

Service development

User need assessment

Approach

The user need assessment aimed to (1) determine potential partners in the co-development process and potential users of the service, and (2) to identify the major themes, information needs and capabilities in Kenya, Sudan and Ethiopia. In the last year of the project services were co-developed with three service centers: Ethiopia Construction Design and Supervision Works Corporation (ECDSWCo), the Hydro-Agriculture Service Center Sudan, and the Association of Irrigation Acceleration Platform (AIAP) in Kenya. The report combines desk studies, interviews and feedback from the service centers.

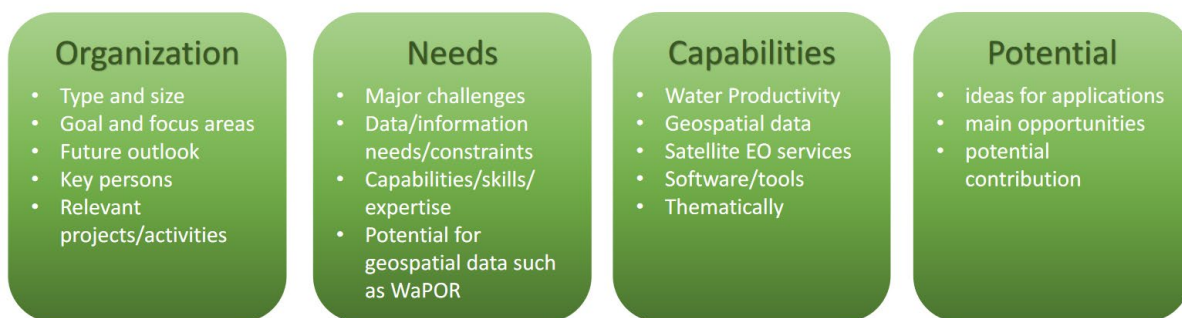


Figure 1: User need assessment interview guidelines

Major finding and recommendations

User needs were all related to taking decisions with better/quantitative/spatial-temporal detailed data on crop production and water availability, usage and stress. The user needs were generally at field-scale and regional (irrigation scheme, agricultural area) scale and related to planning, early action, monitoring and evaluation.

The service centers **approach** depends on the country's institutional structure, work culture and service developers' preferences:

- **Kenya:** Service oriented approach (building potentially acceptable services that were offered) aiming at clients at sub-regional level (agri-businesses and irrigation managers)
- **Sudan:** Service/customer oriented approach (producing mock-up services and sharing with potential clients for feedback) aiming at clients at regional level (banks and insurance companies)
- **Ethiopia:** Customer oriented approach (developing services in co-development with potential clients) aiming at clients at national level (government institutions)

A **challenge** identified in all three countries is that the spatial and temporal resolution of WaPOR is considered insufficient for country-wide near real-time farmer advisory services.

Recommendations:

- Further develop the technical capacity of the service centers in service design and development.
- Improve the awareness and understanding on the accuracy and reliability of remote sensing-based services among government officials, irrigation service providers and farmers.
- Bundle irrigation services with other relevant services such as market yield prices to improve adaptability and impact.

Kenya

58 million ha | 53 million people
Agriculture adds 34% value to the GDP and provides 54% of total employment

Cultivated area is 6 million ha of which 3% is equipped for irrigation

Agricultural water withdrawals are 3.2 Bm³/year which is 80% of total water withdrawal



Challenges: near all agriculture is rainfed and vulnerable to climate change (drought, unreliable rainfall), diseases and pests, outdated infrastructure, soil nutrients, vulnerability of economy to shocks

Sudan

185 million ha | 43 million people
Agriculture adds 20% value to the GDP and provides 38% of total employment

Cultivated area is 20 million ha of which 9% is equipped for irrigation

Agricultural water withdrawals are 25.9 Bm³/year which is 96% of total water withdrawal



Challenges: low and variable agricultural productivity due to climate, degradation, poor technology and knowledge, issues in administration and infrastructure, geographic concentration of irrigated agriculture

Ethiopia

114 million ha | 112 million people
Agriculture adds 34% value to the GDP and provides 67% of total employment

Cultivated area is 18 million ha of which 5% is equipped for irrigation

Agricultural water withdrawals are 9.7 Bm³/year which is 92% of total water withdrawal



Challenges: agricultural productivity suffers from land degradation, poor water management, low technology usage, and underdeveloped infrastructure, conflict, frequent severe weather events, private sector constraints

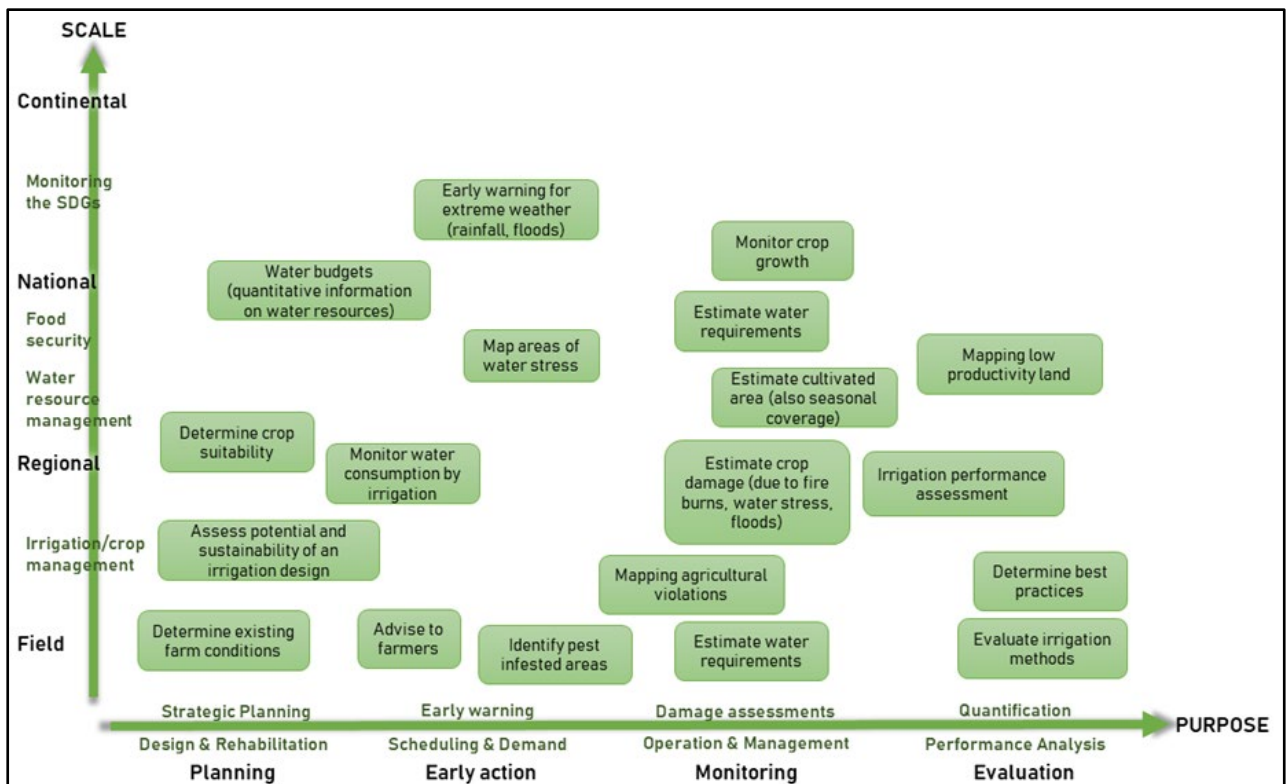


Figure 2: Identified user needs grouped to scale and purpose

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