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**GLOBAL CHANGE OF INFOTERRA TO UNEP-Infoterra: ENABLING COUNTRIES
TO BUILD AN INTEGRATED ENVIRONMENTAL INFORMATION SERVICE**

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Introduction

1. The purpose of this paper is to present an overview of the practical measures to be considered at the national level in order to facilitate access by users to information on the environment. These practical measures are described within the framework of an integrated information service on environmental matters. UNEP, in its catalytic role, is mandated by governments to establish the service in each of the 177 member countries of Infoterra - UNEP's global environmental information exchange network. This mandate has been articulated and reinforced in decision 20/5 of the 20th session (GC.20) of the Governing Council of UNEP in February 1999. Three decisions were adopted at GC.20 relating to access to environmental information. Establishing these national information services needs to be carried out within the overall framework of restructuring UNEP-Infoterra at the national level. The new structure calls for a networking partnership among key suppliers of environmental information within each country to form a national consortium that will collectively establish and operate the service. The revitalised UNEP-Infoterra network should also facilitate the flow of information between UNEP and its partners and complement UNEP's work in environmental assessment, particularly the compilation of the Global Environmental Outlook (GEO) report. In addition, the new structure will enable consortia members to access a revolutionary suite of assessment and mapping web-based tools.

2. In defining the components of this service, the following aspects of information provision need to be considered:

- (a) the scope and meaning of environmental information;
- (b) the identification of users groups and potential user groups, and analysis of the demand for information;
- (c) the identification of suppliers of information and potential suppliers, and assessing their capacities;
- (d) partnership building and networking among institutional stakeholders on the supply side;

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- (e) the infrastructure and tools needed to support and maintain the information service; coordination and funding mechanisms;
- (f) the identification of responsibilities for data documentation and certification of information resources, and
- (g) the promotion and evaluation of the service.

Environmental information

3. Environmental information is multidisciplinary in nature and covers many thematic areas within the natural environment and the built environment. This wide coverage is additionally complicated by cross-linkages to trade, economics, law, education, culture and heritage. Within a country, this broad environmental knowledge base is distributed across many disparate institutional sources. An increasing awareness among UN member states is that the environment is the underpinning framework for all social and economic activities.

Definitions

4. The term environmental information has many different definitions, for example:

- (1) data on the state of different environmental compartments, on the agents stressing the environment and on the sources of environmental problems.

(Europe's Environment- The Dobbris Assessment, 1995)

- (2) any available information in written, visual, aural or data-base form on the state of water, air, soil, fauna, flora, land and natural sites, and on activities (including those which give rise to nuisances such as noise) or measures adversely affecting, or likely so to affect these, and on activities or measures designed to protect these, including administrative measures and environmental management programmes information on those actions consistent with permanent remedy taken to prevent or minimise environmental degradation due to natural or human interventions.

(EU Council Directive 90/313/EEC)

- (3) any information in written, visual, aural, electronic or any other material form on:

- (a) The state of elements of the environment, such as air and atmosphere, water, soil, land, landscape and natural sites, biological diversity and its components, including genetically modified organisms, and the interaction among these elements;
- (b) Factors, such as substances, energy, noise and radiation, and activities or measures, including administrative measures, environmental agreements, policies, legislation, plans and programmes, affecting or likely to affect the elements of the environment within the scope of subparagraph (a) above, and cost-benefit and other economic analyses and assumptions used in environmental decision-making;
- (c) The state of human health and safety, conditions of human life, cultural sites and built structures, inasmuch as they are or may be affected by the state of the elements of the environment or, through these elements, by the factors, activities or measures referred to in subparagraph (b) above;

(Aarhus Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters, 1998)

DPSIR conceptual framework

5. Environmental information can also be defined from a DPSIR (Drivers, Pressures, State, Impact, Response) conceptual model - a general framework for organising information about state of the

environment. The framework assumes cause-effect relationships between interacting components of social, economic and environmental systems, which are:

- Driving forces of environmental change (e.g. industrial production)
- Pressures on the environment (e.g. discharges of waste water)
- State of the environment (e.g. water quality in rivers and lakes)
- Impacts on population, economy, ecosystems (e.g. water unsuitable for drinking)
- Response of the society (e.g. watershed protection)

6. Each component in the DPSIR (Fig. 1) generates a demand for information from different stakeholders, particularly from policy-makers but also from scientists, educators, advocacy groups and civil society.

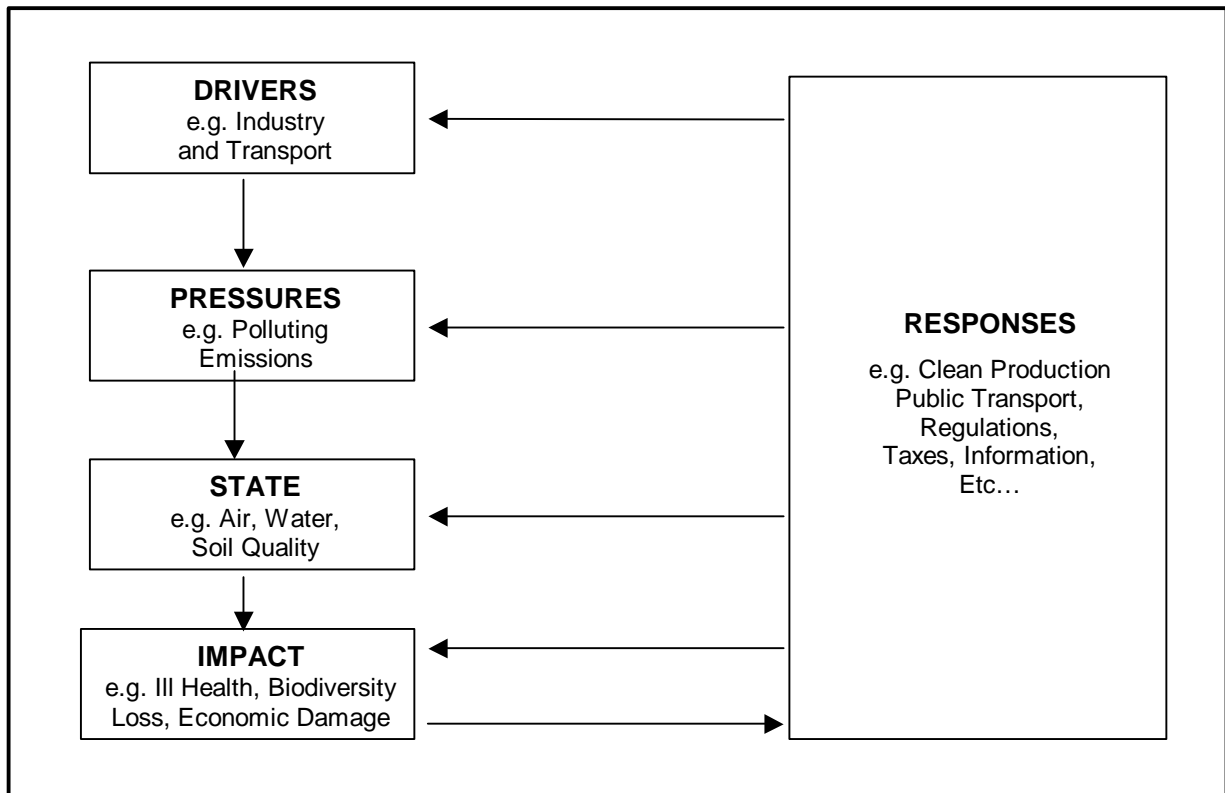


Fig. 1 The DPSIR framework for reporting on environmental issues

Source: EEA

Legislative mandates on access to environmental information

7. A comparative analysis of legal mandates and policy issues relating to access to information is presented in working paper UNEP/INF2000/WP/1. Several multilateral environmental agreements (MEAs) stress the importance of access to information as a pre-requisite for better environmental decision-making. Many countries have enacted legislation on freedom of access to information and under such a legislative framework citizens have a right of access to environmental information in keeping with the right-to-know principle. The interlinkage between information access and decision-making is articulated in principle 10 of the Rio Declaration on Environment and Development:

Environmental issues are best handled with the participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate access to information concerning the environment that is held by public authorities, including information on hazardous materials and

activities in their communities, and the opportunity to participate in decision-making processes. States shall facilitate and encourage public awareness and participation by making information widely available. Effective access to judicial and administrative proceedings, including redress and remedy, shall be provided.

8. The Rio Declaration was adopted by more than 178 Governments at the United Nations Conference on Environment and Development (UNCED) held in Rio de Janeiro, Brazil, 3 to 14 June 1992. Consequently, governments have accepted their responsibility to increase the level of access to information held by public authorities and to encourage other institutional suppliers from the non-governmental and private sectors to make their environmental information resources more widely available. In addition to having a legislative mandate in place, there must also be the political will to ensure that suppliers of environmental data and information provide access. An additional mandate from the Earth Summit on improving information availability is given in chapter 40 of Agenda 21, which calls on the UNEP-Infoterra network to establish networking and coordinating mechanisms among a wide variety of actors, particularly the non-governmental and private sectors, to share information and experience on sustainable development. The current reform of UNEP-Infoterra also addresses this mandate.

9. The establishment of an environmental information service by governments is timely in the pan-European region given that the [Aarhus] Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters is expected to enter into force in 2001. This Convention, which has its origins in principle 10 of the Rio Declaration is described in working paper UNEP/INF2000/WP/5. Practical steps will have to be taken to make the Aarhus Convention work. Establishment of a formal information service on environmental matters based on the UNEP-Infoterra network in each signatory country is a visible, practical step.

10. UNEP's main legislative authority is the Governing Council and is comprised of 58 member governments. Many decisions relating to information access and information dissemination have been adopted by the various sessions of the Governing Council dating back to the first session in 1973. A synopsis of these decisions is given in information paper UNEP/INF2000/INF/4. The most recent (20th) session of the Governing Council of UNEP adopted Decision 20/4 - Promotion of access to information, public participation in decision-making and access to justice in environmental matters. As its title suggests, this decision is emphasising the global relevance of the guiding principles of the Aarhus Convention.

11. In addition, the Governing Council adopted Decision 20/5 - Reform of INFOTERRA to ensure better public access to environmental information - that, *inter alia*,

Notes the new role of INFOTERRA as the United Nations Environment Programme's global advocate of the public right-to-know principle to be carried out through a new structure governing the future operations of INFOTERRA;

Further notes the need to secure the participation of a diverse range of stakeholders drawn from Government, non-governmental organisations, academia, centres of excellence, professional bodies and business enterprises in a partnership arrangement aimed at providing an integrated environmental information service at the national level, and encourage Governments to establish these partnerships under a formal agreement with the United Nations Environment Programme;

Recognises the important synergy between the revitalised INFOTERRA and a new assessment strategy of the United Nations Environment Programme for the purpose of facilitating the flow of information between the organisation and its partners;

12. The challenge now is to establish appropriate multistakeholder agreements and build this integrated environmental information service in each member country of INFOTERRA. However, a guiding framework is needed for the establishment of the service so that individual countries take a systematic approach to the task.

Environmental information service

13. An environmental information service may be defined as a formal service providing wide-ranging and authoritative information on the environment to anyone who needs it. This is a broad definition that does not make any specific reference to the:

- structure of the service;
- type of information being delivered;
- profile of the client;
- profile of the supplier;
- purpose for which the information is needed;
- format in which the information is required (electronic or hard copy); or
- delivery mechanism (electronic or traditional channels of communication).

However, all of these factors need to be taken into account at a practical level. It may be the case that the information required by clients already exists, in which case, the challenge is to locate it and deliver it to the client. Above all, the service must be responsive to the demands of users and therefore, consideration must be given to determining the identity of the users.

14. A formal, coordinated service is required to empower individuals and organisations with the information they need in order to take concrete actions and engage in decision-making processes leading to better environmental protection and the achievement of sustainable development. Therefore, another issue to be considered is who is the appropriate agent of organisation to establish and coordinate the information service?

15. No single organisation can provide a comprehensive information service using only its own information resources. It is necessary to pool the resources of the key information suppliers and establish a partnership among them in order to provide an integrated service. The partnership must be willing to work together and implement an agreed action plan to deliver information services to users in a coordinated way. Terms of Reference (TOR) may be needed to define the working relationship among the respective partners.

The information cycle

16. Most issues demanding information result from direct physical, chemical or biological pressures exerted on the environment from human activities. Issues will also tend to vary from country to country. Within a given country, different stakeholders will tend to attribute different priorities to different issues according to local perceptions of importance. The user will generally require information for a particular purpose - to become more educated on the issue or to engage in decision-making processes related to actions or responses to a particular problem.

17. As a result, environmental information is not only multi-thematic but complex with respect to substance and presentation format. The delivery mechanism used to get the product to the client may also increase the level of complexity. The information cycle is a conceptual approach to information management that breaks down information objectives into a series of small, achievable steps that progressively empower stakeholders. This approach is both cyclical and adaptive.

18. The information cycle, shown in Fig. 2 below, consists of five component processes:

- Agree on priority issues demanding information
- Determine the information needs of decision-making groups
- Design strategic information products
- Agree stakeholder roles and responsibilities for information production
- Enable stakeholders to deliver the required information

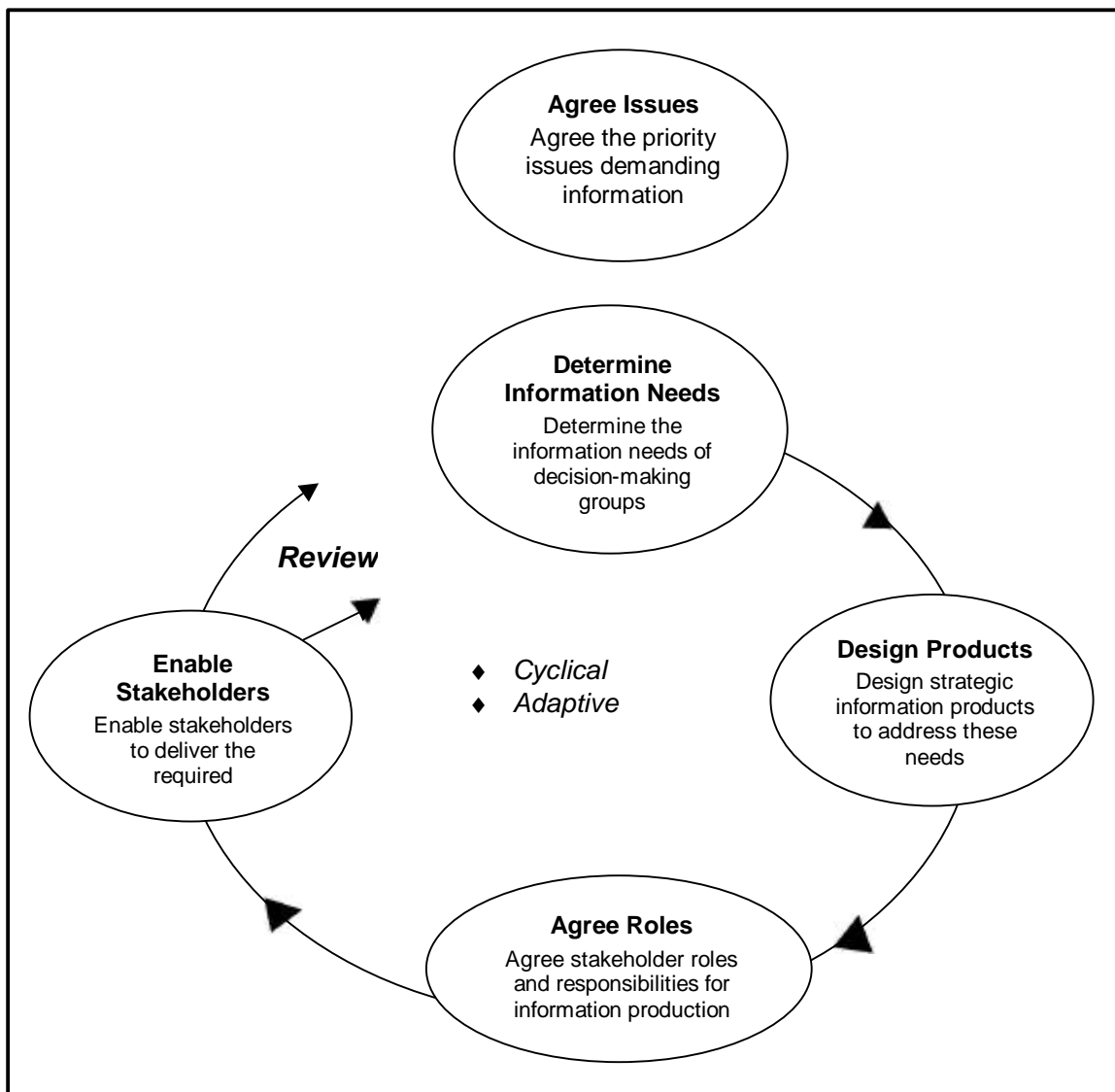


Fig. 2 The information cycle

Source: UNEP-WCMC

An integrated information service on environmental matters

19. Building an integrated information service is a complex process, requiring the cooperation of different institutional stakeholders that are willing and able to provide information on a diverse range of environmental issues to a broad client base.

Design features of the service

20. The five component processes of the information cycle can be used as the basis for designing a demand-driven environmental information service.

(a) Agree on priority issues demanding information

21. The environmental issues demanding information may have already been identified in national state of the environment reports; environmental action plans; sustainable development strategies; and various policy documents and assessment reports. If the issues are defined too broadly then it will be necessary to extract a more focussed list which may serve as a group headings for more subject-specific queries from users. The following table illustrates this approach.

Broad issue	Biodiversity loss
Narrow issues	<ul style="list-style-type: none"> • Loss of species X in ecosystem Y • Effect of eutrophication in river Z on fish species X • Decline in number of hectares covered by indigenous forest in district Y
Specific queries	<ul style="list-style-type: none"> • What are the breeding habits of species X? • Which facilities are potential sources of nutrients being discharged into river Z? • Which NGOs operate tree planting projects in district Y and who funds them?

Table 1. Example of classification schema for environmental issues

(b) Determine the information needs of decision-making groups

22. A comprehensive information needs assessment is a critical initial step. The service must be responsive to users' demands. On the supply side, only reliable and relevant information should be provided. For convenience, users can be classified into the following four-decision-making groups:

- Governmental (central, federal and local) sector
- Academic and research community
- Business and industry sector
- Non-governmental organisations and civil society

23. As the total number of potential users may be very large, the information needs assessment methodology should be applied to a stratified sample extracted from the total user population. A methodology for conducting an information needs assessment is described in working paper UNEP/INF2000/WP/6.

(c) Design strategic information products

24. Information products bridge the gap between science and policy. However, attention must be paid to presentation format. Policy-makers do not have the time to assimilate or interpret vast amounts of data and information. Therefore a critical task is to repackage the information in a format (maps, charts, etc) that is comprehensible to the user. Some users, for example, may only require meta-information i.e. information about the location of information.

25. As the strategic product under discussion is a national environmental information service to be provided by a consortium of key environmental information suppliers, the structure of this service will have to take account of the multi-thematic nature of environmental information, therefore the umbrella service can be viewed as comprising of several component services that are issue-driven, for example:

- Biodiversity conservation information service
- Water quality information service
- Air quality information service
- Waste management information service
- Development planning information service
- Chemicals information service
- Energy efficiency information service
- Green consumer and biosafety information service

The issues will obviously vary from country to country and some issues are cross-cutting, for example, environmental policy, environmental education and environmental law.

26. Each information service will be operated by a national thematic centre (NTC) covering a particular theme or issue. The national network of thematic centres will, in effect, be the consortium of key environmental information suppliers as described in decision 20/5. The NTC may be a governmental, academic, business or non-governmental organisation. Each NTC will be a centre of excellence in its own focal area. However, it is recognised that, within each country, there will be other information suppliers covering a particular aspect of the same focal area. The NTC will need to network with these suppliers and identify key information resources managed by these secondary suppliers. The designation of appropriate NTCs is not a straightforward task. A simple one-to-one mapping of a thematic centre to an issue may be too simplistic in some countries. One thematic centre may be a centre of excellence on several issues and conversely, one issue could be covered by several thematic centres.

27. If the service is to be issue-focussed then a careful classification of the issues combined with a thorough assessment of the information suppliers covering that focal area should result in the identification of one lead institution with strong capacity that probably should be designated as the national thematic centre. The NTC should maintain close linkages with other information suppliers in the same or similar thematic areas. If the NTC is a lead institution then it is probably coordinating a small network in its respective focal.

28. For example, the national focal point for the information clearinghouse of the Convention on Biological Diversity (CBD) will be networking with other biodiversity information suppliers at the national level, and therefore, would be the appropriate NTC to cover the biodiversity issue. Likewise, institutions that have been designated as national focal points for information support services to multilateral environmental agreements (MEAs) such as the Convention on International Trade in Endangered Species (CITES) would be appropriate to designate as NTCs in those thematic areas.

29. On the supply side, the capacity of the national thematic centres to collect, manage and disseminate information in their own focal area must be assessed. A methodology for assessing the capacity of institutions to collect, manage and disseminate information on a particular theme is described in working paper UNEP/INF2000/WP/7.

30. For each component service, the minimum requirement should be access by users to the following type of information on the issue:

- Terminology of the subject
- Datasets and geo-spatial information
- Bibliographic information and full text documents
- Meta-information (information on the location of information)

- Electronic information resources on CD-ROM and the Internet
- Awareness raising information and audio-visual resources

31. To support countries in establishing and maintaining their respective environmental information service, UNEP is engaged in a number of strategic partnerships to provide the following strategic information products:

- Multilingual environmental vocabulary (integrated dictionary and thesaurus.)

The development of a definitive vocabulary on the environment is described in working paper UNEP/INF2000/WP/14.

- Meta-information system

The development of a global catalogue of data sources is described in working paper UNEP/INF2000/WP/15.

- Portal website

The establishment of a single national gateway on the Internet to guide users quickly to the environmental information they require is seen as an important access tool. No definitive portal site has been identified but a number of approaches will be presented by developers of portal sites. These approaches are outlined in working papers UNEP/INF2000/WP/16, 17, 18 and 20.

(d) Agree stakeholder roles and responsibilities for information production

32. The coordination framework proposed for the information service is shown in Fig. 3. A two-tier structure is proposed for the coordination of the UNEP-Infoterra network at the national level. This two-tier structure breaks down barriers to cooperation by facilitating communication at both organisational and technical levels.

Political focal point

33. The Nairobi Declaration reaffirmed UNEP's role as the leading environmental authority within the UN system. In that capacity, UNEP's political points of contact with governments are environment ministries and environmental authorities. UNEP-Infoterra is obliged to maintain policy-level communications and liaison with these entities, generally the office responsible for international environmental affairs. However, interaction with NGOs has also been mandated under the Rio, Nairobi and Malmo Declarations, and represents a parallel coordination mechanism between UNEP and the NGO community (Fig. 3).

National focal point

34. However, in the field of environmental information management, a more operational or technical-level point of contact is also needed. This entity will typically be an environmental information centre with the following characteristics:

- Statutory responsibility for data and information collection
- Strong capacity to manage and disseminate information on environmental matters
- Geo-spatial information capability
- Documentation centre with good collection of domestic environmental literature
- Website management responsibility for parent Ministry or Agency
- Guaranteed public access to the centre's resources (including audio-visual resources)
- Strong linkages with environmental education and awareness raising programmes
- Guaranteed financial support from parent Ministry or Agency

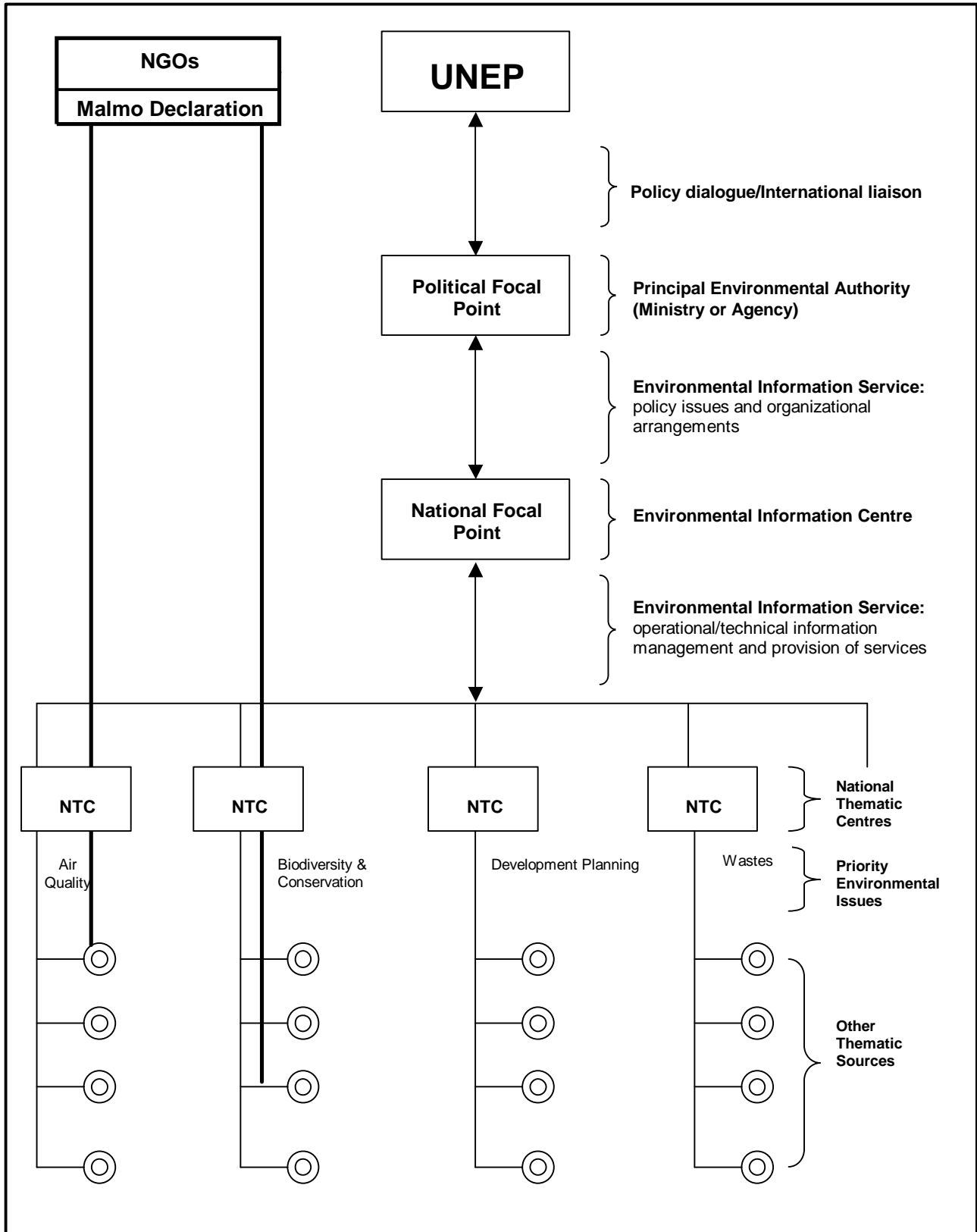


Fig. 3 Coordination framework

35. Responsibility for establishing and maintaining the national environmental information service should reside with the national focal point. In that capacity, the role of the NFP will be to:

- Identify and assess the capacity of potential NTCs
- Establish and maintain dialogue with NTCs
- Develop a plan of action for the operation of the information service
- Organise periodic meetings and workshops on the provision of environmental information services and related issues
- Promote and market the information service
- Provide support to NTCs to implement the information cycle

36. In a number of countries, it will be necessary for governments to re-designate INFOTERRA national focal points to ensure compliance with the proposed two-tier structure. UNEP will then sign a memorandum of understanding (MOU) with the political focal point on the implementation of the new INFOTERRA structure according to Decision 20/5. UNEP will be re-visiting all existing UNEP-Infoterra MOUs to ensure progress towards these goals and compliance with the new consortium structure.

Consortium

37. A consortium is defined as an association of stakeholders united for a common purpose. In any given country, the INFOTERRA consortium will be comprised of the NFP and a number of NTCs. The NFP will act as the hub of the consortium. The number of NTCs involved will depend on the issues identified and the principal information suppliers on those issues. There is no ready formula for determining the number of NTCs in a particular consortium. A number of approaches to establishing consortium models for information dissemination are described in working papers UNEP/INF2000/WP/8, 9, 10, 11 and 21.

38. Each NTC will be responsible for providing an information service in its own thematic area. In doing so, it will be responsible for implementing the information cycle in its own thematic area. Specific tasks to be carried out by each NTC in its own thematic area include:

- Identifying issues in the relevant thematic area
- Providing access to datasets and geo-spatial information
- Contributing meta-information to the national meta-information system
- Managing its component of the portal website
- Responding to queries from users
- Analysing demand for information
- Documenting meta-information and certifying source documents
- Maintaining quality of information delivered

(e) Enable stakeholders to deliver the required information

39. The use of information and communications technologies is probably the single most important factor to be considered in enabling suppliers to deliver information to users in a timely and efficient manner. The gap between developed and developing countries is, unfortunately, widening in this vital area. The 'digital divide' will retard the ability of developing countries to gain timely access to information freely available in developed countries. Poor telecommunications infrastructures coupled with monopolistic prices for Internet connectivity has impacted negatively on developing countries, particularly in Africa.

40. Erratic power supply is another factor to be considered, even in countries where telecommunications infrastructures are of a working standard. Resources are invariably limited to purchase computers and train personnel in information technology applications. Inadequate technical support from local vendors is another factor hampering optimal use of new technologies.

41. Different scenarios will exist in different countries with respect to the approaches taken to information delivery. The use of public access centres within environment ministries and other environmental authorities will be one practical approach to reach users. Institutional networks are also very effective in reaching out to users. Working papers UNEP/INF2000/WP/12 and 13 deal with this issue. Basic e-mail services through to full web services will be found in varying degrees of utilisation and sophistication in many countries.

42. The number of INFOTERRA NFPs with Internet access continues to increase each year. In the past, INFOTERRA has established partnerships between developed and developing countries in order to strengthen weaker members of the INFOTERRA network. However, this limited assistance has been carried out on a piecemeal basis, and as a catalytic organisation (not an executing agency) within the UN system, UNEP has neither the mandate nor the financial base required to fund development projects. However, UNEP can provide a certain amount of capacity building through the provision of advisory services; establishing standards, methodologies and guidelines; and developing training programmes.

43. The methodology applied to assess the information management capacity of suppliers will also identify weaknesses in designated NTC institutions with respect to human and technical resources. To address the problem of building capacity, it is proposed that in developing countries, these weaknesses should be addressed through a capacity building project from which all NTCs will stand to benefit. Therefore, all consortium members should collaborate to produce a joint project proposal to develop and operate a national environmental information service. Ideally, the provision of an environmental information service should be a component of a wider national information policy aimed at strengthening the information society in response to the enactment of legislation on access to information.

44. Meanwhile governments should aim at channelling resources towards equipping the NFP with full Internet access. This is seen as the lowest common factor within a revitalised INFOTERRA network. If a NFP is to maintain effective communications with its NTCs then Internet access for all NTCs is seen as the next step. A web server at the NFP is needed as the basis for portal site development, followed by web servers at all NTCs.

Promotion of the service

45. The service should be visible to all potential users. Once the consortium structure is in place and NTCs have agreed to deliver available information in their own thematic area, the service should be officially launched by the NFP. Potential users need to know of the existence of the service and how they can use it. Traditional marketing materials such as brochures, information kits and leaflets should be available for distribution to users. The use of Internet bulletin boards or listservers is an efficient and cost-effective way of reaching out to the user community. Access points to the service, whether physical or virtual should be clearly identified and made public. The portal website is an important access point and the URL of the portal site should be widely disseminated. At the community level access may be available through a public library that is linked to the consortium structure through an institutional network of public authorities. Institutional information networks therefore are also efficient communication channels for publicising the service. Advantage should be taken of promotional opportunities arising at conferences, meetings and workshops on environmental themes. The marketing of environmental information products and services is described in working paper UNEP/INF2000/WP/19.

Monitoring and review of the information service

46. If the service is to be responsive to users' information needs and be issue-focussed, then a system must be put in place to monitor and evaluate the quality of the overall service. Each NTC should be responsible for the quality of the information being delivered in its own thematic area. User satisfaction surveys should be used in each thematic area to assess the usefulness of the information delivered by suppliers and the purpose for which it was required. An on-line feedback form can be used to collect information from the client base. An analysis of all queries answered can in turn provide fresh input to the task of identifying key environmental issues thereby completing the information cycle (see Fig. 2).

The global perspective - horizontal and vertical integration

47. Within a country, the national environmental information service can be considered to be horizontally integrated in that different NTCs will provide information on different thematic issues, according to national priorities and the information needs of clients. As many issues (e.g. water quality, nature conservation) will be common to many countries, potential exists for vertical integration across NTCs covering the same theme resulting in exchange of information and experience on particular issues.

48. This is the added value of the global UNEP-Infoterra network - synergies result within countries from horizontal integration and synergies are generated across national boundaries by vertical networking among NTCs in a particular focal area. Communications mechanisms to share information are improved. An enabling mechanism is put in place to facilitate the exchange of environmental information and experience among nations. Some of these vertical networks already exist such as the clearinghouse mechanism for the Convention on Biological Diversity (CBD). The challenge is to integrate their national contact points in the new consortium structure. The transition of UNEP-Infoterra to a functional conventions and treaties service centre is another example of a possible synergy across national boundaries.

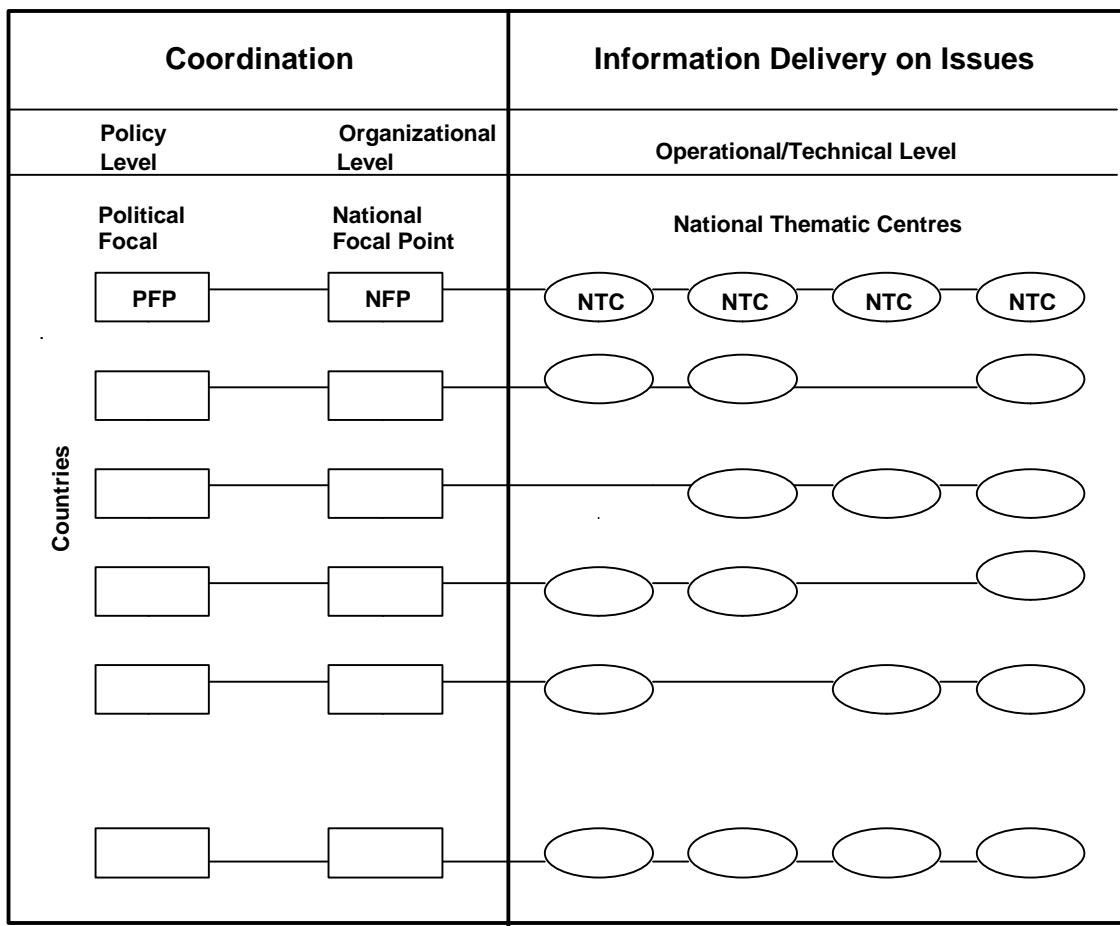


Fig 4. Horizontal and Vertical Integration among Stakeholders

Towards a unified global network

49. As the global authority on environmental matters, UNEP works with many information suppliers in many countries. UNEP's policy is to present a harmonised set of environmental information networking activities in each country. An integrated environmental information service at the national level must be supported by a closely coordinated environmental information network or consortium. In providing a new product or service attention must be paid to brand name and image so that the client has a clear expectation of the quality and utility of the product.

50. In the current reform of UNEP-Infoterra, consideration may have to be given to the brand name of this new global network. Possible brand name options include:

UNEP-Infoterra
UNEP-Infonet
UNEP-Infoweb

51. From a horizontal or national-level perspective, the country name would be appended to the name of the global network:

UNEP-Infoterra-Albania
UNEP-Infonet-Germany
UNEP-Infoweb-Zimbabwe

This naming convention demonstrates co-stakeholdership between UNEP and countries in the new network.

52. Horizontally aggregated sub-regional or regional networks would take the format:

UNEP-Infoterra-Caspian
UNEP-Infonet-West Africa
UNEP-Infoweb-Caribbean

53. From a vertical or thematic perspective, the thematic name would be appended:

UNEP-Infoterra-Wastes
UNEP-Infonet-Biosafety
UNEP-Infoweb-Desertification

Conclusion

54. The establishment of a fully operational environmental information service in each country will produce benefits for both national governments and UNEP. At the national level, governments will achieve high visibility in servicing the environmental information needs of its citizens. The public will in turn have a greater understanding of environmental issues enabling individuals and communities to play an active part in protecting their local and national environment.

55. At the global level, UNEP will have in place an infrastructure that can exchange information internationally and also play an active role in disseminating information on UNEP's workprogramme at the national and regional levels.