The Territory of the Coal Basin Districts in Northern Bohemia

Czechoslovakia, CSFR, is divided into two republics, the Czech Republic and the Slovak Republic. The Czech Republic is geographically located in the western half of the CSFR. Administratively it is divided into 122 districts with its capital in Prague.

The Northern Bohemia territory is the northwest part of the Czech Republic borders on former East Germany. It is primarily industrial area and contains the Northern Bohemian brown coal basin. This area contains the districts of Ústí nad Labem, Děčín, Teplice.

The Coal Basin districts have an area of 3,500 square kilometers and a population of 650,000 people. They are important for the Czech Republic for their high concentration of industrial activities. In these districts brown coal output comprises 70 percent, electric power 42 percent and gas production 50 percent of the total production for Czechoslovakia.

The centers of the towns are mostly of medieval origin. Some of these towns were damaged by bombing during World War II, 1944-1945. In addition some towns lost their integrity by industrial or mining activities, and by the lack of maintenance. For instance the town Teplice is one of the oldest spa towns in Europe and was visited by such well-known artists and scientists as: Goethe, Beethoven, Chopin, Liszt, Humboldt and others. Today it has been damaged from the war and from mining.

The coal basin territory lies in a badly ventilated valley, surrounded by mountains. The range of Krkán hory (The Ore Mountains) is a barrier for the prevailing winds from the Atlantic Ocean. The Coal Basin air pollution comes from its own sources, but also from coal basins in western Bohemia, former East Germany and Poland.

Today this territory has many economical, environmental and many other problems. However, due to political and economical changes in the last 2 years there is an opportunity for stopping the adverse development of this region and improving the economy and environment, by utilizing the regions favorable characteristics efficiently and effectively.

Economical and Environmental Challenges

Northern Bohemia has developed as an industrial center due to several significant factors which have made it desirable for industry. These factors which continue to offer industry advantages in Northern Bohemia include:

- abundant natural resources such as coal and water
- an industrial, skilled population, eager to work
- a large market for goods and services in nearby countries
- a good transportation system with easy access from Northern Bohemia's Central European location

However, the recent industrial management approach has emphasized an increase of production volume without environmental considerations. This has resulted in an unbearable high concentration of industrial activities, producing large amounts of wastes, and emissions which destroyed the landscape and environment. Since market economics and product competitiveness were not factors, the technologies and management used here are outdated, in comparison to western countries. Thus, the challenge now is to balance industrial and economic development and modernization with environmental needs.

Industry

The industrial base of Northern Bohemia includes power-stations, heating stations, pressure gas works, engineering works, metallurgical works and rolling mill plants, glass and china factories, chemical plants, paper mills, and food production. Power output and chemical production are of particular importance for the Czechoslovak economy. The bulky raw materials needed for metallurgical and chemical plants are transported by railway and river boat.

Future industrial recovery will be aided by recent land and building developments and the existing technical infrastructure and transportation network. Currently, capital sources and management are the bottleneck to the revitalization of this area.

Agriculture

Most of the land is covered by state farms - one organization in one district and by so-called integrated farming cooperatives. There is a trend to restore individual family farms and cooperatives of the farmers. There is a lack of proper buildings and machines for future farmers, and a lack of financial support.

In the mountains there is an opportunity to restore cattle-raising. The lowland plains farming is based on the available stable.

Forestry

The spruce mountain forest has been dying off under the impact of sulfur dioxide emissions. The wood in the dying forests is deteoriated and of poor quality.

The resulting premature cutting of the forests and a lack of sufficient capacity in the saw mill and timber industry has caused economic losses. In addition forest destruction causes the groundwater quality and quantity to diminish. The recovery of the forest land requires reforestation and re-establishing destroyed areas with resilient kinds of plants and trees, and the elimination of the harmful emissions.
land for vegetables, sugar beets and grain. In the Loony district there are hop gardens, in the Liemelvichte district there are hop gardens, vineyards and orchards.

Transportation
The rail and road network had been developed by industrial and public transportation needs. In addition the Lake River was made navigable in the last century. The development of surface coal mining has occasionally required the relocation of railways and roads. They are expensive and often complex constructions. There is no civil airport in this territory, the nearest airport is in Prague.

Water supply and treatment
The drinking water supply system is based on long distance pipelines from the Krusne Hory Mountains. The water for industry and for power station use is taken from the Ohre River and from the Lake River. For the flood protection of the mines several river dams were built. The future mining development plans may require the relocation of some mountain water sources.

The quality of surface water and groundwater is adversely affected by industrial and municipal discharges, and by agricultural runoff.

The infrastructure.
The electric power, gas, heat, water transport lines and distribution grids are adequate to the needs of the region. There is a lack of facilities for the handling of solid, liquid and toxic wastes from industry and for sewage water treatment of municipal wastes. The telephone network is not adequate for the needs of the region.

Environmental Problems and Solutions
With unchecked industrial development based only on production quotas, the environment has suffered major degradation resulting in problems affecting both the natural environment and human health.

In the Northern Bohemian coal basin districts here are a large number of pollution sources having major adverse effect on the environment. The districts Chomutov and Most account 42 percent of the total sulphur dioxide emissions in all of Czechoslovakia. The coal basin districts are affected not only by emissions from their own sources, but also from other parts of Central Europe, such as former East Germany and Poland which form a “Bermuda triangle of pollution” in this part of Europe. The danger to human health and nature is not only limited to this area as the prevailing winds transport the pollution across a wide geographic area. Most of the air pollutants have their origin in combustion processes.

Program: The Revitalization of Economy and Environment
The Federal and Czech government have decided within their authorities to support a revitalization program of Northern Bohemia. The realization of the program and its cost will be a great burden for the national economy and for both the Federal and the public governmental budgets. Objectives will be set and the Master Plan developed for better coordination, and synergy. The Master Plan will define the time framework and the logical interrelations for the future territorial development. An attractive environment with a well functioning administration, favorable economic conditions for foreign investment, and a reliable legal guaranty must be created. The Master Plan will include consideration of:
- Economic development – industry, coal mining, farming, forestry, transportation, infrastructure and banking
- Landscape reclamation and population health recovery
- Protection and rational use of natural resources:
  - air protection
  - biophere protection
  - water protection and water supply
  - mineral water and spas environmental protection
- Creating a balance between environmental and industrial needs by means of:
  - regulations and technical standards administered by a legal system and governmental supervision to assure adherence to the standards and regulations
  - objective collaboration of individuals and organizations to assure the achievement of regional goals
- Definition of quality-of-life goals such as:
  - sound life style
  - improvement of cultural values
  - self-governing bodies and citizen associations
  - support for the development of services including leisure time facilities
  - domestic and foreign tourism support
  - social services and facilities support
  - bank services network development
  - support to educational and training facilities
- assistance to opportunities for increasing the knowledge and individual approach for effective, entrepreneurial, advanced management theory and practical implementation.

Investment in Northern Bohemia
Legal and Economical Situation
Analysis
After-war changes in owner and user rights
Between 1945 and 1948 the majority of private property was nationalized. In the following years the remaining private ownership in industry, business, trade and farming was abolished - owners were deprived of their rights.

Property restitution acts
The Law of Extrajudicial Rehabilitation Act (Pov 1991) and the Restitution Act will return the property, confiscated after Feb 23 1941, to those persons claiming the property, if they are Czechoslovak citizens, and if they do so in the stated legal time-limit. The Small Privatization Act allows the government to auction small state-owned enterprises (shops, workshops, restaurants, etc.) for cash to citizens. Large industries will be privatized by the Transformation Act. The large state organizations will be analyzed, appraised, restructured, and then shares will be sold by means of coupons or bank loans to citizens and to domestic entrepreneurs, or the shares will be offered to foreign entrepreneurs. New legislation has opened the way for entrepreneurial activities. The possibilities for investment from abroad has been widened by allowing full ownership. In addition the internal convertibility of the Czechoslovak crown allows for the export of profits. The Czechoslovak government has signed bilateral agreements with many nations, to protect investment and to increase the flow of capital.
How to create mixed team - joint team (JT) and joint ventures (JV) - with domestic and foreign experts. By means of competitive proceedings and by generating mixed expertise working groups and companies on all needed positions and process levels for any defined or implemented project:

### Discussion example: How to form the future responsibilities

#### PUBLIC

- Government Republ. (government, ministries)
- Czech Republic Economic Council
- Regional economic council (s)
- Project creation & coordination republic-center
- Public & private participants of infrastructure projects and some enterprises & service organizations going through the privatization process
- State owned industrial & service organizations
- Engineers, bankers, lawyers, financial consultants, construction companies, technology suppliers, equipment manufacturers, operation specialists, real estate developer

#### PRIVATE

- Large Privatization Law (LPL)
- Small Privatization Law (SPL)
- Private consultant(s)
- Private enterprises service organizations (LPL)
- Foreign capital: grants, loans, subsidies
- Domestic capital: grants, loans, subsidies

### Consortium for the Northern Bohemian Revitalization Project

- an association of experts, both domestic and foreign, working for common interest
- defines objectives & tools in real time and the financial framework
- guarantees projects' coordination & effective flow of relevant information

#### Revitalization project contains three phases

1. Master Plan framing (strategic studies, setting priorities, management structure, responsibilities, tenders' inviting, etc.)
2. Project planning assistance & control (bids' evaluation, engineering & design coordination, etc.)
3. Implementation assistance, economic and environmental impacts control

#### System state characteristics

- Tendered proposal for Master Plan (MP1, 1991)
- Business areas: industry, agriculture, forestry, mining, civil works, infrastructure, municipal facilities, tourism & leisure time
- Sources & benefits: environment, human resources, human capital, technology, human resources & job opportunities, education, social, & health care
- Revitalization projects implementation: Union of EEC regulations & standards
- Probable Czechoslovak member of EEC

### 2. How To Train Our Managers and Specialists?

The process of revitalizing Northern Bohemia is a method that can be used in many other regions until we finally achieve the standard and quality of development desired for Czechoslovakia as a whole. In this manner we see all the problems connected with the CSFR and the Czech Republic in the region of Northern Bohemia.

In this region we have to support the private industry and small developer's firms for infrastructure improvement. Our goals can be obtained through the use of joint teams and joint venture formed with a mix of domestic and foreign participants. These teams will be broken down into smaller flexible private developers. These developers will break away from their foreign counterparts and become the future quality managers of our country.
Opportunities for Foreign Business Activities

The Northern Bohemia Revitalization program provides diverse opportunities such as:

- Taking part in revitalization planning
  - foreign consulting companies will be hired for the participation on set-up and implementation of the Master Plan
  - environmental monitoring and control system and laboratory equipment
  - outline, design, delivery and maintenance of the territory information system

- Participation or individual enterprises in construction projects. Many fields are available: industrial reconstructions, new technology implementation, infrastructure development, etc.

Domestic Firms Prepared for Business Cooperation

Northern Bohemian Economic Union

This Union was established in 1990 as an association of industries, research and service organizations, all residing in the Northern Bohemian coal basin districts. The Union integrates and coordinates actions of member organizations when dealing with authorities and self-governed bodies. When dealing with trade unions the Union acts as a deputy of employers.

The Union aims to increase the collaboration between the Union’s members and their business partners, both domestic and from abroad. In addition the Union helps to find sales, manufacturing cooperations and financial participation or participants. The Union provides consultant services in operational and technical tasks, in commercial, legal and economical problems, and can help in investigating new technologies and investment opportunities. The Union works with an emphasis on the humanization of lifestyle and environment.

The Union has 27 member organizations today. This number comprises 23 manufacturers, the rest provides service in research and engineering. The Union possesses an information base and uses qualified assistance for their members to the benefit of all. The knowledge background enables them to provide assistance directly to foreign businesses to find the proper counterpart for their interest and to contact domestic and foreign partners with proven local specialized consultants. Through these operations the Union will contribute to success, and attempt to avoid or decrease business risks.

Member Companies of Northern Bohemia Economic Union

The Northern Bohemia Brown Coal Basin - SHD

SHD, společný podnik, 434 51 Most
tel. (035) 7850

The Northern Bohemia brown coal basin area is 1,400 square kilometers; this number includes 550 square kilometers of the coal seam. The brown coal has been mined intensively for more than one hundred years, total extraction to date totals over 3,000,000,000 tons.

In the basin the coal is mined in eight surface-mining locations. There is available 2,200,000,000 tons of coal in the existing mine pits. Known coal reserves of 1,800,000,000 tons are available for future mining in development mine sites, which are planned to open after 2030. In total 1/3 of that stock is of first quality brown coal, which may be treated in coal treatment plants and can be used for combined power and chemical processing. Two thirds of the coal stock is coal for burning in power plants.

In addition four deep mines have 50,000,000 tons of coal reserves. Annual output of the basin was 60.7 million tons of brown coal in 1994. Thus the share of this basin from the total brown coal output in Czechoslovakia comprises about 72.5 percent and more than 57 percent of the total solid fuels output. The long-term trend of extraction development is estimated to be 41.5 - 50 million tons in 2005.

To date national enterprises have been integrated into one common enterprise SHD - Northern Bohemian Brown Coal Mines, Most.

Enterprises joined into common enterprise SHD include:

- Doly a úpravny Komofany, Most-Komofany
- Doly Bilina, Bilina
- Pařížový kombinát, Ústí nad Labem
- Doly Nástup, Tušimice
- Doly Hlubina, Litvinov
- Bělské stavitby, Most
- Rekuplační výstavba, Most
- Bělské projekty, Teplice
- Výzkumný ústav hladkého uhlí, Most
- Krušnohorské strojírny, Most-Komofany
- SHD - Kones, Most
- Výrobní centrum technika SHD, Most

Branch:
- coal mining & dressing
- coal mining
- integrated coal workings
- underground mining
- reclamation and mining engineering
- brown coal research
- brown coal research
- brown coal research
- commercial service
- NP & computer service

Povrch – rolled sheets from non-ferrous metals

The giant mining machine RS5000 in the surface mine near Most

Václavovy trub, a.s.
43023 Chomutov
tel. (039) 2318

One of the oldest manufacturers of one piece pipes; the company was established in 1870, and in 1887 was bought by Manesmann. It was given the task to develop and implement the production of one piece pipes – and the first one in the world was made here. The plant was widely recognized. It also implemented the production of austentic alloys for nuclear power station installations. The annual output was 80,000 tons in 1950, and since 1980 has been increased to 400,000 tons. Half of the output was exported to the USSR, 10 percent to other European countries and 40 percent was consumed in ČSPR. Deliveries can be completed by Czech, German, or Soviet standards, and by ASTM, in all steel quality marks. The manufacturer has been approved for all deliveries in AK quality by TÜV, and possesses an allowance of Lloyd’s Register of Shipping for pipes to DN 720 and wall thickness to 35 mm. They have their own testing facility for non-destructive tests.

ZKL - Závody kulíčkových ložisek, a.s.
43151 Klášterec nad Ohří
tel. (039) 93521

Fabrication of bearings.
The power station Prunéřov II - a part of one turbine unit in the machine-hall

Českovická cementárna a vápenice, a.s.
41112 Čížkovice tel.: (0419) 25270

Cement and lime works - this industry has a tradition here from 1898. A new production facility was put into operation in 1975. Annual output is 670,000 tons of cement, and 170,000 of lime. Cement production here fulfills all requirements of standards DIN and PN 196. Twenty five percent of annual cement production is exported to Germany. The quality has been now tested in LGA Nuremberg.

Prefa, a.s.
40082 Ústí n.l. tel.: (047) 99370

This factory manufactures structure elements from precast concrete, and produces and delivers wet concrete mixtures to contractors at construction sites, and prefabricates and delivers steel reinforcement skeletons. Prefa welcomes a collaboration in manufacturing and sale of reinforced concrete structure elements and in other construction business branches.

Severočeské papírny, a.s.
41108 Štíš

North Bohemian Paper Mills are the greatest producer of cellulose and paper in Czechoslovakia. The main factory in Štíš and four other works have an annual output of bleached cellulose of an amount of 250,000 tons, and 100,000 tons bleached cellulose. They are the only producer of newspaper paper in CSFR now. Estimated output in 1992 is 106,000 tons. The annual amount of other kinds of paper and carton is 200,000 tons, incl. 30,000 tons of wrapping paper and 80,000 tons of paper for heavy paper bags, and 44,000 tons of bitumen insulation blazes. The main works in Štíš have a very advantageous site by the Labe River with a good railway and road connection conditions.

Cukrovary, a.s.
43801 Žatec tel.: (039) 387985

Sugar works in Žatec, district Louňov, include for factories producing raw beet sugar for industrial processing and several other products. The enterprise offers free area and sheltered spaces and rooms in the closed sugar factory in Lenišice (site area 18 hectare) and free parts of sugar factory in Postoloprty. There are railway tracks in both places. A partner for assistance in the solution of water treatment problems in Doksy will be welcomed.

ELBA
40035 Ústí n.l. tel.: (047) 28751

ELBA is an organization providing engineering services in construction and related assistance. ELBA performs all tasks from the first negotiations with authorities to the final construction evaluation, and offers engineering and design works for recovery of buildings and remodelling of equipment, etc.

Narces, a.s.
41731 Novosedlice tel.: (041) 29679

This small state enterprise offers landscape work in municipal and industrial construction, in the maintenance of natural parks and public areas, and in environmental reclaiming of land damaged by industrial activities.

ČSAV, sociálně-ekonomický ústav
40011 Ústí n.l. tel.: (047) 43850

The Czechoslovak Academy of Science research institute for social and economic problems and solutions.

Severočeské teplárenské závody, a.s.
43401 Most tel.: (035) 36516

North Bohemian heating plants and networks are a producer and distributor of heat in district heating. The heat is transferred in steam or pressurized hot water to industrial and municipal customers. The total installed thermal output is 1493 MW. The boilers are fired by brown coal, oil or gas. Some amount of heat is purchased from CEZ - from power plants. The enterprise is now facing the task of replacing the output of heat and power station Komornáy (2 x 32 MW) with a new brown coal combustion or gasification technology with combined steam and gas cycle. There is a need for the improvement of small heating stations in the town Děčín, Litoměrice and Tepličky - Novosedlice, and in heat and power station Trmice, where a new boiler with fluidized bed combustion is planned.