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### Visual Representation of the Indicators - The HELIX

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#### Introduction

Albania ( in Albanian Shqiperi ), republic in south-eastern Europe, located in the western part of the Balkan Peninsula, bounded on the Northwest and north by Serbia and Montenegro, on the east by the Former Yugoslav Republic of Macedonia, on the Southeast and south by Greece, on the west by the Adriatic Sea and on the Southwest by the Ionian Sea. Albania, one of the smallest countries of Europe, has a maximum length from north to south of about 345 km, and a maximum width of about 145 km. The total area is 28 748 sq. km. Tirana is the capital and the largest city.

#### Geography

Albania is predominantly mountainous with peaks averaging between 2100 and 2400 m. Lowlands, which comprise less than one-quarter of the land area, are limited to a belt along the Adriatic coast which finishes at north of Vlora, and to several river valleys extending inland from the coast. The rugged North Albanian Alps from the southern end of the Dinaric Alps and include Albania's highest peak, Mount Korabi 2751m. In the central and southern parts of the country the mountains are interrupted by high plateau's and basins. The coastal lowlands possess rich soils, but in many places the land is marshy or poorly drained.

Most of Albania's rivers rise in the mountainous east and flow west to the Adriatic Sea. The largest of these Drini, Semani, Shkumbini, Vjosa, etc. There are three large lakes in the borders: in the Northwest, Lake Scutari, and in the east Lake Ohrid and Lake Prespa.

Albania has a typical Mediterranean climate, with mild, wet winters and hot, dry summers. Average annual precipitation ranges from less than 800mm along the eastern border to nearly 2500mm in northern mountains.

Albania is well endowed in mineral resources and is especially rich in high-quality chromium

ores. Among the other minerals present are petroleum, copper, nickel, coal (mostly low-quality lignite), iron ore, phosphates, and natural gas.

### **Demography**

Albania is one of the most ethnically homogeneous countries in the world; about 98% of its people are Albanians, a group that is believed to be descended from the Illyrians, an Indo-European people who inhabited the area in ancient times. Minority groups include Greeks (less 2%), Gypsies, Slavs.

The Albanians are divided into two main branches: the Ghegs (the north area), and the Tosks (the south area). These areas are divided by Shkumbini River. The groups are distinguished by minor differences in physical traits, dialects, and customs.

The population of Albania is about 3,4 Million. The country has one of the highest rate of natural increase of any European country ( 1,8% in 1990). Before World War II (1939), the population was overwhelmingly rural; since the 1950-s rapid urbanisation has occurred (about 37% in 1990 live in urban areas). This figure has a very big increase in recent years (1993-1997) and now about 55% live in urban areas.

The Albanian main cities are Tirana, the capital (over 400 000 inhabitants), Durrresi (120 000), Shkodra (90 000), Vlora (85 000), Elbasani (90 000), Fieri (80 000), Korca (70 000), etc.

The Albanian language is classified in the Thraco-Illyrian subfamily of the Indo-European languages and has two main dialects: Ghegs and Tosks. The official language is based on Tosks dialect.

In 1967 the Albanian communist government abolished all religious institutions. In 1990, however, the prohibition was revoked and mosques and churches began to reopen. Legislation adopted in 1991 declared Albania a secular state that observes freedom of religious belief. Albania is the only country in Europe with a predominantly Muslim religious population (60%, the others 20% Orthodox, 13% Roman Catholic).

### **Economic development**

Although a modern industrial base has been established by a series of five-year plans beginning in 1951, the country remains one of the poorest and least developed in Europe. By the late 1980s virtually all industry was nationalised, and farmland was either collectivised or organised into state farms. A program of economic reform was introduced by the new coalition government in 1992. Measures provided for the widespread transfer of farmland and state-owned companies and housing to private ownership. The program also called for abolition of trade restrictions and price controls. Today Albania faces many economic challenges, including dependency on foreign aid, heavy external debt, a shortage of management and technical skills, and unemployment of as high as 30%. Albania relies to a large extent on remittances from 300 000 to 450 000 Albanians working outside the country.

However, the 1997's breakdown of order has set back the earlier efforts made during the 1990s. The new Government faces conflicting pressures over the question of how to deal with the remaining pyramid schemes and with losses occurred from those which collapsed, or the others which are going to be closed.

Mining is an important sector of the Albanian economy. In the early 1990s the annual output of crude petroleum was 19,1 million barrels, and the country invited other European countries and the United States to assist in exploration for new reserves. Albania extract about 5% of the world's production of chromate ore (annual output 490 000 metric tons). Other major

exploited minerals are copper, nickel, coal, iron ore, and phosphates.

Beginning in the late 1950s Albania established factories producing chemicals, cement, fertilisers, and machinery. Other new plants include oil refineries, textile mills, and a big steel plant at Elbasan, also plants producing asphalt, copper items, timber, cigarettes, and processed foods.

With its numerous mountain streams, Albania has great potential for developing hydroelectricity. Annual electric-power production in the early 1990s was about 5 billion kW hours, of which most was generated by hydroelectric plants.

The Albanian official statistics were not readily available during the communist period, and an articulated set of national accounts to UN/OECD standards is still a hope for the future. There is a conflicting variety of estimates and accounts, with various international organisations or agencies (EBRD, IMF, Economic Commission for Europe, Economic Intelligence Unit)) seeking to draw a realistic picture from the various statistical abstracts. So, in the absence of reliable data from Albanian sources, they estimated an increment of GDP at 1996, 8,2%; 8,5%; and 6%, respectively.

### **Eight indicators of sustainability**

As it is presented in your body of the report to be restructured we have selected the 1990's figures and 1996's ones based on the estimations made by IMF, World Bank Annual Report

#### **A . Environmental Sustainability**

**1. Global environmental impacts** will be measured by CO2 emissions per capita due to primary energy.

This figure has decreased from 1990 to 1996, not due to interventions of the Albanian Government to decrease emissions to stabilise the climatic conditions, but to the fact that the industry, after 1991, in Albania has stopped. Based on the WB estimations the figures are the following :

<b>Mt. per capita / YEAR</b>	<b>1990</b>	<b>1996</b>
<b>CO2</b>	<b>1.8</b>	<b>0.7</b>

**2. Local environmental impacts** will be assessed using measurements of the most significant local pollutant from the energy sector (SOx, NOx, VOC, etc.)

<b>kg per capita / YEAR</b>	<b>1990</b>	<b>1996</b>
<b>SOx</b>	<b>11.040</b>	<b>3.942</b>
<b>NOx</b>	<b>26.887</b>	<b>9.265</b>
<b>VOC</b>	<b>5.815</b>	<b>1.997</b>

## B . Social Sustainability

**3. Rural electrification** measured by the *percentage of rural households having access to a power supply* (grid or otherwise)

Electrification of rural areas, in Albania, received great impetus during the 1950s, and was essentially completed in the 1970s. So after the 1970s all the Albanian rural household is connected with the power supply grid, and the percentage is 100%. Almost 80% (34705 km) of the total length of distribution network was for the distribution to the rural areas.

There are no data for each year as far as the share of energy bill is concerned. The data given for 1996 only shows that the share of energy budget in total budget for a typical urban family has been about 22%, and for a rural family is about 15%.

**4. Employment intensity** measured by the *number of direct energy jobs created per million dollars invested in energy.*

It is no information about this indicator, but the unemployment remains considerably high and constitutes a major problem for the society.

## C . Economic Sustainability

**5. Resilience to external impacts** (stable energy prices and security of supply) can be measured by the level of energy sufficiency, i.e. the percentage of net energy imports or exports (including fabricated fuel and eventually, energy equipment).

YEAR	1990	1996
Net import	24 %	30 %
Net export	7.5 %	5 %

**6. Burden of energy investments** on development is seen in the proportion of governmental investments in energy generation compared to the amount of GDP.

YEAR	1990	1996
Share of Government investments	8.7 %	3.79%

## D. Technological Sustainability

**7. Energy productivity** is the inverse of energy intensity and is measured by *GDP divided by primary energy consumption.*

YEAR	1990	1996
Energy productivity (1000 US GDP/Toe)	0.132	0.0888

**8. Sustainable energy deployment** can be measured by the share of energy output coming from energy conservation and renewable (excluding mega-hydro and unsustainable biomass exploitation).

YEAR	1990	1996
Share of energy output coming from renewable energy	0.22 %	1.27 %

The share of energy output coming from energy conservation it is not calculated up to now.

### Conclusion

First of all, we have to mention that before the 1990s Albanian energy institutions were characterised by an excessive bureaucracy, highly centralised command structures and usually arbitrary decision, putting ideological objectives over utilitarian economic concepts. All system ran slowly, losing in time, in information, mismatching of planning objectives, and reducing efficiency and performance of the energy sector to minimum levels. The new Government, on 1992, launched a comprehensive programme of stabilisation measures and structural reforms intended to establish a market economy, but despite the considerable effort in restructuring, the vestiges of prior central planning mechanisms continue to persist within all energy sectors.

After 1993, many organisations to promote, regulate, and co-ordinate energy savings activities, were created like the National Committee of Energy (NCE) , the Energy Efficiency Centre (EEC), Household Energy Agency (HEA) etc., with the support of international institutions and organisations like European Commission, World Bank, IMF, EBRD, etc.

New environmental legislation, regulation and standards affecting the energy sector need to be discussed and prepared.

Currently NCE, the Centre, HEA, and CEPP, are making together big efforts for outlining an energy strategy framework aiming at the development of a common energy policy.

The work carried out by all the above mentioned institutions have contributed in the completion of the data requested by this report.