

6.7 ENVIRONMENTAL MONITORING PLAN

(1) Introduction

The existing PMP system is comprehensive in the range of factors that are examined, but suffers from lack of funding. As a result, the extensive range of issues that are examined are not always looked at in sufficient depth and although there is some sharing of data for specific monitoring purposes, there are also situations where there is insufficient co-ordination between closely related groups, eg SHMU and GSSR for groundwater. Added to the above issues is that fact that other organisations are involved with monitoring, who are not part of the PMP system. There can therefore be duplication of the monitoring programmes, but there is still the issue of insufficient coverage of critical issues, because the monitoring programmes are not necessarily sufficiently focused on identifiable environmental issues.

One further main concern is that there appears to be considerable collection of information, without having a clear idea about the reason for undertaking the monitoring. It is possibly a reflection from pre-revolution times, when data were collected for national statistical purposes on a regular basis to identify baseline conditions, but possibly not to look at trends in environmental parameters. Given the additional issue of the considerable cost of monitoring, thought needs to be given to the scope of the PMP system, together with all other monitoring that is undertaken.

The approach that is necessary will require a thorough evaluation of the existing programme, which goes beyond the boundary of the Study Area, given that it will require modifications to national practices, not just regional issues. There will therefore have to be detailed discussions with the Ministry of Environment. Most significant will be a rationalisation of the existing monitoring programme, together with the creation of major objectives for the sampling that remains, notably in identifying major problem areas and evaluating the effectiveness of mitigation measures.

It must be appreciated that monitoring in itself will not provide a solution to existing environmental problems. However, if used effectively, it will aid the regulatory authorities in more effective policing of pollution incidents, assist in the prioritising of clean-up and reclamation of OELs and provide a better registration of trends in environmental baseline conditions

Finally, because the PMPs together constitute the basic source of data on the condition of the environment, and some of the factors affecting it, it is essential that there is better availability of the data for all the PMP project managers. The fact that the data are collated and presented by

SAZP in GIS format, is helpful. However, the information is then accessible to a limited number of organisations with direct interest in certain areas, rather than being accessed by all the PMP members. Wider distribution and discussion about the data would be helpful in developing a wider perception of the issues that are affecting the Study Area and Slovakia as a whole.

(2) Monitoring Programmes

The range of issues presently covered is given in detail in several SR publications, including 'The Environment of the Slovak Republic' and SAZP documents on the PMP system. It is therefore unnecessary to reproduce a detailed review of the full monitoring programme. Specific monitoring requirements are also addressed within each specialist area and a resume of the existing situation has been presented in Section 3.6. Some suggestions are presented below for additional or rationalised monitoring, which should be considered in the future.

1) Air Quality Monitoring

The number of sampling points is considered to be insufficient to provide a clear picture of air quality in the Study Area, and the modelling exercises that are utilised to try to provide a clearer interpretation of the existing conditions, should be treated with caution, due to the lack of data for model calibration purposes. It is appreciated that the number of automatic monitoring points may be reduced in the near future due to cost, so it is not recommended that major investment is made in new sampling stations. Rather, a number of campaigns should be developed, based upon 'spot sampling', using mobile equipment, or simple sampling techniques involving, for example, passive diffusion tubes for the recording of NO_x levels.

These campaigns should be designed to tackle identified pollution problems, or investigate the potential implications of possible emission sources, such as oil-fired district heating schemes or traffic generated pollution in sensitive areas. It will only be possible to identify public health risks and prioritising emission control exercises, by applying such applied monitoring programmes.

2) Water Quality Monitoring

In the first instance, there are a large number of organisations with responsibility for monitoring a range of water parameters from a number of sources. These include surface and groundwater at source, and subsequent to discharges of effluents. There is also monitoring of raw water for potable supplies and the treated product, at the consumers' taps. It is suggested that there should be some form of rationalisation of the number of organisations responsible for the sampling, analysis and interpretation of the collated data.

It is noted that SHMU prepares an annual environmental baseline evaluation of Slovakian rivers. This provides a classification of all major water courses in the country, but there are no specific water quality objectives (WQOs) to prioritise, for example, the programme of effluent treatment schemes. The monitoring data is therefore being used merely to inform the regulatory authorities of the condition of the river systems, but not to provide guidance in how the river systems might be managed and appropriately utilised in the longer term. This situation could be addressed by the introduction of WQOs.

It is suggested that a number of additional sites are developed for the investigation of groundwater in the Lower Hron Basin, due to the perceived problems with nutrient and metal contamination. It is initially suggested that a review is undertaken of the original GSSR study, so that "gaps" can be identified in the data. There should then be an evaluation based upon existing SHMU sampling locations and a tie-in between the two programmes, to see where additional sites could usefully be added.

Finally, it is recommended that preliminary biological monitoring of river systems be undertaken, to provide supporting information about river quality. Investigations which utilise macro-invertebrate population structures provide a picture of the long-term health of rivers, which is not always evident from water quality analysis, since the latter only gives a specific temporal view of the system. Biological parameters give an indication of the stability of the system, and the likely ecological resources and habitats that the river could support. It is acknowledged that it takes time to develop a comprehensive monitoring programme, but a simple approach should be first adopted, possibly using academic or educational resources and institutes, to gain an initial picture within the Study Area. More comprehensive schemes can then be introduced as experience proves the worth of the programmes.

3) Waste

Waste statistics that are reported in the PMP system are restricted to quantity data of wastes arising, categories of wastes and disposal methods to which such wastes are subjected. There is considerable confusion in the nature of the statistics that are collected and the fact that two organisations are presently responsible for data collation. This situation should be reviewed as a matter of urgency, with a view to having only one organisation responsible for collection of information relating to waste statistics.

In addition, it is recommended that OELs are investigated and reviewed with a view to monitoring major sites that pose a risk to the environment and public in the vicinity of the waste deposits. At present there is no requirement to monitor either OELs or established landfill sites which are not subject to recent license agreements. These should be brought into line with the

recently developed facilities, where monitoring, notably for local groundwater conditions is a statutory requirement. This may require legislative changes to take place, possibly covered by the proposed Waste Act due for introduction by the end of 1999.

4) Soils

VUPOP are responsible for checking soil quality, with around 20 samples annually being taken in the Study Area. These are part of the basic network of sites that are analysed at 5 year intervals. Agricultural plots are also evaluated, possibly by the Central Controlling and Testing Institute, Zvolen, (UKSUP), for a range of contaminants. These include heavy metals, polycyclic aromatic hydrocarbons, trace elements and the nutrient status of soils. No major changes are recommended for this element of the programme, but the existing programme should be reviewed to determine specific objectives for the monitoring programme.

5) Biota

Data for this topic area are collected by SAZP, particularly in connection with National Parks and Protected Landscape Areas. LVU is responsible for assessing the ecological condition of forests in the Study Area, covering nearly 49% of Banská Bystrica Kraj and 47% of the Hron Basin. Comments have been made above (sub-section 2) on the desirability of undertaking baseline ecological monitoring in the Study Area river systems.

6) Forestry

LVU are responsible for monitoring a number of sites throughout Slovakia, to assess the condition of growth, effects of acidification, soil issues such as nutrient status and heavy metals. There are also 4 sites in the Study Area where ozone (O₃) is analysed, together with other parameters and meteorological data, as part of a European network of intensive monitoring sites. Data are additionally provided regarding the forestry value of the main species including evaluation of the economic status (girth, height and crown) for relevant tree species. No modifications are specifically recommended for the existing programme, although it is recognised that limited financial resources adversely influence the comprehensiveness of the monitoring programme that can be operated by the FRI.

(3) Issues and Recommendations

A summary of the following recommendations is presented in Table 6.7 - 1.

At present, a number of organisations provide information to the PMP system, but there is no one organisation with overall responsibility for making use of these data, other than to produce a periodic 'state of the environment' report. Where there is data-sharing within the PMPs, then

one organisation has overall responsibility for collating the various data sources. However, it appears that there are also a number of other bodies collecting data, which do not go into the PMP system. It is also noted that no one organisation has access to the full range of PMP elements, so that no decision maker has an overview of the existing conditions upon which to make judgements for the prioritisation of environmental needs.

Some of the monitoring data appears to be used to evaluate the performance of industrial operations, namely by the SIZP, eg for air and water issues. These data are also used for identifying the present conditions (State of the Environment Report), but not for devising water quality objectives for various stretches of river. To some extent, data collection appears to be undertaken as an end in itself, but with no clear purpose as to why the data are being collected. Given the time and financial effort that goes into the sampling and production of the data, it would seem appropriate to make better use of it, through more detailed evaluation.

A good example is that of forestry, where the LVU provides information to the European network on the condition of forests in Europe. Even here, however, some caution is necessary, since data presented in the Interim Report suggested a serious issue with acid rain impacts, while the latest set of data indicates that the situation is in fact, much less of a problem, than originally thought. Nevertheless, although the data are supplied as part of the wider network, it is not clear if the data are optimally used to support resource management proposals.

In the case of air and groundwater quality, the number of sampling sites and their locations are considered to be too few and perhaps not best placed, to develop an overall picture of the environmental conditions in the Study Area. As soon as the data from GSSR ground water quality survey became available, SHMU could have considered adjusting their monitoring sites to include problem areas identified by the survey. Moreover, even the provision of additional sampling points will not necessarily serve any useful purpose, unless detailed interpretation of data is undertaken and specific management proposals and actions result from the analyses.

It is also noteworthy that there are a number of data sources that are not included within the PMP system and whose data are not published. For instance data on municipal infrastructure (water supply and wastewater connections) are essential data for environmental management programmes. Also there are major gaps in the data on Waste, for example, with no reference points for the public to review the performance of modern landfill sites, and the complete absence of a monitoring database on the condition of old licensed landfills and OELs. This latter issue is important for the municipal authorities if they are to help prioritise and / or pay for the cost of reclamation or treatment of OELs.

Given that some of the monitoring programmes are not fulfilled, due to lack of financial resources, it is important that the system should be rationalised, and duplication of effort removed. Some parameters or issues, eg groundwater and air, may need to have additional monitoring in order to obtain a clearer picture of the existing situation and an assessment of the trends in pollution. However, such decisions should not be made without considering very carefully how the collected data are to be used in relation to the overall management of the environmental resource.

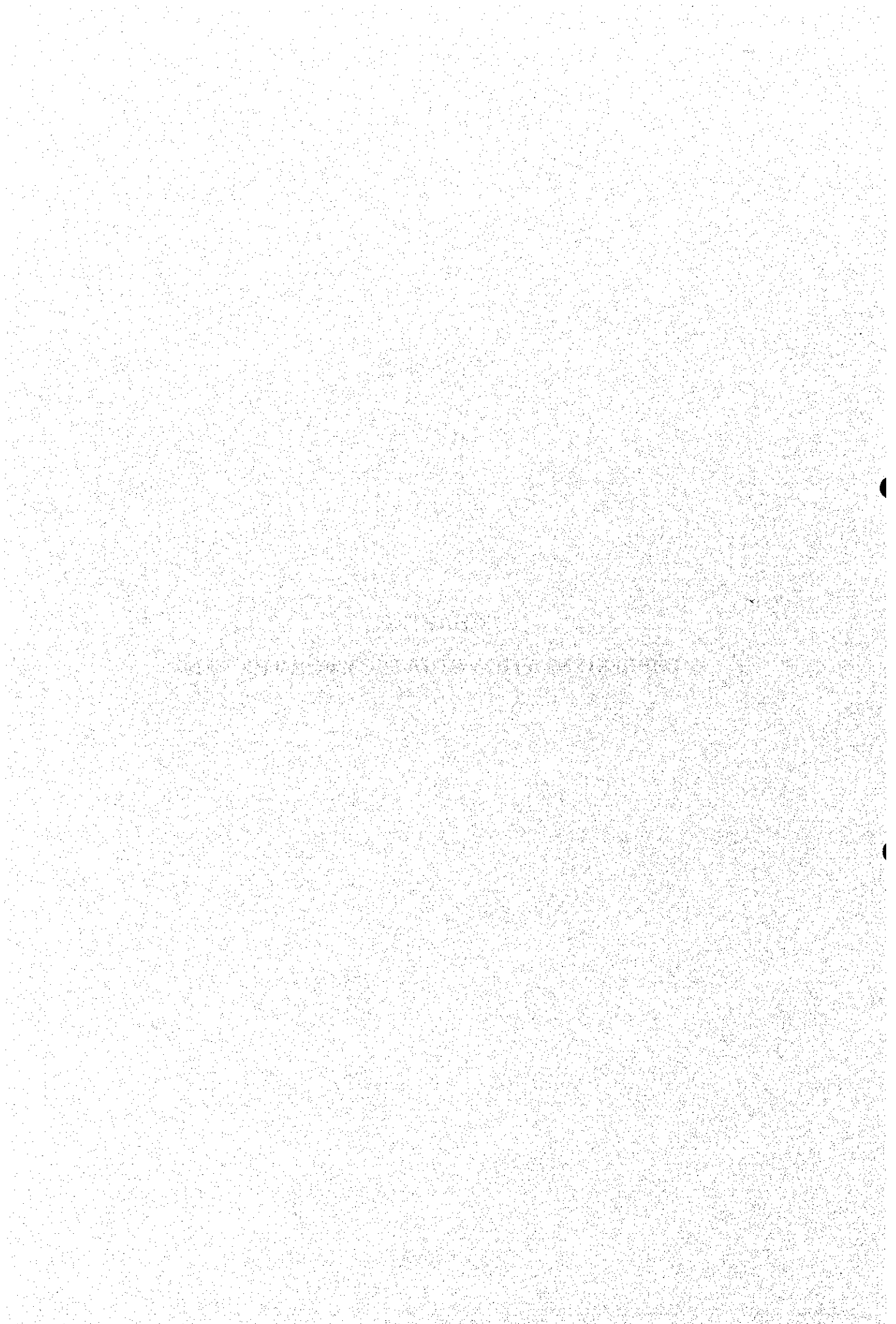
As the PMPs are part of a national plan, the recommendations for such modification to the system need to be undertaken at a national, not just regional level. It will also require an element of rationalisation of the institutional arrangements for monitoring of environmental quality. It is believed that it is necessary to consider changes to the ways in which the data are used by the PMP co-ordinators, in association with the SIZP and municipal and Okres authorities, when considering the control of pollution from industry and the development of targets for the long term protection of the environment.

Table 6.7 - 1 Monitoring: Summary List of Issues, Objectives and Recommendations

GOAL: To develop an integrated monitoring programme for the Study Area that detects environmental trends and areas of environmental risk, such that decision makers have information for identifying and prioritising investment requirements for environmental protection measures.

Issue	Objective	Target	Measures	Implementing Agency
(M1) Lack of Clear Objective in the Collection of Data	To develop a series of PMPs that have a clear usage by decision makers	Review of each PMP by the relevant managers, to provide a rationalised scheme by end 2000	(M1) Review data collected, use to which put and assess effectiveness in assisting decision makers in identifying and prioritising risks. Propose appropriate costed changes	MZP, MP, SAZP, SHMU, LVU, GSSR, SZU, VUPOP, LVU, PH, Okres and Municipalities
(M2) Lack of Co-ordinated Approach to Overall Use of the Data	To make more effective use of the collated data	Develop a single agency with overall responsibility for the practical implementation of environmental protection proposals by 2003	(M2) Review of present PMP responsibilities by Min. of Environment, with a view to either choosing the best manager for overall responsibility or creating a new co-ordinating agency	MZP, MP
(M3) Insufficient Sampling Programmes to Identify Effectively Environmental Issues	Develop a comprehensive but cost effective monitoring system	Rationalise the monitoring programmes against specific management objectives for each major environmental area by end 2000	(M3) Have each agency review their PMPs, discuss the application of data with other managers and local authorities and revise as necessary to be more effective aid in decision making and prioritisation process	MZP, MP, SAZP, SHMU, LVU, GSSR, SZU, VUPOP, PH, Okres and Municipalities
(M4) No Coherent Approach to the Overall Management of Environmental Issues	Establish a coherent and demand-led approach to environmental monitoring	Prepare the Plan by mid-2001	(M4) Preparation of an agreed co-ordinated Monitoring Plan for the Study Area, tailor-made to assist decision makers in prioritising management measures relating to WWTPs, OELs, Quality Objectives etc	MZP, MP, SAZP, SHMU, LVU, GSSR, SZU, VUPOP, PH, Okres and Municipalities

CHAPTER 7
IMPLEMENTATION STRATEGY FOR THE REMP



7.1 INTRODUCTION

For a significant proportion of the projects and programmes of the REMP to be implemented, a number of issues must be addressed; the Ministry of Environment, funding organisations and others with an interest in seeing environmental improvements in the Basin, will need to make sure that action is taken on these issues. Four of the major issues are as follows:

- The status of the REMP in relation to several other 'environmental' plans covering parts of the Study Area and also requiring implementation;
- Need for consensus and co-operation on priorities and scheduling;
- Limited availability of public sector financial resources in Slovakia;
- Need to undertake Feasibility and Detailed Design Studies for selected Projects and Programmes.

The first two issues have been discussed in the previous chapter under the heading Institutional Measures (Section 6.2) and corresponding recommendations were made. Furthermore, with reference to the second issue, it is hoped that the REMP, through its data analyses and consultations, will:

- have identified the major environmental issues in the Basin and
- have indicated the types of project and programme required to address those issues and therefore
- represent a set of priority measures and a schedule that are generally acceptable to the stakeholders.

It is emphasised here that, with respect to 'consensus on priorities', the Study Team have endeavoured, in their identification of issues and selection of recommendations, to reflect the views and knowledge of both the local communities and the experts with whom they have consulted. The views of the former were obtained primarily through the questionnaires to municipalities and citizens (Annex L.2). The views and knowledge of the latter were acquired through many meetings with state and self-government organisations, the private sector and NGOs in the Study Area; through Public Meetings; meetings with the REMP Steering Committee; and circulation of reports for comment, especially the Interim Report and its Summary.

The responses to the Questionnaire to Municipalities highlighted concerns over solid waste management and inadequate waste-water treatment; the importance to local communities of an

unpolluted and attractive natural environment with healthy forests and rivers; and the desire to recycle waste, restore damaged environments and to promote an environmentally life-style and eco-tourism. The importance of improving waste-water treatment systems and waste management were clearly known to local experts and the need to obtain funding for these improvements was their main concern.

With this technical and local support, the REMP should constitute a sound guiding document (i) for those with responsibility for providing funds for implementation and (ii) for those with direct responsibility for implementation.

This chapter now addresses briefly the last two issues raised at the top of page 7-1, namely the need for funding and for follow-up feasibility and design studies, the two issues being closely related. Also related is one other issue that emerged from the Municipal and State/Expert consultations. Though all were well aware of the lack of finance for environmental improvement programmes and projects, it was evident that neither the Municipalities nor State Government organisations had any clear strategy as to how to set about obtaining the required funding.

7.2 REQUIREMENTS FOR FUNDING AND FURTHER STUDIES

Some of the proposals of the REMP, eg those relating to institutional changes, policy and legislation, may require no special funds nor further study prior to implementation, but can be dealt with by the existing administration – in liaison with and supported by Technical Assistance from the EU, where the changes relate to proposed EU membership. Other priority projects (eg some of those identified in previous Environmental Action Programmes) may already have been the subject of feasibility and detailed design studies and could be ready for implementation as soon as finance is available. Nevertheless it is believed that many of the locally prepared studies would not meet the requirements of international funding agencies, which insist on well-justified and costed proposals – and some type of supporting framework which the REMP supplies. The REMP is an integrated and co-ordinated set of measures (technical, institutional and legal), with defined goals, objectives and targets – and not primarily a ‘wish-list’ of projects as presented by some Environmental Action Plans.

Some project proposals can perhaps be adopted by existing programmes eg the Programme for Village Renewal of CUPER (SAZP) – see section 7.3.3 (2) 3). However for many of the more ‘concrete’ projects and programmes identified in the REMP, it may not be possible to proceed immediately with project implementation, even if funds are available. The project proposals may require further study and development (especially by economists, engineers and other experts). The recommended measures set out in Table in relevant sub-sections (5.x.4) Sections 5.1 through 5.6 include some of the preparatory studies and data gathering exercises where the Study Team consider these to be essential.

As mentioned in Chapter 1, estimates of the costs of the various recommended measures in the REMP have not been made by the Study Team (for lack of the necessary information and local expertise on the team). Nevertheless, initial cost estimates are very important for some of the recommendations of the study to be taken forward for national and international funding. **Therefore it is recommended (see FS2 in Section 7.4) that such cost estimates are prepared with some care, by means of a short follow-up study to be conducted by a team with access to the best information and the appropriate institutions.** To put forward very inaccurate unsubstantiated cost estimates (either too high or too low) would reduce the credibility of the document and could put at risk the prospects of securing funding for REMP implementation.

7.3 SOURCES OF FINANCE FOR IMPLEMENTATION

7.3.1 AVAILABLE OPTIONS

Needless to say, the availability of finance for implementation of EAPs and the REMP is of critical importance. Until now, the major financial sources for implementation of the EAPs have been the State Environmental Fund (SFZP), funds of related ministries, Municipal taxes, private investment and sponsorship, and international assistance. The newly created funds for regional development and village improvement projects are also available for the implementation of EAPs. However, government funding to the environment sector has declined significantly over the past 6 years (from 1.3% GDP in 1993 to just 0.2% GDP in 1998). This is considerably less than commitments made in other EU accession states. This trend will need to be reversed for the major REMP components to be implemented; even if international funding agencies make useful contributions, much of the finance will still have to come from state and local government resources. The State Environment Fund and international donors are discussed further below, as sources of funding for the REMP.

7.3.2 STATE ENVIRONMENT FUND

Of the above sources, the State Environmental Fund used to be considered the first that should be approached for financing of 'local' environmental improvement projects eg for the installation of gas supplies, sewers and sewage treatment plants in villages and the hundreds of Projects listed in National, Regional and District Environmental Action Programmes. However, for the time being this source of finance is very limited; the fund overspent its resources by 900 million SK (£60 million) in 1998 and will be unable to support any new projects until 2000 at the earliest. Therefore the SFZP cannot be depended upon until new funds can be added to it by the State or other bodies. It is therefore recommended that the provision of additional finances to the SFZP is treated as an urgent priority.

It is also recommended that closer attention is paid to the process by which the SFZP selects projects for funding ie that the process is transparent and allows successful completion of the projects. This is necessary in the light of past experience. Since the fund was limited and unable to meet the very large number of requests from Municipalities, it is understood that project components were sometimes started with finance from the SFZP, but that adequate funds were not always made available for completion of these projects. This is a result of attempts to distribute financial resources evenly instead of prioritising projects.

7.3.3 INTERNATIONAL SOURCES

(1) Funding from the Japanese Government

The Japanese Government provides soft loans to developing countries to assist their efforts for development of social infrastructure and the stabilisation of the economy. The loans (mostly Japanese Yen credit) have been provided by the Overseas Economic Co-operation Fund of Japan (OECF). Recently OECF and the Export-Import Bank of Japan (EXIM) merged to become Japan Bank for International Cooperation (JBIC), but the policies and scheme of the former OECF loans remain unchanged under JBIC. In 1998 OECF made a pledge to the Government of Slovakia to provide a soft loan up to the amount of about 11 billion Yen for a highway construction project. JBIC funds are accommodated to relatively large projects that benefit a large number of general public.

(2) New European Union Funds

1) Introduction

As part of the process of accession to the EU (European Union) by Central and Eastern European Countries (CEECs), including Slovakia, 'Accession Partnerships' have been established between the European Commission and each of the candidate countries. Each Partnership mobilises all forms of EU assistance within a single framework for each country. This framework covers, in detail, the priorities for adopting the *acquis communautaire*, as well as the financial resources available for that purpose, in particular the Phare Programme. To complement its Accession Partnership, each candidate country has prepared a National Programme for the Adoption of the Acquis (NPAA). The NPAA document sets out the legislative, administrative and operational adjustments that need to be completed by candidate accession countries prior to accession, together with an implementable timetable.

The EU, in order to support projects that will help candidate countries in their preparations for accession to the EU and to familiarise the authorities and other organisations with methods used to implement community measures, has introduced two new 'financial instruments' – ISPA and SAPARD. On the one hand these instruments could both be very important sources of funding for implementing some of the measures proposed in the REMP. On the other hand, the REMP should provide a useful framework and justification for some of the projects that the Ministry of Environment, Ministry of Agriculture and other organisations may have already put forward for ISPA and SAPARD funding - or projects that they are considering putting forward for such funding. ISPA and SAPARD and their importance to the REMP are described further below.

2) ISPA

ISPA (Instrument for Structural Policies for Pre-Accession), established by EU Regulation No. 1267/99 of 21st June 1999, covers the environment and transport sectors only and will operate for seven years (2000-2006). ISPA is managed by the EU Commission (DGXVI and DGIA). The goal of the transport component of ISPA is to improve the connections between the CEECs and the trans-European network, and their extension eastwards, so is not of direct relevance to the REMP.

The main focus for ISPA in the environment sector is for measures that enable beneficiary countries to comply with the objectives of the Accession Partnerships and the priorities indicated in the 'National Programmes for the Adoption of the *Acquis*' (ie the programme to bring Slovakia's legislation, policy and practices into compliance with EU legislation and policy). In general, the measures should relate to the identification and selection of projects in the wastewater treatment, drinking water supply, air quality and waste management sectors and support compliance with the following directives:

- 'Drinking Water Directive' (80/778/EEC and its amendments) to be replaced in November 2003 by Directive 98/83/EC;
- 'Urban Wastewater Directive' (91/271/EEC);
- 'Framework Air Directive' (96/62/EC) together with the new related Directives for specific pollutants;
- 'Large Combustion Plant Directive' (88/609/EC);
- 'Municipal Waste Incineration Directive' (89/369/EEC);
- 'Hazardous Waste Incineration Directive' (94/67/EC);
- 'Integrated Pollution Prevention and Control Directive' (96/61/EC);
- Framework Waste Directive (75/442/EEC)

These sectors correspond to those covered in the first four sections of Chapter 5 of this Main Report of the REMP. The Ministry of Environment has set out its ISPA priorities in accordance with the EU directives as follows (from the MZP web-page):

1. Waste water:

- re-construction and intensification of existing waste-water treatment facilities in settlements with over 2 000 persons-equivalent;
- installation of equipment for removal of nitrogenous compounds and phosphates at existing large waste-water treatment facilities (over 10 000 persons-equivalent);

- re-construction of existing sewers already attached to waste-water treatment plants with adequate capacity and technical facilities;
 - completion of sewers to existing waste-water treatment plants with adequate capacity and technical facilities, and construction of new sewers and waste-water treatment facilities in settlements of over 2000 persons-equivalent;
 - construction of waste-water treatment facilities in settlements of over 2000 persons-equivalent.
2. Drinking water:
- construction and re-construction of drinking water-treatment facilities;
 - construction and reconstruction of piped water supply (distribution) networks;
 - construction of drinking water-treatment facilities with connections to users;
 - monitoring of quantity and quality of drinking water in state observation networks.
3. Air protection:
- compliance with emission limits and general operating conditions for hazardous waste incineration;
 - compliance with emission limits and general operating conditions for other incinerators;
 - compliance with emission limits for large fuel burning installations.
4. Waste management:
- construction of regional incinerators for hazardous waste;
 - construction of regional incinerators for hospital waste.

Candidate countries have been advised to develop strategies for implementing these directives and to focus their resources on complying with the directives. Projects proposed are to be of a sufficient scale to have a significant impact in the field of environmental protection, with emphasis on the most costly (i.e. investment-intensive) and difficult to implement.

All investments supported by ISPA must be economically efficient. Social cost and benefit analysis must prove the net benefit for the society resulting from the investment. The total cost of each project will in principle be not less than Euro 5 million although, in exceptional cases, projects with a total cost of less than Euro 5 million will be considered (eg groups of related projects and the REMP provides just such a linkage). Community assistance under ISPA may take the form of non-repayable grants, loans or any other form of assistance. Preferred beneficiaries of ISPA will be public sector units, such as state enterprises acting for public utilities and local communities, and municipal enterprises registered under commercial law but

totally owned by local communities. The rate of Community assistance granted under ISPA will in most cases be up to 75% of the total cost of expenditure by public bodies. In exceptional cases, ISPA may finance preliminary studies and technical support measures at 100% of the total cost (up to 2% of the total ISPA allocation), including:

- Economic/financial feasibility studies
- Environmental Impact Assessments, according to EU rules
- Reviews of design and project costing
- Assistance in the preparation of tender documentation
- Project management

For the first few years of ISPA funding (eg 2 000 to 2 003) it is the Ministry of Environment's intention to make proposals just for larger infrastructure projects (> ECU 5,000,000). A proposal for year 2000 ISPA funding has already been made by the Ministry of Environment for the Hron River Basin, namely the completion of the wastewater collection system and upgrading of the Sewage Treatment Plant in Banska Bystrica. The results of the REMP study support the position of the Ministry of Environment that wastewater collection and treatment in Banska Bystrica is a funding priority.

Single/larger projects are easier to manage (because only one or two institutions are involved) and also easier to start quickly because some of the necessary feasibility studies, detailed designs etc may be available already ('off-the-shelf') - or at least ready very soon or straightforward to prepare. Nevertheless, collections of smaller projects may be as beneficial for the environment and benefit a large number of smaller communities, especially in rural areas.

Since the Study Area for the REMP, the Hron River Basin, is large it may therefore provide a good framework for ISPA funding for **groups** of (environmental) infrastructure projects – since groups of related projects are eligible provided that they exceed the minimum grant/loan of ECU 5,000,000. For example several sewerage projects, from different parts of the Basin, could easily be justified under the umbrella of a larger project to improve the water quality of the River Hron and its tributaries, with benefit to the less prosperous rural areas of the Basin, not just the larger towns. Nevertheless, groups of projects will require more co-ordination and preparation, and the preparatory studies could be undertaken over the next 3 years, using the REMP as a framework.

3) SAPARD

SAPARD (Special Accession Programme for Agriculture and Rural Development) is a similar

fund to ISPA, but for the rural sector. Measures for structural and rural development in the Study Area that would be eligible to receive SAPARD funding and which are consistent with the REMP recommendations include:

- promoting agricultural production methods that aim to protect the environment;
- renovating villages and preserving the rural heritage;
- developing and improving rural infrastructure;
- water resources management;
- promoting forestry.

In Slovakia this scheme is a responsibility of the Ministry of Agriculture; the Study Team is not fully familiar with the Ministry's priorities and intentions with regard to use of this fund and how it will be administered. However, it is understood that, based on:

- (i) an analysis of issues relating to agriculture, food and forest and water management at a national level and a review of the Green Report (Reference 22 - 1) and "The Conception for Rural Development in Slovakia" and
- (ii) responses to a regional level questionnaire undertaken in April/May 1999,

the overall aims of SAPARD projects/programmes in Slovakia will be:

1. To improve economic conditions;
2. The development of rural livelihoods/human resources (local skills and activities);
3. Sound and sustainable environmental management.

Priority actions for Slovakia's SAPARD funds have been grouped under the following headings:

- Action No 1: Investment into Agricultural Enterprises;
- Action No 2: Improvements of processing and marketing of Agricultural Products;
- Action No 3: Improvement of the Structure of Quality Control, Veterinary Control, and Plant Protection;
- Action No 4: Development and Diversification of Activities that Aimed at Creation of Additional Job Vacancies or Alternative Sources of Income;
- Action No 5: Forestry;
- Action No 6: Village Development and Renewal;

Action No 7: Agricultural Production Methods Designed to Protect the Environment and Maintain the Countryside;

Action No 8: Management of Water for Agricultural Use;

Action No 9: Land Consolidation.

The Study Team considers that at least four of these nine Actions, which have been adopted by the Ministry of Agriculture as the basis of their SAPARD programme, could support REMP projects. These are:

- Action No.6 Village development and renewal
- Action No. 7 Methods Designed to Protect the Environment and Maintain the Countryside
- Action No. 8 Management of Water for Agricultural Use
- Action No. 9 Land Consolidation

Local communities and institutions in the Study Area, and the Ministry of Environment, need to co-operate with the Ministry of Agriculture in order to ensure that projects that are consistent with the REMP, obtain the maximum benefit from SAPARD funding.

It is **recommended** that those responsible for/with an interest in implementing the REMP **investigate which of the projects and programmes proposed in the REMP might be funded by SAPARD** (including those projects relating to ecology, especially to protection and restoration of river ecology and riverine habitats, and forestry). Once identified, more detailed proposals for funding by SAPARD would need to be developed. It is **recommended** that some or all of this **project identification and preparation** activity be undertaken through the 'follow-up investment study' proposed in section 7.4.

It is emphasised that the ongoing Programme for Village Renewal (see section 3.2.1 (2) of this Main Report), which is run jointly by the SAZP and the Rural Development Agency of the Ministry of Agriculture, would appear to be a very good vehicle for implementing some of the REMP proposals (eg on Cultural Heritage and Tourism). The Programme has already developed good contacts with many Municipalities and helped the Municipalities to prepare action programmes, but is short of funds for implementation. The Ministry of Agriculture is already proposing SAPARD support for this programme.

7.4 STRATEGY FOR OBTAINING FUNDS FOR REMP IMPLEMENTATION

Since government financing resources are stretched (eg SFZP), it is important that REMP implementation makes maximum use of support from international funding sources and involves the private sector. Some larger projects (eg Banska Bystrica Wastewater System and integrated water supply and wastewater schemes for small to medium sized towns) may be funded by ISPA and some of the rural schemes by SAPARD, but many smaller projects also need to be undertaken and the government should fund some of these. However, new approaches to funding also need to be explored, including private sector investment – in addition to the use of loans and grants from international institutions. However, some of the institutions with responsibilities for implementation (eg *obec* and *mesto*) have limited experience of making applications to the international agencies that provide grants or loans, or of obtaining private sector investment. The UK 'Know How Fund' is intending to fund a 'training project' to strengthen capacity in environmental project development in Slovakia, and this will be helpful to municipalities in the medium to long term.

New approaches to funding infrastructure, environment and other projects using private/commercial investment and international assistance, etc are in fact already being investigated within the Basin, in the *Okres* of Ziar nad Hronom, Banska Stiavnica and Zarnovica. This is by means of another UK 'Know How Fund' Project - the Regional Development and Institutional Strengthening Project (REDIS) – which is being carried out by UK Consultants (GHK) in association with Slovak specialists - and a large number of local partners / stakeholders. Proposals for investment in sewerage, waste management, housing, tourism and other development projects have been made by REDISP in conjunction with their various partners – including the Municipalities and private sector.

However the REDISP project area is relatively small, such that the small infrastructure projects that have been identified may not be eligible for some of the larger international funding programmes eg ISPA and SAPARD.

FS1 It is therefore recommended that the approach to partnership and investment being adopted by the REDIS Project with:

- (i) close co-operation between all relevant Slovak institutions and
- (ii) the preparation of financial management plans, whereby the costs of environmental investments can be acquired and recovered,

is expanded to **Environmental Projects/Programmes in the whole Hron River Basin, with the REMP acting as a guiding, framework document.**

To start this process it is necessary to obtain a clearer picture of the costs of implementing the REMP – as a whole and its individual components.

FS2 A follow-up Investment Study is therefore recommended as an urgent priority, to be undertaken over a period of a few months by a small team of engineers, economists and environmental specialists (Slovak and international), working in close collaboration with the concerned implementing institutions (StVak, Povodie Hrona, obec/mesto, industry etc).

Part of this process would be a review of existing project proposals, to determine the extent to which the proposals are adequate for the project(s) to proceed, or whether further 'pre-investment' studies (feasibility etc) are still required (see section 7.5). It is known that Povodie Hrona and StVaK already have investment proposals. These and other proposals for projects need to be examined further in relation to the REMP proposals (as has been done by way of example in the Case Study set out in Annex N) and in conjunction with the Municipalities that will be both finance-providers and beneficiaries of the projects – especially in the case of projects to improve wastewater treatment systems. The requirement for co-operation in assessing costs and obtaining funding, accentuates the need to develop institutional structures and relationships in the Hron Basin (section 6.2) that strengthen the linkages between local government (especially *mesto* and *obec*) and state government and its enterprises/utilities.

7.5 NEED FOR PRE-INVESTMENT STUDIES - FEASIBILITY AND DESIGN

There may be an expectation, amongst those interested in the REMP, that it will be possible to proceed immediately to implementation of the many projects directly from the plan. In the past this may have been possible in Slovakia, and other pre-accession countries with a supply driven economy and most funding from state government, without the need for Feasibility Studies etc to justify the expenditure. Experience of feasibility studies and the 'Project Cycle' (as recognised by funding agencies: eg plan, project identification, pre-feasibility study, feasibility study, detailed design, construction etc.) appears to be limited in Slovakia. However, the execution of such pre-investment studies will be a requirement of most international financial institutions (public and private) before funds are provided for a project. **The recommendation for one or more Investment/Pre-investment Studies is therefore re-iterated.**

The further development of some of the REMP recommendations may well take the form of feasibility studies, detailed engineering and design studies, pilot projects and even studies to devise cost recovery mechanisms for infrastructure and other investments (eg in tourism). Especially if international funding is being requested (eg ISPA, SAPARD) convincing proposals will be required. Environmental impact assessment studies will also need to be carried out for some projects, where required by Slovak legislation and the funding agencies. Much of this 'project / programme development' will be the responsibility of the Slovak implementing institutions, both government and private sector, but the international funding agencies (eg EU, UK Know How Fund) should also be approached to provide technical assistance. The UK Know How Fund (KHF) may be of particular significance, since it is understood that the KHF is considering the provision of support to a programme to strengthen capacity in environmental project development. This 'training' is likely to be directed, at least in part, at local government. Therefore the measures recommended in the REMP, along with the supporting information that the REMP contains, would provide an excellent foundation for building the capacity of the institutions/stakeholders of the Hron River Basin in the development, acquisition of funding and implementation of their own environmental improvement projects.

7.6 USE OF REMP BY OTHER PROJECTS

One way of taking some of the REMP projects forward to implementation, is for the REMP issues and recommendations to be integrated within policies and plans at national, regional and local level. Three projects have been identified which provide an opportunity for this to be done.

Two of the Projects are linked as one, under the title 'Support to Sustainable Development in the Slovak Republic' and are being carried out under the supervision of the MZP and Regional Environmental Centre (in Bratislava), with financial support from UNDP:

- Regional Agenda 21;
- National Strategy for Sustainable Development in the Slovak Republic.

The Regional Agenda 21 project, starting in early 2 000, is being co-ordinated by local consultants and has the central part of the Hron River Basin as the pilot area. With both the REDIS Project and the REMP covering this area, this project provides an excellent opportunity to build on (i) the data that has been collated and analysed, (ii) the recommendations made and (iii) the institutional co-operation and community participation that has been initiated. Local support, and thus financial assistance, and further development of REMP measures should emanate from this exercise.

Similarly, the National Strategy for Sustainable Development can incorporate, into the national policy and plan making process, some of the conclusions of the REMP that need to be addressed at a national level, such as changes in legislation and institutional reform.

The third project, REDISP, is already taking forward some of the priority proposals in the REMP, specifically those for domestic wastewater treatment. REDISP, in conjunction with Municipalities and other concerned parties, is using the information on surface water quality etc in the REMP, to develop funding proposals to ISPA for improvements to the sewerage systems of several small- to medium-sized towns in the Basin.

APPENDIX



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