

**PI External Reviews: Summary of Report
Sustainable Use of Biodiversity (SUB)**

Report to IDRC Board of Governors
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PI Aims

1. SUB's program focus is on the generally neglected link between biodiversity and poor communities in marginal environments. SUB seeks to ensure that research on local and indigenous management of biodiversity is entered into national and international policy debates.
2. SUB's goal is "to promote the conservation and sustainable use of biodiversity and the development of appropriate technologies, local institutions and policy frameworks through the application of interdisciplinary and participatory research that incorporates gender considerations and local and indigenous knowledge." SUB's objectives are:
 - 2.1. To promote use, maintenance and enhancement of the knowledge, innovations and practices of indigenous and local communities that conserve and sustainably use biodiversity;
 - 2.2. To support the creation of models for policy and legislation that recognize the rights of indigenous and local communities to genetic resources and to the equitable sharing of the benefits of the use of these resources in the context of intellectual property regimes;
 - 2.3. To develop gender sensitive incentives, methods, livelihood options and policies that facilitate community-based participation in in-situ biodiversity conservation and management strategies.

Review Methodology

3. The review team selected key review areas within SUB's overall program for more intensive examination. These included two main areas: participatory plant breeding and medicinal plants, as well as cross-cutting issues such as gender/equity analysis, networking and capacity building. The main methods used were interviews and review of documentation. Interviews were held face-to-face, by telephone and by e-mail with selected project leaders, representatives of external partners and with IDRC staff in Ottawa and in the Regional Offices.

Review Findings

4. Overall, the review found that SUB has followed the strategic directions laid out in its Prospectus and has made major **contributions** to science, to policy, to institution building and to the work of the Centre between April 2000 and March 2003. It has also been an innovator within the Centre and is highly respected among its external partners and leading scientists in the fields in which SUB is active. It is a well managed program and well led with a dedicated cadre of committed IDRC staff and its team approach has strengthened considerably over this program cycle.

5. SUB has made excellent progress in terms of its **strategic directions**¹. It has maintained a strong community-based approach and one that is more integrated between cultivated crops, uncultivated foods and medicinal plants. It has been a leader in developing research methodologies that involve men and women farmers and has continued to use global and regional networking as a key program strategy.
6. As anticipated in the Prospectus, SUB has created a Genetic Resources Policy Initiative in collaboration with the International Plant Genetic Resource Institute. It has exchanged experiences with other PIs and has collaborated with several PIs in supporting joint research projects. SUB has supported both interdisciplinary and multidisciplinary research, but it is hard to judge whether it is more or less than might be expected - there are no targets or indicators set.
7. SUB has promoted the work of its research partners in publishing research results but it is not known if there is yet “brand recognition” within the policy community. In general we suggest that SUB might encourage more publications by its research partners in peer-reviewed journals as one way to mainstream the research results and methodologies with other researchers, and to link with other major scientific programs in biodiversity such as the Millennium Ecosystem Assessment.
8. The SUB prospectus does not elaborate on regional strategies, other than to say it will have regional distinctiveness in its programming. While regional differences and priorities are evident in SUB’s program, it would be helpful if some clearer strategy were spelled out in the next prospectus, based on consideration of the different priorities and capacities in the regions.
9. **Participatory plant breeding** (PPB) entails approaches that involve collaboration between researchers and farmers. In SUB’s work on PPB it is regarded internationally as a leader. IDRC’s investment in 44 projects over ten years achieved some important results, including documentation of cases of farmer maintenance of diversity, development of innovative methods and tools, some changes in breeding practice, and sharing of ideas to get PPB onto the agendas of major players in agriculture.

¹ The review identified eight strategic directions in SUB’s Prospectus to use as yardstick for assessing progress rather than its three program objectives. The objectives are expressed more as goals and are therefore difficult to use in assessing progress. SUB’s strategic directions entail an integrated, community-based approach, participatory and gender-sensitive methodologies, interdisciplinary research, exchange of experiences with other PIs, support to networks, creation of a Genetic Resources Policy Initiative, and promotion of the work of research partners.

10. SUB's support in the current prospectus period has been for additional case studies, for research that builds on and addresses gaps (such as market linkages) in the previous work, and for efforts to influence legal and policy frameworks. The PPB research approach in the project "Crop Development and Biodiversity Enhancement in Southwest China," for example, is revolutionary, with its participatory action research and involvement of men and women in plant breeding and variety selection, in a context in which the Chinese government has relied on the development and distribution of modern varieties to achieve its goal of national food security.
11. The area where the most progress has been made in PPB is that of influencing national policy and national agricultural institutions. This points to the advantage of SUB working directly with national agricultural authorities and allowing researchers within those institutions to internalize the PPB approach.
12. IDRC has been at the forefront of supporting research and partnerships which link traditional medicine with local and culturally appropriate livelihood and health options and with the conservation and sustainable use of **medicinal and aromatic plants** (MAPs). Our assessment of the work of SUB on MAPs is extremely positive. IDRC's work around MAPs has a span of almost three decades, so the current SUB work has the advantage of building on the gains and lessons learned within this period. In medicinal plants research, the strengths that IDRC has developed include:
 - Democratization of research through the use of multidisciplinary and interdisciplinary research approaches, bridging formal science and local and indigenous knowledge;
 - Effective capacity and strategies of SUB MAP staff and project partners for bringing about policy and institutional changes;
 - Multi-stakeholder processes and mechanisms;
 - A cadre of committed and dedicated SUB PI staff and partners;
 - Establishment of the scientific basis of traditional medicinal plants and traditional medicine, which entailed the application of traditional and laboratory science to develop methods for safety and efficacy evaluation; and
 - Exploration of ways to improve livelihood options for marginalized peoples who nurture and depend on medicinal and aromatic plants.
13. Examples of projects demonstrating such results are:
 - 13.1. The Medicinal and Aromatic Plants Program in Asia (MAPPA), which was launched in 1998 and has become a network that supports research and small projects in South Asia. It focuses on the development of methods for *in-situ* conservation of genetic resources, value-adding processing and utilization methods, socio-economic and cultural benefits, and promotion of traditional knowledge and support

services including marketing and information. Achievements include **the development of institutions and programs of governments** that address the need for more coherent policies and programs on medicinal and aromatic plants and traditional medicine, such as the National Medicinal Plants Board in India and the National Medicinal Plants and Non-Timber Forest Products Development Committee in Nepal. Based on MAPPA's research information and recommendation, the Government of Nepal has replaced the ad-hoc system of royalty fixing on med-plant products by a more rationalised system. MAPPA also enabled the declaration of five States in India as Herbal States. Additional achievements include major thematic contributions to research, and institutional and community capacity-building.

- 13.2. The establishment of **the Organization for African Unity Decade for African Traditional Medicine (2001-2010)** through project 100859 is a major accomplishment that was due to the effective lobbying skills of SUB staff at ESARO together with their partners. The Declaration was adopted with the Assembly of Heads of State recognising the important role of traditional medicine and calling upon all African governments to build upon the traditional knowledge and plant resource base to help achieve health for all. The SUB PI was also instrumental in the process that led to the formulation and adoption of the OAU Model Law, which has been used extensively by the governments in complying with international law. These successes have far reaching effects in influencing national government policies and programs and in strengthening their negotiating positions in multilateral bodies. There are now pending bills on traditional medicine in Uganda, Tanzania and Kenya.
- 13.3. The project on Medicinal Plants and Biodiversity in Uganda seeks to enable a larger community within Uganda to be aware of the health and economic advantages of preserving biodiversity of medicinal plants. Among its results, the project has influenced government leaders **to acknowledge the role of traditional healers and to integrate them into the health care system** in Uganda.
14. SUB has a clear strategy for **networking**, particularly for using networks to scale up and out, and has put in place some very influential regional and global networks. The networks currently supported all combine a research function and a policy/advocacy function. Networks are also one important way of building capacities of individuals and institutions for research and policy impact.
15. SUB is a leader within IDRC for promoting **gender and equity analysis** in its projects and throughout the conceptualization and implementation of its program. SUB has supported projects looking at gender differences and

provided research tools to help researchers to take gender and equity issues into account. We have documented SUB's activities for incorporating gender/equity analysis into its work to show what care and resources SUB has invested. The gender strategy of SUB is proving much harder to implement than was anticipated. SUB also has to work with partners that need more capacity building in gender than can be provided in the short term within the resources available for projects.

16. SUB's successes in terms of **policy influence** would indicate that the policy advocacy skills of program staff and partners are quite developed. This has been done primarily through learning-by-doing.
17. In addition to the researchers funded by SUB, two key groups identified as **target groups** are the international agricultural research centres supported by the Consultative Group for International Agricultural Research (CGIAR), and policy makers in developing countries. SUB intended to influence the CGIAR to adopt more participatory approaches, and to integrate gender and equity sensitive analysis into its work. In this, SUB has had measurable impact and has achieved some notable successes, particularly in demonstrating the validity and acceptability of participatory varietal selection (PVS). Success in influencing mainstream plant breeders to work more closely with farmers has had only limited and mixed success. One challenge is that the CGIAR and SUB do not share the same vision about biodiversity. Another is differing views on the rigour of social science and participatory research. Nonetheless, SUB has influenced program work within the CGIAR in several important ways, including the wider acceptance of participatory research and gender/equity analysis and increased collaboration between the CG Centres and NGOs. SUB has had much less impact on the content of the core scientific activities of the CG, but this is not surprising.
18. The most impressive influence of SUB on **local partners** has been the improved capacity of farmers in Asia, Africa and Latin America to interact with formally trained breeders and scientists. Empowering farming communities has also increased their confidence to assert their views on how agricultural programs should be designed.
19. SUB has made remarkable strides towards "**closing the loop**" with other researchers and with the scientific world in general. Projects produced scientific papers designed to reach other researchers, but could go farther in terms of producing peer-reviewed journal articles. SUB projects have also attempted to make materials available to local communities and local researchers. Two innovative tools developed by SUB for outreach are a CD-ROM on *Writing for Change*, designed to help researchers prepare materials for dissemination to a range of audiences; and an In-Focus book, *Seeds that Give*, linked to a series of policy briefs and in-country dissemination to reach

decision-makers, and with clear recommendations that respond to the kinds of questions decision-makers would have.

20. At the **international level**, SUB has had some impact on the Conference of the Parties to the Convention on Biodiversity, although not as much as the SUB team would like to see. The potential for impact of the Genetic Resources Policy Initiative (GRPI), which is to build the analytical and technical capacity in the South to analyse and negotiate genetic resource policies that flow from TRIPS, WIPO and other institutions, and to produce domestic genetic resource-related laws and policies, is great.
21. SUB is carrying out its **evaluation** plan as anticipated, with adjustments as program implementation progressed. SUB has also carried out a set of formative evaluations. We cannot endorse SUB's initiative in this type of evaluation strongly enough. The formative evaluations have clearly been used by SUB to help draw lessons from experience and to help design its new program emphases. As well, with CBNRM and Minga, SUB is leading the way in exploring effective ways of building participatory monitoring and evaluation into its projects. SUB has responded to almost all of the recommendations from the 1999 external review, except for those referring to a clearer regional strategy for capacity-building and to regional strategies. SUB is systematically incorporating lessons from evaluations into its future planning, takes evaluation very seriously, and has made considerable investment in its own project and program level evaluations.
22. IDRC is one of the many organisations active in the field of **biodiversity**, but is one of the very few donors to have a specific program on biodiversity. Many of the international agreements and current practice tend either to ignore the rights of local communities to access the biodiversity that they have traditionally managed and used; or they are not able to benefit from learning lessons from the knowledge and experience of local peoples. Addressing these issues is SUB's niche. SUB has focused on those genetic resources that are most vital to food security, nutrition and primary health care, especially for poor and often marginalized peoples. In discussion with SUB's partners, SUB's four areas of emphasis² were identified as critical issues for research.
23. SUB is **viewed by its partners** as an innovative program, providing strong intellectual input to its projects, and supporting projects that are at the cutting edge methodologically and in the alternative view they provide to mainstream science.

² Strengthening biodiversity-rich production systems; local perspectives on access and benefit-sharing; strengthening local seed systems; and gender, biodiversity and tenure.

24. SUB's **value-added** includes its contribution to syntheses of knowledge and its outreach tools, some of which are models for the Centre. It has led the way in integrating the work in medicinal plants and agro-biodiversity and in conceptualising the continuum that exists between plant (and animal) products that are grown or collected for food, dietary diversification and nutrition and primary health care and remedies.
25. SUB has had more difficulty in attracting other donors, especially CIDA, to **co-fund** its activities than expected. This is partly because most donors are not structured to have a program focus on biodiversity.
26. SUB's **niche** is clear and important in a crowded field. It builds well on IDRC's strengths and the Centre's history in research in natural resources management. SUB has the potential to provide research results and experience that can influence particularly national policies but also international negotiations and guidelines for future practice. Its focus on local communities is increasingly recognized as important at the international level but few other organizations have the capacity and experience to work at community level in all developing regions and to link the local perspectives into national and international policy debates.

Issues for Consideration

27. There may be some benefit in continuing some of the work of the present program cycle before moving completely to new thematic areas because the results are not yet consolidated enough to make some potentially major gains in impact and scaling up.
28. In participatory plant breeding, SUB may wish to support additional studies of the costs and benefits of participatory plant breeding, and the development of tools to help farmers manage information and be more systematic in their approach to PPB. In the area of medicinal and aromatic plants, we suggest further development of cross-cultural analysis of medicinal plant use and alternative methods of verifying the safety and efficacy of herbal remedies; greater focus on the rights of indigenous peoples and local communities; studies on changes in health and nutrition of communities; and studies on how the most marginalized have been empowered.
29. Without substantially changing SUB's definition of its problématique, it may wish to consider recasting it within a scientific and policy framework that is more "legible" to its present and potential future partners. A scientific framework might emphasize the main drivers of globalization, including globalization of food production and distribution. An alternative policy framework might identify SUB's work more closely with the Millennium Development Goals (MDG) adopted at the UN Millennium Summit in 2000,

especially that of poverty alleviation. Most, if not all, OECD donor agencies have accepted these goals and have structured their programs to meet them.

30. For the next program cycle, SUB might better elaborate regional strategies for its program activities, in consultation with other PIs and the Regional Offices.
31. Studies of SUB's capacity building activities (possibly part of a Centre-wide exercise), of its use of formative evaluations, and of the costs, benefits, and value-added of networking, would be useful.
32. A suggestion is that SUB explores how to provide the necessary training and (more important) mentoring support for gender/equity analysis through the project cycle by means of resource groups within its regional networks.
33. SUB is working in a highly charged arena, and one that will become more so if the Centre moves to work in the area of biotechnology and GMOs. A program with a biodiversity focus and decade-long successful track record is almost unique in a donor agency. This continuity of programming and program focus gives SUB and thus IDRC a special edge and credibility for policy uptake in its future work.