

PH 11/18/88  
64702

**A Review of  
"Report of the Working Group on  
The Least Developed Countries"**

**by**

**BOSTID Colloquium**

**October, 1988**

**Prepared by**

**Center for Research on Economic Development**

**In partial fulfillment of**

**Contract #PDC-0180-0-00-8121-00**

**Bureau of Program and Policy Coordination**

**U.S. Agency for International Development**

## Report of the Working Group On The Least Developed Countries

### BOSTID Colloquium

#### OVERVIEW

The paper examined the possibility of promoting aid to the poorest nations through long term efforts to halt economic degradation. Possible projects examined included both small and global size projects.

#### HIGHLIGHTS

Topic #1: How can increased U.S. funding of programs in the least developed countries be rationalized?

Criteria: Funding will come from Congress and thus popular support for such programs must be cultivated.

Possible Solutions: Humanitarian motive should be linked to the popular concern for the erosion of the natural resource base in developing countries.

Economic, political and cultural concerns should be included in environmental projects (e.g. to interest Black Americans in African development).

Topic #2: Which types of programs will be the most successful?

Criteria: LDC programs should be focused on survival needs.

Programs should be taken on and evaluated from a scientific and technological viewpoint.

Possible Solutions: Bilateral programs should be directed toward infrastructure.

The grass-roots, small scale projects should explicitly include scientific and technological components. The private sector may help here.

Topic #3: How best can a human resource base be built?

Criteria: American faculty must be willing to go overseas.

Small local universities in LDC's should be found.

Possible Solutions: Building the human resource base through funding universities in the LDC's with money for computer networks and communication technologies will be helpful.

1

WORKING GROUP ON THE LEAST DEVELOPED COUNTRIES

PRINT  
NOT FOR REVISION OR CITATION

Nature of the Countries

The meaning of "least developed" was discussed. An examination of the World Bank's economic indicators reveals a set of about 40 countries with GNP per capita below \$500. Concentrated in Africa and South Asia, these countries share a number of characteristics -- small, often landlocked, resource poor, and faced with survival issues. It was understood that several of the large, technologically advanced countries in this set (India, China, and possibly Pakistan) would logically fall into a special category because of their differential capacity to absorb both science and technology.

Since many of the least developed countries (hereinafter designated as "LDCs") still include significant tribal populations, and since their societies had been disrupted during the colonial period, some group members felt that it was especially important to consider the impact of past and future technologically-driven development on populations in these countries.

Rationale for Cooperation

It was argued that traditional humanitarian motives should be key to programs of assistance in the LDCs, and there was reason to believe that the public (and thus Congress) is especially supportive of such programs. In addition, many of the LDCs are in Africa and South Asia where there is growing concern about environmental degradation.

Erosion of the natural resource base has been severe; for this reason,

DRAFT  
NOT TO BE USED FOR CITATION

food supplies are generally inadequate and the quality of life for many, but especially the poor, is declining. It was believed that scientific understanding of environmental change would be essential to assist local people in the restoration of these environments. In recognition of rising public awareness of global interdependence -- see the World Environment Commission's report on "Our Common Future" -- participants felt that the public would also support long-term efforts to halt environmental degradation in the LDCs. Consequently, the group concluded that the humanitarian rationale should be linked in some way to broader environmental concerns.

There was less consensus about explicitly adding other components to the rationale, although it was recognized that humanitarian concerns are often short term while long-term commitments are needed if one is discussing cooperation involving science and technology. Thus, it was agreed that including economic, political, and possibly cultural components (e.g. to interest Black Americans in African development) would both broaden the base of popular support for development and expand its time frame. In the context of this discussion, it was pointed out that both political stability and economic growth are related to the status of the resource base, which again argues for making environmental rehabilitation a priority for long-term support. Thus, a clear goal for development assistance in the LDCs should be the establishment of programs to maintaining the natural resource base.

## Types of Programs

There was consensus on the need to substantially increase development program effectiveness since it is widely believed that AID's programs in the LDCs don't work well in contrast with people-to-people efforts such as the Peace Corps. It was suggested that LDC programs should be focused on survival needs rather than on economic growth; consequently, it seemed important to learn from past successes with agriculture and to place emphasis on those applied sciences needed to rebuild the resource base for later growth. It was further agreed that more money would be needed just to hold the line.

Regarding bilateral programs, govt to govt assistance was thought to be most useful for building infrastructure. It was agreed that, even in the LDCs, infrastructure building needs to include building S&T capacity although the funding needn't be large; in many cases, even 1% of existing development assistance budgets could be very useful in building important elements of this capacity.

### Small Scale Programs

The group observed that grass-roots approaches to development work well in many areas but that these approaches do not usually include S&T. Since there is evidence of Congressional interest in promoting more small scale efforts (e.g. Interamercian Foundation programs), it was felt that an attempt to explicitly include S&T programs under the banner of such efforts might be successful. In addition, these efforts could involve the private sector in promotion of small, technology based businesses in key areas such as health products, food processing/storage, and construction materials.

CONFIDENTIAL  
NOT FOR QUOTATION OR PUBLICATION

Participants felt that universities and national research institutes in the LDCs should be strengthened in order to provide trained personnel to advise local entrepreneurs in the establishment of small businesses that would make good use of local materials and craftsmen.

#### Global Change Program

The international global change program was discussed. Involving the poor nations in this program seems justified both because desertification and tropical forest destruction are damaging the resource base in these countries and because the poor suffer most. The group thought that the LDCs might best participate through multilateral institutions such as OECD; there was also a sense that the private sector needed to be involved.

#### Programs to Build the Human Resource Base

Participants agreed that assistance to the LDCs should focus on long-term programs to build the human resource base especially in science and technology. On a regional or national basis, the LDCs need excellence in applied and mission oriented research. While they conduct research of the highest quality and thereby make a contribution to development problem solving, it was recognized that International research institutes do not build local capacity. On the other hand, creative local problem-solving can be fostered in universities, which often don't require much external money to launch. While isolation of small universities was an impediment to excellence in the past, it is believed that computer networks and other communications technologies can be used to overcome this problem in the future.

In order to consider which of the successful past efforts in countries such as Brazil and India might be applicable to the LDCs in the 1990s, the group discussed U.S. experience with mechanisms for building research capacity . USAID supported efforts such as the NSF program in Science and Engineering for Economic Development (late '60s), the Academy's Brazil Chemistry Program (early 70's), and BOSTID's current Research Grants Program were considered along with the Fulbright program and others. It was generally believed that programs that place U.S. researchers in developing country institutions are of lasting benefit when good matches are made. It was suggested that such matches often occur when the research involved has an important field component -- agricultural or ecological research for example.

The above review highlighted the importance of bringing in outside personnel to help build institutes by training local students and by transferring the culture of science as well as scientific knowledge. Training in the U.S. was thought to be important in selected fields but only at advanced levels and preferably in mode that helps build networks among LDC professionals; in addition, the need for enrichment and life-long learning was noted. It was stressed that every training program supporting LDC students or professionals in the United States needs to consider the absorptive capacity of the recipient country if the trained individuals are expected to return.

The problem of getting young American faculty to spend time in LDC institutions was discussed. Prestige helps, and in addition, faculty in field-dependent disciplines might be utilized more effectively; the

CONFIDENTIAL  
NOT FOR QUOTATION OR CIRCULATION

area of restoration ecology was considered to have special potential in this regard. It was suggested that a new Academy program might be considered to bring important skills to bear on the problem of institution building in the LDCs and in selected regional institutions especially in Africa. Regional programs linking researchers at work on common problems were considered important. The possibility of increasing the science emphasis in the Fulbright program was also mentioned.

#### Funding S&T in the LDCs

The group considered both economic and political realities that affect funding for development programs. It agreed that funding for S&T related to development in the LDCs was grossly inadequate and that it always has been; in addition, it noted an unfavorable change in the attitude of developed countries toward support for scientific exchanges that would benefit the LDCs. Moreover, the short-term perspective of Congress and most aid agencies means that even the meager funds that are available are not being used to address chronic problems. In the present economic environment, funding problems are further compounded because of the bureaucratic tendency to cut budgets across the board rather than to decide which are the most critical programs.

The funding situation is even more grim when attitudes in the LDCs are considered. In general, LDC policy makers see no value in S&T, which has been put at the margins in recent years thus driving trained people into a state of despair. The lack of support for science can be traced, in part, to the failure of the LDCs and their partners to articulate a compelling strategic plan for applying S&T to LDC development. The issues of how to allocate extremely limited internal

resources and of how to direct dwindling external resources have not been addressed adequately. Should health come before agriculture or environment before alternative energy for rural development? How important are environmental concerns? The latter are invisible to LDC economic ministers who do not want to see "green conditionalities" placed on economic development schemes. These strategic issues are considered in more detail in the next section.

With regard to the vagaries of funding and the tendency of both the executive branch and the Congress to "fiddle" with development assistance, the group felt that consideration should be given to the need for a government funded foundation that would support S&T especially oriented to meeting both the short and the long-term development needs of the LDCs. In the absence of a special program, it seemed hard to imagine how support could be maintained for the kind of steady and often unspectacular approaches that will be required to solve chronic problems characteristic of the LDCs. With respect to the contribution of the NAS in this area, it was suggested that a combined effort involving both the U.S and Soviet Academies be considered with the Japanese contributing intellectual and financial resources as needed.

#### Strategic Planning and Analysis

The group examined the way decisions are made regarding cooperative scientific and technical programs involving the LDCs. Since the LDCs generally lack technically trained personnel, such programs are often directed by outside interests. Moreover, these programs are sometimes poorly conceived since, with regard to S&T, the analytical capabilities of most development agencies are also limited; for this reason, there

DRAFT  
NOT FOR QUOTATION OR CITATION

was consensus on the need to build a better analytical capacity vis a vis science and technology within our assistance agencies. It was also agreed that priority setting must come from within; consequently, it was agreed that local people should be trained and brought into the process of analysis and strategic planning. Further, participants agreed that capacity to conduct environmental analysis is especially important to guide program decisions. In this regard, it was noted that no internationally supported center for training in policy and analysis exists; consequently, a program to help build capacity for analysis and policy would help meet this important need. In those countries currently torn assunder by civil war, a program to train expatriots for future planning might be considered.

Since we excel in systems analysis, it was thought that the U.S. could make a special contribution to programs designed to build capacity for strategic planning. A program to support U.S. experts working in-country for 2-3 years and more was suggested. With regard to tropical ecosystem analysis, perhaps the land grant institutions on islands in the Caribbean and the Pacific could be better used.

#### Unresolved Questions

The group did not have time to consider the specific contribution of appropriate technology to LDC development or the particular role of a number of important groups including: the U.S. universities, the middle income countries (through trilateral approaches), the private sector and multinational corporations, and the local people who need to be given prominence, status, and a sense of participation in their own development.

PROJECT  
NOT FOR REPRODUCTION OR CIRCULATION

### Summary

The key rationale for applying science and technology to development in the least developed countries links environmental concerns and humanitarian interests. Programs should focus on human resource building where the United States has particularly good experience.

Funding has been inadequate and poorly used. New programs, new institutions, and new mechanisms specifically targeted at the chronic problems in these countries are needed. Also needed are both communications networks linking isolated institutions and programs to build indigenous analytical capacity that is required to guide policymakers on the use of S&T.

Working closely with the leadership in the recipient countries, planners must decide what kinds of institutions are needed; they must be prepared to fund them well and to make strong efforts to identify and attract the best people to these institutions.

## Fonts for Wang

Character Set Number	Font name
01	Collegiate PS portrait*
02	Collegiate PS landscape*
03	Letter Gothic 12 pitch portrait
04	Letter Gothic 12 pitch landscape
05	Times PS portrait
06	Times PS landscape
07	Times 12 pitch portrait
08	Times 12 pitch landscape
09	Symbol 12 pitch portrait**

\*Portrait prints vertically; landscape prints horizontally.

\*\*Symbol 12 pitch does not print in landscape.

**Printer number in 'Print Menu' should be Z.**

For Collegiate portrait, use 78 format line with 10 left margin.

For 12 pitch portrait, use 80 format line with 10 left margin; or 75 format line with 12 left margin.

For Times PS, use 75 format line with 10 left margin (= 1<sup>1</sup>/<sub>8</sub> inch left margin); or 77 with 09 left margin (= 1 inch left margin).

*Command Format - to see what PS looks like on the screen.*