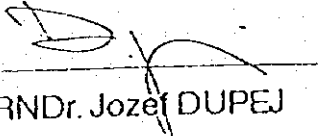
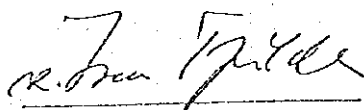


3. Minutes of Meetings

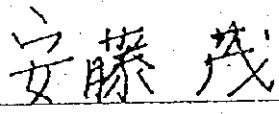
MINUTES OF MEETING  
ON  
THE SCOPE OF WORK  
FOR  
THE STUDY  
ON  
THE REGIONAL ENVIRONMENTAL MANAGEMENT PLAN  
FOR  
THE HRON RIVER BASIN  
IN  
THE SLOVAK REPUBLIC

BANSKA BYSTRICA, NOVEMBER 12, 1997

  
RNDr. Jozef DUPEJ  
Deputy Director  
Slovak Environmental  
Agency

  
Mr. Alojz NEMETHY

Director  
Department of International Economic Cooperation  
And Foreign Assistance  
Ministry of Foreign Affairs of the Slovak Republic

  
Mr. Shigeru ANDO  
Leader  
Preparatory Study Team  
Japan International Cooperation  
Agency

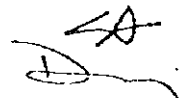
1. In response to the request of the Government of the Slovak Republic, (hereinafter referred to as "the Government of Slovakia") the Government of Japan has decided to conduct a Study on Regional Environmental Management Plan for the Hron River Basin (hereinafter referred to as "the Study") through the Japan International Cooperation Agency (hereinafter referred to as "JICA").

The Japanese Preparatory Study Team (hereinafter referred to as "the Study Team"), headed by Mr. Shigeru ANDO, visited the Slovak Republic from November 3rd to 12th, 1997, where field survey of the study area was carried out and a series of meetings were held with the Slovak Environmental Agency (hereinafter referred to as "SEA") and other authorities concerned. The list of attendants is attached herewith.

The draft Scope of Work (hereinafter referred to as "the S/W") proposed by the Study Team was discussed in detail between SEA and the Study Team. The Study Team stressed that the S/W is a standard procedure, based on which various types of Development Studies are conducted including such in Slovakia.

2. The Study Team introduced the JICA's Development Study Program and SEA fully acknowledged the objectives, study areas, durations and so forth. Both sides agreed to make the final report open to the public.

3. Both sides observe that the Study Team shall be subject to the Slovak laws and regulations except privileges as shown in the chapter VII of the S/W. These privileges shall be effective even if the revision of legislation should occur in the Slovak Republic.



4. Concerning the S/WIV5, both sides confirmed the needs that based on the existing data on the whole Hron river basin in the five concerned organizations (SEA, Geological Survey of Slovak Republic, Soil Fertility Research Institute, Forest Research Institute, Slovak Hydrometeorological Institute), the Study Team will develop the integrated GIS data base concerning environmental conditions of the study area. The Study Team promised to convey this to JICA H. Q..

Concerning the S/WIV3, both sides confirmed the needs that the field reconnaissance will be done as follows. The needs originate from ones for identification of significant pollution sources and others for obtaining environmentally significant data as models in the Study area which are lacking but socially and environmentally important.

- 1) Localization for selected significant sources of pollutants using the GPS technology,
- 2) Sampling and analyses of heavy metals for underground water, surface water, and soil by selecting a few (2 to 3) waste disposal sites as models,
- 3) Data acquisition of acid deposition of the forest ecosystem where the wet deposition data are lacking,
- 4) Data acquisition of ozone at selected points, including the forest ecosystem sites,
- 5) Data acquisition of meteorological parameters at one existing station in Ziar nad Hronom,

The Study Team promised to convey this to JICA H. Q..

Concerning the S/WIV6, both sides confirmed the needs that that spatial analyses will also be performed based on the data from above-given items.

The Study Team promised to convey this to JICA H. Q..

Both sides agreed that a study relating to nuclear power plants and military facilities will be out of the scope of this Study.

SEA requested the Study Team not to provide any input data to a third party without a permission of SEA. The Study Team promised to convey this to JICA H. Q..

5. Both sides agreed to establish a "Steering Committee" with the mandate to provide direction of the Study for the coordination among the relevant organizations. SEA will act as a coordinating body to conduct the Steering Committee.

6. The Study Team requested SEA and participating organizations to assign necessary counterpart personnel and supporting staff for the smooth implementation of the Study. SEA accepted the request, and participating organizations promised to convey the request to their headquarters.

7. With respect to the provision of available information in need for the Study, the Slovak side promised to make effort in providing such information in English, responding to the request by the Japanese side. SEA, however, expressed a difficulty over this request for the coverage of translation fee due to the budgetary constraint. The Study Team promised to convey this to the JICA H.Q..

The Study Team requested that SEA and participating organizations should bear the expense in need for the participation of counterpart personnel in the Study. SEA accepted the request, and participating

organizations promised to convey the request to their headquarters.

SEA requested to the Study Team that the necessary equipment and others including software programs be brought in for the conduct of the Study. The Study Team promised to convey the request to JICA H. Q..

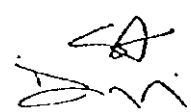
8. The Study Team confirmed that SEA would provide in or near the SEA building necessary office space (two rooms with the capacity for ten people) with necessary equipments (Telephone, FAX, E-Mail, Copy Machine etc.) and furniture (desks, chairs etc.). SEA, however, requested that the Japanese side bears the usage cost of Telephone, FAX and Copy Machine. The Study Team promised to convey this to the JICA H.Q..

9. The Study Team requested that SEA would provide two vehicles with drivers, fuel and maintenance cost. SEA, however, expressed a difficulty over this request due to the budgetary constraint. The Study Team promised to convey this to the JICA H.Q..

10. The Study Team explained the counterpart personnel training program in Japan. SEA requested the Study Team to have its trainee participate in the program especially in the fields of regional environmental management. The Study Team promised to convey this to the JICA H.Q..

11. The Study Team suggested that at the time of the submission of the Inception Report, SEA should invite the Slovak officials concerned, for a good start up, to make presentations on the progress of research and countermeasures in relation to this project. SEA welcomed this suggestion.

SEA requested the Study Team to hold a seminar as a part of



technology transfer twice in the course of the Study (at the time of Interim Report / Draft Final Report) and the Study Team agreed to convey the request to JICA H.Q. for the positive consideration.

12. Both sides agreed that the Slovak side shall expediently return to the Japanese side the S/W and this M/M upon signing them by the Slovak Department of International Economic Cooperation and Foreign Assistance and that the S/W should become in force when the Japanese side receives the S/W and M/M through the diplomatic channel.

ANNEX  
(List of Attendees)

1. Slovak Side

1-1. MINISTRY OF FOREIGN AFFAIRS

- (1) NEMETHY Alojz, Director, Department of International Economic Cooperation and Foreign Assistance
- (2) BUJALKA Vladimir, Desk Officer

1-2. MINISTRY OF THE ENVIRONMENT

- (1) SLEBODNIK Ladislav, Chief of the Office
- (2) KASANICKA Zuzana, Environmental Programme Manager, Programme Management Unit
- (3) KOHUT Stefan, Informatic

1-3. SLOVAK ENVIRONMENTAL AGENCY

- (1) TONCIK Miroslav, Director of the Agency
- (2) DUPEJ Jozef RNDr., Deputy Director of the Agency
- (3) BENKO Vladimir, Head of Department, Monitoring and Informatic Department
- (4) BECKOVA Jana, Project Manager of REMP, Monitoring and Informatic Department
- (5) NAVRATIL Rudolf, GIS specialist, Monitoring and Informatic Department
- (6) VYSOCAN Miroslav, GIS specialist, Monitoring and Informatic Department
- (7) RUDIK Frantisek, GIS specialist, Monitoring and Informatic Department
- (8) BARTKO Anton, Head of GIS Division, Monitoring and Informatic Department
- (9) WACHKOVA Nada, Head of Remote Sensing Division, Monitoring and Informatic Department
- (10) BOROVSKY Igor, Monitoring and Informatic Department
- (11) LIESKOVSKA Zuzana, Head of Department, Department of Environment
- (12) UHRIKOVA Miroslava, Department of Environment
- (13) RYCHLA Helena, Department of Urban Development
- (14) HOLICOVA Vlasta, Department of Revitalization of Landscape of Endangered Areas
- (15) HORVANOVA Tatiana, Department of Revitalization of Landscape of Endangered Areas
- (16) BOZALKOVA Irena, Department of Nature Conservation
- (17) DUPEJOVA Jarmila, Department Head, Director's Department
- (18) HAUEROVA Jana, RNDr., Expert in Waste Treatment Issue

1-4. SLOVAK HYDROMETEOROLOGICAL INSTITUTE

- (1) ONDRAS Miroslav, Deputy Director for Meteorology and Climatology, SHMI at Bratislava
- (2) KAMENSKY Ladislav, Division of Climatology, SHMI at Banska Bystrica
- (3) PADUCH Frantisek, Division of Hydrology, SHMI at Banska Bystrica
- (4) KOLACNA Zuzana, Division of Hydrology, SHMI at Banska Bystrica
- (5) PODOLINSKA Jana, Division of Hydrology, SHMI at Banska Bystrica
- (6) KLUKA Jan, Division of Air Pollution, SHMI at Banska Bystrica
- (7) MAJLINGOVA Terezia, Division of Air Pollution, SHMI at Banska Bystrica

1-5. MINISTRY OF AGRICULTURE

- (1) JANSKY Libor, Consultant to the Minister

1-6. FOREST RESEARCH INSTITUTE

- (1) BUCHA Tomas, Deputy Head of the Department, Forest Management and Forest Monitoring Department
- (2) MINDAS Jozef, Head of the Department, Forest Environment Department

1-7. INTERPRETER

- (1) KUCAK Peter, KUCAK Peter(company name)
- (2) SVITOK Rene, KUCAK Peter(company name)



## 2. Japanese Side

### 2-1. EMBASSY OF JAPAN AT CZECH REPUBLIC

- (1) MARUYAMA Shunji, Ambassador, Extraordinary and Plenipotentiary of Japan
- (2) NOCHI Yuji, First Secretary

### 2-2. THE REGIONAL ENVIRONMENTAL CENTER FOR CENTRAL AND EASTERN EUROPE

- (1) MIMURA Seiichi, Director, Japan Special Fund

### 2-3. JICA AUSTRIA OFFICE

- (1) YAMADA Ken, Assistant Resident Representative, JICA Austria Office

### 2-4. JICA PREPARATORY STUDY TEAM

- (1) ANDO Shigeru, Team Leader/ Environmental Management Planning, Japan Environment Agency
- (2) FUKUDA Kazuhiro, Study Planning, Social Development Study Department, JICA Headquarters
- (3) MIWA Nobuhiko, Environmental Monitoring, Japan Environment Agency
- (4) SASAKA Tsuyoshi, Natural Environment, Green Blue Corporation(Consultant)
- (5) HORIE Yuji, Environmental Data Base, Green Blue Corporation(Consultant)



#### 4. Questionnaire

### Questionnaire

on the regional environmental management plan for the Iiron river basin

#### 1. Legislation and Policy

Please identify the names of the entities questioned, such as organization, institution, facility, and corresponding policy for the following questions. Although we have already understood some of these, we need to update our knowledge.

Would you also indicate the availability and locations of the corresponding documents, if any, and prepare for us the copies in English, if possible? (If you already handed in relevant documents to JICA mission team this past April and have not updated them later, the preparation is not necessary for the concerned documents this time.)

1.1 the national basic law for overall environmental sector

1.2 the national/regional basic law or acts for the regional environmental management and/or conservation

Is it "the Act No.287/1994 on Nature and Landscape Protection" ?

1.3 the national/regional law, institution and system for environmental (impact) assessment :(briefly)

1.4 the national basic policy for the environmental sector

1.5 the basic action plan or programme, and the alternatives if any, of the regional development for the region concerned

1.6 the environmental quality standard(s) or regulation(s)

- on water ( surface and underground )      - on air      - on waste
- on forest management and conservation      - on natural conservation
- on developmental projects and land use

\*Please attach the detail, e.g. values, penalties, if any?

1.7 the organization, system, and institution of the national/local government in the environmental sector

1.8 the demarcation of duties on environmental policy among the above organs( as mentioned in 1.7)

1.9 the national budge/expenditure

- for past 5 years' result
- for next 3 years' plan

1.10 the budge/expenditure of the concerning agencies

- for past 5 years' result

- for next 3 years' plan

**1.11 agencies which implements the policy for environmental quality improvement and their budget shift and distribution for the recent and coming years**

- on improvement of water supply and sewage system
- on improvement of the facilities of solid waste disposal (Is industrial wastes treated by private sector or not ? )

**2. International Conventions on Environmental Conservation**

Have you affiliated to any bilateral or multilateral convention(s) concerning environmental conservation , e.g. Ramsar Convention , Washington Convention ?

Give the name(s) of the convention(s) affiliated and the date of affiliation , if any.

**3. International Network, Database, Information System on Environmental Monitoring and Management**

Have you affiliated to any International Network, Database, Information System on Environmental Monitoring and Management, e.g. EP of IASA, EUREKA ? Give the name(s) of the network, database, information system (s) affiliated and the date of affiliation , if any.

**4. Present Situation of the Proposed Project Site**

Describe the following where and as far as possible, please.

**4.1 Socio-economic Environment of the region concerned**

- 4.1.1 the existing statistics, e.g. population, economy, production of industries, consumption of energy and chemicals like agricultural fertilizer, health and so on
- 4.1.2 the area maps, e.g. land-utilization, pollution-sources, mines, and so on
- 4.1.3 the constituents of population, e.g. racial or religious diversity, majority and minority groups, and so on
- 4.1.4 cultural property, national/regional emblem or symbols, religious sites and/or archaeological sites
- 4.1.5 existence of the land which special attention should be paid to
- 4.1.6 existing recycle systems for the industrial or domestic wastes
- 4.1.7 existence, type ,location and availability of the basic data or information on the above

**4.2 Natural Environment of the region concerned**

- 4.2.1 the area maps, e.g. ones with topographical, geological, hydrological, biological.

- ecological, vegetation and meteorological data
- 4.2.2 the history of natural disaster such as landslide, earthquake and flood
- 4.2.3 the change of water level and quality of rivers and lakes in recent years
- 4.2.4 the state of soil pollution or earth degradation in recent years
- 4.2.5 the change of forest conditions in the past years
- 4.2.6 the results of environmental monitoring of the air, water, soil, forest (especially 4.2.3) yearly or seasonally, if available.
- 4.2.7 the location of environmentally vulnerable areas such as wetland, forested slopes, deforested land
- 4.2.8 the present state of conservation or protection
- 4.2.9 the protected or endangered species of animals and plants
- 4.2.10 the locations of particular areas officially protected such as national parks and natural parks
- 4.2.11 the distribution of important landscape or scenery for tourism or religion
- 4.2.12 existence, type, location and availability of the basic data or information on the above

#### 4.3 Environmental Pollution of the region concerned

- 4.3.1 the present air quality data and maps
- 4.3.2 the present water quality from pollution sources
- 4.3.3 the state of contamination and erosion of soil
- 4.3.4 the state of groundwater contamination
- 4.3.5 the regulation of effluence, emission, waste disposal
- 4.3.6 the results of monitoring or inspection of sources and their compliance with the corresponding regulations
- 4.3.7 existence, type, location and availability of the basic data or information on the above

### **5. Environmental Information System concerned**

#### 5.1 Environmental Data Base

- 5.1.1 What kinds of digital base map systems do you have ? Please list them and provide us with concise description of each data base, including the name of the organization which possesses the data base.
- 5.1.2 What kinds of environmental data do you intend to include them in the GIS system which you plan to develop under this program ? Please provide us with a list of the types of environmental data and a brief description of each data type.
- 5.1.3 Do you intend to develop a GIS-based data base for only one geographical region

or more than one region ? Describe the region(s) and the status of existing environmental data (type, completeness, etc.) for the region.

## **5.2 Geographical Information System (GIS)**

5.2.1 Do you have any specific GIS software in mind, which is to be used under this program ?

5.2.2 Please provide us with the names of institutions currently using a GIS in your country, including the name of the GIS software and the types of data incorporated into the GIS system.

5.2.3 Please, provide us with the names of institutions which will become either a cooperative member of or an end user of the GIS system to be developed under this program.

5.2.4 Do you have an institution or institutions which will manage the GIS system after this program developed it ? If yes, provide the name of the institution and its size and social status.

5.2.5 Do you have the financial and organizational resources for managing and upgrading the GIS-based environmental data bases after they are developed ? If yes, please describe the levels and natures of the financial and man-power resources available for this purpose.

5.2.6 What applications of the GIS system are you currently considering ? Please, describe the areas of applications, the perceived benefits of them, and the hardware/software requirements for accomplishing them.

5.2.7 Do you have an existing GIS in the area of environmental management and conservation. If yes, please provide us with some documents describing the GIS.

5.2.8 What kinds of GIS software and hardware do your governmental agencies currently possess ?

5.2.9 What kinds of GIS software and hardware do you wish to be included in the GIS system which is to be developed under this program ?

5.2.10 Do you need any training of how to operate and manage the GIS system before the developed GIS system is delivered to your government ? If yes, what kinds of training do you like to receive from our side ?

1997/10/17

prepared by T.Sasaka, Y.Horie

Green Blue Corporation

12/3/97

### Questionnaire

1.1. and 1.2. The national basic law for the environmental sector is Law No. 17/1992 on the environment, in the wording of the law No. 127/1994 and the law No. 287/1994. There is also a set of environmental legal regulations the list of which in English was given to Mr. Horie in November 97.

Individual legal regulations are valid in the whole territory of Slovakia. They apply to the protection environmental components in the territory.

1.3. A complete impact assessment of activities before their realisation is regulated by the law No. 127/1994 on environmental impact assessment that came in force in September 1994. It specifies the purpose, system, bodies and organizations involved as well as the activities subject to the impact assessment. (The law in English was given to Mr. Horie in November 97). Coordination of the process of activities approval is ensured by the law No. 50/1976 on land planning and construction code in the wording of later regulations.

1.4. Basic national principles for the environment are specified in the document National Environmental Policy of the Slovak Republic approved by the Slovak Government on the 7 Sept. 1993 and by the Parliament on the 18 Nov. 1993 ( was given in English to Mr. Horie in November 97).

1.5. On 14 May, 1996 the National Environmental Action Programme (NEAP) was approved, that specify conceptual, legislative, organizational, educational and investment measures that should be taken to achieve the goals of the environmental strategy. NEAP was further elaborated on regional levels defining measures to solve the problems on the regional level.

1.6. Legal regulations for the specified spheres are listed in the list mentioned in 1.1.

Standards for evaluation of the surface water quality - STN 75 7221 and drinking water quality - STN 75 7111 in English were given to Mr. Horie in November 97. Indicators of the acceptable levels of water pollution are given in the Order of the Slovak Government No. 242/1993.

Governmental Order No. 92/1996, by which the law No. 303/1991 on the protection of the air against pollutants, in the wording of later regulations is executed specifies air pollution limits for the given lists of pollutants.

At the same time this Order specifies also deposition limits of particulate matter, SO<sub>2</sub>, NO<sub>2</sub>, CO, O<sub>3</sub>, Pb, Cd and dust substances.

The highest acceptable levels of pollutants in soil are given by the Decision of the Ministry of Soil Management of SR No. 531/1994 - 540.

For the sphere of the nature protection and land use the legal regulations given in the list mentioned in 1.1., section Nature protection, land planning and construction code apply. There exist a system of fees and fines in the Slovak Republic.

#### Water:

They are given in the law No. 138/1973 on water in the wording of the Order of the Czechoslovak Government No. 35/1979 on compensations in water management, in the wording of the governmental order No. 91/1988 and the governmental order No. 235/1996, regulation of the Slovak Forest and Water Ministry No. 154/1978 on public water distribution networks and sewage systems in the wording of the regulation No. 15/1989, regulation of the Slovak Forest, Soil and Water Ministry No. 12/1963, order of the Czechoslovak government No. 31/1975 on fines for failing to fulfil obligations in water management.

#### Soil:

Law No. 307/1992, order of the Slovak government No. 19/1993.

Law No. 61/1997, Law No. 100/1977, law No. 372/1990 offences in the wording of the law No. 524/1990.

#### Air:

Law No. 311/1992 on compensation for polluting, law No. 309/1991 on the protection of water against pollutants in the wording of the law No. 218/1992, law No. 148/1994 and the law No. 256/1995, law No. 513/1991 (Commercial Code).

#### Waste management:

Law No. 327/1996 on fees for disposal of waste, law No. 494/1991 on state government in waste management in the wording of the law No. 309/1992, the measure of the Leadership of the Slovak National Assembly No. 371/1992, law No. 238 on waste in the wording of the law No. 252/1993, law No. 255/1993 and law No. 222/1996.

1.7. and 1.8. Organization, system and state government bodies in the environmental sector are ruled by the law No. 595/1990 on the state government in the environment in the wording of the law No. 494/1991, law No. 134/1992, law No. 287/1994 and law No. 222/1996.

According to the above-mentioned laws the bodies of the state government in the area of environment are: Ministry of the Environment of SR (MoE), regional authorities, district authorities

Bodies responsible for the environment protection on the local level according to the law No. 369/1990 on municipal administration in the wording of later regulations of municipalities, are municipalities.

Competencies and liabilities on individual levels of the state administration as well as municipality level are given in relevant laws ruling individual spheres of the environmental sector. An overview is shown in the attachment of the Information System of the Environment given to Mr. Horie in November 97.

**1.9. Data can be found in the documents:**

- Environment in the Slovak Republic in 1992-1993, published by MoE
- Report on the state of environment in the Slovak Republic in 1994, published by MoE and the Slovak Environmental Agency (SEA)
- Report on the state of environment in the Slovak Republic in 1995, published by MoE and SEA (was handed over to Mr. Horie in November 97)
- Report on the state of environment in the Slovak Republic in 1996 (will be published by the end of this year), publisher MoE and SEA

**1.10. Such data are not being usually disclosed.**

**1.11.** Funds for environmental quality improvement are provided from the state budget in the form of subsidies through budget heads of relevant ministries and through the State Environmental Fund. Total amounts in Slovak crowns as well as percentage share of individual ministries in the environmental quality improvement are given in the Report on the State of Environment in SR in 1995, on the page 142. These investments are further distributed for following spheres: waste water treatment plants and sewerage systems, other constructions in the sphere of water management, waste management, air protection (see the Report on the State of Environment in SR in 1995, page 143, table No. VII.1 Environmental investments of the ministries of SR financed from the state budget and the State Environmental Fund in 1995). Companies implementing principles of the environmental quality improvement are e.g. Stredoslovenské a Západoslovenské vodárne a kanalizácie (Central- and West Slovak Water Distribution and Sewage Works) in the sphere of improving water supply and sewage. All data concerning wastes are given in the Conceptions and Legal Regulations of the Waste Management (1997, MoE) and in the document Slovak Republic Waste Management till 2000 Programme (MoE, 1996).

**2. All materials concerning this item were given to Mr. Horie in November 97.**

**3.** By the end of this year the computer network of the Ministry of Environment ŽPNet will be put into operation, interconnecting following expert organizations: MoE, SEA, State Hydrometeorological Institute, Geological Service of SR, Administration of Slovak Caves, National Parks Administration, State Environmental Fund, Slovak Inspection of the Environment and their selected offices. Data from the Monitoring Information System, Environmental Information System and Information System of a Territory will be processed and exposed in the network. In the next year a dial-up connection with the European environmental network EIONet is anticipated.

**4.1.**

**4.1.3.** Statistical Annual on CD handed over to Mr. Horie in November 97.

**4.1.5** Special attention should be paid to the central Hron river basin area between Žiar nad Hronom and Zvolen hollows. The main polluters of the environment are industrial companies situated in a line passing from Nová Baňa through Žiar nad Hronom, Zvolen, Banská Bystrica up to Brezno. More detailed data on air, surface water and soil pollution as well as on waste relating to this area can be found in the Report on the State of Environment in SR in 1995, page No. 87 and 88.

**4.1.6.** Conceptions and Legal Regulations of the Waste Management (1997, MoE)

**4.1.7.** Basic data or information on the above are included in the documents elaborated for individual regions. As the region concerned covers mainly Banská Bystrica region and Nitra region data can be found:

**a) for Banská Bystrica region**

- in the Environmental Action Programme of Banská Bystrica region (published in May 1997 by the Regional Office in Banská Bystrica) - was handed to Mr. Horie in November 97,

- in the territorial planning documentation of the large territorial units,  
concretely in:

1. in the territorial planning documentation of the large territorial unit of the region of Central Slovakia, ordered by the Regional Office in Banská Bystrica
2. in the territorial planning documentations of the large territorial units of the districts of Banská Štiavnica, Žarnovica and Žiar nad Hronom, ordered by the Regional Office in Banská Bystrica,
3. in the territorial planning documentation of the large territorial unit of Nízke Tatry, ordered by MoE.

The territorial planning documentations of the large territorial units of the region of Central Slovakia and districts of Banská Štiavnica, Žarnovica and Žiar nad Hronom are at present in process and will be completed by the end of this year. The territorial planning documentations of the large territorial units reflect social and economic changes in the society, main development goals of individual regions, new position of cities and communities and their municipal authorities, they evaluate and solve mutual relations and impacts of investments that are under preparation from the point of view of the transport infrastructure, they solve changes and subsequent restructuring of industrial and agricultural production, taking into consideration interests of the nature protection, natural sources protection, protection of natural and cultural heritage of individual regions.

- in the regional territorial systems of ecological stability, ordered by a relevant district or regional office.

Territorial systems of ecological stability are the documents of nature protection. They enable to respect such land elements that are a basis of its ecological stability and enable, at the same time, to create conditions for the effective economic use of a landscape already in the planning stage, i.e. during the territorial planning documentation preparation. These elements are interconnected in the schemes of territorial systems of ecological stability. These are the biocentres (regional, over-regional), and biocorridors. They are formed mainly by protected landscape areas or biotopes of a high ecological quality.

#### b) for Nitra region

- in the Environmental Action Programme of Nitra region (ordered by the Regional Office in Nitra), officially it will be published by the end of this year, (at present just a working version is available),
- in the territorial planning documentations of the large territorial units of the districts Zlaté Moravce, Levice and Nové Zámky,
- in the regional territorial systems of ecological stability, ordered by the relevant district or regional office.

4.2. - Meteorological and hydrological data + maps - source is the Slovak Hydro-Meteorological Institute (SHMI),  
- geological and hydrogeological data + maps - source is the Geological Service of SR (GS)

4.2.2 Source - Geofond, SHMI

4.2.3. Given in the document Present State of the Environment in the Hron River Basin (SEA, 1997) - handed over to Mr. Yamada in JICA, Austria office in October 97.

4.2.4. Report on the state of elaboration of the Partial Monitoring System (PMS) - Soil (being elaborated every year by the Research Institute of Soil Fertility, Bratislava (RISF), for 1997 it will be completed in March 1998.

4.2.5. Report on the state of elaboration of the Partial Monitoring System - Forests (being elaborated every year by the Research Forest Institute in Zvolen - RFI), for 1997 it will be completed in March 1998.

4.2.6. Report on the state of of the elaboration of individual partial monitoring systems, elaborated every year by the supervisors of individual PMS will be completed for 1997 in April 1998. In SR there are 12 PMS at present:

PMS name	Supervisor	Ministry
1. Air	SHMI	MoE



2. Water	SHMI	MoE	
3. Biota (fauna and flora)	SEA	MoE	
4. Wastes	SEA	MoE	
5. Settlement	SEA	MoE	
6. Land use	SEA	MoE	
7. Geological factors	GS	MoE	
8. Forests	RFI	MSF	
9. Alien substances in foodstuffs and fodders	Food Research Institute	MSF	
10. Soil	RISF	MSF	
11. Radiation and other physical fields	State Health Institute	MH	
12. Load for population by environmental factors	State Health Institute	MH	

4.2.7. Territorial planning documentation of large territorial units elaborated by a relevant Environmental Department.

4.2.8. Environmental Action Programme of Banská Bystrica Region, pages 29, 30, 31.

Environment protection is ensured by legislation specified in item 1.1 of this questionnaire. Execution of a decision concerning approval or non approval of a man's intervention in the environment is done by the expert divisions of the Environmental Department of District and Regional Offices, i.e.:

- state administration division of air protection
- division of state water management
- state administration division of nature and landscape protection
- state administration division of waste management
- division of territorial planning and construction code
- division of EIA

Execution of their activities ensues from the law No. 222/1996 that forms an attachment of the Information System on Environment published by MoE in 1997 (was handed to Mr. Horie in November 97).

4.2.9 In SEA, in the Centre of Nature and Landscape Protection there exist so called „reservation books“ that list protected and endangered species of fauna and flora (only in an analogue form) is being updated by the Centre employees continuously.

4.2.10. Layer of protected areas in the whole territory with precise borders in a digital form under ArcView - SEA source

4.2.11. Large territorial units of relevant districts and regions

Digital elaboration of landscape areas for tourist purposes elaborated by the Department of regional development of the Regional Office (individual layers are being elaborated gradually by regions; at present the Nitra region is in process, elaboration of Banská Bystrica region has not started yet).

4.3.1. SHMI source - Report on ambient air quality and contribution of individual sources to air pollution (was handed over to Mr. Horie in November 97).

4.3.2. SHMI source - . Given in the document Present State of the Environment in the Hron River Basin (SEA, 1997) - handed over to Mr. Yamada in JICA, Austria office in October 97.

4.3.3. RISF source - maps and relevant data bases from monitoring and expert activities

4.3.4. SHMI source - maps and relevant data bases from monitoring and expert activities

4.3.5. Discharges of waste water and emissions are regulated by polluters themselves. They are obliged by law to keep to the allowable limits. Polluters report emission data to the environmental department of a relevant district that, in case the given limits are exceeded, imposes a fine. Also the data on waste generators and liquidators are collected and filed with the environmental department of a relevant district, specifying in more detail the waste generator, quantity of waste classified pursuant to the valid legislation and method of waste disposal. With filing the waste liquidator also the equipment for waste disposal is registered, i.e. equipment type, main characteristic and keeping to the legislation.

4.3.6. Monitoring results are processed by the supervisor of a relevant PMS (different periodicity of evaluation depending on the PMS type, once per year the results are processed for all PMS). Standards applied to environmental sources were mentioned in item 1.1. Monitoring results are being compared with relevant standards and, in case of exceeding, relevant measures are taken.

**Abbreviations used in the questionnaire:**

GS	Geological Service
MFA	Ministry of Foreign Affairs
MH	Ministry of Health
MSF	Ministry of Soil Fertility
MoE	Ministry of the Environment
PMS	Partial Monitoring System
RFI	Research Forest Institute
RISF	Research Institute of Soil Fertility
SHMI	Slovak Hydro-Meteorological Institute
SR	Slovak Republic
SEA	Slovak Environmental Agency

## 5. 面会者リスト

### 面会者リスト

#### 1. Slovak Side

##### 1-1. MINISTRY OF FOREIGN AFFAIRS

- (1) NEMETHY Alojz, Director, Department of International Economic Cooperation and Foreign Assistance
- (2) BUJALKA Vladimir, Desk Officer

##### 1-2. MINISTRY OF THE ENVIRONMENT

- (1) SLEBODNIK Ladislav, Chief of the Office
- (2) KASANICKA Zuzana, Environmental Programme Manager, Programme Management Unit
- (3) KOHUT Stefan, Informatic

##### 1-3. SLOVAK ENVIRONMENTAL AGENCY

- (1) TONCIK Miroslav, Director of the Agency
- (2) DUPEJ Jozef RNDr., Deputy Director of the Agency
- (3) BENKO Vladimir, Head of Department, Monitoring and Informatic Department
- (4) BECKOVA Jana, Project Manager of REMP, Monitoring and Informatic Department
- (5) NAVRATIL Rudolf, GIS specialist, Monitoring and Informatic Department
- (6) VYSOCAN Miroslav, GIS specialist, Monitoring and Informatic Department
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- (13) SKRARKOVA Lydia, Department of Environment
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(1) ONDRAS Miroslav Dr., Deputy Director for Meteorology and Climatology, SHMI at Bratislava

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#### 1-6. MINISTRY OF AGRICULTURE

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(1) BUCHA Tomas, Deputy Head of the Department, Forest Management and Forest Monitoring Department

(2) MINDAS Jozef, Head of the Department, Forest Environment Department

1-8. SOIL FERTILITY RESEARCH INSTITUTE

- (1) BIELEK Pavol Dr., Director, SFRI at Bratislava
- (2) CURLIK Jan RNDr., Associate Professor, SFRI at Bratislava
- (3) SEFCIK Peter RNDr., SFRI at Bratislava

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- (1) KRIZANI Ivan Dr., Geological Institute, Slovak Academy of Sciences at Banska Bystrica
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- (3) KANA Richard Ing., General Manager, SLOVENSKA BANSKA, s.r.o. HODRUSA-HAMRE
- (4) HANO Igor, Deputy Director, Water and Sewage Management Office at Zvolen
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- (1) KUCAK Peter, KUCAK Peter(company name)
- (2) SVITOK Rene, KUCAK Peter(company name)

## 2. Japanese Side

### 2-1. EMBASSY OF JAPAN AT CZECH REPUBLIC

- (1) 丸山 俊二、チェッコ共和国駐在日本国大使館特命全權大使  
MARUYAMA Shunji, Ambassador, Extraordinary and Plenipotentiary of Japan
- (2) 野地 祐二、チェッコ共和国駐在日本国大使館一等書記官  
NOCHI Yuji, First Secretary

### 2-2. THE REGIONAL ENVIRONMENTAL CENTER FOR CENTRAL AND EASTERN EUROPE

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- (1) 山田 健、国際協力事業団オーストリア事務所次長  
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- (1) 安藤 茂、環境庁水質保全局、地下水・地盤環境室長、総括／環境管理計画  
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SASAKA Tsuyoshi, Natural Environment, Green Blue Corporation(Consultant)
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HORIE Yuji, Environmental Data Base, Green Blue Corporation(Consultant)

## 6. 現地調査経費資料

フロン川流域環境管理計画プロジェクトの現地調査において発生すると予想される諸経費について参考資料を呈示する。これらの諸経費は現地でのオフィスワークに付随して発生するものと、現地での環境汚染調査を行うものに大別される。前者については下記のような経費が予想される。

### 1. コピー代及びGIS用の地図作成費

C/Pの環境庁からコピー代は負担出来ないとの返答があり、実費負担が必要となる。コピー代は概ね日本と同程度である。環境管理計画作成には種々のテーマ地図の作製が必要であり、一つのテーマ地図を作製するのに最低10程度の基礎地図の作製が必要となる。これらはA1からA0サイズの大きな用紙にプリントされるのでかなりの用紙代がかかる。

コピー代	1.50 Sk / 頁		
地図印刷費	A0サイズ	0-25%印刷	850 Sk
		26-50%印刷	1350 Sk
		50-100%印刷	1850 Sk
	A1サイズ	0-25%印刷	600 Sk
		26-50%印刷	935 Sk
		50-100%印刷	1270 Sk

但し、地図印刷は紙質と解析精度により、価格は変動する。

### 2. 車輦費

車輦費についてもC/Pは負担出来ないとの返答あり。

レンタルカーの費用は運転手つきで1日で1万5千円から2万円かかる（例えば、Banska Bystrica から Bratislava まで移動した場合）。Banska Bystrica 周辺で使った場合、1時間のレートは700円から1000円程度であるが休日は2倍程高くなる。

セダンタイプ（タクシー）	9.80 Sk/km + 240 Sk/1時間留置
マイクロバス	13.20 Sk/km + 200 Sk/1時間留置

### 3. 現地コンサルタント

地質関係のGISデータを得るには、地質調査所（GSSR）はハードコピーだけを持っておりローカルコンサルタントの使用を勧めている。主な理由は、紙地図の地質データを正しいGISデータに落とし込むには、地質調査所の専門家がローカルコンサルタントに指示をしながら作成する必要があるためである。各種のサービス費用の概算は下記の通り。

エキスパートサービス：9地域の紙地図（1/50,000）の記号を統一ユニットに統合し、GISデータにおとせるようにする。

約80万円（6,000 USD=180,000 Sk）

コンピュータマップ作成：等高線スキャニングとデジタル化

約20万円（1,300 USD=40,000 Sk）

GIS用のカラーマップ作成

約390万円（30,000 USD=600,000 Sk）

補足実査に係る費用には下記のものがある。

#### 4. サンプルの分析費

種々の重金属類の分析が必要になる。SEAによるこれらの費用見積もりは下記の通り（かなり、低価格なので、改めて確認要）。

Hg	720 円 (180 Sk)
Se	640 円 (160 Sk)
Cd, Cu, Ni, Cr, Pb, Zn	560 円 (140 Sk)

#### 5. ボーリング費用

SEAによるこれらの費用見積もりは下記の通り。

10メートルのボーリング	20 万円 (50,000 Sk)
15mと25mの2段	38 万円 (95,000 Sk)

#### 6. 通訳及び翻訳関係費

文書、データの翻訳	4,000 円 (1,000 Sk) / 1000 語 (300 Sk/頁)
通訳 レベル1の通訳者	20,000 円 (5,000 Sk) / 日
	10,000 円 (2,500 Sk) / 半日
レベル2の通訳者	12,000 円 (3,000 Sk) / 日
	6,000 円 (1,500 Sk) / 半日



## 7. 収集資料

### 1. 対処方針、S/W、M/M、機材要請関連

### 2. 環境管理計画及び Questionnaire への回答

- ・ Zbierka zákonov (スロヴァキア法) : スロヴァキア語 (以下「ス」語) コピー状態不良
- ・ ZOZNAM MEDZINARODNYCH DOHOVOROV S ENVIRONMENTALNYM ZAMERANIM (「ス」国環境関連法令リスト) : 「ス」語、コピー、1995.
- ・ Questionnaire への回答、英語、3. Dec. 1997.
- ・ 同上、1.1及び1.2に対する回答、英語、19. Nov. 1997.
- ・ 同上、他国協力一覧、「ス」語、19. Nov. 1997.
- ・ 同上、文化遺産に関して、「ス」語、19. Nov. 1997.
- ・ 同上、1.9及び1.10.に関して、「ス」語、19. Nov. 1997.
- ・ 同上、表流水(河川水等)に関する規制・基準、英語、19. Nov. 1997.
- ・ 同上、土水に関する規制・基準、英語、19. Nov. 1997.
- ・ 同上、Banska Bystrica 地域の Environmental Action Program、「ス」語、May. 1997.
- ・ Environmental Impact Assessment Act、英文コピー、53頁、29. Apr. 1994.
- ・ Demonstration Project、Risk Assessment Risk Management、英語、Jan. 1997.

### 3. 環境庁関連プロジェクト

- ・ A Review of Methods for Assessing and Controlling Non-point Sources of Phosphorus、National Rivers Authority、Bristol 英国、英語、1996
- ・ Support to the Environmental Rehabilitation of the Ziar Valley : Executive Summary、Regional Environmental Center for Central and Eastern Europe Japan Special Fund、submitted by EKOTRUST Slovak Republic、英語、1995-1996.
- ・ Project DANUBE : Danube Remote Sensing Demonstration Project、Model of the river basin non-point pollution using Remote Sensing and GIS technologies financed by Phare ZZ9211/0504 Environmental Multi-country programme、英文の部分的コピー、Jan. 1996.
- ・ CORINE land cover Technical Guide、European Commission、英文コピー、Luxembourg 1994.
- ・ Phare : Country Environmental Projects(1991-1996)、「ス」国環境省、英語オリジナル、Bratislava、1997.
- ・ Guidelines for Data Collection for The Dobruis+3 Report、European Environmental Agency、英語オリジナル、Copenhagen、1996

### 4. 「ス」国環境省、環境庁関連

- ・ 環境庁パンフレット2種
- ・ 環境庁の「ス」国内配置図
- ・ 環境省及び環境庁組織図
- ・ 「ス」国通信衛星画像のシーン・カバー配置図、コピー
- ・ European Environment Agency(EEA)の説明文付き構成図、英文コピー
- ・ 「ス」国環境情報ネット(Informatics)構成概念図、コピー

- ・ Informačný System Odborov Zivotneho Prostredia(ISOZP)、 「ス」 国環境情報インフォメーション・システム、 環境省、 「ス」 国語オリジナル、 Bratislava、 1997.
- ・ Koncepcia Rezortnej Casti Statneho Informacneho Systemu MZP SR、 同上コンセプト、 環境省、 「ス」 国語オリジナル、 Bratislava、 1997.

## 5. 水文気象研究所

- ・ S H M Uパンフレット
- ・ Hydrologika Rocenka Povrchove Vody、 流域別水理・水量統計、 「ス」 国語オリジナル Bratislava、 1995
- ・ Air Pollution in the Slovak Republic、 英文オリジナル、 Bratislava、 1995
- ・ Agrometeorologicke a Fenologicke Infomacie Zapadne Slovensko Polnohospodarsky Rok、 「ス」 国語オリジナル、 Bratislava、 1996
- ・ Bulletin Meteorologia a Klimatologia、 「ス」 国語オリジナル、 気象統計図表、 Bratislava、 1997
- ・ Kvalita Povrchovych Vod Na Slovensku 1995-1996、 「ス」 国語オリジナル、 Bratislava、 1997
- ・ Banska Bystrica 周辺局の水文データ類、 「ス」 国語コピー
- ・ Questionnaire への回答 4. 2. 3 に関して

## 6. 地質調査所

- ・ Geological Survey of Slovak Republic 紹介用リーフパンフレット、 Jan. 1996.
- ・ Geologicke Mapy Slovenska ( Geologic Maps of Slovakia )、 「ス」 国語と英語の対訳本オリジナル、 Bratislava、 1996.
- ・ Mineral Resources of Slovakia、 英文オリジナル、 Bratislava、 1996.

## 7. 土壌研究所

- ・ Agricultural Soils in Slovak Republic : Facts & Figures 1997、 英語オリジナル、 Bratislava、 1997.
- ・ Geochemical Atlas of Slovak Republic : Part Soils、 Slovak Geol. Mag. , 3(1997)37-51、 英語コピー、 Bratislava、 1997.

## 8. 森林研究所

- ・ Forest Research Institute パンフレット、 「ス」 国語と英語の対訳オリジナル、 Zvolen、 Aug. 1997.
- ・ Forests & Forestry in the Slovak Republic、 英文、 Zvolen、 1996.
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- ・ Polana Biosphere Reserve、 Administration of the Protected Landscape Area -- The Biosphere Reserve Polana、 Zvolen、 1995
- ・ Polana Biosphere Reserve、 Biosphere Reserves on the Crossroads of Central Europe、 Czech National Committee for UNESCO's Man and Biosphere Programme、 Prague、 1994
- ・ Polana パンフレット、「ス」国語オリジナル
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## 9. 「ス」国環境概況

- ・ The Environment of Slovakia、環境省、V H S ビデオテープ、41分英語版、1995.
- ・ The Caves of The Slovak Karst、V H S ビデオテープ、30分英語、1996.
- ・ Statistical Yearbook of the Slovak Republic、CD、「ス」国語と英語の2カ国語対応、Statistical Office of the Slovak Republic、1996.
- ・ Report on the state of environment in the Hron river watershed、環境庁、英語オリジナル、Banska Bystrica、(1997)記載なし
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## 10. 「ス」国概況

- ・ Slovakia : walking through centuries of cities and towns、英語、PRIRODA, a. s. : ISBN 80-07-00 889-6、Bratislava、1997.
- ・ SLOVENSKA REPUBLIKA (「ス」国地勢図)、1/1,000,000、VOJENSKY KARTOGRAFICKY USTAV, s. p., HARMANEC、1996.
- ・ SLOVENSKA REPUBLIKA-vseobecnozemepisna mapa (「ス」国概要図)、MAPA Slovakia : ISBN 80-88716-28-4、Bratislava、1997.
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- ・ TURISTICKA MAPA (フロン川下流域ツーリストマップ) i00, 132, 137, 138, 140, 142)、1/50,000、1994-95
- ・ Welcome to Slovakia、観光パンフレット、Slovak Information Agency、1995.
- ・ Banska Bystrica、観光パンフレット、Slovak Information Agency、1996.
- ・ VEDECKO-TECHNICKY、(「ス」国語→英語) 科学技術辞書、35000「ス」国 words、SPN : ISBN 80-08-01105-X、Bratislava、1996.

## 8. 関連資料

1. 地域環境計画ハンドブック（平成7年度環境庁請負事業）、（財）環境情報普及センター、平成8年3月
2. 地球環境政策 ERDPOLITIK、エルンスト・U.フォン・ワイツゼッカー、有斐閣、1991年8月
3. GISデータブック1997、（財）日本建設情報総合センター、1997年
4. 実務者のための地理情報システム入門 THE GIS BOOK、George B. Korte, P.E.、インターナショナル トムソン パブリッシング ジャパン、1997年10月
5. GIS電子地図革命 桜井博行、東洋経済新報社、1997年10月
6. 水環境の基礎科学、Edward A. Laws、技報堂出版、1996年3月
7. 環境創造の思想、竹内和彦、東京大学出版会、1991年7月
8. 景観生態学 ランドスケープ・エコロジー入門、沼田眞、朝倉書店、1996年10月
9. Lonely planet Czech & Slovak Republics、1995年2月
10. EURO MAP Slovak Republic North Moravia, Matra, GeoCenter

## 9. テーマ地図の例

### ・自然保護対象マップ

目的： 自然保護地域と、エコロジカルに脆弱な地域を、基図上に表示して環境管理計画に活用する。

基図： 行政区分図、河川分布図、基本地形図

データ：自然保護地域、保護森林分布図

### ・コーリン・ランドカバーマップ

目的： 現状の植生分布と土地利用の実態を、欧州で統一されたランドカバー分類法に従って地図表示する。

基図： 衛星画像解析図、植生分布図、基本地形図

データ：都市化地域分布図、農作物別耕作分布図

### ・土地利用プランマップ

目的： 現在及び近未来の土地利用のありようと、保護すべき自然地域との関係を地図上に表示する。

基図： 行政区分図、河川分布図

データ：土地利用図、土地利用計画データ、自然保護地域、保護森林分布図

### ・各種汚染源分布マップ

目的： 現在環境汚染を引き起こしている、鉱山採掘及び鉱滓、各種工場、農地、市街化地、主要道路等を基図の上に表示する。

基図： 河川図、基本地形図、主要道路地図

データ：市街化地域分布図、業種別工場分布、最終処分場及び鉱滓分布、農作物別農地分布図

### ・土壌及び地下水汚染分布マップ

目的： 土壌及び地下水汚染の程度と空間的広がりを、現在の土地利用との関連で地図表示する。

基図： 河川図、土地利用図

データ：土壌汚染データ、地下水汚染データ、最終処分場、鉱滓処分場、採鉱鉱区図

### ・河川水質汚染分布マップ

目的： 河川水の水質分布を、水位/流量、消費水量、水処理場の容量や都市化地域との関連で地図表示する。

基図： 河川図、土壌タイプの分布図、都市化域図

データ：季節別水位/流量データ、水質データ、処理場性能データ、消費/排水量データ

・大気汚染と森林分布マップ

目的： 森林被害の状況と大気汚染との関連を地図上に表示する。

基図： 地質分布図、森林分布図、地形図

データ： オゾン及び酸性雨データ、森林被害データ

10. 資料リスト

様式第1号 (記第2関係)

(収集/作成資料)

平成 年 月 日作成

資料リスト (□収集資料/□専門家作成資料)

主管部長	主管課長	主管課長	技術管理課長	技術管理課長	技術管理課長

地域	プロジェクトID	714-1001-F-O	調査団番号	A-97-01236	担当課	社調2課
東欧	調査団名又は専門家氏名	スロヴァキア国環境庁	調査団名又は専門家氏名	スロヴァキア国環境庁	担当課	社調2課
国名	スロヴァキア	スロヴァキア国環境庁	調査団番号	A-97-01236	担当課	社調2課
番号	資料の名称	形態(図書・ビデオ・地図・写真等)	収集資料	作成資料	発行機関	取扱区分
1	Zbierka zakonov.	COPY (紙媒体)				JR・CR( )・SC
2	ZOZNAM MEDZINARODNYCH DOHODOVOROV S ENVIRONMENTALNYM ZAMERANIM. 1995	英文COPY				JR・CR( )・SC
3	Questionnaireへの回答 3.Dec.1997.	英文				JR・CR( )・SC
4	同上、1.1及び1.2に対する回答 19.Nov.1997.	英文				JR・CR( )・SC
5	同上、他国協力一覧 19.Nov.1997.	同上				JR・CR( )・SC
6	同上、文化遺産に関して 19.Nov.1997.	同上				JR・CR( )・SC
7	同上、1.9及び1.10に関して 19.Nov.1997.	同上				JR・CR( )・SC
8	同上、表流水 (河川水等) に関する規制・基準 19.Nov.1997.	英文				JR・CR( )・SC
9	同上、上水に関する規制・基準 19.Nov.1997.	英文				JR・CR( )・SC
10	同上、Banska Bystrica 地域の Environmental Action Program May.1997.	同上				JR・CR( )・SC
11	Environmental Impact Assessment Act, 29.Apr.1994.	COPY 53頁				JR・CR( )・SC
12	Demonstration Project, Risk Assessment / Risk Management Jan.1997.					JR・CR( )・SC
13	A Review of Methods for Assessing and Controlling Non-point Sources of Phosphorus, National Rivers Authority, Bristol 1996					JR・CR( )・SC
14	Support to the Environmental Rehabilitation of the Ziar Valley: Executive Summary, Regional Environmental Center for Central and Eastern Europe					JR・CR( )・SC
	Japan Special Fund, submitted by EXOTRUST Slovak Republic 1995-1996.					JR・CR( )・SC

(収集/作成資料)

資料リスト (□収集資料/□専門家作成資料)

平成 年 月 日作成

主管部長	文書管理課長	主管理課長	情報管理課長	技術情報課長	図書館受入日

地域	東欧	プロジェクトID	714-1001-F-O	調査団番号	A-97-01236	担当部署	社調2課
国名	スロヴァキア	所属機関名	スロヴァキア国環境庁	調査の種別又は 招請科目	現地調査期間又は 派遣期間	97年11月2日～97年11月23日	担当者氏名
番号	資料の名称						
15	Project DANUBE: Danube Remote Sensing Demonstration Project, Model for the river basin non-point pollution using Remote Sensing and GIS technologies financed by Phare Z/2921/0304 Environmental Multi-country programme, Jan. 1996.						
16	CORINE land cover Technical Guide, European Commission, Luxembourg 1994.						
17	Phare: Country Environmental Projects (1991-1996), Bratislava 1977						
18	Guidelines for Data Collection for The Doblas-3 Report, European Environmental Agency Copenhagen 1996.						
19	環境庁パンフレット 2 種						
20	環境庁スロヴァキア国内配置図						
21	環境省及び環境庁組織図						
22	スロヴァキア国環境監視画像のシーン・カバー配置図						
23	European Environment Agency (EEA)の説明文付き構成図						
24	スロヴァキア国環境情報ネットワーク (Informatics)構成図						
25	Informacny System Odporov Zivotneho Prostredia (ISOZP) スロヴァキア国環境情報インフォメーション・システム Bratislava 1997						
26	Koncepta Rezarnej Casu Staneho Informacneho Systemu MZP SR Bratislava 1997						
27	SHMUパンフレット						
28	Hydrologika Rocenka Povrchove Vody, (流域別水理・水象統計) Bratislava 1995						



## 資料リスト (□収集資料/□専門家作成資料)

平成 年 月 日作成

主管部長	文書管理課長	主管課長	情報管理課長	技術情報課長	図書館納入日

地域	東欧	調査団名又は専門家氏名	プロジェクトID	714-1001-F-O	調査団番号	A-97-01236	担当課	社調2課
国名	スロヴァキア	スロヴァキア環境庁	スロヴァキア環境庁	スロヴァキア環境庁	調査団名又は専門家氏名	97年11月2日～96年11月23日	担当氏名	
番号	資料の名称	形態(図表・写真・地図・写真等)	収集資料	専門家作成資料	JICA作成資料	サキスト	取扱区分	図書館記入欄
29	Air Pollution in the Slovak Republic Bratislava,1995						JR・CR( )・SC	
30	Agrometeorologické a Fytologické Informácie Západnej Slovenskej Poľnohospodárskej Rôľ Bratislava, 1996						JR・CR( )・SC	
31	Bulletin Meteorologia a Klimatologia Bratislava,1997	気象統計図表					JR・CR( )・SC	
32	Kvalita Povrchových Vod Na Slovensku 1995-1996 Bratislava,1997	オリジナル					JR・CR( )・SC	
33	Banka Rynca (湖沼局の水分データ集)	2007年11月23日 COPY					JR・CR( )・SC	
34	Questionnaireへの回答4.2.3に関して						JR・CR( )・SC	
35	Geological Survey of Slovak Republic Jan.1996	リポート					JR・CR( )・SC	
36	Geologicke Mapy Slovenska Bratislava,1996	2007年11月23日 英文 複製					JR・CR( )・SC	
37	Mineral Resources of Slovakia Bratislava,1996						JR・CR( )・SC	
38	Agricultural Soils in Slovak Republic : Facts&Figures 1997 Bratislava,1997						JR・CR( )・SC	
39	Geochemical Atlas of Slovak Republic : Part Soils, Slovak Geol. Mag.,3(1997)37-51 Bratislava, 1997	COPY					JR・CR( )・SC	
40	Forest Research Institute Zvolen, Aug.1997.	2007年11月23日 英文 複製					JR・CR( )・SC	
41	Forests & Forestry in the Slovak Republic Zvolen,1996						JR・CR( )・SC	
42	Forest Condition in Europe - Results of the 1996 crown condition survey-Convention on Long-Range Transboundary Air Pollution Effects on Forests and European Union Scheme on the Protection of Forests against Atmospheric Pollution, United Nations Economic Commission for Europe						JR・CR( )・SC	

(収集/作成資料)

## 資料リスト (□収集資料/□専門家作成資料)

平成 年 月 日作成

主管部長	文書管理課長	主管理課長	情報管理課長	技術情報課長	図書館受入日

地域	東欧	プロジェクトID	714-1001-F-O	調査団番号	A-97-01236	担当課	社調2課
国名	スロヴァキア	調査団名又は専門家氏名	スロヴァキア国環境庁	調査の種別又は指導科目	開発調査	担当者氏名	
番号	資料の名称	形態(図書・ビデオ・地図・写真等)	収集資料	専門家作成資料	JICA作成資料	テスト	取扱区分
43	and European Commission, Technical Report prepared by Federal Research Centre for Forestry and Forest Products, EC-UN/ECE, Brussels, Geneva, Forests in Slovakia	紹介リーフ					JR・CR( )・SC
44	Polana Biosphere Reserve, Administration of the Protected Landscape Area - The Biosphere Reserve Polana, Zvolen, 1995						JR・CR( )・SC
45	Polana Biosphere Reserve, Biosphere Reserves on the Crossroads of Central Europe, Czech National Committee for UNESCO's Man and Biosphere Programme, Prague, 1994.						JR・CR( )・SC
46	Polana	20分VHSビデオパンフレット					JR・CR( )・SC
47	Polana	20分VHSビデオパンフレット					JR・CR( )・SC
48	Biodiversity Protection in the Protected Landscape Area - Biosphere Reserve Polana and Management of its Grasslands	英語要約付					JR・CR( )・SC
	IUCN The World Conservation Union, Bratislava, 1996.						JR・CR( )・SC
49	The Environment of Slovakia 1995	VHSビデオテープ 41分英語版					JR・CR( )・SC
50	The Caves of The Slovak Karst, 1996	VHSビデオテープ 30分英語版					JR・CR( )・SC
51	Statistical Yearbook of the Slovak Republic Statistical Office of the Slovak Republic, 1996.	CD (20分VHSビデオ・英語)					JR・CR( )・SC
52	Report on the state of environment in the Hron river watershed, Banska Bystrica, 1997.						JR・CR( )・SC
53	National Environmental Policy 1993						JR・CR( )・SC
54	Správa o Stavě Zvolensko Prostejovskej Republiky (Report on The State of the Environment in the Slovak Republic)						JR・CR( )・SC

資料リソース ( ☐ 収集資料 / ☐ 専門家作成資料 )

主 管 部 長	文 書 部 課 長	主 管 課 長	管 理 課 長	技 術 情 報 課 長	國 營 領 受 人 日

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