

NATURAL RESOURCE MANAGEMENT

Zarko RISTIC, Kristijan RISTIC

University of Business Studies, Banja Luka, Bosnia and Herzegovina

*Corresponding author: profesor@zarkoristic.com

Abstract

A new wave of concern for the environment occurred during the 90s by launching claims that environmental problems are global in character. In fact, it is no longer enough that a country conducts proper environmental policy. Neither can polluted air be ordered not to cross the state border nor can an international river be informed not to flow in its bed through all the countries which it has been flowing for centuries. New findings about ozone depletion in the '90s were not announced to the world public for fear of the consequences for all of humanity, because nobody really knew how many centuries are needed for recovering waste. Even the problem of "acid rain" in Germany, "the greenhouse effect" in the United States and "waste impact" in Great Britain have not sufficiently sobered up environmental policy makers who cannot seem to understand that the market is not able to determine the price of resources such as water, air and clean environment..

Keywords: *economy of nature, environmental economics, environmental taxation, ecological equilibrium.*

The economy of nature

Theorists of Ecological economics offer two solutions for this: (1) it is necessary to know who the holder of a particular natural resource is, and (2) it is necessary to force producers and consumers to pay the actual costs in proportion to their share of environmental pollution. In the first case, the owner and the potential pollutant could negotiate, because if, for example, a private fishpond is in question, then the owner would take care to avoid over-fishing. In the other case, however, if it had been common, the producer's and the consumer's calculation would include in the price of gasoline and the cost of remediation of harmful effects of exhaust gases. In this context, the economists' task would be to determine the price of the environment, like the price of any other resource, so the economic policy would be reasonable in terms of official state policy towards current and potential pollutants on the principle of cost-benefit analysis. However, the governments are now acting quite the opposite; they encourage energy consumption by subsidizing prices. Agricultural subsidies encourage the use of pesticides and fertilizers. Permanently entrenched lobbies do not care why the U.S. subsidize the state industry, why Germany subsidizes coal mines, why Great Britain subsidizes the use of vehicles that are owned by companies, etc. And it is the sustainable development which does not exhaust the reserves so the respective reserves would remain for future generations to use. Therefore, it is a question of relation towards the present, as well as an ethical issue within the current environment policy. This is why, for most people today, the most important environmental issue in a market economy with a combination of private sector interests and government regulations is: "how to leave to posterity a world that is, if not better, at least the same as it was when the present generation inherited it". (Economic policy, 1992.)

For logistical entrepreneurs reliability is more important than speed. From an economic point of view, it is about goods to be in the right place at the right time; environmentally, this needs to be done with the least possible burden on the environment. (Economic policy, 1992) Criteria of "speed" is no longer of prime importance. The transition to a slower, but

environmentally favorable means of transport, is quite acceptable to so-called 'ecologistics'. The combination of ecology, economics and logistics in the structural projection of ecologistics prompts the modern society to solve the problem of mutual harmonization of road, rail, air and maritime traffic, so the traffic problem would not become a hindrance of economic growth. The structure of the mass transport must now choose the most environmentally advantageous mode of transport, particularly when it comes to the introduction of fees for heavy transport, increase of taxes on mineral fuels and the introduction of tax on carbon emissions. Ecologistics now pleads to significantly reduce costs through greater reliance on the maritime and railway transport, which provide environmentally friendly and better treatment of goods and more environmentally reliable transport. (Lipietz, 1993.)

"Green" economy management

Goal of the II UN Conference on Environment and Development (Brazil, from 1 to 12 June, 1992) was the interaction between the economy and environment, and balancing economic and environmental objectives within economic decision-making and business management. These ideas are not new, because their intellectual foundation was formulated as early as 1971 in Switzerland, which served for the preparation of the so-called Stockholm conference. Then, however, it was dramatically emphasized that poverty is a major source of environmental pollution because a billion of the world population that lives in poverty, misery and deprivation, are forced, out of desperation, to assault their environment just to survive. The cumulative effects of the devastating onslaught of individuals on nature are big and dangerous, especially when destruction and poverty are combined. That is why the Brundtland commission rejected the so-called zero growth, since zero growth is a consequence of the development of destructive processes to the environment. To meet the needs of growth, the concept needed to include the so-called sustainable development, within the United Nations Conference (called ECO '92.). The concept of sustainable development implies change of climate, cross-border expansion of the air pollution, waste management, protection and management of land resources, conservation and biodiversity, protection of oceans and coastal areas and the quality of supply of freshwater resources. Global risks in the field of biological and genetic resources are forcing the accelerating transition onto balanced development, which must be done through incentives and regulatory measures. In market economy, this means that the cost of the environment is built into the prices of products that induce the growth of costs. This is the so-called "polluter pays" principle. The solution, through regulated action, involves the formation of environmental funds which gather resources intended strictly for the rehabilitation of the environment. The aim is clear: the environmental protection measures must integrate into economic growth and business management, and an economic basis for cooperative global alliance must be formulated, if there is a will for the EARTH to remain a safe home for humans and a common future.

In order to restore the healthy relations of the world trade flow, it is inevitable to incorporate environmentally-protective mechanisms in international trade. In this context, cheapening of agricultural products is not a central goal, if it happens at the expense of nature. Therefore, reduction of subsidies for "green products" does not necessarily mean the preferred policy of reduction of inherited environmental protectionism if the substance of ecology is not incorporated into the structure of market prices. The cost of production of organic food can no longer be irrelevant, because they are already part of the structural reality. After all, market-competitive prices in international trade cannot protect natural resources of a country. Therefore, the environmental protection requires long-term financial and technological investments that would pay off most in the field of environmentally sound agricultural production.

The EU Commission has, after a process that lasted two years, proposed the introduction of a tax whose basis (subject to taxation) would be „the carbon content in fuel." The aim of the

new tax, according to the proposal, is that the emissions of carbon dioxide be stabilized on their level in 1990, but also the encouragement of energy efficiency and stability of supply. Institutionally speaking, the European Union is not entitled to introduce taxes, because it does not have fiscal sovereignty (in itself); therefore, the tax on energy can be introduced only by the member states in the form of a national tax, which would be included in fiscal policy harmonization. However, the fiscal (and economic) trend is such, that the new increase in tax burden is not an option. The solution is, therefore, found in reducing "other" taxes.

Ecology and economy

Green economists are already producing models for the valuation of environmental costs and benefits in national economies, so the national accounts would also show the changes in natural resources. Effects of consumption of natural resources should be empirically verified through the change of SNA (System of National Accounts and Methodology of UN), into the concept of national income, including those natural resources that are under the control of man. The goal is, therefore, for national income balance sheets to "turn green" in order to treat plants and animals in the same way ("increase in a country's livestock is included when it occurs, but the growth of commercial forests recorded when they are cut down"). (Economic policy, 1992) In the present calculation, the national income is often artificially increased by including the cost of preventing pollution. This, in turn, means that the pollution does not count as a loss of gross domestic product. Likewise, the decline in the value of natural resources is presented as an item that exaggerates the net national product. It is clear, in fact, that it is extremely difficult to say how much idyll costs. But deforestation, according to market criteria, is certainly the sum of loss of value of uncut trees and revenues from timber that could be achieved. But, this criterion does not include the value of forests as a wildlife habitat and a recreation area. Therefore, it is important that the development of the national balance sheet adapts to the needs of environmental protection. In the initial stage, it is important to build so-called balance satellites in the form of parallel balances (in addition to the official ones). These "new" balances would include the change in the quality of the environment (for example, increase of air pollution, extinction of certain species of plants and animals), and the evaluation of the damage to natural resources that are not commercially valued. For resources that do not have a market value, the controversial issue is what should be measured: (a) what is the cost of restoring the environment to its original state or (b) the amount of funds that consumers would be inclined to spend to improve environmental quality. All in all, the conventional models for the determination of wealth should be expanded and enriched in order to give adequate answers to the environmentalists who popularize the new calculations. Low prices in mining, grotesque economy of scale and national subsidies have negative implications for the ecology. Intended sale of state (public) land to mining companies for a pittance (\$ 12 per hectare), public funding of mining research results and tax deductions, which reduce the real costs of mining in the United States have significantly contributed to the degradation of eco-balance. Japan offers a wide range of incentives (from loans and subsidies to tax incentives) for the exploration and exploitation of mineral reserves. It is the same in Canada and Australia. German and French governments guarantee assistance and direct financial investments, and they also subsidize foreign projects of domestic mining companies. (Economic policy, 1992)

Even the World Bank is financing the increase in mining production through the provision of loans under favorable conditions. Such a policy of exploitation of natural resources poses a serious environmental threat, because the real costs of world mining are hidden in the extensive producer subsidies as well as in unrecognized environmental damage. Low prices of ore today reflect the extraction-distribution economy, for which there are no costs of restoring denuded forests, eroded land, destroyed or polluted rivers. "The implementation of the stringent environmental laws suggests channeling part of the funds collected through taxation from industrialized countries into the mining countries of the third world. This

mechanism would be facilitated by the World Bank through commissions on loans, which would be conditioned by nature conservation. A higher degree of recycling raw materials and substituting them by less "malignant" materials, in the long term, are additive mechanisms in the reduction in demand that environmentally stumbles. Gradual replacement of copper communication cables by more efficient optical fiber made of glass, also represents the future, which should be supported by tax rewards (not just by basic subsidizing of mining). (Ristic, 2012) The establishment of new companies for waste sorting and companies for thermal processing and construction of devices for waste incineration plants and systems for the production of packaging for recycling are a new challenge to the Ministry for the Environment, which, through tax benefits, features instruments from the Ministry of Finance. Also, placing the green dots on new products should be funded from the state budget.

In the economic and ecological theory and practice, it is considered that most of the natural resources are of a regenerative nature: rational use can renew a resource, and efficient use can increase the total volume of the resource. Mineral resources or raw materials of mineral origin "excavated from certain deposits or ore body" cannot be regenerated, nor can other mineral concentrations be formed. In mineral materials, therefore, only what is created by nature in the unique manner can be used. Therefore, attention should be focused on economic measures in order to protect the environment in the philosophy of sustainable development. Economic instruments, in order to protect the environment, are used as an effective form of replacement of regulations and as a complement to legislation, since legislation cannot always influence the rational use of resources and effective protection against pollution. (Economic policy, 1992)

The "polluter pays" principle actually reflects the need to institutionalize environmental taxes (fees), as follows: (1) differentiated taxation of regular and lead-free gasoline, (2) differentiated sales tax and customs duty on import of cars and trucks with higher consumption compared to cars with lower fuel consumption and the use of unleaded gasoline, (3) differentiated tax on goods with packaging that can be recycled, (4) additional sales tax and customs duty on cigarettes, (5) sales tax and customs duty on import of fertilizers, detergents and pesticides, (6) selective taxation of goods (in order to establish such price ratio that will stimulate the consumption of products whose production and use is less polluting) (7) exemption from corporate income tax (for polluters and manufacturers who, by new technology, reduce emissions and the use of polluting materials), (8) the exemption from value added tax and the introduction of tax on the use of natural resources through the income tax with the abolition of tax on the sale of secondary raw materials (so as to encourage the collection and processing of waste materials), (9) the introduction of fees for pollution, as compensation for the costs of the waste material, (10) introduction of tax for manufacturers whose products pollute the environment during the production process or use, (11) the introduction of penalties for polluters so as to be forced to introduce new technologies, (12) the existence of subsidies to help invest in clean technology and (13) the introduction of pollution charges, for the use of landfills, for the use of natural resources and space (which would be applied for the discharge of pollutants into the air, water and soil, disposal of solid and hazardous waste at the landfills, and to cover the cost of rehabilitation of natural resources and space). (Ristic, 2014)

In general, almost all countries of the modern world are seeking out and finding instruments and mechanisms for the implementation of the so-called Bergen Declaration on Sustainable Development (1990), which insists on the economic respect for commitments based on taking from nature - so-called debt towards nature. In industrialized countries, the fees for so-called mineral wealth have already been introduced (fees for mineral resources and mining fees), which essentially reflects the allocation of the portion of assets (calculated per unit of product) as reimbursement for the renewal of the available natural resources, for goods taken from the available natural reserve funds and for the repayment of debt towards nature. However, sand and gravel are present in almost all regions of the world, whereas oil

and diamonds can be found only in "some" regions (because of uneven geographical dispersion of minerals). Therefore, the existence of so-called fees for mineral resources on selective basis, depending on the type of mineral resources, is economically justified. These allocations would be included in the cost of products, and would be used to repay debts to the nature. Debt for nature would incorporate a fee for use of mineral resources and compensation for damage caused to the environment. (Ristic, 2014)

Ecological strategy of global companies

For each transnational company (corporation), business success is becoming increasingly dependent on accurate predictions of future trends in the business environment of the company. Today, it is of great importance for the managers who are trying to create a picture of business environment for the twenty first century. Managerial structures in developed market economies are forced to respect the widespread opinion of the population which already refuses to accept a high degree of environmental degradation. And when environment is taken into consideration, companies are forced to respond more responsibly to public concern for the inevitable warming of the planet. Forthcoming financial years are future challenges for business dealings, because ecology is becoming a decisive factor in the future of business. The world's leading managers are already preparing to meet the strict requirements of environmental legislation and the demands of consumers, who increasingly insist on the organic components of the product quality. (Slijepcevic, Markovic, Ilic, 2013)

Businessmen feel their vital role in protecting the environment, as they have already realized that the business processes are the dominant source of pressure on the environment. The same as employment is the key prerequisite of social security, the protection of the environment has become a leading prerequisite for doing business. Environmentally sensitive public is giving a chance to profit-oriented managers to color their business planning "green" and to diversify approaches to business organization, accounting, balancing success, corporate finance, marketing, management and public relations, in order to obtain environmental reputation, which predominantly determines consumer decisions about buying (environmental quality) products. Environmentally enlightened consumers in civilized societies with market orientation are ready to use (in an organized way) their purchasing power on the market and put pressure on the industry. Manufacturers have already felt that the demand for environmentally friendly products has an upward trend in the developed markets of the modern world. At the international level, a dramatic shift in consumer preferences "swallows" additional environmental expense burden. And, lo and behold, it is considered a new chance for competitive success, pressuring the leading managers to recognize the need to formalize the new development strategies of the companies, which includes a new marketing view of the world. New business philosophy must take particular account of the relatively strong segment of the population that is willing to pay for products that meet environmental standards. However, managers must take into account the inevitable truth that certain products will become unacceptable to consumers of ecological quality. In the short-time sequences, multinational companies can achieve high profits by bypassing investments into ecological research of product quality. But in the long run, these companies acquire the image of environmentally insensitive companies, lose their place in the highly competitive market, run late in the restructuring of the production programs and endure future rigorous environmental standards more difficultly.

Conclusion

Environmental pressures of the public have forced the acceleration of the transformation of the evaluation of managerial success, which, in addition to the usual management performances based on the quantum of profit growth, incorporates long-term component of the ability to develop teams, who, business-wise and environmentally, introduce a company into the 21st century, focusing the company on environmental problems, with high

environmental awareness of employees and with developed production of so-called green products. The public opinion of modern Western civilization goes in the direction of the topic for the same reason as the companies are fully responsible for the impact of their products and technologies and pressure that their products put on the environment. Managers are, environmentally, burdened by public opinion, and companies are faced with environmental responsibility by law. In this sense, the companies, along with their managers, formulate internal environmental programs and thereby assume full responsibility for the pollutants emitted and recycling. Many companies are already looking for eco-perfection and the reduction of environmental risks that are inherent in the production processes and products. Future environmental monitoring will be tasked to observe the negative impacts on the environment and comply with environmental standards, with derived effects in terms in terms of raising the level of environmental awareness and savings of companies. Monitoring teams will have the opportunity to compare the environmental performances of production processes and products with environmental standards and to ensure their compliance, irrespective of the fact that ecological confrontation of costs and benefits creates problems in the company. But nevertheless, the future of the market will belong only to companies with strong ecological product development strategy whose industrial-production cycle envelops four stages in terms of (1) the extraction of raw materials, (2) the production of goods, (3) use of product, and (4) disposal of products after use (and recycling). It is now accompanied by the requirements for minimizing the environmental impact of products which expired, and for eliminating the perceived problem of waste disposal. In ecologically redefined business strategy, the companies are becoming fully responsible for the product life cycle, from the stage of production to the stage of waste and reuse. Production processes of the future, therefore, must be adjusted to recreating the roundabout and the inputs and outputs with a modular design, which combines relatively short technology cycles and long-term use of products by means of recycling .

References

- Cairneross, F. Costing the Earth, Harvard Business School Press, Boston, 1991, p.26.
Economic Policy, No.2124, November 14, 1992, p.39.
Economic Policy No. 2126/27, December 28, 1992. p.52.
Lipietz, A. Ecological policy, Paris,1993.p.181.
Economic Policy, No. 2088, April 6, 1992, p.52.
Economic Policy, No. 2113/2114, October 5, 1992, p.47.
Ristic, K. and Ristic, Z. Fiscal economy, Etnostil, Belgrade, 2012. p.71. and Ristic, K.
Economy of the European Union, Etnostil, Belgrade, 2014. p.311.
Economic Policy, No. 2108, August 24, 1992, p.31.
Ristic, K. Economics of Sustainable Development, Etnostil, Belgrade, 2014. p. 56.
Slijepcevic, Dj., Markovic, D. Z., Ilic, B. and Ristic, Z. Ecology and Economy, Faculty of
Economy, Banja Luka, 2013, p.272.
Markovic, D. Z., Ilic, B. and Ristic, Z. , Environmental management, Etnostil, Belgrade,
2013, p. 152.