

REPORT

*Liaison Group Meeting on
Agricultural Biodiversity
Rome – 20 to 22 September*

*Food and Agriculture Organization of the United Nations
Secretariat of the Convention on Biological Diversity*

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Report of the Liaison Group on agricultural biodiversity.

I. Introduction

1. The Liaison Group met at the headquarters of the Food and Agriculture Organization of the United Nations (FAO), Rome, 20 –23 September 1999, to assist in the preparation of pre-session documents on agricultural biodiversity for the 5th meeting of the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) of the Convention on Biological Diversity (CBD).
2. Experts from FAO, the Global Environmental Facility (GEF) Secretariat, the United Nations Environmental Programme (UNEP), International Plant Genetic Resources Institute (IPGRI) - on behalf of the System-wide Genetic Resources Programme of the Consultative Group of International Agricultural Research Centers (CGIAR)-, and the CBD Secretariat were present in Rome. Additionally, experts from the following organizations participated by electronic mail and telephone: the International Institute for Environment and Development (IIED); the World Resources Institute (WRI); the Tropical Soils Biology and Fertility programme (TSBF); the International Livestock Research Institute (ILRI); the International Center for Insect Physiology and Ecology (ICIPE); and the Rural Advancement Foundation International (RAFI). A list of participants is provided in annex 1.
3. Mr. Eric Kueneman, Senior Technical Advisor, Agriculture Department, welcomed the participants to Rome, on behalf of Mr. Mahmud Duwayri, chair of the FAO Inter-Departmental Working Group on Biological Diversity. Mr. Jo Mulongoy, Principal Officer, Scientific, Technical and Technological Matters, opened the meeting on behalf of Mr. Hamdallah Zedan, Executive Secretary of the CBD. The meeting was chaired by Mr. Peter Kenmore, Coordinator, Global IPM Facility.
4. The meeting noted that the Conference of Parties (COP) to the Convention on Biological Diversity, through decision III/11 “Conservation and sustainable use of agricultural biological diversity” had established a multi-year programme of work of activities on agricultural biodiversity, and had requested the Secretariat, and FAO, in close collaboration with other relevant organizations, to identify and assess relevant ongoing activities and instruments. The results of this assessment were to be reported back through SBSTTA. In decision IV/6 the Conference of Parties requested that SBSTTA develop and provide to the Conference of the Parties at its fifth meeting, advice and recommendation for the further development of the programme of work
5. The Liaison Group considered the following documents, which had been circulated in advance:
 - Draft of UNEP/CBD/SBSTTA/5/10 : Agricultural biodiversity: assessment of ongoing activities and priorities for a programme of work”; and
 - Draft of UNEP/CBD/SBSTTA/5/10/Add.1.”: Agricultural biodiversity: assessment of ongoing activities and instruments” which provides a more detailed analysis of the findings of the assessment.

Additionally, participants had access to a substantial inventory: "Agricultural Biodiversity - Ongoing Activities and Instruments (International Level)", as well as draft "Overviews, by Region, of National Submissions, and other background material.

6. The work of the Liaison Group focused on three tasks:
 - a) A general review of the draft of UNEP/CBD/SBSTTA/5/10, with particular attention to the proposed elements of the programme of work;
 - b) Elaboration, for each programme element, of the ways and means, and timing of expected outputs;
 - c) Specific amendments and additions to the assessment of activities and instruments (draft of UNEP/CBD/SBSTTA/5/10/Add.1) and the international inventory.

7. Written comments on the documents were provided before and during the meeting. These are provided in annex 2. The comments provided by participants not present in Rome were noted and discussed during the meeting. Additionally, the main points emerging from the general review of the document in Rome were communicated to the other participants for further comments. It was agreed that the draft document would be revised in the light of all the comments made, and to incorporate the new text on ways and means and timing of expected outputs elaborated at the meeting.

II. General review of draft of UNEP/CBD/SBSTTA/5/10

8. The participants expressed their satisfaction that the draft document provided a good basis for further consideration by SBSTTA of the issue of agricultural biological. A number of important points emerged from the discussion and the review of the document.

9. It was agreed that the programme of work should promote the application of the Ecosystem Approach, and particular emphasis was placed on the ecological functions of biodiversity in agriculture. It was agreed that the document could be further strengthened in this regard. Similarly, the document could highlight more clearly the value of agricultural biodiversity for food and livelihood security and poverty alleviation.

10. It was agreed that the programme of work should promote, in particular:
 - local management of biodiversity and farmer empowerment¹
 - mainstreaming of agricultural biodiversity dimensions in agricultural sector and national development plans and its integration in National Biodiversity Strategies and Action Plans (NBSAPs) and other biodiversity and environmental programmes, as well as in specific projects and programmes. (It was emphasized that, together with programme of work on other themes under the CBD, this should contribute to the effective integration of biodiversity in the development and implementation of national development plans generally. The importance of ministries such as finance and planning was highlighted in this regard).

11. All four Programme Elements (PEs) were seen as relevant. It was emphasised that they are mutually supportive, and therefore should be implemented simultaneously, rather than being

¹ The term "farmer and farming communities" is used to encompass agriculturalists, fisherfolk and pastoralists, and the range of farm type from small subsistence farms (including those that are not entirely self sufficient) to intensive farms.

phased one after the other. It was noted that while the programme of work is ambitious in scope, this was partly because it encompasses and builds upon relevant activities of organizations that are were already programmed. Nevertheless, a need was noted for clarification of the timing of specific activities within each programme element, as well as elaboration of the ways and means (see para 14). Existing frameworks, networks, bodies, projects, should be used wherever possible and duplication avoided. It was also noted that there is a need for a certain amount of flexibility in the programme of work to allow countries to identify, within the programme, their national priorities.

12. The need for dynamic two-way feedback mechanisms in all programme elements between farmer-community, technical and policy levels was highlighted. Knowledge and understanding gained through research, case studies and assessments must be effectively used in determining needs, priorities, constraints and opportunities for action at all levels (global, national, and local). Particular emphasis was placed on farmer- farmer or inter-community sharing of experiences.
13. Case studies should convince policy makers that the conservation and sustainable use of biological diversity forms the basis of efficient and cost effective strategies. The information resulting from research, case studies and assessments should be used to elucidate trends in agricultural biodiversity conservation, erosion and use, and to identify and address underlying causes of agrobiodiversity loss. The importance of indicators in this regard was underlined. However, it was also noted that indicator development for agricultural biodiversity and its components was at an early stage.

III. Elaboration of the ways and means and timing of expected outputs

14. The Liaison Group elaborated, for each Programme Element, the ways and means, including main partners, type of funding required etc, and the timing of expected outputs (annex 3).
15. The discussion of these matters also helped to focus attention on the feasibility and focus of the proposed activities . Points arising from this discussion included the following:
 - within PE 2, and particularly PE 1, to emphasize the need for work on microbial and below-ground diversity, and to note the importance of underutilized and wild species of interest to food and agriculture;
 - the text of activities 2.1 and 2.2 required editing to improve clarity and conciseness;
 - In-PE 3, the objective of activity 3.1 should be reflected in the rationale and integrated with the other activities. The importance of consumers should be better highlighted.
 - It should be clarified that PE 4, activity 4.1 focuses on the interactions between institutions *within* countries. Activity 4.2 should include reference to effective mechanisms to respond to early warnings.
16. It was noted that in addition to its present framework of activities on agricultural biodiversity, an operational programme of the GEF on agricultural biodiversity was under development, and this could enhance the implementation of activities in this area. It was suggested that countries and appropriate partner agencies take up opportunities that this would provide.

IV. Specific amendments and additions to the assessment

17. The Liaison Group discussed the draft of UNEP/CBD/SBSTTA/5/10. Add1: "Agricultural biodiversity: assessment of ongoing activities", and the larger inventory of ongoing international agricultural biodiversity activities and instruments, and overview, by region, of national submissions. It was agreed the inventory provided a useful compendium of information and should be made available, *inter alia* through the internet and CD-ROM. The SBSTTA documents should refer more clearly to this material. Other relevant material, specifically the report of the CBD/FAO/NL workshop on "Sustaining agricultural biodiversity and agroecosystem functions" would be available to SBSTTA as information documents.
18. It was agreed that Table 1, of draft document UNEP/CBD/SBSTTA/5/10 would be moved to the add.1 document.
19. A number of specific additions and amendments were proposed for UNEP/CBD/SBSTTA/5/10.Add1; and others would be provided in writing shortly after the meeting. These would be reflected in the revised document.
20. Additionally participants agreed that the larger inventory would be updated with this information. Other organisations would also be invited to submit updates.

V. Closing Session

21. The participants welcomed this opportunity to work together in developing a draft programme of work which would facilitate ongoing collaboration between their organisations and synergies in relevant activities.
22. Jo Mulongoy thanked the chair of the meeting, the team in Rome and Montreal which had proposed the meeting, and all participants for their contributions.

ANNEX 1: LIST OF PARTICIPANTS

Experts

<i>Institution</i>	<i>Name</i>	<i>Position</i>
<i>In Rome</i>		
CBD	Kalemani Jo Mulongoy	Principal Officer, STTM
CBD	David Cooper	Programme Officer, Agricultural Biodiversity
FAO	Peter Kenmore	Co-ordinator, Global IPM Facility
FAO	Linda Collette	Secretary, Inter-Departmental Working Group
GEF	Walter J Lusigi	Senior Technical Advisor
IPGRI	Toby Hodgkin	Principal Scientist
UNEP	Ivonne Higuero	Programme Officer, Environmental Conventions

External (by phone and email):

ICIPE	Scott Miller	Leader, Biodiversity and Conservation Programme
IIED	Michel Pimbert	Research Associate
ILRI	Jean Hanson	Project Co-ordinator, Forage Genetic Resources
RAFI	Hope Shand	Research Director
TSBF	Jo Anderson	Professor, Biological Sciences, University of Exeter
WRI	Lori Ann Thrupp	Director, Sustainable Agriculture

Additional FAO Participants

<i>Name</i>	<i>Service</i>
Sally Bunning	Land and Plant Nutrition Management Service (AGLL)
Eric Kueneman	Agriculture Department
Yianna Lambrou	Women in Development Service (SDWW)
Pierre Sigaud	Forest Resources Development Service (FORM)
Sally Sontheimer	Women in Development Service (SDWW)
Douglas Williamson	Forest Conservation, Research & Education Service (FORC)
Maria José de O Zimmerman	Research and Technology Development Service (SDRR)

**ANNEX 2: Comments on draft papers, received from experts outside of FAO,
September, 1999:**

This annex includes comments from the following contributors, by email: Jo Anderson (TSBF); Lori Ann Thrupp (WRI); Hans Herren, Johann Baumgartner and Scott Miller (ICRPE); Michel Pimbert (IIED); Jean Hanson (ILRI); Hope Shand (RAFI); and in person: Walter Lisuigi (GEF).

From: **Jo Anderson**
Sent: Friday, September 10, 1999 8:58 PM

II.4 add after ... and food security'. Operationally, it is useful to distinguish between the 'planned biodiversity', the plants and animals directly managed by the farmer, and the 'associated biodiversity' of pests, pathogens and beneficial organisms, such as biological control agents and the soil biota, which directly or indirectly affect crop production.

Fifth bullet point:

- 'because of the degree of management...' could replace with:
- because of the degree to which agricultural systems dominate the landscape in many areas of the world, sustainable patterns of land-use are not only important for conservation of agrobiodiversity per se but also contributes to the conservation of total above and below-ground biodiversity as required by the CBD. Areas of forest and improved fallows, field margins and soil conservation bunds on hill slopes are important habitats for biodiversity conservation and refugia for the associated biodiversity..

6(a) microbial genetic resources: fungi such as yeasts, edible mushrooms and micorrhizae, Rhizobia and associative nitrogen fixers. [the footnote 6 should be under 6(b) as nutrient cycling/transformations are a general function of soil microorganisms contributing to system functioning.

6(b) Components... These correspond mainly to the associated biodiversity but the planned diversity of crop plants can also have important indirect effects on system functioning:

(i) Functional biodiversity.....:

- biophysical effects of crops (and weeds) affecting microclimate, soil protection, compaction and erosion. The diversity of plant rooting systems affect soil stability on slopes, reduces erodability, nutrient scavenging, penetration of plough or hoe pans, and maintenance of soil structure.
- (ii) include:
 - Effects of domestic stock on soil compaction, soil erodability and protective cover of ground vegetation.
 - The diversity of ecosystems within the landscape mosaic (type and area extent) and the frequency/intensity of their disturbance, affect the availability and security of goods and services available to rural communities, catchment hydrology (including urban water supplies) and biodiversity conservation. [Decreased landscape diversity, with increasing area extent of crop monocultures results in synchronization of management practices and increasing dominance of anthropogenic effects on ecosystem services].

13.use of genetic resources'. [There is a need to characterize the phenological traits of land uses to link genetic diversity to functional attributes of varieties used by farmers; e.g. capitalizing on the environmental characteristics of farm 'niche' habitats]

14.Some soil management practices, such as minimum tillage and mulching with crop residues, can improve soil structure and functioning, and result in increased importance of soil biodiversity for the maintenance of soil properties and crop production.

20. The provision of ecosystem services, such as air and water quality, at regional, national and international levels are coupled to the nature and intensity of land use and the conservation/loss of biodiversity. The financial benefits of maintaining essential ecosystem services can therefore be coupled to landscape design and management to meet national requirements for biodiversity conservation above and below ground.

24. Need to consider that CBD does not explicitly recognize below-ground BD which comprises most of the total BD in natural as well as agricultural systems. The value of agricultural landscapes for conserving BD, rather than assuming protection of a few pristine areas, is of paramount importance for the CBD.

25. Programme element 1. Objectives??: *To identify relationships between intensification of agricultural production, sustainability and agrobiodiversity (planned, associated and system diversity)*

Rationale includes 'comprehensive assessment of microbial genetic resources'. This has been done extensively for rhizobia and to some extent for arbuscular mycorrhizae and entomopathogenic fungi. It is not a practical objective for the total soil microbiota. It would be far more valuable to focus on strain variation in microbial pathogens and the biological control functions of microbial diversity against root pathogens (there is considerable potential for networking in this field).

Programme element 2.

Rationale, second paragraph: [The importance of understanding/planning/legislation for the structure of agricultural landscapes (see above) could be stated here].

Activities: [The importance of linkages between systems could be mentioned here. These include movements of the associated biota between disturbed systems and refugia (pests, biological control agents and soil biota); design of riparian areas as filters for stream water quality, wildlife corridors and for harvest of domestic commodities; nutrient fluxes in agropastoral systems].

Activities

2.1 (ii) [conservation of landraces and documentation of agroecological and socioeconomic attributes. Recognition of root allocation and architecture of traditional and hybrid crops as fundamental attributes contributing to the sustainability of soil fertility.

b(ii) The importance of root diversity (of different crops), production and architecture for the maintenance of soil structure, stability and soil organic matter content [compared with crop residues above ground which have little effect on these properties and may be better used as animal feeds].

Programme element 3.

Activities

3.1 Document and characterize the characteristics and farmer knowledge of crop landraces for utilization under specific agroecological conditions.

3.2 Develop indigenous functional classification of organic resources for soil fertility management (dung, crop residues, green manures and woody biomass) and promote farmer awareness of below ground processes which underpin links between management practices and crop responses.

Programme element 4.

Rationale

Increase awareness that soil biodiversity is a major component of total biodiversity and has the same intrinsic, utilitarian and functional values as recognised for above-ground BD. [Because of the limited knowledge of these attributes of SBD, particularly in developing countries, the precautionary principle for conservation should be applied through conservation in agricultural landscapes. E.g. forest fallows with low above-ground BD may have similar SBD to natural systems and SBD in small-holder cropping systems can be higher than the above-ground BD in the natural systems from which they were derived. Agricultural systems are therefore important for BD conservation. This can be linked to the economic values of goods and services provided by these systems because it is difficult to place a direct value on SBD].

[Activity 4.2. I believe that measurements of soil structural diversity (biophysical diversity) could be usefully linked to other parameters as indices of soil health and the sustainability of agroecosystems. I note from Footnote 9 that there is a working group (SBSTTA V) on sustainability indicators - who is the contact point?]

JM Anderson

Exeter University

10 Sept 99

From: Jo Anderson

Sent: Tuesday, September 14, 1999 8:27 AM

One of the issues it would be useful to discuss at the workshop is how soil biodiversity can be formally recognised in the COB. It is not surprising that it was not explicitly stated but since it comprises most of the total biodiversity in any system it must come within the remit with the same criteria of moral, utilitarian and functional imperatives for conservation. As I indicated in the previous document, soil biodiversity responds rather differently to land use change in that some components of the fauna are very sensitive to habitat disturbance, but the majority of animals and micro-organisms seem resilient to change until the system is intensively cultivated. Hence conservation of soil BD can be achieved by sustainable agricultural landscapes containing mosaics of land uses supplying different human needs with different disturbance regimes.

Regards

Jo

From: **Ann Thrupp**
 Sent: Thu 16/09/99 22:56

Comments on CBD Documents on Agricultural Biodiversity by Lori Ann Thrupp (sent 9/16/99)

Thank you for the opportunity to review the draft documents on agricultural biodiversity. I read the first report – Assessment of on-going activities and priorities for a programme of work: UNEP/CBD/SBSTTA/5/10, and also briefly skimmed the longer (Add1) document.

Overall, these documents seem very comprehensive, covering numerous aspects and actions affecting agricultural biodiversity. They are quite clearly written and organized logically. The stress on ecosystem functions of agricultural biodiversity in several parts of the document is good; this is an area that has been neglected. Likewise, it's encouraging that the documents include (in several places) support to local and indigenous knowledge on agrobiodiversity, farmers' participation, and policy changes.

I have the following questions and suggestions that I hope are helpful:

1. Why are there two documents that are very similar? Are they for two different audiences or purposes? It is not clear what is the distinction, what are the intended uses, and who are intended users; it would be helpful to explain this matter more clearly. The longer report is so similar to the first one (though more detailed), it seems repetitive and also is tedious for the reader.
2. The list of recommended activities is very extensive, and ambitious. It would be difficult for readers (particularly decision-makers in national and international agencies) to decide which of these actions are priorities, and how to select the most important options. {Page 5, para 11 of the short document mentions priority-setting, but still lists a very long set of actions, and doesn't seem to provide any guidance.) Any decision maker might perceive this extensive list daunting and unrealistic. Are all of these actions feasible for a given country or organization? The fact that there are SO many recommended actions might repel decision-makers from even attempting any aspect. I think it would be advisable to give readers a better sense of priorities. Individual nations or organizations may wish to decide their own priorities, but in that case, the CBD can at least mention criteria to assist in priority-setting.
3. Similarly, the timing or phasing of these recommended actions is not clear. Is it necessary for countries/organizations to begin action on the first section (assessment and data collection), before doing the subsequent actions concerning promotion of alternative farming practices, and/or policies. How and where should the efforts begin? Is assessment and data collection considered a prerequisite, before doing other actions? I don't think it should be necessary for all countries to carry out actions in parts one and two before three or four. For example, some countries and organizations may be ready to take actions and make policy changes rather than spend lots of time doing assessments – given the urgency of the problems. However, if the CBD wants this to be phased, and requires a special order of activities, it should be made clear.
4. Who is expected to do what? In other words, which organizations are advised to take which actions and responsibilities? Are all national agencies at all levels expected to do all of the

actions? I believe it is important to have some division of labor... i.e., an allocation of different tasks among organizations, depending on their capacities. How will this be determined? It probably should be somewhat flexible at the national level, not prescribed by CBD, but some guidelines or suggestions could be offered. At the international level, I think more clarity is needed to identify the roles and responsibilities of different major agencies. (An example is on the assessments: Who will be responsible for gathering the data noted? If it's more than one organization, then how to avoid duplication, and increase co-operation? Who will be involved in actually providing and tracking the information? For whom is the data collected? For what use? Will local people be involved? Will it serve their interests?)

5. The short document does not seem to mention the current major problems/trends and future threats of agrobiodiversity losses. (It is acknowledged very briefly in the long document). This omission seems odd, since agrobiodiversity erosion/loss (and its negative impact on farmers production, on food security, and on people's livelihood) is a major motivation for taking action. I suggest that at least some mention be made of this important challenge. Likewise, actions need to be targeted to prevent and mitigate continued losses, and to focus on the areas where the losses are most significant.

6. Likewise, there is virtually no mention of the key causes of agrobiodiversity erosion. This is a disappointment, because the underlying causes of problems need to be confronted and addressed. I would not expect a detailed description of all the causes, since this may have been described in previous CBD documents. However it is critical to mention the importance of countering those causes of agrobiodiversity loss/reduction. In particular, I am referring to critical causes such as: a) policies that promote/support homogenized monocultural high-chemical-input farming systems (such as subsidies, credit policies, etc..) ; b) agricultural/rural development programs that support conventional industrial patterns of uniform monocultural development and reduce biodiversity; c) pressures by private sector interests that perpetuate the sales and use of uniform seeds and related chemical inputs; d) inequities in the distribution of and access to resources (including genetic resources); e) lack of participation of farmers and stewards of agrobiodiversity in decision-making and program development in agriculture; and f) neglect (or suppression) of local and indigenous knowledge about genetic resources and biodiversity, along with reductionist and uni-disciplinary scientific paradigm that underlies R&D in this arena. Actions should be directed at reversing or preventing these underlying causes – i.e., to eliminate (or major change) of the predominant policies and programs that are responsible... to counter the pressures of the private sector – e.g., through regulations, education, and other means, ensuring better distribution and access to resources, etc. Right now, the documents unfortunately give very little attention to these somewhat sensitive matters. The CBD and partner organizations will probably have more effective and stronger impacts in achieving the intended changes, if these matters are addressed in a more frank and bold way.

7. The separation between animal, plant, forest and aquatic resources seems somewhat artificial to me. Likewise, the division between soil, pest, pollination, is also unnecessary and artificial. These parameters are closely inter-related, and they should be integrated for better understanding and for designing changes. The recommended actions and principles for each of these categories are similar; so it makes more sense to combine them in most cases. An integrated systems approach is clearly recommended, and it needs to focus on the integration and interaction between the resources, not the separation and division. By creating separations, the CBD is falling into a trap of perpetuating problems that contribute to biodiversity losses.

8. The matrix/table is very complex and rather confusing, and therefore is not very helpful as an organizing tool, or as an overview of desired actions. Many participants in the workshop last year also found it inappropriate, as I recall. It again makes the list of tasks seem excessive and daunting. Furthermore, the creation of divided boxes – for animal, plant, forest, and aquatic,... etc... is artificial (and defeats the purpose of integration) – as noted above. It also does not give a decision-maker any sense of priority, or where/how to start the tasks, or who is expected to take on the responsibilities and efforts.

9. The policy section needs to have more on the removal of incentives and policies that contribute to the erosion and loss of agrobiodiversity. ("Perverse incentives" is a term noted cursorily early in the document, but is not explained.). This is critical to achieve changes. As long as contradictory forces are in place, it is very difficult to conserve/enhance agrobiodiversity.

I believe that addressing the above questions and suggestions may help to strengthen the document. I hope these comments are useful and constructive.
Thank you.

Lori Ann Thrupp, PhD

From: **Ann Thrupp**
Sent: Fri 17/09/99 06:40

Hello again,

I have an additional thought/comment on the document, concerning biotechnology:

It is good that the document includes consideration of biotechnology impacts and implications, as noted on page 10 of the document. However, this brief paragraph is likely to be insufficient to address the major challenge, and the recommendation is somewhat vague. The CBD will benefit humanity if it takes a **BOLD** stand and supports strong actions to confront biotechnology challenges. Monitoring and assessment is one minor step, but more attention and additional recommendations need to be included in the document to deal with the current and potential impacts of biotechnology. For example, policies and measures need to be established and implemented to prevent the development and spread of biotechnology innovations that contribute to the erosion of biodiversity in agriculture, and that perpetuate the uniform industrial model and chemical intensive systems. Restrictions and regulations are also needed to curtail and mitigate the practices of corporations that currently control and monopolize the development of biotechnology. Technology innovation should be redirected towards the generation of methods that enhance and support diversity in farming systems, and that contribute to livelihood/food security.

I hope this is useful. Thanks again, Ann

From: Scott Miller
Sent: Friday, September 17, 1999 10:41 AM

Comments on draft of UNEP/CBD/SBSTTA/5/10

In general, the document is an excellent and concise summary of the subject and points to important means of moving forward. Some suggestions for emphasis and clarification follow. We make some reference to the longer version (UNEP/CBD/SBSTTA/5/10/add1) but the comments below focus on the short version. We could have commented in greater depth on some of the subjects, but not in the short time frame available. This represents ICIPE's institutional response, with contributions from **Hans Herren, Johann Baumgartner** and **Scott Miller**.

General:

There is an overwhelming need to encourage national governments, international conventions, and NGOs to improve co-ordination and communication between the agriculture/fisheries/forestry sector and the conservation/environment/wildlife management sector. There are still far too many meetings and workshops that claim to deal with biodiversity yet only include one of these sectors. There is often lack of harmony between both intent and implementation of national and international laws and policies between these sectors. For example, research on agricultural insects in many countries requires research permits and export permits from both the agriculture and wildlife authorities, and may force researchers into dealing with contrasting regulatory approaches. Regulation of introduction of potential invasive species is another area that must be co-ordinated, because one person's weed can be another person's crop!

With this in mind, it is strange that the IPPC is not mentioned in the short document (it is in paragraph 136 of the long document). Note the wide mandate of IPPC, covering ALL "plant pests" which it defines as including ANY "plant, animal or pathogenic agent" that injures any plant or plant product. IPPC also includes responsibilities for survey, monitoring and reporting that parallel those in the CBD. The mandate for exchange of information under IPPC goes beyond that in CBD. This means that at least half of the world's insect species can be considered as "plant pests", resulting in an overlap of several million species between the two conventions! Compare Articles II.1, IV.2 and VIII.1 of IPPC to Articles 7, 8h, 17, and 18 of CBD.

One of the major factors holding back understanding the biodiversity associated with agricultural systems is the "taxonomic impediment" which is being addressed by CBD through the GTI (see SBSTTA4 recommendations). Supporting taxonomic needs of agriculture is the primary aim of Bionet International, a growing international technical co-operation network. The rapid growth of Bionet shows the interest in the issue. At ICIPE we continually hear from the NARS about the need for basic assistance in identification services to support agrobiodiversity research and applications. Although taxonomic needs are mentioned in the table, they do not seem to be mentioned in the text of the short document. At the very least a reference to the importance of the GTI in supporting agrobiodiversity issues would be appropriate.

In most places where the term CGIAR is used, it would be more appropriate to use IARC (International Agricultural Research Centres), which includes the CGIAR and other centres that contribute to the same goals, including ICIPE and TSBF.

Pest, weed and disease control does not receive the attention in the text appropriate to its position in Table 1. For example, throughout the report more emphasis should be given to habitat management (biological control) for improving ecosystem services. By the way, many institutions world-wide are working with habitat management strategies.

Based on the literature consulted it should also be possible to draw some conclusions with respect to the methodologies for conservation. What are the resources required in the examples cited in the report? For example, Johann Baumgartner was personally involved in the design of the direct payment system used in Switzerland (cited in the report), and questions the whether that system can be transferred to a resource poor country.

Specific comments (by paragraph number):

2. Has a report been issued from the Brazil pollination workshop? Should cite the report of the Rome meeting (and at www.fao.org/sd/epdirect/EPre006). The Rome report was available at SBSTTA4 but was not issued as an "inf" document; can it be formally issued as an "inf" document at SBSTTA5? Yet another FAO report that is relevant is: Roubik, D. W. (ed.) 1995. Pollination of cultivated plants in the tropics. FAO Agricultural Services Bulletin 118. FAO, Rome. x + 196 pp.

4. We like the definition of agrobiodiversity as "all components of biological diversity of relevance to food and agriculture". But when one considers all the ecosystem services that support agriculture, and one includes grazing, fisheries, forestry and non-timber forest products in agriculture, then one wonders in a country like Kenya if there are any species that are NOT part of agrobiodiversity?

6.a. Microbial genetic resources should also include bacteria, which are important in fermentation of many foods?

10. Another global information system is the FAO Global Plant and Pest Information System (GPPIS).

23. GTI should be mentioned under other relevant CBD programmes and IPPC should be mentioned under other international organisations.

Programme element 1, activity 1.3.b. Terminology is important. Even in this report diversity related to genetics, species and ecosystems as well as the term landscape has been discussed. How does this terminology correspond to the 'spatial scale' terminology, i.e. to fields, assemblage of fields, farms, landscapes and region? In assessing case studies, conclusions should be drawn with respect to the scale. This is very important from the practical standpoint.

Programme element 2, activity 2.1.b.i. reword to "effects of invasive species (such as honey bees in some habitats) on indigenous pollinators..." because honey bees are themselves indigenous in Africa and southern Europe.

Programme element 4, activity 4.1.a. should be linked to general biodiversity inventory and monitoring mandates of CBD and plant pest survey and monitoring mandates of IPPC.

From: **Michel Pimbert**
 Sent: September 17, 1999 12:36 PM

To Members of Liaison group meeting on Agricultural Biodiversity, Rome 20-22 September, 1999

Dear colleagues,

Here are some comments on the draft note (UNEP/CBD/SBSTTA/10) sent to me. I am unable to spend much more time on this as the coming week is a very busy period for me. I apologize for this and also for not being able to take part in the telephone conference on 21 September. However, I have agreed with David Cooper, from the SCBD, to comment more on the document and also react to your feedback on Wednesday 22 September (around 15.00 UK time, tel no: 44 1865 865274).

1. The draft note (UNEP/CBD/SBSTTA/10) provides a clear summary of COP decisions and what the Secretariat and the FAO have done to meet expectations of the COP and prepare the ground for the next SBSTTA and COP meeting. On page 1, mention should be made of the FAO/Netherlands conference on MFCAL and its conference papers that refer to Agricultural Biodiversity.
2. Page 2, section 5 should explicitly mention "wild" and semi-domesticated plant and animals species that are managed by rural communities for food and other livelihood supporting activities. In my opinion, the evidence gathered emphasizes (once again!) that the distinction between so called wild and domesticated diversity reflects more disciplinary traditions and organizational claims to expertise over specific and exclusive domains rather than the dynamic realities of local livelihoods that draw on, and combine, different components of agricultural biodiversity.
3. Following on from 2, I suggest adding to 6 (a) last para: These constitute the main units of production in agriculture **and food provisioning activities. Managed wild plants and animals**, cultivated species, including domesticated species, correspond essentially to "planned agricultural biodiversity".
4. Under 6 c) add Property right institutions.
5. Under 10, qualify first sentence by saying that the institutional arrangements you refer to are in place **at the global level**.
6. Under 13, would it be worth expanding on the status of indicator development, summarizing what we do know and what are the "many gaps"? Particularly important to highlight the dearth of knowledge on local indicators (of user groups in rural areas) and on how to bring them into land use planning, research agenda definitions and choices in resource allocations.
7. Turning now to the proposed elements of the Programme of Work. All are relevant.
8. Programme element 1 (p7-8). Ways and means. This is a task for the FAO in liaison with the SCBD. Ask COP to recognize comparative advantage of FAO and request FAO governance to make this work a political and financial priority from year 2000, including support for collaborative research on functional biodiversity with different organisations.

9. Programme element 2. I suggest changing and simplifying the present title to: “Expanding knowledge on the multiple functions of agricultural biodiversity and identifying agricultural practices, technologies and policies that impact positively or negatively on agricultural biodiversity”.

Under 2.3 add point c) identification of appropriate professional training and capacity building, organizational procedures and cultures, research methodologies and professional interventions that support best practices listed under 2.3 b).

Ways and means.

Identify and support an international and interdisciplinary case study approach to analyze the dynamics of each item under Programme element 2, with FAO and the SCBD/SBSTTA, UNESCO MAB programme assisting in securing and mobilizing funds from bilateral and multilateral sources.

11. Programme element 3. This is potentially the most innovative part of the workplan along with Programme element 2.

Ways and means

Identify and support an international participatory action research programme designed to link learning with concerted action among local user groups and other stakeholders to promote the adaptive management of agricultural biodiversity in different economic and ecological settings. Support design of funding criteria and reward systems to ensure that the action research funded to further all activities listed under 3 meet minimum standards in terms of process orientation, combining indigenous with scientific knowledge, use of innovative participatory and complementary methodologies, public acknowledgement of the intellectual contributions of all stakeholders and establish transparent and mutually accountable research agreements between local resource users and external organisations and professionals.

Allow a minimal 10 year time frame for the duration of the action research programmes under 3 to build local capacities and local institutions as well as add to national and global knowledge on the functions and management of agricultural biodiversity.

12. Programme element 4. This is straightforward CBD stuff. Borrow from what has already been said in other UN and SCBD documents on national strategies and action plans.

Is it worth asking that COP re-emphasize the urgency of national governments earmarking resources for these activities and designing inter-ministerial mechanisms and incentives to overcome the weight of sectoral traditions that hamper the emergence of more integrated policies, practices and budget allocations? I know -different wording than mine would have to be used here but this is still a key issue for programme element 4.

With best wishes
Michel

From: **Jean Hanson**
Sent: September 17, 1999 5:51 PM

David

Thanks for the telephone call and invitation to review and participate in the discussions on agricultural biodiversity. I have read the documents and they are both very complete. I like the broad grouping of genetic resources that you are using. I will comment on UNEP/CBD/SBSTTA/10 as requested:

Para 13. The issue of indicators for biodiversity loss needs more attention because of the wide distribution of many species of agricultural importance. Are we looking at loss of genes or gene combinations (genotypes) or loss in a particular ecosystem or loss from the species as a whole? How we define this will determine how it is measured and what are then the indicators.

Para 25 Programme element 1. I would like a special mention on related wild species, forages and minor crops under this paragraph. In many cases there is no comprehensive assessments for these species and this is a large gap in the knowledge of species with potential. Under ways and means, I would suggest that crop networks would be a suitable mechanism to do assessments of available diversity and share methods and techniques.

Programme element 2. This section focuses on management for conservation. Sustainable use and conservation through use are important components of management. There is need to do some case studies to determine the effects of use on biodiversity within population and ecosystems. I would suggest that this be included in this section as well as in the programme 3 to strengthen participation of farmers in management. The ways and means could be addressed through a series of case studies at the ecosystem/watershed level to take an integrated approach to the effects of management on biodiversity of the components of the ecosystem.

Programme element 3 is well described. NGOs and the private sector could play an important role in strengthening the capacity of farmers in this area. Some case studies of best practices would provide valuable information.

Programme element 4. The policies for conservation and sustainable use of biodiversity will be closely linked to agricultural and marketing policies.

Ways and means should ensure awareness of the role of biodiversity in increasing food production and farm income with policy makers to ensure full integration in national agricultural policies.

I look forward to participating in the discussions next week.

Jean

From: **Hope Shand**
Sent: Monday, September 20, 1999 6:13 p.m.

Dear David,

I regret very much that I've been unable to make any detailed comments on the draft paper you sent. I'm afraid that I lost some time last week because of the hurricane, and I'm swamped with prior commitments.

I will not be able to participate on the conference call Tuesday am.

Very briefly, I was glad to see that there is some mention of the need to monitor and assess the potential impacts of ag. technologies and inputs - (programme element 2.2) but there doesn't seem to be a lot there. This is an important area - and it should receive greater emphasis in my opinion. For example, the SBSTTA report on Genetic Use Restriction Technology recommended that intergovernmental bodies further study the implications of GURTs on conservation and sustainable use of agricultural genetic resources, and identify relevant policy questions that need to be addressed.

Of course, GURT is just one example, but illustrates why there is a need to monitor and assess the potential impacts of new biotechnologies. I think it would be good to emphasize this more.

Thank you again for the opportunity to make comments.

Best Wishes,

Hope Shand,
for RAFI

GEF Comments on the Draft CBD Paper on " Agricultural Biological Diversity: Assessment of on-going activities and priorities for a program of work".

In accordance with CBD/COP decisions, the fifth CBD/COP will have before it a report on the above assessment which focuses on the following dimensions of agricultural biodiversity, genetic resources for food and agriculture (species, varieties, their wild relatives, harvested wild relatives); components of agricultural biodiversity that provide ecological services and agroecosystem functions; and socioeconomic and cultural dimensions. Since this work has not been concluded it will be useful at this stage for GEF to look at these activities and indicate to the CBD how it has responded to similar concerns within its operational programs and how it could continue to collaborate in support of such activities:

1. Genetic resources for food and agriculture.

Ongoing assessments and priority setting in this area indicate that substantial amounts of work need still to be done on completing the strategies and action plans agreed upon or are under development for each of the sub-sectors to specify priority needs for research, capacity building, public awareness, as well as policy development and legislation. The need to facilitate the involvement of multiple stakeholders and need to provide for proper planning and coordination. The need for better indicators for agricultural biodiversity loss has also been identified.

In this area the GEF should point to its support for national planning frameworks in biodiversity action plans and work being undertaken through its projects in biodiversity conservation. Many GEF projects address the issue of developing a stronger legislation frameworks and agrobiodiversity conservation should be seen as part of the national biodiversity action plans being supported by the GEF. The GEF framework on public participation should be offered as a model for development of activities in this area which need to involve stakeholder participation. The GEF work on indicators has been evolving and we should offer collaboration of other partners involved in similar activities especially those of the CBD. Here also many of our projects also in the area of agricultural biodiversity have components on monitoring of impact at project level this would be a useful framework for collaboration by state parties to the convention in this area. The GEF framework for targeted research seems not to be well known among the CBD state parties. We should point out to the opportunities which are made available for collaborative work in this area which could also help develop collaboration with the CBD in this area.

2. Components of Agricultural Biodiversity that provide ecological services and agro-ecosystem function.

The assessment clearly recognizes the fact that in many areas, work that would be now considered as contributing to the conservation of and sustainable use of agricultural biodiversity, has been ongoing, but only rarely has it been explicitly been recognized as such. This is definitely the case with GEF activities in this area. Right from the very beginning of the GEF has been involved with determining best practices and assessing various aspects of agricultural biodiversity. Notable among this work has been the GEF UNDP implemented project on Slash and Burn which has give birth to a donor supported ongoing initiative in assessing best practices and methodologies for sustainable land management in forest ecosystems. This was a global assessment and involved several institutions and countries. Also in this regard is the LTNEP implemented Global project on People, Land, Environment and Conservation (PLEC) which looks at agricultural practices in traditional systems across the world. The UNEP implemented project on desert margins seeks to find traditional management strategies and practices for pastoral societies which can be shared with other societies. There are opportunities for developing GEF supported activities in this area at national level which utilize the results identified through these activities.

The GEF initiative on land and water in Africa announced by the GEF heads of agencies at their last meeting does offer also opportunities for collaboration with the (CBI) state parties in the area of natural resources management and sustainable agriculture such as watershed and valley bottom management. The GEF operational programs 2 and 9 offer specific opportunities for developing activities in this area. There are already several initiatives underway for developing strategic action plans for river basins and inland waters which are can form the basis for collaboration in this area.

3. Co-ordination of planning and development of national strategies for agricultural biodiversity.

The CBD assessment recognizes that a concerted and coordinated effort that addresses various components of agricultural biodiversity, depends upon a coherent framework to guide national strategies and actions for the conservation and sustainable use on agricultural biodiversity, as well as a dynamic process that ensures country level flexibility and updating of regional and international priorities and actions. It also recognizes the need to mainstream agricultural biodiversity considerations in national strategies, programs and action plans for food, agriculture, forestry, and fisheries. This is the GEFs outlook in supporting national biodiversity action plans which it has so far done in more than 100 countries. The GEF continues to respond positively to requests from state parties for support of various components within the national biodiversity action plans.

ANNEX 3: Ways and means and timing of expected outputs

Programme Element 1: Country-driven assessments of the status and trends of agricultural biodiversity

Ways and Means

Exchange and use of experiences, information and findings from the assessments shall be facilitated through networks and consultation between countries and institutions, including use of existing networks, etc.

Country-driven assessments of genetic resources (activity 1.1) shall be implemented, through programmes of FAO and other organizations (with regular budget and extra-budgetary resources). Supplementary resources may be needed to support additional assessments (activity 1.2), which will draw upon elements of existing programmes of international organizations, and the outputs of programme element 2.

This programme element, particularly Activity 1.3, will be supported through catalytic activities, building upon and bringing together existing programmes, in order to develop agricultural biodiversity indicators, agreed terminology, etc, through *inter alia* technical workshops, meetings and consultations, E-mail conferences, preparation of discussion papers, travel. Funding of these catalytic activities will be through the Secretariat, with in-kind contributions from participating organizations.

Timing of Expected Outputs

List of indicators of agricultural biodiversity and its loss, and agreed terminology of production environments (by 2002).

Periodical reports on the state of the world's genetic resources (animal, plant, forest and fish), as programmed, leading progressively towards comprehensive assessment and understanding of agricultural biodiversity, with a focus on functional biodiversity in agriculture, by 2010.

Programme Element 2: Identification and promotion of adaptive management practices, technologies and related policy and incentive measures

Ways and Means

Case studies will be carried out by national institutions, civil society organizations, and research institutes, with support from international organizations for catalyzing preparation of studies, mobilizing funds, disseminating results, and facilitating feedback and lessons learnt to case study providers and policy makers. New resources may be needed to promote such studies, to analyze the results and to provide necessary capacity building and human resource development, especially at the inter-community or district level. Where a need is identified, for example through lessons learnt from earlier case studies, coherent regional or global programmes of case studies, or action research, will be promoted.

Timing of Expected Outputs

30 selected case studies published, analyzed and disseminated by 2005. The case studies should be representative of regional issues and prioritize best practices and lessons learned which can be broadly applied.

Programme Element 3: Promoting the participation and strengthening capacities of farmers and other stakeholders in the sustainable management of agricultural biodiversity

Ways and means

This programme element is to be implemented primarily through initiatives within countries, including through extension services, local government, educational and civil society organizations, including farmer/producer and consumer organizations and mechanisms emphasising farmer-farmer exchange. This programme element would engage the widest possible range of civil society organisations, including those not normally linked to biodiversity initiatives.

Funding is likely to be on a project or programme basis from bilateral and multi-lateral donors. Catalytic support may be provided through national, regional and global programmes, organisations, facilities and funding mechanisms; in particular to support capacity building, exchange and feedback of policy and market information, and of lessons learnt from this programme element and programme element 2, between local organisations and policy makers, nationally, regionally and globally.

Timing of Expected Outputs

Progressive establishment of local level fora, with a coverage target of at least 1000 communities by 2010.

Examples at country level of operational mechanisms for participation by a wide range of stakeholder groups including civil society organisations, by 2002.

Involvement of farmers and local communities in the majority of national programmes by 2010.

Programme Element 4: Support to co-ordinated and integrated national policies, strategies, programmes and action plans

Ways and Means

Activities are to be implemented primarily at national level through enhanced communication co-ordination mechanisms and planning processes that involve all stakeholder groups, facilitated by international organizations, and by funding mechanisms.

This programme element should draw upon the experience of ongoing programmes (such as UNEPs support to NBSAPs) and a critical analysis of existing practice.

National, regional and international projects and programmes that address policy and institutional development within specific sectors, should make provision, as appropriate, for integration across sectors. Similarly, the development of guidelines should be carried out within the context of the objectives of this programme element..

Additional resources may be needed to further develop or adapt early warning systems, including the capacity to identify thresholds and action needed, and for pilot examples of effective and sustainable response mechanisms to address threats at local, national and supra-national levels

Timing of Expected Outputs

Progressively increased capacity at national level for information management, assessment and communication. Over 100 countries to participate in various assessments of programme elements 1.1 and 1.2 by 2005.

Co-ordination between sectoral assessments and plans of action at national level in the majority of countries by 2005.

Range of guidelines published at international level (on topics to be determined according to needs at national and regional levels).