





# Convention on Biological Diversity

Distr. GENERAL

UNEP/CBD/BS/CM-CB/5/3 6 March 2009

ORIGINAL: ENGLISH

FIFTH COORDINATION MEETING FOR GOVERNMENTS AND ORGANIZATIONS IMPLEMENTING OR FUNDING BIOSAFETY CAPACITY-BUILDING ACTIVITIES San José, Costa Rica, 9-11 March 2009

# REPORT OF THE ONLINE CONFERENCE CAPACITY-BUILDING FOR INTEGRATION OF BIOSAFETY INTO NATIONAL DEVELOPMENT PLANS, STRATEGIES AND PROGRAMMES

Note by the Executive Secretary

#### I. BACKGROUND

- 1. In its decision BS-III/3, paragraph 7, the Conference of the Parties serving as the meeting of the Parties to the Cartagena Protocol on Biosafety (COP-MOP) urged Parties and other Governments to integrate biosafety in their broader sustainable development strategies and approaches and programmes such as Poverty Reduction Strategy Papers, where available and when scheduled for revision, as well as those related to the goals and objectives agreed upon at major United Nations conferences and summits including those agreed upon at the Millennium Summit that are described as the Millennium Development Goals.
- 2. At the third coordination meeting of Governments and organizations involved in implementing and/or funding biosafety capacity-building activities, which was held in February 2007 in Lusaka, Zambia, participants identified integration of biosafety into national development plans and programmes as one of the areas in which many countries require capacity-building support and further guidance. It was agreed that this issue would be addressed at the fifth coordination meeting.
- 3. Pursuant to the recommendation of the fourth coordination meeting, an online conference was organised through the Capacity-Building Forum in the Biosafety Clearing-House (BCH) from 19 January to 13 February 2009 to allow for an initial exchange of views, experiences and lessons learned regarding the integration of biosafety into national development plans, strategies and programmes. The conference was moderated by two members of the Steering Committee for the coordination meetings: John Komen and Lenia Arce Hernández.
- 4. The specific objectives of the conference were:

/...

In order to minimize the environmental impacts of the Secretariat's processes, and to contribute to the Secretary-General's initiative for a C-Neutral UN, this document is printed in limited numbers. Delegates are kindly requested to bring their copies to meetings and not to request additional copies.

- (a) To review the current status, needs and challenges of countries in integrating biosafety into national development plans and similar instruments, such as Poverty Reduction Strategy Papers (PRSPs) and national plans for implementation of the Millennium Development Goals (MDGs).
- (b) To share experiences and lessons learned so far in integrating biosafety and other environmental considerations into the national development plans and programmes and development assistance programmes of donor countries (including the successes and failures and the challenges encountered).
- (c) To identify tools and mechanisms that could be incorporated into generic guidelines for assisting countries to integrate biosafety into their national development plans and programmes, taking into account experience and lessons learned from relevant processes.
- (d) To discuss possible ways and means of strengthening the capacities of developing countries and countries with economies in transition to integrate biosafety into national development plans and processes.
- 5. The conference was organised in following four sessions, which ran in parallel $\tilde{N}$ 
  - (a) Session 1: The scope and rationale of integrating biosafety into development processes;
- (b) Session 2: Country status, experiences and lessons learned in integrating biosafety into national development plans;
- (c) Session 3: Strategies and approaches for integrating biosafety into development planning, financing and implementation processes; and
- (d) Session 4: Measures to strengthen national capacities to integrate biosafety into development plans and processes.
- 6. All the 112 participants who registered for the previous online conference on capacity-building in environmental risk assessment and post-release monitoring of LMOs were automatically enlisted participate in the conference using their previous username and password. In addition, five new participants registered for the conference which brought total number to 117. Out of these, at least 14 persons actively participated in the discussions. A total of 23 messages were posted and all of them are archived in the Biosafety Clearing-House at: http://bch.cbd.int/onlineconferences/about\_dev\_cb.shtml.
- 7. The present report summarises the results of the conference.

#### II. INTRODUCTION

8. Over the last two decades, recognition of the mutual inter-linkages and interdependence between economic development, social development and environmental protection has increased tremendously. It is recognised that sustainable economic development and poverty alleviation hinge on ensuring the vitality of the environment and the long-term sustainability of natural resources that underpin human activities. In 1987, the Brundtland commission produced a report – Our Common Future –, which states that "" The outcomes of a number of subsequent international processes, including, Agenda 21 - the global programme of action on sustainable development adopted by the Earth Summit in 1992 -, the United Nations Millennium Declaration and the WSSD Plan of implementation, called upon national governments to integrate environmental considerations into their national economic development plans and programmes.

- 9. Biosafety which encompasses a wide range of policies and measures to prevent or minimise potential adverse effects of living modified organisms (LMOs) resulting from biotechnology on biodiversity and human health is one of the imperative environmental sustainability strategies that governments need to systematically adopt, especially in light of the dramatic increase in the development and application of modern biotechnology over the last two decades. As noted in Agenda 21 and other documents, modern biotechnology has a great potential to contribute to national development and achievement of the Millennium Development Goals, for example through enhancing food productivity and nutrition, better health care, bioremediation of polluted environments and facilitation of sustainable use of natural resources. However, it could have adverse effects on biological diversity and human health. For example the spread of traits, such as herbicide resistance from genetically modified plants to plants (including weeds) that are not modified, negative impacts on non-target organisms and potential build-up of resistance in insect populations could have devastating environmental consequences. As well, potential effects of antibiotic-resistant marker genes used in research on LMOs could result in serious human health effects.
- 10. In view of the above, the Cartagena Protocol on Biosafety was adopted in 2000 to contribute to ensuring the safe transfer, handling and use of LMOs and enable countries to develop and apply modern biotechnology in an environmentally sound manner so that humankind can derive maximum benefits from the technology while at the same time minimising its potential risks to the environment and human health. A number of countries have developed national biosafety frameworks incorporating legal, administrative and other measures to implement the provisions of the Protocol at the national level. However, many countries have not yet addressed biosafety objectives in the context of the broader national sustainable development goals. Consequently, biosafety considerations are not covered in many of the existing national development plans or equivalent instruments, such as PRSPs. A quick review of the national biosafety frameworks developed so far shows that many of them do not clearly articulate the linkages between biosafety and other economic sectoral policies, plans and programmes. Many NBFs in their current form may not be able to inspire much political interest or effectively influence the policies and actions of other economic sectors and institutions to ensure sustainable development.
- 11. There is clearly a need to build on the progress made in developing the NBFs to systematically integrate biosafety into the broader development policies, plans and programmes through a broad consultative process. Biosafety is a sustainable development challenge that cuts across different sectors and as such requires a systematic, holistic and participatory approach encompassing different ministries, sector departments, civil society organizations and the private sector.
- 12. While the need to promote biosafety is now widely recognised, translating this desire into practical actions and aligning it with other sustainable development objectives is still a big challenge. Many developing countries and countries with economies in transition lack the capacity to effectively integrate biosafety into national development policies, plans and budgets. There is clearly a need to assist developing countries and countries with economies in transition in different ways, among other things, to:
- (a) Articulate the linkages between biosafety and the broader national development and environmental sustainability issues, objectives and priorities;
- (b) Identify and utilise appropriate entry points for integrating biosafety into national development processes, including development of Poverty Reduction Strategies, long-term investment plans, national budget consultations, country assistance strategies, sectoral and cross-sectoral policy frameworks, technical consultations and sector reviews, as well as strategic and project-level environmental impact assessments;

- (c) Define roles and responsibilities for mainstreaming biosafety into national development planning processes and implementation programmes, as well as other relevant sectoral and cross-sectoral policies, plans and programmes;
  - (d) Periodically assess progress on integration of biosafety in development activities; and
  - (e) Share information, experiences and lessons learned.
- 13. This online conference provided an opportunity to an initial exchange views and share experiences in order to develop strategic measures and guidance to strengthen the capacities of developing countries and countries in transition to integrate biosafety into their national development plans and programmes.

#### III. CONFERENCE PROCEEDINGS

## SESSION 1: THE SCOPE AND RATIONALE OF INTEGRATING BIOSAFETY INTO DEVELOPMENT PROCESSES

#### The meaning of biosafety integration into development processes

14. The term "integration" (often interchangeably used with the term "mainstreaming") is variedly defined. According to Merriam-Webster's dictionary, "integration" means to form, coordinate, or blend into a functioning or unified whole. The concept has been applied in relation to different subjects or issues, including environment, climate change, chemicals management, gender, HIV/AIDS and others. In my view, integration of biosafety into development processes is a sub-set of environmental mainstreaming. The latter refers to the proactive and systematic analysis and incorporation of environmental sustainability considerations into development strategies, policies, plans or programmes. The UNDP-UNEP Poverty and Environment Initiative (PEI) defines environmental mainstreaming as the integration of environment into national development planning processes and their outputs, such as Poverty Reduction Strategy Papers (PRSPs) and Millennium Development Goal (MDG) strategies. In practical terms, I think biosafety mainstreaming would involve the deliberate incorporation of tools and measures at different stages of policy, plan and programme design, implementation, monitoring and evaluation to ensure the safe transfer, handling and use of living modified organisms (LMOs) and other biotechnology products in various development sectors including agriculture, fisheries, forestry, health, food aid, international trade and others. In other words, it would mean putting safety considerations at the centre of any sectoral or cross-sectoral policy, plan or programme that involves the use or movement of LMOs. The ultimate goal would be to foster synchronization of socio-economic development and environmental sustainability objectives and handling of any trade offs in a pragmatic manner. I would be interested to know the views of others regarding what the scope of biosafety mainstreaming into development processes should be. Should it be broadened or limited to the scope of the Biosafety Protocol?

Erie Tamale, CBD Secretariat

15. I agree with Mr. Erie Tamale in the sense that Biosafety should be the core when we deal with biotechnology, agriculture, fisheries, forestry, health and food policies. In the case of Cuba, this is still a dream. Our experience shows that it is very difficult to broaden one's mind, due to the fact that the people's perception of risk is very low. Unfortunately in our case biosafety is still considered as an expense instead of an investment for the future. This is a common view conceived by the officials in charge of the decision-making process, in which financial resources are involved. Nevertheless, our action plan on Biosafety is integrated into the biodiversity strategy which, at the same time, is a part of

the environmental strategy. Those strategies have been discussed with all stakeholders. Regarding the scope of biosafety mainstreaming, I strongly believe that biosafety should be understood within a broad scope. Unfortunately the Cartagena Protocol is aimed at just one aspect of the biosafety (LMOs). Other elements in which biological risk is involved, have to be addressed under this term, this is the case of the alien species and biological agents. Biosafety, as a preventive discipline, has been subjected to a fragmented vision due to the preponderance given to LMOs by some international organizations.

Lenia Arce Hernandez, Cuba

16. Broadening the scope or not; both have advantages and disadvantages. First as alluded to by Lenia, Biosafety is not only LMOs. We might have to reconsider calling it "Biological Safety" and then Biosafety can comfortably fit into this broader term. If biosafety is to be integrated into the broader Environmental policies, then this is something that needs to be looked into; from respective parties' local context. Two, the broader environmental integration as mentioned by Erie, might require reconceptualisation of the "narrow view" to "broader, holistic or systemic and socially robust view" that has an innovative focus with regards to sustainability. This is problematic because bringing the social economic context will involve integration of diverse perspectives (and sometimes non-scientific views). When you have divergent opinions, reaching a consensus might be difficult and this is where I would want to hear views of others. It might be (at least for the short term) be rewarding to limit the scope to the Biosafety Protocol until when parties are clear on what broader issues might be, which can consequently be integrated into the respective countries developmental agendas, based on the local contexts.

Ann Kingiri, Kenya

17. As Ms. Ann Kingiri has stated, biosafety systems are developed by different countries taking into account their own scopes and visions about what biosafety is. Unfortunately it seems there isn't a unique and harmonized definition of biosafety, so each country handles this concept differently, broadening or narrowing its scope according to its different needs and priorities. It is true that a broad scope of Biosafety, which would include other categories, in addition to LMOs, at this stage and in the context of the Cartagena Protocol, is indeed problematic. Bearing this in mind, the idea of narrowing the scope to the CP is very reasonable, needless to say that I support this idea. Nevertheless, it is important to keep in mind that some countries, like Cuba, have a broad scope of Biosafety which have a direct effect on our national policies. As a consequence, our needs and priorities regarding capacity building on Biosafety and our international cooperation initiatives on this issue, are consistent with such a scope. These elements previously mentioned here, have been reflected in the international projects (such as the UNEP/GEF project) that we have implemented since 1998.

Lenia Arce Hernández, Cuba

18. I would like to share our view that LMO's can offer opportunities for sustainable development, such as in the field of science, medicines or cleaner production processes. At the same time uninformed or irresponsible use and transport of LMOs, as well as the abuse of LMOs can have negative consequences for development and biodiversity and needs to be arranged. To my personal opinion, it is a fact that we have to deal with LMO's. Natural disasters, climate change, social insecurity can lead to decreased land productivity and increased dependence on imported food. Imports may increase the chance of LMOs entering the country. But also increased access to global markets and economic development can lead to more imports, transports and use of LMOs. The importance attached to the issue may differ per country, depending on political priorities. At the same time, in all cases, there is a strong reliance on governments to ensure biosafety, as well as to decide whether or which LMOs can contribute to a country's development and how, as this is one of the issues that cannot be fully arranged by the free

market or private persons yet. By ratifying the Cartagena Protocol on Biosafety Parties also commit to its implementation. Implementation of this Protocol would be more useful and effective if it also contributes to other development goals and processes. Since this discussion takes place in the context of the CBP, CBP terms and definitions should be used as such, unless otherwise indicated. On national level it is almost unavoidable to use terminology with broader coverage. The government of Parties and other actors involved should however have a clear view of which obligations result from CBP and which issues are or can(not) be arranged internationally via the CBP.

Lucy Naydenova, Netherlands

19. It is obvious that biosafety includes not only issues related to LMOs but also those related to any biological threats. Thus, we might tend to broaden the scope of biosafety integration into development processes to reflect all biological processes that can have a negative impact on the environment. However, we have to keep in mind that the Cartagena Protocol has resulted from a long and difficult negotiation's process. To be consistent with the biosafety Protocol and avoid potential conflicts, we must limit the meaning to the scope of the protocol. Nevertheless, a wide definition can be noted while a limited and more precise will be added to refer to the context of the protocol.

Yves Robert Personna

## SESSION 2: COUNTRY STATUS, EXPERIENCES AND LESSONS LEARNED IN INTEGRATING BIOSAFETY INTO NATIONAL DEVELOPMENT PLANS

- 20. The topic of this session follows nicely from the previous online conference, covering biosafety capacity development. As a first step on this, more complex subject, I would welcome hearing experiences from various countries, specifically focusing on 1 or more of this session's guiding questions:
- a) To what extent have existing development plans and programmes, such as Poverty Reduction Strategy Papers, considered biosafety issues?
- b) What experience has been gained in integrating biosafety into national development plans and programmes and what have been some of the success factors and challenges?
- c) What are the main obstacles and challenges to integrating biosafety into national development plans and how have they been, or could they be, addressed?

Thanks in advance for your contributions!

Mr. John Komen

21. Reading the proposal made by Mr John Komen, I would like to add my experience in Guinea Bissau process of biosafety integration, on national programmes, plans and policies. i)- The National Developments plan the Poverty Reduction Programme and the Millennium Development Goals all were ready before the starting Biosafety process in country, once there is no implementation of all these planed activities we are working on that of the Biosafety integration on them once these programmes plans and strategies implementation shall start. The same situation is related to the Environmental National Plan of Action - PNGA. ii)-In the PNGA which the main Environmental Code is now waiting for Governmental approval as far as the NBF Developments documents, will allowed the interaction of NBF in the PNGA and its implementation, even that same programmes identified in PNGA already implicitly refer to the Biosafety aspects as the programmes VI, VII, VIII, and XIII. Even that also, the National Public Investment Programme - PIP, belonging to the Ministry of Economy and Planning, include since 2006 the Biosafety in the planned PIP, and it is programmed for the next coming years, with donation of 11. 500.000,00XOF on 2007 as un example. At the new created Secretariat of Estate For Environment and Sustainable Development, it will be A biosafety programme in its Policy structures. iii) There are same NGOs that are dis-informing about the Cartagena Protocol and Biosafety thinking on it as un danger insted of un opportunity to Build and reinforce ours capacity institutional and human capacity building

opportunities using the International regional and national cooperation and interaction. We need to informed more people and decision makers about the these opportunity and the real need for the Cartagena Protocol for the Biodiversity Convention implementation. We intent to subcontract the communities radios for these purposes.

Maria Ivone Pereira da Costa, Guinea Bissau

22. Some of you might wonder, why I'm posting here, if the main topic is the integration of biosafety into national strategies such as the PRSP. But I think the problem of "national strategies" is not only linked to the PRPS and developing plans of developing countries. My organisation is active in capacity building for biosafety for many years and though we are a rich country it was not always easy to get funds for these activities. The main reason for that is that biosafety is not included into our national strategy on development cooperation and policy. The Austrian development cooperation focuses on special regions and mainly on structural aid, like building up infrastructure, ensure water supply, etc. My experience, as working in an "implementing" agency is that it is very difficult to get national funds for capacity building activities in biosafety, simply because it is not a priority in the national development policy. I also believe that this is not a problem only in my country. We are in negotiations with the relevant institutions and authorities in order to make them aware of the problem and try to get more attention for environmental issues in development cooperation. Biosafety is just one of them. So in conclusion: It is not only up to the developing countries to adapt their national strategies to include biosafety, also donor countries should besides many other important issues focus a little more on environmental issues (as it is laid down in MDG 7) and include biosafety into THEIR strategies. If they don't it will be rather difficult to get funds for long term, sustainable projects.

> Dr. Andreas Heissenberger, Biosafety Department, Federal Environment Agency of Austria

23. I agree with you and thank for your interest and contribution to this subject that is so important for all us. In fact in Guinea Bissau we are now on the process of regionalisation and harmonisation of most of our policies and strategies followed by actions plans at 17 ECOWAS country as far as for the 8 WAEMU countries. And the environmental sector is one of the chosen among the most urgent. My country belong to both subregional organisations and even that that we are very pooar on respect of the economical and financial resources, specially after national recession, we are forced to follow all regional approaches and Principles, as subsidiarity and solidarities among the two organizations. Since 2005 both of these sub regional commissions are in all members countries for these purposes. Once for WAEMU the priority for the environmental policy go to the following sectors: Water supply, management and sanitation; Costal erea management and protetion related to erotion and pollution; The third priority go to the Biosafety and it relation to food security and agribusiness technology improvement.

Maria Ivone Pereira da Costa, Guinea Bissau

24. I agree with Andreas. There are challenges to be faced in integrating biosafety into the national strategies. The problem may be, biosafety is not considered as "major" compared to other priorities, e.g. food security. This may be understandable from a developing country context and a lot need to be done in term of creating awareness, first at policy makers' level and then the broader public. Responding to Komen with regards to countries experiences, from Kenyan context, significant milestones have been made with the approval of National Biotechnology Policy in 2006 and the recently approved Biosafety Bill. But this is not perceived to be the end because most of the "blind spots" can only be learnt during actual implementation of the relevant policies and legislation. From a closer and critical perspective, it can be said that the two pieces of legislation may have been re-aligned to the broader poverty reduction initiatives since they recognise the role of biotech in addressing the objectives of the MDGs, but not the

vice versa. A lot need to be done towards integrating biosafety into the poverty reduction initiatives. But I argue that a lot can be achieved if biosafety is to be perceived from a "benefit perspective" rather than "less important" if it is to be integrated into the broader initiatives. From the Kenyan experience, it was an uphill task to reach where we are now. Collaboration is key for those who are planning to put up similar policies. However one thing that can be learnt from Kenya case is one; "taking along all stakeholders" in order to safeguard against a possible stalemate; and two; having the capacity to move the process forward and three; having the political will and support. I am sure the Kenyan stakeholders involved can contribute more to this debate.

Anne Kingiri, Kenya

25. Integration of biosafety principles, and more generally environmental issues into national strategies and policy is not an easy task, especially in countries with economy in transition (which is our recent experience) and developing countries. Only gradually it was achieved to integrate these principles into the main corresponding national documents, which in the Czech Republic represent: State Environmental Policy (current for the period 2004-2010), Report on the Environment (annual), Strategy on Sustainable Development (updating started in May 2008), and some more specific documents, such as State Programme on Nature Conservation and Landscape Protection (adopted by Government in 1998), Strategy on Biodiversity Conservation (adopted in May 2005), Strategy on Food Safety (adopted in December 2004), Action Plan on Health and the Environment. No special Strategy on Biosafety exists, but its principles are included in the above mentioned documents, generally in thematically related chapters. As to public awareness and education, State Programme on Environmental Education and Awareness was adopted by Government in 2000, and its Action Plan is periodically updated (every 3 years). So far, biosafety issues have not been too much reflected in environmental education programmes or plans, but contacts were established e.g. with the existing network of Environmental Education Centres and some schools within the UNEP/GEF Project (presentations, poster exhibitions, publication dissemination) with the aim to enhance awareness especially among teachers and through them among children and general public. The main obstacles are: (1) Cooperation with other sectors, especially economic ones: (i) To reach understanding and tolerance with environmental principals and willingness to reflect them in sectoral policies and programmes; (ii) willingness to share financial sources. (2) Cooperation with and integration of various stakeholders into common actions. The advantage/Positive aspects include: (i) Existing international environmental conventions and protocols and obligation of each Party to implement them; (ii) Accession of the Czech Republic to the European Union and consequently transposition and implementation of the EU legislation.

Milena Roudna, Czech Republic

26. In the case of Cuba, integration of biosafety aspects into a national policies and strategies is not an easy task either. Although there is an Action Plan specifically for Biosafety, which is integrated into the National Biodiversity strategy, there are other sectoral strategies, such as public health, agriculture and fisheries in which biosafety issues are not well reflected. These national strategies do not conceive this matter as a system, but just they contain some isolated points regarding biosafety. This results in the allocation of financial resources in which Biosafety takes the worst part. It is true that we have to deal with a lot of difficulties, which are mainly consequences of the particular situation of Cuba concerning its socio-economic framework and within it, the Biosafety framework. We can mention here as a main problem, the particular economical conditions in Cuba marked by an economical blockade we have been facing for 50 years. This situation places Cuba in a different position in relation to other countries, because we were compelled to look for other initiatives to try to mitigate its effects in all branches of the economy. Nevertheless there are some obstacles that are not connected with the blockade, among them, we can mention the fallowing: 1) Primacy of scientific and economic criteria over safety issues. 2)

Unawareness on safety culture issues. 3) Existence of some state regulatory bodies which are strongly involved in Biosafety activities so their competences can be overlapped.

Lenia Arce Hernández, Cuba

27. The difficulties of integrating biosafety into national development plans are common to most countries, irrespective of geographic location. Cuba is perhaps an exception with even more challenges because of its "unique" situation. As a UNEP/GEF Task Manager responsible for assisting countries to implement their National Biosafety Framework, I think the element of integrating biosafety into national development plans/strategy was mostly absent in the earlier project design. This is partly because GEF, UNEP and the 8 demonstration project countries were in a "learning phase". Some countries were able to address this gap later as the project progressed. The main focus of most countries has been to address the sustainability of biosafety beyond project life through the development of national policy/strategic action plan for biotechnology and biosafety, complemented with a regulatory regime to provide the legal basis for the establishment of National Biosafety Bodies. This is a modest start and should not be underestimated. The integration of biosafety into national development plans has been carried out mainly via education, viz. the development of higher secondary and tertiary education curricula on biosafety and biotechnology. This is a laudable long-term investment which will yield results in the years to come. The new Biosafety Implementation projects which are now being developed (in Asia) have all addressed the sustainability issue as well as the incorporation of biosafety into national development priorities, via UNDAF and CCA processes. In order to truly integrate biosafety into national development plans it is also necessary to share information with other colleagues working in other 'focal areas' (in the same or other Implementing Agencies) in the countries where biosafety implementation is being carried out or project being designed, so that they can see the synergy and cost effectiveness of this strategic approach. Ultimately, increasing the awareness of national policy makers on the importance of merging biosafety into national development plans with concomitant change in donor policy and Implementing Agencies attitude will result in the desired positive impact.

Fee Chon Low-Chong, UNEP-GEF Biosafety Project

28. In response to Dr Fee Chon Low-Chong contribution, the Biosafety Implementation Project can really be helpful to the implementing countries in integration of biosafety issues into national strategic documents. Experience from projects implementation and outcomes of different recent studies (focused to environmental issues in general and efficiency of the environmental mainstreaming) resulted in some recommendations how to improve this process and can be summarized as follows: (i) Improved intersectoral and inter-institutional cooperation; (ii) Simplification of environmental legislation (in some cases); (iii) Implementation of the strategic goals, corresponding legislation etc. and better control of application of the given principals in the decision-making processes; (iv) Education and decision-makers and public awareness raising (As underlined by Fee Chon this is very important but a long-term process and investment).

Milena Roudna, Czech Republic

29. Talking about the Moldova's experience I would mention that it takes some long way to get consensus between the different governmental bodies and stakeholders regarding a Biosafety Action Plan for the period of 2009-2015, as a policy document. Finally the paper was prepared, consulted and agreed (2009), and involves different actors to implement the National Biosafety Framework. It was an achievement for Moldova that The National Strategy and Action Plan for Biodiversity conservation, (2001) stipulates the Biosafety as a national priority and requested to elaborate an adequate regulatory system and develop laboratory capacities for GMO testing. At the same time a series of national development strategies and programs and also sectorial strategies that relevant to Biosafety field, as

agriculture, health care, education, intellectual property rights, and others do not considered the Biosafety concerns. I would mention the following relevant national political documents as The National Strategy for the development for the period of 2008-2011, (2007), The Strategy for Economic Growth and Poverty Reduction (2004-2006), (2004), The National Action Plan Moldova-EU, 2005, The Concept of the Environmental Policy of the Republic of Moldova, (2001), The National Concept for natural farming, production and distribution of environmentally clean and non-GMO food (2000), The National Strategy of the sustainable development of the agro-industrial complex in the Republic of Moldova (2008-2015), (2008), The Strategy for the development of the health system for the period of 2008-2017, (2008), The National Strategy "Education for everybody" 2004-2015, (2004), The National Program for environmental security for the period of 2007-2015, (2007), The Strategy of the Sustainable development of the forestry sector for the period of 2003-2020, (2001), et al. During the last period it was made several attempts to integrate the Biosafety concerns into the development and sectorial policies, but a series of obstacles and constrains did not allow meeting a success in this consideration. We are convinced that the mainstreaming of the biosafety into the sectorial strategically view would create a better understanding of the biosafety issues, would get synergy and getting solutions with common efforts, save the human resources and money. Main obstacles and challenges to integrating biosafety into national development plans: 1. Poor public awareness: Public awareness and education; Work with NGOs and civil society for their better information and understanding and tolerance; 2. Decision makers' not sufficient aware of the Biosafety concerns: (i) Awareness and information of decision makers from different sectors to getting consensus and willingness to integrate biosafety into sectorial policies; 3. Funds not available: Getting understanding of the needs to allocate money for the biosafety concerns within the sectors; 4. Poor inter-sectorial collaboration and cooperation: Organizing different common actions that involves different sectors, as risk assessment/management, monitoring over GMOs, inspection and supervising etc; Training and workshops and Exchange of information; 5. Methodological support regarding implementation of the strategies and policies at the sectoral level needed: (i) Access to the biotechnology methodologies and methods; (ii) Regional advisers; (iii) Training and workshops; (iv) Curricula development; (v) Best practices and experience etc; 6. Synergy and regional cooperation would be helpful.

Dr. Angela Lozan, Moldova

I do not dare say there are no problems, but in general Biosafety is well arranged in the 30. Netherlands. However policies and legislation are continuously being improved to meet new obligations, concerns and expectations. In the Netherlands, Biosafety is implemented under the scope of a much broader legislation concerning Biotechnology, which is mostly based on international legislation and in particular on European guidelines and decrees. In addition, organizations dealing with LMOs need to comply with legislations concerning other relevant activities. All applicable legislations and requirements are published on Internet. Currently the Ministry of Environment is busy with simplifying the legislation. The Ministry of Environment is responsible for Biotechnology and for the implementation of the CBP, but has delegated the responsibility for different aspects of Biotechnology to other Ministries, so that they share the responsibility for some cross-cutting issues, such as concerning food and feed with the Ministry of Agriculture and the use of LMOs for medical purposes with the Ministry of Health. Shared responsibility helps integration of Biosafety in relevant policies and processes. Another positive experience in the Netherlands is the regular Biotechnology trends analysis, conducted by three independent commissions and councils on request by the Ministries that share the responsibility for Biotechnology. Broad public participation through panels is an important element of the process. The study outlines the most important trends in Biotechnology for the coming years, including with regard to Biosafety, and provides recommendations to ministers on how to deal with them. The study is always followed by a political debate. The discussion contributes to integration of Biosafety in relevant policies and processes and to improvement of the Biosafety policies. It could be worthy to conduct such a study on a more international level.

Lucy Naydenova, Netherlands

31. As was explained by Ms Fee Chon Low (#920) element of integrating biosafety into national development plans/strategy was mostly absent in the earlier phase of UNEP/GEF biosafety projects. Therefore, even those who were involved in those projects on regional level have limited information about that integration on country level. Still, experiences regarding many issues that are important for mainstreaming (funding, cooperation between different government agencies, overlapping of activities, cooperation between different UN agencies, regional cooperation etc) were gained in those processes. In my country, Serbia, biosafety was included in National Environmental Action Plan (NEAP) and was present in discussions of GEF funding priorities. Since our country is not a big one Implementation project would utilize extremely large portion of available GEF resources for Serbia (and my regional experience points to the same problem). So, integration of biosafety issues in available within country activities often faces significant funding problems - issue that was already raised by Mr Andreas Heissenberger (#913) and Ms Angela Lozan (#921). I therefore strongly support notion given by Ms Angela Lozan (#921) that synergy and regional cooperation would be very helpful and I think that regional projects should be available in GEF framework in order to overcome that obstacle. From my regional experience (West Balkans, Europe, Central Asia) good cooperation between different government agencies that are relevant for biosafety issues (usually ministries responsible for environment, agriculture and health issues) is crucial for successful mainstreaming, as positive examples like Moldova had shown. Lack of successful cooperation is very big challenge for successful mainstreaming and in my opinion and experience is the main cause of activities overlapping. In the case of development plans and programmes, it is even more important since number of government bodies involved is larger. Cooperation of different UN agencies and bodies (SCBD, UNEP, FAO, UNDP) is also very important in this respect. From my experience that cooperation is very good on global and regional levels where those agencies tend to "act as one", but more sharing of information and synergy can be very helpful on country level, too. That issue needs further discussion and can involve faster sharing of information regarding planned activities, identified stakeholders etc. Of course, our main focus must be bisafety as defined in Cartagena Protocol as was stated by Ms Ann Kingiri (#914) But from my experience bisafety as defined in Cartagena Protocol is on country level usually integrated with other issues in country legislation and development plans – for example, laws usually cover broader issues such as GM products (not only LMOs), conditions for contained use etc. I think that it is important to have all important issues covered but we have to be prepared that biosafety will not be standalone issue, but integrated on various levels, depending on country in question. From the regional standpoint I want also to thank Ms Milena Roudna and MsLucy Naydenova for their very informative inputs (#918, #924 #923) and sharing of experiences that can be utilized in our region and is important for other regions, too. Question of utilizing Roster of experts in context of integrating biosafety issues in development plans and programmes raised in #928 could be incorporated in SCBD ongoing activities regarding Roster of experts.

Aleksej Tarasjev, Serbia

32. My country, Saint Lucia in the Eastern Caribbean has begun to mainstream biosafety into some of its national programs. The National Emergency Management Organisation (NEMO) has brought biosafety considerations on board in the development of an action plan for food management after disasters and the Health Ministry has included biosafety issues into food safety guidelines. We still have to work with the Poverty Reduction and Millenium Goals Systems to get biosafety mainstreamed into these activities.

Anita James, Saint Lucia

33. I agree with the above country experience about mainstreaming biosafety into nationals plan and programs or policies. My country is one of the African counties with about 80, small and big islands at the Atlantic Ocean that are not far away from the continental part of the country. All you are referring in your counties are in same instances the same as in my county, since 2002 I am working with the Cartagena Protocol on Biosafety. I never saw such knowledge sharing among people and I have about 28 years of working experience in my country and most of that time I used to work on the development activities between county side people and the in town people. Ms Lenia Hernandez Angela Lozan and M Fee Chow Low, I won't be able to answer you before but since end of January till today we had the WAEMU subregional meeting, where about 2 to 3 people from 8 countries came to my country to adopt together the Regional trianual environmental programme where three priorities components are, Water supply and sanitation, Coastal management and Forestry, at list but not the last Biosafety.

Maria Ivone Pereira da Costa, Guinea Bissau

I want to say that the ministry of agriculture has a recent team that works with gmos' regulation, 34. as well as the activities derived from permits (inspection, surveillance and monitoring). However, we face the problem that there are not enough human resources working no this subject. Aditionally, some people who used to work on GMOs has quitted and all their experience has been lost. However, is also truth that the ministries involved in GMOs' regulation are taking diverse actions in order to have more people working on GMOs. Also, the Mexican government is currently working on a public policy that includes in one of his lines, the maintenance of human capacity on GMOs. At the ministry of agriculture, we are planning a series of trainings that allows official staff to make decisions on concerning GMOs. This effort is relatively recent and we are hoping to count on more trained staff as well as financial resources to improve our work, because nowadays is somewhat difficult to take care of all items related with gmos at the appropriate time and ways. We have a series of interesting projects now under evaluation and approval of the supreme authorities that will allow us to take an important position in the world, mostly related with detection, quantification and identification of gmos derived from licit as well as illicit releases, with the approval of this projects the need will raise for specialized staff on diverse subjects and the government will face the obligation for creating and maintain the human resources at that moment available and the ones for come.

Alma Liliana Tovar Diaz, Mexico

# SESSION 3: STRATEGIES AND APPROACHES FOR INTEGRATING BIOSAFETY INTO DEVELOPMENT PLANNING, FINANCING AND IMPLEMENTATION PROCESSES

35. The integration of biosafety into development planning, financing and implementation processes should be seen as a step towards environmental mainstreaming, which involves understanding poverty-environmental linkages in order to address them in a properly manner. In term of approach, I think it is of utmost importance to understand the major challenges at national level and identify the key factors to be considered in order to consistently reconcile biosafety issues and economic development planning in a context of reducing poverty and promoting growth. The first step of this approach would be to define at national level the priority and objectives with regard to biosafety. Many countries have already developed a biosafety framework which includes a policy, a regulatory and administrative system as well as mechanisms for public participation and involvement. Countries that have not developed a biosafety framework may take actions to achieve it. The second step would be to develop effective capacity in terms of biosafety (institutions and human resources) to ensure that biosafety issues are taken into account in the economic development planning processes. In fact, if there are competent human resources, suitable institutions and adequate infrastructures to address biosafety issues at national level, it

is likely to influence its integration in the development planning, financing and implementation processes. Finally, I think the development of public sector investment and public-private partnership in biotechnology research and application at national level would be an asset for this integration. In so doing, many key economic stakeholders can develop a better understanding as well as a solid commitment to biosafety issues.

Yves-Robert Personna, Haiti

# SESSION 4: MEASURES TO STRENGTHEN NATIONAL CAPACITIES TO INTEGRATE BIOSAFETY INTO DEVELOPMENT PLANS AND PROCESSES

36. Approaching an issue from different perspectives helps to form a more objective and informed view on the subject. It might be worthy to utilize better the Roster of Biosafety Experts as a means of capacity-building and know-how exchange for integrating Biosafety in national development strategies.

Lucy Naydenova, Netherlands

#### Annex I

#### LIST OF THE GUIDING DISCUSSION QUESTIONS

#### Session 1: The scope and rationale of integrating biosafety into development processes

- (a) What does integration of biosafety into national development plans mean in practical terms?
- (b) What is the linkage between biosafety, biotechnology and the national development issues and priorities that influence government policy, resource allocation and programmes for addressing poverty and the achievement of the millennium development goals and other international sustainable development goals?
- (c) Why is it important to integrate biosafety considerations into national development plans and implementation processes and programmes?
- (d) What are the key considerations that need to be taken into account during the mainstreaming process?

# Session 2: Country status, experiences and lessons learned in integrating biosafety into national development plans

- (a) To what extent have existing development plans and programmes, such as Poverty Reduction Strategy Papers, considered biosafety issues?
- (b) What experience has been gained in integrating biosafety into national development plans and programmes and what have been some of the success factors and challenges?
- (c) What are the main obstacles and challenges to integrating biosafety into national development plans and how have they been, or could they be, addressed?

# Session 3: Strategies and approaches for integrating biosafety into development planning, financing and implementation processes

- (a) What specific tools, processes and mechanisms have been used or could be used by governments to integrate biosafety considerations into national development plans and programmes?
- (b) How could biosafety be integrated in the policies, procedures and programmes of development assistance agencies?
- (c) What additional tools could be developed to assist in designing mainstreaming interventions which are likely to be more effective and have the desired impact?
- (d) What indicators could be used to monitor progress and evaluate the success of mainstreaming biosafety into national development plans and processes?
- (e) What are some of the possible entry points for integrating biosafety into national development plans?

# Session 4: Measures to strengthen national capacities to integrate biosafety into development plans and processes

- (a) In what specific aspects of biosafety mainstreaming is capacity-building most urgently required?
- (b) What roles should government officials in different departments (environment, agriculture, planning, finance, and others) play in raising the importance of biosafety issues in the national development planning process and poverty reduction efforts and how can external partners (including bilateral and multilateral institutions, non-governmental organizations and the private sector) support them in their efforts.
- (c) What key elements should be contained in possible generic guidance for assisting countries to integrate biosafety into their national development plans and programmes?
- (d) What specific activities should be taken to strengthen the capacities of countries to integrate biosafety into their national development plans and programmes and who does what and when?
- (e) What is the way forward?
- (f) What other general recommendations should be considered?

### Annex II

### LIST OF PARTICIPANTS

1.	Dr Ossama Abdel-kawy elkawyo@gmail.com	Egypt  PCH regiset coordinator
2	Francisca Acevedo	BCH project coordinator  Mexico
2.	facevedo@conabio.gob.mx	Comisión Nacional para el Conocimiento y Uso de la
	Tacevedo @ conabio.gob.mx	Biodiversidad
3.	Nevena Alexandrova	Diodivolidada
٥.	alexandrova@abi.bg	ICGEB
4.	Abdelbagi M. Ali	Sudan
	abdmali@yahoo.com	Ministry of Environment & Physical Development
5.	Lic. Lenia Arce Hernandez	Cuba
	leniarce2004@yahoo.es	Centro Nacional de Seguridad Biológica
6.	Ms. Amah Atutonu	Togo
	lydia_atutonu@yahoo.fr	Ministère de l'Environnement et des Ressources Forestières
7.	Mrs Merline Bardowell	Jamaica
	mbardowell@opm.gov.jm	
8.	Equipo coordinador BCH Colombia	Colombia
	bch@humboldt.org.co	Instituto de Investigaión de recursos biológicos Alexander
		von Humboldt
9.	Mrs. Bosibori Bett	Kenya
	bosiboribett@gmail.com	Kenya Agricultural Research Institute (KARI)
10.	Stephane Bilodeau	Canada
	stephane.bilodeau@cbd.int	Secretariat Convention on Biological Diversity
11.	Dr Marcia Blair	Jamaica
	mblair@opm.gov.jm	
12.	Didier Breyer	Belgium
	dbreyer@iph.fgov.be	Scientific Institute of Public Health
13.	Dr. Damayanti Buchori	Indonesia
	dami@indo.net.id	Bogor Agricultural University
14.	Mr. Moses Buregyeya	Uganda
	moses@kari.go.ug	National Agricultural Research Organisation (NARO-
1.5	I-lan Cantan Canan	Uganda)
15.	John Cartey Caesar jccaesar@yahoo.com	Guyana Environmental Protection Agency,
16	Dr. Michelle Chauvet	Mexico
10.	ecs@correo.azc.uam.mx	Universidad Autónoma Metropolitana
17	Mr Damien Coke	Australia
1/.	damien.coke@dfat.gov.au	Department of Foreign Affairs and Trade of Australia
10		
10.	Dr Wendy Craig craig@icgeb.org	Italy ICGEB
10	Ms. Suzanne Davis	Jamaica
17.	chm.nhd@cwjamaica.com	Institute of Jamaica
20	Ruben Dekker	Netherlands
۷٠.	ruben.dekker@minvrom.nl	remenands
	TUOCH. GERREI & HIIII VI OIII. III	

### UNEP/CBD/BS/CM-CB/5/3 Page 17

21.	Dr. Bob Devlin robert.devlin@dfo-mpo.gc.ca	Canada
22.	Mr David Duthie david.duthie@unep.ch	Switzerland UNEP
23.	Dr. Ossama El-Tayeb omtayeb@link.net	Egypt Egyptian Environmental Affairs Agency
	Ms. Nasrin Sadat Esmailzadeh nasrin@nrcgeb.ac.ir	Iran (Islamic Republic of) Ministry of Science, Technology and Research
25.	MSc María Ferenczi aferenczi@fagro.edu.uy	Uruguay School of Agronomy (FAGRO) - University of the Republic (UDELAR)
26.	Lic. Martín Ignacio Fernández Campos martinisef@gmail.com	Uruguay Facultad de Ciencias - Universidad de la República
27.	Dr. Enrique N. Fernandez-Northcote fernorth@terra.com.pe	Peru Universidad Nacional Agraria, La Molina
28.	M en C. María del Carmen Fong Cárdenas carmen.fong@senasica.gob.mx	s Mexico SENASICA / SAGARPA
29.	Dr Eliana Fontes eliana@cenargen.embrapa.br	Brazil Embrapa Genetic Resources and Biotechnology
30.	Mrs. Mary Fosi Mbantenkhu mary fosi@yahoo.com	Cameroon Ministry of Environment and Nature Protection
31.	dr steve froggett steve.froggett@fas.usda.gov	United States of America
32.	Prof. Behzad Ghareyazie ghareyazie@yahoo.com	Iran (Islamic Republic of) Center for Strategic Research
33.	Giovanni Ferraiolo giovanni.ferraiolo@gmail.com	CBD Secretariat
34.	Ms. Janil Gore-Francis plantprotection@antigua.gov.ag	Antigua and Barbuda Ministry of Agriculture, Lands, Marine Resources and Agro-Industry
35.	Dr Sridhar Gutam gutam2000@hotmail.com	India National Research Centre for Medicinal and Aromatic Plants
36.	Ms Sonya Hammons sonya.hammons@fao.org	Italy Food and Agriculture Organization of the UN
37.	Dr. Andreas Heissenberger andreas.heissenberger@umweltbundesamt.at	Austria Umweltbundesamt - Federal Environment Agency, Austria
38.	Ms. Lenia Arce Hernández lenia@orasen.co.cu	Cuba National Center for Biological Safety (NCBS)
39.	Ms. Marina Hernández recursos.geneticos@medioambiente.gov.do	Dominican Republic Subsecretaria de Areas Protegidas y Biodiversidad
40.	MSc. Alejandro Hernández Soto ahernandez@protecnet.go.cr	Costa Rica Servicio Fitosanitario del Estado
41.	Dr. Karen Hokanson hokan018@umn.edu	United States of America
42.	Mr. Kazuaki Hoshino bch@env.go.jp	Japan Ministry of Environment

### UNEP/CBD/BS/CM-CB/5/3

Page 18

43.	Mr. Jan Husby	Norway
	Jan.Husby@fagmed.uit.no	Norwegian Institute of Gene Ecology (GenØk)
44.	Ms. Anastasia Idrisova	Tajikistan
	Aldrisova@biodiv.tojikiston.com	National Biodiversity and Biosafety Center
45.	Ms. Noriko Iseki	Italy
	noriko.iseki@fao.org	The Codex Alimentarius Commission
46.	Dr Flora Ismail	United Republic of Tanzania
	ismailf@udsm.ac.tz	University of Dar es Salaam
47.	Gregory Jaffe	United States of America
40	gjaffe@cspinet.org	Center for Science in the Public Interest
48.	Dr Vidya Jagadish	Australia Office of the Cone Technology Regulator
40	vidya.jagadish@health.gov.au  Ms. Anita James	Office of the Gene Technology Regulator Saint Lucia
49.	biodivproject@slubiodiv.org	Ministry of Agriculture, Lands, Fisheries and Forestry
50	Dr Paul Keese	Australia
50.	paul.keese@health.gov.au	Office of the Gene Technology Regulator
51.	Ms. Ann Kingiri	Kenya
	annakingiri@yahoo.com	Kenya Plant Health Inspectorate Service (KEPHIS)
52.	Ms. Ejebay Kokanova	Turkmenistan
	eoka04@rambler.ru	Ministry of Nature Protection
53.	Mr. John Komen	
	jce.komen@planet.nl	Program for Biosafety Systems (PBS)
54.	Mr Brian Kwan	New Zealand
	Brian.Kwan@ArborGen.co.nz	ArborGen NZ
55.	Antje Lorch	Germany
	antje.lorch@gen-ethisches-netzwerk.de	Gen-ethisches Netzwerk
56.	Dr. Gabor Lövei Gabor.Lovei@agrsci.dk	Denmark Danish Institute of Agricultural Sciences
57	Dr Fee Chon Low-Chong	Thailand
37.	feechon.low@unep.ch	UNEP, UNEP-GEF
58	Dr. Angela Lozan	Republic of Moldova
20.	angelalozan@yahoo.com	Ministry of Ecology and Natural Resources
59.	Prof. Bao-Rong Lu	China
	brlu@fudan.edu.cn	Fudan University
60.	Ms Sarah Lukie	United States of America
	slukie@bio.org	Biotechnology Industry Organization
61.	Mr. Harrison K. Macharia	Kenya
	harrison@ncstnbo.or.ke	Ministry of Science and Technology
62.	Dr. Donald MacKenzie	Canada
	don.mackenzie@pioneer.com	Pioneer Hi-Bred Ltd.
63.	Abisai Mafa	Zimbabwe National Biotochuselogy Authority
	<u>absmaus@yahoo.com,</u> <u>mafa@biosafetyzim.ac.zw</u>	National Biotechnology Authority
64	Dr. Desmond Mahon	Canada
U+.	des.mahon@ec.gc.ca	Environment Canada
65	Dr. Volker Matzeit	Germany
00.	DI. TORREL MINUSCH	- Community

### UNEP/CBD/BS/CM-CB/5/3 Page 19

	222@bmelv.bund.de	Federal Ministry of Consumer Protection, Food and Agriculture
66.	Ing. Alex May Montero	Costa Rica
	alexmay@protecnet.go.cr	Ministerio de Agricultura y Ganadería
67.	Dr. Phil McDonald	Canada
	philip.macdonald@inspection.gc.ca	
68.	Dr. Tom McLoughlin	Ireland
	t.mcloughlin@epa.ie	Environmental Protection Agency
69.	Dr. Hartmut Meyer	Germany
	hmeyer@ngi.de	Deutsche Gesellschaft fuer Technische Zusammenarbeit
		(GTZ)
70.	William Muir	United States of America
	bmuir@purdue.edu	Purdue University
71.	Rosa Maria Mutarelli	Canada
	rosamaria.mutarelli@gmail.com	
72.	<b>Prof Alexander Myburg</b>	South Africa
	zander.myburg@fabi.up.ac.za	University of Pretoria
73.	Mr. Kangayatkarasu Nagulendran	Malaysia
	nagu@nre.gov.my	Ministry of Natural Resources and Environment
74.	Dr. Francis Nang'ayo	Kenya
	f.nangayo@aatf-africa.org	African Agricultural Technology Foundation (AATF)
75.	Msc. BA. Lucy Naydenova	Netherlands
	lucy.naydenova@minvrom.nl	Ministry of Housing, Spatial Planning and the Environment
		(VROM)
76.	Dr Thomas Nickson	United States of America
	thomas.nickson@monsanto.com	Monsanto Company
77.	Ms. Ulrika Nilsson	
	ulrika.nilsson@cbd.int	UNEP/SCBD/Biosafety
78.	Mr. Ernesto Ocampo	Uruguay
	eocampo@ucu.edu.uy	Universidad Catolica del Uruguay
79.	MSc Maria Andrea Orjuela-R.	Colombia
	maorjuela@humboldt.org.co	Instituto de Investigación de Recursos Biológicos
		Alexander von Humboldt
80.	Dr. Pisey Oum	Cambodia
	cambio_coor@online.com.kh	Ministry of Environment
81.	Dr. Les Pearson	United States of America
	Lxpears@ArborGen.com	
82.	Ms. Maria Ivone Pereira da Costa	Guinea-Bissau
	ivone.dacosta@yahoo.fr	Ministry of Natural Resources and Environment -
		Secretariat of State of Environment
83.	Yves-Robert Personna	Haiti
	yrpersonna@yahoo.fr	Ministry of the Environment
84.	Dr Esmeralda Prat	Belgium
	Esmeralda.Prat@bayercropscience.com	Bayer CropScience
85.	Dr. Hector Quemada	United States of America
	hdq2@calvin.edu	Program for Biosfety Systems/Calvin College
86.	Dr. David Quist	Norway

	david.quist@fagmed.uit.no	GenØk - Centre for Biosafety
87.	Dr. Gurinder Jit Randhawa	India
	gurinder.randhawa@rediffmail.com	
88.	Mr. Mun Duong Ratanak	Cambodia
	mratanak123@hotmail.com	Ministry of Environment
89.	Dr. Andrew Roberts	United States of America
	andrew.f.roberts@aphis.usda.gov	USDA
90.	Dra. Antonietta Gutiérrez Rosati	Peru
	antonietta@terra.com.pe	Universidad Nacional Agraria La Molina
91.	Dr. Nils Rostoks	Latvia
	nils.rostoks@lu.lv	University of Latvia
92.	Ph.D. Milena Roudna	Czech Republic
	milena.roudna@mzp.cz	Ministry of the Environment of the Czech Republic
93.	Dr Marja Ruohonen-Lehto	Finland
	marja.ruohonen-lehto@ymparisto.fi	Finnish Environment Institute
94.	Prof. Ron Sederoff	United States of America
	ron_sederoff@ncsu.edu	North Carolina State University
95.	Dr. Wansuk Senanan	Thailand
	wansuk@buu.ac.th	Burapha University
96.	Alessandra Sensi	Italy
	alessandra.sensi@fao.org	FAO
97.	Dr. Arash Shahsavarani	Canada
	Arash.Shahsavarani@DFO-MPO.GC.CA	Fisheries and Oceans Canada
00	Mus Danson Chumba Mayudaya	NT
98.	MITS Doreen Shumba-Milyulwa	Namibia
98.	Mrs Doreen Shumba-Mnyulwa dmnyulwa@unam.na	
98.	dmnyulwa@unam.na	Regional Agricultural and Environment Initiatives Network- Africa (RAEIN-Africa)
	•	Regional Agricultural and Environment Initiatives Network-
	dmnyulwa@unam.na	Regional Agricultural and Environment Initiatives Network-Africa (RAEIN-Africa)
99.	dmnyulwa@unam.na  Dr Monika Singh	Regional Agricultural and Environment Initiatives Network- Africa (RAEIN-Africa)  India
99.	Dr Monika Singh monika_a_singh@rediffmail.com	Regional Agricultural and Environment Initiatives Network- Africa (RAEIN-Africa)  India National Bureau of Plant Genetic Resources
99.	Dr Monika Singh monika_a_singh@rediffmail.com Dr. Andrea Sonnino	Regional Agricultural and Environment Initiatives Network- Africa (RAEIN-Africa)  India National Bureau of Plant Genetic Resources  Italy
99.	Dr Monika Singh monika_a_singh@rediffmail.com Dr. Andrea Sonnino	Regional Agricultural and Environment Initiatives Network-Africa (RAEIN-Africa)  India National Bureau of Plant Genetic Resources  Italy Food and Agricultural Organization of the United Nations
99.	Dr Monika Singh monika a singh@rediffmail.com Dr. Andrea Sonnino Andrea.Sonnino@fao.org	Regional Agricultural and Environment Initiatives Network-Africa (RAEIN-Africa)  India National Bureau of Plant Genetic Resources  Italy Food and Agricultural Organization of the United Nations (FAO)
99.	Dr Monika Singh monika a singh@rediffmail.com Dr. Andrea Sonnino Andrea.Sonnino@fao.org  Ms. Dubravka Stepic dubravka.stepic@min-kulture.hr Erie Tamale	Regional Agricultural and Environment Initiatives Network-Africa (RAEIN-Africa)  India National Bureau of Plant Genetic Resources  Italy Food and Agricultural Organization of the United Nations (FAO)  Croatia
99.	Dr Monika Singh monika_a_singh@rediffmail.com Dr. Andrea Sonnino Andrea.Sonnino@fao.org  Ms. Dubravka Stepic dubravka.stepic@min-kulture.hr	Regional Agricultural and Environment Initiatives Network-Africa (RAEIN-Africa)  India National Bureau of Plant Genetic Resources  Italy Food and Agricultural Organization of the United Nations (FAO)  Croatia
99. 100 101 102	Dr Monika Singh monika a singh@rediffmail.com Dr. Andrea Sonnino Andrea.Sonnino@fao.org  Ms. Dubravka Stepic dubravka.stepic@min-kulture.hr Erie Tamale	Regional Agricultural and Environment Initiatives Network-Africa (RAEIN-Africa)  India National Bureau of Plant Genetic Resources  Italy Food and Agricultural Organization of the United Nations (FAO)  Croatia Nature Protection Directorate, Ministry of Culture
99. 100 101 102	Dr Monika Singh monika_a_singh@rediffmail.com Dr. Andrea Sonnino Andrea.Sonnino@fao.org  . Ms. Dubravka Stepic dubravka.stepic@min-kulture.hr  . Erie Tamale erie.tamale@cbd.int	Regional Agricultural and Environment Initiatives Network- Africa (RAEIN-Africa)  India National Bureau of Plant Genetic Resources  Italy Food and Agricultural Organization of the United Nations (FAO)  Croatia Nature Protection Directorate, Ministry of Culture  UNEP/SCBD/Biosafety  Republic of Serbia Institute for Biological Research, University of Belgrade,
99. 100 101 102	Dr Monika Singh monika_a_singh@rediffmail.com Dr. Andrea Sonnino Andrea.Sonnino@fao.org  . Ms. Dubravka Stepic dubravka.stepic@min-kulture.hr  . Erie Tamale erie.tamale@cbd.int Dr Aleksej Tarasjev	Regional Agricultural and Environment Initiatives Network- Africa (RAEIN-Africa)  India National Bureau of Plant Genetic Resources  Italy Food and Agricultural Organization of the United Nations (FAO)  Croatia Nature Protection Directorate, Ministry of Culture  UNEP/SCBD/Biosafety  Republic of Serbia Institute for Biological Research, University of Belgrade, Serbia
99. 100 101 102 103	Dr Monika Singh monika_a_singh@rediffmail.com Dr. Andrea Sonnino Andrea.Sonnino@fao.org  . Ms. Dubravka Stepic dubravka.stepic@min-kulture.hr  . Erie Tamale erie.tamale@cbd.int Dr Aleksej Tarasjev	Regional Agricultural and Environment Initiatives Network- Africa (RAEIN-Africa)  India National Bureau of Plant Genetic Resources  Italy Food and Agricultural Organization of the United Nations (FAO)  Croatia Nature Protection Directorate, Ministry of Culture  UNEP/SCBD/Biosafety  Republic of Serbia Institute for Biological Research, University of Belgrade,
99. 100 101 102 103	Dr Monika Singh monika_a_singh@rediffmail.com Dr. Andrea Sonnino Andrea.Sonnino@fao.org  . Ms. Dubravka Stepic dubravka.stepic@min-kulture.hr  . Erie Tamale erie.tamale@cbd.int  . Dr Aleksej Tarasjev tarasjev@yandex.ru	Regional Agricultural and Environment Initiatives Network- Africa (RAEIN-Africa)  India National Bureau of Plant Genetic Resources  Italy Food and Agricultural Organization of the United Nations (FAO)  Croatia Nature Protection Directorate, Ministry of Culture  UNEP/SCBD/Biosafety  Republic of Serbia Institute for Biological Research, University of Belgrade, Serbia  Mexico Servicio Nacional de Sanidad, Inocuidad y Calidad
99. 100 101 102 103	Dr Monika Singh monika_a_singh@rediffmail.com Dr. Andrea Sonnino Andrea.Sonnino@fao.org  Ms. Dubravka Stepic dubravka.stepic@min-kulture.hr Erie Tamale erie.tamale@cbd.int Dr Aleksej Tarasjev tarasjev@yandex.ru  Ms. Alma Liliana Tovar Diaz alma.tovar@senasica.gob.mx	Regional Agricultural and Environment Initiatives Network- Africa (RAEIN-Africa)  India National Bureau of Plant Genetic Resources  Italy Food and Agricultural Organization of the United Nations (FAO)  Croatia Nature Protection Directorate, Ministry of Culture  UNEP/SCBD/Biosafety  Republic of Serbia Institute for Biological Research, University of Belgrade, Serbia  Mexico Servicio Nacional de Sanidad, Inocuidad y Calidad Agroalimentaria
99. 100 101 102 103	Dr Monika Singh monika_a_singh@rediffmail.com Dr. Andrea Sonnino Andrea.Sonnino@fao.org  . Ms. Dubravka Stepic dubravka.stepic@min-kulture.hr  . Erie Tamale erie.tamale@cbd.int  . Dr Aleksej Tarasjev tarasjev@yandex.ru  . Ms. Alma Liliana Tovar Diaz alma.tovar@senasica.gob.mx  . Mr William Tucker	Regional Agricultural and Environment Initiatives Network- Africa (RAEIN-Africa)  India National Bureau of Plant Genetic Resources  Italy Food and Agricultural Organization of the United Nations (FAO)  Croatia Nature Protection Directorate, Ministry of Culture  UNEP/SCBD/Biosafety  Republic of Serbia Institute for Biological Research, University of Belgrade, Serbia  Mexico Servicio Nacional de Sanidad, Inocuidad y Calidad Agroalimentaria  Australia
99. 100 101 102 103 104	Dr Monika Singh monika_a_singh@rediffmail.com Dr. Andrea Sonnino Andrea.Sonnino@fao.org  . Ms. Dubravka Stepic dubravka.stepic@min-kulture.hr  . Erie Tamale erie.tamale@cbd.int  . Dr Aleksej Tarasjev tarasjev@yandex.ru  . Ms. Alma Liliana Tovar Diaz alma.tovar@senasica.gob.mx  . Mr William Tucker will.tucker@health.gov.au	Regional Agricultural and Environment Initiatives Network- Africa (RAEIN-Africa)  India National Bureau of Plant Genetic Resources  Italy Food and Agricultural Organization of the United Nations (FAO)  Croatia Nature Protection Directorate, Ministry of Culture  UNEP/SCBD/Biosafety  Republic of Serbia Institute for Biological Research, University of Belgrade, Serbia  Mexico Servicio Nacional de Sanidad, Inocuidad y Calidad Agroalimentaria  Australia Department of Health and Ageing
99. 100 101 102 103 104	Dr Monika Singh monika_a_singh@rediffmail.com Dr. Andrea Sonnino Andrea.Sonnino@fao.org  Ms. Dubravka Stepic dubravka.stepic@min-kulture.hr Erie Tamale erie.tamale@cbd.int Dr Aleksej Tarasjev tarasjev@yandex.ru  Ms. Alma Liliana Tovar Diaz alma.tovar@senasica.gob.mx  Mr William Tucker will.tucker@health.gov.au  Mr. Noel Unciano	Regional Agricultural and Environment Initiatives Network- Africa (RAEIN-Africa)  India National Bureau of Plant Genetic Resources  Italy Food and Agricultural Organization of the United Nations (FAO)  Croatia Nature Protection Directorate, Ministry of Culture  UNEP/SCBD/Biosafety  Republic of Serbia Institute for Biological Research, University of Belgrade, Serbia  Mexico Servicio Nacional de Sanidad, Inocuidad y Calidad Agroalimentaria  Australia Department of Health and Ageing  Philippines
99. 100 101 102 103 104 105	Dr Monika Singh monika a singh@rediffmail.com Dr. Andrea Sonnino Andrea.Sonnino@fao.org  Ms. Dubravka Stepic dubravka.stepic@min-kulture.hr Erie Tamale erie.tamale@cbd.int Dr Aleksej Tarasjev tarasjev@yandex.ru  Ms. Alma Liliana Tovar Diaz alma.tovar@senasica.gob.mx  Mr William Tucker will.tucker@health.gov.au  Mr. Noel Unciano nooelmu11@yahoo.com	Regional Agricultural and Environment Initiatives Network- Africa (RAEIN-Africa)  India National Bureau of Plant Genetic Resources  Italy Food and Agricultural Organization of the United Nations (FAO)  Croatia Nature Protection Directorate, Ministry of Culture  UNEP/SCBD/Biosafety  Republic of Serbia Institute for Biological Research, University of Belgrade, Serbia  Mexico Servicio Nacional de Sanidad, Inocuidad y Calidad Agroalimentaria  Australia Department of Health and Ageing
99. 100 101 102 103 104 105	Dr Monika Singh monika_a_singh@rediffmail.com Dr. Andrea Sonnino Andrea.Sonnino@fao.org  Ms. Dubravka Stepic dubravka.stepic@min-kulture.hr Erie Tamale erie.tamale@cbd.int Dr Aleksej Tarasjev tarasjev@yandex.ru  Ms. Alma Liliana Tovar Diaz alma.tovar@senasica.gob.mx  Mr William Tucker will.tucker@health.gov.au  Mr. Noel Unciano	Regional Agricultural and Environment Initiatives Network- Africa (RAEIN-Africa)  India National Bureau of Plant Genetic Resources  Italy Food and Agricultural Organization of the United Nations (FAO)  Croatia Nature Protection Directorate, Ministry of Culture  UNEP/SCBD/Biosafety  Republic of Serbia Institute for Biological Research, University of Belgrade, Serbia  Mexico Servicio Nacional de Sanidad, Inocuidad y Calidad Agroalimentaria  Australia Department of Health and Ageing  Philippines

### UNEP/CBD/BS/CM-CB/5/3 Page 21

108. Piet van der Meer	Belgium
PietvanderMeer@cs.com	Horizons sprl / PRRI
109. Dr. Nina Vik	Norway
nina.vik@dirnat.no	Directorate for Nature Management
110. Prof Chris Viljoen	South Africa
viljoencd.md@ufs.ac.za	
111. Mr. Johansen Voker	Liberia
vokerj@yahoo.com	Environmental Protection Agency (EPA)
112. Prof. Dr. Kazuo Watanabe	Japan
nabechan@gene.tsukuba.ac.jp	University of Tsukuba
113. Mr. Zhang Wenguo	China
113. Mr. Zhang Wenguo Zhang.Wenguo@sepa.gov.cn	China Ministry of Environmental Protection
Zhang.Wenguo@sepa.gov.cn	Ministry of Environmental Protection
Zhang.Wenguo@sepa.gov.cn 114. Ms. Danielle Wood	Ministry of Environmental Protection United States of America
Zhang.Wenguo@sepa.gov.cn  114. Ms. Danielle Wood wooddk@state.gov	Ministry of Environmental Protection United States of America U.S. Department of State
Zhang.Wenguo@sepa.gov.cn  114. Ms. Danielle Wood wooddk@state.gov  115. Mr Jing Xu	Ministry of Environmental Protection United States of America U.S. Department of State China
Zhang.Wenguo@sepa.gov.cn  114. Ms. Danielle Wood wooddk@state.gov  115. Mr Jing Xu xujing.2001@yahoo.com.cn	Ministry of Environmental Protection United States of America U.S. Department of State China Chinese Academy of Environmental Sciences
Zhang.Wenguo@sepa.gov.cn  114. Ms. Danielle Wood wooddk@state.gov  115. Mr Jing Xu xujing.2001@yahoo.com.cn  116. Mr. Abraham Yohannes	Ministry of Environmental Protection United States of America U.S. Department of State China Chinese Academy of Environmental Sciences Eritrea

\_\_\_\_