ICPDR Information System Danubis 1.0

Reconstruction Analysis
version 1.0

>> History of changes

Change date	Doc. version	Change description	Author
03.04.2006	1.0	New document	Michal Rusko
02.05.2006	2.0	Analysis and diagrams	Michal Rusko
07.07.2006	2.1	Diagrams update and description	Michal Rusko
07.09.2006	2.2	Overall update	Michal Rusko
18.10.2006	3.0	Finalization	Michal Rusko
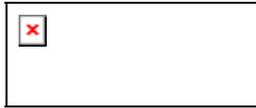
 # Table of contents

1 Objective and Scope

UNDP/GEF Danube Regional Project supports the ICPDR in redesigning and reconstruction of present Information System Danubis, which serves as an information Portal for both internal and external users.

The new portal will replace the existing information system and introduce a range of new and modified features.

Primary goals of the project to analyze and make recommendations for:

1. **Content of the System**

   - Review and propose reorganizing and regrouping the menu elements on the navigation pane, without altering information or data.

   - Review and re-design the help system mainly from the user point of view (not administrator) to assist with navigation when finding specific type of information/application and everyday work in the system. This would also include preparation of a "tour" of the system and its features for new users after their first log-on.

   - Facilitate reviewing of available information and removing redundant and outdated information, in close cooperation with a team of people consisting of one member of ICPDR group. This would be also enforced and supported by re-designed information system.

   - Re-design the personal homepage for users, mainly in terms of complexity and present available information in more understandable way.

   -

2. **Processes in the System**

   - Develop automated process in the system for adding new users and assigning rights to use the system in order to minimize administration time.

   - Develop processes to enable all users to add and edit a new event concerning his/her interest group.

   - Develop processes for the document control; the system should have good access right management and offer validity parameters and archiving option in order to keep the system up-to-date.

3. **Design of the System**

   - Clean up the design of pages to make it more readable, considering design and ergonomics best practices

   - Improve overall navigation and the basic system layout in terms of information and controls on the page, looking-up for other information within the system, interactivity and live appearance.

⟫ 2 Users' survey

User survey are one of the main sources of information when analyzing information systems, as they provide good feedback from users on analyzed system.

The current Danubis Survey II was launched to have an overview on usage of the ICPDR Information System as such, usage of specific functions and their importance for users as well as additional required functions that could be included to the system.

The questions in the Survey were designed taking in consideration the previous Danubis Survey I and information collected from project team meetings.

2.1 Survey questions and answers

2.1.1 User information

Q1. What is your position in ICPDR?
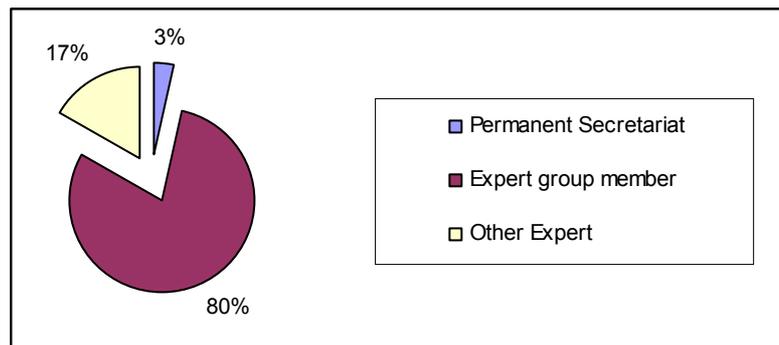
Q2. Which of these options describe best your activities in ICPDR Information System?
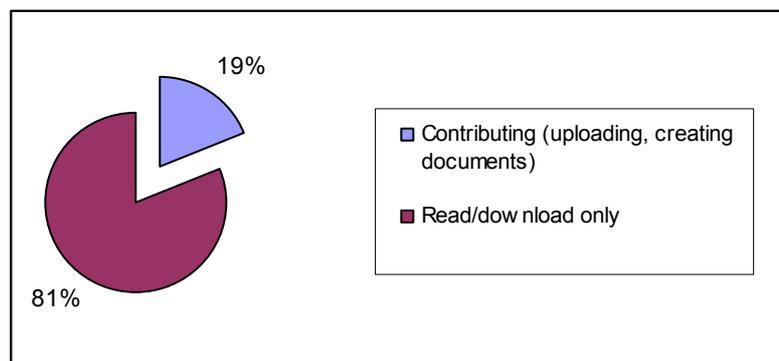
Q3. How would you describe your knowledge in computer and information technology areas?
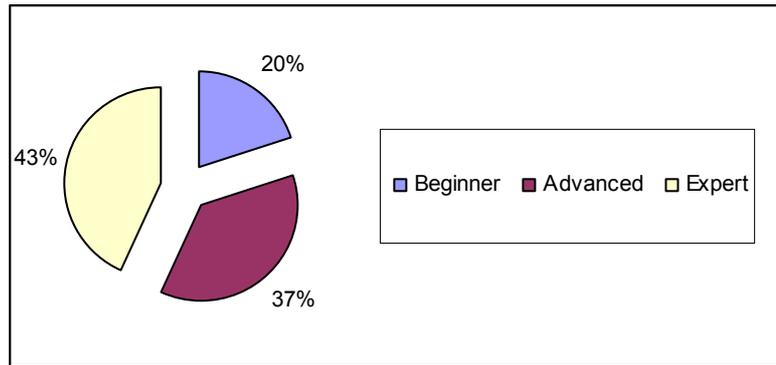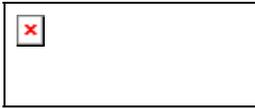
2.1.2 General questions

Q4. How often do you use the ICPDR Information System approximately?
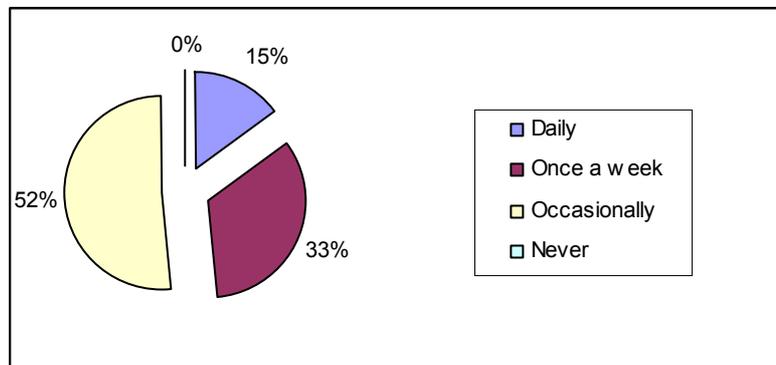
Q5. How much time do you typically spend in the ICPDR Information System (per visit)?
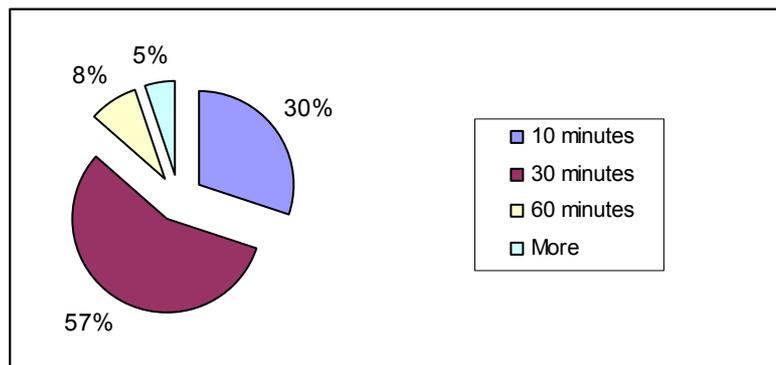
Q6. How important is the Information System to your work within the ICPDR currently?
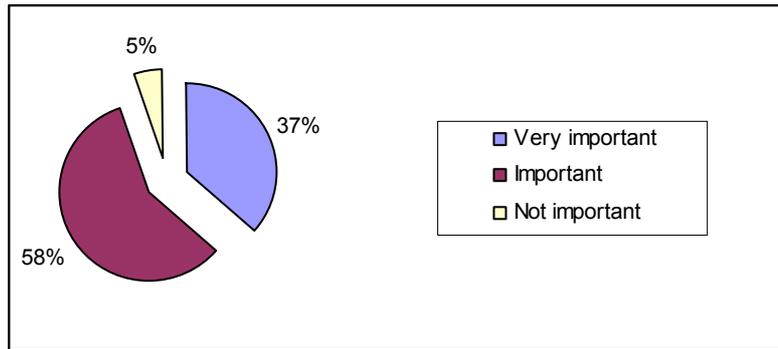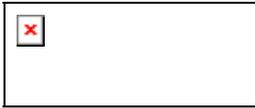
Q7. How would you describe the ease of use and navigation in the current Information System?
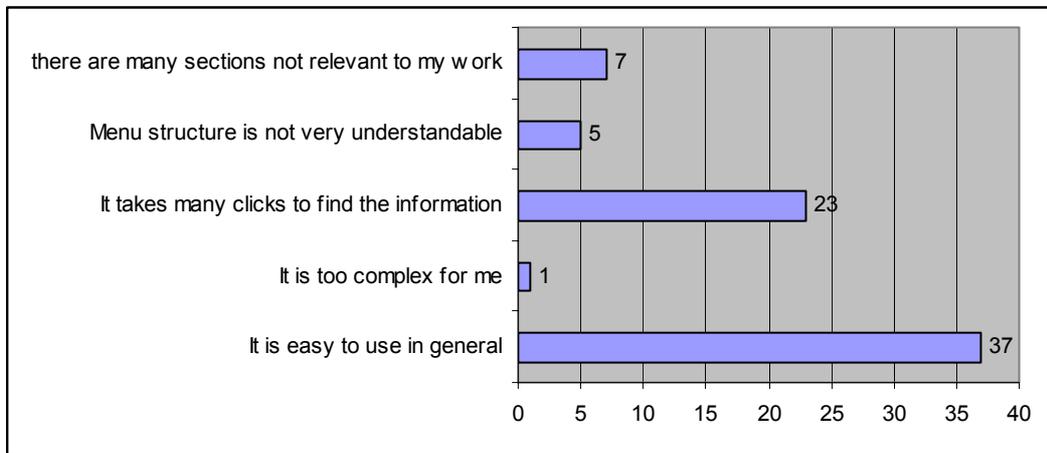
Q8. What do you think about the search function?
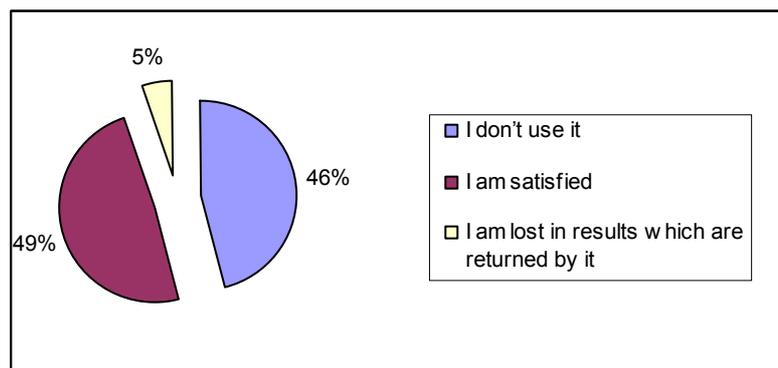
Q9. Do you find up to date information in the Information System?
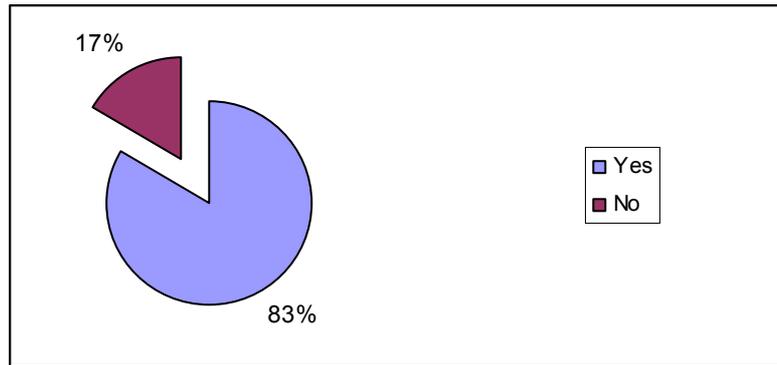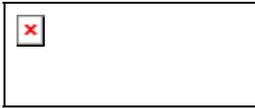
Q10. Importance of using the ICPDR Information System for different tasks.
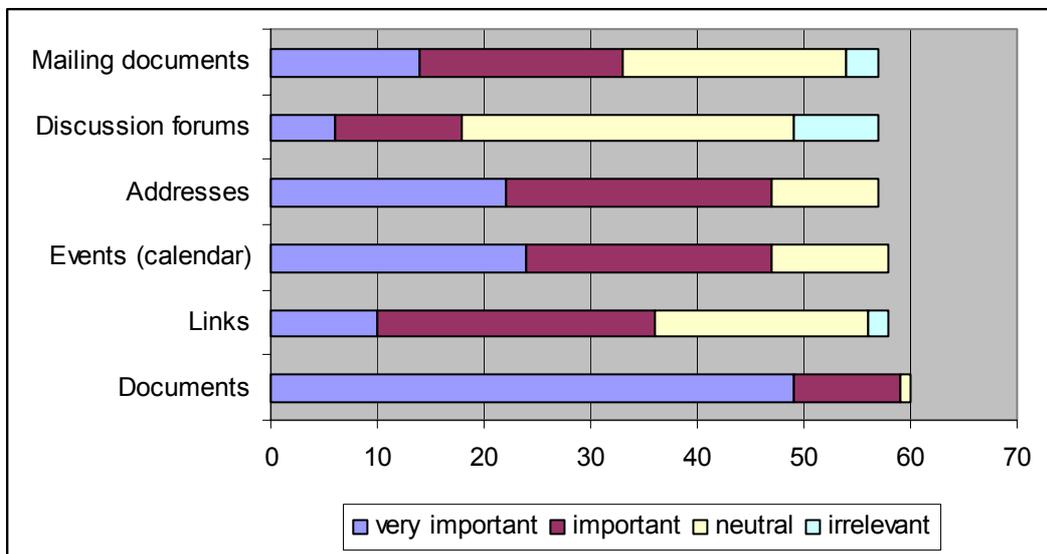
Q11. Which databases do you use?
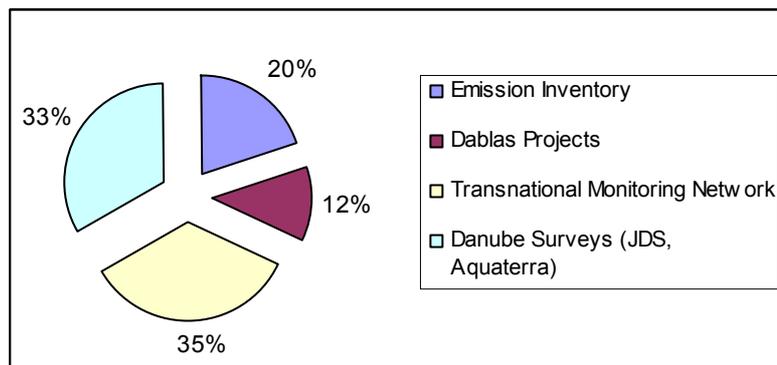
Q12. Do you export data from the databases?
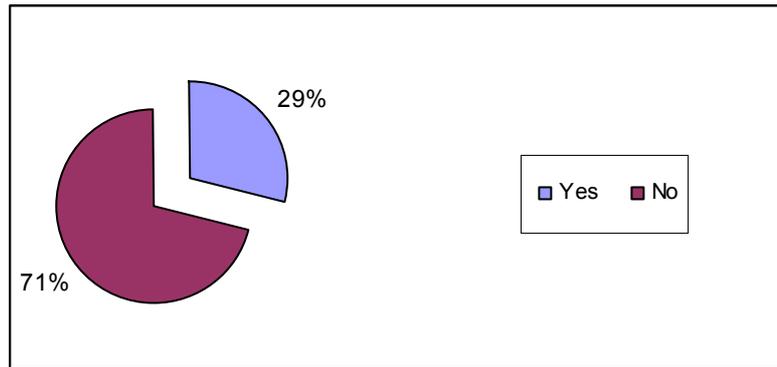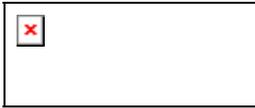
Q13. Your satisfaction with using the ICPDR Information System for different tasks.
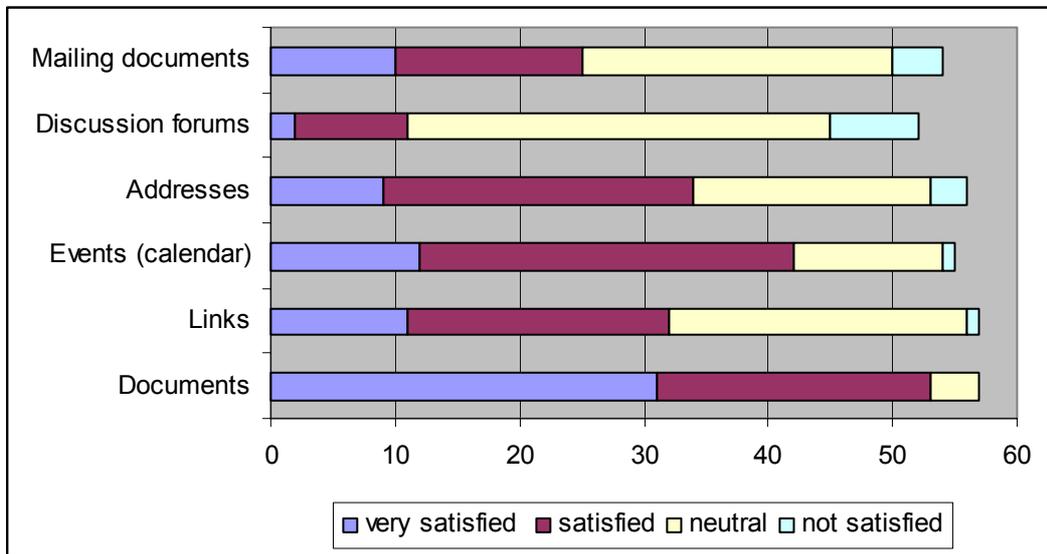
Q14. Which future enhancement would you like to see in ICPDR Information System?
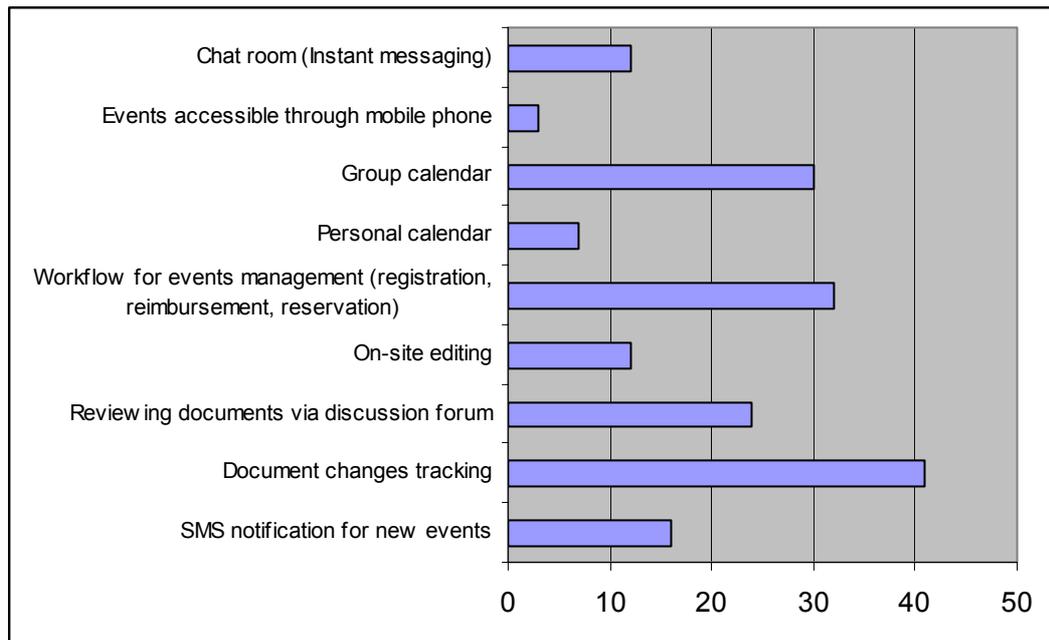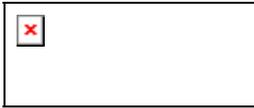
Q15. Which important task/function is not covered by the Information System?

1. I'm satisfied

2. general overview about (long-term) processes and state of affairs

3. for this time all my interests are covered

4. very important function consists in well defined mutual linkages of all Danubis components; these linkages should be ranged within clearly specified system.

5. detailed analysis

6. workshops

7. knowledge map - docs, links, etc. organized by geographic, thematic and other categories

8. GIS import

Q16. What do you think is the biggest advantage of ICPDR Information System?

1. existence and fast operation

2. the continuity for the time of ICPDR existence and same data/information even before of that, being accepted and uploaded by the EG with PS support

3. keeping history of documents, meetings, etc.

4. the relevant information on one place

5. having relevant Danube information on one place, exchange of information

6. finding meeting information and events

7. its existence and diversity. practically all information is available

8. all information are important
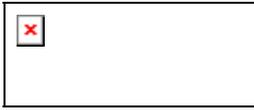
9. documents sharing

10. availability of data, documents, methodology, connections

11. to get information from different working groups and different levels of the ICPDR-organization in time

12. his existence and the possibility to inform the public and expert groups

13. to be up to date with the information and documents that are in the process of development

14. access to information, download possibilities for documents (reports, agendas, ..)

15. access to internal working area

16. access to new information

17. online access

18. it is not easy to unambiguous advantages of the IS.

19. instant connection

20. user-friendly

21. the exchange of information and documents within the expert groups; announcement for different kind of events

22. the possibility to define folders for notification, eg. for my expert group and selected other topics

23. fast and easy way to have information

24. all Danube/ICPDR - relevant information is (or should be) there & updated

25. quick access and overview of status of important documents. contact network to key persons in DRB (to be improved!)

26. smart, fast, accurate

27. information of new man-caused effects

28. working documents available on-line

29. no sending of large emails needed any more. fast and simple!

30. fast distribution of a relevant information

Q17. What do you think is the biggest disadvantage of ICPDR Information System?

1. the search function needs to be more performing, with possibility of covering XXXX a number of smaller but selected topics/ issues within XXXX what is xxxx Danubis[MR1]

2. the big document can be a problem

3. the system works very well, a disadvantage appears only if documents are not put into the system

4. maybe to complex for public

5. info sometimes is "isolated" in terms of history (see Q15)

6. minutes of meetings or other documents are too late in the System to be of help.
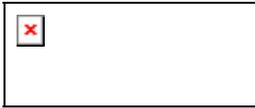
7. from my point of view the structure of the databases are the weak point in the ICPDR information system. They have to be more flexible.

8. long/difficult hierarchies

9. info potential to be used is not well used and updated by the various users (outside of secretariat)

10. too complicated structure, some functions are not used

11. looks a bit boring, not interesting and gray

12. probably too complicated structure and problematic access to Internet in some countries (slow speed for downloading large files)

Q18. Any further comments?

1. "comment to Q13: postal addresses are without of EG members"

2. I enjoy the e-mail notification about new items in DANUBIS and the possibilities to choose a personal starting page

3. sometimes it is not easy to get into the System.

4. not too many animations, please. rss/atom feed for changes made would be great

5. "comment to Q13: addresses are often out of date"

2.1.3 Questions for specific parts of the Information System

2.1.3.1 Personal homepage

Q19. Do you find the Personal Homepage useful?
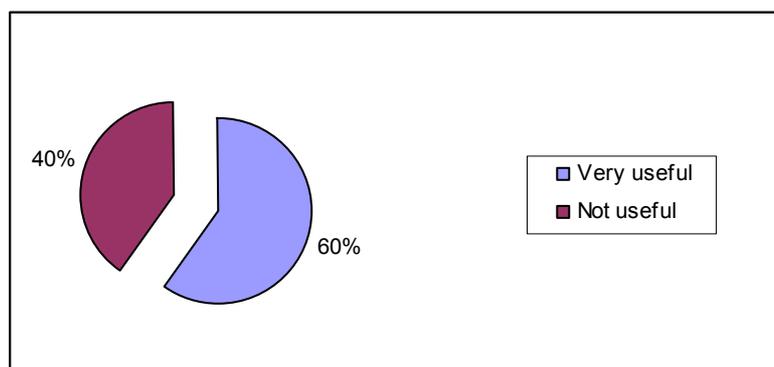
Q20. Do you use the Personal Homepage as a starting point for browsing the ICPDR Information System?
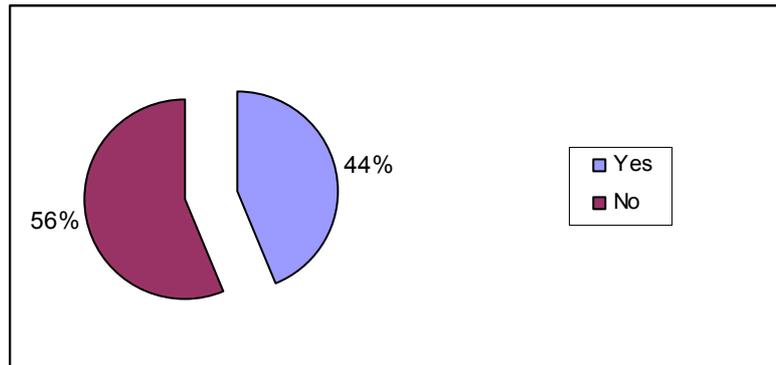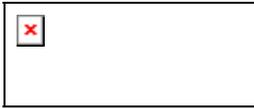
Q21. Do you have at least one favorite / interest list filled in?
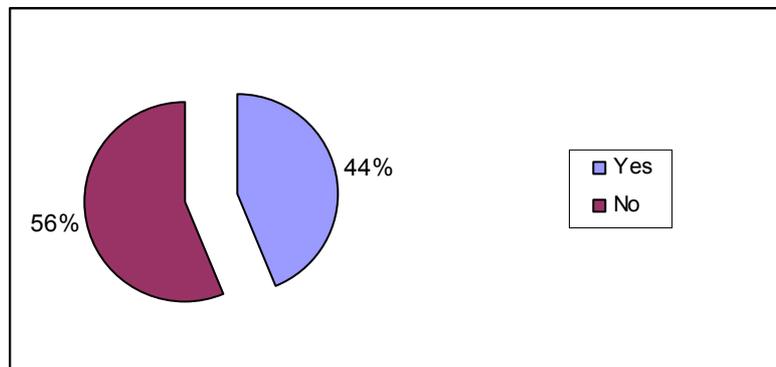
Q22. Do you use the Personal Homepage to manage your notifications?
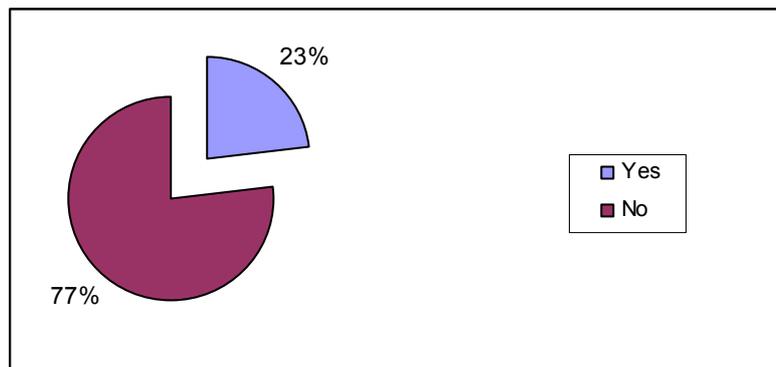
Q23. Any further comments?

1. I just got my homepage on February 9
2. too complicated to get to the document I am searching
3. using the Information system very occasionally I really cann't find the need of Personal Homepage.
4. I linked in one favorite but it is empty since then …
5. I would prefer to have more customizable home page and more attractive
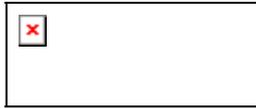
2.1.3.2 Discussion forum

Q24. How often do you use the Discussion Forum?
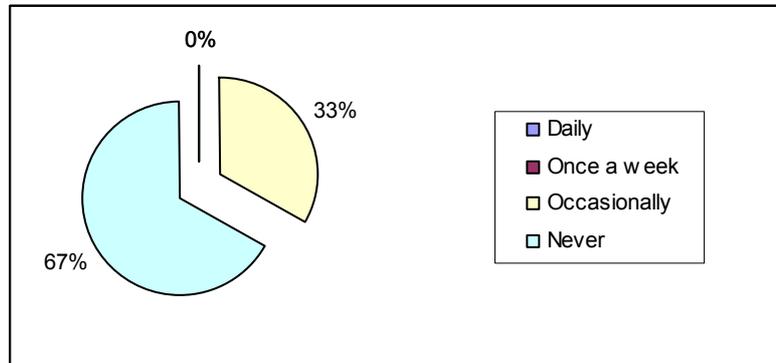
Q25. Do you think that e-mail communication is better than web discussion? If yes, why?
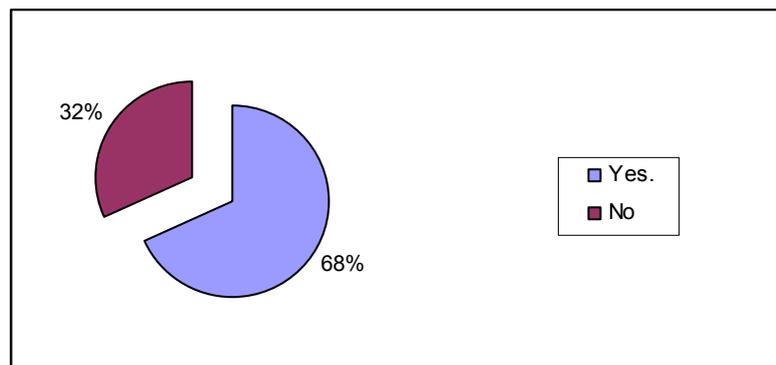
Reasons, why yes:

1. no opinion
2. sometimes is better because you are warned about the discussion in real-time
3. I can check a successful deleting of the message
4. e-mail communication have addresses on which was send
5. it is a question of habit
6. response as yet not assured
7. forums are rarely used by other colleagues
8. time availability
9. it is more familiar way for me but I would not answer YES
10. most of the experts have not enough time to check discussion forums for new entries, so it is much better to bring information/questions etc. directly to the persons involved by e-mail
11. because you can have time to answer, time to think at the problems
12. it's more private
13. access is independent of ICPDR web page / login status

14. more user-friendly - I receive what I need to have

15. we are familiar with

16. direct connection and saving time

17. I always get the concrete answere

18. so caled "chatting" might take me a lot of time

19. it is more active

20. both ways are OK

21. personal reasons

22. this kind of communication is more direct, easy and in the same time you can get always contact back.

23. time to answer, quick enough!

24. because it makes more concentrated

25. this is depending on the work which has to be done. For working in an Expert Group email-communication is much better because emails are reviewed daily within "normal" work. If the communication is for working on a national problem or scientific question where you are interested in the opinion of other people web discussion will be the best solution.

26. it is more efficient

Q26. Would you prefer division of the Discussion Forum into:
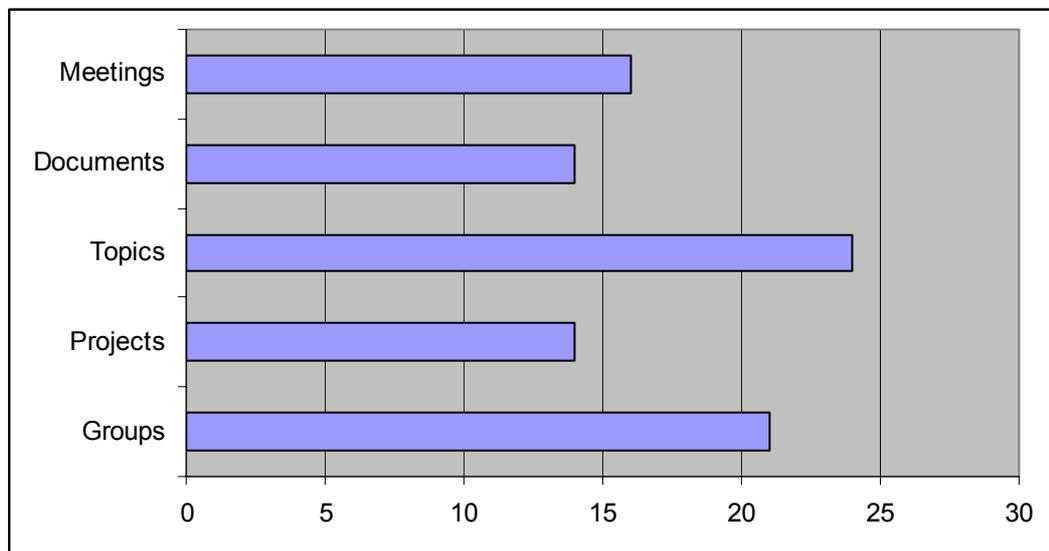
Q27. Any further comments?

1. The selection of the division of the dialogue forum can be one facility to be added but discussion starting has to be warned to potential participants like the documents uploading

2. I do not use Discussion Forum, so I cannot impressed with any standpoint.
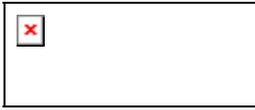
3. Discussion forum is a good thing, but it never became a favorite communication channel in the ICPDR

2.1.3.3 Meeting Documents and Calendar of events

Q28. How often do you use the Meeting Documents and Calendar of Events?
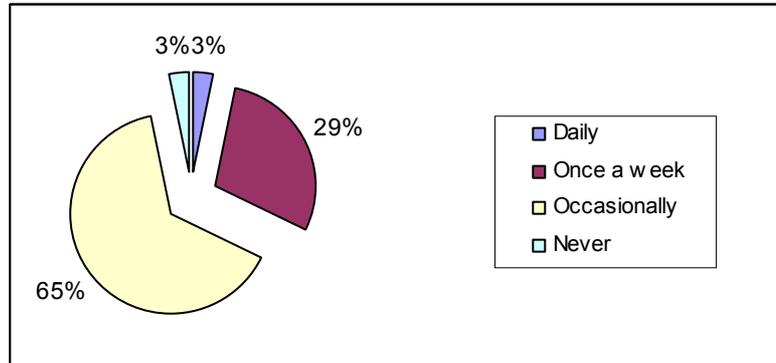
Q29. Would you like to have a possibility to export events information?
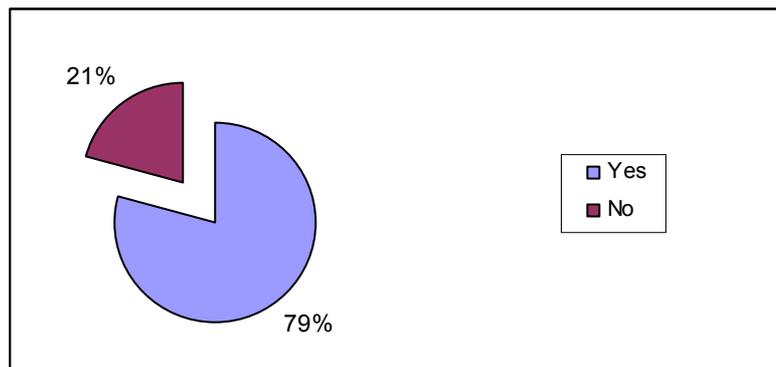
Q30. Would you like to use online confirmation for meetings?
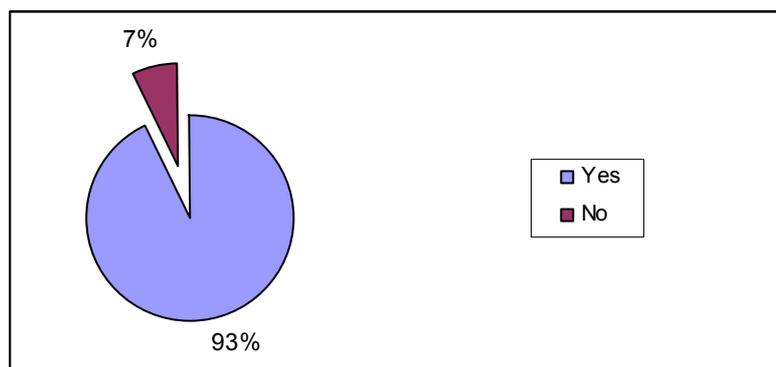
Q31. Would you like to use online reimbursement forms for meetings?
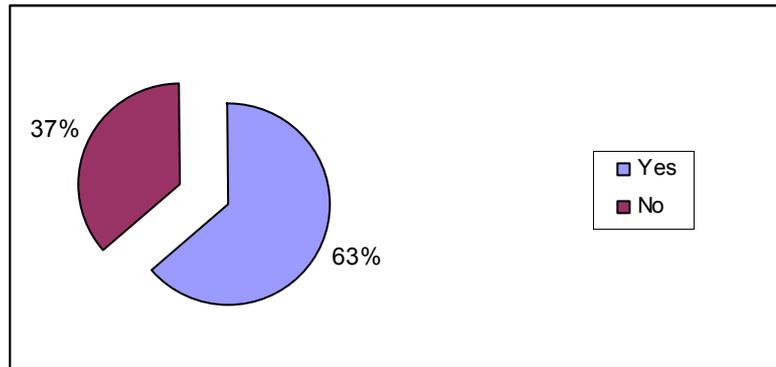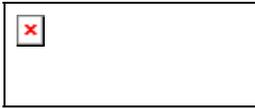
Q32. Any further comments?

1. Organization of meetings handled by e-mail is also very comfortable

2.1.3.4 Expert groups (Working area)

Q33. How often do you use the Expert Groups section?
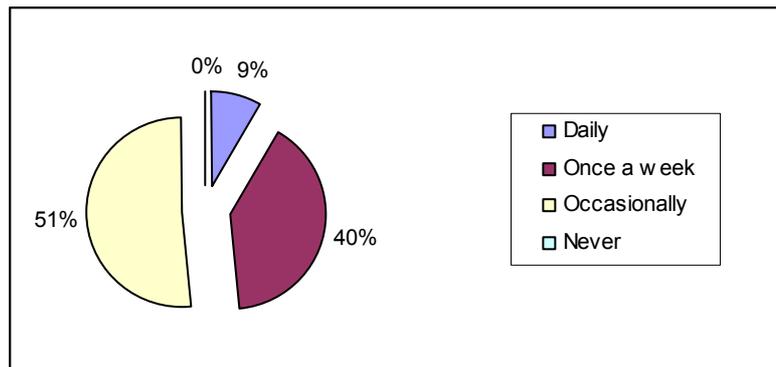
Q34. How do you like the folder structure?
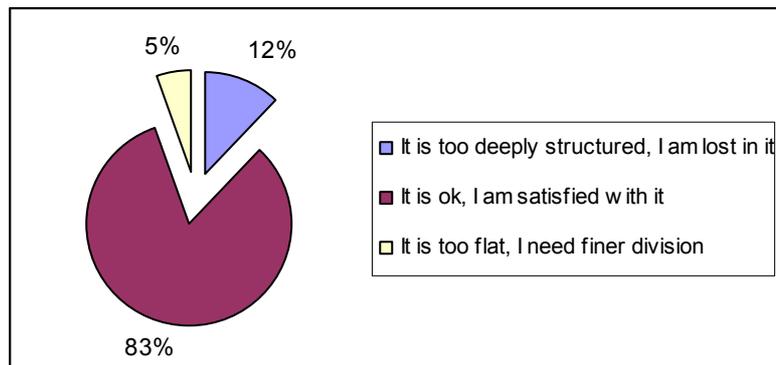
Q35. Are the titles of folders clear?
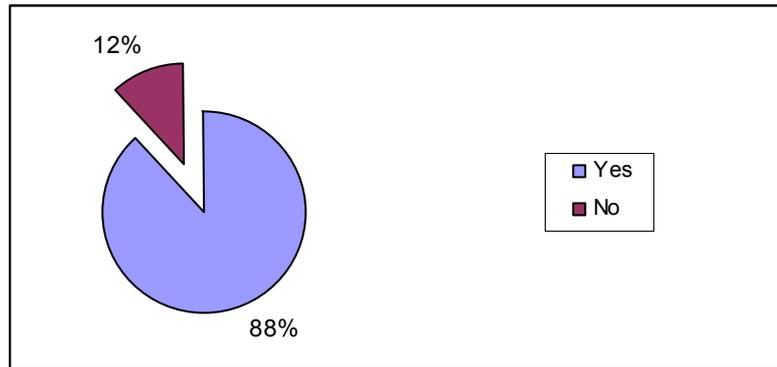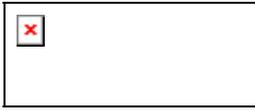
Q36. How do you usually share your documents with other members of your group?
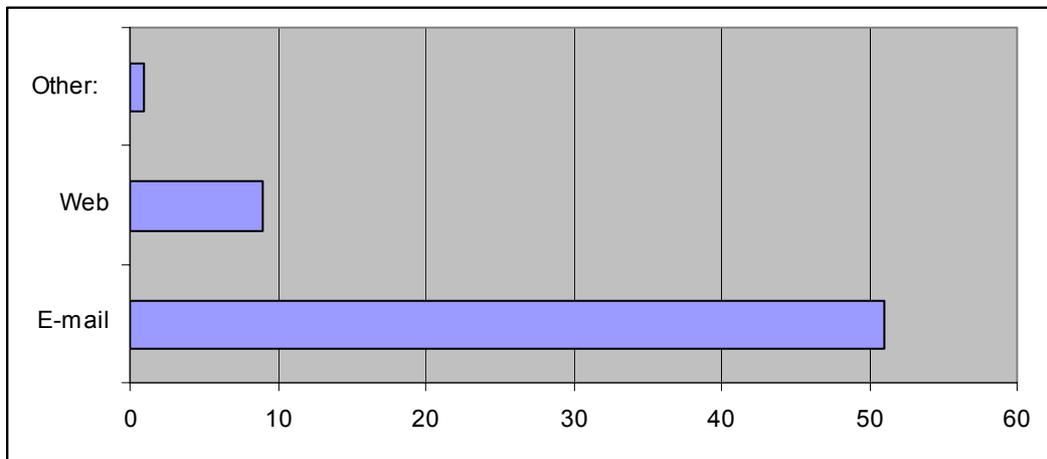
Other types of documents sharing:

1. phone, fax

Q37. Would you like to have an option to make comments on documents directly in the system (like a discussion forum to document)?
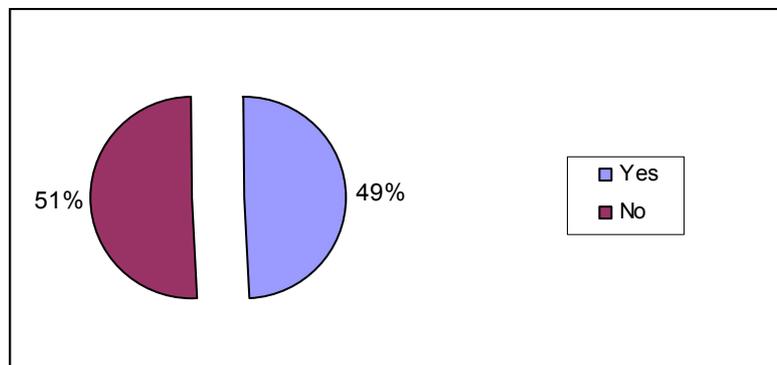
Q38. Would you like to share information about future interesting events with other group members?
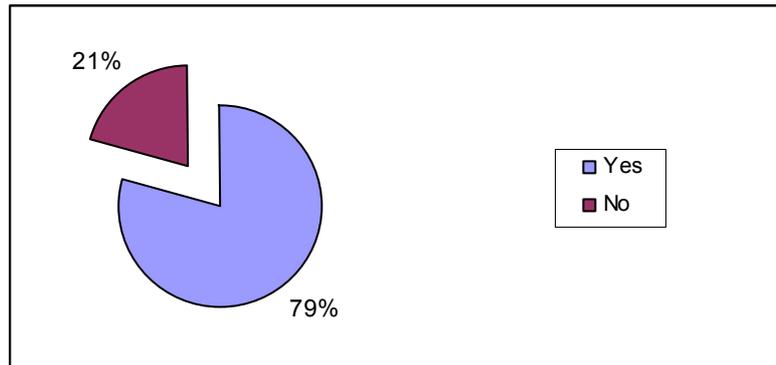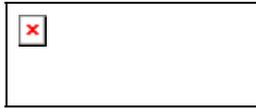
Q39. Which processes concerning your work in expert group do you execute frequently and is not covered by ICPDR Information System?

1. direct communication concerning data exchange, filling templates, etc. but I think that it is covered by the IS

2. it depends on circumstances and problems, which should be solved

3. national monitoring analysis

4. more about sediment

Q40. Any further comments?

1. "Comment on Q35: in addition: names of files are too long, not at head of filename!"

2. It would be easier for observers to send opinions on documents or ask something on-line only on working level. On the level of heads of delegations it should be sent by post or fax (signed).

2.1.4 Help system

Q41. Have you ever used the help system in ICPDR Information System?
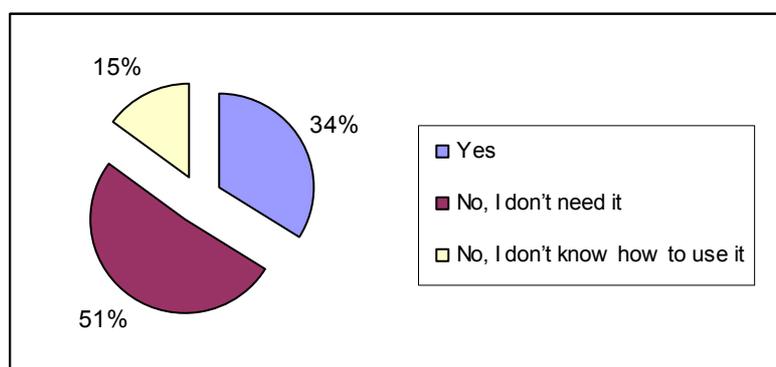
Q42. Which types of existing support is useful for you?

Chart showing support types with values:
- Tutorials (with animations): ~8
- Email Support: ~22
- Phone Support: ~6
- Online help web pages: ~19
- Frequently Asked Questions and Answers: ~17
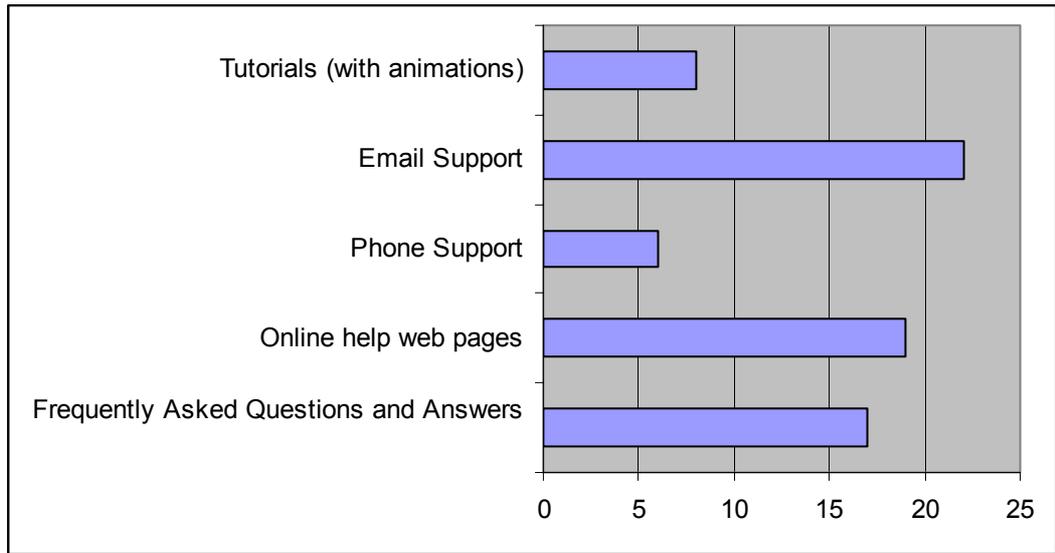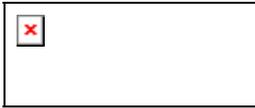
Q43. Which types of support would be useful for you?

Chart showing:
- Instant messaging (chat): ~10
- Web support: ~26
- Training sessions at Expert Group meetings: ~19
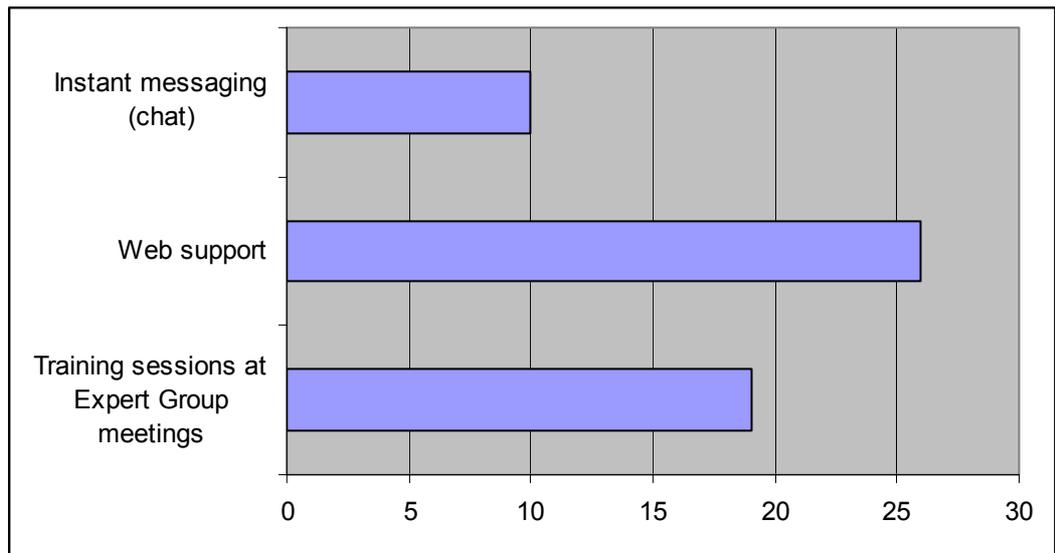
Q44. Would you like to undertake an introduction tour of the ICPDR Information System, which would show you all functionalities?

Pie chart: Yes 78%, No 22%
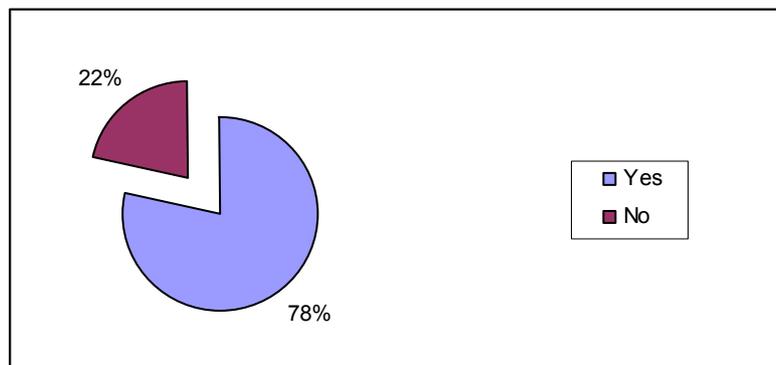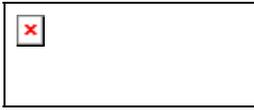
Q45. Any further comments?

1. "Comment on Q35: if possible to have more detailes but available at the wish of user (active click)"

2.2 Survey analysis

2.2.1 User information

The Danubis Survey II was realized both in electronic and printed forms. The feedback is based on the answers from 60 people who undertook the survey.

The participants of the survey are mainly Expert groups' members. There was a very low attendance from the ICPDR Secretariat and so the results are highly influenced by this fact.

Most of the users (81%) are only reading and downloading documents from the information system. The rest are people from secretariat and representatives from each expert group, who are actively contributing to the information system.

In the question of computer knowledge, 80% of the users consider themselves as advanced or expert level computer users. They use computer on daily basis and are familiar with most of today's technologies.

2.2.2 General questions

Most of the users use the Danubis information system occasionally or once a week. Only 15% of the users use it every day. The time spent while using the systems ranges from 10 to 30 minutes per session.

For most users (95%) the information system is either important or very important. It is essential for their work and contains important information and documents. Only 17% of the users find that the information is not up to date, which is a considerably better number than one found out in first survey. The reasons for this can be more. It may be influenced by the set of users who participated in survey. Or it may be the result of publishing of the all important documents in the information system instead of sending them by e-mail.

The answers from the questions about the ease of use and navigation in the current information system show that users consider the system as an easy one to use but not very ergonomical. It takes many clicks to find the information in it and there are many sections which are not relevant to the logged-in user which makes it less readable. Some users feel that the menu structure is not very understandable. This applies even more to users who are new to the information system – which was picked up during first meetings with ICPDR. The interface has to be rebuilt to be more user friendly – taking in consideration new users and users who use the information system every now and then. Besides them, also daily users who got used to the system do need redesign following good practices, which would help them with information system personalization - according to their needs.

Importance of using the ICPDR Information System for different tasks can be divided in two groups:

1. Important or very important functions

▪ Among the very important functions belongs the ability to access and share the project and other documents, access to information about upcoming events and access to addresses.

2. Neutral functions

▪ Among functions assessed as neutral we find functions for emailing documents and collection of links. The discussion forums were too assessed as neutral with some people assessing it as irrelevant. This is mainly a result of current discussion forums being less interactive and containing not so important information. Information is mostly shared through documents sharing.

Database access is more or less evenly distributed among all databases and only 29% of the users need to export data from it in any means.

The satisfaction with using the ICPDR Information System Danubis for different tasks is more or less copying the importance of those functions. Mainly with the documents and events management were users either very satisfied or satisfied. The satisfaction with discussion forums was very low – resulting in little or no usage.

Analysis of future enhancements show that most users want to have availability of tracking document changes, advanced workflow for events management and group calendar features. Other also important enhancement was ability to review documents via discussion forum. Current discussion forum allows this generally, but isn't "connected" to documents and is very static. Among other features worth mentioning belong on-site editing, personal calendar and chat room (instant messaging).

Mostly mentioned missing functions from Danubis Information system according to users were:

1. general overview about (long-term) processes and state of affairs
2. knowledge map – system for organizing documents, links, etc. by geographic, thematic or other categories
3. well defined mutual linkage among Danubis components
4. workshops

Selected biggest advantages of the Danubis Information system:

1. its existence and fast operation
2. keeping history of documents, meetings, etc.
3. all relevant information in one place
4. documents sharing, no need for emailing large documents
5. information about events and meetings
6. fast information distribution

Selected biggest disadvantages of the Danubis Information system:

1. too complex, long/difficult hierarchies
2. search function not working very well

3. little possibilities of updating content by users outside secretariat

4. downloading large documents

5. databases structure is very strict, not flexible access

6. outdated information

Selected further comments about the Danubis Information System:

1. sometimes it is hard to get into system

2. addresses are often out of date

3. good e-mail notification about new items

4. RSS/Atom feed would be great

2.2.3   Specific parts of the Information System

2.2.3.1 Personal homepage

The Personal homepage is by 60% of the users considered as very useful but less that half of the users are actually using it. 44% users use Personal homepage as a starting point in the Information System, 44% of the users have at least one favorite/interest list filled in. Only 23% of the users use it to manage their notifications.

Selected comments on Personal Homepage:

1. I would prefer to have more customizable and attractive home page.

2. I linked in one favorite but it is empty since then.

3. I am using the information system very occasionally and I can't find the need for Personal Homepage.

2.2.3.2 Discussion Forum

The discussion forum is used occasionally (33%) or never (67%). There could be more reasons for this. One of them is that users think that e-mail communication is better than web discussion. Also the discussion forums currently implemented in the Information System are not linked with topics at Expert Groups and are not linked with documents either. Linkage with documents would be appreciated by users, which results from answers in survey.

Other main reasons why e-mail communication is better than web discussion:

1. a question of habit

2. response as yet not assured

3. forums are rarely used by colleagues

4. access is independent of ICPDR web page / login status

5. e-mail messages are reviewed daily with "normal" work

6. you are warned about discussion in real-time
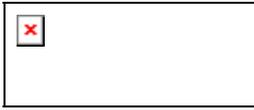
7. e-mail communication is more direct, easy and in the same time you can always contact back

The preferences in division of the Discussion forum show that users want to organize forums mostly by topics, groups and meetings, which is in contrast to previous answers. This probably shows that users are commenting more on existent status of the Information System and not on future possible enhancements.

1. possible participants of the discussion forum should be notified about starting of the new topic – exactly the same way like when new document is uploaded

2. discussion forum is a good thing, but it never became a favorite communication channel in the ICPDR

2.2.3.3 Meeting documents and Calendar of events

Users are using the Meeting documents and Calendar of events once a week or occasionally. Most users (79%) would like to have a possibility to export events information.

By far the most users (93%) would like online confirmation for meetings attached to meeting information.

63% of the users would appreciate online reimbursement forms for meetings.

2.2.3.4 Expert groups (Working area)

The Expert groups working area is used most in the Danubis Information System. It is used mostly once a week or occasionally, but many users are using it daily. This depends on the user classification.

Most users (83%) think that the folder structure within expert groups is ok and are satisfied with it. 12% of the users think that it is too deeply structured and that they are lost in it. This could be easily solved by personalization of the structures. The problem with high complexity is accentuated when new users are learning how to use the Information system and also when occasional users who don't work much within the Information System are connecting to it.

The folder titles are mostly clearly named (88%).

The document sharing among the experts in expert groups is realized mostly by e-mail. Only few users are sharing documents using web. Other means of sharing are by phone or by fax.

Half the users would like to have a possibility to comment on documents directly in the system, which could increase the usage of web in documents sharing.

Only 21% of the users would like to have an ability to share information about further events with other group members. Users are mostly counting on secretariat to provide them with information about new events.

Processes concerning work in expert group that users execute frequently and are not covered by ICPDR Information System:

1. national monitoring analysis

2. more about sediment

3. it mostly depends on circumstances and problems to be solved
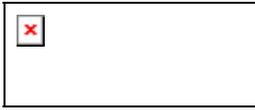
Selected comments on Expert groups (Working area):

1. Names of files are too long, not at head of filename!

2. t would be easier for observers to send opinions on documents or ask something on-line only on working level. On the level of heads of delegations it should be sent by post or fax (signed).

2.2.4 Help system

More than half of the current users do not need help system. 34% of the users do need it and only 15% of the users do not know how to use it.

For most people the best type of help system is email support and online web pages. Certain users consider Frequently Asked Questions and Answers as useful although there are not many Q&A in the current Information System.

Additionally, most people would like to have web support and training sessions at Expert groups meetings.

Most of the users (78%) would like to undertake an introduction tour of the ICPDR Information System, where all the functionalities would be presented.
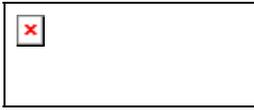
3 Analyses and recommendations

The survey was mostly focused on the functionalities of the Danubis and its key parts. This should be helpful for the re-design of the system in terms of functions.

The structure of the system as such was not really put in question, as this has to be discussed/agreed within a smaller group of experts at the Secretariat, assuming that not many users have experience with other information systems.

The current system is using a folder structure, where the folders cover different issues and their hierarchy is not very clear. Following the discussions with the ICPDR Secretariat staff and DRP, the basis for a new structure of the Information System should be the key activities of the ICPDR, taking into account administrative tasks of the Secretariat. Therefore, a system of views was proposed, as an optional solution to the existing system.

3.1 System of views

System of views can be perceived as a logical division of the system referring to users and objects in the system. The aim is to eliminate the amount of information displayed on page at the same time and to increase the transparency of the system and work efficiency. Navigation and understanding of the system will be improved, mainly for new users.

The first view the user will see when he/she will log into the information system would be General (Secretariat) View, combined with the subset of Personal view. This subset of Personal view (logged in user name, link to personal information and settings, etc) would be displayed in all views. General view would provide all the news, events and information for logged in user. It would display links to Expert groups – displayed in Expert group views. Each view has its own attributes, displays view-specific information and provides the tools needed for the particular view. Each view can have one or more modules (Calendar of events, Meetings, Documents and libraries).

The information is linked together in logical manner, depending on applicable access rights of the user. For example, one document can be displayed in more views. One event can be shown in global calendar and also in personal calendar.

All the views could be personalized to reflect user needs and preferences.
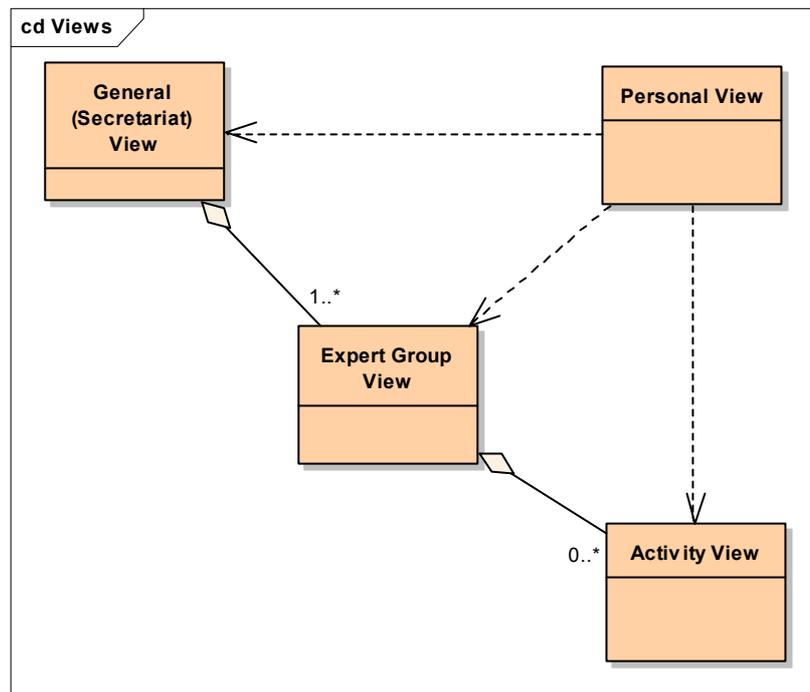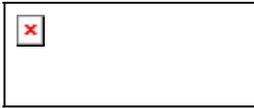
Diagram is showing the system of views

Diagram description table:

Class name	Class description
General (Secretariat) View	This is the main part of the information system and will be general and accessible for every user. In this view one or more Expert Group sections can be viewed or accessed.
Expert Group View	This section will be aimed at Expert Group members. In this view there will be information for Expert groups: documents, calendar, activities, meetings, etc. In this view user can access or display Activities views.
Activity View	This section covers activities within user group. Description, documents, calendar, discussion. There can be more activities for one Expert group.
Personal View	Personal view can be accessible and be seen from any other view in the information system. User can set preferences, its profile, display his/her own calendar, etc.
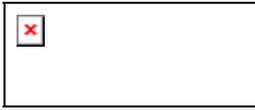
3.1.1 General (secretariat) view
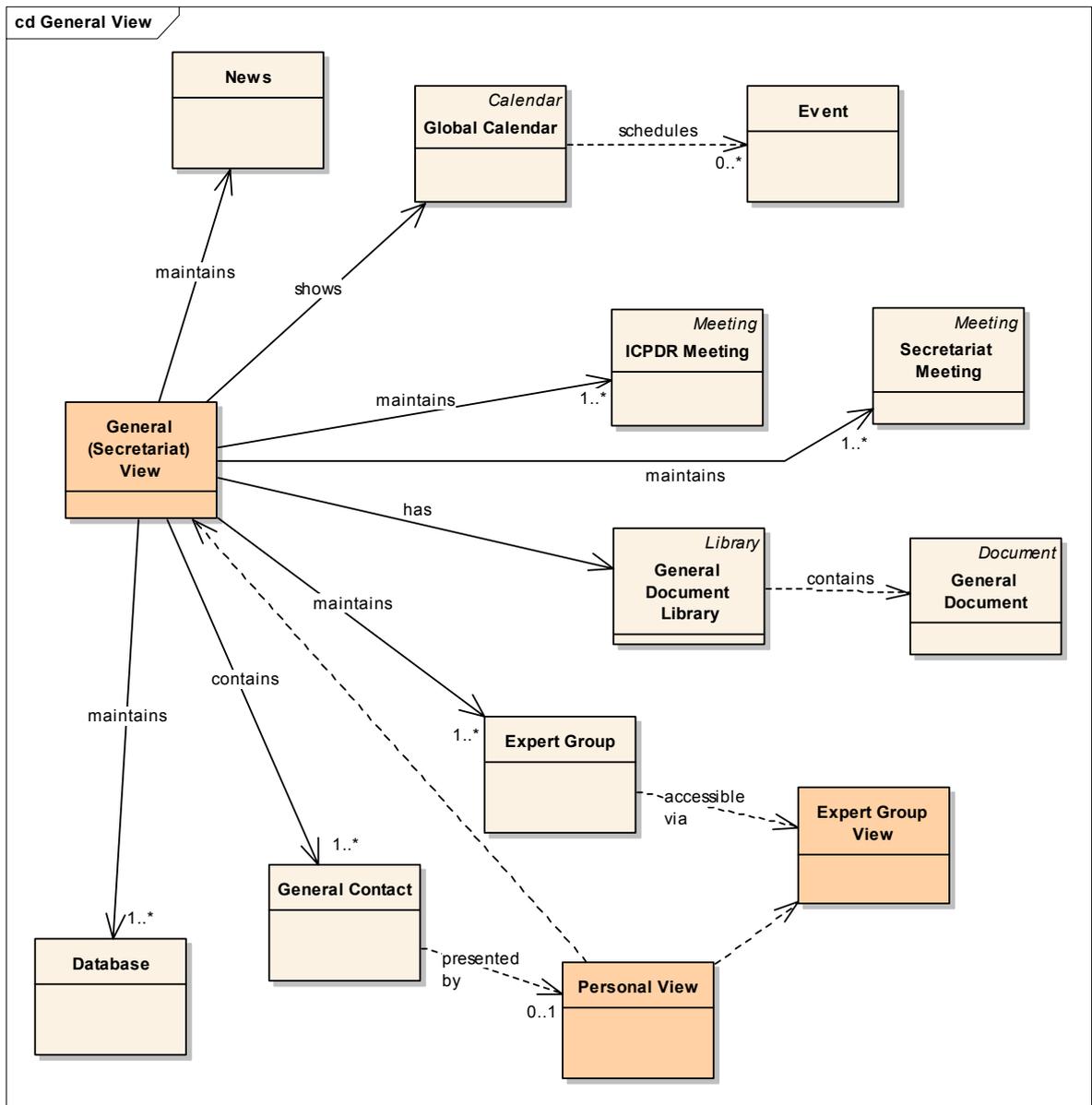
General (secretariat) view is basic access point aggregating information for every user. It contains a list of expert groups, general information, databases and calendar, etc.

Diagram description table:

Class name	Class description
News	News section will be a part of General view. Here will be displayed news for all users – system news, information about meetings, new activates, new projects, etc.
Calendar	This is a global calendar for all users where will be displayed all events (meetings, conferences, etc). Secretariat member can schedule a meeting from this calendar.
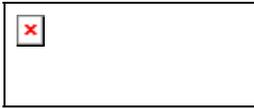
ICPDR Meetings	General view will be displaying information about past and upcoming ICPDR meetings with all the facts, documents, etc.
Secretariat Meetings	Information about secretariat meetings will be displayed here. These meetings will be manager by secretariat.
General Documents Library	Here will be basic policy and legal ICPDR documents concerning ICPDR, (the Convention, Rules, ToRs, MoUs)
Expert Groups	Expert groups view and consequently expert groups will be accessible from this view.
General Contact	General contact will be a general contacts database and also user profile information section. They will be both accessible through personal view.
Database	Either a link to database in ICPDR or database tables displayed within information system.
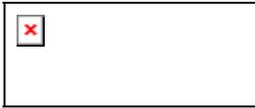
3.1.2 Expert group view
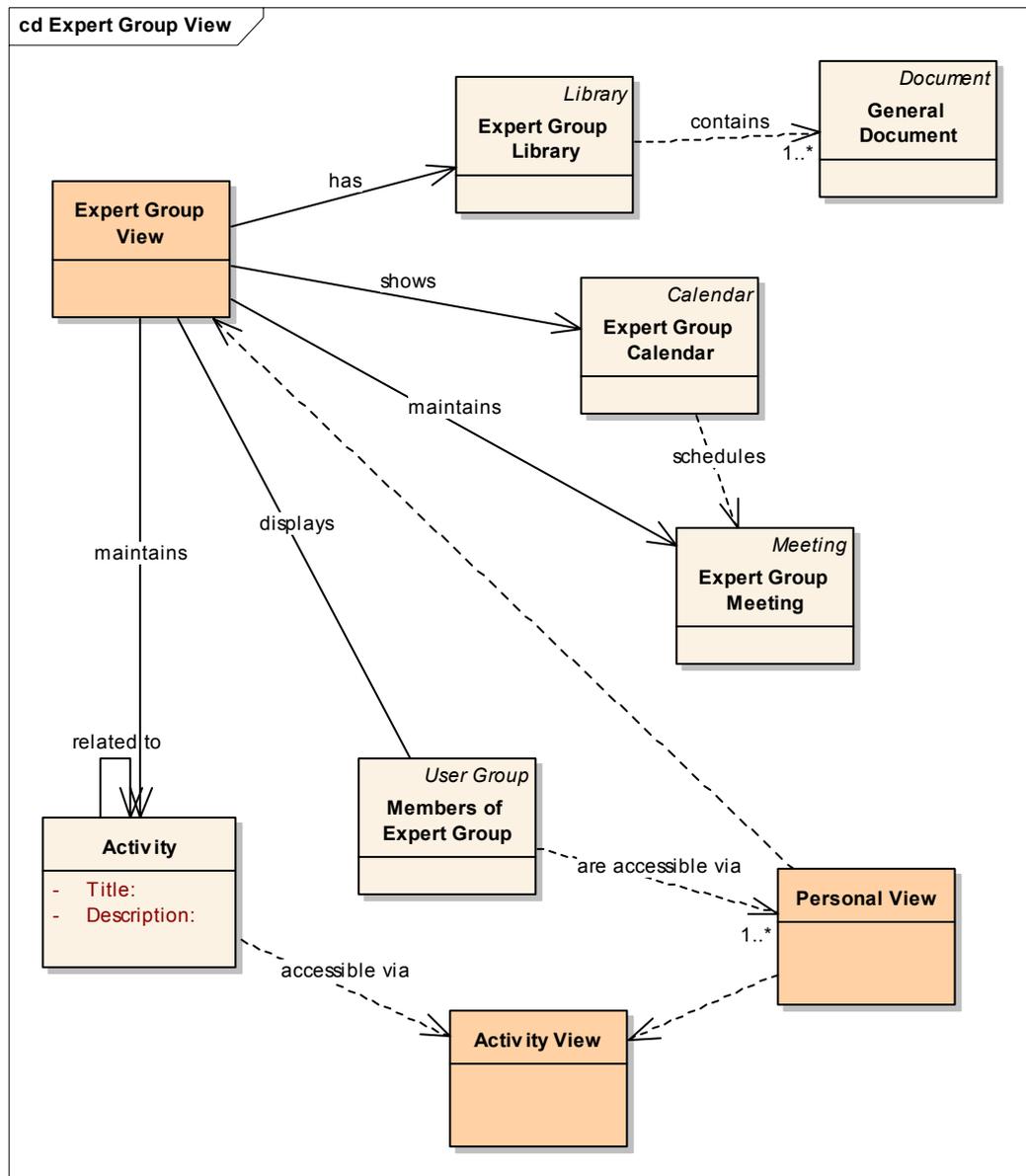
Expert group view is for members of expert groups. It shows summary information about expert groups, information about expert group meetings, documents, expert group calendar. There is also a list of assigned activities.

Diagram description table:

Class name	Class description
Expert Group Library	A library of documents available to expert group members, concerning expert groups meetings (meeting minutes), workplan, activities, projects, etc. Reports produced by the EG will be linked with the Activity library.
Expert Group Calendar	Expert Group Calendar will be displayed with all the upcoming events – meetings, conferences, activities
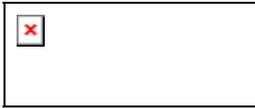
	milestones, etc.
Expert Group Meeting	Expert Group Meeting which will be show also in EG Calendar will create a main section of this view.
Expert Group Members	Expert group members will be accessible through personal view displayed in Expert group view. What do you mean here?
Expert Group Activity	Expert group can have one or more activities which can be accessible through Activity view.

3.1.3   Activity view
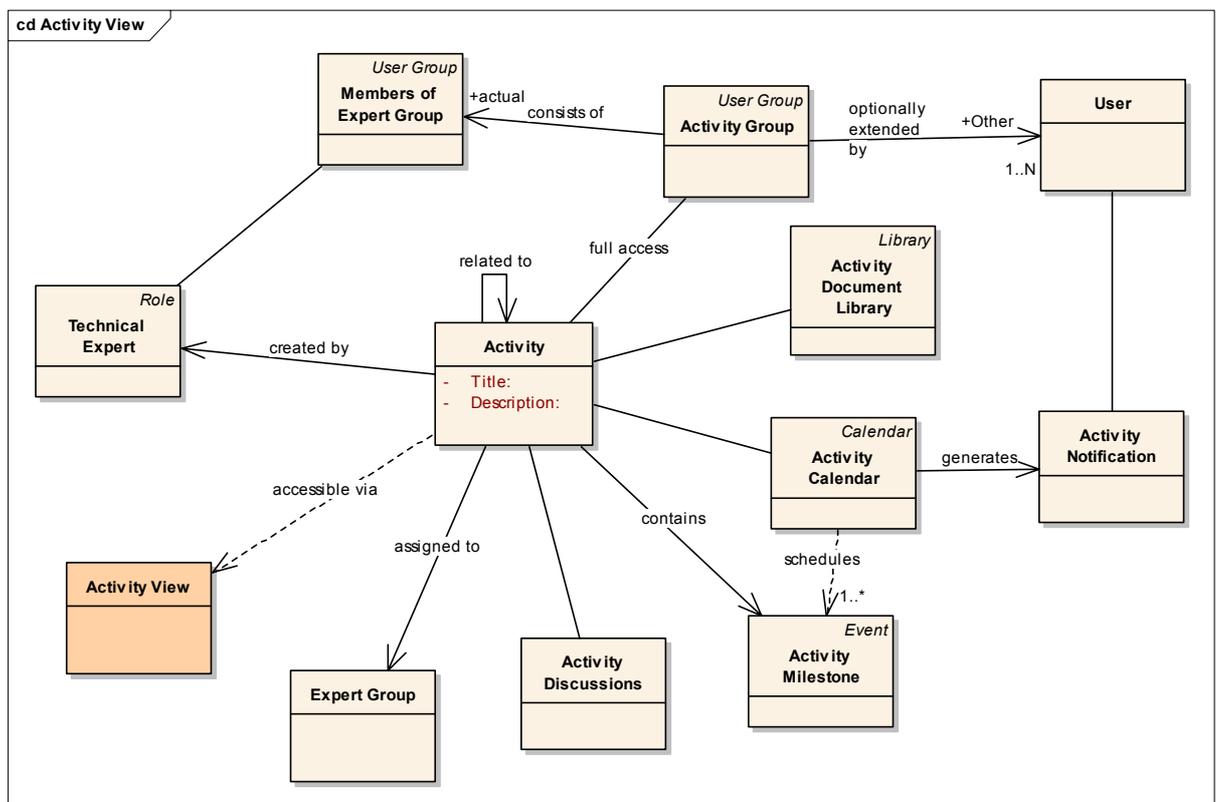
This view displays assigned activity with all the attributes and objects which participate in activity. The milestones and time information is shown in activity calendar. Activity is defined by the technical expert and is negotiated with expert group chairs and executive secretary. Activity is created in the system by technical expert.

Diagram description table:

Class name	Class description
Activity Description	Expert Groups have assigned activities which will be accessible through Activity View. Each activity has its title, description, milestones, etc.
Activity User Group	Activities will be created in system by Technical experts and are executed by users within expert groups, optionally by other defined users outside expert groups.
Activity Document Library	Each activity can have its own document library
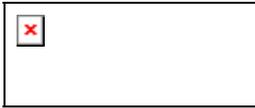
	(storage) where will be documents concerning particular activity, mainly reports, discussion papers, etc..
Activity Calendar	Each activity can have activity milestones, which can be show in activity calendar and can generate notifications to users.
Activity Discussions	Activity specific discussion can be accessed through this view. Users can discuss activity problems, milestones, etc.

3.1.4 Personal view
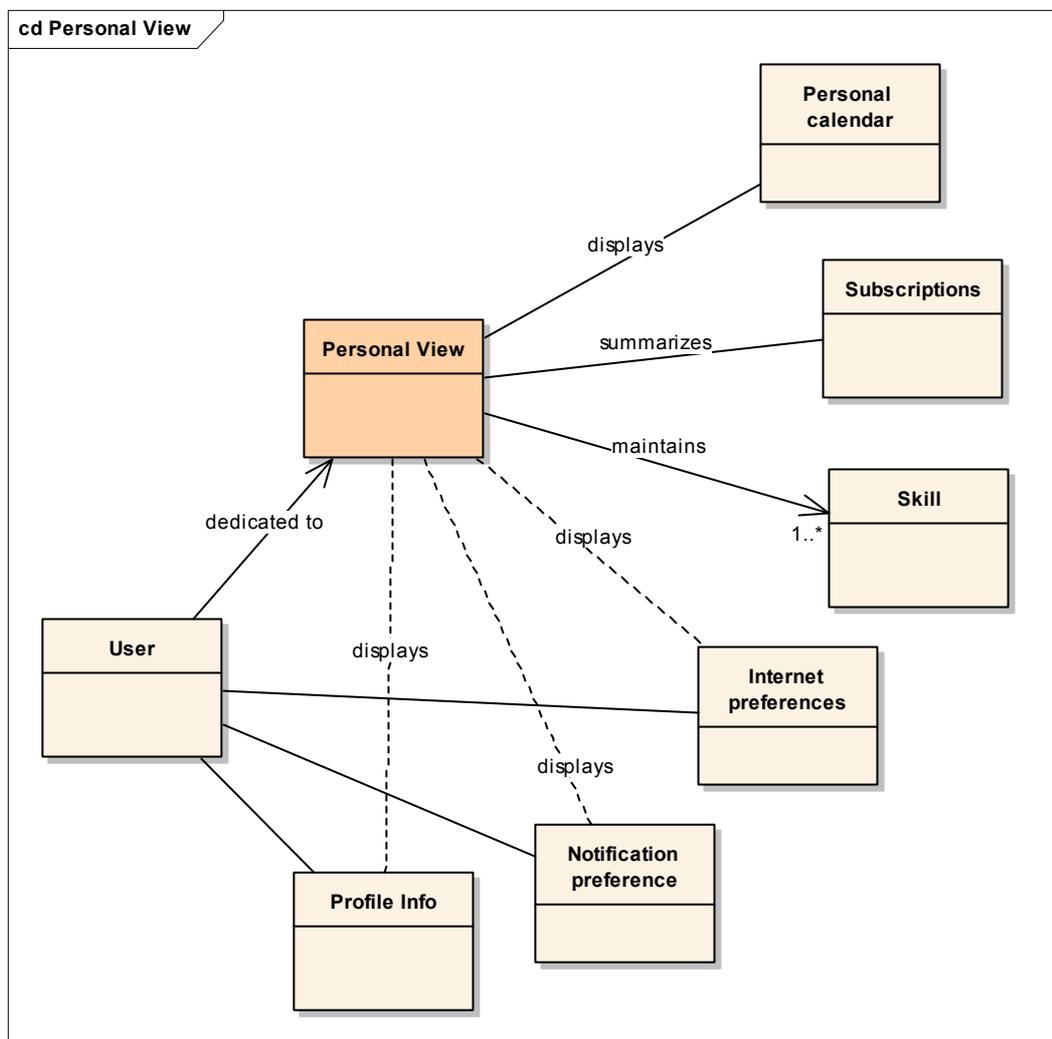
This view contains user specific information with its profile and private information. It contains skills information and notification management.
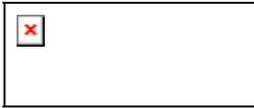
Diagram description table:

Class name	Class description
Personal Calendar	Personal view displays personal calendar where events, conferences and meetings can be shown.
Subscriptions	This view summarizes all user subscriptions to content in one place and which can be easily managed.
Skills	This is a skills database for particular user with possibility to search for other users' skills. This will make search for experts easier[MR2].
Internet Preferences	From this view a user can set or change internet settings and preferences.
Notification Preferences	This view summarizes user notifications for actions throughout the system in one place. They can be easily managed by user.
Profile Info	This section will be showing information about the user of the information system. It can have contact and other information and will be managed by logged in user.
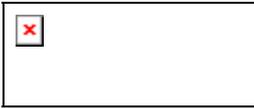
3.2 Users and roles
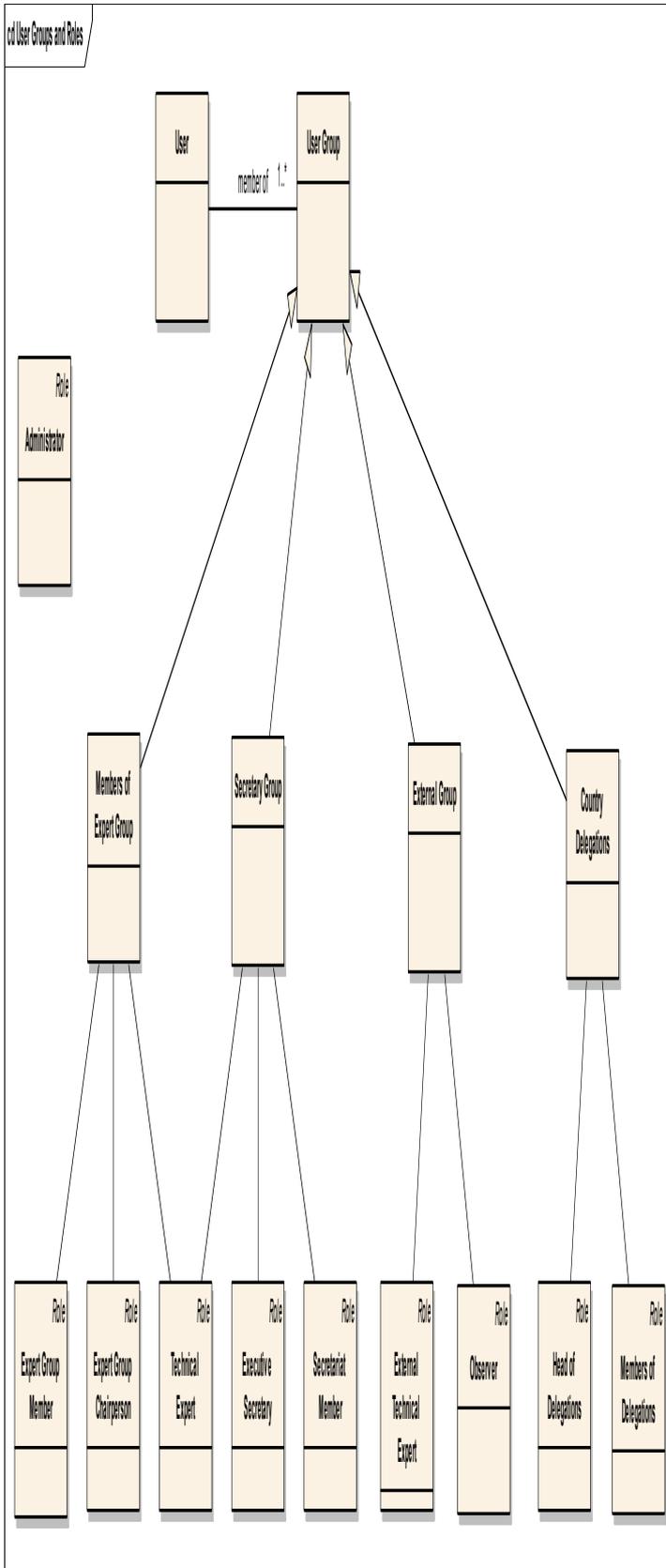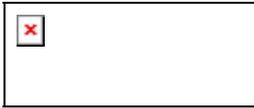
This is a global view on user groups and roles in the information system and the relations between them. Users are divided in user groups according to organizational division. User roles specify specialization in particular user group which is connected to access right in the information system.

Diagram description table:

Class name	Class description
Administrator	A user role with super access to all parts of the information system. This role will be responsible for adding new users, setting preferences and maintenance of the whole system.
Members of Expert Groups	Members of Expert groups will have access to particular expert group view. This group will consist of Expert group members, Expert Group Chairperson and Technical Expert(s).
Secretary Group	This group will consist of Technical Experts, Executive Secretary and members of Secretariat.
External Group	This group will consist of External Technical Experts and Observers (for ICPDR meetings).
Country Delegations	This group will consist of Heads of Delegations and Members of Delegations (for ICPDR meetings).

3.3 General modules

Modules are parts of the information system, which are displayed within one or across more views. They are reusable and customizable.
For instance Calendar of events module can be displayed in Personal view as a personal calendar, in Activity view for displaying milestones, in Expert group view for displaying meetings and events, etc.
In each view, the particular module would be displayed differently – customized for the desired need.

Main modules are:
- **Calendar of events**
  Displayed in:
    ❖ General view
    ❖ Expert group view
    ❖ Activity view
    ❖ Personal view
- **Meetings**
  Displayed in:
    ❖ General view
    ❖ Expert group view
- **Documents and libraries**
  Displayed in:
    ❖ General view
    ❖ Expert group view
    ❖ Activity view
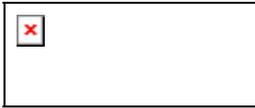
3.3.1 Calendar of events
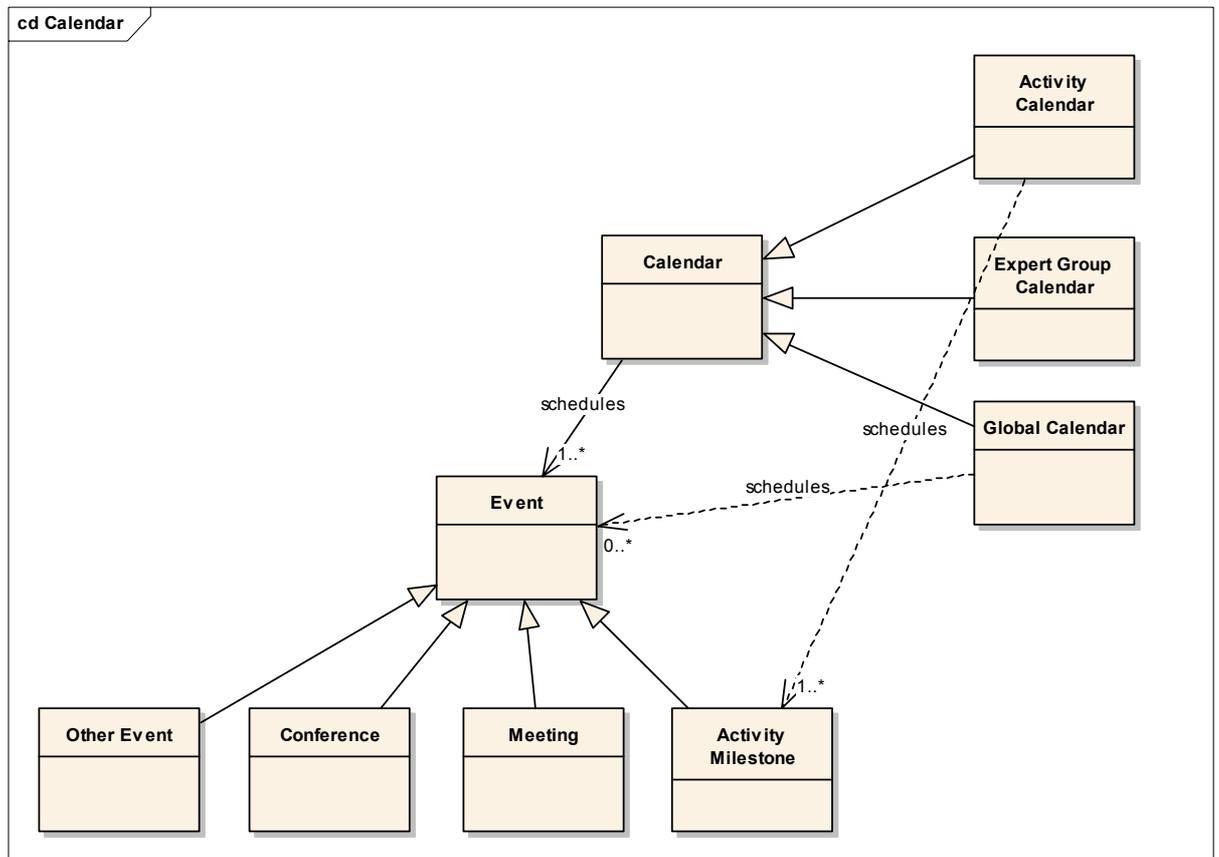
This diagram shows Calendar of events, its parts, types and logical relationships.

Diagram description table:

Class name	Class description
Calendar	Calendar will be available for Activities, Expert Groups and Global usage for all users. Each calendar can be used to schedule events.
Events	Events in calendar can be: Conference, Meeting, Activity Milestone and Other Event. Each event can have its settings and style in calendar.

3.3.2 Meetings

cd Meeting

«document template»
Reimbursement form

After user's registration to the meeting an Travel authorization document might be generated

User

In case of ICPDR Meeting, there will be users defined for ICPDR Meeting Group. For Expert Group Meetings, there will be users from actual expert group and other appointed experts.

defines prefilled

registers

«document»
Meeting Invitation

attaches

1..*

assigned to

Actions are objects substituting Task Items Documents, and might be directly assigned to a user.

Meeting Participation

Invitation

defines

«group»
Meeting Invitees

1..*
contains

generates

Event
Meeting

defines

Agenda Item
- ordering: int
- title: int

1..*

results in

«document»
Meeting Agenda

results in

Actions

1..*

For each agenda of the meeting, there will be a possibility to assign a document as an attachment.

has

is discussed in

Meeting Document Library

Expert Group Meeting

ICPDR Meeting

Meeting Discussion

Document
Meeting Document

1..*

This is structure of Calendar of events and its parts. Diagram shows also meeting types and relationships between different objects.
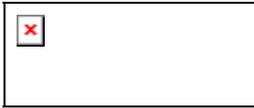
Diagram description table:

Class name	Class description
Meeting	Meetings can be basically divided into Expert Group meetings and ICPDR Meetings. This module provides functionality to both of them.
Invitations	Meeting event generates invitation which is sent to Meeting invitees. Meeting invitees can be a group of defined people (mainly ICPDR meetings) or whole expert group (in case of EG meeting) and other people. Invitation can be sent together with document attachment.
Meeting Participation	When user participated on a meeting, he/she can use online reimbursement forms in form of pre-filled template.
Agenda Items	Each meeting can have one or more agenda items with their own titles, ordering or description. These can result into actions which are assigned to users or groups.
Meeting Agenda	Agenda Items are part of the Meeting Agenda and for each agenda item meeting, there will be a possibility to assign a document as an attachment.
Meeting Document Library	Meeting Document Library is a library of documents linked to agenda items or topics which are discussed. The documents should be divided into two groups: pre-meeting documents and post-meeting documents. Both categories should be accessible also after meeting.
Meeting Discussion	Meeting proceedings or preparation for meeting can be discussed in Meeting Discussion.
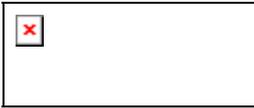
3.3.3 Documents and libraries
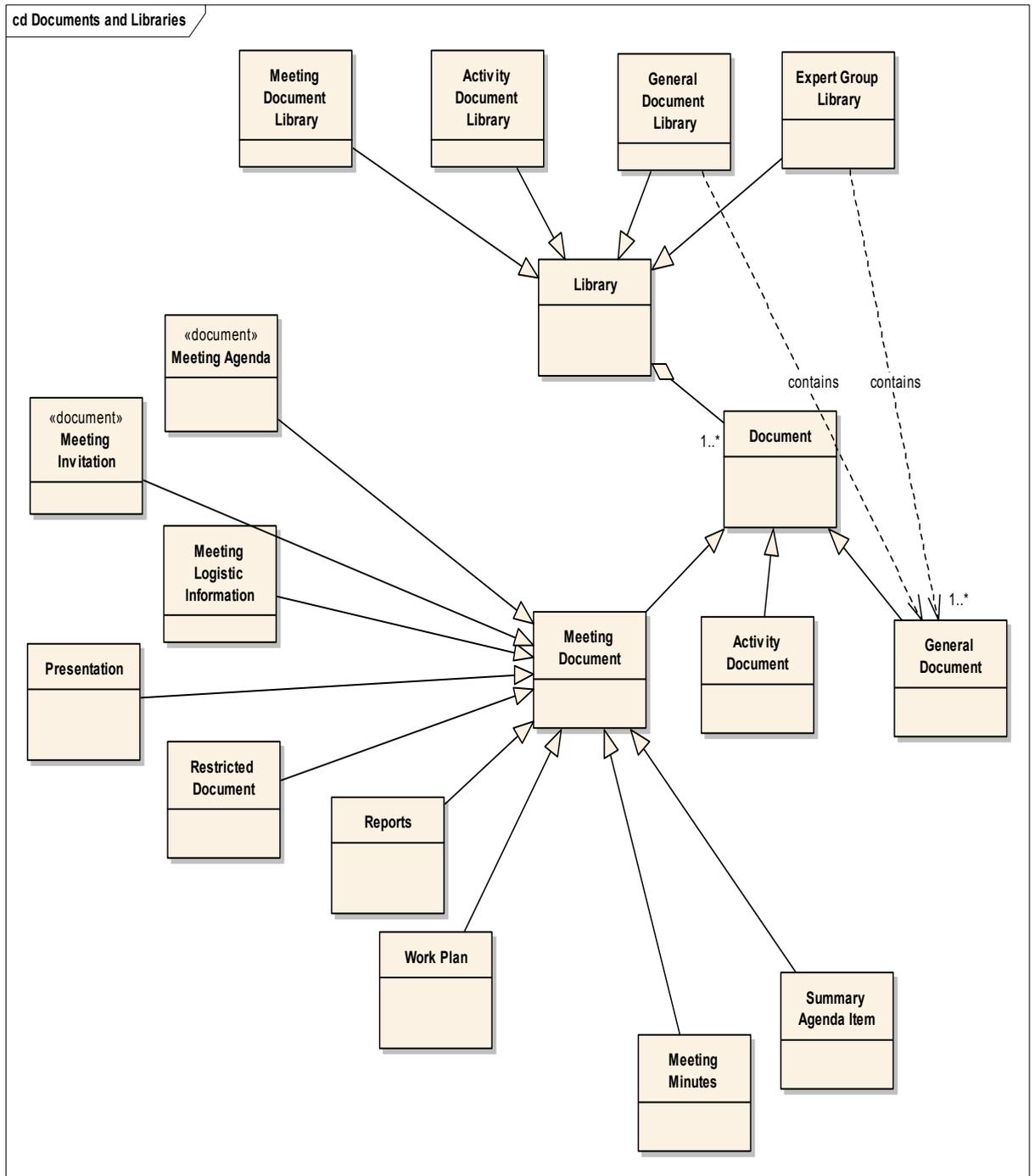
This diagram shows document types and relationships between them.

Diagram description table:

Class name	Class description
Library	Document library in general is a repository for all documents, for example: Meeting documents, Activity documents, General documents, or Expert group documents. Specific parts of library are show in particular sections of the information system (meeting documents in meetings section, expert group documents in expert group view, etc.)
Document	Document can be almost any type of file (Word document, Excel sheet, Powerpoint presentation, PDF document, JPEG Image, etc.) Documents can be specifically linked to Meetings, Activities or there can be just General documents.
Meeting Document	Document displayed in meeting section of information system. This can be Meeting agenda, Meeting Invitation, Meeting logistics information, Presentation, etc.
Activity Document	Activity document can describe activity assigned to user or user group. It can contain background information for activity, etc.
General Document	General document is mainly displayed in General view and can contain information about ICPDR, UN, other projects, etc.
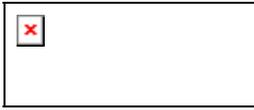
3.4 Conclusions and additional remarks

The ICPDR is ready to make a restructuring of the current information system since there are growing requirements for information management, due to an increase and expansion of the ICPDR activities and recent changes in organizational structure of expert groups and their programmes. The basic requirement to the system is to be more efficient, user friendly for new Danubis users, flexible for new tasks and of course cost effective.

The survey of the current system has shown that the Danubis information system is often used, it is very important and it is an essential tool for users, but there are slight differences in how users perceive their system usage and their overall experience. The smaller part of the users (19% according the survey) who are using the system actively are mostly satisfied with the system. That is because, they are using the system almost every day and they spend most hours actively working with it. The larger group of 81% users who are only reading and downloading documents from the system are not so satisfied. To them, the system is too complex and not very easy to use. Mostly this group of users demands more intuitive operation and clearer design, as stated in previous documents and also in the survey. This has to be answered in new generation of the system as some needed functions of the systems are not utilized and some need improvements and further enhancement.

In comparison with the current sytem, which is based on hierarchically organized folders mostly according to the expert group structure, the concept of the reconstruction of the system is based on activities of the ICPDR and its expert groups. Almost all functionalities of the current system are kept or enhanced, new functions should be added according to the results of the survey.

A number of issues for further consideration at the ICPDR level were identified during discussions with the ICPDR, DRP and Consultant team and partly as an outcome from the analysis:

- Structure of the system

  Two options should be considered: 1. system of views or 2. current system of folders. If system of view is taken, then activities have to be defined (possible criteria could be: key activities of the ICPDR, work plans of expert groups, or on internal organizing of documents like G-drive)

- Access/user rights

  The set-up of access rights at the current system is quite complex with a large number of user groups, but still the users have right to fully manage the working areas of their expert groups. This should be partly restricted, if the new system is implemented. This restriction will decrease the number of user groups that have different access rights. Simple workflows should be implemented, i.e. approval
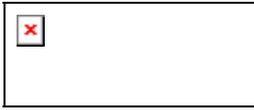
process when uploading documents / creating other content by users other than from the Secretariat or appointed EG member.

The ICPDR should discuss whether the users should be restricted when creating new contents and who will be responsible for approval and for publishing.

The ICPDR should also decide on following questions:

- Who will be responsible for adding of the new users, who will be managing general contacts?
- Which access rights should have expert group members within other (not their primary) expert groups?
- Should exporting database data be allowed?
- Who will be responsible for adding new events and meetings?
- How will be realized the External experts' access?
- How and for which parts of the information system ICPDR wants to do notifications?

- Decision on technology
  In principle, there are three variants:

  - **Currently used technology of Oracle Portal:**
    This was rejected due to various reasons and will not be considered

  - **Open source java-based portal frameworks like Liferay Portal, JBoss Portal or Jakarta Jetspeed Enterprise Portal:**
    The pros of this variant: pure object oriented approach, open scalable architecture, higher level of reuse, strong community support.
    The cons of this variant are: requires skilled developers and higher hardware requirements.

  - **Open-source not java-based products like Drupal, Mambo or Plone:**
    The pros of this variant are: easy development, ideal for smaller applications, quick deployment process.
    The cons of this variant are: simple object model and limited architecture

- In all three cases some development work will be needed to adjust the products to the Danubis. Considering the requirement of the ICPDR to use open source software, second or third variant should be used. The following ready-made systems can be used:

  - Drupal
  - Mambo
  - Plone
  - Liferay Portal
  - JBoss Portal
  - Jakarta Jetspeed Enterprise Portal
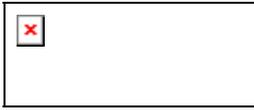
The next steps for the implementation

- settling on framework and technology that will be used
- technological (use case, design, ...) analysis
- implementation
- migration of data & information

The new system may look from complicated from the first view; however it will bring a number of advantages for users:

- The system will be built from the user point of view (not administrator) to assist with navigation and everyday work in the system.
- The whole system will be designed for users mainly in terms of simplicity and ease of use, presenting available information in more understandable way.
- New developed automated process in the system will help users and administrators with every day tasks in the system.
- Users will be more engaged in developing and using system structure and documents.
- There will be an increased document control helping to keep the system up-to-date.
- The system will be designed according best ergonomics best practices, which will make the system more user friendly to every day non contributing users.
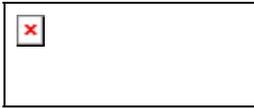
3.5 Annex I – Danubis feature list

Feature	now	prio	new	Comments
General				
Open source	n	1	**y**	Python or PHP Java?
OS independent	y	1	**y**	Linux is must
Database independent	n	2	**y**	PostgreSQL preferred, Oracle for migration mySLQ, PostgreSQL, MS SQL, Oracle
XHTML compliant	n	1	**y**	
Web accessibility	n	1	**y**	
Support for mobile devices	n	3	**y**	
RSS support	n	2	**y**	
Multi-Site Deployment	y	2	**y**	
Friendly URLs (human readable)	n	1	**y**	
Page caching	y	2	**y**	
Themes / Skins	n	3	**y**	CSS, HTML based
Customizable UI	n	1	**y**	e.g. hide unnecessary options
Static Content Export	n	3	**y**	
User Access Management				
Single Sign-On Authentication	y	1	**y**	integration with GIS to be considered (LDAP, webservices?)
User and Group management	y	1	**y**	should be more user-friendly, integration with GIS to be considered
Group hierarchy	y	1	**y**	
User can request new password	y	1	**y**	
User can change password	y	1	**y**	
Self registration	n	2	**y**	for public database users
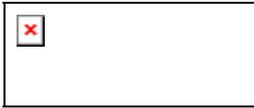
Feature	now	prio	new	Comments
Email Verification on account creation	n	3	**y**	
Keep user logged in option	n	2	**y**	
Automatically lock accounts on x failed login attempts	y	3	**y**	
Automatically terminate accounts by date	y	2	**y**	
Access reports	y	1	**y**	
Login History	y	2	**y**	
(De)Activate users	y	2	**y**	
Access Levels	y	1	**y**	view – create – manage – administer
Fine-grained privileges (on object-level)	y	1	**y**	
Content management				
Folders	y	?		it will be dependent on ICPDR decision to be discussed, see content relations
Files	y	1		filesystem-based instead of database-based
URLs	y	1	**y**	
Text (HTML)	y	1	**y**	for news, announcements
Images	~	2	**y**	it will be dependent on ICPDR decision to be improved, photo gallery would be "nice have"
Internal links	~	-	**-**	see content reuse/relations
Sub-items	y	1	**y**	see content relations
Custom content types	y	1	**y**	with custom meta-data
Customizable Metadata	y	1	**y**	e.g. Doc No., Version, Date of preparation
Categorization / Taxonomy	y	?		it will be dependent on ICPDR decision to be discussed
Content reuse	n	1	**y**	
Content relations	n	1	**y**	content related to objects (meeting, activity, other content)
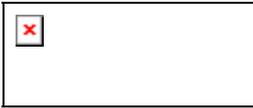
Feature	now	prio	new	Comments
Content scheduling	y	3	**y**	
Content versioning/audit trails	y	?		it will be dependent on ICPDR decision not used currently, to be discussed
Content approval	~	1	**y**	approval processes it will be dependent on ICPDR decision
Workflow	n	?		it will be dependent on ICPDR decision to be specified
Content check-out (lock)	y	?	**y**	not used currently, to be discussed
Move content	y	1	**y**	
Copy content	y	-	**y**	should be avoided, preferably reuse content
Cascade (Copy) Privileges	y	-	**y**	different approach: inherit privileges from parent object
Bulk move/attribute change	y	1	**y**	easy assign a lot of documents to another object
Bulk upload by zip file	y	2	**y**	upload zip archive and extract online, currently also creates folder structure by using specific CMS module
Bulk download by zip file	n	2	**y**	select files and download as one zip archive by using specific CMS module
Trash/Undelete	y	1	**y**	or undo function
Archive content	n	2	**?**	it will be dependent on ICPDR decision still easy to view/search in archived content
Send file by email	y	1	**y**	usage ~400/month
WYSIWYG Editor	n	1	**y**	for news, comments
Link management	n	3	**y**	check broken links by using specific CMS module
Commenting	n	1	**y**	
Reuse templates, types, categories, etc across sites	y	2	**?**	it will be dependent on ICPDR decision if project websites (e.g. Cris/Körös) are organized as separate sites
Contact management				
integrated with user management	y	1	**y**	contains data for users and other contacts
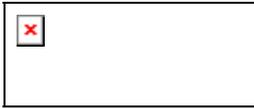
Feature	now	prio	new	Comments
Customizable fields	y	1	**y**	some should only be editable by contact manager
Skills	n	1	**y**	edited by contact manager (?) yes
Distribution lists	n	?		it will be dependent on ICPDR decision difference to user groups to be discussed
Integration with local email client	n	1	**y**	get coma-separated email address list for pasting into recipient field
Export to vCard	n	2	**y**	by using specific CMS module
Search by group, cp, internal/external, name, skill	~	1	**y**	
Export search result to CSV	n	1	**y**	
Export search result to Excel	y	2	**y**	
Calendar				
List view	y	1	**y**	
Week/Month/Day views	n	1?	**y**	it will be dependent on ICPDR decision to be discussed
Gantt View	y	1?	**y**	it will be dependent on ICPDR decision to be discussed
Customizable fields	y	1	**y**	
Export iCalendar/vCalendar	n	1	**y**	
Relation to content	~	1	**y**	it will be dependent on ICPDR decision
Event registration	n	1	**y**	
Search				
Search in selected Meta-information	y	1	**y**	
Full-text search (PDF, DOC, etc.)	y	2	**y**	current usage: ~100 requests/month
Integrated search for content, events, contacts (and other databases)	n	3	**y**	
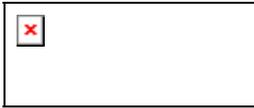
Feature	now	prio	new	Comments
Integrate/Extend with public website search	n	2	**y**	by using third party search engine integration
Personalization				
Group view on content	n	1	**y**	
Email notification on content and event updates	y	1	**y**	derived from group membership, additional self-subscription to be discussed
Personal homepage	y	?	**y**	it will be dependent on ICPDR decision to be discussed: currently, it is an overview page, in future this is for personal presentation?
Bookmarks	y	2	**y**	it will be dependent on ICPDR decision usage: 390 bookmarks by 175 users
Save search parameters	y	-	**y**	usage: 26 saved searches by 21 users
Save options in database components	y	3		it will be dependent on ICPDR decision
Personal Folders	y	-	**y**	it will be dependent on ICPDR decision usage: ~140 items (most only for training)
Internationalization				
UTF-8 Support	y	1	**y**	
Translated UI	~	3	**y**	only for AEWS required, otherwise "nice have"
Translated content	~	3	**y**	it will be dependent on ICPDR decision
Help				
Online help pages	y	3	**y**	usage: only ~18 hits per month
Introduction/Tutorial	~	1	**y**	
Development tools				
Template-based layout	~	y	**y**	full control necessary XHTML and CSS templates
Reports	y	y	**y**	code-based instead of wizard-based
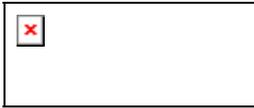
Feature	now	prio	new	Comments
				approach
Charts	y	y	**y**	it will be dependent on ICPDR decision "
Forms	y	y	**y**	it will be dependent on ICPDR decision "
Platform Support				
Commercial support	y	1	**y**	
Manuals	y	1	**y**	
Community/Forum	y	1	**y**	

[MR1]This was a feedback from survey participant which could not be read correctly. That is why I replaced unreadable words with "XXXX"

[MR2]<mark>Q: Is it possible to merge 'Skills' with Profile Info? If not, what is the difference?</mark>

In our perception the profile info and skills database should be separate. Even if they are displayed in one section of the view. Personal information is just e-mail address, telephone, fax, ... Skills can consist of more detailed information, which could be grouped, layed out differently, etc. But of course, it depends on your decision.