Central Asia Knowledge Portal: Description of Activity

Background

Access to reliable, comprehensive data and analysis is a foundation of effective water and energy resource management. Although information exists, it is fragmented and heterogeneous; many institutions produce different kinds of information (rarely digitized) and exchange between administrative bodies at national level is limited. At regional level, despite the establishment of an institutional framework (IFAS) and of a regional water information system (e.g. CAREWIB), available information is not freely accessible.

As reported to the ESCC in June 2013, the 2009-2012 ESCC Action Plan concluded with a roadmap for strengthening analytical tools for integrated water resources, including energy-water linkages. The roadmap was based on eight key principles articulated by Central Asia experts, including a desire for: (i) more emphasis on open source data, information products and models available in the public domain; and (ii) integrating "top down" (satellite, remote sensing and internationally public)and "bottom up" (national and regional) data.

Objectives of Knowledge Portal

The objective is to establish an on-line knowledge platform supporting analysis of water and energy management issues in Central Asia and Afghanistan[1] and raising awareness/building capacity on the main tools available from local, regional and international sources.

The activity will: (i) enhance access to and exchange of global, basin and national multi-sector information (climate, hydrology, environment, agriculture, economy, infrastructure) in an interactive way; (ii) combine   "top down" (using the last earth systems available products – see Figure 1) and "bottom up" (using existing national products) sources; and to (iii) share information on the sources and assessment of data, and on the relevance to regional and national decision-making.

The portal will be publicly disseminated. Thus the audience will be all information users in the region from various levels and different backgrounds: government, environmental groups and institutes, academia and researchers.

Work Program

The portal will be developed through four tasks.

Task 1 will develop a prototype portal giving access to existing datasets from global levels. It will be developed using ESRI's ArcGIS Server and ArcGIS Online for Organizations platform. The prototype will provide a basis for further refinement. The first task will also generate selected information products (e.g., atlas of Aral Sea Basin) to illustrate the use of the portal.

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[1] Countries of the Aral Sea Basin

Task 2 will convene Central Asia experts to work interactively with the prototype portal. Conducted in parallel with training session (see Task 4), these sessions will afford an opportunity to better understand the global data sets and relevance to Central Asia. These sessions will also help identify specific products and further user-driven development of the portal. A key component of this task to convene experts and organization currently involved in similar or related endeavours.

Task 3 will identify and collect information from local and regionally available data sets, both digitized and non-digitized. Some data will be available on-line (e.g., Interactive scheme of the Syr Darya Kazakh part FFEM-EECCA Project, EC-IFAS Branch Kazakhstan) and other may be by request (e.g., CAREWIB data through ICWC). Some available free information also exists at the national level (e.g., water quality). This task will also explore technical approaches to integrating different "top down" and "bottom up" data sources.

Task 4 provides a training module on use of the portal and its components. In so doing, efforts will be made to establish a network of users to guide ongoing development and encourage further contributions from a community of professionals within Central Asia, in partnership with a separate activity with the World Bank Institute (under development). Training will cover: portal design, structure and access; introduction to earth systems modeling and global thematic databases; and information sharing among information management efforts within Central Asia.

Process

The initial portal prototype will be produced by the World Bank, building on similar exercises in Asia and Africa. However, the portal will depend on engaging national government ministries, IFAS (in particular SIC-ICWC, SIC-ICSD and Executive Committee branches, Regional Centre of Hydrometeorology, CAREC) to ensure user-driven refinements, ownership and application. Updates will be provided to the ESCC.