

# SLOVENIA AND THE CHALLENGES OF SUSTAINABLE DEVELOPMENT

Dušan Plut  
Katja Vintar Mally

Even before entering the European Union (2004), Slovenia faced the changing significance of developmental factors and the exhaustion of the previously existing development model, which subsequently led to its replacement with a sustainable development paradigm. Even though Slovenia did not form a national strategy of sustainable development, it explicitly strove for an equal treatment of the economic, social, and environmental dimensions of development in all the primary development documents, sector policies, and legislation (for example, the Strategy for Economic Development, the National Development Plan, environmental policy with the Environmental Protection Act and the National Environmental Action Program, regional policy with the Promotion of Balanced Regional Development Act and the Strategy of Regional Development of Slovenia, spatial planning policy, etc.). The realization of the principles of sustainable development, however, is limited just to sectors and is not comprehensive.

For the strategic assessment of the opportunities and risks of sustainable development, it is of key importance that in the framework of the expanded European Union (EU-25) Slovenia ranks among:

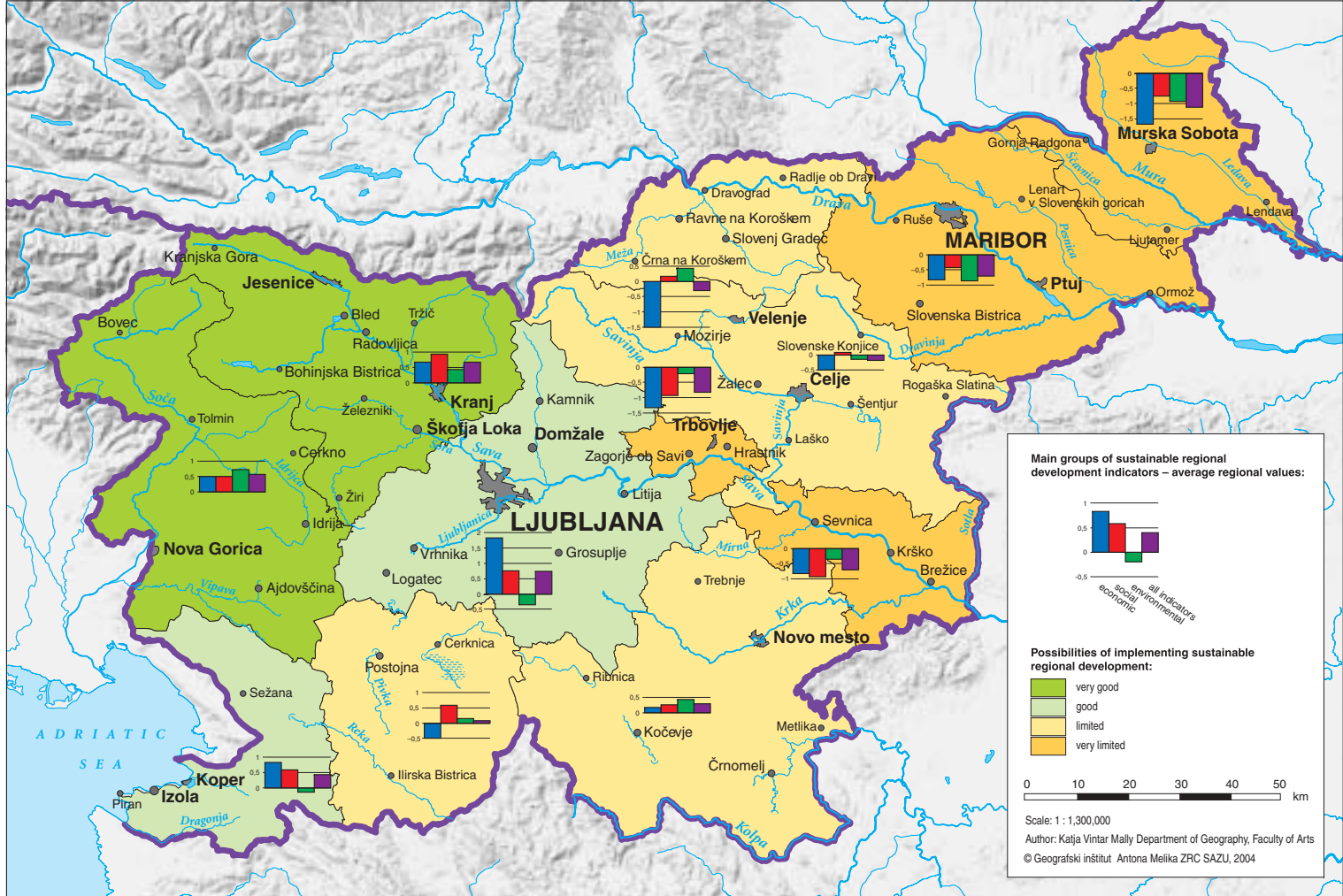
a. countries with medium-developed economies, with increasing interregional economic and social disparities also after gaining independence in 1991 and smaller areas of intensive and multilevel landscape degradation that at the same time are developmentally weak traditional industrial areas with structural problems; and

b. countries with gradually improving environmental legislation, moderate general pollution, above-average pollution of water sources, unregulated and problematic waste management, inappropriate use of space, various trends of population and economic pressure on the environment, and high material use and energy intensity (Špes 2000; Plut 2002; Poročilo 2003).

The increase of regional disparities and the continuation of the predominantly dispersed pattern of suburbanization and the simultaneous depopulation and overgrowth of marginal and higher areas of Slovenia has magnified pressures on the environment in the already heavily polluted and vulnerable valley-basin and coastal ecosystems (Plut et al. 2002).

A quantitative analysis and evaluation of thirty-two economic, social, and environmental indicators from the viewpoint of favourability for implementing sustainable development in twelve Slovene statistical regions responsible for the execution of regional policy draws attention to large interregional differences. According to the absolute difference between the average values of the best and worst ranked regions, these differences are greatest in the economic sphere (3.5) and substantially smaller in the social (1.83) and environmental (1.64) spheres (Vintar 2003). On the basis of the values for the three main development spheres and their average (i. e., indicator of sustainable regional development), the regions are classified into four groups relative to future possibilities of implementing sustainable development (Figure 1).

From the viewpoint of the wider European context, the concept of a balanced development in Slovenia is not being fully realized. In the last decade, steady economic progress (1995–2002: GDP growth from 61% to 69% of the average of the pre-May 2004 members of European Union (EU-15) has been accompanied by favourable social development (29<sup>th</sup> place among 175 countries relative to the human development index) with the extension of the average life span, the level of social protection, stopping the increase of income-inequality, and lowering of the level of poverty risk. However, the trends are



◀ *Figure 1: Evaluation and implementation of sustainable development in Slovenian regions.*

less favourable in the environmental sphere due to the high energy intensity, unfavourable level of the growth of »dirty« industries, and more intensive agriculture (Poročilo 2004).

According to a series of environmental indicators, Slovenia ranks among the moderately polluted European countries with modest or exhausted stocks of non-renewable natural resources but with great landscape and biological diversity and various renewable natural resources that also perform indispensable ecosystem functions. Several wider industrial and mining areas of intensive and multilevel pollution stand out, which as a rule also lag behind in development. In the majority of cases, the forms of environmental degradation are not of an irreversible nature, which realistically allows for the clean-up of the environment or its polluted elements (Nacionalni 1999). The per capita consumption of natural resources and the generation of gas emissions and waste water per capita in Slovenia are substantially above the sustainable accepted planetary level but somewhat below the level of the EU-15 countries (Table 1). According to the majority of the presented key indicators of pressures on the environment per capita or per unit of surface, Slovenia ranked among the countries with moderate pressures in the period between 1999 and 2001 in comparison with the EU-15 countries.

A comparison of the key indicators of sustainable development for the EU-15 countries and Slovenia for the 1990's underlines the especially large consumption of material and energy per unit of GDP in Slovenia. A relatively large proportion of industrial branches consuming raw materials and energy and producing emissions intensively is characteristic of the Slovene export. According to Eurostat estimates, the emission of greenhouse gases in Slovenia increased between 1990 and 2001, while in the EU-15 countries it decreased by two percent. Slovenia is also marked by a profligate use of space (and the necessary extensive and burdening infrastructure and use of energy connected with it) because it uses three to five times more space per every new residence than densely populated Denmark or The Netherlands. Also, the proportion of the total protected area in Slovenia (around 10% of the country in 2003) is too small from the comparative viewpoint.

In the period following independence the quality of the environment and its components that are critically polluted are improving as a rule, but in general the pressures on the environment have increased slightly since the middle of the 1990's (Plut 2002).

The key developmental and environmental concern is the modest inclusion of environmental components in government policies, particularly in industrial, transportation, and agricultural policies. The existing government mechanisms for increasing the competitiveness of the business sector place environmental protection incentives in the background or include them in insufficient measure. One of the key hindering factors for the necessary reduction of energy and emission intensity is the large proportion of energy-intensive state-owned companies.

The principles of sustainable development and membership in the European Union demand the systematic and more consistent application of environmental principles and measures in national policy, in the behaviour of companies and institutions, and in the organization of the material life of the family and the individual. Maintaining the current pattern of environmental protection and environmental policy will weaken Slovenia's advantages and development opportunities.

Between 2005 and 2015, Slovenia will have to achieve the expected economic progress and the rise of welfare along with the more efficient use of its natural (environmental) capital, the preservation of nature, and a rise in the quality of the living environment. After 2010, due particularly to the exhaustion of environmental resources and the continuing (globally and locally) unacceptable consumption of natural resources and the resulting emissions per capita in Slovenia too a more determined transition to a developmental-environmental model of strengthened sustainability and the optimal preservation of the environmental capital of Slovenia and its regions will be necessary. Along with the anticipated technological development and the transformation into a more energy-efficient informa-

Table 1: Key synthesis and environmental indicators of EU-25 countries

	GDP ppp (2001) EUR/capita	Human development index (2001)	Ecological footprint (1999) global	Population density (1999) person/km <sup>2</sup> ha/person	Total primary energy supply (2000) toe*/capita	Fertilizer consumption per agricultural land area unit (1999) tonnes/km <sup>2</sup>	Number of cars per 1,000 inhabitants (1999)	Water exploitation (1999) %	Emission of CO <sub>2</sub> (2001) kg/capita	Municipal waste generation (2000) kg/capita
Austria <sup>1</sup>	26,140	0.929	4.73	97	3.51	7.11	495.5	3	8,150	556
Belgium <sup>1</sup>	24,970	0.937	6.72	310	5.57	19.66	448.2	43	12,392	534
Cyprus	18,190	0.891	–	82	3.22	13.74	340.8	27	–	677
Czech Republic	14,160	0.861	4.82	130	3.95	6.28	334.7	21	12,430	334
Denmark <sup>1</sup>	26,930	0.930	6.58	124	3.69	14.79	346.5	20	9,905	665
Estonia	9,000	0.833	4.94	30	3.32	1.90	330.8	1	12,307	462
Finland <sup>1</sup>	24,270	0.930	8.42	15	6.30	13.69	403.2	2	12,035	–
France <sup>1</sup>	24,470	0.925	5.26	107	4.24	15.90	468.8	18	6,825	530
Germany <sup>1</sup>	23,460	0.921	4.71	230	4.09	17.83	515.6	30	10,443	537
Greece <sup>1</sup>	15,680	0.892	5.09	80	2.66	5.20	254.5	7	10,187	372
Hungary	12,020	0.837	3.08	108	2.45	6.26	224.1	7	5,932	454
Ireland <sup>1</sup>	27,480	0.930	5.33	54	3.70	15.84	338.3	2	11,577	601
Italy <sup>1</sup>	23,380	0.916	3.84	191	3.04	10.89	555.8	29	8,032	502
Latvia	7,790	0.811	3.43	37	1.54	2.19	218.1	1	2,887	242
Lithuania	8,690	0.824	3.07	57	2.03	5.23	294.5	1	4,508	294
Luxembourg <sup>1</sup>	45,360	0.930	6.72	172	8.23	–	609.9	–	12,314	643
Malta	16,219	0.856	–	1219	2.10	7.92	470.7	109	–	481
The Netherlands <sup>1</sup>	26,450	0.938	4.81	383	4.73	24.15	401.3	9	10,901	613
Poland	9,550	0.841	3.70	120	2.33	8.28	240.2	20	8,529	–
Portugal <sup>1</sup>	16,510	0.896	4.47	109	2.41	6.20	493.7	11	6,310	453
Slovakia	10,430	0.836	3.44	110	3.23	3.63	229.2	4	7,678	316
Spain <sup>1</sup>	19,670	0.918	4.66	78	3.07	7.72	427.4	28	7,770	–
Sweden <sup>1</sup>	24,790	0.941	6.73	20	5.45	8.55	439.2	2	6,298	428
United Kingdom <sup>1</sup>	24,620	0.930	5.35	246	3.85	11.88	413.9	8	9,141	493
<b>Slovenia</b>	15,840	0.881	3.58	98	3.29 (3.20**)	15.72	427.6	2	7,904 (7,332***)	584
<i>Slovenia ranking</i> <sup>2</sup>	17	17	5	11	12	19	16	4–7	9	17

Source: *Environment ... 1999; Living ... 2002; Europe's ... 2003; Human ... , 2003; Statistični ... , 2003*

Notes: <sup>1</sup> pre-May 2004 members of the European Union (EU-15); <sup>2</sup> place in EU-25 according to favourability for sustainable development;

– no data available; \* tonnes of oil equivalent; \*\* National Energy Program (2003) data; \*\*\* emission of CO<sub>2</sub> in 1999 according to records of IPCC

tion society, the basic developmental and environmental goal of Slovenia is the stabilization of energy use by 2015 (except in the event of exceptionally high economic growth).

The key environmental goals and priority tasks in the field of environmental protection for Slovenia to achieve by 2013 are the following:

- Improving the quality of water sources, reducing the damaging consequences of droughts and floods and enforcing the sustainable use of water on the basis of the economic cost of water;
- Reducing the quantity of waste through changed production and consumer patterns, technological improvements, economic measures, advertising and informing the public, and increasing material use efficiency;
- Reducing the emission of greenhouse gases;
- Mitigating traffic pressures on environment;
- Preserving landscape and biological diversity;
- Reducing the degradation of the environment in wider areas of multilevel degradation (Zasavje, Mežiška Valley, the urban area of Celje, and the Šaleška Valley) and in smaller critically polluted areas;
- Accelerated integration of environmental requirements in sector policies and consumer patterns.

In parallel with the environmental requirements, economic interests will also be forced to confront demands for the abolition of poverty, the guarantee of social security and justice, and the general improvement of the quality of life. With its inclusion in European integration processes, its desire to rapidly achieve the level of the countries with the most developed economies, and to raise the competitiveness of its regions, this small but very diverse country will have to be very inventive in its search for opportunities of social and economic development within the existing environmental limitations.

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