ECONOMIC COMMISSION FOR EUROPE

Meeting of the Parties to the Convention
on Environmental Impact Assessment
in a Transboundary Context
Working Group on Environmental Impact Assessment
(Second meeting, 29-31 May 2000)
(Item 2 (g) of the provisional agenda)

ENIMPAS DATABASE EVALUATION

<u>Interim Report by the delegation of Hungary</u>

<u>Introduction</u>

1.   At their first meeting in Oslo 1998 the Parties to the UN/ECE Convention
on Environmental Impact Assessment in a Transboundary Context (the Espoo
Convention) agreed to establish, for a two-year trial period, a database
(ENIMPAS, http://www.mos.gov.pl/Enimpas) to record data on EIA projects with
transboundary effects, EIA legislation, institutions, etc. They also decided
that the database would be evaluated and a report prepared for their second
meeting in October 2000. Hungary agreed to act as lead country for the
evaluation.

2.   At its first meeting (17-18 May 1999, Budapest, Hungary), the Evalution
Group decided that it would consider the following issues: the need for the
database; the database structure; the quantity and quality of the information;
the content of the database; its uses; the capacity and willingness of
countries to provide information for the database; the management of the
database; its user-friendliness; and its costs and benefits.

3.   Two methods were selected to collect and analyse information regarding the ENIMPAS database: (a) a user survey focusing on all the important aspects of the structure and function of the database, and (b) an Internet-technology-related survey, focusing on the major aspects of the Internet version (the website of the ENIMPAS database), since that is the dominant way of accessing the database.

I.   RESULTS OF THE SURVEY
Questionnaire

4.   Chapter I was compiled by the lead country of the Evaluation Group. It is based on the responses to a questionnaire and comments received from countries in the Evaluation Group.

5.   A questionnaire was developed to cover all the important areas of the ENIMPAS database's structure and functions, according to the aspects identified at the Evaluation Group's first meeting. The following sub-titles reflect these aspects. The questionnaire contained some 55 questions grouped into: personal identification, technical background of users, experience using ENIMPAS, recommended improvements, authorized ENIMPAS users' section (see annex I below). It was aimed at collecting relevant information about the ENIMPAS database in order to objectively assess its trial period. Therefore, no hypothesis was put forward and checked in developing and evaluating the responses to the questionnaire. At the end of the following headings, short summaries are boldfaced; they do not necessarily reflect the opinion of the Evaluation Group. The "Options for the Future" at the end of this report are based on the Evaluation Group's analysis of the responses.

A.   Country responses and users' backgrounds

6.   The questionnaire was distributed to all 55 UN/ECE countries and the European Commission, and made available on the ENIMPAS web site. Of the targeted countries, 21 responded (annex II). The following results reflect these 21 sets of answers. Except for two answer sheets, most of the respondents answered about 75% of the questions, providing relevant information for the evaluation. Each of the answer sheets represents one country's opinion. The responses reflect the state of the ENIMPAS database in October to early November 1999.

7.   All the respondents are from the government sector and, except one, all are aware of the Oslo decision about the ENIMPAS database. Regarding the technical background of the users, they have an average work experience with the Internet of two and a half years. 55% of users regularly use information technology, while 44% do so occasionally. All the users work in EIA, and on average have an EIA experience of 5.5 years and experience with the Espoo Convention for almost three years. The number of Espoo cases occurred so far in their countries varied significantly from 0 to 5, with an average of almost 2.

B. <u>Need for the database</u>

8.   Almost 90% of the users sayd that the ENIMPAS database can help their Espoo-related work, and only 10% reported that the database is not useful from this perspective. The ENIMPAS database is mainly used for obtaining information, whereas both obtaining and providing information comes in second place. The use of the database only for providing information by authorized contact points is not typical.

9.   Only 50% of users think that the database could improve the implementation of the Espoo Convention, and 50% state that the database can only partly improve such work.

10.   Some of the users specify the reasons of improving the implementation of the database and mentioned: the usefulness for countries and NGOs, when providing impetuses and suggestions for third parties, EIA information is open, opportunity to gain EIA information, information about projects, ideas on EIA, better practice and practical information.

11.   The most useful features for users are its information on other EIA cases and on relevant institutions and people. Finding pieces of legislation in other countries comes second.

12.   There is a clear need for the database to contain broad information assisting the Espoo-related work. On the other hand, the database is not seen as a powerful means for assisting the implementation of the Espoo Convention.

C. <u>Use of the database</u>

13.   63% of the users use the database a few times a year, 16% on a weekly basis and 16% never. The number of hits on the Internet homepage was not taken into account, because it does not reflect the real use of the database and may therefore bias the evaluation.

14.   Many users access the ENIMPAS database a few times a year, which may indicate that its information is not attractive enough and doees not entice them to visit it more frequently.

D. <u>Database structure</u>

15.   2 users rate the structure of the database "excellent", 13 users "good" and 1 user "poor". **The database structure is thought appropriate for serving the implementation of the Espoo Convention.**

E. Quantity and quality of information - content of the database

16.   82% of the users do not find inaccuracies in the database, however 18% do (e.g. list of Signatories and dates), and use other UN/ECE homepages to find the correct information. 75% of the users report that they do not use the database as a resource, and the few who do find that the database does not provide relevant project information with one exception. The simple reason, according to the answers received, is that the database does not contain enough relevant information. Almost 70% of the users do not find the information they are looking for when searching for specific projects, institutions, legislation or research/training.

17.   Regarding information about EIA legislation, 4 out of 18 users say it is very useful, 8 fairly useful and 8 not useful at all. Regarding information about transboundary projects, 5 out of 18 users think it is very useful, 6 fairly useful and 8 not useful at all. Regarding information on research and training in other countries, 2 out of 18 believe it to be very useful, 6 fairly useful and 9 not useful at all. Regarding information about EIA institutions in other countries, 7 out of 18 users find it very useful, 6 fairly useful and 6 not useful at all.

18.   Almost 61% of the respondents find the amount of information in the database unsatisfactory. Half the users state that information in the database is not useful in their work at all, 38% say it is fairly useful and only 11% assess it to be very useful.

19.   Users suggest additional categories of information that can be useful, such as:

- Activities under the Convention work-plan (incl. small working groups);
- Different progress reports;
- List of country data managers;
- New documents under "What's New" regarding bilateral and multilateral agreements;
- Available EIA guidance.

However, one user believes that additional categories should be included only at a later stage.

20.   By the end of the evaluation period the quality of information was acceptable. However, countries are in a position to judge the accuracy of their own information only. The usefulness of the information of the database is poor in the main branches of the services it provides so that half the users do not see the database as being useful in their work.

F. <u>User-friendliness</u>

21.   62% of users find the database very easy to use, while 31% have needed some time to get acquainted with it. 10 users out of 19 find the access via Internet fast, 5 think it is usually slow and 3 report it to be slow and sometimes not available.

22.   ENIMPAS users also report some, mainly technical, hitches with the search facilities in the database, case-sensitivity, etc. Also, the preferred Internet browser (Netscape) is criticized, because it is not seen as mainstream software for the future. The right to enter information about a certain project into the database is sometimes considered to be a problem.

23.   User responses show that the database generally has the technical and structural design to serve users effectively. However, authorized users indicate several problems when providing information and placing it in the database.

G. <u>Database Management</u>

24.   Almost three quarters of users do not contact the Polish database manager; the ones who do tend to get a good or excellent response. Some difficulties are perceived in some cases when opening the software and due to a lack of training in using the database.

H. <u>Cost-Benefit aspects</u>

25.   User opinions are not unanimous on whether the time and costs involved in using the ENIMPAS database are worth it: 64% say yes, while 36% say no. This seems to be in contradiction with the opinions regarding the poor amount of information available in the database.

26.   Evaluating the direct operating costs of the database management was not part of the study.

27.   There is very limited information available regarding the cost-benefit aspects of the database. On the users' side, there is very little cost involved in obtaining information from the database once the hardware and software are in place. Major costs are foreseen for collecting and arranging information on the country level. Further steps could be taken to assess the database management costs, for which the start-up figures may serve as a starting point. The overall benefit of the database seems to be acceptable.

I. <u>Capacity and willingness of countries to provide
information for the database</u>

28.   Regarding the special experience of authorized ENIMPAS users, more than half state that all the necessary information is available in their organizations, less than half say it is only partly available. The equipment and Internet connection arre easily available to more than 70% of the users.

Technical assistance is generally available in all organizations, though sometimes not easily.

29.   The mechanisms for providing information for the database are reported to be fairly country-specific and in many cases still lack established procedures. Obstacles to providing information to the database, beyond the technical and procedural aspects, are the lack of direct Internet connection, frequent staff changes and the lack of capacity.

30.   Users foresee about three Espoo cases on average before the second meeting of the Parties. Out of the four service areas of the ENIMPAS database, "Projects", "Institutions" and "Legislation" are used the most, "Research and training" is not a priority. 6 users out of 15 find better information on the same EIA issues elsewherer (www.europa.int, www.unece.org/env/eia or EU DGXI homepage).

31.   Three quarters of authorized users do not specify further obstacles to providing information to the database beyond Internet access and in-country information management. **Generally, there are no major obstacles to providing relevant information for the database. Incentives and overall database management are needed for future improvement of the database.**

J. Other potential users

32.   Users provided very limited contact information on potential interested actors on Espoo-related issues. Altogether 8 academic university contacts were mentioned and 3 NGO contacts.

II. RESULTS OF THE TECHNICAL EVALUATION
OF THE ENIMPAS DATABASE WEB SITE

33.   The evaluation of the ENIMPAS dtabase includes an assessment of its Internet technology (see annex III). The Hungarian expert team has conducted a survey of the ENIMPAS Web site from a technical perspective. (The content of the database, the structure, detail, accuracy or credibility of the information stored in the database are not part of this assessment.)

A. Methodology

34.   The Web site and the technology of the database were assessed according to the following criteria:

-      The database's context on the Internet, and its trends;
-      Accessibility;
-      How fast does the database download, what specific requirements does it have on the user's side and how easy is it to find it through search engines;
-      Database structure;
-      Data structure and performance of the database;
-      Web site design and construction;

- The Internet technology and design used;
- Navigation;
- How easy is it to find a piece of information in the database;
- Providing input;
- How can those who have permission enter information into the database.

35. The detailed assessment can be found in annex III.

B. Recommendations

36. The recommendations from the users targeted three areas: (a) database content, (b) database layout and (c) database management.

37. Database content:

- Provide more information for the database;
- Enter information into the database;
- Obtain full text legislation with comments for the database;
- Make full text search available;
- Show links to other relevant sites;
- Put bilateral and multilateral agreements into the database:
- Facilitate the practical implementation of the Espoo Convention, do not develop ENIMPAS into a primary source about EIA in Europe and beyond.

38. Database layout:

- "What's New" should take the user directly to the new item;
- Show link to Espoo Convention homepage;
- Show links to national relevant web sites.

39. Database management:

- Develop and deliver training course on using ENIMPAS;
- Database manager should assist in entering data into the database;
- Organize country data managers' training course.

40. In technical terms, the ENIMPAS database is a well-designed, well-implemented, standard, interactive, on-line database. Its technological solutions are appropriate for its purpose and are functioning well. No real mistakes or errors were found. A few peripheral elements are not yet completed. There are some aspects that can be improved to ensurre better accessibility or navigability.

41.   The main recommendations for improvement are:

- Create a text-only or a combined version of the front page;
- Improve headings and register in search engines;
- Improve the information content of front page;
- Complete missing elements;
- Improve navigation assistance (add navigation bar).

III.   OPTIONS FOR THE FUTURE

42.   This section was compiled by the lead country of the Evaluation Group based on comments received from the countries involved in the Evaluation Group. At their second meeting. the Parties are expected to discuss and comment on the scenarios put forward below and the related requirements.

43.   The usefulness of the ENIMPAS database is based on two key factors. First, ENIMPAS as an Internet-based database was found to be a proper technical means of contribution to the implementation of the Espoo Convention. Second, the actual content, quantity and quality of the information in the ENIMPAS database were considered to be its main weaknesses. The management system with country data managers and one database manager does not seem to be effective in gathering all the relevant information into the database. So the prestige and the usefulness of the database were considered to be low.

44.   The following scenarios concentrate on the management and capacity on country-level issues, since the technical aspects of the ENIMPAS database are well established and relatively well managed and the suggested modifications apply to all the scenarios below.

Scenario one

45.   The ENIMPAS database keeps operating within the Espoo Convention's framework. Additional services are developed and offered, especially in the field of general EIA support. This option requires more information from countries and more funds to develop new services and keep the database server operating. This does not seem to be a viable option.

Scenario two

46.   The ENIMPAS database keeps operating within the Espoo Convention's framework. The services offered are streamlined and focused on implementation, in response to the wishes expressed in the questioinnaire. Countries take full responsibility in accordance with their Signatory/Party status, and provide further resources to fulfil their obligation to provide information for the database. This will require less effort from the database manager, but a certain level of cooperation is essential to ensure effective communication and cooperation. The database management costs are covered by international funds.

47.   This option represents the status quo. The prerequisites are:

- Database host country willing to keep the database going;
- International funds to cover the operating costs;
- Active input from countries into the database;
- Active database management.

Scenario three

48.   The information gathering and provision are centralized and assigned to the database manager. He regularly requests information request from countries, collects this information for the database, and assists to integrate information into the database in terms of both content and (Internet-based) technology. The database concentrates on providing links to other EIA-relevant sites and serves as a meta-database. The database focuses on Espoo projects; training and legislation are of secondary importance.

49.   This scenario require countries to be willing to cooperate with the database manager in a timely manner. The database manager must be prepared for the extensive communication and support functions, and additional international funds have to be available to cover all database manager operating expenses. This option is considered viable.

Scenario four

50.   Providing information for the ENIMPAS database is a major obstacle that countries are not able to overcome for the time being. In this case the electronic database is closed when the trial period expires. No further energy or time is put in by the countries or the database manager. No further international funding is necessary to maintain the ENIMPAS database or its Web site. Other means (like meetings, correspondence, e-mails, etc.) are preferred to assist the implementation of the Espoo Convention. Information is collected on paper and compiled information packages are distributed on a regular basis to the Parties.

51.   This requires further resources from the secretariat of the Espoo Convention, but represent a viable option for the future.

Annex I

QUESTIONNAIRE - ENIMPAS DATABASE EVALUATION

Personal identification

Name..

Position..

Organization..

Country...

Sector – government - academic, university - business, consulting - NGO

ENIMPAS-related identification

1.   Are you aware of the Oslo decision about the database?___Yes   __No

2.   I am using ENIMPAS:
      (Please tick one)
      S   to obtain information
      S   as an authorized contact point (providing input for the database)
      S   both obtaining and providing information

Technical background

Informatics

3.   How long have you been using Internet in your work?   ....(years)

4.   How do you evaluate the usefulness of informatics in your job?
      (Please tick one)
      S   I can live without it
      S   It may assist me sometime
      S   There are certain cases when I need it
      S   Usually I need to use it
      S   I am using it daily

Environmental Impact Assessment (EIA)

5.   Do you deal with EIA in your work?   __Yes   __No

6.   How long have you been working in the EIA field?   ....(years)

7.   When did you start to work in an Espoo Convention related field?
      ....(date)

8.   Was there any case in your country relating to the Espoo Convention?
     _ Yes   _ No

9.   If yes, please specify:
     ....
     ....
     ....

10. How many Espoo cases have you dealt with during this time?
     ....(number)

Experience using ENIMPAS

11. Can such a database assist your work related to the the Espoo
     Convention?   __Yes   __No

12. If yes, in what way?
     (Please tick where appropriate)

     S   Learn about good practices
     S   Get information on other EIA cases
     S   Find institutions/relevant people
     S   Help contacting relevant people
     S   Find pieces of legislation in other countries
     S   Learn about research and training projects
     S   Other: ....

13. Has it ever happened that the information you read in the database
     turned out to be incorrect?
     _ Yes   _ No

14. If yes, in which case?

15. Could you please specify the information resource which assisted you to
     identify the incorrectness?
     ....
     ....

16. How often do you use the database in your work?
     S   daily
     S   weekly
     S   monthly
     S   a few times a year
     S   never

17. How easily accessible is the database through your Internet connection, how fast does it download?
    - Fast
    - Usually slow
    - Slow, sometimes not available
    - Never accessible

18. Have you encountered any unforeseen difficulty when attempting to enter information (project) into the database? Please describe:
    ....
    ....

19. How early in a project phase can you submit information into the database?
    Please describe: ....
    ....

20. In your opinion, can such a database improve the implementation of the Espoo Convention?_   _ Yes   _ Partly   _ No

21. Please explain why:
    ....
    ....

22. How do you rate the structure of the database (its main categories of information):

    S   not appropriate
    S   poor
    S   good
    S   excellent

23. When you were looking for examples or case studies, did you find any relevant project in the database for your work, did you use the database as a resource?   _ Yes   __No

24. If yes

    S   rarely found
    S   usually found
    S   always found

25. If not, please explain why:
    ....
    ....

26. When you were looking for a specific project, institution, legislation or research/training in the database, did you find it?   _ Yes   __No

27. Did you find the amount of information satisfactory?

    S   not at all
    S   fairly
    S   very
    S   exceptional

28. How useful do you consider information in the database about EIA
     legislation in other countries?

    S   not at all
    S   fairly
    S   very
    S   exceptional

29. How useful do you consider information in the database about
     transboundary projects in other countries?

    S   not at all
    S   fairly
    S   very
    S   exceptional

30. How useful do you consider information in the database about research
     and training in other countries?

    S   not at all
    S   fairly
    S   very
    S   exceptional

31. How useful do you consider information in the database about EIA
     institutions in other countries?

    S   not at all
    S   fairly
    S   very
    S   exceptional

32. What additional categories of information would be useful in the
     database? Please describe in keywords   ....

33. Was the information in the database useful in your work?

    S   not at all
    S   fairly
    S   very
    S   exceptional

34.   Can you mention a good example when you made use of the database?

35.   Did you have any bad experience with the database? Please describe:

36.   Which part of the database do you use (check as many as relevant)?

      S   Projects
      S   Institutions
      S   Legislation
      S   Research and Training

37.   Have you found better information on the same issue on another website?
      _ Yes   _ No

38.   If yes, would you give us the address?

39.   How many cases can you foresee from your country in the database by the
      second meeting of the Parties, Nov. 2000? Please give us an estimation
      here:........(number)

40.   Have you ever contacted the Polish database manager for any assistance,
      correction, etc.?
      _ Yes   _ No

41.   If you ever contacted the Polish database manager, how did you find the
      responsiveness?

      S   Excellent
      S   Good
      –   Fair
      –   Poor

42.   How user-friendly is the database in your experience?

      S   Very easy to use
      S   Needed some time to get acquainted with it
      S   I've had serious difficulties using it
      –   I am not able to get along with it.

43.   If you had any difficulties in using the database, please describe them
      below:
      ....
      ....

44.   In your experience, is it worth your time and costs to use the ENIMPAS
      database?
      _ Yes   _ No

45. **How would you improve the database in order to better serve transboundary EIA processes?**

Regarding database content (Please describe)

....
....
....
....
....

Regarding database layout (Please describe)

....
....
....
....
....

Regarding database management (Please describe)

....
....
....
....
....

Other ENIMPAS users in your country

46. We would like to receive feedback on ENIMPAS from other users in your country. Please provide us with contacts below:

–   government /contact information/
....
....

–   academic, university /contact information/
....
....

S   business, consulting /contact information/
....
....

–   NGO /contact information/
....
....

Only for authorized ENIMPAS users
(Authorized users are nationally designated contact points who are allowed to provide information for the database)

47. Do you have all the necessary information in your organization to complete the database?
     _ Yes   _ Partly   _ No

48. What is the mechanism in your country to provide information for the database?
     Please describe
     ....
     ....

49. How many people in your organization are responsible for providing information for the ENIMPAS database? Please give a number here:
     ....

50. Are the equipment and Internet connection available for entering information into the database?

     -    Yes, easily available
     -    Available, but not directly (e.g. in another office, only with a technician, etc.)
     -    No

51. If you use the database not through the Internet , but through a stand-alone facility, please describe the advantages and disadvantages of using the stand-alone facility below:

     advantages:
     ....
     ....

     disadvantages:
     ....
     ....

52. Do you have difficulties with entering information into the database?
     _ Yes   _ No

53. Can you get technical assistance in your organization when you need it?

     _ Yes, easily   _ Yes, but not easily _ No

54. Are there any other obstacles to providing information for the database?
     _ Yes   _ No

55. If yes, please describe:

Annex II

COUNTRIES THAT RESPONDED TO THE QUESTIONNAIRE

Albania
Austria
Azerbaijan
Bulgaria
Czech Republic
Denmark
Finland
Georgia
Germany
Hungary
Italy
Latvia
Liechtenstein
Lithuania
Poland
republic of Moldova
Russian Federation
Slovakia
Sweden
Turkey
United Kingdom

Annex III

TECHNICAL EVALUATION OF THE ENIMPAS DATABASE WEB SITE

I. CONTEXT

1.   The Internet is the most extensive, global computer network. Any
information service which is put on the Internet without special restrictions
can be accessed by any one of the many millions of computer users around the
world. The Internet is changing extremely rapidly in terms of volume (number
of users, services and traffic) and technology. However, many users, mostly
in less developed countries, do not have access to the newest technology,
fastest computers and high bandwidth and are not skilled in or accustomed to
using the state-of-the-art Internet technology. Both these factors must be
taken into account when developing an Internet information service.

2.   The ENIMPAS database is an interactive, on-line Internet database. This
means that it is permanently accessible on the Internet, and can be searched
for pieces of information in an interactive way, according to several search
criteria (countries, keywords, institutions, events, etc.). There are so-
called "privileged users", who have special permission (password) to feed new
pieces of information, or modify earlier ones, in the database.

3.   Such databases are relatively common on the Internet. They are widely
used in the business, government or NGO sectors, on all sorts of topics.
There are standard and customized elements of technology, and many Internet
users are familiar with these.

4.   From this point of view, an application which is user-friendly, i.e.
does not require any special training or skills from its users and is easy to
use, should meet the following criteria:

> S   Be accessible with many different Web browsers and computer
> platforms;
> S   Be accessible by users with poor Internet access, i.e. who use
> lower capacity computers or have a slow connection to the Internet (low
> bandwidth, noisy lines, etc.);
> S   Be attractive also to experienced Internet users with fast
> computers and high bandwidth, who can use and are accustomed to state-
> of-the-art applications with lots of graphics, moving pictures, sound
> effects and other special features;
> S   Be easy to navigate, search and feed information into.

5.   The primary target group of the ENIMPAS database includes:

> S   Focal points, responsible for the implementation of the Espoo
> Convention in each UN/ECE country;
> S   Institutions and companies dealing with Espoo cases.

6.   Others who might be interested in the information of the database can therefore be regarded as secondary target groups:

    S   Affected populations and their organizations;
    S   EIA experts and students, even outside the UN/ECE region;
    S   Other interested parties.

These target groups represent a very broad range in their technical equipment, quality of Internet access, computer skills and experience.

7.   In comparison with other on-line databases, the ENIMPAS database is a well functioning, standard application, and is easily accessible without any special skills or training.

II.   ACCESSIBILITY

8.   In this chapter, the experts looked in more detail at how easily the ENIMPAS database is accessed from different parts of the world and with different technologies. Specifically, they looked at:

    (a)   Downloading speed;
    (b)   Browser compatibility;
    (c)   Accessibility with poor Internet access; and
    (d)   Accessibility through search engines.

A.   Downloading speed

9.   One key to the success of any Internet service is that it should not require much time to appear on the user's screen. Large files, especially images, and complex pages significantly increase downloading time.

10.   When users access an Internet service, they are downloading files from a remote computer, which may be on another continent. The information usually goes through dozens of computers, so-called gateways. The capacity of the line between each gateway, the so-called bandwidth, may vary widely.

11.   In this respect, the downloading speed of a specific Internet service very much depends on where the user is geographically: how many gateways are needed to reach the service's server computer and what is the smallest bandwidth en route. Therefore, the organization providing the service should:

    -    Put its service ono a high-capacity server with a high bandwidth;
    -    Keep files small.

12.   The files on the ENIMPAS database are reasonably small; the use of graphics on the pages is not excessive. A few trace route tests were performed from Hungary and a few other places. These tests, which list the gateways and access speeds step by step en route, gave good results. From this point of view, the accessibility of the ENIMPAS database seems to be fairly good.

B.   Browser compatibility

13.   The target group of the ENIMPAS database includes users with many different computer platforms and software versions. Thus it is essential that the database should not contain any technical solution which is not supported by all browser software. The ENIMPAS database can be used with all graphic browser software. It does not contain frames, java scripts or other special features which are not supported by older software versions. The only problem occurs on the front page with text-only platforms, or with users who have problems downloading images, because the main page contains information and links only on the images.

14.   Some of the pages (the thematic search pages) are wide. This causes difficulty for users who do not have high-resolution screens. They are not prevented from using these pages, but it is very inconvenient for them.

15.   The browser compatibility of the ENIMPAS database is close to excellent. It could be improved by a text-only version of the front page and by reducing the width of the thematic search pages.

C.   Accessibility with poor Internet access

16.   The UN/ECE region includes countries where Internet access is still poor even for government officials. This means slow and unreliable connections and/or low-capacity computers, which can run only older versions of software. These people may have serious problems with downloading large files or graphics. Usually these users switch off automatic downloading of images.

17.   The front page of the ENIMPAS database does not have a text-only version, any information or link appears only when the user has downloaded the images. This may be a problem for some users. All of the other pages on the site are well usable without downloading graphics. A text-only main navigation page (front page) would be a good improvement.

D.   Accessibility through search engines

18.   Search engines are special services on the Internet where a user can enter names or keywords and the engines perform an automated search in millions of Web pages. This is the most effective way of finding information or important sites on certain topics.

19.   Admittedly, the primary target groups of the ENIMPAS database, i.e. government officials and relevant institutions, are expected to learn about the database in official ways, not by searching the Internet. However, the affected population, its organizations, interested students and experts could make use of information in the ENIMPAS database, if they could find it through search engines.

20.   A few test searches were carried out on three of the largest search engines on the Internet (Altavista, Yahoo and Excite), in order to see whether

the ENIMPAS database could be found through them. Several combinations of
keywords were searched for, thus making general and more specific searches as
well.

The results of the searching tests are shown in the following table:

Keywords searched	Result in Altavista	Result in Yahoo	Result in Excite
Environmental impact assessment	Over 1.2 million matches, ENIMPAS not among the top 200	ENIMPAS did not show up among the results	ENIMPAS not among the top 100 matches
Environmental impact assessment database	266000 matches, ENIMPAS not among the top 10	ENIMPAS did not show up among the results	ENIMPAS not among the top 100 matches
Environmental impact assessment database transboundary	255000 matches, ENIMPAS not among top 100	ENIMPAS not among the top 100	ENIMPAS not among the top 80 matches
ENIMPAS	The only page that appeared was the ENIMPAS Manual page, which is empty (under construction)	ENIMPAS front page appeared on the top of the list	The only page that appeared was the UN/ECE secretariat (Bulletin board, which is empty

21.   The occurrence of the ENIMPAS database in search engines is very poor.
It could easily be improved by including relevant keywords in the title
headings of the pages and by manual registration in the major search engines.
This is not a requirement to achieve the main goal of ENIMPAS, but could
greatly increase its contribution to professional information on the Internet.

III. DATABASE STRUCTURE

22.   A database contains comparable pieces of information that are stored in
a specific format and structure. This makes searching, updating, combining
and processing information much more effective. With an electronic database
data are stored in a computer, and if it is accessible on the Internet, it is
an on-line database.

23.   Designing and building the structure is the most important part of the
ENIMPAS database, and the one which requires the most programming expertise.
The main categories of the ENIMPAS database are: countries; projects;
institutions; pieces of legislation; research and training events.

24.   The structure and the construction of the database, inasmuch as can be
seen from a user's perspective, seem perfect. Different searches have
compatible outputs. Cross linking between projects, institutions, countries,

legislation, research and training events, and between the English and Russian versions works well.

25.   On the page for searching by country, the only mistake found was in the country data: the dates of ratification and coming into effect on the main Convention page (http://www.mos.gov.pl/ENIMPAS-db/legislation?leg_text_id=23) seem to be updated (although the "last modification date" on the bottom of the page is not), but those data do not appear on the search pages by legislation.

26.   The data structure of the ENIMPAS database is appropriate for its purpose and is performing well.

III.   WEB SITE DESIGN AND CONSTRUCTION

27.   The design and construction of a Web site covers aspects like how the information is broken into separate pages, how graphics are used, the quality and functionality of graphic elements, the use of colours and their function, the coherence of the layout of separate pages, how attractive the pages are, the layout of pages, how navigation is facilitated among the pages, how general information is provided.

28.   Web design is very much a matter of taste. There are no standards which can be used as universal references. However, from a practical point of view, some benchmarks can be useful.

29.   As the main purpose of the ENIMPAS databse is to provide professional information (and not entertainment, for instance), the Web site should primarily be functional and easy to use.   Its attractiveness is secondary. The ENIMPAS Web site has a good solid design. However, it uses many different background images and title graphics, and this may not be advantageous: its decreases identification with the whole site and generates unnecessary extra traffic.

30.   The front page aims to be attractive with its picture composition. However, all the information and further links are on the images. For the user, who does not automatically download images (because of a slow connection, for instance), not a single piece of information appears on the screen.

31.   The information content of the first page is weak. It says "Database on Environmental Impact Assessment in a Transboundary Context", and has the UN/ECE-EIA logo. This may not tell all visitors enough. On the other pages, visited links, not-yet-visited links and underlined text appear in exactly the same way. This might be confusing for users.

32.   Several items on the "General information" page are empty, such as "The UN/ECE secretariat bulletin board" and the "ENIMPAS manual and related documents", which are linked. Probably, the first one is due to the lack of input from the secretariat, but this is not obvious.

33.   The "What's New" page gives a good searching possibility for projects
and research/training sessions entered into the database within the past year.
A "© by Authors" note is placed at the bottom of each page, just below the
main content of the page. This may be misleading, as it is not clear what the
copyright refers to.

34.   The design of the ENIMPAS Web site is simple and functional. A more
homogeneous design could better connect the separate pages, but this is partly
a question of taste.

35.   The front page could be significantly improved in the following two
ways:

    (a)   A text-only version, or a combined solution, would make it possible
           to access the database by those who do not download images. This is
           especially recommended, since none of the further pages requires
           the use of graphics;

    (b)   Some explanation of the role of UN/ECE and the Espoo Convention
           could prevent misunderstandings; so could a brief description of
           what kind of information from what sources can be found in the
           database.

36.   On the "What's New" page an explanation or even a link to projects that
are older than one year (but maybe still open) could help visitors to find
what they did not find there.

37.   If the "© by Authors" note was in the first column on the left, below
the small ENIMPAS logo, some misunderstandings could be prevented.

V.   NAVIGATION ON THE WEB SITE

38.   The navigability of a Web site refers to how easy it is to get to the
relevant page, how clear it is on each page where the users are within the
site, and how clear it is what they will find on the site and what they will
not. It is very important that users always know what they can find on the
Web site and where. To assist in this, Web sites usually include a navigation
bar on each page, or at least a "back" button, or a site map.

39.   The ENIMPAS Web site is relatively small and not very complicated.
Navigation starts from the front page. On each of the other pages, a small
ENIMPAS logo links back to the front page. No other navigation tools are used.

40.   Because all links from the front page are on the images, navigation is
possible only after downloading the large graphic images. Most links point to
an interim page (an html file), which then immediately takes the user to
another (shtml) one. As a result, clicking on the "back" button in the browser
does not take the user back to the previous page, but after a few seconds the
user ends up on the same page again.

41.   There is no "New search" button on the search pages, although this would be very helpful in many cases.

42.   In general, navigation on the ENIMPAS site is fairly straightforward. It could nevertheless be improved by:

        (a)   Adding an alternative text-only or a combined version of the front page;

        (b)   Adding a navigation bar on each page;

        (c)   Excluding the interim html pages between the front page links and the real shtml pages;

        (d)   Adding a "New search" button on the search pages.

VI.   PROVIDING INPUT

43.   National focal points for the Espoo Convention, and maybe some other "privileged" users, have special permission to enter or change information in the database. These people have individual passwords, with which they can access the input forms. The input forms run on a secure server; this ensures that the passwords cannot be stolen. The input forms can be accessed only with the Netscape browser; Microsoft Internet Explorer cannot be used.

44.   A four-page, illustrated manual was prepared by the ENIMPAS operators. It describes in detail how one can enter or change data in the database. With this manual, providing information is simple, no special technical skills or training is required. The input forms are simple and easy to use. Text can be typed in or copied and pasted from another file. Additional HTML formatting (character and paragraph formats) is possible for those who are familiar with the html code setting.

45.   After the completed forms are submitted, the information is not automatically published, but goes to the operators, who check it before forwarding it to the database. This ensures that no fake or accidentally entered information is published. Only those who entered a piece of information can change it later.

46.   One issue was raised about providing input. It is a policy question ratger than a technical one. Until a project is entered into the database by its country of origin, the affected countries are not able to enter their data on that project. This kind of access issue may need to be revised at the policy level. A proposed technical improvement is to marked the fields of "obligatory text" in the input forms more strikingly.