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ETHICAL AND ECOLOGICAL DILEMMAS OF ENVIRONMENTAL PROTECTION

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Abstract:

The article analyses the problems (dilemmas) in approach to the environmental protection and management. EU has declared the plan for the Great Reset of global economy and environmental politics. The idea is not new, but the approach is expected to be completely different. While the EU leaders set the strategy of centralisation, there are strong claims for opposite way – decentralisation. The second dilemma we analyse in our article is the problem of European Commission massive support of green investments (including using of renewable sources of energy and focus of environmental protection), especially after lockdowns connected with covid pandemic which meets with the strong negative position of those economical circles which see such types of initiatives as green shooting to the economy. Terra Carta as an integral part of Sustainable Markets Initiative was launched in 2020. The third dilemma we pay our attention is connected with the efficiency of new environmental taxes. The article focuses also on the good practice as can be seen in environmental protection management efforts and green solutions for using and saving energy resources. As an examples we assess the projects supporting use of renewable energy in Africa (e.g. Lights for Africa), Cradle to Cradle Program (C2C) and we go back to the Come2CoM. The whole is analysed in the context of corporate social responsibility.

Key words: *environmental protection, energy ethics, environmental management, eco-ethics, great reset, sustainable smart city, social justice, sustainable development, corporate social responsibility*

INTRODUCTION

Joel J. Kassiola centres his discussion and gives answers regarding the environmental ethics and its major contribution to the solution of environmental problems in the article *Can Environmental Ethics 'Solve' Environmental Problems and Save the World? Yes, but First We Must Recognise the Essential Normative Nature of Environmental Problems*. Kassiola explains that environmental ethics is a normative philosophical inquiry about human ethical live on finite planet and it must contribute to effective response to the urgent environmental problems. He understands environmental problems as the result of human behaviour which is fundamentally based on human values. In modern society we live in the detrimental behaviour to the natural environment is the result of the specific modern values, limitless economic growth, and competitive materialism, so that changes in these values will be necessary if the aim is to resolve environmental problems [1].

„Ethical criteria, ethical states, and ethical responses are brought to bear on the divergent paths that have been tried in the past and that can be pursued in the future. And with climate change becoming an increasingly urgent

issue, the stakes involved in our energy practices are enormous and ever rising. As a matter on which humanity and other beings depend for their livelihood, energy raises fundamental questions that involve judgements about our entangled telos“ [2]. These issues concern individual consumers as well as companies and institutions. In the case of the latter, they are part of social responsibility, which is essentially based on ethical criteria. Increasingly, enterprises and institutions include energy efficiency in the sphere of social responsibility for the natural environment.

The article in the form of a discussion analyses the basic dilemmas related to environmental protection and management. The first one concerns the Great Reset of the world economy and environmental policy, where two opposing trends collide: the strategy of centralization and the postulates of decentralization. The second dilemma that we analyse in our article is the problem of mass support of green investments by the European Commission (including the use of renewable energy sources and environmental protection). The third dilemma to which we draw attention is related to the effectiveness of the new

ecological taxes. In the further part, good practices in environmental protection management and saving energy resources are also discussed.

RESEARCH METHODOLOGY

In the article, the authors take into account literature studies based on a critical analysis of the literature on the subject. It is a method commonly used in scientific research and forms the basis of scientific discourse. The ongoing political and journalistic discourse related to the discussed problems (dilemmas) was also analysed. The illustration of specific ecological activities related to environmental protection is based on the multiple-case method.

LITERATURE REVIEW AND DISCUSSION

Great Reset – centralization or localization

The idea of massive transformation of capitalism into its post-modern effective version and transition into the new economic paradigm is not new. Richard Florida published his book *The Great Reset: How New Ways of Living and Working Drive Post-Crash Prosperity* in 2010 [3]. The question is how the new paradigm should look like, therefore various theoretical models have been developed in different frameworks. It seems that green deals and green employment has become the crucial point of future well-being of global society. The issue of creating green employment is related not only to the protection of the environment and natural resources, but also to the changes in production technologies and the use of materials, the value of work, social needs, free choice of people, social justice and the fight against unemployment.

Jeremy Rifkin in his book published in 2011 *The Third Industrial Revolution: How Lateral Power Is Transforming Energy, the Economy, and the World* discusses the Third Industrial Revolution. He describes the role of five-pillars of the Third Industrial Revolution in creation of great number of businesses, jobs, and specifies fundamental reordering of human relationships, from hierarchical to lateral power, that will impact the way we conduct commerce, govern society, education and engage the civic life [4]. Rifkin's vision is already becoming a reality through the projects of sustainable economic development [5]. Corporate social responsibility is one of the tools to support the implementation of the sustainable development goals, not only in the economic, but also in social and environmental terms, therefore it is more and more often included in the development strategies of enterprises and institutions, with a focus on both internal and external stakeholders [6]. These issues were present in all sustainable development programming documents, starting with Agenda 21 (1992) [7], although the idea of corporate social responsibility is earlier [8].

The new economic paradigm for sustainable economic growth, Great Reset was the central topic of the World Economic Forum, which was held in January 2021. The urgent solutions for global stakeholders to cope with the consequences of the lockdowns of the economies during the Covid-19 pandemic were discussed as the reaction on

the situation which was named Great Blockade by International Monetary Fund. Gita Gopinath, the chief economist at the International Monetary Fund analyses the impact of lockdowns and argues that the world has changed so dramatically we can talk about truly global crisis that did not spare any country. The world faces the worst economic downturn since the Great Depression [9]. The consequences of the COVID-19 pandemic are multidimensional [10, 11, 12].

The resumption of growth should be achieved primarily through the restoration of confidence in the reform of economic systems, rebalancing economies, the consolidation of preset priorities and measures, investment into innovative technologies and green economy. The Great Reset was announced by the world leaders as the most ambitious and radical plan the world has seen in more than a generation. Klaus Schwab, the founder and executive chairman of the World Economic Forum, said in his speech that all aspects of our societies and economies must be revamped, from education to social contracts and working conditions under central governance. The official statement launched by the World Economic Forum (WEF) explains the Great Reset as an initiative that “will offer insights to help inform all those determining the future state of global relations, the direction of national economies, the priorities of societies, the nature of business models and the management of a global commons. Drawing from the vision and vast expertise of the leaders engaged across the Forum’s communities, the Great Reset initiative has a set of dimensions to build a new social contract that honours the dignity of every human being” [13]. Klaus Schwab describes its three main components. The first one enhances the creation of conditions for stakeholder economics, the second one involves building in more flexible, equitable and sustainable way - based on environmental, social and governance (ESG) metrics, which would include more green public infrastructure projects. The third component means using the innovations of the Fourth industrial revolution for public welfare [14].

Steffen Roth in his article *The Great Reset. Restratification for lives, livelihoods, and the planet* discusses the scenario of an epochal transition from capitalism to restorism. Roth argues that recommendations suggested at the WEF 2021 imply that the world before the COVID-19 crisis was a crisis in itself and that, therefore [15], “our systems need a reset” on a track that harnesses the benefits of the fourth industrial revolution [16] for a sustainable recovery based on the UN Framework Convention on Climate Change and the UN Sustainable Development Goals [14]. The core of this reset is a shift from neoliberalism to an interventionist approach [15].

However, there are voices against the efforts and initiatives of world leaders calling for decentralization. The opponents see new massive government programs and far-reaching policies the world needs as growing effort to centralize the political power, gaining greater government control, and adopting more socialistic policies. They claim

the traditional institutions have failed to manage the climate and social crises that were already underway and have now been exacerbated by the coronavirus crisis, there is a risk that these crises will deepen and leave the world even less sustainable, less equal, and more fragile [13]. The unprecedented rise of prices of commodities, goods, raw material cost, gas and oil hold records. Rising inflation affects all sectors in the society. Freida M'Cormack states that "democratic decentralisation is advocated as a means of providing more appropriate, efficient and accessible public services, and of achieving a variety of interrelated socio-economic objectives, including poverty reduction and economic development" [17]. Contemporary situation in the global and globalized society means not reduction of poverty but its deepening. Inflation is pushing up the prices of energy, essential goods such as food, transport and utilities as well as costs of living.

Green shooting or green investments

The main topic of annual economic forum Intelligence on the world, Europe, and Italy, which took place on 6-8 September 2013 in Cernobbio, Italy, was the persistent problems of Europe. In his then opening speech, Valerio de Molli called for an immediate change in the situation. He claimed that the unemployed in Europe currently number 25 million individuals, European manufacturing alone lost 3.4 million jobs (nearly 10% of the total in just four years) and the international labour organization has forecast that, over the next five years, the worldwide total will reach 210.6 million. This situation must be reversed rapidly. If businessmen and decision-makers do not regain the required levels of confidence to once again begin to risk and invest in new activity, in innovation, in R&D and in technology, the positive driver for recovery will never be triggered. Europe desperately needs more entrepreneurs and growth. Without growth there is no employment and without jobs, there is no future [18]. Seven years later, during the meeting in 2020, Molli calls again for keeping the values which the world needs in moments of crisis such as the current one – innovation, courage and vision [19].

The goals of the economy of growth are well known – stable economic growth, stable inflation and low unemployment. The reality is different. High energy prices and strong Euro lead to the inability of European companies to compete with American and Chinese producers, which in turn contributes to the collapse of many companies and high unemployment. In the context of Europe's economic competitiveness, the Forum has revealed during the years of its existence the urgent need for a new energy policy. Antonio Tajani, a former EU Commissioner for Industry, strongly criticises the regulations set by Brussel. Thanks to regulations that he calls "green shooting" the European industry faces the high costs of renewable energy, energy prices had risen to such unsustainable levels at which Europe cannot compete with the US and China. This means, according to Tajani, "industrial massacre" for Europe. He added that the European Central Bank's tight financial

policy had led to the failure of many small businesses across Europe. "Unless the ECB lends to small businesses", says Tajani, "as the Bank of England does, it is impossible to reduce unemployment or public debt without a strong industrial policy that revives small businesses" [20]. Compared to the US, European industry now pays twice as much for electricity and four times as much for gas, which means that European businesses are not rewarded for being more efficient [21].

At the 50th meeting of the World Economic Forum in Davos in January 2020, Ursula von Leyen, the President of the European Commission, presented an EU action plan to save the planet and to create Sustainable Markets and Trade Council. The European Commission presented as its first priority the European Green Deal. Europe will be the world's first climate-neutral continent by 2050. Planned investments through the Deal amount one trillion euro over the next decade. It should create green investment wave. "The European Green Deal is our new growth strategy. The novelty and the difference to our fossil fuel based model is that we will foster growth that is not extracting re-sources but that gives back more to the planet than it takes away", says Ursula von Leyen [22].

First climate action initiatives under the Green Deal include:

- European Climate Law to enshrine the 2050 climate-neutrality objective into EU law
- European Climate Pact to engage citizens and all parts of society in climate action
- 2030 Climate Target Plan to further reduce net greenhouse gas emissions by at least 55% by 2030
- New EU Strategy on Climate Adaptation to make Europe a climate-resilient society by 2050, fully adapted to the unavoidable impacts of climate change [23].

New EU Strategy on Climate Adaptation [24] is designed to help countries and regions in transition to a carbon-free economy by 2050. It is designed to invest massively in regions that need to apply new technologies and create new jobs, but will not support nuclear and gas projects. Decommissioning or construction of nuclear power plants and investments related to the production, processing, distribution, storage and combustion of fossil fuels are excluded. Many solutions have already been developed in science that may guide future activities related to climate protection [25, 26].

However, new EU Strategy on Climate Adaptation with an estimated amount up to 50 billion euro is not the only financial instrument proposed by the European Commission to reduce emissions. Another is the Just Transition Mechanism (JTM) [27] which is part of the European Green Deal and in which the Strategy creates one of three components, with a total amount of 100 billion euro for green projects and investments. Mechanism is integral part of Sustainable Europe Investment Plan [28] with a cumulative amount of financial funding of one trillion euro. In both strategies – in the Just Transition Mechanism and Sustainable Europe Investment Plan – the European Commission relies on cohesion policy (Euro funds), loans from

the European Investment Bank and private financing as budgetary commitment in years 2021-2030.

The Just Transition Fund is a key element of the European Green Deal and the first of the three pillars of the Just Transition Mechanism. It is a new instrument with an overall budget of €17.5 billion, of which €7.5 billion are coming from the Multiannual Financial Framework (MFF) and €10 billion from the NextGenerationEU. It aims to alleviate the social and economic costs resulting from the transition towards a climate-neutral economy, through a wide range of activities directed mainly at diversifying the economic activity and helping people adapt in a changing labour market [29]. Among the main elements belong slightly broadened scope with the aim “to address the social aspects of the transition, in particular the creation and safeguarding of jobs, as well as investments in smart and sustainable mobility and rehabilitation of district heating network, whenever deemed necessary to accompany the transformation of local economies; exclusion of fossil fuel financing and the possibility to support investments in large enterprises in assisted areas pursuant to regional State aid guidelines, whenever they are needed to bridge job losses' gap resulting from the transition” [30]. All projects submitted to the European Commission for approval must be in accordance with the national energy and climate plans already submitted by the Member States, which should be assessed by the European executive during the summer 2021.

Terra Carta (Earth Charter)

As part of the Sustainable Markets Initiative, HRH The Prince of Wales, announced the Terra Carta [31] as a living document for next decade. Prince Charles explained that the Terra Carta offers the basis of a recovery plan that puts Nature, People and Planet at the heart of global value creation – one that will harness the precious, irreplaceable power of Nature combined with the transformative innovation and resources of the private sector [32]. The ten points action plan focuses on platforms, prices, standards, nature, innovations, policies, solutions, systems, pathways and default settings. The Sustainable Markets Initiative was launched by Prince Charles at the annual economic meeting in Davos in 2020 and it currently consists of several programmes including industry roundtables, engaging with country leaders, RE:TV (which went live in September 2020 at the 75th United Nations General Assembly to promote the Sustainable Markets Initiative globally), Online marketplace (should be launched during 2021), Flagship initiatives (SMI Nature and Economy Centres, or Living Labs; A global award to recognize credible plans to accelerate the transition to a sustainable future and The Top 100 as an SMI Flagship initiative intended to showcase corporations and investment funds that have the greatest positive environmental impact [33]).

The Terra Carta document devoted Section 2 to redesigning net zero and nature-positive transition. One of the goals is to establish publicly accessible roadmaps that will outline detailed steps for industry-level transition. These industry roadmaps will aim to help guide companies in the

development of their own roadmaps. The annual review of the Terra Carta will provide a state-of-play of industry roadmaps to support continuous improvement and innovation over the decade” [34]. In rethinking market forces prince Charles calls for better communication with costumers and argues that consumers' behaviour as a real force able to change the ways the goods, services and investments are made and provided. In his speech at Davos 2020 he pointed out the necessity of making the sustainable options the trusted and attainable options for consumers. He explained that with consumers controlling an estimated 60 per cent of global GDP, people around the world have the power to drive the transformation to sustainable markets. Consumers cannot be expected to make sustainable choices if these choices are not clearly laid before them. As consumers increasingly demand sustainable products, they deserve to be told more about product lifecycles, supply chains and production methods. In renewable energy we are rapidly approaching a time when renewable energy will be an order of magnitude cheaper than fossil fuels [35].

New environmental taxes – real solution?

As part of the European Green Deal, the EU has set out ambitious targets to tackle climate change and foster a cleaner environment, aiming for a 55% reduction in greenhouse gas emissions by 2030 and to become a climate-neutral continent by 2050. Environmental or so called green taxes include taxes on energy, transport, pollution and resources. Energy taxes are taxes on energy products and electricity used for transport (petrol and diesel) and for other purposes (fuel oils, natural gas, coal and electricity used in heating) [36].

The question is if new green taxation does really mean support of a more sustainable future. Proponents and opponents agree that the transition towards climate neutrality requires deep societal change, but opponents claim that green taxes are again about money making policy of economy of perpetual growth that turned “green efforts to save and reduce” into “huge green business” and there is no real change. The prices will rise and it will make the poor even more vulnerable. Roger Harrabin, BBC environment analyst, argues that fuel tax in France took from people struggling with living costs, and diverted the proceeds to wind farms instead. “The French humiliation showed people rejected the sort of carbon taxes supported by the UN's climate deal. Of course, it's more complicated than that, because it depends on what sort of carbon taxes and how they are imposed. Environmental economists say carbon taxes are a good idea - but they insist that governments must protect the poor from the side-effects” [37]. World-leading research into the social impacts of green taxes has been done at University College London by Paul Ekins, professor of Resources and Environment Policy. In his article The costs and benefits of environmental sustainability he discusses the economic implications of current trends and the possible transformation to a low-carbon and resource-efficient economy in the years to 2050 for which GEO-6 calls. A key conclusion

is that no conventional cost-benefit analysis for either scenario is possible. This is because the final cost of meeting various decarbonisation and resource-management pathways depends on decisions that are made today [38].

Boosting green industry politicians have to think about the ethical consequences of their decisions. Eco-ethics is considered to be an essential foundation for sustainable use of the planet. The declaration of eco-ethics which was inspired by Professor Otto Kinne's publications (1997, 1998, 2001, 2002) [39], which document important steps in the development of eco-ethics. Declaration reads: "We should value individual worth and dignity of each individual in the context of an ecological life support system with a multitude of individuals, each of whom has potential worth and value" [40]. It refers "to the principal importance of ecological dynamics for all forms of life on earth. Ecological dynamics are the cradle, evolutionary motor, directive force and overall supporter of life as we know it. Hence, progressive deformation of ecological dynamics and ecological systems-ecosystems-due to human activities demand ethics to function as controlling force" [39].

Is the real solution to let people and businesses pay more and more for the pollution they cause? Researchers and academics have figured out over the years how to protect the environment in much more rational and effective ways and how to deal with pollution. States as USA, India, China, Indonesia which belong to the biggest polluters according to global rankings need to apply in practice more elaborate ways of reduction of pollution and recycling of waste. Huge international business with waste is very well known and it is part of the problem with false environmentalism. International corporations have to change radically the strategies and ways they produce goods in the undeveloped countries.

There are many questions that have to be solved. EU declared the green taxation must fit into a wider EU policy context and National environmental taxes could address specific environmental issues in each individual Member State. In this sense, green taxation initiative should help to reach the environmental policy goals by encouraging a switch to cleaner energy, more sustainable industry and greener habits. [36]. Environmental policy of EU causes speculations if it is really useful or it is just ideology that brings more harm than benefits. European Parliament lawmakers decided to back a proposal made by the European Commission last year to require a 100 percent reduction in CO₂ emissions from new cars by 2035 that will ban selling new fossil fuel-powered vehicles in the EU. This decision will affect strongly the automakers, car prices and demand for lithium. Analytics call that decision madness that has nothing to do with environmental protection. Negotiations will continue with the attempt to reach a new deal.

Good practice of environmental management

There are many organizations that want to contribute to building a sustainable society. We are witnessing the emergence and disappearance of many initiatives,

changes in production technologies, production processes and we see the implementation of research results into practice. What is missing is a unified and systematic approach to solving the still complex problems both in the EU countries and beyond, long-term structural changes at all levels of society. The result should not only be building a sustainable society, but above all a real quality of life. Changes in one sector affect other sectors, such as the agricultural, health, energy or transport sectors.

The question remains how to introduce innovative technologies and adapt to environmental rules without leading companies and businesses to lose competitiveness and jobs. In his article Full Employment in a Green Society, Steve Dawe reflects on the state of the economy, understanding the concept of work and its meaning in society, discusses paid and unpaid work, hidden forms of work, the grey economy and indicators of real unemployment. He says that from a green perspective, work has its value if it serves both environmental and social needs. He raises the question of whether GFE (green full employment) is currently possible at all. It is a long-term goal. Dawe sees GFE as a preparatory concept, an effort. The lines of further research are defined and determine how to transform formal conceptualization into a policy that will be implemented in practice [41].

A green approach to social justice means that barriers to respect human rights will be removed. According to Dawe social inequality and social injustice cannot be effectively combated as long as natural resources continue to be a key factor in both the formal and informal economy. On the one hand there are neoliberal values such as economic and social security, prosperity and prosperity, on the other hand, it is the deepening economic crisis, the loss of social and economic security, the poor state of the environment and limited natural resources [41]. One of the key GFE's ideas is that people have not only rights but also responsibilities. Changing people's attitudes to work itself and the values it creates is absolutely essential. It is natural that some jobs will disappear due to economic initiatives and changes taking place in present-day society, and society should be prepared for this. Here again, the important role of guiding enterprises and institutions to social responsibility appears. On the one hand, it is the creation of green jobs with respect for human rights, on the other, protection of the natural environment. This fits in the wider context of sustainable development. The supporting tool is sustainable development reporting in accordance with GRI (Global Reporting Initiative) standards.

Lights for Africa

Currently, there are more than 300 projects, many of them supported by The World Bank Group, connected with using of renewably energy in different states of Africa. „Renewable energy is imperative for Africa's development; however, given that sustainable energy projects in Africa seldomly succeed, it is imperative to ascertain how community acceptance also influences energy projects,“ write Sarpong Hammond Antwi and Debora Ley in their article Renewable energy project implementation in

Africa: Ensuring sustainability through community acceptability [42]. According to the World Bank Senior Energy Specialist David Vilar, who leads the infrastructure programs in Ghana, Liberia, and Sierra Leone, solar technology and renewable energy are at the heart of the climate agenda.

About two-thirds of the population in Sub-Saharan Africa (600 million people) live without grid electricity. This lack of modern energy services severely limits educational and economic opportunities and has negative impact on day-to-day quality of life and health. People without electricity often use polluting and expensive lighting sources such as kerosene lamps or candles, the fumes of which can cause serious health problems. Since running its first pilot projects in Ghana and Kenya in 2009, organisation Lighting Africa has already enabled 32.3 million people across Africa to meet their basic electricity needs (lighting and mobile phone charging) through quality verified off-grid solar products. [43].

The Africa Renewable Energy Fund (AREF) invests into small hydro, wind, geothermal, solar, stranded gas and biomass projects across Sub-Saharan Africa, excluding South Africa. Berkeley Energy, as the fund's managing Organisation, has experience in over 120 renewable energy and power engineering, construction and investment projects in Africa and Asia. It is a focused investor, developer and deliverer of renewable power assets. [44]. The First Phase of the Solar Development in Sub-Saharan Africa project is to promote the deployment of competitively-procured Regional Solar Parks in West Africa and enable the dispatch of variable solar energy [45]. With a strong push for solar energy from the World Bank and the International Finance Corporation, life of Ghanaians is changing. The \$220 million Ghana Energy and Development Access Project (GEDAP) is among the first Bank-financed programs that focus on access to renewable energy through off-grid solar services and products. The project included five pilot mini-grids that converted solar energy to electricity for isolated communities in islands in the Volta Lake and the Volta River. These five pilot mini grids provide 24/7 electricity to about 10,000 beneficiaries for the first time, allowing these fishing communities to use electricity to improve their livelihoods [46].

Nevertheless, organisation Lighting Africa states that very important are consumer educational programmes and education campaigns in rural areas focused on empowering the final consumers of renewable energies. Teaching end-users about the benefits and proper usage of solar lighting and energy products and how to identify quality lanterns helps to promote knowledge and awareness of some of the additional energy services. Nana Asamoah Manu, Program Manager, Lighting Africa-Kenya says, that good products alone cannot achieve the desired behavioural change: it must also be fostered through consumer awareness and education [47]. The key factor remains also business development support to companies active in this sector – a range of private sector companies, including product manufacturers, importers, and distributors.

Cradle to Cradle project

It is possible to prosper and create new, sustainable jobs, including green jobs, as experienced by the many activities cities, organizations, companies and enterprises have been performing. One of the important activities that shows that it is possible to combine effort of sustainable growth with the use of renewable materials and energy sources with environmental protection is the Cradle to Cradle Program. C2C Certification is a trademark of McDonough Braungart Design Chemistry (MBDC).

The Cradle to Cradle Products Innovation Institute is devoted to powering innovation for the circular economy through products that have a positive impact on people and planet. Through the Cradle to Cradle Certified™ Products Program, the Institute sets the global standards for products that are safe, circular and made responsibly. The Innovation Institute claims that Cradle to Cradle Certified is used by future-focused designers, brands, retailers and manufacturers to innovate and optimize materials and products according to the world's most advanced science-based measures for material health, product circularity, renewable energy and climate, water and soil stewardship, and social fairness. It powers the global shift to a circular economy through partnerships and collaborative initiatives. The Institute is a part of the 1% for the Planet network, which connects businesses, individuals, and non-profits to protect the planet [48].

Park 20|20 is the world's first Cradle to Cradle optimized working environment. Its construction began in 2010 and the first part of the project, a complex of corporate and residential buildings and public spaces in Hoofddorp near Amsterdam, was opened in May 2013.

The requirement was to create a safe and healthy place to work and live, environmentally friendly and to use renewable energy and natural resources. The whole complex is created in the spirit of the C2C philosophy, based on the so-called human centred design approach, i.e. friendly to humans and the environment. Park 20|20 functions as a self-sufficient dynamic environmental system that includes the local community, its ecosystem and economy, and is one of the leading innovation programs in Europe. This is the first project of such large size and significance. All companies and organizations located in the complex are proud to apply the principles of sustainable development and C2C principles. Park 20|20 „combines innovation with sustainable designs, it uses an optimal ecological approach and works with closed systems for energy and water. Central to the whole approach is human wellbeing, for today and the future. The total result is in an inspiring, healthy and productive working environment“ [49].

The first region in the world to embrace principles from cradle-to-cradle (C2C) is the Venlo region in the south-eastern Netherlands, next to the German border. It is situated in the province of Limburg. Venlo adopted a sustainability concept which is based on the recycling of raw materials, so that products are 100% recyclable and waste serves as raw material. The region is a hub of major highways, main logistics port, the centre of manufacturing industries [50]. Initiatives to build sustainable cities inspired

by the C2C project have been successfully implemented mainly in the Netherlands, Germany, Austria, Denmark, Belgium and other countries, including China. The basic idea of Michael Braungart C2C program is that we do not want only sustainability, we want real quality. William McDonough and Michael Braungart explained the myths and facts of sustainability in their book *Cradle to Cradle: Remaking the Way We Make Things* [51], which is, as they both call it, a manifesto for a radically different philosophy and practice of manufacture and environmentalism.

Come2CoM - sharing urban sustainable energy strategies

The Intelligent Energy – Europe (IEE) project Come2CoM ended in April 2012, but it helped in fact to build several sustainable energy communities and had impact on creating sustainable energy cities and regions which develop their own ways to gain sustainable existence. The project was the promotional campaign for the Covenant of Mayors (CoM). The twelve come2CoM partners aimed at supporting municipalities in eleven European countries in joining the CoM, showing them how to take the lead in mitigating climate change and supporting them in setting up their Sustainable Energy Action Plans (SEAP). The individual support was given to more than 120 municipalities and 28 SEAPs have been finalised until the end of the project [52].

In the ranking of the "greenest" cities, which try to actively apply the principles of green way of existence into the daily life of the city and adapt the functioning of the entire urban infrastructure as well as the lives of their inhabitants are such cities as Copenhagen (Denmark), Reykjavík (Iceland), Amsterdam (Netherlands), Vancouver (British Columbia), Stockholm (Sweden), London (UK), Curitiba (Brazil), Malmö (Sweden) and, surprisingly, New York (USA) and San Francisco (California, USA). Vancouver had an ambitious plan to become the "greenest" city in the world by 2020.

The City of Växjö (Sweden) calls itself "the greenest city in Europe and won the European Green Leaf Award in 2018 for its commitment to sustainable development and ambition to become completely fossil fuel free by 2030. This sustainable attitude started in the 1970s when the city decided to restore the heavily polluted lakes around the city. This coincided with the oil crisis of the 1970s, which prompted the municipality to look for an alternative to oil powered district heating" [53]. Växjö was one of the first European local authorities to sign the Covenant of Mayors. It belongs to Energy Cities [52], the European association of cities in energy transition. It was the first city in the world to set a goal of becoming fossil fuel free up to year 2030, but also has a goal of achieving carbon neutrality (net zero GHG emissions) by 2050. Växjö promises a complete switch to renewable energy on the path to both goals. Renewable energy, energy efficiency, and urban planning are three of several high-priority methods the city has focused on to achieve a fossil-fuel-free Växjö. The fossil-fuel-free Växjö programs includes:

- the use of biomass for district heating,

- renewable energy, mostly from biomass, for power generation,
- urban planning that reduces the need for cars,
- an increase in the use of electric and biofuel cars/buses;
- and the use of advanced construction techniques to produce green building through-out the city [54].

The city has a large amount of protected natural areas and green space. The modern wood city adopted in 2013, required that 25% of what is built by the municipality entities will be wood-based by 2015 and 50% shall fulfil this objective by 2020. Wood construction strategies have been systematically included in external communication about Växjö's work on sustainability [55]. Some new homes and buildings constructed in Växjö get enough energy from biomass and solar to actually be plus-energy buildings (generating more energy than the building consumes), similar to Vauban, Germany. Residences not connected to the district heating network in Växjö are offered technology by the municipality to convert their home heating systems into renewable energy-based systems.

CONCLUSIONS

Experts in various fields agree that Europe needs a radical transformation. Innovative entrepreneurship requires changes in education and training that lead young people to be willing to learn and work hard, courage and responsibility, independence, creativity and initiative. Young people should be prepared not only to "look for work, but to create their own", says Valerio de Molli, adding that "it is essential to support the birth of a new form of entrepreneurship" [18].

In the context of eco-social challenges, it is necessary to create an environment in which the new companies and organizations could emerge, grow and develop. The environment is related to the culture of the country and its changes. In many cities and countries, activities aimed on environmental protection and using of renewable resources are supported and developed despite the pitfalls and difficulties to which entrepreneurs, organizations and their implementation teams have to face. Traditional way of thought often becomes an obstacle to development itself.

Therefore, ecological education and shaping the ecological awareness of the society should be intensified. For this, special curricula in formal education are needed, in which environmental ethics is an integral part. Shaping environmental awareness should be supported by non-formal and informal education. This education should have a global dimension. Enterprises and institutions should play an important role in such understood education. Implementation of special educational programs in enterprises with a view to making employees aware of, among other things, the need to save energy and protect the natural environment as a manifestation of corporate social responsibility. An important role should also be played by environmental education of managers and their focus on achieving better energy efficiency indicators, reduction of greenhouse gases in enterprises. An interesting

direction for further research will therefore be the study of enterprises in terms of the implementation of the objectives of the European Green Deal strategy, aimed at building a resource-efficient and competitive economy with zero net greenhouse gas emissions and the implementation of corporate social responsibility assumptions in the context of Just Transition.

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