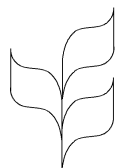




CBD



**CONVENTION ON
BIOLOGICAL
DIVERSITY**

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CLEARING-HOUSE MECHANISM
REGIONAL WORKSHOPS
First Meeting
Cartagena de Indias, Colombia

Introduction to the

CLEARING-HOUSE MECHANISM

**OF THE CONVENTION ON BIOLOGICAL DIVERSITY
TO FACILITATE AND PROMOTE
TECHNICAL AND SCIENTIFIC CO-OPERATION**

Note by the Secretariat

This background document has been prepared by the Secretariat for the purpose of facilitating the First Regional Workshop on the Clearing-house Mechanism of the Convention on Biological Diversity, recalling the recommendations and decisions constituting the clearing-house mechanism. To further assist the Regional Workshops, this document restates the terms of reference of the Meeting, as formulated by the Conference of the Parties to the Convention on Biological Diversity, namely in order to attain a clear definition of country and regional-level scientific and technical information needs, priorities identified, modalities to deliver information and evaluation of national capacities for the implementation of the Convention. The regional workshops should also review experience in scientific and technical cooperation in support of the objectives of the Convention, in order to identify ways by which the clearing-house mechanism can best facilitate such cooperation.

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I. INTRODUCTION AND BACKGROUND

1. Art. 18(3) of the Convention on Biological Diversity is the basis for the implementation of the clearing-house mechanism (CHM) aimed at promoting and facilitating technical and scientific cooperation among Contracting Parties and participants in general. Therefore, *inter alia*, the CHM will provide global access to and exchange of information on biological diversity and its sustainable use.

2. In English, the Convention calls for a Clearing-House Mechanism while the French translation calls the CHM a "Centre d'Echange". The term clearing-house derives from English clearing-houses which were institutions in the financial world used to clear credits and balances between banks. The biodiversity clearing-house of today also strives to act as a mechanism bringing together the supply and demand components of those aspects related to the promotion and facilitation of technical and scientific cooperation. During the negotiations of the Convention a number of countries expressed that the CHM should play a brokering role trying to match the offer of and demand for technology. However, the majority of countries questioned this role as a broker. They finally decided that the CHM should develop in a transparent and decentralized way, functioning on a meta-data level and only acting as a point to information. "Information about information" and "clearing-house of clearing-houses" were the slogans during the negotiations. Near the closing of the negotiations, the Parties also agreed upon the facilitation of scientific and technical cooperation as the main tasks of the CHM.

3. Step by step, the international Clearing-House Mechanism will gradually be developed based on experiences gained by the users. This implies that features presented may be modified according to the demand-driven nature of the CHM. Information structuring is important, but will not be the final stage. A second step in the development of the CHM is to explore how the interaction between partners in the various fields of the Convention, such as technology transfer or capacity building, can best be implemented.

II. GUIDANCE PROVIDED BY THE BODIES OF THE CONVENTION

4. The first meeting of the Conference of the Parties decided to implement the provisions of Article 18, paragraph 3, of the Convention for the establishment of a Clearing-House Mechanism (CHM) to promote and facilitate technical and scientific cooperation (Decision I/3).

5. The COP in its second and third meetings charged the CHM with a number of tasks. The most important ones are listed as follows:

- The Clearing-House Mechanism should be developed through specific and focused areas of activities related to the promotion of international technical and scientific cooperation;
- The CHM should gradually build its functions in response to clear and identified demand based on experience and resources available;
- The CHM, as a decentralized mechanism, should use resources such as print and electronic media, including the Internet;
- The CHM should make full use of existing facilities, avoiding any duplication or overlap of activities, allowing for the early implementation of the mechanism;

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- The CHM should cooperate closely with relevant international organizations and entities as partners in the Clearing-House Mechanism in order to maximize the existing experience and expertise;
- The CHM should enhance networking between existing national, regional, subregional and international centers of relevant expertise, as well as governmental and non-governmental institutions and the private sector;
- The CHM should use the Secretariat as a focal point, encouraging the development of a network of active partners and supporting the partners in developing specific training for the effective participation of users in the clearing-house network;
- The CHM pilot phase as envisaged in decision II/3 shall be extended for another year, until December 1998;
- The CHM should disseminate, in addition to scientific and technical information, information on policy and management issues relevant to the implementation of the Convention;
- The CHM will allow ownership of all information made available through the Clearing-House Mechanism to remain with the provider of the information.

6. The following attributes were added to the CHM by the COP following the recommendations of SBSTTA:

- The CHM should develop in a neutral, transparent, cost-effective, efficient and accessible manner;
- The CHM should be compatible with national capacities, need-driven and decentralized in nature, providing access to meta-data, providing support to the decision-making process and to the extent possible should involve the private sector;
- The CHM should include as main features of the operational framework of the pilot phase, information linking and organization, visualization and decision support functions;
- The CHM should be clearly focused on the implementation of the Convention;
- The CHM should include information exchange modalities in addition to the Internet to ensure the participation of Parties without Internet access.

III. PARTNERS AND TARGET GROUP

7. The Convention does not discuss exclusively the partners of the CHM nor the target group. However, the following advice can be drawn from the decisions of the COP.

8. The work of the Clearing-House Mechanism at the international level should focus on providing thematic focal points for linking activities at the national and regional level. Therefore, at the national level the

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Clearing-House Mechanism needs to support the activities of the Regional and National Focal Points assisting in linking Thematic Focal Points (TFPs) to a wider Clearing-House Mechanism network.

9. The operational framework presented here is specifically designed to avoid the duplication of effort, and to maximize the exchange of existing information and knowledge through the development of databases of existing knowledge (or meta-databases) by Clearing-House Mechanism partners.
10. As previously mentioned, the target group is somewhat unclear. The meaning of target groups depends on national priorities and the accessibility of information. Decision-makers in governments and related institutions should presently be considered as the major target group. As data accessibility improves, the target group needs to be redefined so that a wider audience can participate in and contribute to the system.
11. The contributors to the system vary. Supported by the Secretariat of the Convention, the National Focal Points will provide and use the information contents as well as provide national experiences through, *inter alia*, the national reports. The TFPs have a long, solid and specialized experience in given fields of biological diversity. They are envisaged to voluntarily provide their information sources *inter alia* on the Internet. Examples for TFPs include the World Conservation Monitoring Centre (WCMC), IUCN, Species 2000, as well as joint approaches such as the Biodiversity Conservation Information System (BCIS). Regional approaches such as BIN21 or the IABIN initiative or supra-regional initiatives such as the OECD Megascience subgroup on bioinformatics or the G-7 ENRM subgroup on biodiversity data also will contribute to the system. Many other initiatives have commenced. It is desirable to harmonize efforts to avoid duplication of work.
12. The role of the Secretariat should be that of a facilitator, ensuring the dissemination of experience and knowledge among all partners, that the system as a whole is learning from shared experience, and that different solutions to similar problems are being recorded and exchanged. As a facilitator, the Secretariat needs to provide learning feedback so that areas of priority interest to the Parties can be identified. The role of the Secretariat in this process will be to provide the learning feedback in order to identify areas considered priorities by the Parties. This will ensure the world-wide sharing of experiences in the implementation of the Convention. This also will lead to a conceptual network model in which the Secretariat is a node to the CHM, acting as a coordinating switching-center, facilitating linkages to the three categories of associated nodes: National Focal Points, Regional Focal Points and Thematic Focal Points.
13. The development of the CHM must be supported by a large number of different partners enabling the mechanism to fulfill its tasks and the expectations of its users. This is only possible when all the Contracting Parties, focal points and other users and providers consider the development of the CHM as a joint responsibility from which they can profit in their national implementation of the Convention. Therefore adding value to biodiversity through information is one of the most important tasks of the CHM.
14. An informal advisory committee will assist the Clearing-House Mechanism. This Advisory Committee will be constituted and coordinated by the Executive Secretary in a transparent manner, which will guide and integrate the development of the pilot phase activities endeavoring to ensure that all Parties can participate in the pilot phase of the Clearing-House Mechanism. The Executive Secretary plans to convene a first meeting of an informal advisory committee to assist in the functioning of the Clearing-House Mechanism. The Executive Secretary has also considered using the regional workshops to designate National Focal Points to participate in the advisory committee.

Synergy vs. Duplication

15. Close cooperation is needed with other conventions and agreements. The Secretariat needs to identify those activities and organizations which could provide support to the Clearing-House Mechanism, promoting synergy, avoiding duplication of efforts and providing appropriate advice to the Subsidiary Body on Scientific, Technical and Technological Advice.

16. Regional and National Focal Points, Thematic Focal Points or other partners are envisaged to take over a specific theme or issue of the Convention to structure the information and provide a single pointer on the CHM website. This will avoid duplication, creating synergy within the CBD, maximizing effectiveness, helping to structure information in a decentralized way and making the international CHM a globally managed, globally owned and globally distributed information source with clearly shared responsibilities.

17. Contracting Parties stressed in their decisions the notion of avoidance of duplication of efforts and also the utilization of synergy between the partners. In its three year pilot phase, the implementation of the CHM will be developed in a way which serves both the users and providers of information. Cost-effectiveness, independence, transparency and a decentralized structure have to be linked and combined in such a way that on the one hand duplication of efforts can be avoided while the information searcher will find the relevant information without delay.

IV. CONCEPTS

18. Information about biodiversity is gathered and maintained by a large number of public and private institutions. Scientists, managers in public and private agencies, and the public must have access to this information. This includes tools that help to locate, analyze and combine information in order to improve the quality of decision-making and in turn the quality of life. In addition, the value of any specific piece of information is often increased when it can be combined with information of other sources.

19. The reliance upon those who collect or maintain information about biological diversity as stewards of these information resources is critical. These individuals and institutions know best both the biological resources, and the nature, quality and condition of the resulting information, and are most likely to maintain the data appropriately.

20. The purpose of the Clearing-House is transactional rather than custodial. It facilitates transactions through the provision of means. A clearing-house implements operational procedures that ensure effectiveness and transparency.

21. The Clearing-House Mechanism will need to function at both national and international levels. At the national level, the Clearing-House Mechanism will serve the information needs of those organizations involved in implementing the provisions of the Convention. The nature of those needs is complex and multi-faceted. Opportunities for addressing them are offered through ongoing developments in information technology. Increasing numbers of sources of information relevant to the implementation of the Convention are likely to be identified, such as UN-organizations, local and national government agencies, universities and research centers, indigenous and local communities with traditional knowledge, non-governmental organizations and the private sector. The potential volume of information suggests that National Focal Points would need to invest immense

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amounts of time conducting searches through this wealth of information. Further contact with each source holding such information would likely reveal a need to distinguish relevant information among overall information held by the institution, ensuring its availability in an appropriate format.

22. This framework provides the means by which access to, and the inter-active nature of, an information-exchange system can be maximized during the pilot phase of the Clearing-House Mechanism. Such an approach takes into account the complexity of the many Convention-related topics. This approach is especially relevant when considering the demands for inputting and updating the different types of information to be submitted by a growing number of partners and participants.

IV. CURRENT STATUS

23. A crucial component of the Clearing-House Mechanism's operational framework is that it be service-oriented. It must be able to link its meta-information in order to respond to queries on topics relevant to the implementation of the Convention. It must point the users to the location of relevant information, and answer specific scientific and technical questions posed by users. Due to its interactive nature, the Clearing-House Mechanism will provide a means for exploring and identifying topics and issues that will need to be addressed in future stages of the programme, and for identifying and disseminating multiple sources of information in an effective and decentralized way.

24. The process for gathering and organizing the information that will feed into the Clearing-House Mechanism is in itself decentralized, with its partners coordinating efforts amongst themselves and with the Secretariat addressing topics of common interest. The contribution of each active partner will be included in the information system of the Clearing-House Mechanism and will be made available to all users. In this way, updating the information in the system will not be the responsibility of any one institution, or of a programme officer in the Secretariat. It will be a decentralized activity, to be undertaken by the CHM partners, with the responsible programme staff at the Secretariat playing a role analogous to that of a "web manager" on the Internet.

25. Access to computers and the Internet is far from universal. While addressing this need is not unique to the biodiversity information arena, it is important to ensure that the needs of those managing biodiversity and those managing information about biodiversity are assessed and their needs made known. This information can be of use both to those concerned with overall information and telecommunications infrastructure and by those in a position to finance information projects that support biodiversity conservation and management. The COP identified that printed information is also crucial for those who have no direct or continuous access to electronic media. Therefore a CHM newsletter will be published by the Secretariat as a paper highlighting the recent developments of the CHM and the CBD.

26. The most important feature of the operational framework that has been agreed upon is the identification of three distinct components of the Internet site of the CHM that constitute the conceptual basis of the activity programme of the pilot phase. These are:

- (i) the organizing and linking of information relevant to the implementation of the Convention;
- (ii) the visualization of the information, which will facilitate the integration of information from many disciplines and domains into formats useful to the design of strategies, plans and

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programmes relevant to the Convention; and

- (iii) the decision-support function, which will consist of providing syntheses of global trends and priorities identified by the Parties and others from information provided in national reports, thematic assessments, studies on the regional distribution of the condition of the components of biological diversity, and other information. This component will need to be developed in close collaboration with those involved in country-level decision-making processes in order to assist the development of increased national capacity for the implementation of the strategies, plans and programmes relevant to the Convention.

27. The different features described here are neither fixed nor permanent components of the Clearing-House Mechanism. These features have been included as part of the pilot phase of the Clearing-House Mechanism in order to provide good examples of how the service-oriented nature of the Clearing-House Mechanism Web page might be fulfilled. As innovative ideas arise, or in response to suggestions from the partners on improvements to the service, these can and will be included. The same is also true for the items currently included under each section of the Web page. For example, as new organizations are identified, they will be added to the existing list of international organizations or Thematic Focal Points, and if it exists, the appropriate link will be made to their Web page, or to the appropriate e-mail address.

28. It is planned that an information service covering topics under consideration at meetings of the COP, of the SBSTTA and other relevant meetings under the Convention will be included in the pilot phase. It is envisaged that, as topics are identified and programmed for consideration by the COP and the SBSTTA, National and Thematic Focal Points will compile subsets of specific pointers leading users to sources of information on that topic. A simple way to avoid duplication of effort in the system would be to set up a single pointer to the active partner responsible for the compilation.

29. It is also envisaged that the Clearing-House Mechanism will play an important role with respect to National Reports under Art. 26 of the Convention. After the first national reports will be made available to the Secretariat, possibilities of disseminating relevant information contained in national reports will be explored.

V. 1. STRUCTURE

30. The need for a clear structure shall be identified to facilitate navigation and identification of the required information within the CHM. Further, it is proposed that a common structure based on agreed elements be used by the CHM-National Focal Points (NFPs) and the Secretariat of the Convention. This would create a CHM-identity among the national CHMs.

31. On a general scale two distinct "roles" can be identified emphasizing the tasks of information structuring (content) of:

- (i) the Secretariat and
- (ii) the NFPs.

32. The Secretariat should be responsible for summarizing information at the global level. The NFPs should focus on organizing information at the national level.

33. A logo has been developed for the Clearing-House Mechanism and its use will be encouraged. This will

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provide a distinct identity to all Clearing-House Mechanism activities and relevant information sources, and will assist in the easy identification of National Focal Points on the Internet. The Subsidiary Body on Scientific, Technical and Technological Advice may wish to consider recommending criteria for the use of the Clearing-House Mechanism logo.

34. A common and shared identity element for the Secretariat as well as the NFPs is the CHM-logo. This



logo helps to create a "CHM-identity".

35. Specifically, it is necessary for the NFPs to agree that, in addition to the national native language(s), English should be used to present core information. In addition, the use of a common style of title (introductory page to the CHM homepage) is recommended.

36. The Secretariat proposes that minimum agreed common elements identified as main descriptors to facilitate identification of information through the CHM are presented as follows:

Secretariat	National Focal Points
<p><u>Basic elements</u> (see also the Secretariat's Internet homepage: http://www.biodiv.org)</p> <ul style="list-style-type: none"> • COP • SBSTTA • List of National Focal Points • Secretariat information • CHM • Thematic Focal Points • Top issues • GEF and additional financial resources • Related conventions 	<p><u>Basic common elements</u></p> <ul style="list-style-type: none"> • National CBD implementation process <ul style="list-style-type: none"> ■ article structure and related implementation of provisions ■ thematic areas and ■ National Report, National Strategy • Services (collections, research, projects, bibliography, thematic areas, national institutions, national financial mechanisms) • Regional Focal Point News • Secretariat "site map"

37. In order to achieve broad participation of different contributors to the CBD implementation process in building the CHM and to create more awareness, it is strongly recommended that the National Focal Points establish a national Advisory Group/ Steering Committee. This group would be multisectoral and interdisciplinary, representing a "Network of Networks".

38. In order to facilitate the exchange of ideas and experiences in the development of the CHM it is proposed to establish a CHM-NFP e-mail group including the currently 169 NFPs, moderated by the Secretariat.

39. The following recommendations are possible options to guarantee access to information for non-web-connected NFPs:

(i) Establish facilitator roles for non-web-connected NFPs by those NFPs who have access to the Internet and additional space on their server for this kind of bilateral collaboration. This also would help to create CHM identity among the parties. It is recommended that the Secretariat explore with the GEF modalities (tool-kit) to enable non-webconnected NFPs to submit their information to the facilitating NFP.

(ii) Explore ways and means to present CBD-related requests submitted via various "traditional" media, e.g., e-mail, telephone, fax, letter, to the Secretariat, NFPs or the relevant institutions.

(iii) Present the "CHM" on a CD-ROM (FAO experience).

(iv) Provide a list of CBD-related CD-ROMs which are relevant to the different articles and thematic areas identified by the Convention.

40. To improve synergy with regard to information exchange with other CBD-related conventions (e.g., CMS, CITES, Ramsar, MAB), between CHM and other information management initiatives (e.g. UNDP-SNDP, UNEPnet, OECD, G7). The avoidance of duplication of efforts is recommended.

41. The Secretariat proposes to limit the use of graphics within the introductory pages of the CHM to reduce uploading time and costs for users of the CHM.

42. Ways and means at the national as well as at Secretariat's level should be explored as to how mass media (e.g., press, radio, TV) may be used by the CHM to disseminate information on the CBD to a broad public.

43. It is also recommended to explore the feasibility of use of formats or standards to submit harmonised (meta) information either to be used for the compilation of the "Global Biodiversity Outlook" or to facilitate searches in a "meta-database".

44. The Articles of the Convention can currently be regarded as the only commonly agreed "format" which facilitates the allocation of article-based information and the use of pre-defined structures within the CHM. All relevant information can be retrieved in any country by clicking on the same article and paragraph. It is expected that future National Reports may provide a similar role.

45. Effective sharing of information is greatly enhanced by a common understanding regarding terms, nomenclature and operating standards. Achieving some level of consistency with respect to common terminology and operating approaches will greatly increase the degree to which these systems can communicate with each other. Users can find the information they need, and data can be combined and aggregated where appropriate. Issues include technical standards by which information is described, formatted and transmitted, as well as issues involving pricing, protection and use of data.

46. The scope of the Convention is very broad. The Convention covers a wide array of issues related to biodiversity conservation, sustainable use and the equitable sharing of its benefits. Respectively the scope of the CHM was considered as similarly becoming very broad in the last CBD meetings. In-situ conservation, taxonomy, access to genetic resources, technology transfer, biosafety, indigenous knowledge, incentive measures and capacity in general were acknowledged as fields in which the clearing-house has an important role to play.

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However, it seems clear to the Secretariat that covering all these topics would require an adequate time frame to be accomplished. This also implies an aspect of a decentralized information system with the burden shared by national and thematic partners.

V.2. INFORMATION CONTENT

47. There is a need to clarify the types and levels of the information in question to make the CHM fully operational. The CHM could provide information on biodiversity related Treaties and Conventions, facilitating access to data, providing links to other networks, facilitating the information transfer or even providing the opportunity to articulate needs. Further clarification is needed if the CHM will develop its taxonomic expertise, concentrating on land-cover information or will facilitate protected areas information. It is not clear as to what types of information on management techniques, biodiversity planning and on national reporting and strategies could be incorporated in the concept.

48. The activities of the CHM should be balanced along the lines of the COP decisions including: (a) decision II/3, on the exchange and dissemination of experiences and lessons learned by Parties on the implementation of the Convention; and (b) decision III/4 on the facilitation and promotion of access to research, technologies, cooperation, benefit sharing, and public awareness, as well as to promote/facilitate linkages between different stakeholders.

49. The four types of focal points recommended are:

- Secretariat Focal Point
- National Focal Points
- Regional Focal Points
- Thematic Focal Points

50. Focal points should make available metadata, whenever possible. The contents of the CHM at the Secretariat's Focal Point could include the following information:

- Convention on Biological Diversity
 - Full text document of the CBD
 - Protocols of the Convention
 - Ratification status
 - COP (meetings, documents)
 - SBSTTA (structure, members, meetings, documents)
 - Intersessional activities (calendar of events and documents)
 - Other Conventions and International Agreements
- National Focal Points
 - Directory with links
 - Services
 - Training
- International Themes (Thematic Focal Points)
 - Scientific
 - Technical
 - Technological

Socio-economic
Cross-sectoral approaches

- Financial Resources
 - List of developed country parties /donors
 - Financial mechanisms: policy, strategy, programme priorities and eligibility criteria
 - Enabling activities
 - Other funding sources
 - Enabling Activities
 - Guidelines (standards, information technology...)
 - Scientific and Technical Education and Training
 - Technology Transfer
 - International programmes
 - Global Biodiversity Outlook
 - Incentive measures
 - Help Desk
51. The contents of the CHM at the National Focal Points level could include the following information:
- Country Profile
 - International Activities
 - Translation of COP and SBSTTA documents and resolutions to the language of the country
 - Interpretation (national and non-technical language) of all resolutions and opportunities
 - National Strategy, Action Plans, Activities, and Evaluations
 - National Legislation, i.e.
 - Biodiversity conservation
 - Sustainable use
 - Access to genetic resources
 - Access to transfer of technology
 - Patents
 - Biosafety
 - Environmental legislation
 - Incentive measures
 - International Agreements
 - Scientific Information, i.a.
 - Components of biological diversity, including:
 - Described genes and genomes
 - Species and communities
 - Ecosystems and habitats
 - Data monitoring activities
 - In-situ conservation
 - Ex-situ conservation (plants, animals, micro-organisms)
 - Sustainable use of biological resources
 - Incentive measures
 - Technological Information

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Technology (available, required)
Indigenous/traditional knowledge, technology, and innovation

- Research Results
Technical, scientific, socio-economic
- Services
Training, surveying, specialized and/or technological expertise
- Help Desk

52. The contents could also be structured using other approaches (e.g. pressure/state/response).

53. Thematic Focal Points could provide information on special topics, including the following priority issues of the CBD:

Coastal and Marine Biodiversity
Terrestrial Biodiversity
Biosafety
Access to Genetic Resources
Intellectual Property Rights
Technology Transfer and Development
Threatened Species
Traditional and Indigenous Knowledge
Agricultural Biodiversity
Inland Waters

54. One element of content of all focal points should be a directory of meta-databases which are of global interest and relevant to the CBD.

V.3. CAPACITY BUILDING

55. Enabling Contracting Parties to participate in the CBD Clearing-House Mechanism is of utmost importance. The following objectives may guide the further development of the CHM:

- (i) Development of National Focal Points to the CHM (start-up CHM kit).
- (ii) Review of existing CHMs ('Good Practice').
- (iii) Harmonisation/interoperability among Focal Points.

56. The Secretariat, advised by the informal advisory committee, could promote the CHM to CBD Parties, with a view to raising awareness and encouraging the development of national CHMs.

Assessment

57. A user needs assessment for the Start-up Kit should be conducted. A user needs analysis could include one or more of the following:

- inventory of existing sites
- technical questionnaire
- structured interviews
- workshops

Development of a Tool- Kit

58. The development of a prototype has been recommended to be developed by December 1997, to be tested during 1998 at regional CHM workshops and expert meetings, and to be made available to Parties who may wish to test it. Within any country the development may be supervised by a steering group and implemented by a working group with appropriate expertise.

59. The content of such a tool-kit could comprise of the following:

- World Wide Web authoring tools, including public domain or commercial products to produce one or more
- standard `front end` pages
- common material (link to official Convention site, etc.)
- standard format for national reports
- tutorial

60. Parties may require additional support in the nature of computer equipment (including Web-server) and internet connectivity.

Training

61. Training can be provided in country or in the form of `Training of the Trainers`. The objective is to raise the level of expertise not only for those delegated to implement the national CHM but also their colleagues.

62. Training could be provided by an organisation(s) that meets specified criteria, such as:

- www expertise
- understanding CBD and CHM issues
- training experience in closely related areas
- ability to provide support services (including distance learning).

63. It is proposed that the Secretariat facilitate modalities to support those Parties without full Internet access, preparing and disseminating updated information on CD-ROM or diskettes to them, either periodically (e.g. quarterly) or as required, and facilitating that those Parties to disseminate appropriate information. Support would be needed for:

- publishing (paper, CD-ROM, etc)
- distribution
- external www host (CBD-CHM)
- email, newsgroups, bulletin boards
- external publisher

64. The Secretariat would keep the tool-kit up to date.

65. The use of the CHM will be facilitated if priority is given to ease of use, through intuitive interfaces and relatively flat structures (i.e. minimal number of layers of information).

66. Consistency and compatibility would also be promoted through:

- exchange of experience (through e.g. listservers or workshops)
- sharing of locally developed software
- encouraging evolution of standards
- developing the capacity to browse multiple sites.

67. Significant efforts should be made on initial promotion (nationally and internationally) to raise awareness to encourage national focal points to plan the development of their CHMs.

68. It is also important to encourage and monitor feedback from users of the CHM to ensure that it meets their needs. This will prove very useful in setting priorities. Some kind of question and answer forum could also prove useful.

69. Follow-up on user feedback is very important. This will also involve maintaining contact with the Secretariat to ensure the CHM is developing in line with current decisions of the Conference of Parties and other players.

Proposed Action Plan

70. Accordingly, the following action plan could be drawn:

- Phase I (to be completed by October 97): The Secretariat, with the assistance of the informal advisory panel, should determine user needs. This may be expedited through the regional workshops already scheduled (decision III/4). Only marginal costs for this activity are envisaged.
- Phase II (to be completed by December 97): Develop prototype of Start-up Kit.
- Phase III (to be completed by June 98): Implementation of Start-up Kit (build on existing infrastructure).

71. Also a choice of training methods would need to be made, or even a combination of methods, depending on the circumstances and needs.

VI. REGIONAL WORKSHOPS

72. In order to implement the decisions II/3 and III/4 of the Conference of the Parties, it is planned to organize four regional workshops both in 1997 and in 1998 as part of the pilot-phase process of user-driven development of the Clearing-House Mechanism. The workshops are intended to assist National Focal Points for the CHM in identifying key elements in a strategy for supporting Clearing-House Mechanism implementation needs in Contracting Parties. All regions have officially signaled their interest in hosting regional workshops.

73. The COP requested Governments and relevant financial, scientific and technical institutions to facilitate, including the provision of voluntary contributions, regional workshops with a view to attain a clear definition of country and regional level scientific and technical information needs and priorities identified and modalities to deliver information and evaluate national capacities for the implementation of the Convention. Such workshops should also review experience in scientific and technical cooperation in support of the objectives of the Convention, in order to identify ways by which the Clearing-House Mechanism can best facilitate such cooperation.

74. Until now the types of information provided by the Clearing-House Mechanism are based on the assumption made by the Secretariat about the potential users and country needs. Identification of the target group as well as of user needs are major concerns of the envisaged regional workshops. Participants in the regional workshops have been asked to address their national information demands and needs to enable the Secretariat to explore modalities how best to provide these information types.

75. An agreement on the harmonization of formats, structures, key-words, attribute lists and thesauri would facilitate both the input of information by National and Thematic Focal Points and the efficiency of search procedures for users. Guidelines for the usage of such agreed formats, and periodic updates, would then be provided to partners and users. It is foreseen that the regional workshops will facilitate the identification and agreement upon information formats and structures.

76. The COP requested that the Executive Secretary and partners collaborate on the provision of advice to Parties and others on, *inter alia*, the necessary layout and system specifications.

VII. SUPPORT BY THE FINANCIAL MECHANISM OF THE CONVENTION

77. Several CHM partners have proposed the development of an Internet-based training package as part of the implementation of Decisions II/3 and III/4. It is planned that the Secretariat will coordinate and assist the National Focal Points in the development and evaluation of these training materials, and report on the results at the fourth meeting of the Subsidiary Body on Scientific, Technical and Technological Advice. It is envisaged that eligible National Focal Points for the CHM will be supported in their efforts by providing elementary hardware and software equipment by the Financial Mechanism enabling Internet connectivity of designated National Focal Points for the CHM.

78. The COP requested the Global Environment Facility (GEF) to support the activities referred to in Decision III/4 as critical components in the implementation of the Clearing-House Mechanism at the national, subregional and regional levels, including in the pilot phase.

79. The COP at its third meeting further requested the interim financial mechanism to implement its revised operational criteria for enabling activities in relation to the Clearing-House Mechanism.

80. The need for capacity-building for the purposes of the Clearing-House Mechanism must be encouraged in developing countries, including training on information systems technologies that will allow developing countries to take advantage of the recent developments in electronic communication, including the Internet.

81. The advantages of country-driven pilot projects focused on priority areas identified by the Conference of Parties will enable developing countries to begin to implement the main features of the pilot phase of the Clearing-House Mechanism.

82. The GEF provides under its enabling activities programme a country-level support to the national implementation of the CHM.

VIII. PROSPECTS AND EXPECTATIONS: CLEARING-HOUSE 21

83. One of the aims of the CHM is to render meta-data into information and knowledge supporting decision-making at all levels. It might be difficult to expect this role to be developed in the pilot-phase of the CHM, but this role should be pro-actively and jointly developed with the national reports, biodiversity strategies, plans and programmes. The international CHM's goal is to facilitate the easy identification of specific information sources at the country level. National and Thematic Focal Points will be responsible for the provision of data and information as well as the level of detail of data. Visualization of data and information extracted from National Reports and aggregation with other data sources are of utmost importance to improve the effectiveness of the international Clearing-House Mechanism.

84. The results of the pilot-phase achieved so far can be used as a foundation to launch the challenging full scale implementation of the Clearing-House Mechanism. The CHM must be developed into more than a simple referral system. As a first step, a referral system is necessary and important to explore the scientific and technical arena of biodiversity in its interlinked complexity in a cross-sectoral way. However, interactive and cross-sectoral components have to be added to meet the needs of future generations.

85. Several tools are indicated here as to the nature of such a system:

- Development of national reports into central information sources;
- Visualization and blending of geo-referenced meta-data for the evaluation and monitoring of trends as well as the development of indicators to measure changes in biological diversity;
- Fractal zooming of aggregated global data into detailed structures on the national and local levels;
- Integration and linkage of global and regional information structures through the utilization of a few key words (attribute lists) which in return can open new information spaces;
- Development of a "CHM-tool kit" to support the CHM partners in the establishment, integration and exchange of their existing data sources within commonly agreed information structures of the CHM;
- Development of novel and user friendly search mechanisms to explore the biodiversity information domain in a step-by-step process.

86. The logo mirrors the global importance of the Clearing-House Mechanism. The three green leaves of the Convention and the red arrow symbolizing the information exchange that keeps the Earth intact. The global Clearing-House 21 will become a globally managed information source under common and shared responsibilities to contribute to sustainable development, conservation and equitable utilization of the components of biological diversity. It will promote and facilitates awareness at all levels of society for a long-term conservation and availability of our natural resources and ecosystems.