, are impositions on their national programs because these targets and strategies do not take into account their economic and logistic implications. In a growing heap of external demands for accelerated performance and achievement, the issue of sustainability gets lost. The concept of TRADE-OFF between acceleration and eradication and the sustainability of program outcomes has recently emerged as central to the discussion of sustainability.

The Donor Perspective. Concern about the sustainability of projects after the end of external development assistance is not new. According to donors' literature the sustainability record of the last 30 years is disappointing. With a few exceptions, projects or programs which were heavily dependent upon foreign external assistance did not maintain comparable outputs because national governments could not afford to provide the same levels of resources as the previous donors.

EPI is still dependent upon external resources because in many developing countries, external assistance still covers 50% of all EPI costs. However, because of the competing demands on limited resources (with a substantial amount going to Eastern Europe and to AIDS primarily), it is understandable that some donors increasingly want to be reassured on the soundness of their contribution and of - what they would like to consider - their investment. However, the key issue for donors is not whether donor assistance should continue. Whatever way one looks at it - political, economic, epidemiologic, or cultural - it is the self-interest of the industrial countries to provide assistance to the less developed world. They gain as much as the recipient from the assistance provided, although in different areas.

What has emerged as a key issue for donor countries is to be able to dispel the apprehension that EPI is not the Danaides barrel of Greek mythology fame - a too real bottomless pit in which money must be thrown forever, without results. Donor agencies need collaboration from national EPIs in documenting the effectiveness of EPI strategies in disease reduction, infrastructure and resource building, and overall contribution to the development of national health. Donor agencies are accountable to their constituents and they increasingly expect accountability from their partners.

The Technical Agencies' Perspective. Technical agencies are currently promoting two simultaneous strategies to eradicate or control EPI-preventable diseases: primary health care and eradication policies for WHO; primary health care and universal child immunization by 1990 for UNICEF. At times, despite a proclaimed commonality of goals, the coexistence of three different paradigms (with their own logic) within EPI and the recommendations for their universal application has different implications on sustainability issues. What are these paradigms?

- a) The Eradication paradigm aims at the eradication of a single disease. Its historical illustration is the smallpox eradication program which still has sustainable effects. Compared with the benefits of smallpox eradication, its costs were negligible. Under the eradication paradigm, the benefits (financial and non-financial) accrued from eradication justify high costs during a relatively short period - before eradication is achieved. A possible spinoff of the emphasis on disease eradication might be a positive strengthening of surveillance. Once its goals have been achieved, the eradication model is totally sustainable for one disease.
- b) Universal Child Immunization has set bold goals which had a boosting effect on country programs, as shown by the rising figures of vaccination coverage. However, some miscalculations crept in as, in several countries, the contribution of pre-1990 acceleration strategies to the strengthening of routine immunization services proved short-lived. Two rhetorics seemed, therefore, to have been at work: an acceleration effort to reach 80% coverage by 1990 at any cost at the possible detriment to

sustainability and, concurrently, rising concerns about the sustainability of EPI after 1990.

- c) According to the Alma Ata declaration, EPI is one component of Primary Health Care (PHC), so logically EPI achievements should be analyzed in the context of PHC. Such an integrated model puts emphasis on the process of the long-term sustainability of health services. It implies a dependency on the slower development of the infrastructure through which services are delivered, the integration of EPI with other maternal and child health services, and the strengthening of the rest of the health services. This model assumes that the recurrent costs of EPI will be borne outside EPI within the structure of Primary Health Care.

Contradictions, as we know, are dialectic and may lead to progress. However, the EPI community would benefit from a debate clarifying the role of EPI eradication and control strategies in terms of strengthening health services and the overall health of children. Or is the issue moot because EPI technical agencies have already, albeit implicitly, adopted a model of EPI which is an association of eradication strategies? In that case, what are the implications of such choices for the present debate on sustainability?

From the different perspectives a basic understanding of sustainability emerges:

A sustainable EPI is one which maintains or improves the results achieved in the control or eradication of EPI target diseases and shows a decreasing dependency on external support.

A consensus must be obtained among EPI partners on what to sustain. Broadly defined, what must be sustained is the highest level of achievement of the program, as measured by vaccination coverage levels or disease incidence.

Sustainability is not a goal by itself. It is an attribute of technical achievements. Because the level of achievements and its deadline is often beyond the immediate financial means of many countries, progress towards universal childhood immunization and the sustainability of EPI implies a long-term partnership between donors, technical agencies and countries under varying conditions.

What are the factors of sustainability ?

D. FACTORS OF SUSTAINABILITY

A Long-term Commitment to Partnership Between Donors and Countries. The commitment to partnership between donors and countries to support EPI is ESSENTIAL to the implementation and continuity of programs. This has been shown in many countries by the preparation of immunization campaigns, the acceleration of programs towards Universal Child Immunization and through presentations at the recent World Summit for Children.

1. Sustainability of donor support.

The sustainability of EPI needs to be within the context of a stable relationship between donors and countries. National ministries of health need to know that they will be partners in development for many years and that they are building for the future. Such a perception induces a positive frame of mind which fosters commitments and eases negotiations. The continuity of the relationship and of the donor community's commitment is of significant concern to political leaders, not unwisely when one looks at the volatility of health fads in the past. Family planning provides a clear example where international concerns stimulated national action but continuity (or sustainability) has been difficult to maintain.

A review of 212 U.S. Agency for International Development-supported projects found that a necessary condition for sustainability was for donors to commit support for a minimum of 10 years. Donors should address the issue of sustainability from the very beginning of the collaboration, at the feasibility phase. Sustainability should be specifically spelled out as an outcome of the project: an implementation plan with phases and benchmarks should be prepared early and monitored during the length of the project.

2. National policies on EPI.

Many national leaders are now aware of public demand for EPI services and that it is politically astute for them to satisfy it. Such a recent interest in EPI on the part of policy makers reflects the current development of a growing understanding of health services. Long considered a net consumption of national resources, health services are now increasingly seen as an essential investment in the future of the nation. A healthy population, capable of making full use of its mental, physical and spiritual potential will thereby contribute to national development.

The commitment to EPI and progress toward its sustainability might be judged by the national ownership of EPI and several indicators:

a) The creation and operation of an Inter-Agency Coordinating Committee (ICC).

Inspired by the example of the Americas, the 1988 Global Advisory Group recommended that each country have an EPI Inter-Agency Coordinating Committee. Surprisingly, as of today only a few countries outside the Americas have one. The ICC proves to be an efficient forum for planning and coordination of resources. Its working methods and procedures encourages dialogue and collaboration among EPI partners and provides a reasonably flexible mechanism to strengthen the health delivery system.

The more open and participatory the negotiations between the national government, donors and technical agencies at each phase of the program, the stronger the national commitment. When government officials feel that the priority, the content and the design of a program have been imposed, or that a project is a donor project, their

sense of ownership decreases rapidly. It is crucial to address the issue of the sustainability of results as early as possible in the program.

- b) The reallocation of resources for health within the national budget and, within the health budget, the allocation of a budget for EPI. Enough resources must be assigned to promote equity of access to services and cost-effective interventions.
- c) The development of a broad-based national ownership. This should include maintaining contact with a broad spectrum of political leaders, encouraging the media to report successes and lessons learned (to foster accountability of the health services) and creating large networks of public support for immunization. They should be at national level in priority, e.g. local women or business groups; Rotary, Red Crescent or Red Cross, Lions Club. Sister or twin cities initiatives are an effective - although less used - way to provide resources, technology transfer and tailored support directly.
- d) The hosting of an annual national immunization day to reinforce public awareness of the benefits of immunization and to boost program activities.

A Sustained Demand for Immunization Services. Another presentation will address this subject. It is significant for many EPIs that physical and social accessibility of services and their acceptability remain a stumbling block.

Managerial Sustainability. In the field of EPI, as in development in general, the metaphor of providing the fish or teaching how to fish still holds true. Sound management principles should serve as foundation to implement EPI - providing that a minimum of resources are available at each level to operate. In many respects, sustainability and program management are two sides of the same coin.

Managerial sustainability should be enhanced by:

1. Providing local programs with the resources to operate.

e.g., per diems, gas for travel for supervisory visits, kerosene for refrigerators, etc. Too often, local programs lack the resources to supervise.

2. Improving the effectiveness of the use of available resources.

In our world of shrinking resources, better management of what is already available could significantly improve EPIs still plagued with deficiencies. Suggestions include:

- integration of different child survival intervention strategies including maternal and child health, immunizations, diarrheal disease or perhaps, a better coordination and sharing of resources for some activities, like supervision,

would seem a logical choice for the sake of cost-effectiveness and sustainability. Such coordination seldom happens in practice for reasons which should be exposed and discussed openly.

solving the maintenance problems paralyzing many EPIs which includes lack of: maintenance of equipment, inventory, spare parts, qualified mechanics and no petty cash for regular maintenance. (Competition among donors has sometimes lead to the experience by nationals that it is easier to get a new car from donors than spare parts to maintain an existing one.)

better management of immunization sessions and pediatric consultations. This will reduce the drop-out rates between doses and missed opportunities for immunizations. These should be priorities of managers because of benefits, as both financial and epidemiological, to be gained.

3. Decentralizing management.

The ability of mid- or local-level managers to control resources, make decisions, plan, supervise and have a sense of ownership are significant factors for sustainability. However, in many countries decentralization in reality means that the central government passes on to provinces or regions the financial burden of expenses (initially underwritten by the central government).

4. Improving the quality of monitoring tools.

As epidemiological and demographic conditions evolve, factors of sustainability involve the flexibility of the program and its capacity to adapt as new or different needs arise. Some of the needs might be ancient, like hepatitis B. It is only recently that relatively affordable vaccines have been available; others, like tuberculosis, are now on the rise and others like measles have benefitted recently from technological advances. Still other vaccines like neonatal tetanus have only been recently recognized by policy makers. This is why surveillance - and surveillance tools - are essential to detect and monitor trends over time.

5. Defining more precisely the characteristics of the specific target groups and their needs.

EPI with coverage rates around 70% still face the challenge of defining the profile of partial users and non-users. Who are they? Where are they? What are their needs? EPI should be familiar with the socio-economic, religious and cultural characteristics of partial and non-users of immunization services to address their needs adequately. Urban poor deserve particular attention because of their growing number, their role in disease transmission and their relative neglect so far.

Technical Sustainability. Technical sustainability may be understood as the existence overtime of a tradition of high standards of technical expertise within EPI. Key ingredients to this technical sustainability are the role of human resources, e.g., the health staff and physicians, and the overall issue of training.

1. EPI health staff.

In EPI, it is sometimes thought that the sustainability of skills is easier to foster than financial sustainability. Unfortunately, that does not seem to be the case as many EPIs are still plagued with ghost staff, a lot of absenteeism, rapid staff turnover, a lack of both positive supervision, and career structure in public health, low morale, irregularly paid salaries, no training incentive with emphasis on competence, etc ... It does not seem that things have changed since 1878 in British India when "the village, town and city bazaar have only seen humble creatures of little standing - the vaccinators. 'Vein-opener,' 'needle pricker,' etc ... are the names by which the vaccinator is designed in the bazaar and sensitive to ridicule as our Indian fellow-subjects are, it requires the pressure of considerable poverty to enlist respectable recruits".² Human resources are the best possible sustainable investment an EPI can make.

In each country, EPI should target its health staff as the third EPI priority group along with children and women. More attention should be paid to the health staff's beliefs, attitudes and practices which are harmful to the efficacy and acceptability of EPI in order to change them. Above all, EPI should foster a tradition of quality of services, professional ethics and team work.

2. Physicians.

Physicians and private practitioners are not active promoters of immunization services, even in industrial countries. Many physicians still believe in the numerous medical contraindications of vaccinations and do not recognize the more important real health risks a child faces by not being immunized early in his or her life. Studies from several countries show that up to 40% of "sick" children are denied vaccinations on certain immunization days. Since physicians strongly influence the overall performance of health staff, attitudes of future physicians should be shaped to stress the individual risks a non-immunized child faces as well the threat it poses to the community. Changing medical practitioners into active promoters of EPI should significantly enhance the sustainability of immunization practices.

3. The role of training.

In the past, training too often meant having attended a course or receiving a per diem instead of being defined as the acquisition of skills. In many countries, formal EPI training of program managers (using the WHO modules) has not taken place for several years. As new

² Eleventh Sanitary Report North-Western Provinces, 1878, cited in Harrison J.B. "Allahabad: a sanitary history" in *The Colonial City*

vaccines are introduced into EPI and the understanding of strategies is refined, on-going training including clear updates of immunizations and strategies should be provided to all levels of staff to inform them and avoid confusion.

From the present overview a few themes emerge:

- EPI progress is a sensitive measure of the capacity of health services to improve the health of children.
- Sustainability is the critical context for the maintenance of achievements and continued improvements of EPI.
- The essential ingredients for achieving sustainability of EPI include satisfying financial, political, social, managerial and technical aspects.

E. RECOMMENDATIONS

Several recommendations are suggested for debate:

Recommendation 1: Donors need to lengthen their planning horizons to nourish a stable and trusting environment in which sustainability can only occur. The role of donors in EPI must continue during the decades ahead.

Recommendation 2: Every EPI should be planned, implemented and evaluated against a background of financial, political, social, managerial and technical sustainability indicators which should be defined nationally.

Recommendation 3: Because there is an unavoidable trade-off between the progression of a national EPI toward sustainability and the pace of acceleration, consulting agencies should take these factors into consideration when making technical recommendations.

Recommendation 4: The recommendation of the 1988 GAG for the creation in each country of an Inter Agency Coordination Committee, to include representatives of host governments, technical agencies, donors and non-governmental organizations, should be implemented. The role of the ICC should be to:

a) examine the issue of sustainability as it relates to EPI and provide specific indicators to use in the design, implementation and evaluation of all future EPI activities; and

b) determine how EPI is influencing the development of Primary Health Care.

F. APPENDIX

- FIGURE 1: VACCINATION COVERAGE
FIGURE 2: POVERTY IN THE DEVELOPING WORLD
FIGURE 3: GNP GROWTH
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FIGURE 5: PRIORITIES AS INDICATED BY RELATIVE RESOURCE
ALLOCATION IN CHILD SURVIVAL COUNTRIES
TABLE 1: PURCHASING POWER OF WAGE EARNERS
TABLE 2: COVERAGES IN MONTHLY AVERAGE ATTENDANCE BEFORE
AND AFTER CHANGES IN FEES STRUCTURE BY SECTOR AD
SELECTED IMMUNIZATION AND DISEASES

Figure 1

VACCINATION COVERAGE WORLDWIDE. JULY 1990

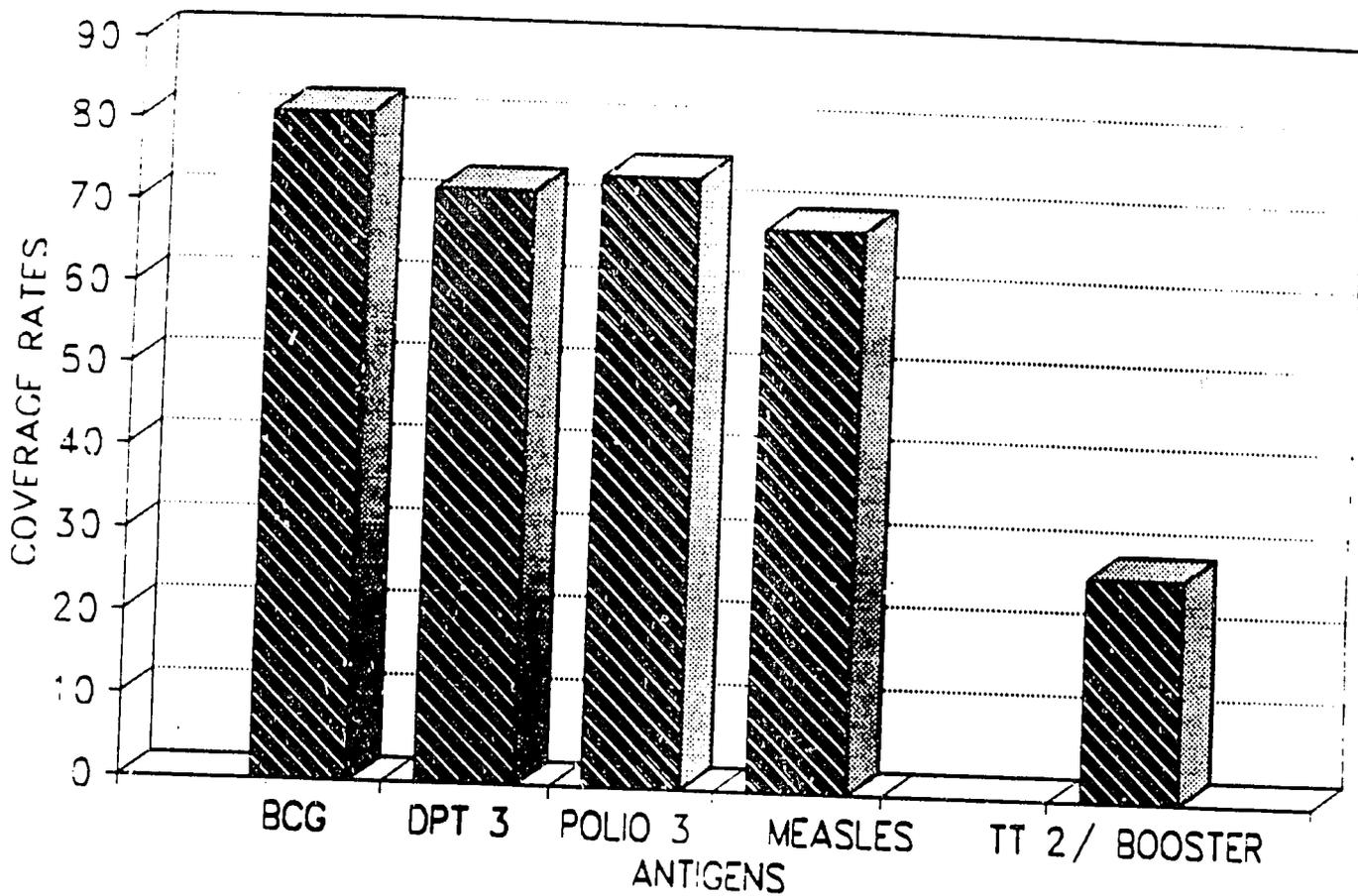


Figure 2

POVERTY IN THE DEVELOPING WORLD 1985 AND 2000

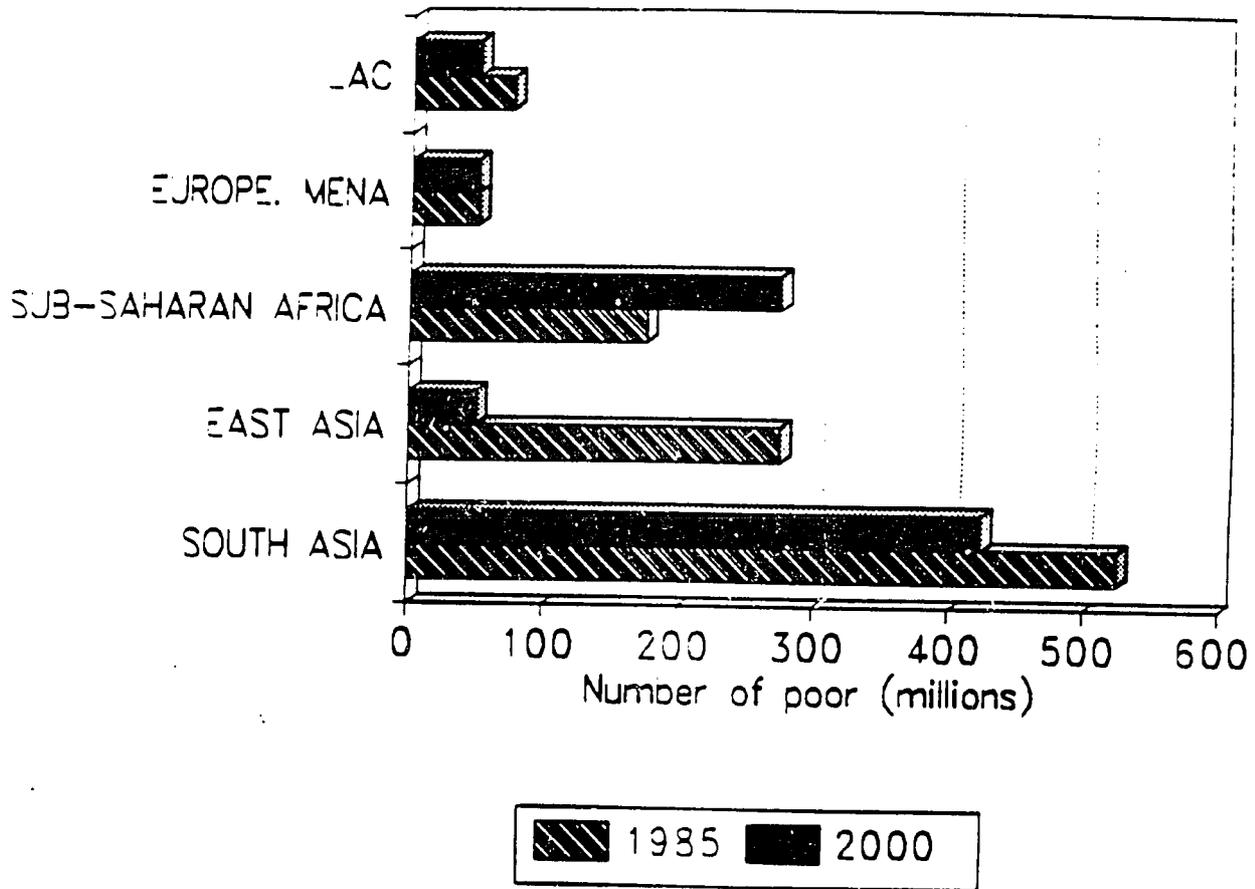
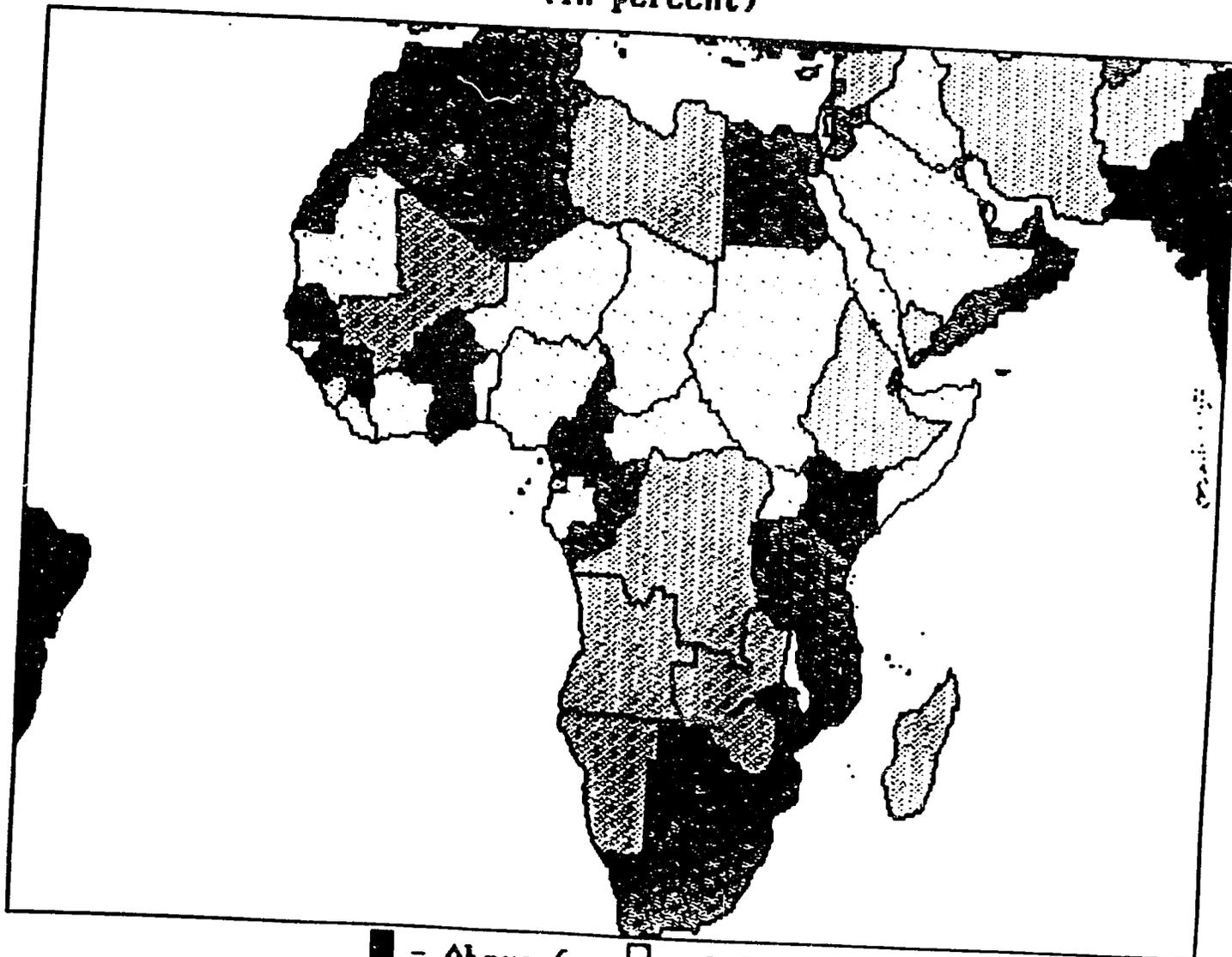


Figure 3

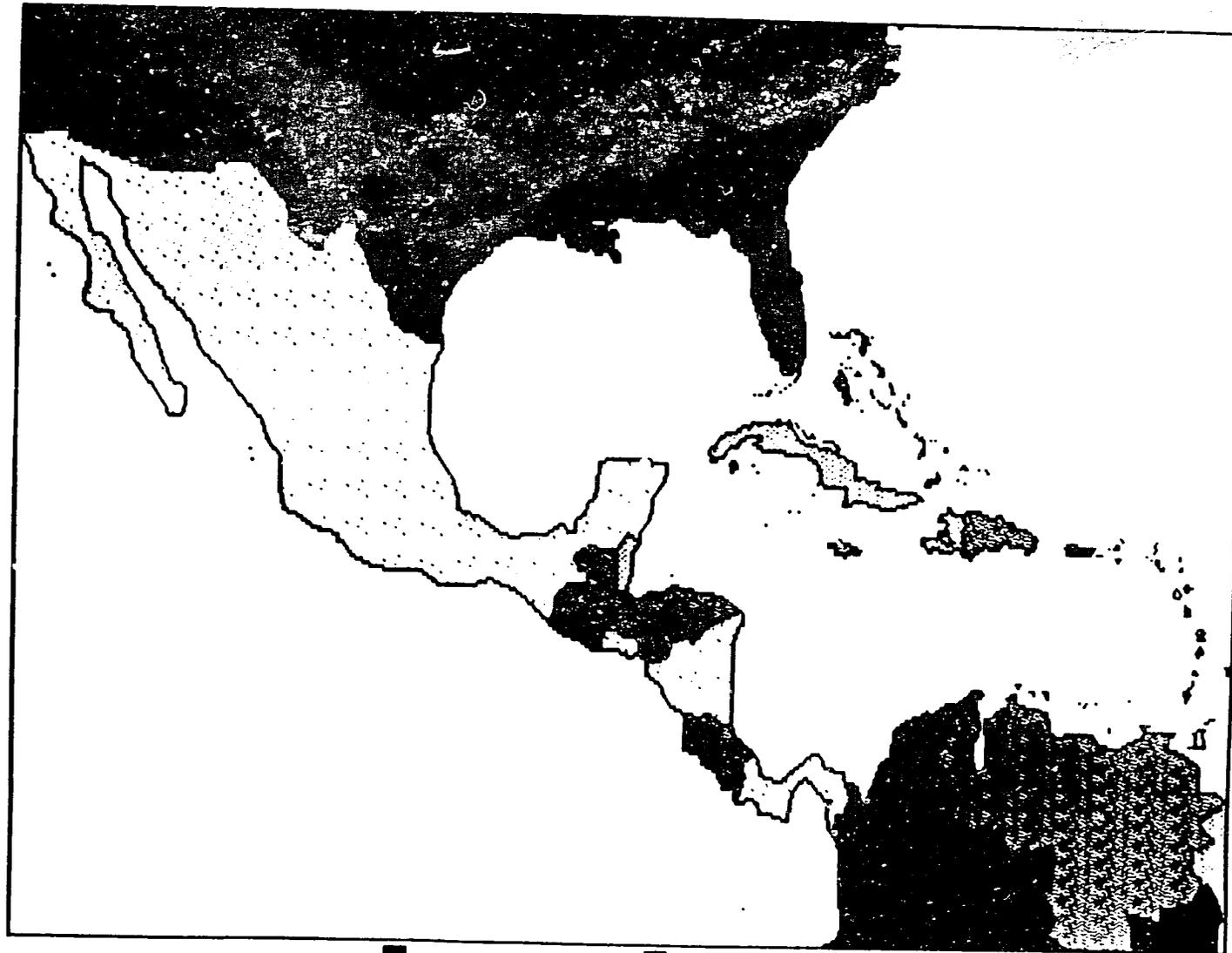
GNP GROWTH
(in percent)



14

■	= Above 6	□	= 0-2
■	= 4-6	□	= Below 0
■	= 2-4		

Figure 4
GNP GROWTH
(in percent)



■	= Above 6	▨	= 0-2
▤	= 4-6	□	= Below 0
□	= 2-4		

Figure 5

PRIORITIES AS INDICATED BY RELATIVE RESOURCE ALLOCATION IN CHILD SURVIVAL COUNTRIES

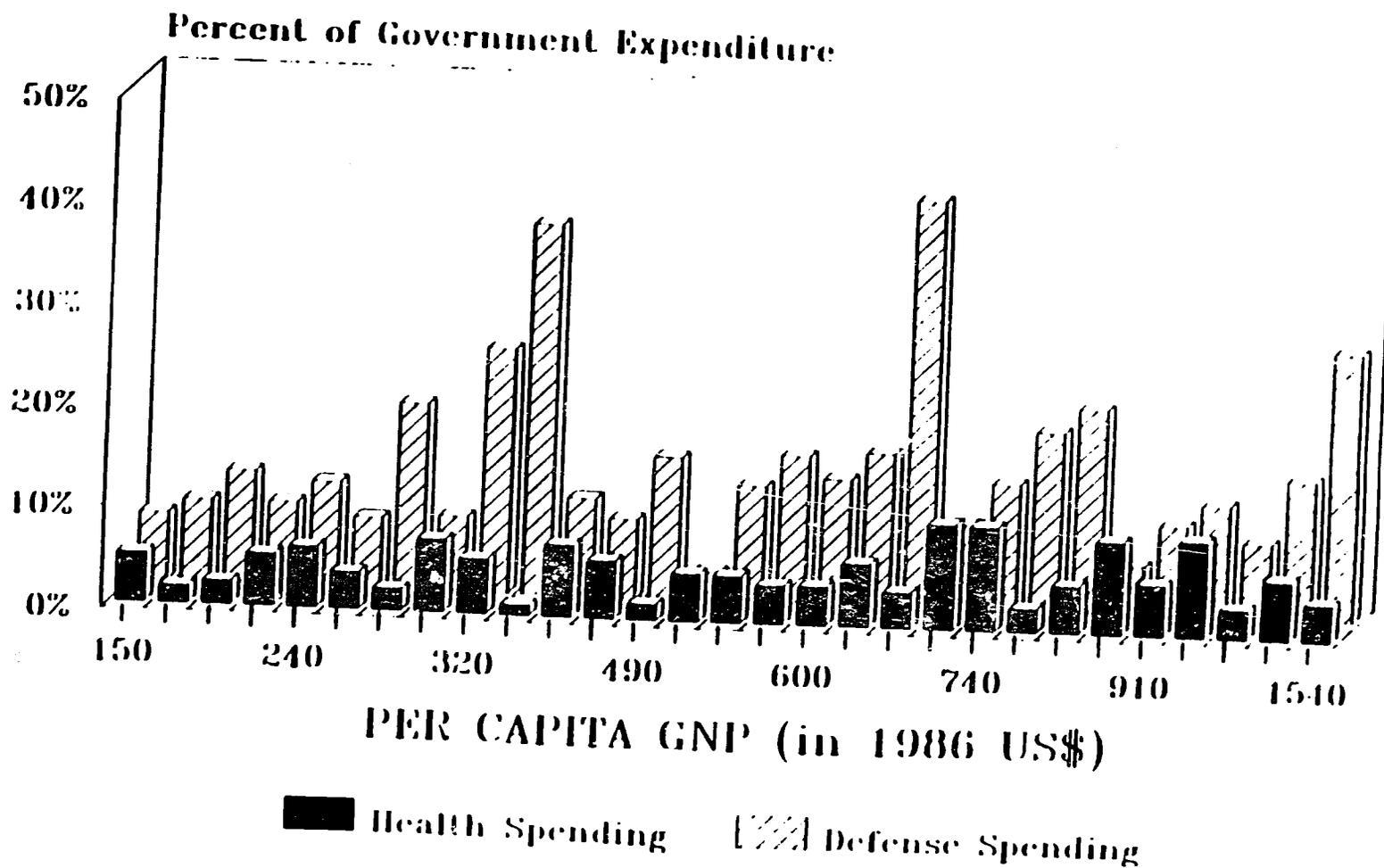


Table 1

Purchasing Power of Wage Earners (Worktime Required to Buy Commodities)

Commodities	1970	1977	1983	1985
Bread (1 kg)	17 minutes	17 minutes	31 minutes	38 minutes
Meat (1 kg)	2 hrs. 56 min.	3 hrs. 51 min.	5 hrs. 50 min.	7 hrs. 36 min.
Olives (1 kg)	1 hr. 58 min.	2 hrs. 36 min.	3 hrs. 16 min.	5 hrs. 58 min.
Rent (1 month)	12 days	6 days 3 hrs.	14 days 6 hrs.	26 days

Source: Cumhuriyet Newspaper, 13 July, 1987. Ankara, Turkey.

Table 2

Changes in Monthly Average Attendance Before and After Changes in Fees Structure by Sector and Selected Immunization and Diseases

From R. Yoder Soc. Sci. Med. Vol. 29, No. 1, pp. 35-42, 1989

Immunization or Disease Treated	Government % Change	Mission % Change	Government and Mission % Change
BCG Immunization	-25.6	-11.2	-16.4
DPT 1 Immuniza- tion	-37.6	5.1	-18.7
Diarrhea Age < 5	-41.2	-8.6	-24.4
Diarrhea Age > 5	-45.5	-12.2	-32.1
STD	-39.5	3	-21.8
Respiratory Dis.	-43.7	.8	-20.6
Musculoskeletal Disease	-46.6	32.6	-1.2
TOTALS	-41.6	-1	-21.2