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Economic Growth:

Environmental and Social Considerations of Sectoral Reform

Economic growth is critical to achieving USAID's paramount goal – fostering significantly higher levels of material well-being in the countries in which it works. Moreover, growth must be sustained over a long period of time; mining the national patrimony to achieve quick, but transitory, returns is self-defeating. And the benefits of growth must be broadly shared. Experience strongly suggests that when income is concentrated in the hands of a few, societies become unstable, and economic growth slows. Conversely, the emergence of a broad middle class has been indispensable to stability and sustained development.

A rich natural resource endowment does not guarantee a high rate of growth; conversely, resource poor countries are not doomed to poverty – witness the economic successes of Japan and Singapore. But, that said, careful husbanding and prudent use of those resources that are available – and wise stewardship of the environment – are essential for sustaining growth over the long term. Full appreciation of this fact came only relatively recently. Until the mid-1950's mainstream economists held that growth (G) was a function of man-made capital (K) and labor (L). About that time, technology (T) became recognized as a separate factor, and the accepted paradigm became represented as $G=f(K, L, T)$. Environmental awareness grew in the 1960's, and by the late 70's, development economists began seriously rethinking the neoclassical growth model (as summarized above), recognizing that their macroeconomic policy recommendations were incomplete and oftentimes imprecise without do regard for the roles that environment and natural resources play in economic growth. As a consequence, the analytical paradigm was refined in the 80's to reflect the notion of environmentally sustainable economic growth. The new growth model is formally represented as $G=f(K, L, T, R, E)$, where R and E respectively are the stock and quality of natural resources (renewable and non-renewable), and the state of the environment.

While the close association of sound environmental and natural resource management on the one hand, and economic growth on the other, is now widely accepted, daunting strategic choices remain for developing and transitional countries. Historically, the early stages of economic development in many countries have been associated with degradation of ecosystems, a process that unless reversed can depress economic growth, adversely impact human health, generate (or exacerbate) conflicts, and lead to displacement of populations. In short, and consistent with the notion of environmentally sustainable economic growth, efforts to stimulate economic growth undertaken without regard for the environment can, and sometimes do, sow the seeds of their own demise. And even where remedial environmental measures are taken soon enough to prevent that kind of collapse, they generally entail much more expense than what would have been required to avoid degradation in the first place.

Expensive clean ups after the fact are not necessary. As the World Bank notes,

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The “grow now, clean up later” approach to development ... imposes very high costs – costs that could be avoided by adopting policies and programs that prevent serious environmental damage.¹

Beyond economic growth per se, maintaining the quality of air and water and other environmental assets in USAID-assisted countries is necessary for life support, for public health, and to assure that environment continues to provide critical services to growing economies. While the value of those services is not always obvious, the vast sums that countries that have experienced serious deterioration spend on cleaning up environmental pollution and restoring natural resources, in the process diverting their limited financial and human resources that could otherwise have been used to enhance production, is ample testimony to their importance.

Put more succinctly, environment and natural resources matter for economic growth and the well-being of the people of developing countries. They are not just luxuries that only rich countries need pay attention to. Let’s look at some specifics.

- Natural resources – from clean water, to fertile soils, forests, aquatic resources, minerals, attractive landscapes, etc. – are essential production inputs. But they are all in limited supply, and are subject to degradation. Therefore, using them to best advantage, not exceeding the sustainable yield of those that are renewable, investing in resource protection and enhancement measures, and adopting production practices that encourage use of those that are plentiful, while conserving those that are more scarce, permits increases in production and extends the time horizon over which production is possible.
- Well-functioning environments provide a myriad of valuable economic and life support services. Among them are those provided by climatic conditions favorable for agricultural and silvicultural production; by water bodies (rivers, lakes, estuaries, wetlands) that provide favorable habitat for valued aquatic organisms (shrimp, fish, plant life) as well as water resources for human consumption and manufacturing; and by biodiversity, that contributes to ecological stability as well as to tourism, long-term agricultural productivity, and possibly pharmaceuticals.²
- While all productive sectors benefit from inputs and services provided by the environment, resource-based sectors, e.g. nature tourism, forest products, marine products and agriculture, do so the most.
- Catering to environmentally conscious western consumers by producing in ways that conserve natural resources and do minimal environmental damage can enhance growth by serving as an effective strategy for entry into profitable niche markets. This applies whether or not the western consumers themselves actually benefit directly from environmentally friendly production of the products they buy. Frequently, clean producers can demand and receive a premium for their environmentally-differentiated products and services.

Well-designed policies implemented by effective, well-positioned institutions can play a critical role in assuring that environmental and natural resources are available in requisite quantity and quality to support equitable, sustainable economic growth. The best combination of policy instruments to

¹ *Making Sustainable Commitments: An Environmental Strategy for the World Bank*, 2001, page xviii.

² The examples used here were taken from Toman, Michael, *The Role of Environment and natural Resources in Economic Growth Analysis*. The full report will be available as an EPIQ II document in 2005.

be employed is context specific – that is to say dependent on the types of environmental problems encountered, the sources of the problems (domestic, industry, services, transportation, agriculture, etc.), their magnitude, whether they are reversible, those most affected, institutional arrangements and capabilities, social norms, and political considerations. To be effective, donor support programs need to be designed with all of these considerations in mind. Policy types to be considered include:

- Pricing of natural resources used as inputs for production: In many instances, e.g. water and forest products, these are appropriated without payment by small and large producers (and by consumers) as open access resources. In others, they are underpriced as a matter of conscious policy. But such underpricing serves to encourage overuse and use for undertakings that would not be viable otherwise. The end result is that once plentiful resources become scarce and/or degraded.³
- Pricing to assure that those who use the environment to dispose of the waste byproducts of production pay for that privilege. Such pricing can be used to assure that financial resources are available to properly manage solid and hazardous waste, as well as wastewater.
- Establishment (and enforcement) of regulations governing the conditions under which the environment may be used as a sink for the waste byproducts of production. These may require some specified level of pretreatment, or may limit quantities of wastes that can be disposed of, and/or their toxicity.
- Establishment (and enforcement) of regulations governing permissible production processes. These may be instrumental in ruling out processes that are especially destructive of the environment, including those that produce irreversible damage.
- Regulations defining permissible land uses.
- Establishment of markets that cap emissions of specified pollutants, provide the sources of the pollutants with permits to emit specified amounts, and allow such sources to use or trade their permits with each other. Such schemes can be used to assure that the costs of staying within the cap (which itself can be reduced over time) are minimized.
- Schemes for publicizing good (and bad) environmental performance. These may be effective even if environmental awareness is not high;⁴ public approbation or, conversely, shame can be a powerful tool.
- Establishment of facilities to finance “environmental investments” by private entrepreneurs.
- Provision of public infrastructure, e.g. water and sanitation services, landfills, public transportation, etc.
- Establishment (and enforcement) of systems requiring environmental impact assessments as a condition for undertaking investments in plant and equipment.

³ A note of caution is essential here. Imposing prices on resources heretofore available for the taking is difficult at best, especially in countries in which public sector institutions are not strong. Water, for instance, is widely regarded as a gift from God. However, some countries have found ways to move towards a more rational system.

⁴ And, of course, it serves to promote such awareness.

- Provision of information services to assist entrepreneurs select and finance efficient and environmentally benign production technologies, and to better acquaint the general public about current and projected environmental concerns.
- Measures to foster accountability, e.g. via requiring disclosure of resource use and emissions on the part of industries.
- Measures to assure broad public participation in the environmental policy process, together with information disclosure to enable advocacy groups to participate in an informed manner.
- Measures to assure that access rights to land and natural resources are well-defined and enforceable; such measures encourage investments with long-term returns, including investments in protecting resources for future use.
- Institutional reforms to assure that environmental considerations receive due consideration in the policy process, including the formulation and implementation of policies that have non-trivial environmental implications although they are devised with other concerns in mind.

Lastly, it is important to note that sound environmental management and policy not only fosters economic growth, but growth that is equitable. This is because, in many instances, constituencies that ostensibly have little in common have coalesced around the need for environmental policy reform, and successfully advocated for changes that foster equitable access to the resources needed for growth.