**3. Irrigation Management Information System (IMIS)**

The IMIS is now operational but is missing data export functions and the main canal conveyance efficiency computations. Both of these will be provided by the developer in February/March. After that, the IMIS can test the IMIS in the Lower Kofarnihon and Zarafshon basins.

**IMIS Application**

|  |  |  |  |
| --- | --- | --- | --- |
| **No.** | **Recommended data for the IMIS** | **IMIS is ready to hold the data sets as of Jan 2020 (Yes/No)** | **Remarks** |
| **A** | **Dynamic/Time Series Data** |  |  |
| 1 | Proposed cultivated area by crop for each WUA per vegetation period | Yes | Import the data from the WUA billing system. |
| 2 | Computed water demand of each WUA per vegetation period | Yes | Import the data from the WUA billing system. |
| 3 | Actual daily water delivered to each main canal (volume) | Yes | Collect the data from the gauging stations. |
| 4 | WUA water demand vs. actual water delivered to each WUA | Yes |  |
| 5 | Computed efficiency for each main canal per vegetation period | No | It will be added in Mar 2020 |
| **B.** | **Static/Reference Data** |  |  |
| 1 | Basin management zones | Yes | Import the attributes from NGDA ( 5 total in Tajikistan). |
| 2 | Main Rivers | Yes | Import the attributes from NGDA (3 in the Kofarnihon Basin). |
| 3 | Lakes | Yes | Import the attributes from NGDA. |
| 4 | Reservoirs | Yes | Import the attributes from NGDA. |
| 5 | Catchments | Yes | Import the attributes from NGDA. |
| 6 | Main canals | Yes | Import the attributes from NGDA (11 main canals in the Lower Kofarnihon) |
| 7 | Canal gauging stations | Yes | Import the attributes from NGDA (64 total and 49 are automated in the Lower Kofarnihon). |
| 8 | Irrigation systems | Yes | Import the attributes from NGDA (9 irrigation system in the Lower Kofarnihon). |
| 9 | Drainage canals | Yes | Import the attributes from NGDA |
| 10 | WUAs | Yes | Import the attributes from the WUA billing system. |
| 11 | Regions | Yes | 1 – Khation |
| 12 | Districts | Yes | 3 – Shahrituz, Hosiri Hisrav and Kabaiyan |
| **C** | **Database functions** |  |  |
| 1 | Data input, edit and delete | Yes |  |
| 2 | Data collection forms | --- | Not necessary |
| 3 | Data import and export utilities | See remarks | Data import utility – Yes  Data export utility - Feb 2020 |
| 4 | Reports | See remarks | WUA water demand vs. actual water supply report – Feb 2020.  Main canal efficiency report - Mar 2020. |
| 5 | Maps | Yes | Hydropost and WUA locations (points) |
| 6 | Graphs and charts | Yes | Basin zones/management areas  Indicators and quantitative indicators |
| 7 | User administration | Yes | Users and roles (super administrator, editor) |
| 8 | Settings by user | Yes | Profile and change password |

Recommendations for improving the IMIS are:

1. Add an appropriate background photo for the login page by February.
2. Change the banner color of “Agency for Land Reclamation and Irrigation under the Government of Tajikistan” from black to white to make it more readable by February.
3. Replace the “Main” page with a photo of an irrigation canal structure on the left and short description of the database application on the right, similar to the BPDB home page by February.
4. Fix the Indicator chart with actual information on the Main page by February.
5. Redo the menu on the left – Planning with submenus: WUA crop info and WUA water requests; Water Supply – Same as before; Gauging Stations – Same as before; Performance – Actual water delivery to WUA, WUA water supply and demand, Main canal efficiency by February.
6. Build the Data Export utility (text and worksheet formats) by February.
7. Program the database to compute canal conveyance efficiency for each main canal by March.
8. Build the WUA water supply and demand report by February.
9. Build the main canal conveyance efficiency report by March.
10. Test the IMIS in the Lower Kofarnihon and Zarafshon after February.
11. Populate the application with actual data from the Lower Kofarnihon, not just a sample set. The staff members from the ALRI regional office in the Lower Kofarnihon will perform the data entry tasks under the supervision of the WIS team after February.
12. Build additional database reports per ALRI instructions after February.