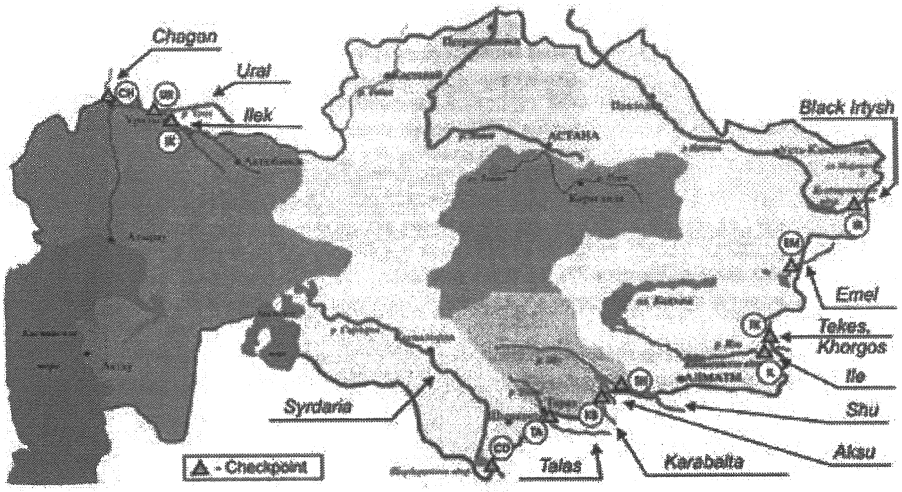
ORGANIZATION OF THE SYSTEM OF RADIATION AND HYDROCHEMICAL MONITORING FOR THE KAZAKHSTAN TRANSBOUNDARY RIVERS

1 T.M. ZEINULLIN, 2 K.K. KADYRZHANOV, 2 V. P. SOLODUKHIN, 1 P.K. SHINGISSOVA
1 Republican State Enterprise «KazHydroMet», Almaty, Kazakhstan
2Physics Institute of Nuclear NNC, Almaty, Kazakhstan

State of water resources in Kazakhstan is characterized by its general lack, considerable pollution and exhaustion. Also the situation is aggravated by a fact that after USSR disintegration and loss of relations between its former republics coordination of activities on control of the water flows and quality in transboundary rivers has become considerably looser.

Beginning with spring of 2007, the RSE «KazHydroMet» and the INP KNNC undertake activities on the radiation and ecological monitoring in near-border sections of transboundary rivers inflowing to the Kazakhstan lands. Layout of appropriate checkpoints is shown in figure below.



In arrangement of the monitoring system, the methodology was used which was developed by a group of scientists from Central Asia and USA in course of implementation of the International Project «Navruz» [1]. Determination of radionuclide/element composition in samples of soil, bottom sediments and water soluble/insoluble components is carried out by techniques of instrumental γ spectrometry, radiochemical analysis, NAA, XRFA, and MS-ICP.

1. H.D. Passell, V. Solodukhin, S. Khazhekber, V.L. Poznyak, I.A. Vasiliev, V. Alekhina, A. Djuraev, U.S. Salikhbaev, R.I. Radyuk, D. Suozzi, D.S. Barber. The Navruz Project: Cooperative Transboundary Monitoring, Data Sharing and Modeling of Water Resources in Central Asia. NATO Science for Peace and Security Series-C: Environmental Security "Nuclear Risk in Central Asia", 2008, pp.191-199.