

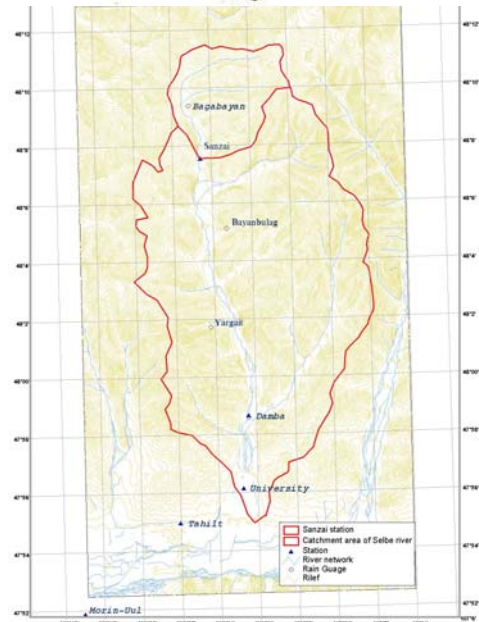
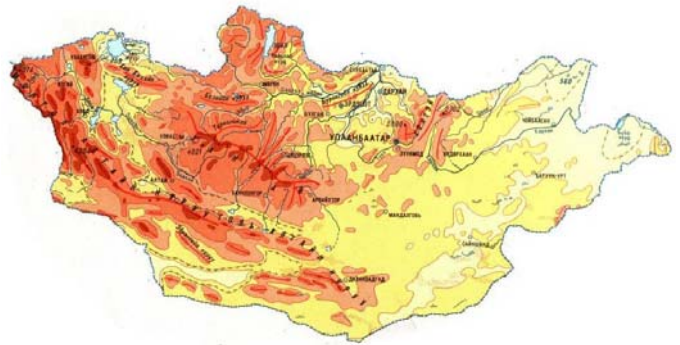
GEOSS/AWCI Demonstration project, Mongolia

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Stream basin characteristics

- The selected Selbe stream basin is located in center of Mongolia, in the north of Ulaanbaatar, between the latitudes of **47° 55' - 48° 15' N** and the longitudes **106° 50' - 107° 00'**.
- The Selbe with **26.2 km** length is draining an area of nearly **303 km²** in the Tuul Stream basin of 6300 km². Land use types are described as urban, pasture and forest (forest area 177.94 sq.km). Geomorphology: floodplain, hilly slope, mountain.



Observation system

Two stations:

In the period 1985-1991 at the lower site-Dambadarjaa is operated. However, in 1994, this station was re-established. Since 1998, Selbe at Dambadarjaa gauge is operating temporary (operating only during warm period from May to October) in frame of the different national projects (Institute of Meteorology and Hydrology).

No.	Sites	Coordinates	Cactment area, km ²	Stream length, km	Basin mean elevation	Channel slope, ‰
1	Upper basin-Sanzai	48° 07' 33" 106° 53' 25"	34.2	8.3	1620	21.3
2	Lower basin-Damba	47° 58' 24" 106° 55' 34"	188	26.2	1510	12.4

Observation system

SURFACE	Number	HYDROLOGICAL	Number
Air Temperature	2	Streamflow	2
Humidity	2	Reservoir (Water level, Outflow)	No
Wind	2	Groundwater Table	Not yet defined
Pressure	2	Evaporation	No
Precipitation	6	Soil Temperature	1
Snow Depth	1	Soil Moisture	1
Skin Temperature		Atmosphere	Number
Upward Shortwave Radiation		Planetary Boundary Layer Tower	No
Downward Shortwave Radiation		Pilot Baloon	No
Upward Longwave Radiation		Radiosonde	1
Downward Longwave Radiation		Radar	1
Net Radiation	1	Water Quality	Number
Sensible Heat Flux	Can be calculated at 1 station	Groundwater quality indicators	Not yet defined
Latent Heat Flux	Can be calculated at 1 station	Surface water quality indicators	2
Ground Heat Flux	1	Others	Number
CO2 Flux	No		

Raingauges in the Selbe stream basin

	Sites	Elevation, m	Coordinates	
			Latitude	Longitude
1	Sanzai	1583	48° 07' 35"	106° 53' 25"
2	Bayanbulag	1510	48° 05' 08"	106° 54' 42"
3	Yargait	1511	48° 01' 45"	106° 53' 47"
4	Damba	1258	47° 58' 41"	106° 55' 36"
5	University*	1299	47° 27'	106° 58'

- In 2005 due to cooperation between Japanese and Mongolian national hydrological committees for UNESCO, in upper Selbe stream have established **AWS**, which has the next **sensors**
- for wind speed and direction
- air temperature
- relative humidity
- Rainfall
- net radiation
- soil heat flux
- soil temperature
- soil moisture

Targets

- **Environmental degradation** (vegetation, soil degradation, deforestation and rapid urbanization and etc)
- **Surface and ground water monitoring and modeling**
- **To develop the information system** for promoting the implementation of integrated water resources management (IWRM) in the Selbe and Tuul Stream Basins.

Proposed activities

No.	Activities	2008	2009	2010	2011
1	Hydrometeorological and water quality monitoring	X	X	X	X
2	Data integration system (input data preparation, quality control)			X	X
3	Improvement of in-situ observation network system	X	X	X	
4	Setting-up a Distributed Hydrological model	X	X	X	
5	Scenario studies: Land use change analysis, dry periods & etc	X			
6	Capacity building on Floods, Droughts & Water quality	X	X	X	
7	Parallel testing of the system at operational stage			X	X
8	IWRM plan development of Floods, Droughts & Water quality			X	X

Thank you for your attention

