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Meeting of the Parties to the
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Public Participation in Decision-making and
Access to Justice in Environmental Matters

Working Group of the Parties to the Convention
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(Item 7 of the provisional agenda)

Draft Guidance for National Nodes
of the Clearinghouse Mechanism[1]

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[1] This document was submitted on the above date due to the need to hold in-depth consultations concerning the text with a number of leading experts on the topics covered by this guidance.

CONTENTS

I.   INTRODUCTION: THE AARHUS CLEARINGHOUSE MECHANISM

1. A "clearing house" is a mechanism that brings together seekers and providers of goods, services or information, thus matching demand with supply. The Aarhus Clearinghouse Mechanism comprises:

- UNECE secretariat staff assigned to service the Convention's information pillar (the "central node");
- administrators designated by the Parties or Signatories to the Convention and responsible for compiling and communicating legal and practical information on issues related to the Convention at the national level, linked to the Aarhus Clearinghouse for Environmental Democracy (the "national node");
- other stakeholders involved in the production and exchange of information related to the Convention's implementation; and
- technical infrastructure underlying this information exchange, such as software, Internet sites and email.

2. The most visible part of the technical infrastructure is the Aarhus Clearinghouse for Environmental Democracy (http://aarhusclearinghouse.unece.org). It provides information on demand to a wide range of users, including Parties or Signatories to the Aarhus Convention; other states; intergovernmental organizations (IGOs); nongovernmental organizations (NGOs); students and researchers; and the general public. By its design, it facilitates the exchange of information between diverse parties and stakeholders.

3. This guidance is written for administrators of the national nodes of the Aarhus Clearinghouse. The guidance provides a broad framework under which countries can add value to their existing systems or establish new websites in fulfilment of decision II/3.

II.   GOAL OF THE CLEARINGHOUSE

4. The goal of the Clearinghouse Mechanism is to facilitate, through the use of electronic tools, the useful sharing of national and international information related to access to information, public participation and access to justice in an efficient, simple and well-structured manner.

III.   ROLE OF NATIONAL NODES

5.   As is set out in decision II/3, Parties, Signatories and other interested States are recommended to maintain a national website with information related to the nationwide implementation of the Convention. This site will serve as the national node of the Convention's Clearinghouse Mechanism. They are also recommended to designate contact points responsible for collecting, managing and updating the information contained in the national node and for providing the necessary information for the central node of the Convention's Clearinghouse Mechanism, and to undertake to disseminate information to the public on the Clearinghouse Mechanism.

6.   Development of the Clearinghouse Mechanism at the national level is to be considered in the light of identified capacity-building needs and specific user requirements. Many countries have yet to designate a national node. As a first step, it is recommended that they do so.

7.   The national nodes may also be used to link information on local and national activities, including information provided by NGOs and other bodies to the Aarhus Clearinghouse for Environmental Democracy managed by the UNECE secretariat. This linkage facilitates the exchange of good practices in implementing the Convention within the UNECE region and globally on principle 10 of the Rio Declaration on Environment and Development. Easy access to information on how countries have implemented the Aarhus Convention can provide an invaluable source of inspiration for other countries that are working to develop their own procedures, mechanisms and legislation.

8.   Information should be submitted in one of the three official languages of the UNECE: English, French or Russian.

IV.   NATIONAL NODE TERMS OF REFERENCE

Site structure

9.   The national focal points and technical developers are free to decide on the visual design and content of a country's Aarhus Web presence. The design of national websites will reflect national requirements and circumstances. Relevant factors include the capacity and needs of individual states, as well as the relationship between the designated national node for the Convention and the more general allocation of responsibilities in national administrations for overall control of the content and format of Web-based information. However, the following possible features cover the broad areas of information that will provide compatibility with the design of the UNECE's central node.

10.   Recommended items for the national node home pages are listed below. The most important components are the resource directory and the search facility.

- Resource directory (the main body of Clearinghouse content), with content items described according to common content attributes
- News
- Calendar (Convention-related activities in the countries)

- Search
- Text of the convention in the national language(s)
- English and local language switch button
- National coordinator, focal points for the Convention's task forces, working groups and other bodies (contact details)
- Governmental, non-governmental, academic and other organizations most active in Convention-related activities in the country (contact details, links to websites)
- Date of the last update of the page
- Link to the Aarhus Clearinghouse (http://aarhusclearinghouse.unece.org)

11.   If requested, GRID-Arendal will provide national nodes with documentation and examples/templates with recommended site components.

Content attributes

12.   Each national node should provide references to the documents, relevant activities, and the main policy players supporting the Aarhus Convention.

13.   The information resources should include the following:

- Legislation
- Policy regulations, procedures and guidelines
- Proceedings, handbooks, manuals and methodologies
- Project descriptions and reports
- Case studies.

14.   If these documents are available on a publicly accessible server, the national node need only provide basic citation information (including a valid hyperlink reference) for each document (see "Citation information", paragraph 18 below).

15.   If a document is not electronically available, the focal point should provide only citation information. Ideally, the information (at least the basic document reference) should be provided in English and/or in the local language.

16.   The most important items on the national nodes are the content attributes. These include selected categories through which it will be possible to monitor the implementation of the Aarhus Convention at the national level.

17.   Table 1 provides a list of the main content attributes to be included on the national websites and a brief description of each.

Table 1. Content attributes

Foci	Content attribute	Description
What is the goal?		
Pillar	Access to Information	Includes guidebooks, methodologies, good practice examples of access to information.
Pillar	Public Participation	Includes public participation procedures, projects, awareness-raising activities (e.g., campaigns), guidebooks, methodologies and good practice in public participation matters.
Pillar	Access to Justice	Includes information on access to justice, including articles, guidebooks, methodologies, best practices, projects and other relevant information.
Special focus	Pollutant Release and Transfer Registers (PRTR)	Includes references to technical reports, guidebooks, methodologies and good practices in implementation of national PRTRs.
Special focus	Genetically Modified Organisms	Includes references to scientific reports, guidebooks, methodologies and best practices in dealing with public participation in decision-making on GMOs.
Special focus	Strategic Decision-making	Includes information related to public participation in environmental decision-making at the strategic level, including relevant legislation, policies and projects.
Special focus	Electronic information tools	Includes legislation, policy papers, project information, scientific studies and other information on the use of electronic tools to provide access to information to the public and facilitate public participation in environmental decision-making.
How is it achieved?		
Activity	Legislation	Legislative, regulative and other measures (laws, regulations, etc.) related to the national implementation of the Aarhus Convention.
Activity	Policies	A policy is a set of plans for achieving the goal (e.g. national programmes, action plans, public commitments). This should include items only directly related to the implementation of the Convention or its themes.
Activity	Procedures	A series of steps taken to accomplish an end or a set of established forms or methods for conducting the affairs of an organized body. An example of the former would be guidance for environmental impact assessment; of the latter, a meeting's rules of procedure.
Activity	Projects	Should include only information on projects directly contributing to implementation of the Convention in the countries. Examples include the Tacis project on environment education, information and public awareness and the NIS progress report.
Activity	Research	Information on books, articles, studies and academic projects related to the themes of the Convention.
Who is doing it?		
Source	Government	Official information on the national status of implementation of the Convention will be provided primarily by governments, and national nodes will provide gateways to the information stored on one or several government websites.

Source	Non-governmental	NGOs often maintain Web pages with relevant information on projects or activities at the national or international level and may become nodes of the Clearinghouse.
Source	Intergovernmental organizations	IGOs often post on their websites documents or policies related to the Aarhus Convention, and these sites may also become nodes of the Clearinghouse. In many cases, this information will be linked to international projects or relevant developments at the regional or global level.
Source	Academic community	The websites of educational and research institutions often provide relevant information (e.g. articles, studies, academic projects on the themes of the Convention).

Further information on content attributes appears in Annex I.

Citation information

18.	Reference information for documents and activities (e.g. a document's title and publication date) may be provided in the following ways:

- By using the Aarhus Clearinghouse online content management system, accessible via the Internet (recommended method);
- By creating a spreadsheet (e.g. Excel) with the citation information included, using a file template provided by the Clearinghouse;
- By creating citation text documents in XML using the RSS format[2] and publishing them on a publicly accessible server or emailing them to a Clearinghouse project officer (see contact details in paragraph 22 below).

19.	The citation will normally include the following information:

- Title
- Description (usually a summary of a document's contents)
- Publisher
- Language
- Date (publication date)
- Subject/keywords (using above-described content attributes)
- Link (URL if document is available online)
- Country.

Search mechanism

20.	Where necessary, GRID-Arendal will provide an easily implemented search mechanism for the national nodes. The mechanism will enable searching of all the resources referenced by the Clearinghouse at the central and national nodes. Implementation of the search mechanism will be very simple, requiring pasting a snippet of code on the search form page.

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[2] XML is a markup language for documents containing structured information. RSS is a format for syndicating news and the content of news-like sites. Once information about each item is in RSS format, an RSS-aware programme can check the source for changes and process the changes in an appropriate way on a website.

V. FOR MORE INFORMATION

21.   The Aarhus Clearinghouse website was developed by UNECE in cooperation with UNEP/GRID-Arendal (in Arendal, Norway), with the support of the Government of Norway.

22.   For technical information about the Clearinghouse, please contact Mr. Stephen Lapointe, Senior Web Developer, UNEP/GRID-Arendal (stephen.lapointe@grida.no).

23.   If you have further questions about the Aarhus Clearinghouse for Environmental Democracy, please contact:

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Annex 1

TECHNICAL BRIEF

1. This technical annex gives an overview of the technologies used by the central node of the Aarhus Clearinghouse, how they are implemented and features of the Clearinghouse's contents.

TECHNOLOGIES

2. The Aarhus Clearinghouse is a dynamic Web application comprised of two main components:

-   A public website at http://aarhusclearinghouse.unece.org[1]
-   An administrative website at http://aarhuslearinghouse.unece.org/admin

3. In keeping with best practices in Web development, the website content is separated from the visual design/display, with most of the actual content stored in a SQL database. Server-side scripting[2] is used with page templates to generate the range of content "pages" displayed in browsers.

4. The site depends on the following technologies:

-   Macromedia ColdFusion MX 6.1: for server-side scripting, including interaction with the SQL database
-   Web server: Windows 2003 Server and Internet Information Services 6
-   Microsoft SQL Server 2000: SQL database for storage of site content, management of metadata such as content attributes, tracking of administrators' user roles and profiles, storage of translated English/Russian terminology, and full-text document searching functionality.

ARCHITECTURE

5. The Clearinghouse website is built around a standard application server[3] architecture. Whenever a client browser makes a request of a Clearinghouse Web page, here's what happens:

a. The request is routed from the Web server to the Macromedia ColdFusion application server.

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[1] Alternatively, the address http://aarhusclearinghouse.org may be used.
[2] Server-side scripting is a Web server technology in which a user's request is fulfilled by running a script directly on the Web server to generate dynamic HTML pages. It is usually used to provide interactive websites that interface with databases or other data stores. (Explanation from en.wikipedia.org/wiki/Server-side_scripting.)
[3] An application server is a server program in a distributed network that provides the execution environment for an application programme. (Explanation from publib.boulder.ibm.com/infocenter/wxddoc51/topic/com.ibm.wasxd.doc/glossary.html.)

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b. Macromedia ColdFusion processes any server-side logic required for that page, including database queries retrieved from a separate database server, file includes, and user session information.
c. Once these server-side processes have occurred, the generated file content is passed back to the Web server, which serves the page to the client's browser.

Note that this whole process takes a fraction of a second.

IMPLEMENTATION

6.   Clearinghouse website implementation involves a range of programming components. Following are brief descriptions of the major ones.

Resource directory browsing

7.   The browsing model is based on faceted classification, rather than hierarchical classification. A faceted classification differs from a traditional one in that it does not assign fixed slots to subjects in sequence, but uses clearly defined, mutually exclusive and collectively exhaustive aspects, properties or characteristics of a class or specific subject. Such aspects, properties or characteristics are called facets of the class or subject.[4] This method of classifying information leaves room for future development of the Clearinghouse's unique system of classification. It enables the expression of complex relationships and their subsequent retrieval.

8.   Each information resource is categorized using four different sets of facets: topic, activity, source, region. When a user filters all directory resources using one facet (e.g. with the source being IGOs), the number of resources matching remaining facets is recalculated appropriately. Users can thus create their own trails of "breadcrumbs"[5] based on their own approaches to this content.

9.   A single table in the database is used for all sets of attributes, making the system extremely flexible. A new set of attributes could be added, and most of the existing content management and public website functionality would support that new set of facets.

Full-text search

10. Full-text searching is implemented using Microsoft SQL Server's built-in full-text indexing/search functionality.

11. Special ColdFusion scripting has been developed to support various kinds of search functionality, including the display of the snippet containing the document text matching the query term.

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[4] Wynar, Bohdan S. *Introduction to cataloging and classification.* 8th edition. p. 320.
[5] "Breadcrumbs" are a form of navigation whereby a user's current location within a website is indicated by a list of pages above a given page in the hierarchy, up to the main page (e.g. Home > Products > Clothes > Shoes > Sneakers).

Content management

12. The content management system offers roles-based editing of the document collection, news items and authorized list of users. The UNECE secretariat can control editing rights by assigning user roles to each national node content manager, or to other authorized users. It is possible to define precisely the areas of a document that each user has the rights to edit.

13. This functionality is implemented with standard Web forms using ColdFusion to enable content storage in the SQL database.

14. Content management session control is handled within ColdFusion, with a table in the SQL database storing basic user authentication information.

Multilingualism

15. The Clearinghouse content management site can be used with either an English or a Russian interface. The translated interface terms are stored in a SQL database table, with any required translations being retrieved from the database and made available as ColdFusion variables for use on the page.

16. Currently, only the Clearinghouse administrative site has multilingual features. Multilingual features could be added to the public website using the technology that supports the administrative site.

CONTENT FEATURES

What? How? Who? Where?

17. The Clearinghouse's Resource Directory is designed to be very user-friendly. The home page is dominated by four coloured bars (see box 1 below).

Box 1. Home page of the Aarhus Clearinghouse for Environmental Democracy (colour bars removed)

Each bar asks a question which readers (users) might bring to their search for information, followed by a brief example. Reading from left to right, these questions are:

a)   What is the goal?

18. The Convention's three pillars make a framework for the public to participate in decisions that directly affect their lives, including in specific areas of public concern, such as GMOs.

b)   How is it achieved?

19. Effective public involvement in environmental issues is made possible through adoption of laws, policy development, capacity-building, research and so on.

c)   Who is doing it?

20. Different actors, including governments, nongovernmental organizations and academia, promote public participation in environmental issues.**Where in the world?**

21. The Clearinghouse showcases information on the Aarhus Convention originating primarily from Europe, but it includes relevant resources from all over the world.
Assigning and accessing content attributes

22. Below each question is a scroll window containing "content attributes".[6] These attributes are assigned to the individual resources found in the Directory's relational database. Table 2 gives a complete list of the first three types of content attributes.

Table 2: Content attributes

Content attributes
What is the goal?
Access to Information
Public Participation
Access to Justice
Pollutant Release and Transfer Registers (PRTR)
Genetically Modified Organisms
Strategic Decision-making
Electronic information tools
How is it achieved?
Legislation
Policies
Procedures
Projects
Research
Who is doing it?
Government
Non-governmental
Intergovernmental organizations
Academic community

23. The fourth type of attribute is geographic. Resource entries may be assigned a specific country (e.g. Austria), continent (e.g. Europe) or supra-region (e.g. Asia and the Pacific) according to the geographic scope of the activity or, in some cases, the source of the information.

24. When a geographic attribute is assigned, the logic of the Clearinghouse promotes the entry into the Home Page New Resources window. Without a geographic attribute, the entry will not appear on the Home Page. It will, however, be accessible through its other attributes in the Resource Directory.

25. Multiple geographical attributes may be assigned to a resource entry. In this case, the Home Page New Resource feature will present the entry twice, selecting the first two geographic entries it finds assigned to the resource. To prevent this from happening, it is preferable to assign only one geographic attribute. The UNECE provides an interesting example. The UNECE region encompasses Europe, the North American States of Canada and the United States, Israel, the Caucasus and Central Asia. Generally, the attribute "Europe" is used, rather than "Asia and the Pacific", "Europe" and "North America".

26. However, other attributes need not be assigned uniquely. The logic of faceted classification allows multiple attributes to be assigned to any given resource entry.

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[6] 'Who is doing it?' does not have a scroll bar, as all four attributes fit into the displayed window.

27. For example, the resource entry "Environmental Democracy – Access to Information on the Environment" directs the reader to a rich collection of research reports prepared for Ireland's Department of the Environment, Heritage and Local Government. Because of its wide-ranging content, this collection has been assigned the Aarhus Convention pillar attribute "Access to Information" as well as the activity type attributes "Legislation", "Policy", "Projects" and "Research", and to the Aarhus Convention foci attributes "Convention Compliance" and "Strategic Decision-making", in addition to the geographic attribute "Ireland" and the organization type "Government". Someone searching for resources fitting the description "Access to Information" and "Ireland" would quickly find the entry among the limited number of entries sharing those two attributes. If they were to add "Research" and "Government" to their search, the database would serve them an even shorter list of entries, including the desired collection.

28. The order in which someone initiates a search makes no difference. "Government", "Ireland", "Research" and "Access to Information" will all yield the same results.

29. To access the Resource Directory from the home page, users left-click the attribute text appearing in the display window. Alternatively, they can click the thumbnail map appearing in the lower right-hand corner of the page. This will open a digital map of the pan-European region. Clicking over the territory of any member State will initiate a geographic search of the Resource Directory entries for that country.

30. "Who is doing it?" generally refers to the producer of the activity described in the Resource entry. In some cases, however, it refers to the origin of the information contained in the resource. In the example given in paragraph 27 above, a government department published the collection of research reports; the attribute "Government" is therefore assigned to the Resource. The actual activities reported in some of the papers might have been undertaken by university researchers or community organizations.

Convention News

31. The Convention News feature presents up-to-date news items related to the Convention's implementation and principle 10 developments nationally, regionally and worldwide. Its coverage, then, is broader than that of the news found on the Aarhus Convention website
http://www.unece.org/env/pp/news.htm,
where news about the Convention and its subsidiary bodies is posted regularly.

32. In addition to publicizing the activities undertaken by the Parties and secretariat to implement the Convention itself, the Convention News feature aims to broaden public understanding of the impact of the Convention and its principles in related areas of activity. Part of the outreach strategy of the Clearinghouse is to attract a wider readership by providing such information. Thus, for example, someone searching for information on "citizenship and the environment" might be drawn to the Clearinghouse website by a news story announcing the upcoming

Third World Environmental Congress dedicated to participative management of environmental resources.

33. The home page features only the headlines associated with the three most recently entered news items. Clicking over the headline reveals the complete text of the news item.

34. The 10 most recent news headlines, along with their dates and subheadings, can be viewed by clicking News on the home page . Earlier news items are stored in the database and can only be accessed by the central node administrator.

New Resources

35. The lower right-hand side of the home page features the two most recently entered Resources. For each Resource, it shows the following:

- Geographic origin
- Title
- Author or publisher
- Year of publication

In the following example

Croatia | Croatia Biotechnology: New Law on Genetically Modified Organisms (GMOs)
USDA Foreign Agricultural Service, 2005

the title is a hyperlink. Clicking on the title takes the user directly to the source of the Resource.

36. Nearly all of the resources indexed in the Clearinghouse are published electronically. In contrast to the News items featured in Convention News, which are served by the Clearinghouse's server, the Clearinghouse does not hold or publish electronic resource documents. Instead, it hyperlinks viewers' browsers to external websites where such documents are held, or indicates other means of accessing the documents.

37. The Clearinghouse is an Internet portal, not an electronic document repository.

38. The New Resources feature does not take users into the Clearinghouse Resource Directory. It bypasses this step by directing the viewer's browser to the requested external website.

Resource Directory Entries

39. Paragraphs 27–29 of this annex described ways in which users could access resources by clicking on combinations of attributes. The database will generate just find those resource entries which fit the selected set of attributes. For example, selecting "Ireland" will generate all resources in the database with this attribute. Following this selection with "Access to Information" will then select the subset with this second attribute out of the out of the original selection "Ireland" (excluding resources from other countries addressing

"Access to Information"). Users can refine their selections as many times as they want. Here is a closer look at how the entries themselves are devised.

40. Resource entries held in the Directory are summaries which capture key aspects of the content of resources. Here is an example:

Caucasus Environmental NGO Network (CENN). Founded by environmental NGOs in Azerbaijan, Armenia and Georgia, CENN seeks to establish an easily accessible environmental information space and coordinate efforts to develop compatible environmental strategies and policies in countries of the Caucasus. With electronic bulletin, NGO country directories and links. In English and Russian.
CENN, 2004.

The title of the entry (which in the above example is also the name of the organization) is followed by additional details on the resource's geographic scope and its purpose or mission. The summary concludes with a list of features found in the resource (e.g. "electronic bulletin") and the languages in which the resource is available (when the language of publication is other than Croatian, English, French or Russian or more than one language is used). The last line shows the author/publisher of the resource. In the above example, the organization's acronym CENN is used for sake of brevity.

41. Entries can be quite short, especially when their relevance to the Convention is self-evident:

Implementing the Aarhus Convention: a user guide for civil society in Azerbaijan. The national user guide of Azerbaijan for civil society. In Russian and Azerbaijani.
Regional Environmental Center for Central and Eastern Europe, 2004.

Calendar

42. The Calendar feature links to the official Aarhus Convention calendar at http://www.unece.org/env/pp/calendar.htm.

Help page

43. This page provides help to general users of the Clearinghouse.

About the Clearinghouse

44. In addition to introducing the scope and purpose of the Clearinghouse and its intended audience, the statement found here credits the role of GRID/Arendal in the development of the website and the financial support of the Government of Norway. GRID-Arendal continues to provide server-side support for the Aarhus Clearinghouse.

Terms of use and disclaimers

45. This page contains the copyright notice, terms of use and disclaimer notices for use on United Nations websites subscribed to by the United Nations Economic Commission for

Europe and governing the Aarhus Clearinghouse. Among the disclaimers attached to the Clearinghouse is the following:

"Materials provided on this Site are provided "as is", without warranty of any kind, either express or implied, including, without limitation, warranties of merchantability, fitness for a particular purpose and non-infringement. The United Nations specifically does not make any warranties or representations as to the accuracy or completeness of any such Materials."

It is recommended that national Aarhus Convention websites, where they incorporate materials from or links to external sources, include a similar statement, in accordance with national law.

Annex 2

PREPARING RESOURCE CITATIONS IN MICROSOFT EXCEL OR XML FORMAT[1]

1. The best way to provide reference information for your Aarhus-related content is by using the Clearinghouse's Web-based content management system. You just log in, fill in a short form for every content item, and you are done. However, if you have unreliable or expensive Internet access, you may wish prepare the reference citations for your content in a Microsoft Excel spreadsheet or in XML format.

Reference Citations in Microsoft Excel

2. Here is how you would prepare and provide the reference citations in Microsoft Excel:

a.   Obtain the sample Microsoft Excel template by email or download it from the Clearinghouse website.
b.   In Excel, enter one citation per row for each content item.
c.   After you have prepared this Microsoft Excel document, email it to the Clearinghouse team.

Reference Citations in XML

3. To prepare and provide the reference citations in XML format:

a.   Obtain the sample XML template by email or download it from the Clearinghouse website.
b.   Using any text editor, such as Notepad on a PC, prepare one XML file for all content items.
c.   After you have prepared these XML files, publish them to an accessible directory on a Web server or email them to the Clearinghouse team.

Content Attributes and Keywords

4. In assigning keyword attributes to content items, please use the short list of categories and corresponding codes, which are available online or in print format. Instead of writing out category words, simply indicate the appropriate category code(s) for each citation.

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[1] If you have reliable Internet access, please disregard this section.