

IS INTERNATIONAL AGRICULTURAL RESEARCH A GLOBAL PUBLIC GOOD ?

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Ladies and Gentlemen :

I would like to thank Ian Johnson for this opportunity to address you. Having worked in the Bank's New Delhi Office as agricultural economist in the mid sixties, when the green revolution was in full swing, and also as Director of Projects in Asia, the Middle East and North Africa and Latin America in the seventies and eighties, when agriculture occupied a dominant place in World Bank assistance programs, I have witnessed the impressive results of international agricultural research "on the ground".

I am here because the independent Operations Evaluation Department (OED) has just launched a review of global public policies and programs. It will be carried out under the superb leadership of Uma Lele. She is known to many of you for having produced incisive research studies of agriculture development in Africa and having served on the TAC. To get warmed up for this task, she just completed a highly complex and influential evaluation of the Bank's 1991 strategy for a sector which faces tough global and local challenges--forestry.

Beyond the Country Focus

Why are global policies and programs suddenly emerging from the shadows and showing up on the radar screen of the Bank and of OED? First and foremost, because of the urgent need to reverse global trends which do not appear to be sustainable.

Over the past fifty years, carbon emissions have quadrupled. A sixth of the land area has been degraded. Fish stocks are down by one quarter. Deforestation is proceeding at the relentless rate of one acre per second. Wild species are becoming extinct at a rate 50 times higher than naturally.

How to do this is far from obvious. Global economic integration is occurring just at a time when global politics are increasingly fragmented and, in too many parts of the world, undermined by ethnic conflict and civil strife. If the Bank is moving to a higher operational plane, it is simply because global commons issues (ozone layer, climate change, bio-diversity loss, etc.) as well as such cross border spillovers as air and water pollution, contagious diseases and financial instability cannot be tackled effectively at the level of the individual country. Knowledge is replacing land and capital as the major source of national wealth. As a result, many poor nations are being marginalized given their lack of skills and connectivity. Hence, commonly agreed standards and new forms of international cooperation are urgently needed to reduce the instability and the inequities associated with globalization.

The World Bank cannot stand idle in the face of such challenges--or else it would not be the World Bank. Accordingly, it has begun to use its convening power, its professional skills and its unique network of relationships with governments, the private sector and the civil society to provide platforms for international dialogue and global action. The Bank is acting not only to soften "the sharp edges of globalization", to use Peter Woicke's phrase, but also to make globalization work for all. Increasingly, the Bank Group is providing special help for poor and small countries unable to connect to the mighty engine of the global economy. It is also amplifying the voices of the poor in global policy fora and giving a fillip to the sorely neglected cause of development cooperation, a global public good.

As of the last count, the Bank was involved in 92 global and regional programs, of which 47 are recipients of Development Grant Facility resources. They are highly diverse and reflect the fact that globalization has created three major gaps:

- (i) a *values gap* reflected in the growing disconnect between the urgent need to conserve resources and share the benefits of globalization equitably, on the one hand, and the competitive and acquisitive spirit which animates innovation and dominates the culture of globalization, on the other hand.
- (ii) an *institutional gap* which is explained by a lack of equitable "rules of the game" at the global level, a state of affairs which urgently requires adjustment lest a severe popular backlash stops globalization in its tracks.
- (iii) an *organizational gap* which reflects the "built in" weakness of supranational institutions and which has led to the creation of hundreds of ad hoc networks and voluntary alliances-of varying relevance and efficacy.

Given globalization, the overall institutional framework for development cooperation appears less congruent with the needs of the developing world than in 1971 when the CGIAR was created. Whereas the Bank's original global grants were viewed as exceptional and temporary, the advent of globalization has created a new role for global multilateral institutions like the United Nations and the World Bank. It is likely that these and other organizations will increasingly be asked to help create and sustain global and regional networks. And while questions have been raised (e.g. at the Development Committee in Prague) about the comparative advantage of the World Bank with respect to some individual global programs, there is a growing realization among all our member countries that World Bank activities at the global level are here to stay.

Global Development Grants

Some of our owners believe that it is time to examine the methods of allocation across grant programs. Does it make sense for DGF to allocate close to 30% of its grant resources to the CGIAR?

The case is getting harder and harder to make as new grant opportunities of very high priority emerge, (e.g. HIV/AIDS), and, with lending stagnant, the discretionary resources generated by the Bank's net income are proving scarce in relation to increasing needs for reserves, debt reduction and IDA.

Equally, as demonstrated by recent OED work, a cherished principle of grant giving ("the arm's length criterion") is not being observed by the Bank for CGIAR and other important DGF programs. One admittedly painful solution to this twin dilemma is the exit option. Like a well run foundation, the Bank seeks to effect a turnover of its grant resources both to achieve a major and broad based development impact and to promote sustainability and self reliance in the global and regional programs it supports.

In any event, it is time to assess the development effectiveness of global public goods programs supported by the Bank and to draw the lessons of experience from existing programs. The CGIAR has been around for a long time. Thus, it is a very attractive candidate for an independent evaluation. But using the lessons of the past to the future should be done with care. Past is not always prologue. The very success of an organization can turn into a curse. Indeed, experience suggests that path dependence in organizations tends to be a major source of dysfunction where managers stick to what they think are proven solutions and the operating environment is undergoing rapid change. This is precisely the time when organizational entropy takes over. Any evaluation of the CGIAR will therefore have to consider whether its current mission, structure and competencies are still aligned with the operating environment. There is no problem with the vision of CGIAR. But vision without reality is hallucination. And one of the evaluation questions is whether the returns to CGIAR investments while still high are being

eroded by increased transaction costs, lateral mission creep (from R to D) and inadequate connectivity to national research institutions.

The Global Agricultural Challenge

CGIAR is a critical global asset. It is involved in what Nobel Laureate T.W. Schultz has called the "rare and difficult art of increasing agricultural production", a noble calling since improved agricultural productivity is a prerequisite for poverty reduction, environmental protection and sustainable growth . Increased agricultural productivity is rare because most policy makers in the development system look at the rural sector through the distorted lenses of urban bias and romantic views of development. It is difficult because science based agriculture is context specific and suitability of new agricultural practices depends on a host of environmental and socioeconomic factors.

The lack of ready made technologies suitable for a wide range of conditions may still be the main reason why disparities between farm productivity by region and crops remain so large. In particular, lagging adaptive research for coarse grains, tubers, roots and pulses in highly diverse, tropical, low input environments could help explain why agriculture in Africa is not moving forward as it should. Has CGIAR done all it could to work with others to address this problem effectively?

Did the system allocate insufficient resources to the African continent-- is 40% the right share? Are CGIAR structures adapted to the fact that the transmission belts of national research remain in poor working order? Could it be that the main constraint for getting African agriculture moving lies in replenishing and expanding the pool of African agricultural scientists? Or is it that policy reform, basic rural infrastructure and governance are the main constraints--areas where the CGIAR has little to offer and where the CGIAR would need to be in partnership with others to achieve impact? These questions need to be answered. Former French President de Gaulle once said that this is not Africa's century. Let this new century be Africa's century for agricultural development. And let CGIAR show the way.

CGIAR and Global Public Goods

Is the CGIAR producing global goods? The answer is far from obvious. After all, agricultural research is first and foremost a local and country level activity. On the other hand, agricultural research enjoys considerable economies of scale especially in the information and biotechnology age. Equally, failure to raise agricultural productivity in the zones of turmoil and development (where eighty percent of the world's population live) could lead to recurrent humanitarian crises and lead to setbacks in the globalization process.

Does agricultural research produce public goods? Yes, in the sense that it produces results which are not subtractable (or rivalrous)--the use of a new technology by one farmer does not prevent another to make use of the same technology. Given this characteristic, agricultural research cannot rely on markets alone to be effective. It requires a judicious mix of voice and hierarchy to remain responsive and efficient. This raises an important policy question--do the main clients of the system, the developing countries, have enough of a voice in the management of CGIAR? Is the current governance of CGIAR adequate in terms of inducing discipline in Center management and resource allocation?

Free riding is associated with public goods since the benefits received bear no relation to efforts expended. From an organizational perspective, severe incentive problems are connected to public goods creation due to information asymmetries and principal agent problems. Equally, funding of public goods is exceptionally difficult to arrange. As a result public goods are usually underproduced and the production process can be inefficient.

On the other hand, agricultural research may not be classified as a pure public good since its non excludability characteristics are not perfect : access to research results is not necessarily open and free.

Thomas Jefferson's phrase "knowledge is the common property of mankind" only goes so far in our market driven global economy. Research results can be patented and the new products which research generates are private goods which produce revenue.

This raises a fundamental policy issue for the CGIAR. Should it be in the sole business of producing public goods? Alternatively should it produce club goods, i.e. goods which are non-rivalrous but are excludable and thus can produce revenue by restricting access to the findings to those who can afford it. The former would be more equitable and in line with the role of a public institution. The latter would help solve the financing dilemma which the system faces but it would require special arrangements to ensure appropriate public access to research findings in developing countries.

Moving in this direction might also improve the efficiency of the CGIAR system by providing new incentives for researchers to excel as has been the experience in hybrid public/private research organizations in the developed countries. Perhaps both approaches should co-exist. If so, a new compact may be needed to connect private and public research--like in the genome project. This may require a restructuring of the CGIAR towards the twin objectives of engaging the private sector and making globalization work for all.

The Need for Change

Already, globalization trends have revolutionized the behavior of private entrepreneurs and financiers. A similar transformation is underway in the voluntary sector with the advent of global alliances of non governmental organizations. In turn, a reconsideration of the development system of which CGIAR is an important and visible component has become necessary. In other words, development effectiveness is a challenge at the global level -- just as it is at the country level.

The solution lies in continually re-shaping partnership networks to better meet the needs of their clients and align their strategies to evolving operating environments. Any partnership network needs constant realignment in a changing world since context matters for collaborative relationships grounded in mutually agreed objectives, shared responsibility for outcomes, distinct accountabilities for results and reciprocal obligations. In the private sector, partners shoulder unlimited liability for debt, assume joint management responsibility and share in the aggregate profits. In the public sector, partnerships take a variety of forms. But just as in the private sector, their underlying mission must evolve to be re-aligned to the changing needs of the membership, partners' commitment must be periodically demonstrated, new capacities must be built to maintain a level playing field among partners--and trust must be continuously nurtured.

These hurdles have been overcome by CGIAR over decades of proud accomplishments but the question before this group is whether the basic parameters of the partnership must now be revisited. Is the CGIAR partnership adapted to the operating environment? Is the balance between developed and developing countries appropriate? Is CGIAR tapping the enormous scientific assets of such countries as India, China and Brazil? Are the ascending private sector and civil society interests appropriately represented? Should new style, hybrid partnerships combining the legitimacy of the public sector with the energy and resources of the private sector and the idealism of the civil society be crafted? Should links be created on a global scale with existing centers of agricultural research excellence?

Criteria for Change

For partnerships to resolve the collective action dilemmas associated with public goods, they must find ways to minimize free riding through selective incentives, simulated competition and subsidiarity – i.e. doing the work as close to the client as possible. A long term view should be adopted. If the clients are the small farmers of the developing world, the very concept of a center may eventually become archaic for many of the

research tasks currently being carried out by CGIAR funded programs given the information revolution and the increasing availability of scientific personnel in developing countries.

Partnerships are justified only if the benefits exceed the costs and the net benefits are fairly allocated. For partnerships to be relevant, they must be based on shared values, broad based ownership of goals and responsiveness to the real needs of clients. For efficacy to be achieved, achievement of goals must be verifiable, membership requirements judicious and operating protocols flexible. For efficiency to materialize, there should be an accurate accounting of benefits, and benchmarking should be practiced along with participatory monitoring and evaluation. In other words, relevance demands responsiveness to needs. Efficacy demands effective management and coordination. Efficiency demands specialization and the practice of subsidiarity and selectivity. Finally sustainability demands loyalty and public legitimacy. This in turn demands transparency. and participation.

A Final Word

CGIAR may have been able to live up to the above principles so far. The evaluation will probe this proposition. But we already know that in order to do so in the future, it will have to examine its performance with objectivity and make the tough decisions to respond to the challenges I have sketched. Eric Hoffer once said that "change is an ordeal and its only cure is action". An evaluation will only yield results if the CGIAR is prepared to act and to change. If not now when? If not you who?