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Item 6 (g) of the provisional agenda*

**Matters for consideration or action by the
Conference of the Parties: technical assistance**

**Summary of the results of four case studies on regional and
subregional centres for capacity-building and technology
transfer under the Stockholm Convention****

Note by the Secretariat

1. At its sixth session, the Intergovernmental Negotiating Committee for an International Legally Binding Instrument for International Action on Certain Persistent Organic Pollutants requested, in paragraph 1 of decision INC-6/10, that the Secretariat develop and conduct in cooperation with the secretariat of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal and the Basel Convention regional centres, as appropriate, one or more case studies on regional and subregional centres for the purpose of facilitating capacity-building and technology transfer in accordance with paragraph 4 of Article 12 of the Stockholm Convention on Persistent Organic Pollutants, with a view to contributing to the feasibility study provided for under decision INC-6/9 (see document UNEP/POPS/COP.1/27).

2. In response to decision INC-6/10, the Secretariat organized four case studies in various regions or subregions, the results of which are summarized in the annex to the present note. Full reports on the case studies are contained in document UNEP/POPS/COP.1/INF/26.

* UNEP/POPS/COP.1/1.

** Stockholm Convention on Persistent Organic Pollutants, Article 12, paragraph 4; Report of the Conference of Plenipotentiaries on the Stockholm Convention (UNEP/POPS/CONF/4), appendix I, resolution 4; Report of the Intergovernmental Negotiating Committee for an International Legally Binding Instrument for Implementing International Action on Certain Persistent Organic Pollutants on the work of its sixth session (UNEP/POPS/INC.6/22), annex I, decision INC-6/10.

Annex

Summary of results of four case studies on regional and subregional centres for capacity-building and technology transfer

Introduction

1. The selection of the institutions was based on the following criteria:
 - (a) At least one institution selected should be a Basel Convention regional centre;
 - (b) The institution selected should be involved in technical work relevant to a major issue on persistent organic pollutants (POPs) in the region;
 - (c) The candidacy of the institution should be endorsed by the national focal point in the host country;
 - (d) Institutions selected should be from differing regions across the globe.
2. The Centres used for the case studies are shown in the follow table:

Name of institution	Country and region/subregion
International Centre of Insect Physiology and Ecology (ICIPE)	Kenya, sub-Saharan Africa
Centro Coordinador del Convenio de Basilea de Capacitación y Transferencia de Tecnología en Desechos Peligrosos para América Latina y el Caribe (Basel Convention Coordinating Centre) (BCCC)	Uruguay, Latin America and the Caribbean
Universiti Sains Malaysia (USM)	Malaysia, South East Asia
South Pacific Regional Environment Programme/Basel Convention Regional Centre (SPREP)	Samoa, Pacific Islands

3. The terms of reference to be addressed in the case study were to:
 - (a) Identify an issue of major concern within the region to be targeted by the case study;
 - (b) Include a field visit that demonstrates a desired piece of technology pertaining to the implementation of the Convention that could be transferred to other countries;
 - (c) Include discussion on the relevance and possible implementation of the technology demonstrated and the pros and cons of its success;
 - (d) Invite participants from multiple countries in the region;
 - (e) Contract and include at least one regional expert to act as a resource person;
 - (f) Survey the participants on their consideration for the success of the study;
 - (g) Provide a written report on the implementation of the case study, including information on success/problems with organization, finances, technology viewed and any other information deemed pertinent to the assessment of the study.

I. Results

4. A series of questions seeking “yes/no” answers on procedure and implementation were used to assess the implementation of each of the studies. The results are presented below. (Note: Y = Yes; N = No; ? = information not provided.)

Areas of interest	Institutions							
	ICIPE		BCCC		USM		SPREP	
Administrative areas	Y	N	Y	N	Y	N	Y	N
Is the institution a regional entity?	Ö		Ö			X	Ö	
Were the initial activities accepted for implementation?	Ö		Ö		Ö			X
Was the case study completed successfully?	Ö		Ö		Ö		Ö	
Was the case study completed within the deadline?	Ö		Ö		Ö		Ö	
Was the case study report delivered within deadline?	Ö			X		X		X
Were more than six countries represented?	Ö		Ö		Ö		Ö	
Was the case study completed within budget?	Ö		Ö		Ö		Ö	
Did the institution provide > 10% in-kind contribution?	Ö		Ö		Ö		Ö	
Was there smooth administration during implementation?	Ö			X	Ö			X
Was the initial financial report submitted acceptable?		X		X		X		X
Technology transfer areas								
Was a major issue of the region identified?	Ö		Ö		Ö		Ö	
Was a piece of improved technology demonstrated?	Ö		Ö		Ö		Ö	
Did discussion on the relevance of the technology occur?		X	Ö		Ö		Ö	
Was transfer of the technology discussed?		X	Ö		Ö		Ö	
Did the field visit have relevance to the Convention?	Ö		Ö		Ö		Ö	
Were the participants surveyed on the study's success?	Ö		Ö			X		X
Were the participants satisfied with the study?	Ö		Ö		?		?	
Were experts from the institution involved?	Ö		Ö		Ö		Ö	
Was at least one suitable external expert contracted?	Ö		Ö		?		Ö	
Was technology from another country included?		X	Ö		Ö		Ö	
Was there a request for follow-up action in the report?		X	Ö		Ö			X

5. A review of the four case studies follows.

A. International Centre of Insect Physiology and Ecology, Kenya

6. The International Centre of Insect Physiology and Ecology (ICIPE) based in Nairobi, Kenya, was founded in 1970. It is an inter-governmental research organization which specializes in research and development into arthropod-related issues which impact on the economics and welfare of tropical developing countries. ICIPE activities concern vital issues of global and regional significance: human health; livestock productivity; food security; biodiversity; sustainable use of natural resources; and institutional and individual capacity-building. In carrying out research, ICIPE collaborates with many local and international institutions in delivering and testing its technologies.

7. Basic strategic research on insects and other arthropods using state-of-the-art methods provides the required scientific underpinning for the development of environmentally safe and affordable pest and vector control technologies. These research results are then translated into applied research projects

that lead to specific products or technologies that can be used directly by resource-poor communities and commercial farmers alike for the management of pests and disease vectors.

8. ICIPE has 240 staff members who work in multidisciplinary teams in four research and development divisions corresponding to the Centre's central aim of improving the "4Hs": human health; animal health; plant health; and environmental health. Capacity-building is an integral aspect of every project within each of the four divisions.

9. Research on disease vectors, particularly on mosquitoes, is undertaken in a closely coordinated effort with the World Health Organization Africa Regional Office (WHO/AFRO) and other organizations in which an integrated vector management (IVM) initiative plays centre stage in disease control. ICIPE is a WHO pre-designated centre on IVM and capacity-building. It is also a partner with WHO/AFRO in assisting countries in Africa to reduce their reliance on DDT for malaria control through implementation of IVM programmes.

10. Through its capacity-building programme, the African Regional Post-graduate Programme in Insect Science (ARPPIS), ICIPE has contributed to the training of specialists at the Ph.D. and M.Sc. levels in insect science around the continent. Thus far, over 170 African scholars have enrolled in the programme, which is a collaborative effort of ICIPE and 27 African universities. ICIPE also hosts numerous short courses and specialist training for IVM and integrated pest management practitioners.

11. Through its information and communication services and publications, ICIPE makes available to collaborating institutions and individuals the latest information on pest and vector control.

12. Given its core function of disease control, ICIPE carried out a workshop and field study on POPs and in particular, on alternative strategies to malaria control. The objective of the study was:

- (a) To provide technical and managerial skills on integrated vector management;
- (b) To strengthen the capacity of national disease control programmes on environmentally sound alternatives and management options for POPs, with particular emphasis on reliance on the use of DDT.

13. The study involved:

- (a) Presentations on POPs, the Stockholm Convention and IVM;
- (b) Country presentations on DDT use and malaria control;
- (c) Group analyses on country profiles;
- (d) A field visit to a community in Kenya to see and experience the use of IVM strategies for malaria vector control.

14. The countries sending participants included Ethiopia, Kenya, Uganda, the United Republic of Tanzania, Zambia and Zimbabwe.

15. There was no feedback from ICIPE on problems occurring during implementation. The institution has expertise in alternatives to the use of DDT for malaria vector control and carried out a study in that area. The report indicates that the case study was undertaken successfully. The expenditures were made within budget and administrative costs were covered by ICIPE. The draft report for the case study was presented some four weeks before the deadline, and the final presentation was made with two weeks to spare. The participants offered high marks for the running of the study.

16. The use of DDT for malaria control is a major issue for the participating countries. The study involved presentations from experts on alternatives to DDT use, and a field visit to a community that had implemented alternative strategies provided "hands-on" experience of a successful alternative strategy.

17. All the participants expressed the need for their country to undertake such alternative programmes for malaria vector control, but noted that funding would have to be obtained to realize such measures. However, the case study report did not describe any dialogue among the participants on the pros and cons of the introduction of alternative technology for DDT replacement. While general recommendations were included in the conclusions of the report, there was no indication of possible specific future actions based on the results of the field visit aimed at having the showcased technology transferred to other countries.

B. Basel Convention Coordinating Centre (BCCC), Uruguay

18. BCCC was established by a written framework agreement between the Secretariat of the Basel Convention and the Government of Uruguay. BCCC coordinates the Basel Convention regional centres on training and technology transfer in Latin America and the Caribbean, which are hosted by Argentina, El Salvador and Trinidad and Tobago.

19. BCCC has a new headquarters at a national institution in the fields of science, technological development in different areas of production and in management systems in the Technological Laboratory of Uruguay. It is situated in an 11 hectare space with buildings occupying 23,500 square meters. It has established infrastructure which includes laboratories, conference rooms and exhibition areas.

20. The vision of BCCC is to consolidate, together with the regional centres, a reference institution which will lead Latin American and Caribbean countries in the process of capacity-building strengthening and specialization aimed at minimizing health and environmental risks in the integrated management of chemical and hazardous wastes within a framework of sustainable development.

21. For this study, obsolete pesticides, a subject of interest to Parties to the Stockholm Convention in the region was selected. The case study was aimed at transferring knowledge and exchanging experiences through a field visit in Venezuela and the elaboration of a practical guidance for the environmentally sound management of stockpiles of pesticides in Latin America and the Caribbean.

22. Venezuela was the country selected for the field visit because of its experience in the repackaging and preparation for the environmentally sound disposal of 1,000 tons of obsolete pesticides, and because the whole process had been suitably documented. The three-day activity was organized together with the Ministry of Environment and Natural Resources of Venezuela, which has a qualified team of experts in obsolete pesticides.

23. The activities undertaken included a workshop, a visit to a warehouse containing obsolete pesticides that had been repackaged and an accident simulation.

24. Experts on the subject of disposal of obsolete pesticides from Argentina, Brazil, Chile, Cuba, Ecuador, El Salvador, Mexico, Nicaragua, Uruguay and Venezuela participated in this training. They were selected by the focal point of the Stockholm Convention or by the responsible authority for the national implementation plan in their respective countries.

25. An unforeseen issue was the havoc created by the passing of hurricane Ivan. Services were disrupted, resulting in the late arrival of some participants, while others did not participate at all. There was also delay in the implementation of the study because the host institution for BCCC was in the process of establishing a new agreement with the Basel Convention. Once these hurdles were overcome, the implementation of the study went smoothly.

26. A guidance document entitled "Practical guidance for the environmentally sound management of stockpiles of pesticides in Latin America and Caribbean countries" was prepared that provided practical ways to manage obsolete pesticide stockpiles in an environmentally sound manner, especially for developing countries. Taken into account is the management of hazardous wastes, storage issues, local treatment, exportation processes, prevention and obligations under the Basel Convention, the Stockholm Convention and the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade. It is aimed at technicians involved in the management of obsolete pesticides. The document also responds to the concerns that arose during the workshop, and is based on the compilation of information from multiple experts.

27. The preparation of the guidance document corresponds to one of the strategies of the Centre, which is to achieve a larger impact from its activities and projects by generating information that is both harmonized and available for transfer.

28. The majority of the participants were satisfied with the reviews of the study and reflected positively on the relevance of the technology shown in relation to the situation in their respective countries. The BCCC showed a good command of the region and has established effective links to relevant institutions of Government throughout.

29. Being recognized by Governments in the region of Latin America and the Caribbean allows BCCC to obtain the support and cooperation required to carry out projects that include many countries. This provides opportunities for the institution to deliver technical assistance.

C. Universiti Sains Malaysia (USM)

30. Established as the second university in the country in 1969, USM was first known as the University of Penang. The fluid exchange of knowledge and ideas between industry and the community at large and USM forms the main goal of the university's corporate strategy.

31. The university specializes in the area of biopharmacy. It founded the first pharmaceutical sciences teaching programme in the country in 1975, and its school of pharmaceutical sciences has grown to include three specialized units, the Centre for Drug Research, the National Poison Centre, which has lately been designated a WHO collaborating centre, and the Doping Control Centre, which was set up to conduct doping control tests during the 1998 Commonwealth Games.

32. Other internationally affiliated centres include the Vector Control Research Unit, the Centre for Marine and Coastal Studies, the Aquaculture Research Group and the Centre for Atmospheric Studies.

33. In the field of POPs, the university has a research cluster comprising several researchers from different departments in the University. Some of these have been working on POPs problems and have been involved directly with projects such as the national implementation plan for Malaysia and the Global Environment Facility Regionally Based Assessment of Persistent Toxic Substances for the South Asia and Pacific Region. The university enjoys facilities and expertise to conduct research in POPs monitoring, including analysis of dioxins and furans.

34. Most of the 12 chemicals covered by the Stockholm Convention have been banned from import into Southeast Asian countries. The major concern is the elimination of stockpiled POPs such as the organochlorine pesticides and PCBs.

35. Most of these developing countries do not have proper facilities for eliminating these stockpiles of POPs. It would be beneficial to the region to have facilities for removing stockpiled POPs and reducing releases of polychlorinated dibenzodioxins (PCDDs) and polychlorinated dibenzofurans (PCDFs).

36. PCDD and PCDF are of major concern in the region. Domestic wastes are commonly disposed of in landfills and by open burning, with very few domestic waste incinerators being used in the region. State-of-the-art domestic waste incineration facilities which achieve the controlled release of PCDD and PCDF are scarce in the region.

37. The objectives of the case study included:

- (a) To determine the need for elimination of POPs stockpiles, particularly PCB and PCB-contaminated oils and transformers in each country;
- (b) To provide technical information on the establishment of chemical, industrial and domestic waste incineration facilities in each country in the region;
- (c) To study the needs and requirements of each country in establishing such facilities;
- (d) To look at how regional delivery of technical assistance can be provided toward supporting these causes;
- (e) To determine other important issues relating to compliance of the Stockholm Convention.

38. The study involved participation from Brunei, Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Philippines, Singapore, Thailand and Viet Nam. Site visits were held in Malaysia and Singapore to study efficient incineration plants with post visit sessions to analyse the possibilities for implementation in other countries.

39. Through discussion and analysis of the responses from the questionnaires, several common issues were highlighted for regional consideration with regard to POPs chemicals and efforts to comply with the Stockholm Convention. Issues discussed include:

- (a) Waste incineration technology – PCDD and PCDF releases, open burning and forest fires;
- (b) Chemical waste incineration – lack of facilities;
- (c) Analytical and monitoring capacity for POPs – lack of expertise for analysis and monitoring;

(d) Lack of regulations on POPs management – illegal movement of POPs within the region.

40. An intention of the case study was to see if efficient waste incineration technology could be transferred to countries within the region. It did provide an opportunity for Government representatives to visit facilities using such technology. The cost of constructing, operating and maintaining the technology, however, may be prohibitively high for many of the countries in the region.

D. South Pacific Regional Environment Programme (SPREP), Samoa

41. SPREP is a regional organization established by Governments and organizations of the Pacific subregion to look after its environment. It has grown from a programme attached to the South Pacific Commission in the 1980s into an intergovernmental organization charged with protecting and managing the environment and natural resources. It is based in Apia, Samoa, and has a staff over 70 people.

42. The Pacific island Governments and administrations saw the need for SPREP to serve as the conduit for concerted environmental action at the regional level. The establishment of SPREP also sends a clear signal to the global community of the deep commitment of the Pacific island Governments and administrations to sustainable development, especially in the light of the outcomes of the World Summit on Sustainable Development in the form of the Plan of Implementation, the Millennium Development Goals, the Millennium Declaration, the Programme of Action for the Sustainable Development of Small Island Developing States (Barbados Programme of Action) and Agenda 21.

43. The SPREP mandate is to promote cooperation in the Pacific Islands region and to provide assistance in order to protect and improve the environment and to ensure sustainable development for present and future generations. The organization's unique focus is on sustaining the integrity of the ecosystems of the Pacific islands region in order to support life and livelihoods today and tomorrow. SPREP has 21 Pacific island member countries and four other members countries outside the region.

44. SPREP has concentrated on the need to provide people in the region with information on alternative methods of disposal of organic waste besides burning and to improve knowledge on sampling and analytical methods for dioxins and furans. As fish is a staple in the diet of the islanders, this would include background information and demonstrations on the procedures involved in the monitoring of food fish for dioxin and furan concentrations.

45. A subregional workshop on dioxins and furans involving information collection and management training in the Pacific island region was organized by SPREP and held in Wellington, New Zealand from 14 to 18 June 2004, with the following aims and components:

(a) To provide general information and training on sampling and analytical techniques of dioxins and furans in environmental samples;

(b) To provide training on assessment and evaluation of public awareness techniques about dioxins and furans and looking at alternate ways of dealing with organic waste;

(c) To discuss best available techniques and best environmental practices;

(d) To undertake a field trip to expose the participants to some best environmental practices that are in place in New Zealand, where green waste is dealt with in an environmentally friendly manner.

46. The countries that were represented at the workshop were Fiji, Micronesia (Federated States of), Papua New Guinea, Samoa, Tonga, Tuvalu and Vanuatu. In addition, three non-governmental organizations were invited to join the training workshop and describe their experiences and explain how their organizations could contribute to raising awareness on issues pertaining to the release of dioxins and furans.

47. The first component of the study provided the participants with some understanding of the sampling and analytical methods used for monitoring dioxins and furans. The technical aspects of the technology could not be comprehensively explained, owing to its complexity and the fact that the participants were not experts, but the participants became more familiar with the equipment and the acute precision that was required to monitor these chemicals.

48. The second and third components of the study gave the participants more useful tools to introduce into their local settings. There is very little knowledge on the dangers of open burning of organic wastes and possible alternative practices, and the study provided a means of sensitizing key

individuals who would be instrumental in carrying such information to their respective Governmental agencies for implementation.

49. There were problems in communication given the remoteness of the region and possibly inadequate technology and expertise at SPREP. This resulted in the report of the case study being delivered late and delays in communication via e-mail.

50. The case study was implemented without setbacks. SPREP has much experience in working on environmental issues in the region and is well placed to provide support for delivering technical assistance in the Pacific Islands.

II. Conclusions

51. In general, the four institutions implemented the proposed study successfully. Satisfactory administrative and technical support were key factors in their ability to do so. Success was heavily dependent on the leadership effectiveness and scientific skills of the institutions. Attention to management and recruitment of personnel could be critical to the success of the delivery of technical assistance for each region on a long-term basis.

52. All institutions seemed intent on having workshops as the means of transferring technology.
