



Ministry of Water Resources

Govt. of the People's Republic of Bangladesh

User Manual

On

Knowledge Repository

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1.1 Overview

The Ministry of Water Resources is the highest authority in Bangladesh's water sector. It is responsible for drafting all laws, rules, and regulations pertaining to the water sector, as well as regulating and controlling the organizations that report to it. The Ministry of Water Resources and Environment plans and executes development projects for things like flood control and drainage (FCD), flood control, drainage, and irrigation (FCDI), riverbank erosion control, delta development, and land reclamation, and so on. It also builds things like barrages, regulators, sluices, canals, cross-dams, embankments, and sea-dykes along riverbanks to provide irrigation, drainage, flood protection, bank erosion protection, and land reclamation facilities. The ministry may need to monitor water sector operations in a more flexible fashion before designing and executing the development programs, and so it requires a comprehensive database as a single knowledge repository where all key agencies would publish the water related information. Higher-level ministry and agency officials, planners, decision-makers, researchers, and cabinet members could all have a stake in the information repository. The major purpose of building such a platform is to aggregate information related to Bangladesh's water industry in one convenient location.

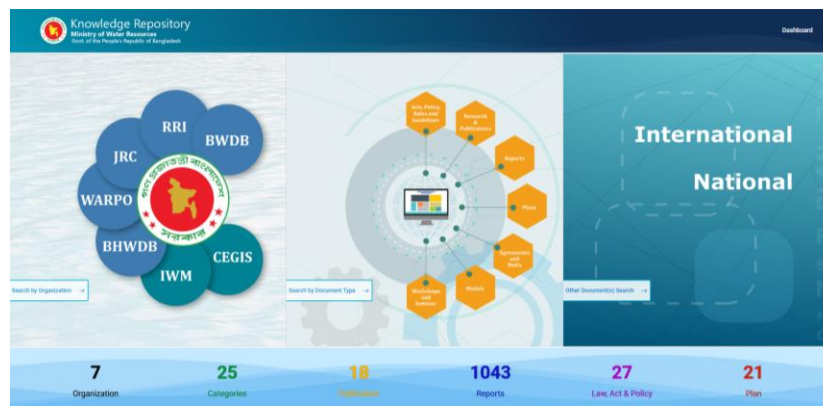


Figure 1 Home page of the MOWR Knowledge repository

1.2 Homepage

Homepage displays all the important information in form of numbers about the MoWR Knowledge repository. It contains important links to view different features and panels of this web application. Moreover, the user can find the three types of searching feature page and dashboard link from this page. By this page users can easily access all the features of Knowledge Repository by just clicking the displayed links.

To view the homepage of the MoWR knowledge repository please visit the following link: <http://202.53.173.185:8000>. It contains the navigation bar at the top and then the slider with three sections, which indicates three important searching parameters they are:

- Search by Organization
- Search by Document
- Search Other Documents

To find a document from the Ministry of Water Resource associated organizations Click on the **Search by Organization**. The user can filter any document based on keyword or from common categories by using this module. Sometimes it is convenient to find a document by a keyword to

title by using **Search by Document** module it is also possible. Moreover, for searching other documents like international or national information users can use **Search Other Documents** module.

In the top of the footer, section there is a panel for displaying useful information about Knowledge Repository. Finally, at the end of the page there is a footer with links of homepage of all the available organizations of Knowledge Repository. By clicking any of the organization logo, users will be redirected to the desired organization homepage.

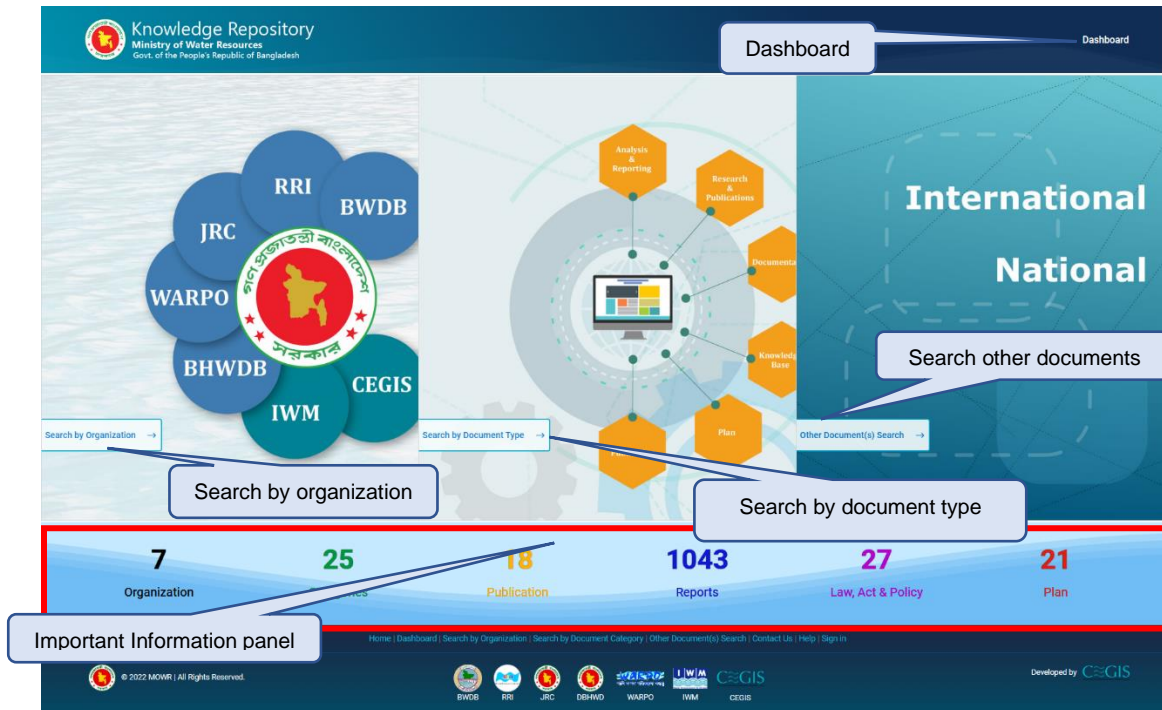


Figure 2 Home page of MoWR Knowledge Repository

1.3 Dashboard

Dashboard contains overall information of all the documents based on organization and document's category. A user can easily view any documents related to a specific organization by just clicking on the organization icon. However, the users can also view any document of a particular category by clicking on the category link. So, the Ministry or relevant organizations can only browse their organizational document or document by category from the Dashboard page.

After coming to the Dashboard page, three sections will be visible in the webpage. The first section is **Important Information panel** where different vital information related to MoWR Knowledge Repository would be visible. After that, they would be an **Organization Information** panel, where the number of documents available for each organization would be visible with all documents viewing capability. As soon as the user hits any of the displayed logo, they would redirect to the new page containing information about the documents of the respective organization. However, to visualize a categorical document for example report type documents just click on the Reports link from the Type of Documents section. Then after the application would redirect the user to the page with all report type documents. By clicking the **Important Links** user can view National and International relevant portals.



Figure 3 Dashboard Page

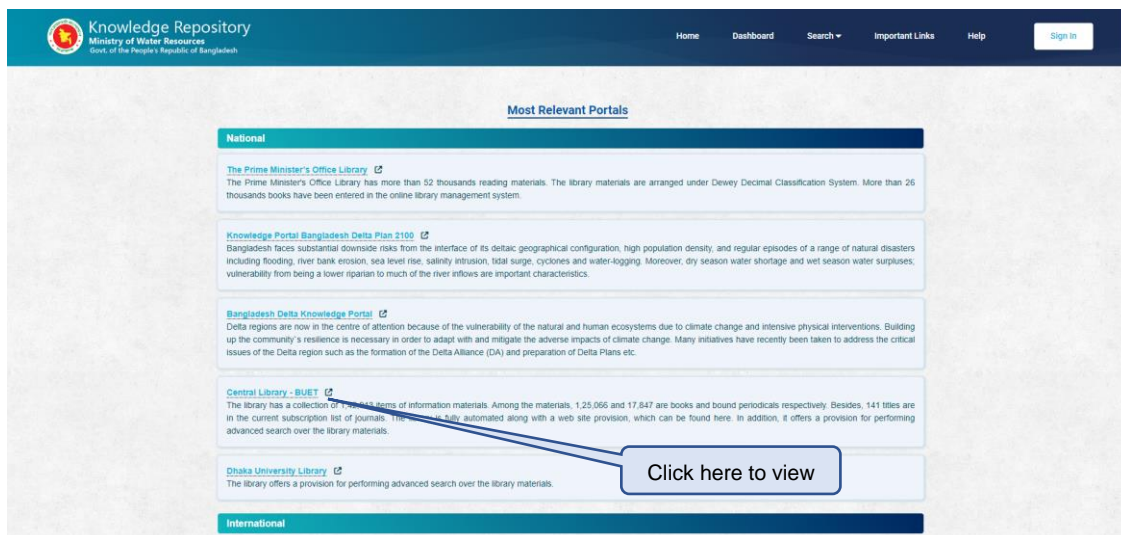


Figure 4 Important links

To help the user in case they are confused about any section there is link for user guide. By clicking the help, link user can be redirected to the user guideline pdf file. By going through the desired section, the user would understand all the necessary concepts and feature of this knowledge platform conveniently.

Overview of Knowledge Repository

1.1 Overview

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1.2 Objectives

The major purpose of building such a platform is to aggregate information related to Bangladesh's water industry in one convenient location. The explicit goals of building such repository is given below:

- To build an online platform with a custom database and a GIS interface for the water sector's knowledge repository
- To make it easy for users to insert, modify, upload, and search for data from the repository
- To build a reporting module that allows a user to view data and export it in excel/pdf formats.
- To provide system support and maintenance services
- To create a user manual and teach the selected users on how to use the system.



Figure 1.1 Home page of the MOWR Knowledge repository

Figure 5 User Guideline Section

1.4 Document Search and Download

There are a lot of documents from different organizations which are available to public and some restricted documents for a few privileged users. Its difficult for an individual to search any particular document from the huge collections. To create convenience the knowledge repository has the capability to search by organization, document type etc. This feature helps the users to find their desired document by just typing a few keywords.

The access of MOWR knowledge repository is available to the different level of users based on the document type, organization and documents access levels. There are four access categories currently available in the system. Among them, limited, private and restricted documents are only

available to restricted users based on their access to these documents. However, besides it rests of the documents are available to public.

To make the use of knowledge repository, so that the users can make more effective searches and find their desired documents easily. The search is primarily based on document type, document responsible organizations, region level, important keywords etc. If the user enables a filter, it will then be applied to whole search result. So far, we have learnt that there are three types of customized search options available in the system. We will now see how each of these modules are working together to make the Knowledge repository effective.

- Search by Organization
- Search by Document type
- Search by Other Organization

There are several Common Categories available in the knowledge portal for search the document based on its type.

- Acts, Policy, Rules and Guidelines
- Research & Publications
- Reports
- Plans
- Agreements and MoUs
- Models
- Workshops and Seminars

To find among any the mentioned specific categories please click on the any of above common category items. Later the information under that category would be visible in the system to view or download.

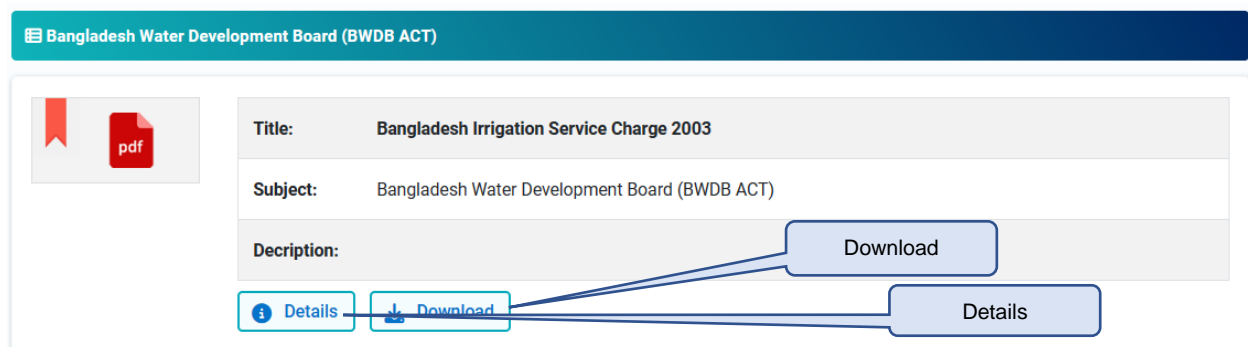


Figure 6 Individual Document Specific information

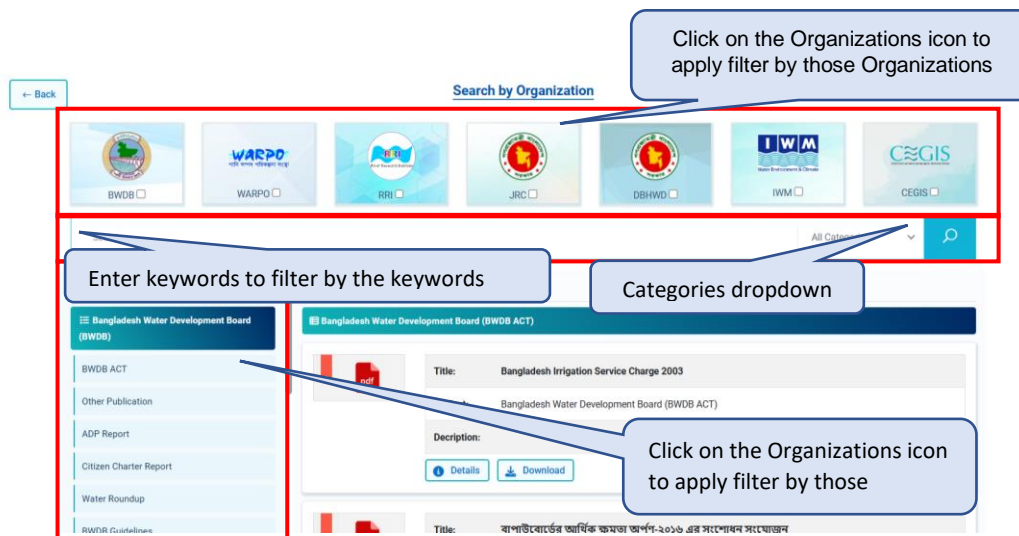
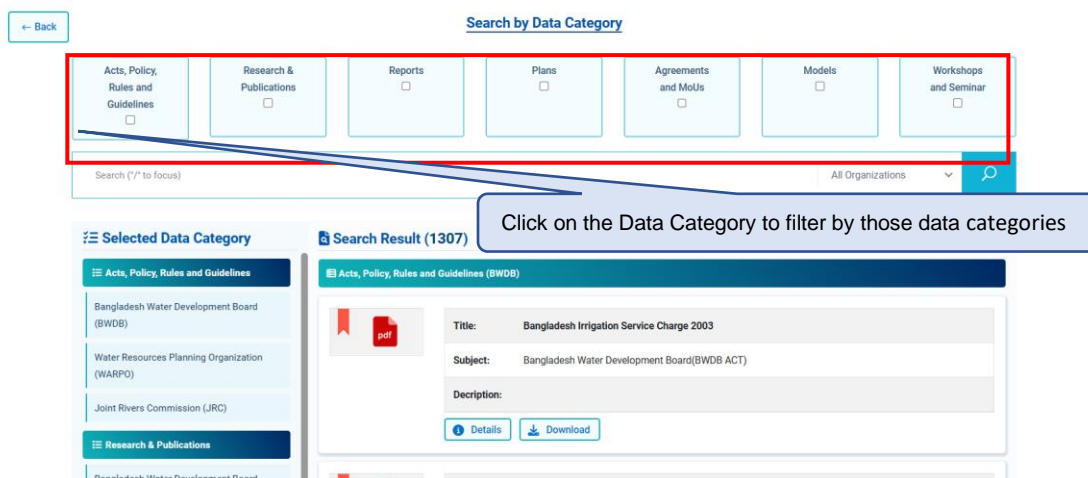


Figure 7 Search by Organization

Now to Search among all documents first select the Organizations in which to apply the filter. This can be achieved by clicking the desired organizations logo icon. If no organizations are selected then filter is applied on all the organizations. After that user can go to specific categories by clicking on the organization specific categories on the left side panel.



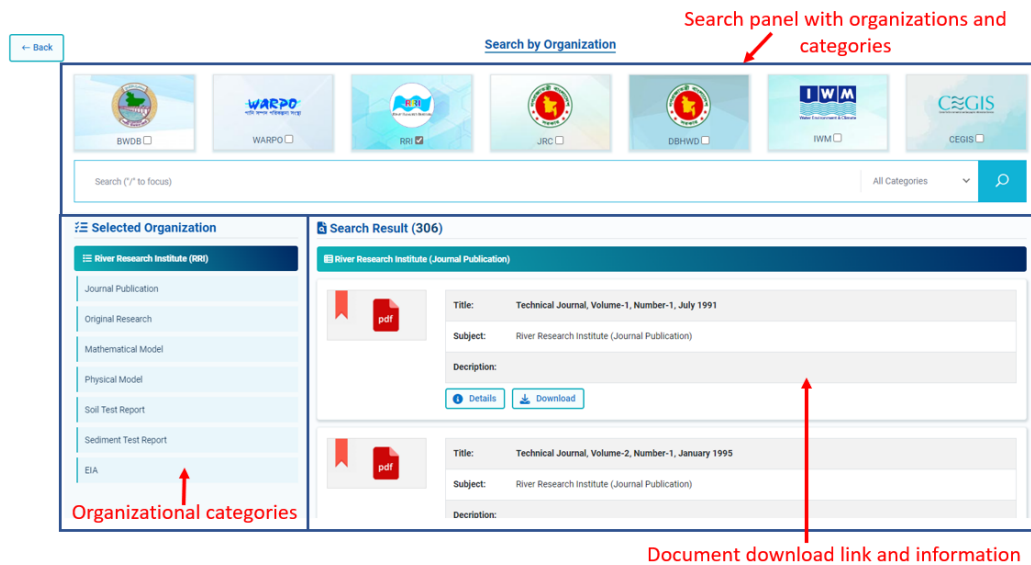


Figure 9 Document Search Module

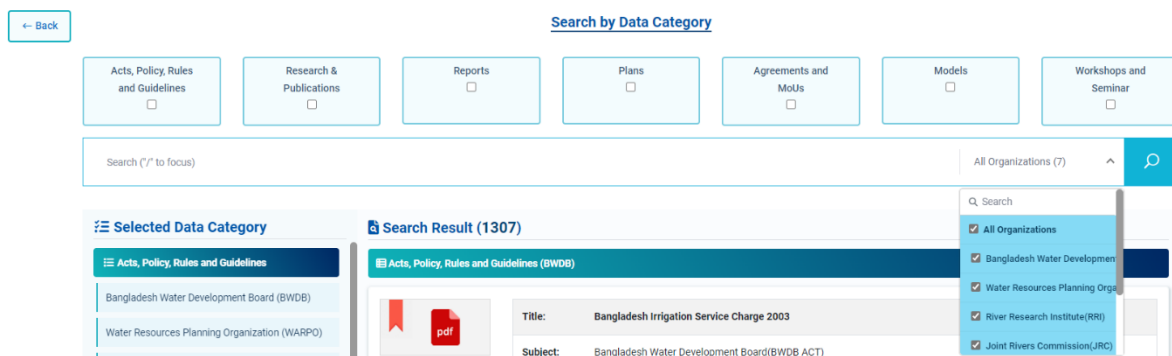


Figure 10 Filter by organization while searching by data category

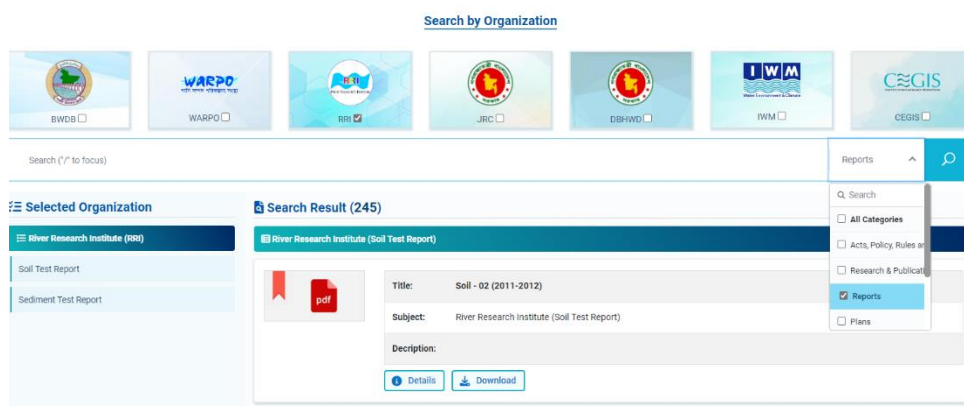


Figure 11 Search by Common Categories



Figure 12 Search by Organization from specific categories

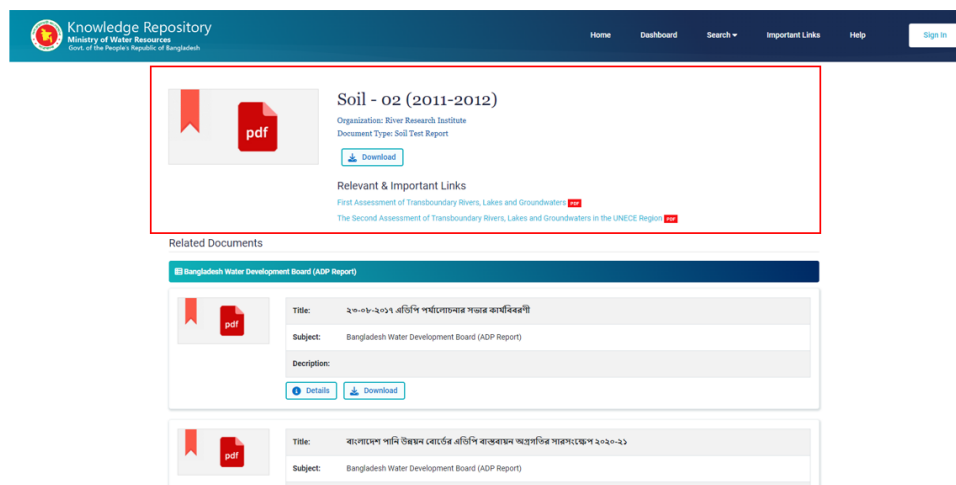


Figure 13 Display document's details information

To download a specific file please click on the Download link on the bottom part of the section.

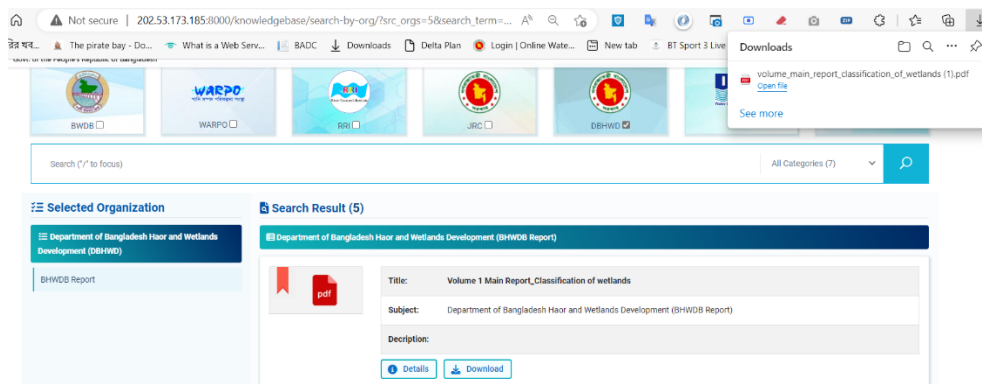


Figure 14 File Download

1.5 Authorized Users Section

A few modules have been prepared for privileged users to have overall control over the MOWR Knowledge repository. Some of the privileged features include

- To view/update/upload data to the MOWR Knowledge repository
- Grant or revoke permissions of a user
- View/update/delete system generated logs

There are three types of privileged users in the system like:

- Super User
- Organizational Admin
- Data uploader

Admin dashboard consists of relevant table information of MOWR knowledge repository as well as information about recent auto generated logs from the system. Though both Organizational Admin and Super User has similar access, but the only difference between them is Organizational Admin has access to only his responsible organization; on the other hand, Super User has access over all the organizations.

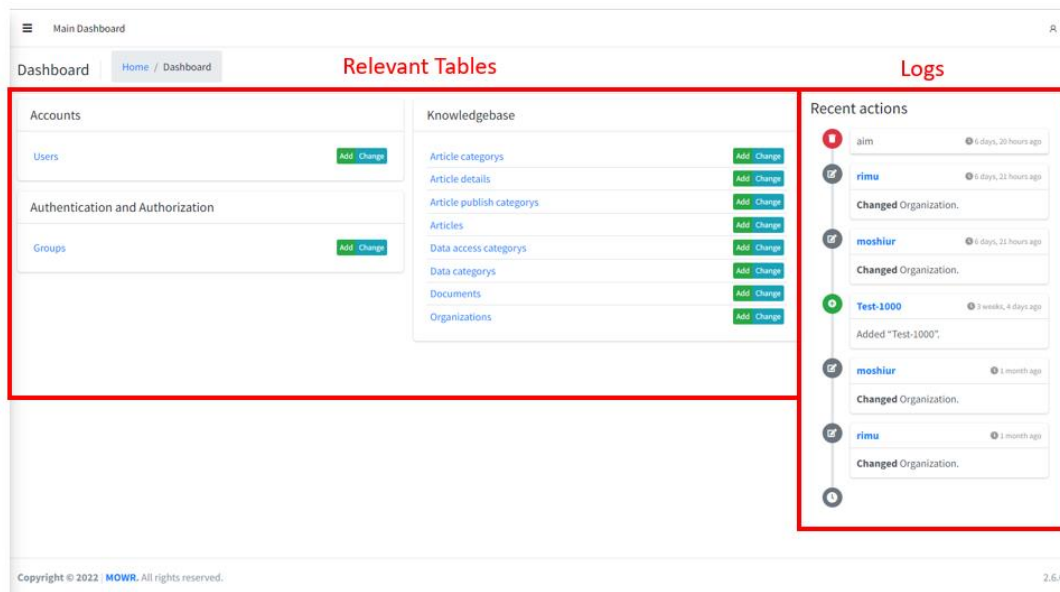


Figure 15 Administrative Dashboard

To view the administrative dashboard the user must be login. Moreover, the user should have privilege as Super user or Organizational Admin.

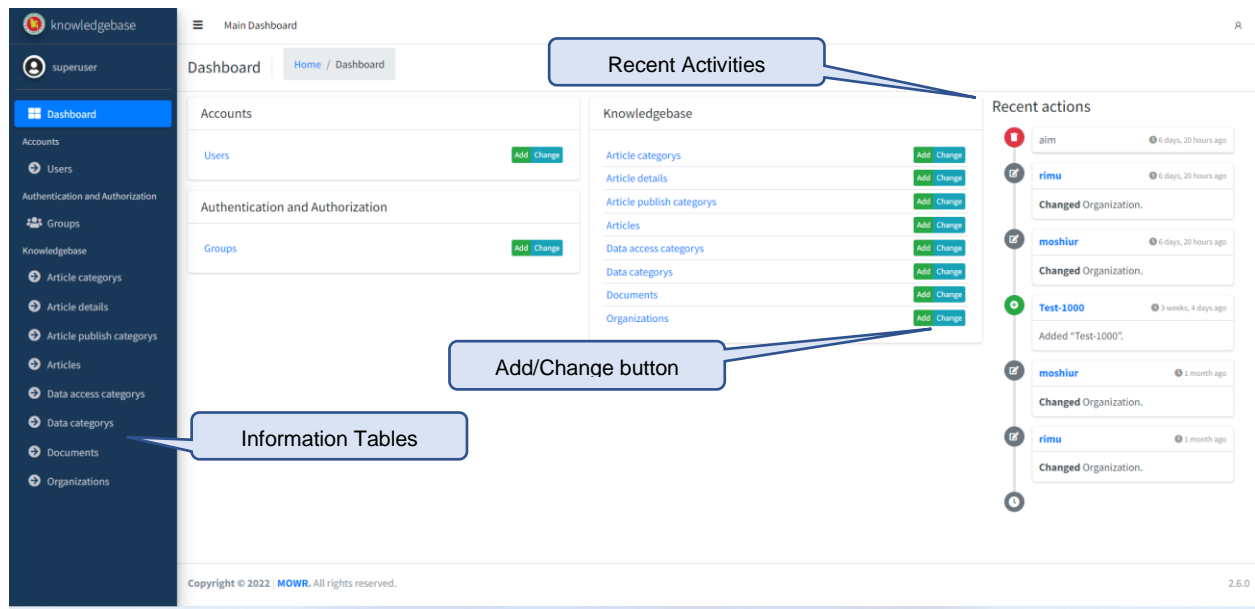


Figure 16 Dashboard as Super Admin/ Organizational Admin



Figure 17 Options visible as normal logged in user

1.6 Add or Change Information

To add or change information of any table the user first must login into the system and he/she should have the permission to add or change table data.

Article categorys	Add Change
Article details	Add Change
Article publish categorys	Add Change
Articles	Add Change
Data access categorys	Add Change
Data categorys	Add Change
Documents	Add Change
Organizations	Add Change

Figure 18 Add or Change button

There are two links available at the right side of the table. One is **Add** and other is **Change**. If the user clicks on **Add** link the user would be redirected to a new page to add information.

The screenshot displays the 'Add document' page. The sidebar on the left contains a 'knowledgebase' header and a 'superuser' profile. Below this is a navigation menu with items like 'Dashboard', 'Accounts', 'Users', 'Authentication and Authorization', 'Groups', 'Knowledgebase', 'Article categorys', 'Article details', 'Article publish categorys', 'Articles', 'Data access categorys', 'Data categorys', 'Documents' (highlighted), and 'Organizations'. The main content area has a breadcrumb trail 'Home / Knowledgebase / Documents / Add document'. The form includes fields for 'Organization', 'Data category', 'Title', 'Subject', 'Description', 'Author', 'Access category', 'Publication date', 'File name', 'Thumbnail', and 'Keywords'. On the right, three buttons are visible: 'Save', 'Save and add another', and 'Save and continue editing'. Callout boxes point to these buttons, the dropdown arrows on the form fields, and the 'Choose File' buttons for file uploads.

Figure 19 Page for adding new document

After entering all the relevant information to save in the database, the user should click **save** button. If any mandatory field is missing during entry, then system will display error message due to failure to validate.

knowledgebase

superuser

Main Dashboard

Documents

Home / Knowledgebase / Documents / Add document

Please correct the errors below.

Organization *
• This field is required.

Data category *
• This field is required.

Title *
• This field is required.

Subject

Description

Author

Access category *
• This field is required.

Save

Save and add another

Save and continue editing

Figure 20 Validation error message

knowledgebase

superuser

Main Dashboard

Groups

Home / Authentication and Authorization / Groups / Add group

✓ The group "test group" was added successfully. You may add another group below.

Figure 21 Successful save message

However, if the user clicks on the any of the table information all the available information would be visible in form of a tabular list.

knowledgebase

superuser

Main Dashboard

Documents

Home / Knowledgebase / Documents

Add document

Select Organization data category access category Search

Go 0 of 20 selected

Title	Organization	Data category	Access category
<input type="checkbox"/> Declaration of JRC	Joint Rivers Commission	JRC Formation	Public
<input type="checkbox"/> Statute of JRC	Joint Rivers Commission	JRC Formation	Public
<input type="checkbox"/> 1977 Agreement on sharing of Ganges Water	Joint Rivers Commission	Sharing of Ganges Water	Public
<input type="checkbox"/> 1982 Memorandum of Understanding (MoU) on sharing of Ganges Water	Joint Rivers Commission	Sharing of Ganges Water	Public
<input type="checkbox"/> 1985 Memorandum of Understanding (MoU) on sharing of Ganges Water	Joint Rivers Commission	Sharing of Ganges Water	Public
<input type="checkbox"/> 1996 Treaty on sharing of Ganges Water	Joint Rivers Commission	Sharing of Ganges Water	Public
<input type="checkbox"/> 2019 Memorandum of Understanding (MoU) on withdrawal of 1.82 cusec water from Feni river	Joint Rivers Commission	Common River Basin Management on GBM basin	Public

Figure 22 List view of the all the available information of table

To update or delete data user need to click on the data. Then from the displayed page user can update the necessary information wherever necessary. In case to delete data click on the **Delete** button.

The screenshot shows the 'Documents' page in the knowledgebase application. The left sidebar contains a navigation menu with options like Dashboard, Accounts, Users, Authentication and Authorization, Groups, Knowledgebase, Article categories, Article details, Article publish categories, Articles, Data access categories, Data categories, Documents (selected), and Organizations. The main content area is titled 'Documents' and shows a breadcrumb trail: Home / Knowledgebase / Documents / Declaration of JRC. The form contains the following fields: Organization (Joint Rivers Commission), Data category (JRC Formation), Title (Declaration of JRC), Subject, Description, Author, Access category (Public), Publication date (1972), File name (Currently: jrc_declaration.pdf), and Thumbnail. On the right side, there are five buttons: Save, Delete, Save and add another, Save and continue editing, and History.

Figure 23 Data update or delete page

1.6.1 Access Control

One of the important features of MOWR Knowledge repo is to control the access of the user. Admin can control the access by creating a new group and providing it some permissions. Later he can add users to so that the user might have all the access to permitted contents of that user group.

Hold **Ctrl** and click on the necessary permissions and hit save button to save that information.

The screenshot shows the 'Groups' page in the knowledgebase application. The left sidebar is the same as in Figure 23, with 'Groups' selected. The main content area is titled 'Groups' and shows a breadcrumb trail: Home / Authentication and Authorization / Groups / Add group. The form contains the following fields: Name (empty) and Permissions (a list of permissions: accounts | user | Can add user, accounts | user | Can change user, accounts | user | Can delete user, accounts | user | Can view user). On the right side, there are three buttons: Save, Save and add another, and Save and continue editing.

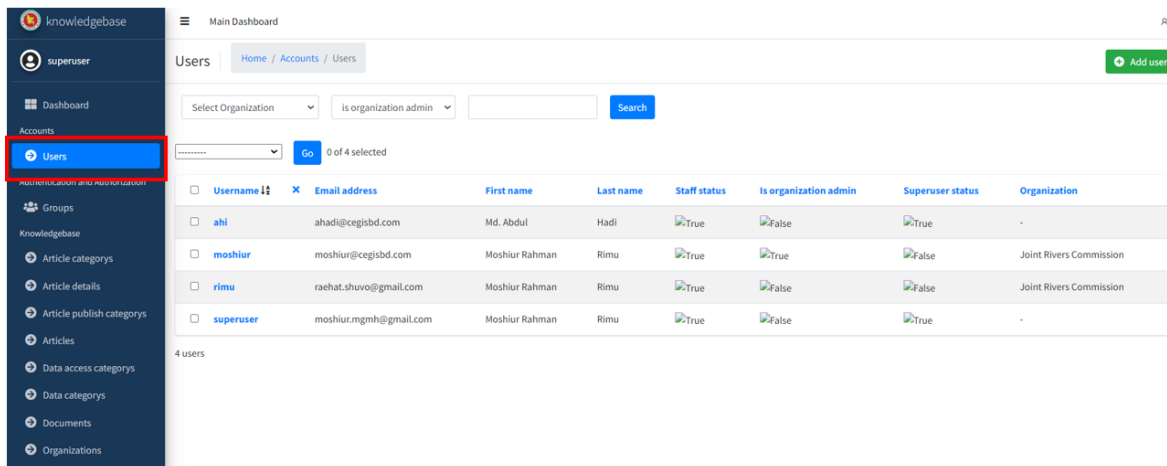
Figure 24 User Group permission selection page

1.6.2 Add Users to a Group

To give users permission to different level access like create, read, update, delete; the users need to be assigned to different groups. So, to add or remove group

- **Click** on the Users button.
- **Click** on the username of the any desired user.
- **Click** on the permissions tab.
- Now select the desired groups.
- Now select desired permissions.
- Hold Ctrl to allow more than one selection.

Select one or more permissions from the permissions section to control individual user level access. After that click save and the message of successful information update would be displayed on the screen.



The screenshot shows the 'View All Users' page in the knowledgebase system. The left sidebar contains a navigation menu with the 'Users' button highlighted in blue. The main content area displays a table of users with the following columns: Username, Email address, First name, Last name, Staff status, Is organization admin, Superuser status, and Organization. There are four users listed in the table. Below the table, it indicates '4 users'.

<input type="checkbox"/>	Username	Email address	First name	Last name	Staff status	Is organization admin	Superuser status	Organization
<input type="checkbox"/>	ahi	ahadi@cegisbd.com	Md. Abdul	Hadi	True	False	True	-
<input type="checkbox"/>	moshir	moshiur@cegisbd.com	Moshiur Rahman	Rimu	True	True	False	Joint Rivers Commission
<input type="checkbox"/>	rimu	raehat.shuvo@gmail.com	Moshiur Rahman	Rimu	True	False	False	Joint Rivers Commission
<input type="checkbox"/>	superuser	moshiur.mgmh@gmail.com	Moshiur Rahman	Rimu	True	False	True	-

Figure 25 View All Users

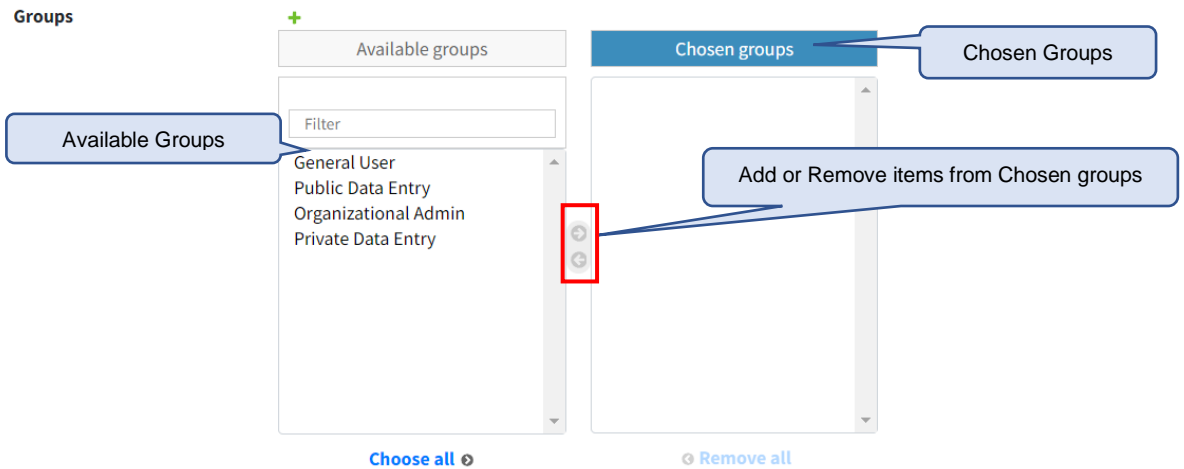


Figure 26 Add or Remove groups

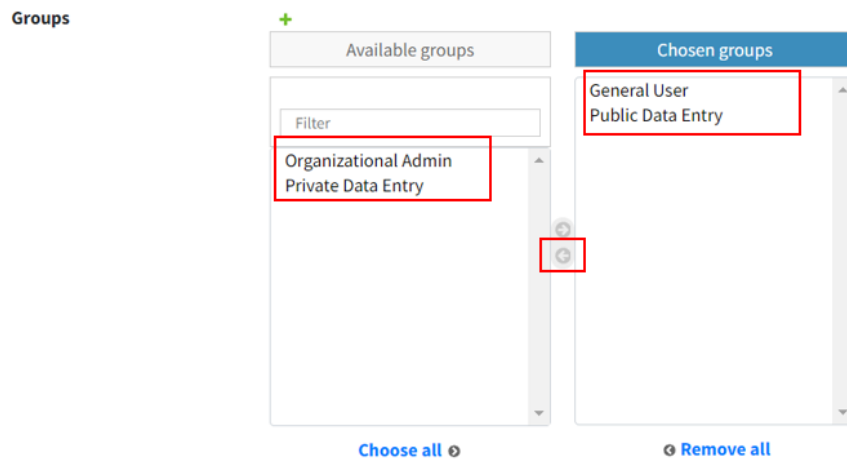


Figure 27 Select a group from given groups

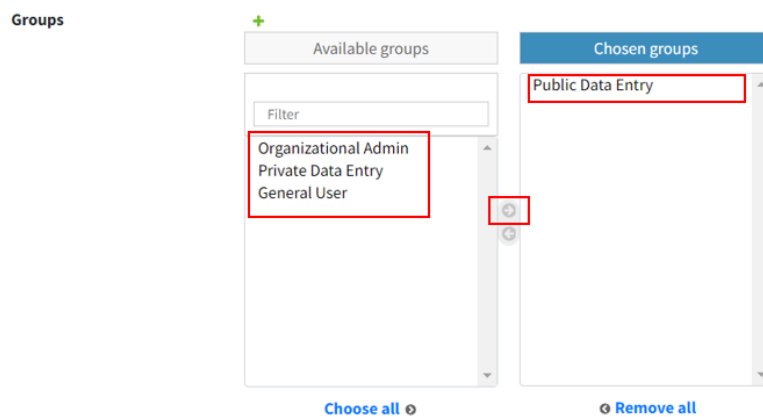


Figure 28 Remove a group from the selected groups

To add or remove group access select a group from the left panel. To select multiple groups, hold ctrl and click on each item those need to be selected. Then click on the right arrow to make the selected groups as chosen groups. In case to remove a group from the chosen groups, click on the groups and click left arrow to unselect those chosen groups.

To choose all groups select **Choose all** button and to remove all selected groups click **Remove all** button.

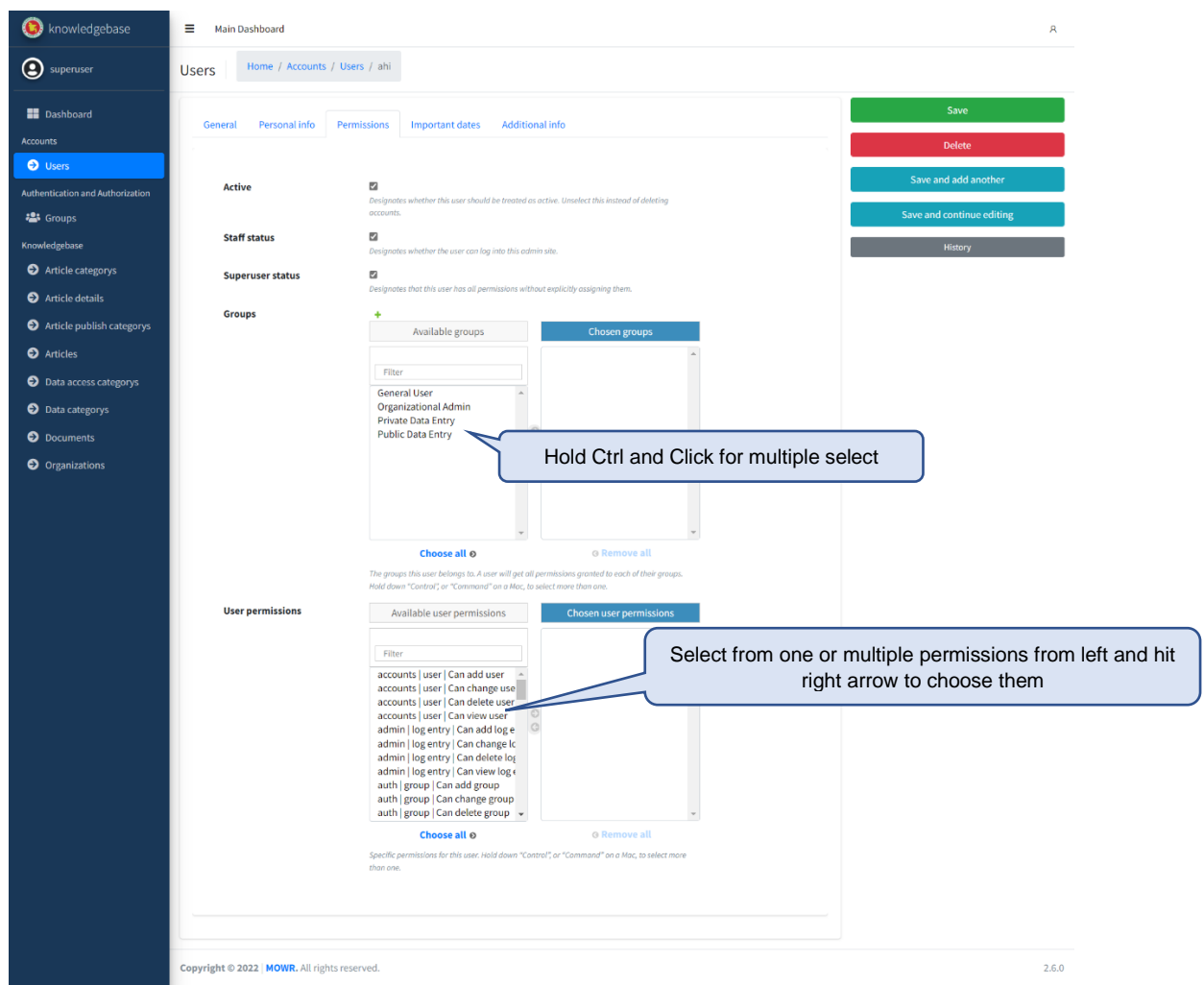


Figure 29 Permission Control Panel

To view the history of the changed events, click on the right-side button named as **History** button.

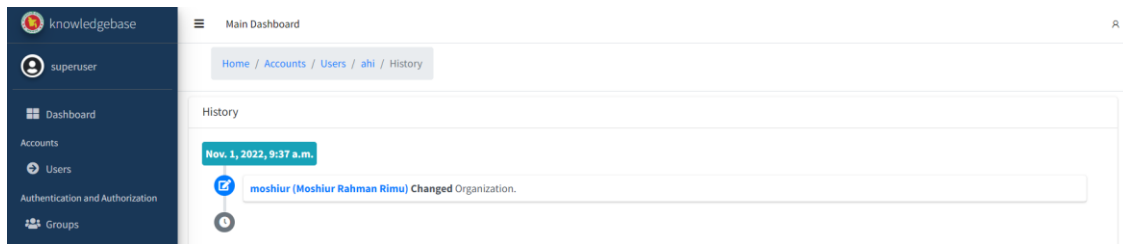


Figure 30 History of log events

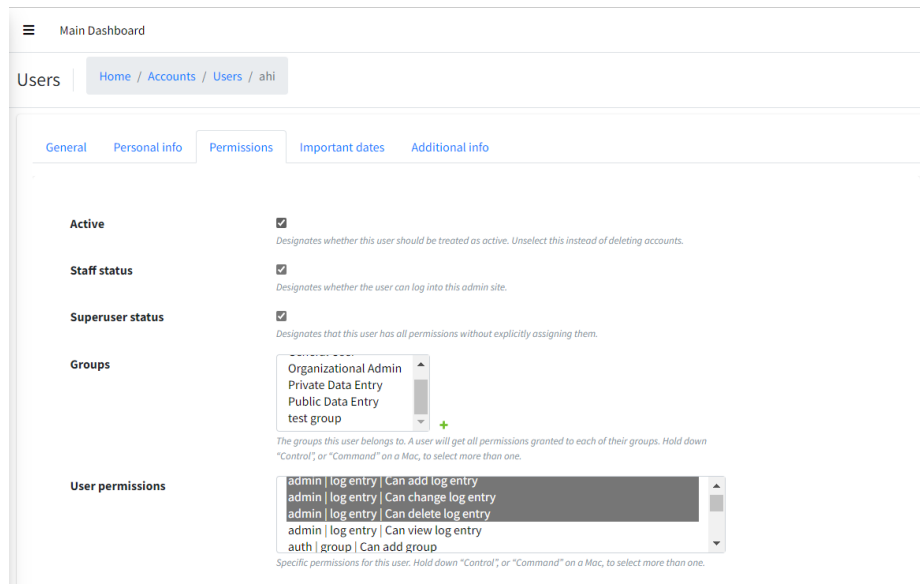


Figure 31 Specifying groups and permissions

1.7 Data Entry

There are two types of documents that can be uploaded into the system. One public and other is private documents. The private files can only be uploaded by the users who has private data entry-level access. Otherwise, the user can only upload the public documents.

Please visit **1.6 Add or Change Information** section for detailed information.