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THE TRANSITION TO SUSTAINABLE AGRICULTURE:

AN AGENDA FOR AID

- ① List of proposals & recommendations
- ② AID position on activity

Ad Hoc Committee
Proposals
Recommendations

AID Actions or
supporting positions

AID's counter suggestion
or concerns

Draft

**Ad Hoc Committee on
Sustainability in Agriculture**

June 18, 1987

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**THE TRANSITION TO SUSTAINABLE AGRICULTURE:
AN AGENDA FOR AID**

This paper represents an initial effort by a committee from within the environmental, development and private voluntary organization communities to define in practical, non-technical terms what we mean by sustainable agriculture. In that context we have set out what we believe and hope AID should do to help the farmers and, secondarily, the scientists, private organizations, and governments of developing countries make the very necessary transition to agricultural sustainability in a timely fashion.

Objectives

Our objectives are to urge AID to consider the following:

1. Institutionalize sustainability as the norm for all its agricultural programs and policies.
2. Focus more of its agricultural and rural development program on helping farmers of developing countries make the transition to sustainable agricultural systems.
3. Discourage the use of non-sustainable agricultural methods and inputs.
4. Progressively assume leadership in encouraging governments of developing countries, development agencies, and global, regional, and national research organizations to commit significant resources for helping farmers, particularly poor farmers, make the transition to sustainable agriculture.

Our Internal Goals

1. Carry out with AID a continuing, mutually beneficial and increasingly well-informed exchange of views about agricultural sustainability in general and AID's agricultural program and projects in particular.
2. Develop a better capacity to evaluate "in-place" projects focussing on sustainable agriculture, and in particular AID's projects.
3. Utilize our ability to mobilize effective support with Congress for AID's efforts to assist farmers in developing countries to make the transition to sustainable agriculture.

Sustainable Agricultural Systems Defined

Sustainable agriculture is but one, if perhaps the most important, building block for overall sustainable development, a subject which we don't fully address.

We think of sustainability in agriculture as the ability of an agricultural system to maintain production, over time, in the face of ecological difficulties and social and economic pressures. More importantly, from a working viewpoint, we regard sustainable agricultural systems as follows:

1. Systems that maintain and improve soil productivity, (goal) quality, and tilth.
2. Systems that augment the potential for achieving the highest possible efficiency in the use and conservation of basic farm resources (soil, water, sunlight, energy, and farmer's time). (goal)
3. Systems that incorporate as much biological interaction as possible; for example, mulching, the use of nitrogen fixing plants, the use of agroforestry techniques, and the use of intercropping and crop rotations to control pests and weeds. (method)
4. Systems that minimize the use of health endangering and environmentally damaging external inputs (some chemical fertilizers; non-selective pesticides and herbicides; and some forms of energy) and, instead, maximize the use of available, affordable, renewable, and environmentally benign inputs.
5. Systems that avoid the contamination of groundwater by using only those fertilizers, pesticides and herbicides that do not penetrate below the plants' growing zone and then only in controlled doses.
6. Systems that meet the needs of farm families for energy to work their land, cook, and heat from readily available and affordable energy sources.
7. Systems that strengthen communal cooperation, that protect rural survival systems, that through community support and sharing allow farm families to keep going in difficult times (famine, drought, and natural or political disasters), and that make possible effective local management of community-controlled common property resources (ponds, woodlots, grazing lands, irrigation systems) in ways that permit equitable sharing in benefits.

Maintain
Enhance the
natural resource base

The achievement of sustainability and therefore the protection of the natural resource base requires improvement in the lives of the poor majority. Unless there is a significantly greater return for a farmer's investment of time and whatever limited capital he may have, he will have no incentive to adopt ecologically sounder practices. It is because of this that we emphasize the close connection between improving all aspects of the well being of the poor majority (economic, social and nutritional) and agricultural sustainability.

Two additional important elements integral to sustainability which must be developed at other levels are the

1. willingness of research organizations, economic development agencies and banks, and developing country governments and institutions to accept the need for continuing evolution of the concepts and practices of sustainability and to provide long term commitment to their achievement, and the
2. growing need for changes in the attitudes and practices of governments in some developing countries so as not to discourage but, rather, to provide encouragement and incentives for the adoption of sustainable agricultural systems.

We believe strongly that in a world of rapidly growing population pressure and rapidly increasing deterioration of natural resources, sustainability in every aspect of development is an imperative. For us, sustainability in agriculture--nationally and internationally--is vital. In this paper, however, we only address the narrower questions of how AID should carry out its mandate to assist the poor in developing countries and, more specifically, how it does this through its agricultural and rural development programs.

Central to our thinking is the proposition that AID should do much more to make agricultural sustainability a central focus of its agricultural and rural development program; and that given the vital importance of agricultural sustainability, projects to carry it out should enjoy the highest priority within AID, and even precedence over other aspects of agricultural development. We are convinced that in the light of budget cuts, present and possibly prospective, agricultural programs based on sustainability can better meet AID's mandates--in particular poverty alleviation--than can its current mix of agricultural programs. We urge that every aspect of AID's agricultural portfolio be reconsidered to ensure that everything aims at and contributes to sustainability and that nothing is done which detracts from that objective.

To achieve sustainability, we urge AID to concentrate on what it does better than other things (human development) and on what most needs to be done (offering techniques which make sustainability possible under present conditions and limitations available to the poor majority of Third World farmers). Poor farmers need not only new techniques but also a limited number of additional resources of the kind that PVO's and community organizations can provide. With few exceptions, however, other important and more expensive agricultural development programs should be left to the World Bank, the regional banks, and other bilateral and multilateral givers of economic assistance.

Fortunately, a transition towards sustainability as a central focus for AID should be relatively easy, for in our view AID is already embarked on the right ship. To its credit, AID has already thought more and done more about agricultural sustainability than most development institutions. In a few good projects it has dealt creatively with sustainability. Many of AID's agricultural and natural resource management specialists and policy makers accept and even advocate giving sustainability a central place in its agricultural programs and research. A growing number have practical experience in its application. And AID's present portfolio of agricultural, rural development, and natural resource projects provides a good base for expansion in the right direction.

AID's most recent high-level formulation of agricultural policy, "Focus for Agency Agricultural Programs" dated May 1, 1987, reflects, in our view, important policy elements that favor sustainability: "maintaining and enhancing the natural resource base", a mandate that surely encompasses all or most aspects of sustainable agricultural systems as we see them, and a concentration on the "poor majority" of Third World farmers.

not just farmers

However, we believe that this policy statement should be slightly expanded. First, there is no recognition of the centrality of agricultural sustainability per se. Also the goal "to increase the incomes of the poor majority and to expand the availability and consumption of food" (presumably for all Third World people, not just farm families), while important to include, is not comprehensive enough. We recognize that poor farmers without income are too often just on the fringe of some market economy and, therefore, at a disadvantage in acquiring the things they need for a better life, let alone new technology that could help them achieve sustainability. However, in our view even more important than cash income for many poor farmers is food security. This concept is possibly included in AID's definition under "food availability" but the statement should be expanded in our view specifically to recognize the importance of food security. For poor farmers, the imperative must be to feed their families in good times and bad; however, a second imperative, both for them and for us, must be to do so in a way that does not degrade the lands they farm.

*Availability
~?
Security*

In our view, the focus statement has another shortcoming. It does not seem to reflect the importance of increasing farm productivity (not production), productivity which can and must be increased within sound environmental bounds if poor farmers are ever to achieve a better life. We believe that sustainability must encompass this concept of both increased productivity and increased economic return for poor farmers. Even the poorest have a desire to improve their situation and not remain just marginal farmers.

Despite favorable attitudes and some good projects, we fear that AID's commitment to agricultural sustainability is still fragile and still lacks the institutionalization which will ensure its survival and bureaucratic prosperity. AID's work on sustainability is still spotty. It is not yet conceptualized as it relates to every aspect of agriculture. It is not yet well enough integrated with AID's broader-based efforts to improve natural resource management and not well enough linked to programs in forestry and watershed protection. Furthermore, it is not yet well enough networked as a separate, complicated multi-sectoral discipline in a way that the lessons AID and others have learned about agricultural sustainability become part of the Agency's institutional memory and are easily available through its computer network.

Another weakness that AID shares with other development agencies and the global academic community is the difficulty of designing and then implementing true cross-sectoral projects in sustainable agriculture. The reductionist trend in the academic world has left its mark on most professions represented in AID. It's still difficult, for example, to get crop-oriented agronomists to work closely with foresters. Agriculture and natural resources management are too often perceived as being separate sectors. While AID had made progress in overcoming inter-professional distrust and lack of understanding, it still has a way to go as do too many of its frequently used consulting firms. Strong interdisciplinary leadership is still badly needed.

Most important of all, we believe that AID's first need now is to gather and analyze its rather disparate experience and then determine how best it can adapt this experience to the many agricultural environments in which it is working. The United States knows enough about agricultural sustainability to make major contributions now.

Unfortunately, as far as we can determine, AID has yet in any country to carry out enough agricultural projects where sustainability is a major focus to have more than very local impact, let alone regional, national, or international impact, or even real impact beyond a narrow circle of experts. In our view there is an urgency about mounting efforts to promote one aspect

of agricultural sustainability largely overlooked by AID--by indeed other development agencies too--and by Congress: the fate of the poorer farmers on the more fragile lands who too often unwittingly contribute to the destruction of the very natural resource base on which their own families (and, ultimately, people in their own country and beyond) must depend for food. Heretofore, ecologically sustainable methods of slash-and-burn with long rotations were available to farmers cultivating poorer lands on every continent, although it must be admitted that their standard of living was both economically and nutritionally poor. Today, however, the growing number of farm families and the lack of land for long rotation makes even this relatively unsatisfactory method difficult and even impossible.

GUIDING PRINCIPLES FOR AGRICULTURAL SUSTAINABILITY PROJECTS

We suggest six general principles to guide AID's work in agricultural sustainability. None of them is new to AID, but all need reinforcement.

1. Concentrate major effort on developing the human and material resources necessary to put sustainable agriculture systems within the grasp and understanding of poor farmers. This means, in part, more AID attention to participatory and "bottom up" work with farmers. *training,*
2. Defend the existing natural biological diversity of agricultural areas in all AID's agricultural and rural development policies. For us this means, inter alia, moving from promoting large-scale monoculture to greater utilization of polycultural methods. While institutionalization of polyculture on a farm-by-farm basis is not realistic, nevertheless for both ecological and nutritional reasons, greater introduction of a broader crop base on at least a community-by-community basis holds real potential.
3. Enlist American private voluntary organizations (PVOs) in the effort to help poor farmers adopt technologies of agricultural sustainability AID should be more imaginative and determined in its effort to recruit or develop indigenous PVOs for this task.
4. Maintain a high level of support for research that emphasizes sustainable agricultural systems, particularly as it affects farmers on fragile lands.

*Tropical soils -
Biol-N. fixation
crops adapted.*

5. Assume a greater leadership role in promoting sustainable agricultural systems: with Congress, with those in the American agricultural, scientific, and academic communities concerned with Third World agricultural development; with other development agencies, specially the World Bank with whom AID should develop joint or parallel programs; and with Third World governments and appropriate private institutions in the developing countries.
6. Long-term public commitment to programs and projects in support of agricultural sustainability, a commitment, if possible, backed up by Congress.

This is specially important in this day of changing AID priorities and funding levels. One of AID's principal weaknesses in rural development has been its failure to spend the necessary time and resources to bring projects to fruition and then see to the wider adaptation of the lessons learned. It often takes years and some false starts before cultural, political, economic, and agricultural structures are understood and impediments to success are mastered. An agricultural project--in fact, any development project--cannot be said to be "sustainable" in our view until there is a high probability of an ongoing flow of benefits to farmers once AID stops its assistance. This means in practice that trained and competent local people are in place who can carry out the functions (including support and encouragement) that outsiders formerly filled and that an institutionalized provision of necessary resources, such as money, technical assistance, and encouragement continues to be available.

We will have more to say about these principles later in the context of suggested AID programs. However, human development is so central in our view to AID's mission and capacities that a few basic thoughts on this subject seem warranted at this point. First, there can be no doubt that the human problems of getting sustainable agricultural systems adopted by farmers and accepted by governments is an even harder task to accomplish than finding technical solutions. Typically, AID experts and others well-grounded in sustainable agriculture tend to be relatively clear about the technical aspects of this problem, but less clear about how to go about solving the human problems. They quite correctly point out how "site-specific" each project must be in human as well as in ecological terms.

Second, at the level of the farmer, we know of very few occasions when farmers have accepted the new disciplines and additional complexity of sustainable systems until they were up against a wall--from drastic and consistent reduction of productivity, from getting sick (or their families getting sick) from farm chemicals, or, in the case of a very small number of richer and better educated farmers, from being convinced that only thus could they help stave off financial ruin.

Third, and closely related, the economics of sustainability are as important to the subsistence farmer as to the more favored farmer. Farmers' willingness to adopt sustainable practices depends more on whether it is profitable than whether it is environmentally sound. The interrelationship between profitability and sustainability is not always apparent to the poorer farmer, but this must be at least the initial focus of how sustainability is presented.

Fourth, perhaps the hardest of all in human terms is finding ways to present or help present the methods of sustainability to farmers ("extension"). Methods acceptable both to the farmers themselves and to central government authorities have proved very difficult to devise. Central government controlled and financed extension systems on the US/European models have very often proved too expensive in terms of recurrent costs, and quite often unacceptable to farmers who resist close contact with agents of the central government. Nor have these systems been particularly efficient. At the root of these problems is the global rural/urban split, sometimes complicated by ethnic or religious factors. The answer to this problem, as with many others, seems to lie in Third World governments encouraging a greater degree of decentralization and rural empowerment. Unfortunately, we can find very little formal reflection of AID's understanding of this latter highly political aspect of the urban/rural problem.

One more aspect of human development policy to which we attach particular importance needs to be underlined: AID's agricultural program must, in our view, have an even stronger grounding in the collaborative and participatory approach. AID's basic task should be to orient and then to train developing country people at all levels in the potentials, problems, and procedures of sustainable agriculture. AID seems well launched

¹The term "extension" is used for shorthand purposes though it too often has for Third World farmers a strong connotation of American and European cultural bias.

into collaborative work at the governmental and technical levels in developing countries. However, despite good rhetoric, not enough has been done in our view to ensure "dirt farmer" input into program adaptation. Not only the awareness and sensitivity of the cultural anthropologist is needed. Also, the techniques of soliciting the farmers' own perceptions of their capacities and enlisting their "ownership" of whatever is new needs much more attention. The farm family and then the village and its chosen organizations must be the most important objects of AID's attention. Respect for farmers' understanding of their own environment and of rural values generally, including very specifically the crucial role of women, is essential. *farmers' support*

Projects aimed at sustainability, while necessarily complex and multi-faceted in design and while ideally bringing to bear inputs from several scientific disciplines, must fit the farmers' available time, must build from existing farm practices, should support existing survival strategies, and must be simple enough to be credible and understandable. Building simplicity out of complexity is admittedly a very difficult task.

All projects should be low cost, from the farmers' perspective, and be based on adapting proven technical packages to local environments. They should build from existing farm practices and should use only easily available, affordable, and environmentally safe inputs.

In designing and carrying out agricultural projects, AID must ensure that benefits are equitably distributed. This is a vital element in sustainability. It must also ensure, as some donors have not, that existing common property rights (communal woods, ponds, irrigation systems, grazing areas) are respected and that the costs of adopting new techniques do not unfairly fall on any particular group.

OTHER IMPORTANT AID PROGRAMS AFFECTING RURAL DEVELOPMENT

AID has other rural development programs which are important to achieving sustainability, which we endorse, and which we will discuss later: population programs; rural reforms by central governments, sometimes supported by AID subsidy; and, very specially, land tenure and land entitlement programs which give landless farmers the incentive to protect and build up the lands they farm.

Other very valid aspects of AID's rural development policy are covered only in passing in this paper: health, general education, women in development, nutrition, farm housing, etc. We do not downgrade the importance of these programs but choose not to discuss them in detail in order to concentrate attention on the ecologically oriented aspects of rural development.

We recognize that there is a complex set of interrelationships between and among all facets of rural development. However, we urge, on the basis of AID's unhappy experience with the too broadly conceived "integrated rural development projects" of the '70s, that at least at first projects focussed on achieving sustainability should not include too many components. AID in any given village where it is involved in agricultural projects should normally introduce additional components such as assistance to health and education only incrementally and as farmers and their families grow into the system. There will be exceptions, particularly with PVO-run projects, but the general rule still holds.

WHAT AID SHOULD NOT DO IN RURAL DEVELOPMENT

AID's work in helping farmers in developing countries make the transition to sustainability in agriculture is so important that it should largely leave to other development agencies most other approaches to agricultural development, particularly those involving the construction of "public works": engineering rehabilitation of major irrigation systems; rural highway construction; agricultural storage, if this involves major construction; and the construction of buildings for government research and government services. The World Bank is usually willing to finance such "bricks and mortar" projects and, in fact, usually does them better.

In sum, we repeat our view that AID should focus its agricultural programs and projects on introducing sustainable systems; and in doing this, by concentrating on what it does best; on what most urgently needs to be done; on what other development agencies cannot do as well; and on what it can find the resources to do. On all counts, helping teach people at many levels to adapt to the many ecological and economic situations in which it works the new techniques of sustainable agriculture fills the bill.

SPECIFIC ELEMENTS THAT SHOULD BE INCLUDED IN AID PROJECTS

The following pages include a list project elements that we believe will advance agricultural sustainability. It is meant to be suggestive rather than all-inclusive. Some project elements could and do appear under more than one heading.

We use the term "project elements" to emphasize the need, for example, not to have soil projects as such but rather to include elements dealing with various aspects of soil conservation or productivity in every agricultural project.

Maintain & enhance the natural resource base

SOIL: Systems and Project Elements Which Conserve and Improve Soils

Soil conservation is an area of special American expertise. AID has been relatively strong in soil research and mapping but weak in soils management conservation.

In our view, not enough has been done to introduce simple, cheap soil conservation techniques into AID agricultural projects, with the exception of a few good PVO-sponsored projects. This should include:

- o Protection against water erosion: planting ground cover; tree planting along terraces; bench terracing; bunds on steep areas; check dams; infiltration ditches; terrace construction, when cost-efficient or when built as the result of village decision; gully plugs; low dams; stone and trash lines; minimum till; alley cropping.
- o Protection against wind erosion: dune stabilization by palisade construction and tree planting; trees for wind breaks; planting of ground cover.
- o Restoration and maintenance of soil fertility: use of mulching; crop residues; animal and "green manure"; dispersed farm tree planting and other agroforestry practices; methods to increase organic content of soil, particularly in arid and semi-arid zones.
- o Restoration of abandoned lands.

Almost all soil preservation and restoration projects involve substantial investment of money and time. Some are relatively cheap (trash lines) and some expensive (terracing). Outside financing is very often necessary. However, such projects should not be undertaken unless farmers are genuinely convinced that such projects are in their vital interest, make a strong case for them, and are willing to invest their own time and even some funds in their construction and maintenance. We believe that major attention should be given in all AID's agricultural programs to basic, well-understood soil and water management as an integral part of all that AID does.

CROP SYSTEMS: Project elements that adapt to local use crops and cropping systems (a) to increase productivity or crop security, particularly in difficult environments (low rainfall, poor soils, etc.); (b) to augment soil fertility, (c) to reduce the need for outside inputs for pest and weed control; and (d) to improve the quality of rural life (better nutrition, sources of cash income to purchase inputs, basic goods not produced on the farm, and amenities).

Nitrogen-fixing Crops

- Crops that reduce the need for fertilizers whose use leads to nitrate pollution or the destruction of soil structure or quality.
- Nitrogen fixing systems: alley cropping; use of nitrogenous trees; leguminous cover crops, etc.
- Systems that provide for better crop spacing, better timing of planting, intercropping, crop rotation, and use of biological interacting plants for weed control.
- Low till systems.
- Improved crops which have been adapted to acid, saline, or other problem soils, which increase drought and stress resistance, and which increase pest resistance, thus reducing the need for those pesticides which destroy pest predators or pose health risks.
- Relay cropping, polycultures, and crop rotation.
- "Minor" crops, both annuals and perennials, that provide better farm diet or that can be processed to provide cash income, including honey, gums, tanning, edible seeds, fruits, leaves, bark, and fibers.
- Agroforestry combinations, including forest and home gardens, particularly for moist tropical forest situations, where on-farm production can also provide wood, forage, fruits, medicines, and other products; project elements which will make it unnecessary to resort to primary forest destruction.

- Incorporation of animals including small ruminants and fish (aquaculture) into farming systems to provide power, organic fertilizer, and new sources of food.
- Incorporation of tree or other plants or animals which can be processed on the farm for cash income at periods of cash shortage.

We support the introduction of more productive and more sturdy species which are developed through agricultural research when and if they meet actual farmer requirements. However, we urge that AID not wait for "the perfect species" and put less emphasis on crops as commodities and more as part of a total farm system. We support the move away from monoculture and towards the preservation of crop progenitors.

WATER MANAGEMENT: Low cost systems or techniques which provide for conservation of water and improved and locally controlled water management at local village level.

- Small scale irrigation systems, including systems which prevent salinization, waterlogging, and water borne diseases.
- Watershed management and runoff control on or above village lands.
- Deepening of wells and low-cost pumping.
- Dry land techniques for water conservation: field grid systems, water spreading, water channelling, and water harvesting (infiltration) systems.
- Water storage conservation methods.

ENERGY: Project components and systems which meet needs for energy at the farm or village level (preferably from energy), renewable energy sources for reducing the burden of heavy farm work, for heating, and for cooking.

- Introduction of draft animals (absence of good or cheap animal fodder is often the chief constraint).

- Home and village tree planting for fuelwood (often a by-product to the production of construction materials, animal fodder, food, and the provision of space).
- Biogas digesters (also supply nutrient rich slurry), bicycle power, etc.
- Solar energy for crop drying and preservation.
- More efficient use of biomass fuels through better stoves, improved techniques for the production of charcoal, etc.

WETLANDS, COASTAL SYSTEMS, FORESTS, AND GRASSLANDS: systems and techniques that provide for sustainable use and protection of village-exploited forests, aquatic systems, and grasslands.

- Improved management of natural forests and equitable distribution of benefits.
- Improved management of wetlands and coastal systems.
- Development of local fisheries, particularly as a supplemental source of farm income and better nutrition.
- Rangeland rehabilitation (AID should also continue some practical experimentation to find more efficient traditional range management systems despite widespread failures to date).

*no
trivial
grazing
patterns*

RURAL SUPPORT: systems and techniques which make possible more efficient and equitable village-level support of agricultural production, storage, and commercialization.

- Farm or village level crop storage.
- Locally controlled marketing systems.
- Local solutions to meet the need for more cash at the time of purchase of seeds and other inputs through the

planting of supplementary cash crops and the establishment of local micro-enterprises to process agricultural products (too many top-down farm credit systems have proven to be unsustainable because of high cost and difficulty of financial control and repayment).

- Locally controlled means of purchasing and reselling needed farm inputs.

RESEARCH

- AID, as a matter of high priority, should restore its previous level of financial support to the CGIAR research institutions and a limited number of other research institutions like ICRAF, the International Fertilizer Development Center, and CATIE. While some of these organizations have made a start in addressing sustainability, AID should continue to use its intellectual influence and financial leverage to persuade them to concentrate more of their time and attention specifically on sustainable agricultural systems and on helping the poorer farmers on fragile lands to increase their productivity and food security. These research institutions should be encouraged to find better ways to get meaningful inputs from dirt farmers themselves; from the outset of research planning to the adaptation of this research to various ecological situations, farmers must be involved. These research institutions should continue to concentrate their genetic research on plants which can resist climatic and soil stresses as well as combat pests and weeds. They should be encouraged to be more imaginative and creative in finding ways to deliver the fruits of their research to farmers when Third World government research and extension services are weak or unpopular with farmers.
- We urge continuing attention to collaborative social science research related to the establishment of sustainable agricultural systems. Two important subjects that come to mind are (1) how to measure success in achieving sustainability (both human and agronomic indicators), and (2) the attitudes of various governments to decentralization and empowerment of rural citizens, information which is vital to planning successful programs in sustainable agriculture.
- We agree with AID's policy of helping to build up national or, in some cases, regional research capacity. AID has already decided it cannot help

build research centers in every country, but rather that it should concentrate on helping countries with the most promise and potential for efficient regional outreach. AID should encourage research institutions to move away from classic export-crop and commodity-oriented research towards giving more attention to the problems of the poorer farmer and to helping solve the problems of transition to sustainable agriculture.

- So far, US academic commitment to agricultural sustainability is thin, and AID should encourage the U.S. academic community to move faster towards a multi-disciplinary, sustainable approach to Third World agriculture. In this regard, we consider BIFAD to be an important vehicle for encouraging collaborative research between U.S. academic institutions and Third World scientists working on agricultural sustainability.
- AID should continue and even accelerate its efforts to encourage, train and utilize American academic experts on both the biological and social scientific aspects of agricultural sustainability in the developing world. While individual experts in the various disciplines involved in designing and implementing sustainable agriculture systems are available, there are fewer American academic experts on country-specific agricultural problems. AID should help create and then use a few centers of excellence where all country-specific aspects of development, including in particular agricultural sustainability, will be studied.
- Closely related are efforts, in which AID has played a pioneering role, to support networking, data gathering, and retraining of scientists, all related to sustainability. AID should also continue to support the growing and laudable trend towards scientific exchange and cooperation among developing countries, which cooperation is already quite effective among some countries in Asia and Latin America. AID should continue to find ways to support individual scientists in developing countries who have shown real understanding of the problems of sustainability.

We would not presume to be much more specific about the agenda which the various research institutions we have mentioned here should follow. This agenda must vary widely from institution to institution and we don't pretend to know enough to make firm recommendations. However, there are common characteristics that we believe research projects should share: solid grounding in farms systems analysis; a broad interdisciplinary approach; and continuing participation in refocusing and adaptation by farmers themselves.

A few research topics which we believe should continue to receive special attention are:

- Designing "no-till" systems which don't depend on chemical herbicides. > ?
- Further research and dissemination of successful tropical agroforestry models, and finding and developing fast growing woody perennials adapted to the various ecological situations in which AID works.
- Finding low-cost and widely available ways to provide basic soil nutrients, particularly phosphorous, to poor farmers in order to avoid the need to import costly fertilizers.
- Testing of systems of resource-conserving range management which will be acceptable to migratory herdsmen. > ?
- Confecting systems of low-cost integrated pest management which do not rely on harmful or costly chemical pesticides.
- Discovering low-cost ways of measuring and monitoring water output from shallow aquifers.
- Developing additional and lower cost sources of farm energy.
- Comparisons of total performance of a large number of low-cost, projects (in AID and elsewhere) with that of conventional high-input agricultural systems.

ADAPTATION AND SPREADING OF SUSTAINABLE FARM TECHNIQUES

("EXTENSION")

- We applaud AID for beginning to move away from financing and then relying on classic Third World extension services, patterned after US models, models which have progressively fallen into disuse here. We encourage AID to move creatively farther and faster in the direction of perfecting imaginative "bottom up" modes of helping farmers to adapt sustainable agricultural systems through utilizing local "NGO's" as well as new uses of mass communications and even the formal educational systems at local levels. Better utilization of local people who understand and are dedicated to sustainability, people who have a superior knowledge of local culture, appears to us to

be the best way to mobilize these absolutely vital local human resources.

- We believe that almost invariably the best base for success in reaching large numbers of poor people for the adaptation and teaching of new techniques is participation by farmers at all stages of research and planning and, of course, implementation by farmers and their chosen organizations. This must be accomplished at the village level and through choosing credible (to farmers) organizing groups of manageable size. AID should have more "barefoot" seminars on agricultural sustainability.
- AID should expend a lot more effort in helping to build local institutions. We recognize that the selection of local cooperating organizations is messy, highly pragmatic and almost site-specific. Usually, but not always, the best group to choose is the one that is most widely supported by the farmers themselves: farmers' cooperatives or unions; women's groups, particularly where women do most of the farm work; village councils; and religious groups. If no appropriate group exists, we believe that AID should help create one.
- But AID's working at the level of individual villages won't solve the problem of spreading new techniques more broadly. At this stage, AID does not have the money to tackle the problems of sustainability in all villages of a country or even a region. Nevertheless, even while working at the village level, AID must aim to construct solutions which are of broad enough applicability as to be widely acceptable in a large number of villages and which need only small low-cost local adaptation. For the moment, AID must realistically look to cooperating organizations - and cooperating donors -- to shoulder the broader dissemination of information on new and proven systems and techniques more broadly. This further means that project methods and results must be recorded a way which can be widely understood and then made widely available.
- Typically, the most difficult problem in bringing about proper acceptance of proven systems and "technical packages" is finding more widely based regional or national groups with the technical skills, governmental receptivity, and financial strength to act as conveyor belts to reach new farmers' groups. We believe AID is on the right track in turning for this purpose to:

- US private voluntary agencies; ✓
- "Indigenous" PVOs with national or regional reach;
- The US Peace Corps; ✓
- The African Development Foundation; ✓
- The World Food Program; ✓
- IFAD;
- Local university outreach programs;
- And, increasingly, local private sector channels, particularly in Asia.

- AID should give greater emphasis to in-country training of people at every level involved in agricultural sustainability: government officials, indigenous NGO and PVO leaders. They need to be helped to get information about the need for the ready availability of many sound soil, cropping, water management, energy techniques that protect fields, forests, rangelands, and aquatic systems.

- Reliance on any single group or combination to do the whole job in any given country is impossible today. There are limits in the case of each of these categories of cooperants, usually self-imposed, on their capacity for expansion. We recommend that AID urgently make more systematic efforts to identify organizations, particularly local PVO's, which can effectively play this role. AID should help in training them technically and financially. We also urge that AID do even more to encourage reluctant developing country governments to look with a kinder eye on the use of such groups, particularly local groups. Finally, we urge that AID identify and seek to remedy constraints that make it difficult for PVOs to use their funds efficiently; that it make a careful survey of success stories in the use of PVOs in achieving sustainability; and that it examine how it can help give the better indigenous PVOs the financial stability which will attract and keep good people.

- As a very central point, given the fact that AID will be depending increasingly on PVOs, American and indigenous, we believe that AID should reassess and rationalize its methods of working with them. Every effort should be made to be more flexible and encouraging. For example, we believe that matching fund requirements should be relaxed for AID-PVO cooperative activities involving agriculture and forestry just as it has done with child survival programs.

AID'S NON-AGRICULTURAL PROGRAMS CLOSELY RELATED TO AGRICULTURE

We strongly support the following programs:

- o Land reform or, where communal property is firmly rooted, more security for farmers in their tenure; the purpose of such measures is to give farmers a sense of ownership and responsibility for the land they till so that they will, among other things, not disincentives against protecting the natural resource base of their lands.
- o AID programs proposing and supporting, through structural adjustment and reforms or otherwise, a whole series of changes in governmental institutions and policies which could help or hurt the cause of sustainability (agricultural pricing, agriculture taxes, abolition or limiting of cheap food imports, changes in government agricultural institutions, and abolition of subsidies which will discourage farm populations).
- o Population Programs: including demographic studies to determine the impact of population trends on agricultural sustainability. Reducing overly rapid population growth is one of the keys of the transition to sustainable agriculture in many parts of the world. Even in areas where the lack of population could be a constraint on agriculture, the ability of farm families to decide on family size will be a factor for stability.
- o Health: particularly infant health.
- o Education
- o Women in development programs.
- o Non-farm rural employment and other programs which improve the quality of rural life.

INSTITUTIONALIZATION OF SUSTAINABLE AGRICULTURE

Experienced AID observers all agree on one thing: the surest way to ensure that AID moves more rapidly toward effective incorporation of the principle and practices of sustainable agriculture into all its agricultural and related programs is to institutionalize the principle by bringing it into every aspect of AID activities: personnel recruitment and assignment; training; promotion; policy formulation; planning at individual missions, as well as central planning and budgeting; planning and coordination with other donors; and, very important, policy and technical discussions with developing countries.

As with any key program, AID's program for agricultural sustainability must receive increased resources, money as well as personnel, if it is to succeed. A major effort should be made by AID, particularly in these times of budgetary stringency, to convince Congress of the priority and importance of U.S. support of agricultural sustainability, inter alia as a key element in the protection of our own national interests. Private American organizations, like those which participated in the formulation of these views, should be asked to lend important support with Congress. AID should particularly examine one instrument for giving greater support to this effort, Public Law 488. We believe that greater use can be made of funds so generated for support of agricultural sustainability without creating dependence on imported food stocks.

AID must also take the lead in convincing other development agencies to support sustainable agriculture. AID has a comparative advantage over other donors in helping developing countries make the shift toward agricultural sustainability. In addition to sharing in the U.S. national advantages in adapting agricultural advances to many situations, it has other strengths: the presence of AID field staff which can monitor and encourage promising initiatives (although field staffs are being cut too rapidly under present budgetary pressures); ability to mobilize grant funds and PL-488 counterpart funds to help meet local costs; a dynamic relation with U.S. PVOs which allows creative spread of sustainable agricultural concepts; the willingness to help build cooperating nongovernmental organizations in developing countries; and the ability to work closely with experienced people in American academic and scientific institutions in networking with developing countries.

AID also has some distinct disadvantages: growing budgetary limitations; personnel ceilings; and, perhaps as serious as any, Congressional restrictions on AID's activities.

Personnel

Most of AID's younger generation of agricultural experts -- now in the majority -- are firm believers, at least in theory, in the centrality of sustainability to agricultural development. The trouble is that AID does not yet have enough field-based agricultural and especially natural resource experts: to plan the kinds of projects we have described; to inform and motivate developing country counterparts; to keep close touch with farmers and their organizations; to monitor U.S. and other agricultural and natural resource projects and programs; and to seek, evaluate and disseminate the successes and failures of sustainable agriculture. Unfortunately, the number of experienced in-house agriculturalists is shrinking, and AID never had a sufficient number of natural resource specialists. Without trying to quantify exactly how many such experts should be stationed in

Washington or in a given country, we believe that every mission where there is a serious agricultural-natural resources program (and with limited exceptions that should include all AID missions) should have one or more resident experts. AID should make special efforts to recruit more of the kind of people who understand the participatory approach such as ex-Peace Corps people. AID should also encourage American PVOs to help in training local experts skilled in the agronomic and human skills of sustainability.

We strongly urge that Mission Directors and, in fact, all AID personnel be judged for promotion in part on their ability to support sustainable agricultural projects. This means, unlike what is the case too often today, seeing such programs through to a successful conclusion, not just designing such projects and getting them underway.

We recognize that AID should and will have to rely heavily and increasingly on outside experts from the U.S., other developed countries and from the Third World, from a few excellent agricultural development institutions, from free-standing groups of consultants, and from the academic community to carry out its agricultural programs. We urge discriminating emphasis in selection of these experts on experience and performance and not on their institutional affiliation as such. We also urge a careful review of the criteria for selecting "IQCs" to ensure that agriculture consultants so chosen are truly qualified in the principles of sustainability.

We urge AID to sponsor a growing number of regional workshops on sustainability in agriculture, some quite specifically on sustainability for farmers on fragile lands. AID should also hold or sponsor more interregional workshops in Washington. These workshops should include people from all regions, all bureaus, Congressional aides, PVO and NGO representatives, and outside experts.

AID Policy and Planning: In Washington and in the Field

We believe that AID has made a good start in formulating policy on agricultural sustainability. Nevertheless, we believe that AID's working consensus has far outrun written down policy in both detail and creativity, particularly in the good agricultural and natural resource policy statements of some regions. As already indicated, we believe that AID's new agricultural focus statement should be expanded. We urge AID within the coming months to make new efforts to formulate global and regional agriculture policies which will, to a greater extent, reflect the centrality of sustainability. This theme should also be reflected much more specifically in Congressional presentations.

We urge that more of AID's centrally funded agriculture and natural resource projects be focused specifically on sustainability and be mutually better integrated.

With growing decentralization, a major emphasis on agricultural sustainability in the planning and allocation of funds by AID missions is essential to institutionalizing sustainability. Some missions--reflecting the experiences and predilections of top staff and often the views of host-country government--put more emphasis on sustainability than others. We urge AID in its screening of mission Action Plans to insist that missions include proposals for projects and project elements that address agricultural sustainability. Furthermore, we believe every mission should have at least one ongoing program which addresses at the national level one or more of the more serious natural resource conservation problems related to agricultural and rural development. Individual Country Development Strategy Statements as well as the guidance for preparing those statements should also be reviewed to ensure they have taken agricultural sustainability and particularly its natural resource components fully into account in their longer range planning.

We urge AID to push on toward completion of Phase II of the Congressional mandated program for financing the writing of environmental profiles for developing countries. These profiles, appropriately done largely by experts from the country being studied, should be required to put new emphasis on natural resource problems associated with agricultural sustainability. The same should be the case with AID-financed National Conservation Strategies.

AID Leadership on Agricultural Sustainability with Developing Countries and Other Donors

Outside but more often within the context of their projects, AID, Embassy, and other U.S. officials have a continuing exchange of ideas and proposals on agriculture and related subjects with officials of the country to which they are tied. These discussions range from macro-economic aspects of economic policy and reforms--in or out of fundamental discussions on structural adjustment or reforms--to quite technical discussions among experts. Sustainability in all its aspects should be central to those discussions. We also urge that AID generate good discussions of the demographics of agriculture and its relation to population programs.

We recognize the difficulty of persuading other givers of economic assistance fundamentally to change the course of their development assistance programs and to undertake programs and projects to which they are not politically, institutionally, or intellectually committed. However, agricultural sustainability

and natural resource protection are themes whose time has come, and other donors--and some of the more advanced developing countries like India, China, and Thailand--have very important contributions to make. We urge that agricultural sustainability--and not just agriculture--should be the theme of regular exchanges of information and views with and among donors and of attempts to avoid unproductive donor duplication and rivalries, both in-country and on a more global or regional basis. AID should also, in this period of budget austerity, interest other donors in financing projects for the spreading of sustainability solutions, once such systems have been proven in various environments. This should be particularly so when AID doesn't have the money to do the job itself. AID should urge the OECD's Development Assistance Committee (DAC) to hold a special session dedicated to sustainability. AID, in reviewing World Bank and other regional bank projects, should give special emphasis to those institutions' performance on sustainability.

Finally, we urge that AID produce an annual state-of-the-art report on its and other's experiences in finding successful techniques and ways to get them adapted and adopted. PVO experience in this regard will be particularly important.

Bitt

See Inside - attached ^{meeting}
"The Transition to
Sustainable Agriculture
An Agenda for A.I.D."

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DEVELOPMENT

August 7, 1987

Duane Acker
Agency for International Development
Bureau of Science and Technology
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Washington, D.C. 20523

President:
Brian W. Walker
Director,
North American Office:
David Runnalls
Chairman:
Robert O. Anderson
Vice-Chairman:
Abdlatif Y. Al-Hamad
Chairman of the Council:
Maurice F. Strong
Treasurer and Chairman
of the Executive Committee:
Sir Arthur Norman

Dear Duane:

I am sorry you were ill and unable to attend our meeting on July 31, 1987. From our point of view it was an excellent meeting which showed a lot of good preparation on the part of your people.

We reached substantial agreement on the broad principles laid down in our June 19 paper "The Transition to Agricultural Sustainability: An Agenda for A.I.D." We agreed that we would consider reworking the areas where your people thought our paper did not do full justice to AID's efforts to work towards agricultural sustainability.

We are anxious to get a marked-up copy of our paper with all of your suggestions. We would, in fact, welcome any suggestions, formally or informally, about parts of the agenda that we have suggested which might for one reason or another be better expressed or, in fact, might be better addressed by the World Bank or one of the other development agencies or international financial institutions. I would appreciate receiving any comments your people may have, formal or informal, as soon as possible since we have a short time before we must give our views to Congress in early September.

One of the points made by your people that needs further consideration was the thought that more work on agriculture sustainability might be having to do less with other priority areas.

Rec'd in S&T/FA

AUG 13 1987

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Duane Acker
August 7, 1987
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However when we discussed this point further it was clear that we couldn't go beyond these generalities because it was first necessary to have a better idea of your thinking about priorities and how you felt the various aspects of sustainability fit into AID's other agricultural objectives and with what priority. Any indications that you can give us on that subject would be most welcome.

① Two suggestions were made for future work and we are anxious to move forward. The first was for a joint study of third world voluntary organizations and nongovernmental organizations. Representatives of the developmental, environmental, and American PVOs on our committee who were present noted that some AID missions had been very creative in finding, and in some cases, even creating new host government organizations for assisting technology transfer at the village and regional levels and in organizing farmers for development. However, it seems clear that no one has of yet a clear idea of how often this kind of work is being done in various countries and with what results. Nor was it possible at present to get this information from your computers. It is the very clear view of our organizations that further and even more imaginative and generalized use of host country "PVOs" at the local and regional level is vital for reaching working farmers. Also from a practical point of view, if, as it seems more and more likely, AID continues to have to cut field staff, it will be increasingly necessary to mobilize PVOs and NGOs, American and Third World, to help carry out our agricultural development program.

In that light, we urge AID to query its missions and offices about which third world PVO's they are working with, both directly or indirectly, and through U.S. PVO's in other ways; how well they judge these organizations to be performing; what attitudes each host government takes towards working with local PVO's; and how, if at all, those governments try to restrict or regulate such cooperation. We would like to see as much American PVO input into such judgments as possible. We also hope that AID will reinforce the view expressed informally to us at our meeting that greater use of PVOs in agricultural development is strongly encouraged by AID/Washington for the reasons stated in our paper.

Duane Akkers
August 7, 1987
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At some early date, furthermore, we would like to meet with a larger group of AID representatives to go further into AID's utilization of American and non-American PVOs in agricultural development.

② Another discussion which both AID and our committee members agreed would be mutually useful was what AID and other development agencies should be doing in the very difficult area of livestock and range management. We (as apparently are you) are ambivalent about this area of development. First, there is little in AID's experience or that of the other development agencies to suggest success in achieving sustainability without environmental damage or eliminating environmental damage, rather, is possible. On the other hand, from an economic, human and environmental viewpoint, we all agree that the people in the resources of the great grasslands should be somehow helped to achieve sustainable development if that is at all possible. As this is the subject on which Congress has shown considerable interest, we would welcome a thorough discussion of what AID, and in fact other development agencies, might do or support, not just in developmental projects per se but also in training, development and research. Our committee has strong concerns that we would like to explore in this area. It might also be useful to include representatives of the IBRD and the IDB in our later discussions.

We would be gratified to hear how your people support these ideas and welcome your views on when and how we should move forward. While the forum on AID's use of PVO's might be more useful after receiving information from the field, we would be ready for an initial discussion on this subject and on livestock and range management in early October when everyone is back from vacation.

Let me say again, how much we appreciate the thought and the work that your people have put in to working with our committee. We look forward to collaborating with you even more closely and to support with Congress and in the Executive Branch the expanded efforts by AID to achieve the transition to agricultural sustainability.

Sincerely,



Robert O. Blake

June 19, 1987

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**INTERNATIONAL
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President:
Brian W. Walker
Director:
North American Office:
David Runnalls

Chairman:
Robert O. Anderson
Vice-Chairman:
Abdalla Y. Al-Hamad
Chairman of the Council:
Maurice F. Strong
*Treasurer and Chairman
of the Executive Committee:*
Sir Arthur Norman

**Peter McPherson
Administrator
U.S. Agency for International Development
Washington, D.C. 20523**

Dear Peter,

I am sending you a copy of "The Transition to Sustainable Agriculture: An Agenda for AID". This paper represents a consensus on agricultural sustainability reached by a broad group from the developmental, environmental, and "PVO" communities. In the writing of this paper, we also had the advice of a number of leading experts on and practitioners of sustainable agriculture as well as informational input from some of AID's experts on this subject.

The work of our group on agricultural sustainability, which group we have informally designated the Ad Hoc Committee on Sustainable Agriculture in Developing Countries, reflects, in my view, a lot of hard work and considerable advance in our own thinking on this important subject. Although we have previously addressed this subject both individually and within many of our own organizations, we had not had the occasion to share our perspectives and to reach a consensus. Like other consensus documents, this paper represents the views of most members but may not balance those views the way that some members might.

The spark that touched all this off was a meeting convened by Duane Akker to get the views of the environmental and PVO communities on AID's agricultural program. We subsequently had two more group meetings with AID's agricultural people plus a number of informal meetings with individual AID experts. We believe that considerable credit belongs to Dr. Akker and his colleagues for getting us all together in a constructive way.

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Our intention is, after taking into consideration any comments that you and your AID colleagues might have, to share this paper with members of Congress, many of whom have expressed strong, positive interest in agricultural sustainability and what AID might do to help advance it. However, before we go much further, we want to fine tune our paper to eliminate any statements which might be based on incomplete information or could be subject to misinterpretation. AID, of course, is not likely to agree with all of our conclusions. However, discussion and refinement of our thought should provide another excellent vehicle for dialogue with AID on this important subject.

As we say in our paper, our hope is to continue to work closely with AID in refining its policies and programs to institutionalize sustainability as a principal focus of all AID's work in the agricultural sector. We will be holding more meetings with AID experts to learn about your agricultural and rural development and to communicate our thoughts on how we think these programs might be structured. We would hope, furthermore, to be able to help mobilize the Congressional and public support. We see the United States' role as involving not only AID and the United States Government but also the resources of non-governmental organizations and, hopefully, the business community. We also hope to be able to help AID locate the kind of people outside the government who can contribute to making this agenda a reality.

Through a combination of constructive criticism and active support, we hope together with AID to help give the farmers of the developing world the tools and the confidence to make a transition to a better and more productive life. We await your comments with interest and anticipation.

Sincerely,



Robert O. Blake

encl.

cc: Duane Akker

BB/fs

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