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ANALYZING OF ENVIRONMENTAL MANAGEMENT SYSTEMS STATUS IN THE SOURCE DOCUMENTS OF THE EU, OECD AND IN THE SLOVAK REPUBLIC

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ABSTRACT

Solving of the key environmental problems we face today, including climate change, biodiversity loss, water scarcity and health impacts of pollution, achievable and cost available. Without new policies, we risk irreversible damage to the environment and natural resources needed to promote economic growth and prosperity. Costs of political inaction will be high. In the paper is analyzed documentation which includes solving of the environmental management system problems.

KEY WORDS

Environment, management

Introduction

Well-designed environmental strategy can maximize synergies and co-benefits on several fronts. For example, combating air pollution can bring about reductions in greenhouse gas emissions, reducing the economic burden of health. Climate policy also helps protect biodiversity if reducing deforestation to reduce emissions. At the same time it should be closely monitored conflicting strategies and to respond to them. For example, water infrastructure, power plants, which are designed to increase water and energy security, may disrupt natural habitats and ecosystems. Increasing consumption of biofuels to meet climate targets could have a negative impact on biodiversity as a result of boarding larger area for growing bioenergy crops.

As many environmental problems are global in nature (eg. the loss of biodiversity, climate change) or associated with crossborder implications of globalization (eg. trade, international investment), to ensure a fair distribution of the costs of solutions to international cooperation is essential. If no new policy actions over the next few decades we risk irreversible changes to environmental basis for sustainable economic prosperity. To avoid this, the need for urgent action to address especially "red" issue of climate change, biodiversity loss, water scarcity and health consequences of untreated and hazardous chemicals.

Examples of the consequences of the adoption of other policies:

- It is expected that global greenhouse gas emissions by a further 37% by 2050 and by 52% (this could result in an increase in global temperatures compared to pre-industrial levels by 1.7-2.4 ° C by 2050 which would lead to an increase in heat waves, more droughts, storms and floods, which would result in a damaged key infrastructure and crops.
- A significant number of today's known animal and plant species likely to become extinct, mainly due to the growing infrastructure and agriculture, as well as climate change (Fig. 9.2). Food and biofuel together globally requires a 10-percent increase in farmland with a further loss of life environment for wildlife. Continued loss of biodiversity is likely to limit the ability of the earth to provide valuable ecosystem to promote economic growth and human prosperity.
- Water scarcity is exacerbated by unsustainable use and management of resources as well as climate change. It is expected that the number of people living in areas affected by water shortage will increase by another billion to 3.9 billion.
- Health effects of air pollution, the decline globally, with more than double the number of premature deaths associated with a fourfold increase in ground-level ozone. Chemical production in non-OECD countries is growing rapidly and there is insufficient information for a full risk assessment of chemicals in the environment and in products



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- The biggest environmental impacts will be felt developing countries, which are less equipped to manage and adapt. However, the economic and social costs of political inaction or delaying action in these areas are significant and they affect the economy, including OECD countries, either directly (eg. Through the cost of public health services) and indirectly (eg., Through lower labor productivity). It is a good opportunity to introduce ambitious policy changes to tackle the key issues in the field of environment and sustainable development. Today's possibilities of investment must be directed towards a better environmental future, particularly those which "locks" the energy modes, transport infrastructure and buildings for the next decade. The following measures are essential.
- Use several complementary policies to address more significant and complex environmental problems with a strong emphasis on market-based instruments such as. taxes and tradable permits, to reduce the costs of these measures.
- Improve partnerships between members and non-members of OECD and non-OECD countries to address global challenges in the environmental field. Especially Brazil, Russia, India, Indonesia, China and South Africa (grouping BRIICS) are key partners given their growing influence in the world economy and the growing share of global pressures on the environment. Other environmental cooperation between EU and non-OECD countries can help spread knowledge and best practices in technology.
- Strengthen international environmental governance to better address cross-border and global challenges in the environmental field.
- Strengthen attention to the environment when developing programs to promote cooperation and smarter policies (Rusko-Králiková, 2011).

1. OECD

OECD (Organization for Economic Co-operation and Development) is an intergovernmental organization thirty most economically developed countries in the world that have adopted the principles of democracy and market economy. Forerunner of the OECD was called. The Organization for European Economic Cooperation, which was originally founded in 1948 as the administrative apparatus of the Marshall Plan, which was initiated by the US with Canada and should help Europe recover from the economic crisis caused world wars. As such, the OECD was founded in 1961 in Paris, after the signing of the founding document on December 14, 1960. The role of the OECD is to help build a strong economy, its Member States to increase their efficiency and improve the liberalization of international trade. OECD has also help maintain stability and develop national economy and contribute to reducing unemployment.

List of Member States:

Founding states: Belgium, Denmark, France, Ireland, Iceland, Italy, Canada, Luxembourg, Germany, the Netherlands, Norway, Portugal, Spain, Austria, Greece, Sweden, Switzerland, Turkey, USA, UK.

Other states and date of entry: Japan (1964), Australia (1971), Finland (1968), New Zealand (1973), Mexico (1994), Czech Republic (1995), Republic of Korea (1996), Poland (1996), Hungary (1996), Slovakia (2000).

OECD outlook for the environment by 2050 puts forward and a common modeling by the OECD and the Dutch agency for environmental assessment PBL Netherlands Environmental Assessment Agency demographic and economic trends for the next four decades. Evaluates their impact on the environment if not fed humankind effective policies to better manage natural wealth. It also examines some of the policies that could change the picture of the future for the better. This outlook focuses on the four most problematic areas: climate change, biodiversity, water resources and the impact of pollution on health. The conclusion states that swift action is needed. Is needed act in order to prevent significant losses and the consequences of inaction, both in economic and human terms?

By 2050, the projected increase in the number of people on Earth from the current 7 billion to more than 9 billion and the world economy would be nearly quadruple, increasing demand for energy and natural resources.

The average GDP growth rates should fall in China and India, while Africa may record the highest GDP growth in the world between 2030 and 2050. In the OECD countries, it is expected that by 2050 more than a quarter of the population older than 65 years, today it is 15%. China and India are also likely to experience a significant aging of the population, while in parts of the world with a younger population, particularly in Africa, is expected to be rapid growth. These demographic shifts and higher standard of living tends to account lifestyles and consumption patterns, which will have a significant impact on the environment. Almost 70% of the world population in 2050 will be present dwellers, increasing the pressure to address challenges such as air pollution, congestion transport and waste management.

Four times larger economy should in 2050 consumed 80% more energy. Without effective energy strategies remains the share of energy from fossil fuels in the global energy mix at around 85%. The emerging economies of Brazil, Russia, India, Indonesia, China and South Africa (country BRIICS) should become major consumers of energy. In relation to



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food for the growing population and changing eating habits in the next decade look forward to expanding farmland, but increasingly lower speed.

The combination of a lack of new strategies and ongoing socio-economic trends is the basis for a "baseline" scenario of this study. Under the baseline scenario will progress in pollution reduction and resource efficiency overcome increased pressures of the environment as a result of population growth and rising living standards. In 2050 it is expected to continue the degradation and erosion of natural wealth with the threat of irreversible changes that could endanger two hundred years the trend of increasing living standards.

Without more ambitious policies are expected in 2050 following developments:

- likely to worsen climate change, assuming continued growth of global greenhouse gas emissions by 50%, mainly due to 70 percent increase in CO2 emissions related to energy,
- it is anticipated continued loss of biodiversity, especially in Asia, Europe and South Africa,
- freshwater availability will remain limited and the 2.3 billion more people than today (in total more than 40% of world population) will live in river basins with severe water shortages, especially in northern and southern Africa and South and Central Asia. Overall water consumption should grow by around 55%, due to increasing demand in the manufacturing sector (+400%), thermal energy (+ 140%) and domestic consumption (+ 130%),
- under this scenario, the air pollution will become biggest cause of early death. The concentrations of particles in the air in some cities, particularly in Asia, already far exceed safe levels WHO. The problem with diseases related to exposure to hazardous chemicals is significant worldwide.

2. GREEN GROWTH STRATEGY

OECD green growth strategy is the first comprehensive strategy for economic growth in the post-crisis period, also taking into account environmental aspects. Its focus is the economy and is characterized by linking taxation, innovation, knowledge economy, labor market, business environment and environmental aspects and impacts. The timing of this report on the post-crisis period is crucial as the country must look for prospects and new sources of growth, but must also take into account the limited natural resources and the effects of pollution, as well as improving the quality of life of the individual. Green growth is about changing the structure of economies, and it is in the post-crisis period is the best time to deal with maximizing economic growth and development in addition to minimizing the negative pressure on the quality and quantity of natural resources.

The strategy aims to build a bridge between policy makers in the financial, economic, employment, trade and the environment, as growth has hitherto been frequently disregard for natural resources and their potential for generating economic growth, and their contribution to human well-being. As the most effective tool transition to green growth appear taxes (carbon taxes, excise taxes, carbon tax on motor vehicles) and subsidies are seen as inefficient and non-transparent. It is important to set the right "policy mixes" and we must not forget the international dimension of green growth, as global problems cannot deal with individual countries. (Rennings et al., 2003)

OECD as a multidisciplinary organization disposing of knowledge and expert analysis of different relevant policies is a good platform for green growth strategy. In addition, the "global" organization working closely with emerging and developing countries and can offer their knowledge of the field of measurement, setting national policies and instruments desirable direction, as well as from the sphere of comparable standards. Important is the fact that green growth is a more specific term such as sustainable growth and represents a solid political framework for generating new and greener sources of growth, now and in the future, as opposed to sustainable development, which has the character of a long-term concept. Green growth but it in no way replace.

3. EUROPE 2020

Europe 2020 is the EU strategy, which during the next decade to ensure economic growth. In a world full of changes we want in the EU it has built a smart, sustainable and inclusive economy. These three mutually reinforcing priorities should help the EU and its Member States to achieve higher levels of employment, productivity and social cohesion. The EU has set five ambitious objectives on employment, innovation, education, social inclusion and climate and energy that should be met by 2020.

The strategy is based on the promotion of low-carbon industries, investing in efforts to develop new products, exploiting the potential of the digital economy and modernizing education and training. In strategy Europe 2020 was nominated five quantitative targets. These include increasing the employment rate from the current 69% to at least 75% and a significant increase in spending on research and development spending to 3% of HPD. At present, these expenditures to 2% of GDP, which is much less than the US and Japan. The plan also confirms the very ambitious EU climate (20/20/20) that the worlds do not have competition. Reduce greenhouse gas emissions by 20% (or providing a broader global agreement by 30%) compared to 1990 levels, to acquire 20% of energy from renewable sources, achieving a 20-percent increase in efficiency in energy use. The strategy also aims of reducing poverty by 25%, which would be an estimated 20



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million people, moved above the poverty line. In education, the Commission recommends to reduce the rate of early school leavers from the current 15% to below 10% and increase the share thirties with a university degree to 40% (currently 31%).

The EU currently oversees public finances in order to prevent fluctuations that could undermine the Eurozone. The new plan goes further and this role extends to other areas that could subvert the competitiveness of the EU. The strategy sets out seven key initiatives that the EU should take in the interests of growth and employment expansion. These include programs to improve conditions and access to finance for research and development, rapid deployment of high-speed internet and increase the share of energy from renewable sources. All Member States have their own national targets in each of these areas, that each Member State can monitor their own progress in meeting these goals. Do not imply burden-sharing - are common objectives to be pursued through a mix of measures at national and EU level. The objectives are interrelated and complementary: improving education, promotes employment and poverty reduction; a larger share of research and development and innovation in the economy, combined with more efficient use of resources contributes to greater competitiveness and job creation; most environmental investments in technology to help fight climate change and create new business and employment opportunities. Concrete action at national and EU level is sustaining implement the strategy (Sarkis, 2003).

4. STRATEGY FOR SUSTAINABLE PRODUCTION

Developing strategies for sustainable consumption and production focus on:

- Sustainable production, with particular emphasis on increasing resource efficiency; This includes the provision of
 incentives to encourage technological innovation in product design and manufacturing processes, as well as
 improving resource efficiency of production and reduce environmental pressures from production processes, not
 only in production but also in the growing service sector.
- Sustainable consumption, changing consumer behavior; Attention has turned to policies that reduce the impact of consumption on the environment, not only in homes but also in the public sector, the voluntary sector and businesses as consumers. Policies tend to fall into two main groups support for the purchase of more environmental products, promote the use and disposal of behavior that has a lower impact on the environment.
- Linking of production and consumption for sustainable products and materials; the main objective is to minimize the environmental impact products and services throughout the life cycle of products, including packaging, distribution, use, and disposal and recycling phases.
- The Government will take the lead in their operations and procurement activities; Political activity under this scheme relates both to the government to be able to manage their business in a sustainable manner and meet their own sustainability goals and to the government using its purchasing power changes carried out among its suppliers and ensure the sustainability of their supply chains.

CONCLUSION

An analysis of the development documents at EU, OECD and Slovakia shows that properly designed development strategy can be outlined in the baseline scenario reverse perspective. The complexity of environmental issues has resulted in the need for large amounts of strategic instruments, mostly various combinations thereof. However, there are common procedures.

What is needed is a mix of strategies, because the various environmental issues are interrelated. Climate change may have as the impact on the hydrological cycle and increase the pressure on biodiversity and human health. Biodiversity and ecosystem services are closely related to water, climate and human health: clean water marshes, mangroves protect coasts from floods, forests contribute to climate regulation and genetic diversity offers opportunities for pharmaceutical discoveries. Strategies must be designed correctly to match the features of an interconnected environment and the broader economic and social consequences. Integration of environmental objectives into economic and regional strategies is a necessity, because these strategies have a greater impact than the actual environmental instruments.

REFERENCES

OECD (2003): Environmental Taxes and Competitiveness: An Overview of the Issues, Policy Options and Research Needs, Paris opportunities for non-competitive agriculture, In: Guido van Huylenbroeck,

Organisation for Economic Co-operation and Development : MEASURING SUSTAINABLE CONSUMPTION AND PRODUCTION EXAMPLES OF ENVIRONMENTAL ACCOUNTING APPLICATIONS, Paris, 23-25 November 2010 ,OECD Conference Centre.



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ISSN 1339-5270

- Organisation for Economic Co-operation and Development : MONITORING PROGRESS TOWARDS GREEN GROWTH MINISTERIAL REPORT ON GREEN GROWTH INDICATORS, Draft outline and measurement framework, 23-25 November 2010 Paris, OECD Conference Centre.
- Organisation for Economic Co-operation and Development : MONITORING PROGRESS TOWARDS GREEN GROWTH OECD INDICATORS, Draft report ,2011
- Organisation for Economic Co-operation and Development : OECD ENVIRONMENTAL OUTLOOK TO 2030 ISBN 978-92-64-04051-9 © OECD 2008.
- Rennings K, Schröder M, Ziegler A.: The Economic Performance of European Stock Corporations, *Greener Management* International 44 (2003), 33-43.
- Rennings K, Ziegler A, Ankele K, Hoffmann E. :The influence of different characteristics of the EU environmental management and auditing scheme on technical environmental innovations and economic performance, *Ecological Economics* 57 (2006), 45–59.

Rusko, M., Králiková, R: Application of Six Sigma Method to EMS Design / Miroslav Rusko, Ružena Králiková - 2011. In: Research papers. Roč. 19, č. 30 (2011), s. 39-44. - ISSN 1338-0532 [on-line] Available on - URL:

- http://www.mtf.stuba.sk/generate_page.php?page_id=5489.
- Sarkis J. : A strategic decision framework for green supply chain management, *Journal of Cleaner Production* 11 (2003), 397–409

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