Striving for ‘nirvana’: EPIRB Team Leader Timothy Turner

EPIRB project team leader Timothy Turner, with a university degree in civil and structural engineering and another in zoology, has been involved in water resources planning for more than 20 years. He has managed water resource and environmental projects and programmes in Russia, the Black Sea, the Caspian Sea, the Kura-Aras basin, the Arctic and Central Asia.

“Assisting in the construction and operation of effective regulatory and management frameworks for natural resources may not sound exciting, but I assure you it is,” says Turner. “It is hard work and you have to be committed, but if you succeed in moving forward, even by one small step, then at the end of the day your spirits are lifted. The environmental sector is populated by some of the most hardworking, dedicated professionals I know.”

The EPIRB project follows up on EU work in the Black Sea and Caspian Sea basins on the implementation of integrated water resources management (IWRM), and specifically the Water Framework Directive (WFD). Turner hopes that the implementation of pilot river basin management plans (RBMPs) will not only result in cleaner waters, but also attract funding to the countries from multilateral and bilateral donors and raise the profile of environmental issues on local and national political agendas.

“Cooperation between countries to tackle common and shared problems is central to EPIRB project objectives,” claims Turner. “The pilot RBMPs prepared under this project are jigsaw pieces in a much larger regulatory picture for the Black Sea basin. The IWRM concept is a lofty target, perhaps even a ‘nirvana’ concept that can never fully be reached, but it’s something which we have to strive for. At the heart of any IWRM programme is institutional reform. Water professionals need to work together and build understanding and trust. This means that all stakeholders need to be involved and participate in the exercise.”

Regional activities under the EPIRB project will support the implementation of both the UNECE Water Convention and the Danube Convention, and will look to strengthen national commitment to these conventions via practical assistance at country level.

“The key project deliverables will be the RBMPs developed in line with the WFD, but they should not be seen as products of the project, but rather products of the beneficiaries,” Turner concludes. “The plans are not meant to be pretty documents which decorate the bookshelves, but planning and implementation tools which galvanise investment and ultimately lead to improved water quality and environment. This will be our aim over the next two years.”
Pilot river basin profiles as selected by leading beneficiary institutions

**UPPER DNIIEPER BASIN**
*Total area: 77,336.17 km²*
*Location: 67,295.35 km² in Belarus; 10,040.82 km² in northern Ukraine*
*Characteristics: Wide natural biodiversity and a variety of linked ecosystems, with more than 90 fish species, 182 bird species and over 2,500 plant species.*
*Did you know? The Dnieper derives water from many sources: snow water (50%), groundwater (27%) and rain water (23%).*

**PRUT BASIN**
*Total area: 17,473.36 km²*
*Location: 8,123.35 km² in Moldova; 9,350.01 km² in western Ukraine*
*Characteristics: 5 national parks and several nature reserves, 1 major wetland, and several Ramsar-listed lakes along the lower Prut.*
*Did you know? The Prut River starts from the south-western slope of Mount Goverla of the Chernogory Massif, and flows into the Danube River.*

**CHOROKHI-ADJARISTSKALI BASIN**
*Total area: 2,478.84 km²*
*Location: South-western Georgia on the Black Sea coast*
*Characteristics: 2 national parks and several reserves; diverse flora and fauna, including rare varieties of relict and endemic species.*
*Did you know? No artificial reservoirs are currently operating in the pilot basin, though many hydropower infrastructure development plans are in the works.*

**AKHURYAN WATER BASIN MANAGEMENT AREA**
*Total area: 5,021.19 km²*
*Location: Akhuryan River Basin in western Armenia, bordered by the Metsamor River Basin*
*Characteristics: 30 rare mammal types and 200 bird types; notable species include various waterfowl, panthers, Armenian moufflon, Bezoar goats and the red-listed Darevsky’s viper.*
*Did you know? Ample water reserves and good climatic conditions allow agriculture and cattle breeding to be key components of the regional economy.*

**CENTRAL KURA BASIN**
*Total area: 6,188.10 km²*
*Location: Gandzha-Gazakh Economic Region in western Azerbaijan; 4 main rivers (Gandzhachay, Shamkirchay, Tovuzchay and Agstafachay)*
*Characteristics: 1 national park, 2 state nature reserves, and 4 state nature sanctuaries.*
*Did you know? Almost all rivers in the region are used for recreation and provide drinking water.*
The Dnieper River Basin Council (RBC) was established in 2011 as an advisory body to the State Agency for Water Resources in Ukraine. The Basin Management Authority of Water Resources in the Dnieper, based in Vyshgorod, acts as Council Secretariat.

At a meeting held in Cherkassy on November 22, 2012, the Dnieper RBC’s main task was to discuss improvements in the management of environmental restoration of the Dnieper Basin and the rational use of its water resources. Belarusian counterparts were invited to the meeting and were among the 45 people in attendance. Participants discussed the roles and responsibilities of the Dnieper RBC with regard to EU practices and the Water Framework Directive.

Another meeting in Cherkassy on May 23–24, 2013, concentrated on the conception and planning of Dnieper Day celebrations (July 4–5) and resulted in key decisions such as: providing information on the hydromorphological, chemical and biological water quality of water bodies during later stages of development of the pilot RBMP of the Upper Dnieper; legally establishing a transboundary working group (Ukraine and Belarus); and proposing to launch trilateral negotiations to reach a final agreement on the text of the basin treaty. Also, the RBC deemed it appropriate to send a request to provincial councils and governors to help organise Dnieper Day celebrations.

Georgia’s NCC was established on May 31, 2012, and the first EPIRB NCC workshop in Georgia was held on March 7, 2013, an event that took place jointly with the European Water Initiative National Policy Dialogue for Georgia. Major steps for the development of the River Basin Analysis for the Chorokhi-Adjaristkali were presented, as were ongoing activities and future plans.

The first EPIRB NCC meeting in Azerbaijan was held on June 6, 2013, in Baku. Its main purpose was to raise project awareness among representatives of key beneficiary institutions and to discuss completed work and follow-up tasks to be carried out in Azerbaijan, such as RBMP analysis and water body analysis in the Central Kura pilot basin district.

**TRIO OF NCC MEETINGS TAKES PLACE**

The National Coordination Committee (NCC), together with the Regional Steering Committee, serves as an advisory mechanism for close cooperation between the EPIRB project team and beneficiary institutions in carrying out project goals and objectives. Three NCC meetings took place in the past 18 months.

The first NCC meeting in Armenia was held in Yerevan on December 12, 2012, and featured the presentation of a tentative work plan of upcoming project activities in Armenia, namely: improving the hydro-, biological-, chemical- and hydro-morphological monitoring and assessment of water bodies; and developing joint RBMPs for selected river basins.

**DNIEREP RIVER BASIN COUNCIL SPRINGS INTO ACTION**

The Dnieper River Basin Council (RBC) was established in 2011 as an advisory body to the State Agency for Water Resources in Ukraine. The Basin Management Authority of Water Resources in the Dnieper, based in Vyshgorod, acts as Council Secretariat.

The concept and planning of Dnieper Day celebrations (July 4–5) and resulted in key decisions such as: providing information on the hydromorphological, chemical and biological water quality of water bodies during later stages of development of the pilot RBMP of the Upper Dnieper; legally establishing a transboundary working group (Ukraine and Belarus); and proposing to launch trilateral negotiations to reach a final agreement on the text of the basin treaty. Also, the RBC deemed it appropriate to send a request to provincial councils and governors to help organise Dnieper Day celebrations.

**WATER QUALITY LABS IN SIX PROJECT COUNTRIES**

Countries and regions need to manage their water basins to minimise anthropogenic effects on water quality, and an efficient national laboratory is an important tool for doing so. Such laboratories regularly monitor and analyse water conditions, organise and conduct on-site water and sediment samplings, respond to water pollution incidents, work to limit or reverse damage, and raise general public awareness about key water quality issues.

All of the six project countries have water laboratories with different capabilities, and each does the most it can with the resources provided to carry out vital activities. As a key priority is to provide support to these national laboratories, the project’s key ecological and biological expert, Michael Jackman, has carried out training workshops and worked on site with staff in attempts to address the following:

- narrowing gaps with regard to analytical equipment and staff operations;
- training and assisting staff to ensure the credibility and acceptability of analytical results (ISO17025 accreditation);
- advising on laboratory management;
- reviewing local expert support for water pollution control and analysis; and
- assessing and training staff on taking water samples according to international ISO standards.


**SCI-TECH:** All six project countries have water labs, each with different capabilities.
A joint fields survey (JFS) includes surveying, monitoring, sampling, equipment programming and evaluation.

Groundwater joint field surveys and trainings were carried out this year in three Caucasus countries—Armenia, Azerbaijan and Georgia—during April 6–27, and in Moldova and Ukraine during May 14–25. Activities took place in the following pilot river basins: Akhuryan-Metsamor (Armenia), right tributaries of the Kura River (Azerbaijan), Chorokhi-Adjaristkali (Georgia), Prut (Moldova) and Upper Dnieper (Ukraine).

After obtaining a number of sampling materials and detailed topographic maps of pilot basins, 20 groundwater points (wells and springs) were visited and sampled in each pilot basin, and sampling point coordinates were fixed with the GPS MAPS 62sc device. After conducting field parameter analyses, samples for each basin were delivered for laboratory analyses of main cations, anions and trace elements. The information will be used to fill in groundwater data gaps and for further classification of groundwater bodies.

Furthermore, 22 local experts have been trained to perform field work in compliance with EU QA/QC requirements.

Joint field surveys of surface waters in pilot basins of the Caucasus sub-region took place in Armenia, Azerbaijan and Georgia during June 10–29. The event goal of these efforts is to obtain data from each of three key sections of every surface-water object or river basin, namely: a) upstream river sections in order to demonstrate reference conditions in each basin (‘high’ to ‘good’ ecological status); b) middle-flow sections where significant impact from human activities is still not clearly visible (‘good’ to ‘moderate’ status); and c) downstream flow sections or at crossing points with industry/agriculture and highly populated areas to demonstrate changes in ecological status (from ‘moderate’ to ‘poor’ or ‘bad’ ecological status).

Since water quality monitoring practice has severely limited the amount of available monitoring data in the selected pilot areas, the first priority of this year’s JFS was to sample and analyse hydro-biological, physical-chemical and hydro-morphological quality elements for potentially ‘high’ and ‘good’ ecological status of the identified water bodies. Any further examinations of water bodies with inferior classifications will be carried out at the next JFS during summer 2014.

Based on the results of this year’s survey, it is possible that the project may change reference point locations for next year to ensure compliance of sampling locations with EU WFD requirements.