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U.S. AID AND GLOBAL CHANGE

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There is a major international as well as national effort at developing global change research agendas. According to NASA, we are now at a point where the global environment is seen from space—reinforcing the “only one earth” concept. NASA, NOAA, and NSF, among other agencies, are developing programs focused on understanding global change and the factors that are bringing it about.

Virtually all of AID's concerns and activities can be related to global change. The processes perceived to lead to or be associated with development (e.g., domestic production and export), are linked to environmental changes at the local, regional, or global levels. Many of these processes are seen to be required for development: the export of timber, the clearing of land for cash crop plantations, the development of irrigation schemes, the tapping of groundwater, and so forth. Each activity has adverse side effects which, if not planned for or controlled, will ultimately contribute to global environmental change. Regardless of where one sits on the political continuum, all observers agree that “you can't do just one thing.” Digging a well has side effects that must be considered for the long-term stability (ecological as well as social) of a region. The same can be said for deforestation or for irrigation. Unwanted side effects include all components of the concept of desertification (wind and water erosion of soil), salinization or waterlogging, declining soil fertility, compaction of soil, changes in regional climatology, changes in regional reflectivity of the earth's surface (called albedo), and so forth. In addition, global changes such as global atmospheric change will have profound but as-yet-known regional and local impacts. It is at these levels that global

change will have its impact. AID's activities are at the local and regional levels, and these activities can provide insights on the global change situation.

AID can be both a source of information (quantitative, qualitative, and anecdotal) about such changes at the subnational levels around the globe, as well as a consumer of such information produced by this newly focused global change research program. AID could become an important part of a worldwide network of global environmental change activities. To this end, AID might seriously consider the establishment of a global change office (or secretariat) to act as a clearinghouse for such information and for involvement in the development of a national and international network.

AID is concerned with development, relief, and rehabilitation. These involve processes directly and indirectly related to food production. Yet, agricultural practices at the local level often lead to long-term constraints on food production in the future, especially resulting from environmental changes. In addition, as populations increase, more land is needed to maintain per capita food production at a constant level, even though such levels may be inadequate for good nutrition for the population. Often marginal areas are put into cultivation. Drought occurrences appear to increase (because people are growing things where they shouldn't be) as do other environmental changes. In time, the area becomes unsuitable for continued cultivation as land fertility and yields decline and as desertification sets in. Populations then ultimately move into areas that may prove to be even more unsuited to mid- or long-term sustainable agricultural production.

What can AID gain from a global environmental change program? AID could have a better view of how to cope with both changing societal factors and changing environmental

factors. AID would, somewhere in its organization, have a holistic view of such interacting processes as social, economic, political, cultural, and environmental factors, and at the highest administrative level, a unit would be meshing together disciplinary and geographic interests of the AID system from Washington, D.C. to the field. Aid for the purpose of sustained economic development is a process, not an event. It must be dealt with as such. No major breakthroughs in development appear to be in the offing, despite decades of attempts by foreign assistance agencies worldwide to pin all their hopes on one potential breakthrough (e.g., the Green Revolution, solar cookers, or cash crop schemes).

This AID global change activity (or unit) would be a key initiative (at a small but sustained and highly visible level) for the AID Administrator. Much of what would be encompassed by a national global change program is already in progress and supported by AID and other agencies (e.g., NOAA, NASA, NSF), although some new initiatives might be required to fill existing gaps in the knowledge base. It will require a new and different administrative unit to take on this suggested global change perspective and to identify for other agencies (NOAA, NASA) what global environmental change actually means in practice.