

meter installation, servicing and reading; the operation and maintenance of pumping and treatment plants; and water pollution control assistants. Although these efforts are a good way to build up the necessary technical human resources base, a detailed analysis of the water sector has not yet been done to identify current existing gaps in capacity (i.e. required skills, levels of competency and experience), which makes it difficult to estimate the impact of higher-level water education and short courses for technician training.

### Conclusion

The food deficit in Kenya is a major problem, resulting in millions of chronically undernourished people. National food policies, while aiming to

boost productivity, do not address access to food and quality. Access to safe water and sanitation services have not caught up with the needs of the growing population. Inadequate funding curbs the rehabilitation and expansion of the water supply and sewerage systems, and as a result, many diseases claim the lives of poor people every year. The need for domestic, industrial and agricultural water supply is growing, but the absence of demand-management strategies means that the increase in demand will likely outstrip the available supply. The construction of new dams is essential for providing the energy needed for development and meeting the increasing demand for drinking and irrigation water. The absence of international funding, however, remains a major obstacle for development efforts.

## 7. Lake Peipsi/Chudskoe-Pskovskoe

Lake Peipsi/Chudskoe-Pskovskoe (referred to here as Lake Peipsi) is the fourth largest and the biggest transboundary lake in Europe. It consists of three unequal parts: the biggest northern Lake Peipsi sensu stricto (s.s.)/Chudskoe, the southern Lake Pihkva/Pskovskoe and the narrow strait-like Lake Lämmijärv/Teploe connecting Lake Peipsi s.s. and Lake Pihkva/Pskovskoe.

The Lake Peipsi Basin is situated in Russia (59 percent), Estonia (33 percent) and Latvia (8 percent), although the last has a negligible effect on the basin. It is officially managed by a joint commission of Estonia and Russia; Latvia is not a member of any agreements or commissions concerning the lake.

The case study report published in WWDR1 (see WWDR1 case study) concluded that lake pollution (see Chapter 12), eutrophication and economic growth were the most critical problems facing the region. The fishing industry, which has been the lake's major economic activity, has suffered from environmental damage inflicted by pollution and overfishing, both of which have led to a depletion of fish populations. Although some improvements have taken place, the prior trends have not significantly changed.

### Changing climatic and socio-economic contexts

Although there has been no specific research conducted on the effects of climate change in the region, the analysis of data collected over the last fifty-four years shows a slight decrease, approximately 3 cm, in the average thickness of ice cover.

There has been a slight change in the demographic characteristics of the region (the birth rate in Russia has started to increase). However due to aging populations in both countries the departure of younger and educated people for big urban areas continues to be a problem. On the other hand, economic activities in the region are improving and diversifying in both Estonia and the Russian Federation. This change is



**Map 14.8: Overview of the Lake Peipsi/Chudskoe-Pskovskoe Basin**

Source: Prepared for the World Water Assessment Programme by AFDEC, 2002.

due to several factors, including the accession of Estonia into the European Union, the economic recovery of the Russian Federation from its recent crisis and an increased profit from oil exportation because of record high prices. Furthermore, both countries are eager to develop joint economic activities and gain more access to neighbouring markets. Accordingly, economic difficulties are easing, and the high levels of unemployment are decreasing.

### Reforms underway

The Joint Lake Peipsi Management Programme, an integrated water resources management tool, is being developed by both countries in accordance with the requirements of the WFD. When completed, the Estonian-Russian Transboundary Water Commission will be responsible for its implementation and updating. The programme will take into consideration both the surface and groundwater resources of the basin as a unity.

At the institutional level, there have been changes in both countries. As a result of the administrative reform in the Ministry of Natural Resources of the Russian Federation, the Water Resources Agency performs all activities related to the utilization, protection and rehabilitation of water resources. In Estonia, WFD rules and norms are being implemented (see **Box 14.5**), including the development of water basin administrations. As a result, the West Estonia, East Estonia and Koiva River Basin Administrations were established. The East-Estonian River Basin includes Lake Peipsi and the Narva River, which is shared with the Russian Federation.

In order to promote better communication among different stakeholders and build partnership in the region, the Peipsi Council was elaborated as a joint effort.

A bilateral agreement concerning water transportation in Lake Peipsi, Lake Lämmijärv and Lake Pskovskoe was signed in March 2002. One objective that has been facilitated by the agreement and is being currently pursued is the opening of a ferry line between the Russian city Pskov and the Estonian city Tartu. The ferry line is meant to support the local and bilateral development activities of the two countries.

As elaborated in WWDR1, Lake Peipsi is a relatively new transboundary water basin (the control line was formed when Estonia separated from the Soviet Union in 1991). Therefore, the border between the Republic of Estonia and the Russian Federation, a big portion of which runs along Lake Peipsi, has not yet been officially determined, since the official border has not been finalized.

### Environmental issues and meeting the MDGs

In the last few years, considerable investments have been made in both countries to improve water supply facilities and wastewater treatment plants. For example, recent improvements in wastewater treatment facilities in Tartu has helped reduce the basin's pollution load. Due to its unique characteristics, several international and national projects and programmes have been launched with the aim of preserving the biodiversity of the lake and its protected areas. The promotion of regional ecotourism is also considered as a way to improve the regional economy while contributing to current reclamation efforts in the lake.

Progress towards the MDGs in the Russian Federation is reflected in the reporting under the state development programmes, which correspond partially to MDGs and incorporate other state-specific aims and objectives. Estonia, on the other hand, as a member of the EU, addresses water supply and sanitation issues as part of the implementation stage of the WFD. Both countries are on track for achieving the water-related MDGs (UNDP, 2005).

### Conclusion

The region's economy is improving and Estonia and Russia are looking to further increase their economic relations through the establishment of new ferry lines. The water sector in both countries is also improving to face current challenges: Estonia, as a relatively new member of the European Union, has adopted the WFD and is in the process of implementing it, while the Russian Federation is going through administrative reform and revamping its water code. Furthermore the Joint Lake Peipsi Management Programme is in the process of elaboration which would promote implementation of IWRM. Consequently, the changes in both countries will help to create a sustainable utilization of lake resources while protecting the ecosystems.

#### BOX 14.5: BUILDING A COMMUNITY FRAMEWORK

A prime example of the implementation of the EU Water Framework Directive (WFD) is the preparation of the Viru-Peipsi water management plan. In November 2002, the project implementation unit, in cooperation with the environmental departments of four counties (Tartu, Põlva, West-Viru and East-Viru), organized four seminars for ten counties. The main target groups were local authorities (county governments, city governments and

rural municipalities), environmental departments, land reclamation bureaus, health protection departments and water companies. In April and July 2004, two seminars were organized for the participation of local stakeholders in Jõgevamaa, Tartumaa, Võrumaa and Põlvamaa counties.

On the Russian side, such consultations took place within the context of a UNDP/GEF (United Nations Development Programme/Global

Environment Fund) project. The goal of the project was to facilitate the planning processes of the Joint Lake Peipsi Management Programme, taking into account the requirements of both the European Union (EU) and the Russian Federation. Meetings and seminars were carried out mainly in Pskov region and resulted in a number of proposals and recommendations for the future Management Plan (see **Boxes 14.1** and **14.2**).