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**ESTABLISHMENT OF THE CLEARING-HOUSE MECHANISM TO PROMOTE AND
FACILITATE TECHNICAL AND SCIENTIFIC COOPERATION**

Note by the Secretariat

1. INTRODUCTION

1. The first meeting of the Conference of the Parties, held in Nassau, the Bahamas, from 28 November to 9 december 1994, decided to implement the provisions of Article 18, paragraph 3, of the Convention for the establishment of a clearing-house mechanism to promote and facilitate technical and scientific cooperation (UNEP/CBD/COP/1/17, decision I/3).

2. The first meeting of the Conference of the Parties requested the Secretariat to prepare, and report back to the Conference of the Parties at its second meeting on, a comprehensive study, in accordance with Article 18, containing concrete costed recommendations to assist the Conference of the Parties in the establishment of the clearing-house mechanism to promote and facilitate technical and scientific cooperation, taking fully into account the views expressed at its first meeting and submitted to the Secretariat in writing, as well as the need to draw on all relevant existing institutional structures (UNEP/CBD/COP/1/17, decision I/3).

3. The present study builds upon the Note prepared by the Interim Secretariat for the first meeting of the Conference of the Parties (UNEP/CBD/COP/1/8), the suggestions discussed at the Open-ended Intergovernmental Meeting of Scientific Experts on Biological Diversity, held in Mexico City from 11-15 April 1994 (UNEP/CBD/COP/1/16, paragraphs 48 and 49), the guidelines presented in the report of the second session of the Intergovernmental Committee on the Convention on Biological Diversity, held in Nairobi, Kenya, from 20 June to 1 July 1994 (UNEP/CBD/COP/1/4, paragraphs 125-133) and the recommendations of the informal consultation held in Geneva on 30-31 March 1995, with organizations competent in activities to be covered by the clearing-house mechanism. The study also draws on the results of the workshop on the establishment of the clearing-house mechanism organized by the Stockholm Environment Institute (SEI) and the International Academy of the Environment (UNEP/CBD/COP/1/Inf. 9), those of the workshop organized by the German Federal Agency for Nature Conservation, and contributions made by the Biodiversity Information Network (BIN21), the World Conservation Monitoring Centre (WCMC) and CGNET.

4. The purpose of the present note is to assist the Conference of the Parties in defining the objectives,

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scope and functions of the clearing-house mechanism and to propose for its approval the structure, operation, plan of action and budget of a pilot phase for establishing the mechanism.

2. BACKGROUND

5. The extent to which countries perceive benefits from the conservation and sustainable use of their biological resources depends in part on their ability to achieve a fair and equitable sharing of the benefits arising out of the use of such resources. This, in turn, depends on their ability to acquire and develop the knowledge and technologies to add value to these resources, thereby integrating modern technology, including biotechnology, into their development strategies.

6. Scientific and technical cooperation is required to develop joint research programmes and joint ventures for technological development. Such cooperation will foster partnerships between countries and across sectors, involving institutions, enterprises and experts, covering all aspects of the three objectives of the Convention and its provisions, and will bring tangible benefits to the Parties involved.

7. The clearing-house mechanism provides the means by which the Convention can promote and facilitate such cooperation. However, in order for a clearing-house to be operational, initial sectorial limitation may be needed. This could be attained by having the clearing-house cover a large number of topics under the Convention and concentrating on fewer functions; or by limiting the scope of the topics of the clearing-house mechanism and expanding the number and complexity of functions as experience and resources are developed.

8. The latter approach has the advantage of giving priority to the importance aspects of technical and scientific cooperation as decided by the Conference of the Parties. It also provides a structure of work that encourages a gradual build-up of the activities and functions.

3. OBJECTIVE OF THE CLEARING-HOUSE MECHANISM

9. The objective of the clearing-house mechanism is to promote and facilitate technical and scientific cooperation for the implementation of the three objectives of the Convention, in accordance with Article 18, by:

(a) Developing and strengthening national capabilities, through human resource development and institution building;

(b) Facilitating the transfer of technologies, in accordance with Article 16;

(c) Promoting the establishment of joint research programmes and joint ventures for the development of technologies relevant to the objectives of the Convention.

4. POLICY ASPECTS OF THE CLEARING-HOUSE MECHANISM

10. The Conference of the Parties may wish to consider the following policy aspects: scope, functions, structure and operation of the clearing-house mechanism.

4.1 Scope

11. The scope of the clearing-house mechanism should be the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the

utilization of genetic resources, through:

- (a) Providing an information exchange service that enhances the capacity of countries to cooperate in the development of policies and technologies through joint ventures and joint research programmes;
- (b) Developing and strengthening national capacity by serving as an instrument for the development of local, national and global policies on the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources;
- (c) Supporting and facilitating activities that Parties will undertake for the implementation of the Convention, with particular emphasis on the development and strengthening of institutional capacities;
- (d) Assisting countries to develop partnerships through joint ventures and joint research programmes in both the public and private sectors. The partnerships will take into account the need to use innovative ways of mobilizing financial resources for such joint ventures and joint research programmes;
- (e) Assisting the activities of the Secretariat by integrating and disseminating scientific, technical and technological information regarding the objectives of the Convention.

4.2 Functions

12. In the early stages of its operation, the clearing-house mechanism should focus on:

- (a) Developing national capabilities by:
 - (i) Exchanging and disseminating information gathered from reports from Parties on experiences and lessons learned on the implementation of the Convention;
 - (ii) Creating a directory of services on such topics as experience, methodologies, regulations and agreements regarding access to genetic resources, as well as topics related to safe transfer of living modified organisms produced by genetic engineering;
 - (iii) Training and developing human capacities at the regional, national and local levels for effective participation in the clearing-house network;
- (b) Facilitating the transfer of technology by:
 - (i) Developing a training programme for, and exchanging expertise on, institutional and legal issues related to the transfer of technology, including intellectual property rights and patents, socio-economic aspects, and substantive technical information.
 - (ii) Developing a training programme for, and exchanging expertise on, the identification, characterization, management and monitoring of the components of biological diversity;

- (c) Promoting the establishment of partnerships by:
- (i) Developing the capacity of countries to access financial resources and mechanisms by disseminating information on the financial mechanism of the Convention and on other financial sources, including their policies, strategies, programme priorities, eligibility criteria, guidelines for submission of proposals, and project portfolios;
 - (ii) Mobilizing financial resources from the public and private sectors.

4.3 Structure

13. The guiding principle of the structure of the clearing-house mechanism is its openness, transparency and cost-effectiveness. The proposed design comprises a decentralized, flexible and coordinated electronic network, together with the capacity to meet the needs of those users without on-line access through the provision of services in other formats (diskette, CD-ROM, print). Under the proposed structure, the Secretariat would fulfill the role of "catalytic agent" through the creation of a unit (the "clearing-house mechanism operational unit") that would carry out the coordination activities of the clearing-house mechanism, in collaboration with the national and thematic focal points. The location of this unit within the Secretariat will allow it to benefit from the Secretariat's administrative support.

14. The clearing-house mechanism would also create collaborative links to special interest networks, non-governmental organizations and other relevant international, regional and national organizations, in accordance with guidance to be provided by the Conference of the Parties, thus building upon the vast experience and knowledge available (Figure 1).

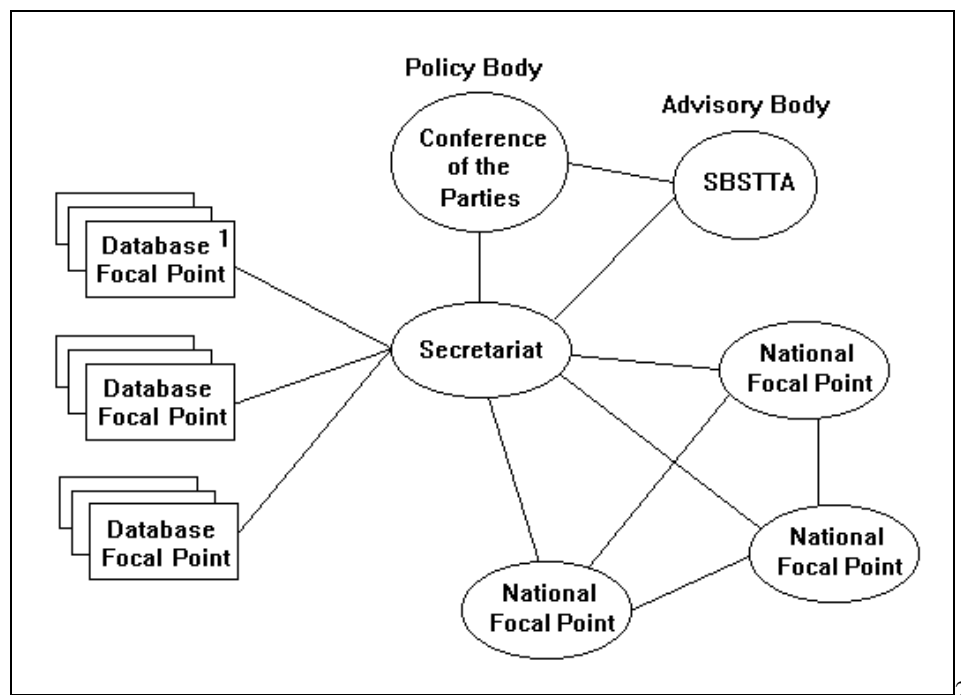


Figure 1. A conceptual diagram showing the institutional functionality of the clearing-house mechanism.

(¹.Existing and new database focal points, including methodologies residing in universities and research institutions, private sector databases and other information sources)

4.4 Operation

15. The Conference of the Parties may wish to consider the recommendations of the second session of the Intergovernmental Committee on the Convention on Biological Diversity regarding the operation of the clearing-house mechanism (UNEP/CBD/COP/1/4, paras. 125-133). The meeting recommended that the clearing-house mechanism should be:

- (a) An openly accessible electronic data network;
- (b) A decentralized network of national and regional centres, coordinated within the United Nations Organization;
- (c) Based as far as possible on existing institutions, using existing databases, information services, and networking services;
- (d) Driven by the real needs of the parties;
- (e) Small in the initial phase, but with the capacity to be further developed.

16. Based on the guidance provided in paragraph 13 above, the clearing-house mechanism would operate under the authority of the Conference of the Parties and aim to avoid the duplication of services or information, making the most effective use of existing infrastructure and other organizations. This would include the following elements:

- (a) The international focal point at the Secretariat would be responsible for gathering, organizing and disseminating information of global interest to Contracting Parties. Other functions would include the development of memoranda of understanding with existing data-bases and networks;
- (b) Each national focal point would be a proactive instrument for convening a cross-sectoral country team for implementing the Convention, in particular as regards (i) consent to access to genetic resources and (ii) transfer of technology, including biotechnology, through the development and implementation of national strategies as envisaged in Article 16, in conjunction with the United Nations Development Programme (UNDP). National focal points could organize training programmes and workshops to promote international partnerships involving both the public and private sectors. The list of national focal points is included in a separate information note (UNEP/CBD/COP/2/Inf.5), and annex II to the present note shows the geographical distribution of national focal points;
- (c) Database focal points would collaborate in the clearing-house mechanism through agreements with the Secretariat, and could also be located at national focal points. They would offer services of data organization and retrieval on specific themes of interest to the Convention for scientific, technical and technological cooperation, including joint ventures and joint research programmes. They would have discussion lists, directories, virtual libraries, and/or meta-databases and help desks;
- (d) The clearing-house mechanism will be enhanced by creating partnerships between national focal points and relevant database focal points;
- (e) Collaboration will be sought with relevant networks, selected according to criteria that include commitment to the Convention on Biological Diversity, network capacity, flexible and open design/structure, willingness to collaborate and participate in the validation of data, geographic relevance, strong linkage to United Nations agencies and relevant academic institutions in order to strengthen national capacity, willingness

to participate in regional exchange programmes for human capacity-building;

(f) Collaboration will also be sought with other relevant organizations, including the implementing agencies of the interim financial mechanism, other United Nations agencies, governmental bodies, non-governmental organizations and other international, regional, national and local organizations, in accordance with guidance to be provided by the Conference of the Parties;

(g) The Conference of the Parties may wish to decide on the role of the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) in the operation of the clearing-house mechanism;

(h) The Conference of the Parties shall periodically evaluate and review the operation of the clearing-house mechanism.

5. PILOT PHASE WORK PROGRAMME TOWARDS THE ESTABLISHMENT OF THE CLEARING-HOUSE MECHANISM (1996- 1997)

17. The rationale for having a pilot phase is to bring together all those users and/or providers with the current capacity to develop and test the different components of the mechanism that will be required for the formal phase of the programme beginning in 1997. For the period 1996-1997, the second meeting of the Conference of the Parties may wish to consider a pilot phase that will set the clearing-house mechanism in motion. This pilot phase, designed in the light of experience gained from existing programmes, will consist of developing four modules, A-D, as follows:

- A. Developing a database;
- B. Establishing a decentralized network of national and regional centres;
- C. Developing a prototype of an intelligent interactive system;
- D. Creating the necessary capacities at the national level.

5.1 Action plan for the 1996-1997 Pilot Phase

18. The action plan for 1996-1997 is based on a modular iterative development approach that enables the providers/users to be actively involved in the evaluation of the system throughout the whole design process. The dates proposed for each of the activities listed below are based on knowledge of similar experiences, and offer the flexibility necessary for developing a system which will best serve the needs of the Convention. The activities to develop the four modules are as follows:

19. Module (A) - developing a database - includes: (a) the identification and assessment of existing database systems in order to develop the clearing-house mechanism database; (b) development and testing of a user-friendly interactive database system; and (c) an evaluation phase, consisting of workshops with the participation of developers and users. The components of the database system are shown in Figure 2. Specific steps will be:
- (i) Design and implementing of a prototype database, building on existing experiences, linked to national, regional and thematic databases (December 1995-June 1996);
 - (ii) Design and programming of formats (December 1995-March 1996);

- (iii) Testing and evaluating (i) and (ii) (July-August 1996);
- (iv) First presentation of the system at the second meeting of the SBSTTA (September 1996).

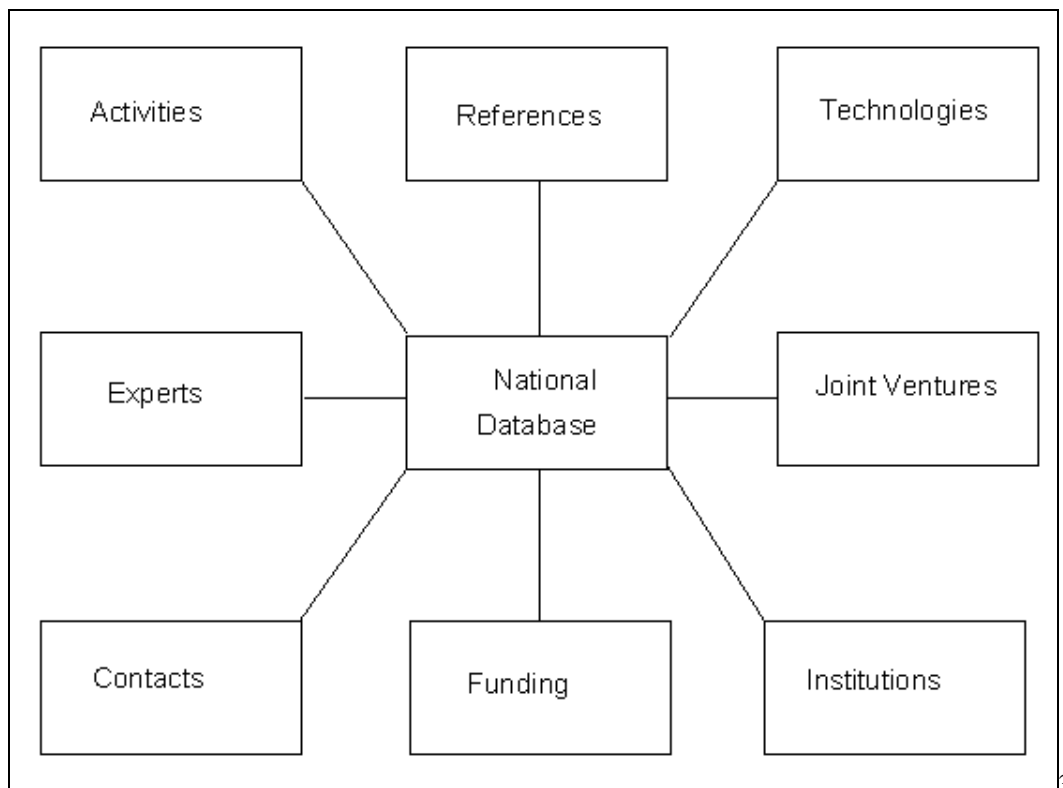


Figure 2. Modular structure of the database system

20. Module (B) - establishing the network - includes: (a) identifying local, national, regional and database contact points for information sharing; (b) developing and undertaking a training programme on the implementation and use of the clearing-house mechanism information system; and (c) providing, upon demand, the necessary technical support for the functioning of the network. Specific steps will include:

- (i) Developing prototype training modules on access to and use of the network for regional workshops (January-August 1996);
- (ii) Developing a hard copy of the database (thesaurus) with cross-referencing capacity for use by national focal points (March-August 1996);
- (iii) Developing a prototype interactive, multi-media diskette and CD-ROM version of the information system (November 1996);
- (iv) Testing and evaluation of training modules (September-December 1996).

21. Module (C) - developing a prototype of an intelligent interactive system - includes: (a) developing the clearing-house mechanism network by building on existing systems; (b) developing an information management tool for use by national focal points, consisting of relational databases on activities, funded

projects, lists of experts, legislation, existing joint ventures, technologies, financial institutions and mechanisms relevant to the implementation of the Convention at the national level; and (c) facilitating user-friendly access to the network by developing a Windows-based query system to enable national focal points to obtain cross-referenced data on elements needed for the implementation of the Convention or for preparing reports. (Figure 3 offers an example of what the query system might look like).

Specific steps will include:

- (i) Design and programming of a query system (December 1995-April 1996);
- (ii) Setting up of the intelligent interactive system on the Internet (April-September 1997);
- (iii) Implementation and testing of an Internet home-page prototype (July-September 1997).

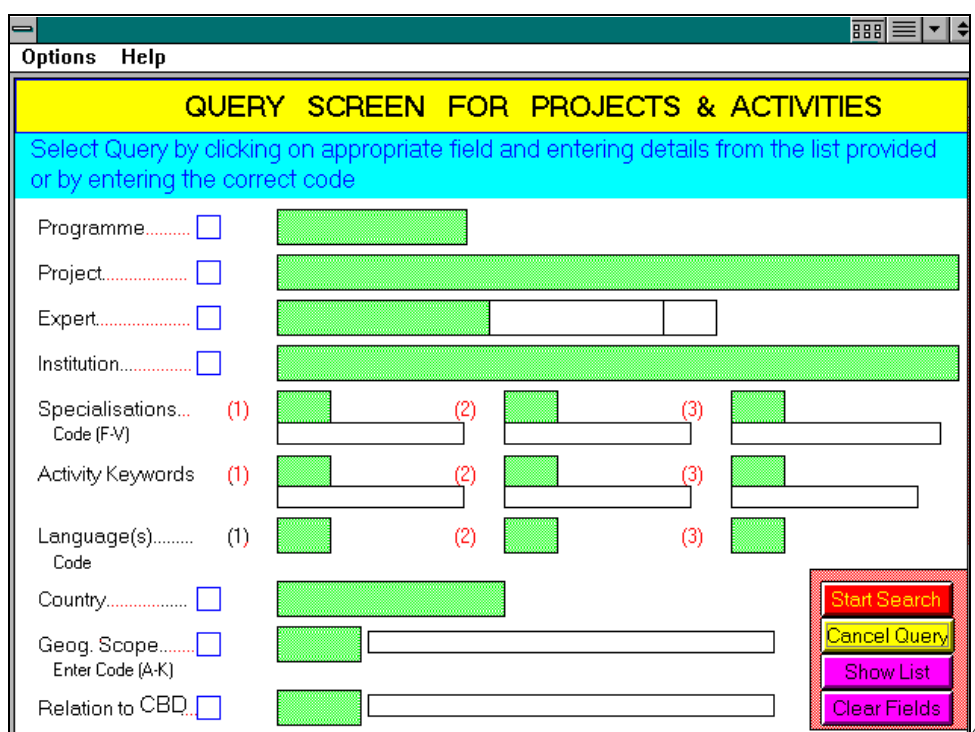


Figure 3. Example of a query window as a component of the information management tool.

22. Module (D) - creating the necessary capacities at the national level - includes the development of: (a) a replicable methodology to assist national focal points in the development of technical and scientific cooperation; and (b) a self-contained set of training modules, materials, audio-visuals, instructions for trainers, and evaluation forms. Specific steps will be:

- (i) Preparation of an action programme beginning in 1997, based on a review of the pilot phase to include the development and implementation of national policies through the strengthening of national capability by means of human resource development and institution-building as envisaged in Article 18, paragraph 2. This programme will also aim to promote the establishment of joint research programmes and joint ventures for the development of technologies relevant to the objectives of the Convention as established in Article 18 paragraph 5;

(ii) Development of training modules for the regional workshops on concepts, tools, techniques for the development and implementation of national policies (January-August 1996);

(iii) Sub-regional policy development and assessment workshops in Africa (5), Asia (5), Eastern Europe (2) and Latin America and the Caribbean (3) to assist participants in the use of the network tools, techniques, and methods for developing and implementing national biodiversity policies, strategies and programmes, including cooperation by developing joint partnerships (five-day workshops, 1997-1999). (It is planned to organize five workshops each year, therefore this activity will extend beyond the pilot phase).

6. FUTURE PROGRAMME OF WORK 1998-1999

23. Based on the results and recommendations of the review of the pilot phase, the future programme of work of the clearing-house mechanism could include:

(a) Establishing a network of regional focal points to support the implementation of training programmes and the delivery of training, research and human resource development. A training programme on technology, including biotechnology, for the sustainable use of biological resources would include three items:

(i) Acquainting participants with concepts and issues associated with technology, including biotechnology, policy in the public, private and financial sectors;

(ii) Examining aspects of governance, preparation of participants' projects, review of methodologies of policy research and report writing; and

(iii) Preparing project reports to be presented at a regional workshop.

(b) Training of regional level participants as facilitators for national training packages, in the use of the information system and policy analysis tools. The components of this capacity-building programme for the national focal points could include assistance in:

(i) Creating an institutional framework at the national level for the implementation of the Convention;

(ii) Training country teams in methods for developing national strategies;

(iv) Identifying funding strategies for the operation and activities of the country team;

(v) Establishing a research fellowship programme on biotechnology policy and the transfer of technology for the sustainable use of genetic resources, including financial and other support mechanisms;

(vi) Organizing national workshops on "Our Biological Resources: New Opportunities for Sustainable Development" with the participation of public, private and financial sectors. These workshops would be hosted by country teams in order to persuade national policy makers of the needs and the opportunities in implementing the Convention;

(vi) Organizing consultative meetings between country teams, key government agencies and the private sector for the establishment of participatory processes for the development of national implementation strategies;

- (viii) Presenting national implementation strategies to policy makers from stakeholder agencies;
- (ix) Identifying and formulating project proposals for submission to the financial mechanism and other sources;
- (x) Negotiating and developing frameworks for joint ventures.

7. BUDGET

24. In its decision I/3 the Conference of the Parties decided that the activities of the clearing-house mechanism should be funded from the regular budget of the Secretariat, as well as through voluntary contributions, subject to decisions to be taken by the Conference of the Parties at its second meeting. The Conference of the Parties may wish to approve a budget of US \$670,000 for 1996 in order to establish the clearing-house mechanism. These funds would be provided through the regular budget of the Secretariat. A breakdown is attached as annex I and this also shows provisional estimates for the years 1997 to 1999, based on the plan of action described above. The costed actions are as follows:

(a) Staff for the unit: In 1995 it was agreed to have a Programme Officer responsible for the clearing-house mechanism. The Conference of the Parties may also wish to consider creating the position of Information Management Officer, responsible for the development, testing and maintenance of the information system of the clearing-house mechanism. In addition, the implementation of the pilot phase of the clearing-house mechanism will require the use of experts and consultants;

(b) Equipment for the unit: hardware (including servers, work stations, network cards, X25 PADs, routers, modems, printers, scanners, power stabilizers) and software will need to be purchased.

8. CONCLUSION

25. The Conference of the Parties may wish to consider the above proposals and:

- (i) Authorize the further work outlined for the pilot phase to be undertaken by the Secretariat;
- (ii) Approve the budget to implement the pilot phase operation;
- (iii) Request the SBSTTA to provide policy guidance for the further development of the clearing-house mechanism.