The Regional Environmental Centre for Central Asia
Региональный Экологический Центр Центральной Азии

Valuation of Ecosystem Services for Improving Agricultural Water Management in Kazakhstan

2014 project progresses

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Expected deliverables for 2014

- Database (GIS and MS Excel spreadsheets) of stakeholder mapping (with sub-category on women) and drivers of water use;
- Calibrated SWAT model. One or two CAREC staff are trained by the consultant and operational for using the SWAT model;
- Agricultural water management modeling of the study area using the SWAT model;
- Capacity building on GIS/remote sensing activities;
- Preparation of two demonstration days: content and audience: identification of target women groups and specification of their engagement;
- Community consultations are held to ensure the project accessibility and ownership by locals;

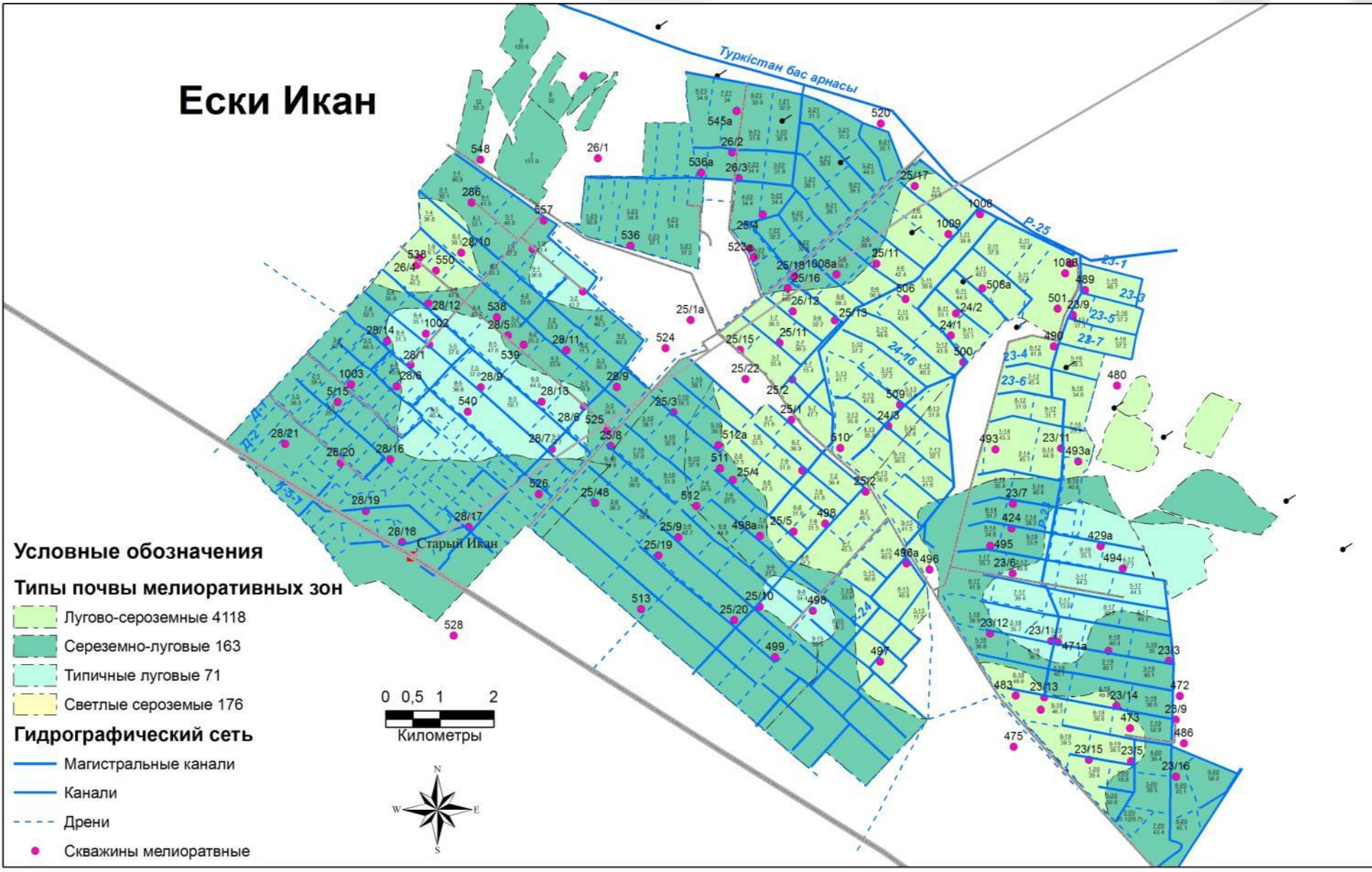
Bio-physical database for SWAT modelling

- Access database including bio-physical data created. Available on CAREC intranet, soon on CAREC website.
  - Land resources (soil quality, land use)
  - Water resources (irrigation and drainage water)
  - Agricultural technologies (crop rotation, fertilizers/pesticides application)
- Missing:
  - Water quality (nutrients and pesticides concentration in irrigation and drainage water). To be generated in 2015.

GIS database

Available on CAREC intranet, soon on CAREC website. Includes data on:

- Administrative boundaries and settlements
- Hydrology (lakes, reservoirs, rivers, irrigation and drainage networks)
- Land uses (crop type)
- Type of soil
- Land melioration (soil quality according to a USSR classification)
- Monitoring network (gauging stations, observation wells)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Типичные луговые 71
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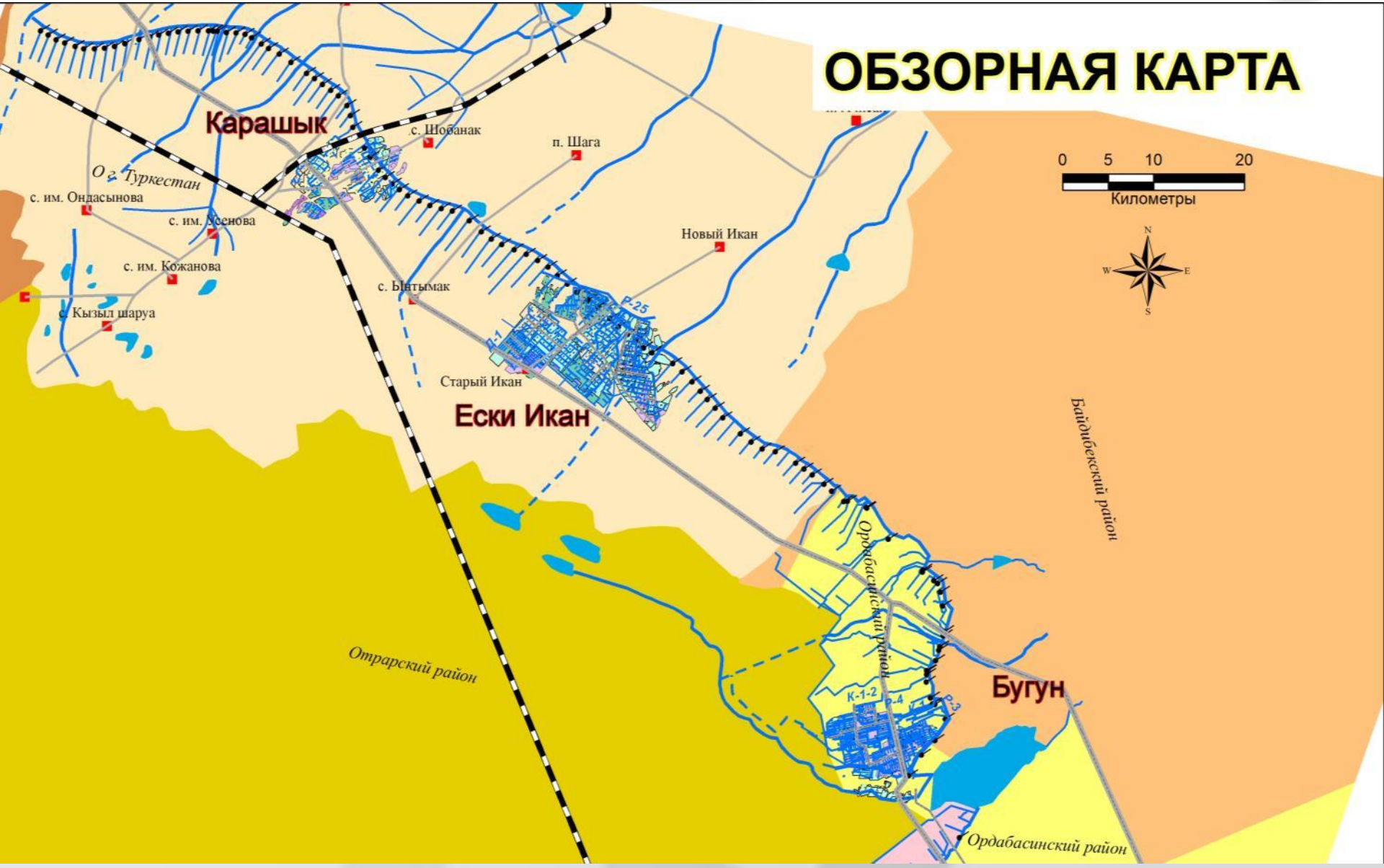
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Capacity building activities

- 1-week training on GIS technologies for project staff and local partners

- SWAT modelling training

Agriculture, irrigation and drivers of water use baseline assessments

- Agriculture and irrigation assessment for each of the three pilot zones:
  - Type of crops and crop yields
  - Crop rotation
  - Crop subsidies
  - Irrigation technologies
  - Origin of irrigation water
- Drivers of water use:
  - Water governance
  - Bio-physical, socio-economic and knowledge-information related drivers

Community consultations

- First consultations held in three pilot zones
  - Awareness raising on project objective, activities and expected results
  - Stakeholder mapping:
    - Identification of main land and water resources users
    - Identification of main organizations controlling and managing land and water resources
  - Participation of women in land and water use and management
  - Barriers (socio-economic, financial, cultural, technical) preventing a more active role of women
  - Specific needs for capacity building of women with regard to agricultural-based activities