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***Strengthening Partnership in Agricultural Research  
for Development in the Context of Globalization***

**POLICY MANAGEMENT AND INSTITUTIONAL  
DEVELOPMENT: SUGGESTED AREAS OF OPPORTUNITY  
FOR RESEARCH PARTNERSHIPS\***

\* Synthesis paper for presentation to the GFAR-2000 Conference, Dresden, Germany, May 21-23, 2000. Prepared by Reed Hertford as resource person on "Policy Management and Institutional Development." This paper summarizes the main aspects and issues that have emerged from an active exchange of opinions and ideas among stakeholders of agricultural research, through meetings and electronic consultations, particularly via intensive use of e-mail.



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## **POLICY MANAGEMENT AND INSTITUTIONAL DEVELOPMENT: SUGGESTED AREAS OF OPPORTUNITY FOR RESEARCH PARTNERSHIPS<sup>1</sup>**

### **SUMMARY**

The main purpose of this background paper is to suggest areas that are ripe for attention on the part of GFAR-facilitated research partnerships in agricultural policy management and institutional development by:

- assessing needs and opportunities based on recent developments relating to agricultural policies, poverty, global food demands, natural resources, genetic resources (with special reference to biotechnology), rural institutions, and the National Agricultural Research Systems (NARS) of developing nations;
- weighing other related ARD stakeholder and GFAR initiatives; and
- considering what has been learned about the requirements for successful research partnerships in policy management and institutional development.

Results are summarized in short form in Annex I which is presented at the end of the paper. Fuller statements are to be found throughout the text. Included in the Annex, but not in the text, is the author's evaluation of the priority GFAR should assign to the work.

### **INTRODUCTION**

#### **A. The policy-institutional complex**

This note deals with both the policies and the institutions bearing on agriculture and rural development because policy only manifests itself in the lives of people through its applications; and those applications involve institutional vehicles (including particularly legal, regulatory, and managerial vehicles) that serve to carry the policy vision to people, and to carry people back to play on the policy.

Another reason for dealing with both policies and their related institutions is that one sometimes modifies the content of the other. Policy shifts can “induce” institutional development, and so, too, can changes in the vehicles delivering policy induce modifications in the policy itself. For these reasons, this discussion paper is concerned with the policy-institutional continuum, or complex.

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## B. Why research the policy-institutional complex?

Research on this policy/institutional complex can:

- help guide its formation,
- facilitate its management, and
- assess its worthiness and sturdiness.

These are valuable functions which explain why policy-institutional research flourishes today most anywhere policy operates. This is the case for agriculture and the rural sector. Hereafter, I will refer to research on this agricultural/rural policy/institutional complex simply as research on ARPIC.

## C. A regrettable legacy

Some of the best known policy research on agriculture was initiated in the 19th Century by two British economists, Malthus and Ricardo. They concluded that agriculture was a constraint on economic growth and on society's progress more generally, and they saw the world (England, in particular) growing hungry<sup>2</sup>. Their assessments were most influenced by two facts: the limited availability of land and the decreasing returns to land, when more labor, capital, and other inputs were applied in farming. We know their predictions did not materialize because technological changes occurred in agriculture, which turned up the decreasing returns to land.

The issues paper commissioned by GFAR for this conference perceives pervasive residuals of the Malthus-Ricardo legacy, stating that:

*“The emphasis on industrialization as the basis for economic development, and of the urban environment as the basic model for the settlement of populations, has redirected investments out of the rural areas and understated the value of natural resources and of rural areas themselves as an attractive place for the placement of non-agricultural economic activities.”*<sup>3</sup>

Indeed, this “anti-rural bias” can be seen in many developing countries, taking sometimes subtle forms. The big question is, “Why?” What explains this anti-rural bias? Ex-Minister of Agriculture and former President of Costa Rica, José María Figueres, said:

*“Development is always subject to great pressure for rapid solutions to problems, involving inadequate resources and the smallest possible political costs. The result is that long-term problems are neglected. Big problems become larger and less manageable until they explode.”*<sup>4</sup>

Rural problems generally involve expensive “fixes” that outstrip resource availability, but their neglect may not generate political costs because of the partial disenfranchisement and remoteness of rural populations. Hence, agriculture and rural areas can be neglected.

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<sup>2</sup> For an excellent discussion of this and related issues, see Johnson, D.Gale, “Agriculture and the Wealth of Nations,” Richard T. Ely Lecture, *American Economic Review*, Vol. 87, No. 2, May 1997.

<sup>3</sup> Torres, Filemon, Martin Piñeiro, Eduardo Trigo, and Robert Martinez Nogueira, “Agriculture in the Early XXI Century,” Issues Paper commissioned by GFAR, April 2000.

<sup>4</sup> Figueres, José Maria, “Sustainable Development and Agriculture in Latin America and the Caribbean in Times of Change”, presented at the International Workshop on the Strategic Role of the Rural Sector in the Development of Latin America, Cartagena, Colombia, July 1998.

This is a part of the answer, but only part. It certainly suggests an opportunity for GFAR.

***Suggested opportunity #1:*** *GFAR should facilitate examinations and improve understandings in the policy community of the full role of a multifunctional agriculture, showing through this research with education and advocacy aims that the sector is more vital and strategic than commonly believed. This activity might be conducted regionally.*

#### **D. More effective agricultural policy-institutional research through cooperation**

GFAR's comparative advantage is in fostering cooperative research on ARPIC. Why cooperate in research? Are there special benefits associated with cooperation which make the research particularly effective?

An individual researcher will enter into collaborations, partnerships, and strategic alliances for purposes of trading complementary assets, that is, to exchange with another researcher an intellectual asset in order to gain one or more that is needed to achieve a higher level of research productivity<sup>5</sup>.

Research by collections of professionals or institutions on the formation, management, and worthiness of ARPIC also gains from the fact that it ensures objectivity--as well as the perception of objectivity--in a field where research is fraught by the very politics its studies. Cooperation among individuals and institutions leads to more solid and believable results for research on policy.

In addition to raising research productivity and objectivity, collaboration in research on ARPIC should build capacities in particular areas where they did not exist before as a result of the "trade" collaboration brings about. Too, collaborators begin to build a collective pool of knowledge which can spawn new policy options and "best practices" (institutions) to be deployed to deal with particular policies. Hence, at the same time as a collection of researchers works together collaboratively, they expand and enhance:

- their own capacities,
- pools of common knowledge, and
- policy options and best practices.

For all the above reasons, the breadth and diversity provided by GFAR's cooperative research present an especially attractive vehicle for high payoff work on the ARPIC.

#### **E. The optimal agricultural and rural development policy cascade**

It is usually easier to assess and criticize anti-rural policies than to suggest a "pro-rural" policy package. The optimal cascade refers to three sets of policies that are comprehended by effective "pro-rural" approaches to development.

- Macroeconomic policies, mainly monetary, fiscal, and trade policies, seek to raise national productivity, improve equity, and enhance stability, but can affect agriculture and rural

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<sup>5</sup> This builds from the ideas of Rausser, Gordon, "Negotiating public/private R&D alliances," forthcoming in Food Policy, Vol. 28, August 2000.

development differentially. However supportive of growth and economic development, these policies have historically been anti-rural biased, if they have evidenced any biases at all.

- Agricultural and rural development (sector-specific) policies have correctional and promotional purposes: they help correct sectorial imbalances that macroeconomic policies may create for rural populations, and provide for priority investment requirements of multi-functional rural areas that will not be supplied by the private sector, e.g., production capital and infrastructure, agricultural production inputs, and necessary support services for production and well-being.

Rural institutions must be constructed to accompany these policies and programs. Because in developing countries policies and programs (and their financing) commonly emanate from central governments, explicit provisions must be made for local-level participation by beneficiaries, end-users, and farmers in the development, conduct and administration, and monitoring and evaluation of policies and institutions.

- Finally, numerous examples of rural poverty not responding either to enlightened macroeconomic or sector-specific policies are leading increasingly to a conclusion that specific, targeted policies must be fashioned and adopted for rural poverty to fall. There is no single “magic bullet”, or “best practice”, for this purpose, given the multidimensional nature of poverty. And all rural institutions need to empower the rural poor so they can have a hand in guiding policies, institutional strategies, and programs, i.e., the cascade should run uphill (as well as downhill), at least in its design and formulation.

***Suggested opportunity #2: To complement its education and advocacy efforts to reduce the anti-rural policy bias, GFAR should facilitate efforts to illustrate and exemplify what is meant by effective pro-rural policies. Therefore, it should welcome opportunities to analyze the extent and contents of the policy cascade in particular settings and to perform inter-country comparative analyses which can help guide appropriate policy and institutional innovation and change.***

## **THE SETTING**

This section summarizes from diverse sources some salient current and projected changes in the rural sector, and lays out in briefest terms their implications for possible GFAR initiatives in policy management and institutional development.

### **A. Poverty as a prime determinant of the future agricultural research agenda**

- Poverty is still a rural problem, with 70 percent of the 1.2 billion people living on less than US\$1.00 per day being in rural areas. About 1.1 billion of the 1.2 billion poor live in South Asia, East Asia and the Pacific, and sub-Saharan Africa. However, major reductions in poverty have been recorded in East Asia and the Pacific in the past 15 years, leaving South Asia and sub-Saharan Africa as principal remaining challenges.

- Poverty alleviation efforts should focus on regions in which agricultural research can most quickly and at least cost do most, most rapidly, to improve the lot of poor people. Towards this end, the multidimensional character of poverty should be recognized and understandings improved of what types of research impact on what types of poverty and how/why. Until the types-of-research-by-types-of-poverty (TORTOP) matrix is completed, or at least better filled out than it is today, a high risk of disappointing expectations may be attached to priorities fixed by research institutions<sup>6</sup>.

***Suggested opportunity #3: Attacks on poverty need to be prioritized through research to ensure the biggest bangs for the buck. GFAR-facilitated research, including studies to round out the TORTOP matrix, should be helpful in framing policies that better target poverty alleviation efforts and are more likely to ensure positive effects of agricultural research on the poor.***

- Institutions of research (local, regional, and international) must come to empower the poor in their future organizations, if poverty is to be targeted and reduced by agricultural research.

***Suggested opportunity #4: Institutional architectures, especially for agricultural research institutions, must come to empower and incorporate the poor. What participatory processes are needed and should be used to achieve this end? GFAR should promote the development of successful case studies and comparative analyses that draw out “best practices” so an answer can be found to the question, “What institutional architectures most effectively empower the power?” How might this question be answered in the specific case of knowledge transfer systems? Participation in this work by farmer organizations is an imperative.***

- The rural non-farm sector has been recently rediscovered. Much rural poverty is harbored there. Can it be reduced at all through agricultural research? How?

***Suggested opportunity #5: In close cooperation with CGIAR and other agricultural research institutions (among others), “living experiments” in defined areas of farm and non-farm rural poor should be facilitated by GFAR. The areas would also evidence resource degradation and low productivity levels. Producers and end-users of agricultural research must be involved in all phases of the work. Initial conditions would be studied, an integrated attack formulated, and interventions would be carefully monitored and assessed through time so that valuable “lessons learned” for agricultural research, policy, best practices, and institutions can be derived from these selected experiments.***

## **B. Global food demand and the locus of agricultural research**

- Meeting global food demand will require a 40 percent increase in grain production by 2020, as well as significant increases in animal production, fuel wood production, and particularly fisheries.
- Trade will continue to be a small share of food production, if most countries gain and sustain their competitive positions. In that case, most additional food and fuel requirements will be met locally, with obvious gains for agriculture, economic development, and poverty reduction. Because 90 percent of future global food demand is to stem from tropical developing countries, production

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<sup>6</sup> See the paper by the author and Douglas Pachico, summarizing the International Workshop, “Assessing the Impact of Agricultural Research on the Alleviation of Poverty,” forthcoming in *Food Policy*, Vol. 28, August 2000.

increases should benefit those nations primarily, if they succeed in gaining and sustaining their competitiveness--a major challenge since least is known about tropical agriculture, beginning with its germplasm, largely unevaluated.

***Suggested opportunity #6: Competitiveness is a messy analytical issue, requiring significant study to measure and quantify with reasonable accuracy<sup>7</sup>. GFAR could be helpful to priority-setting exercises in biophysical agricultural research by maintaining a “watching brief” through cross-country studies of this key strategic concept. The same information will greatly assist agricultural policy formulations, policy adjustments, and institutional developments. This work should be accompanied throughout by the private commercial sector and producers (e.g., IFAP).***

## **B. Natural resources management (NRM) initiatives**

The GFAR concept paper on NRM suggests that more sustainable uses of natural resources should be promoted that are brought about by agro-ecological and institutional innovation (including analyses of how public policies support local initiatives). Site specific, local knowledge is the starting point, as such knowledge is critical for any strategy of “sustainable intensification” of small holder agriculture. But site specific, local knowledge must be complemented by efforts to scale up and spread successful local NRM initiatives, which imposes a requirement to analyze policy issues and questions.

Three mechanisms have been devised to support this comprehensive agenda: “Prolinnova” seeks to strengthen research on farmer innovation in agroecology and NRM, and promotes partnerships of farmers, NGOs, and research organizations; “INTERDEV” assists the scaling up process by ensuring that case studies of successful innovations are appropriately described, validated, classified, and made available for dissemination; and “PolicyNet” seeks to ensure that appropriate policies are set for the scaling up effort by conducting research on NRM policies and performing related facilitating functions.

GFAR should, at a minimum, keep a "watching brief" on this process so that biophysical researchers are exposed to (and internalize) NRM research in their interest areas, and GRM research is made to interact productively with it. Recall: the practical applications of NRM research findings in the agendas of the CGIAR Centers, for example, were termed “variable” and “falling short of aspirations” by the 1999 “Bilderberg Consensus”.

***Suggested opportunity #7: Researchers concerned with the ARPIC should expressly analyze and monitor policy and institutional developments bearing on NRM issues of cross-cutting importance--for example, the water, soils, and biodiversity issues of strategic importance to the agendas of biophysical researchers.***

GFAR has a comparative advantage in maximizing crosscutting ARPIC synergies, especially those derived from NRM and GRM research. This is the consequence of its potential for “cumulating and comparing” research from diverse perspectives.

## **GENETIC RESOURCES MANAGEMENT, WITH SPECIAL REFERENCE TO BIOTECHNOLOGY**

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<sup>7</sup> For a confirmation of this statement, interested readers are referred to Hertford, Reed and James Garcia, Competitividad de la Agricultura en las Américas, Cali, Colombia: CIAT and the Catholic University of Chile, 1999.

- Dramatic changes in science, owing to biotechnology and genome mapping, information, and communications technologies, open new opportunities for research and ways of conducting it.
- GFAR's Report on GRM proposes a very important initiative: awareness-building workshops among research managers, policy-makers, legislators, and stakeholders concerning the new science environment and policy options that are available. The private commercial sector's participation is vital to the success of this initiative. Because its engagement will be difficult, special efforts will be required.

***Suggested opportunity #8: GFAR should broker consultations by the public sector in developing countries with private commercial sector firms for purposes of identifying opportunities and obstacles to partnerships in agricultural, policy, and institutional development. The purpose would be to construct platforms of trust and understanding that can sustainably support other, more specific public-private partnerships, for example, in GRM and biotechnology. Examinations of IPR arrangements would be a part of this effort.***

- Integrating biotechnology with national agricultural research programs must take into account the scarcity of resources available to research organizations. Priority-setting exercises must be undertaken, and the place of biotechnology decided on. Obtaining information of an ex-ante nature is a requirement for this purpose. But the newness of the biotechnology experience makes this difficult<sup>8</sup>.

***Suggested opportunity #9: While information in some settings may not be available for priority-setting exercises in biotechnology, data and studies could be brought from other settings through GFAR's efforts to help assess biotechnology programs and projects where there is limited experience.***

- The quality and success of most research in biotechnology depends on the ability to access and use good quality information concerning genome databases, patents, and bio-safety information. Such information represents real scientific "power". And the information sources in use are unfamiliar and quite different from such traditional sources as books, journals, and professional networks.

***Suggested opportunity #10: GFAR should further support through its EGFAR initiative the acquisition and use of R&D information, genetic resources data, on-line bibliographic information, and information services from the vast range of resources now available, including such international programs as the International Center for Genetic Engineering and Biotechnology, CIMMYT's Applied Biotechnology Center, FAO's REDBIO, BINAS, APHIS, and CABI, as well as such regional programs as CARDI, CATIE, AgroInfo, AgriForo, and InfoSys. Such support might, for example, develop and make available an annotated "global information directory" for developing country research organizations (posting and updating it on GFAR's web site).***

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<sup>8</sup> Further information concerning this point is available in several sources, e.g., [Managing Agricultural Biotechnology. Addressing Research Program Needs and Policy Implications](#), ed., Joel I. Cohen. Wallingford, England: CABI Publishing and ISNAR.

## CHANGING RURAL INSTITUTIONS AND THE RELATED CHALLENGES CONFRONTING THE NARS

“First generation institutional reforms” of relevance to rural areas have been undertaken in many developing countries of the world in recent years, based on the premise that “the State is the problem”. In most developing regions that have initiated change, there are only “the remains” of a public agricultural sector. In too many cases, the public sector is without capacities to deal with the complexities facing rural development in the new millennium<sup>9</sup>.

In these situations, a “second generation” institutional effort is clearly needed, which consolidates relevant laws, produces clearer rules for economic transactions, ensures contract enforcement, strengthens and promises to preserve competitive forces, adopts mechanisms for conflict resolution, suppresses corruption, and eliminates bureaucratic “special favors”.

The reduction in the role of the State has reduced public financing available for agricultural research, and there are two parts to solving the problem. On the one hand, it seems unlikely that this situation will change until developing countries undertake their second generation institutional efforts in agriculture and rural development. On the other hand, restoring budgets in the industrialized nations for international agricultural research will principally require greater understanding on the part of their policy communities that investments of scarce public monies in agricultural research overseas uniquely produce win-win outputs (salutary outputs overseas and important economic gains at home).

***Suggested opportunity #11: GFAR should facilitate research that can guide “second generation” rural institutional change in developing countries and show industrialized countries the win-win benefits of agricultural research investments overseas, thereby helping to mobilize public resources for agricultural research worldwide.***

When financial flows improve, many observers are concerned that there will not be enough first class researchers to utilize effectively the additional resources because few NARS have been able to regenerate their human capital for agricultural research. This will become an especially vexing problem, if the demand increases for fresh graduates with substantive knowledge of tropical agriculture since relevant training is far harder to come by in the advanced training programs of industrialized nations. What might be done about this critical institutional problem with massive implications for agricultural research?

***Suggested opportunity #12: GFAR should motivate surveys and assessments of the quantity and quality of human capital available in developing nations to support first class NARS. If the existence of deficiencies is confirmed, GFAR should see to it that the merits are investigated of mounting continuing education and graduate programs (perhaps, at the regional level) that join selected training capabilities of industrialized countries with the best researchers in tropical areas, and exploit new distance learning information and communications technologies. Other innovative institutional arrangements should be examined.***

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<sup>9</sup> For an excellent paper that expands on these ideas, see Martinez Nogueira, Roberto, “The New Institutionality of the Rural Sector for the Reconstruction of the State and Markets,” paper presented at the International Workshop on the Strategic Role of the Rural Sector in the Development of Latin America, Cartagena, Colombia, July 1998.

**Annex I**  
**Suggested Opportunities, and their Rationale and Priority, for Research Partnerships  
dealing with Policy Management and Institutional Development**

- Suggested opportunity #1** - Research to improve understandings of the strategic, multi-functional role of agriculture.  
Rationale: The need to assuage the anti-rural policy bias  
GFAR priority level: High
- Suggested opportunity #2** - Research to assemble effective pro-rural policy mixes.  
Rationale: If the anti-rural bias is to be assuaged, pro-rural best practices need to be illustrated.  
GFAR priority level: Medium
- Suggested opportunity #3** - Research that can lead to better targeting poverty alleviation by agricultural research.  
Rationale: Poverty alleviation efforts should pursue opportunities for greatest impact per unit of time and cost  
GFAR priority level: High
- Suggested opportunity #4** - Research on rural institutional architectures most effectively empowering the poor.  
Rationale: Agricultural research agendas steered by the poor are more likely to impact poor end-users and producers  
GFAR priority level: High
- Suggested opportunity #5** - Research on a small panel of poor rural areas that permits tracing the impacts of NRM, GRM, and other types of research on end-users.  
Rationale: Much better information needs to be generated that can identify the research-poverty linkage  
GFAR priority level: High
- Suggested opportunity #6** - Research on agriculture's competitiveness.  
Rationale: Competitiveness should critically guide decisions, but it is practically a conceptual and empirical "unknown".  
GFAR priority level: High
- Suggested opportunity #7** - Research which synthesizes and monitors NRM research results and related institutional changes of crosscutting importance, for example, for GRM and biotechnology work.  
Rationale: GFAR has a comparative advantage in assessing crosscutting issues, especially those derived from NRM and GRM research, owing to its potential for "cumulating and comparing" research from diverse perspectives.  
GFAR priority level: Medium
- Suggested opportunity #8** - Survey research with the private commercial sector on obstacles to public-private partnerships for agricultural, policy, and institutional development

Rationale: Real partnerships with the private sector require building sturdy platforms of trust and understanding on something more than technology negotiations  
GFAR priority level: High

**Suggested opportunity #9** - Research for ex-ante assessments of agricultural biotechnology research which expand the data and experience base available in start-up country situations

Rationale: Rational decision-making in start-up countries requires data/experience available from other settings  
GFAR priority level: Medium

**Suggested opportunity #10** - Research to generate and maintain an annotated information directory, especially for developing country research organizations.

Rationale: Especially the new agricultural science requires high quality data/information, and knowing where/how to access it.  
GFAR priority level: Low

**Suggested opportunity #11** - Research that can guide “second generation rural institutional changes” in developing countries and show industrialized countries the win-win benefits of agricultural research investments overseas will help restore the flow of public resources for agricultural research worldwide.

Rationale: Reduced public investment in agricultural research has, on net, been prejudicial to growth, economic development, and the poor.  
GFAR priority level: High

**Suggested opportunity #12** - Research and development relating to one or more continuing education/graduate training vehicles.

Rationale: The new science needs new blood, and there are few sources of real relevance to tropical agriculture.  
GFAR priority level: High