Green SMEs in the European Union

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Abstract: The paper presents the definition and concept of the green economy based on the concept of the United Nations Environment Program, which is improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities. The green economy incorporates means achieving sustainable economic development in areas as improving human well-being, increasing social equity, reducing environmental and ecological risks.

The paper highlights the eco-innovation by the European Commission DG Environment and the project aiming to compile the Eco-Innovation Observatory. The holistic approach of the eco-innovation process is presented. The “green transformation” is a significant business opportunity for SMEs themselves as important suppliers of goods and services. The European Commission has recently prepared a Green Action Plan (GAP) for SMEs, which give a clear direction and framework for aims to (i) improve resource efficiency of European SMEs and (ii) support green entrepreneurship. The GAP aims to contribute to the re-industrialisation of Europe by enhancing SMEs competitiveness and supporting green business developments across all European regions.

Finally the paper presents the main European green entrepreneurship and business awards.

Keywords: Green economy, eco-innovation, Eco-Innovation Observatory, European Commission green action plan, green SME awards

Motto:
“we do not inherit the Earth from our ancestors, we borrow it from our children”
Native American Proverb

Preface

With over 7.4 billion people in the world today, human consumption of natural resources has increased exponentially in recent years to the point where our natural resources are insufficient to keep up with demand. This ever-increasing human
consumption, the solid waste produced by the world population as well as the industrial waste have engendered ecological scarcity and aggravated the deterioration of our environment. According to the Global Footprint Network, the humanity uses the equivalent of 1.5 planets to provide the resources we use and absorb our waste. This means that the Earth takes one year and six months to regenerate what we use in a year. In this respect the sustainability is a matter of life and death for people on the planet. It is a necessary must to end the overshoot, and consider the environmental issue – addition to keeping the peace as primary goal - as the most important task for the mankind.

1 The Green Economy

There is no single definition of the Green Economy. Instead, the Green Economy is viewed as a unifying articulation of Sustainable development.

United Nations defines the concept of a green economy “carries the promise of a new economic growth paradigm that is friendly to the earth’s ecosystems and can also contribute to poverty alleviation.”

Environment can no longer be treated in isolation from mainstream economic policy. In spite of this fact, in most cases, the environment continues to be addressed as a separate component without clear linkages to the social and economic aspects.

In 2011, the United Nations Environment Program - UNEP - has developed a working definition of a green economy as one that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities. In its simplest expression, a green economy can be thought of as one which is low carbon, resource efficient and socially inclusive. [1]

In September 2015, the UN General Assembly formally established 17 Sustainable Development Goals (SDGs) to be addressed by 2030, thus providing a common framework for public and private stakeholders to set their agendas and define their policies and strategies over the next 15 years (See Exhibit). [2] The General Assembly also adopted the UNEP strategic paper on “An inclusive green economy: a summary for leaders” in which concepts such as “sharing, circularity, collaboration, solidarity, resilience, opportunity, and interdependence” pointed out. [3]

An Inclusive Green Economy is an alternative to today’s dominant economic model, which generates widespread environmental and health risks, encourages wasteful consumption and production, drives ecological and resource scarcities and results in inequality. It is an opportunity to advance both sustainability and social
equity as functions of a stable and prosperous financial system within the contours of a finite and fragile planet. It is a pathway towards achieving the 2030 Agenda for Sustainable Development, eradicating poverty while safeguarding the ecological thresholds, which underpin human health, well-being and development.

Critically, the concept of the green economy is not just “greening” economic sectors; it is a means of achieving the sustainable development in the following important areas:

- Improving human well-being: securing better healthcare, faith against the new infectious diseases, like HIV, Ebola virus disease and Zika virus -, preventive drugs measures, improving the education and safeguarding the job security;
- Increasing social equity: launching poverty alleviation programs and ensuring social, economic and financial inclusion;
- Reducing environmental risks: addressing climate change, managing deforestation and desertification, melting of the North Pole and Antarctic, the release of hazardous chemicals and pollutants, and excessive or mismanaged waste; and
- Reducing ecological scarcities: securing access to freshwater, natural resources and improving soil fertility.

Eric Usher, Head of the UN Environment Finance Initiative estimated, the for achieving the SDGs - the global action plan to end poverty, combat climate change and protect the environment - USD5 to 7 trillion needed through 2030. On 30 January 2017, nearly 20 leading banks, financial institutions and investors in Paris set standards sets USD6.6 trillion in assets as the Principles for Positive Impact Finance for sustainable investments.

In connection with the green economy the other important issue is the eco-innovation.

What is Eco-Innovation?

Any form of innovation aiming at significant and demonstrable progress towards the goal of sustainable development. This can be achieved either by reducing the environmental impact or achieving a more efficient and responsible use of resources. [5]

“Eco-innovation is any innovation that reduces the use of natural resources and decreases the release of harmful substances across the whole life-cycle.” [6]
Eco-innovation projects will therefore aim to produce quality products with less environmental impact, whilst innovation can also include moving towards more environmentally friendly production processes and services. Ultimately they will contribute towards the reduction of greenhouse gases or the more efficient use of various resources. The idea of eco-innovation is very new.

In 2013, the European Commission DG Environment founded a project aiming to compile the Eco-Innovation Observatory (EIO). The EIO put together a guide is a practical and comprehensive introduction to eco-innovation addressed primarily to small and medium-sized enterprises (SMEs). [7] The booklet overviews emerging business opportunities eco-innovation has to offer to companies that reconsider business models, develop new products, technologies or services, or improve production processes.

As an eco-innovation we can consider a new start-up or product or making improvements in existing operations. Eco-innovation can focus on introduction of new technologies, but reating new services and introducing organisational changes are just as important. At its core, eco-innovation is about creating business models that are both competitive and respect the environment by reducing resource intensity of products and services.
The Figure 1. demonstrates the reasons why do eco-innovation.

- Saving material and energy costs
- New products and services: new markets
- New business models

- Sustainable management of natural resources
- Tackling climate change
- Improving biodiversity and ecosystems

- Enhancing quality of life
- Creating new and sustainable jobs

- Material security
- Resources justice

Figure 1.
Reasons why do eco-innovation
Source: EIO 2013.

Circular Economy

What is the circular economy? A circular economy is an alternative to a traditional linear economy (make, use, dispose) in which we keep resources in use for as long as possible. The EU adopted the circular economy package on 2 December 2015. The Action Plan for the circular economy suggested action actions will contribute to "closing the loop” of product lifecycles through greater recycling and re-use, and bring benefits for both the environment and the economy. [8]
The adaptation of the circular economy offers considerable economic benefit. In 2017, the UK Waste and Resources Action Programme – WRAP – estimates that the UK businesses could benefit GBP 23 billion per year by low cost and improvement in efficient use of resources. McKinsey Global Institute estimates that total resource productivity opportunity could amount annual saving to society of USD2.9 trillion a year in 2030, at current market prices. [9]

To showcase the key deliverables achieved so far and to debate future deliverables with stakeholders, the Commission and the European Economic and Social Committee on 9-10 March 2017 organised a Circular Economy Conference. On this occasion the European Circular Economy Stakeholder Platform was announced.

2 The role of SMEs in greening the economy

In 2014, within the EU-28, 26 million active enterprises existed with some 143 million persons employed. There were about 4 million jobs created from 2.6 million newly born enterprises, while in the same year the results show 3.5 job losses as a consequence of 2.3 million death businesses. 75.5% of all active businesses were in the service sector. By contrast, only 9.9 % of active enterprises were found in industry, even though these enterprises provided work for 23.6 % of the total number of persons employed. [10] SMEs account for more than 98 % of Europe’s businesses and provide more than 67 % of total employment in the Union and 58 % of gross value added.

In spite of no internationally agreed definition of green growth, there is consensus that it is a combination of economic growth and environmental sustainability. Improving the skills and training is a key challenge for SMEs, especially with regard to innovation and resource efficiency. However, inadequate access to risk capital, in particular at the start-up stages, continues to be one of the main obstacles to the creation and development of growth-oriented businesses;

The individual environmental footprint of the small enterprises may be low, their aggregate impact can, in some respects, exceed that of large businesses. The key sectors where SMEs have a significant environment impact include livestock farming, construction, metal finishing, waste treatment, food and drink industry, textile and leather manufacturing, etc.

SMEs account approximately for 64% of the industrial pollution in Europe. Sector variations are generally within the 60% to 70% range. Using employees as an indicator shows at an average of 64% of environmental impact originates from
SMEs in the EU27 when looking at the four broad indicators (energy use; greenhouse gases; air emissions and waste or hazardous waste). [11]

The transition towards the green growth economy is highly demanding in particular on manufacturing firms, including SMEs, as they account for a large part of the world’s consumption of resources and generation of waste. SMEs in general do not perceive their own environmental impact as compared to large enterprises. SMEs lack information, resources, technical knowledges and expertise to implement green initiatives. The environmental commitments are mostly depend on the SME owners.

It is essential to identify the main barriers to green growth and eco-innovation, so based on these factors SMEs and entrepreneurs could fully participate in the transition towards sustainable economic patterns. It is also crucial that consistent policy strategies are identified and implemented to encourage SME investment in eco-innovation and sustainable practices, in both manufacturing and services.

At time being there are no many researches on SMEs’ main barriers for environmental awareness. As one of the best summaries see below by the European commission.

The aim and key success factor in greening economy for SMEs to the reduction of the environmental in both manufacturing as well as in. However, the willingness and capability of SMEs to adopt sustainable practices and seize green business opportunities generally face difficulties and resource constraints, which involved skill deficit and knowledge limitations. SMEs are often unaware of many financially attractive opportunities for environmental improvement. There is a widespread misperception that protecting the environment is associated with technical complexity, burdens and costs. Even when they are aware of the potential of better environmental performance to improve a firm’s competitiveness, a lack of appropriate skills and expertise commonly prevents firms from acting upon win-win opportunities.

According to OECD guide for green SMEs the “green transformation” is a significant business opportunity for SMEs themselves as important suppliers of goods and services. Indeed, the principal drivers for SMEs to adopt green practices are non-regulatory and include: [12]

- The rising price of commodities and key raw materials;
- Potential cost savings and competitive advantage; and
- Market pressure from customers

The European Union considers the small businesses as priority in its policy and pushes governments across the EU introduce better regulation initiatives. The major policy initiatives for SME greening in the EU is The Small Business Act for
Europe (2008), which was developed to establish the “Think Small First” approach to policy making and regulation and to promote SMEs’ growth. One of its ten high-profile principles is “enable SMEs to turn environmental challenges into opportunities” – a paradigm which lies at the heart of the transition to green growth.
### Resources

- Lack of time to investigate issues or locate support or tools;
- Severe time pressure in small enterprises;
- Lack of resource allocation to address environmental issues;
- Lack of investment in training;
- Cost constrains on investment;
- No employee allocated responsibility for environmental issues.

### Attitudes and company culture

- Believes that SMEs have a low environmental impact and have no environmental issues to consider;
- Mismatch between beliefs and action: positive attitude toward the environment is not translated into actions;
- Perception that environment has no relevance to the business environment given no status as a business issue;
- Scepticism about the potential cost saving and market benefits;
- Prevalence on short-term business planning: beliefs that costs of environment measures arise quickly while benefits accrue slowly.

### Awareness

- Low awareness of environmental legislation;
- Low awareness of support organizations and information sources.

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**Figure 2.**

Internal Barriers in SMEs that prevent the adoption of environmental improvement

Source: European Commission, 2002
3 EU Green Action Plan - GAP

The European Commission has committed itself to “rigorously assessing the impact of forthcoming legislation and administrative initiatives on SMEs (“SME test”) and taking relevant results into account when designing proposals”. The European Commission has recently prepared a Green Action Plan (GAP) for SMEs, which give a clear direction and framework for aims to:

- Improve resource efficiency of European SMEs;
- Support green entrepreneurship;
- Exploit the opportunities of greener value (supply) chains; and
- Facilitate market access for green SMEs. Source: EC, 2008; EC, 2014b

GAP is presented in complementarity with the Communication Green Employment Initiative – Tapping into the job creation potential of the green economy, which proposes a roadmap for supporting green jobs creation across the EU, and with the Communication Resource Efficiency Opportunities in the Building Sector as well as with the Circular Economy Package and Waste Target Review.

The GAP aims to contribute to the re-industrialisation of Europe as advocated by the European Industrial Renaissance Communication (COM (2014) 14) and supported by the European Council, by enhancing SMEs competitiveness and supporting green business developments across all European regions, notably in view of the fact that, at this stage, significant differences in resource efficiency exist between sectors and Member States.

The European Commission document on Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on the Green Action Plan for SMEs highlights why greening SMEs in important for more competitiveness and sustainability. [13]
The Commission has set several objectives to be achieved through the following actions:

1. Provide European SMEs with practical information, advice and support on how to improve their resource efficiency in a cost-effective manner;
2. Support efficient technology transfer mechanism for green technologies;
3. Facilitate the access to finance for resource-related improvements and energy efficiency in SMEs.

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The Action Plan builds on the Eco-Innovation Action Plan (EcoAP) [14] which provides directions for eco-innovation policy and funding under the umbrella of the Europe 2020 strategy. A number of actions and instruments of the EcoAP are highly relevant for SMEs. Examples are:

- the European Innovation Scoreboard
- the Eco-innovation Observatory
- the European Forum on Eco-innovation
- European Innovation Partnerships and financing instruments for eco-innovation under Horizon 2020.

The GAP sets out a series of objectives and lists actions that will be implemented at European level within the framework of the Multiannual Financial Framework 2014-2020.

The five major tasks of the GAP are the following:

3.1 Greening SMEs for more competitiveness and sustainability

Improving resource efficiency in SMEs offers enormous potential for the reduction of production costs and for productivity gains. A better use of resources is calculated to represent an overall savings potential of €630 billion per year for European industry.[15]

At least 93% of SMEs in the EU are taking at least one action to be more resource efficient which, in most cases, is a low-cost action. However, only 42% of SMEs that implement measures to improve resource efficiency has seen a reduction of their production costs. This indicates the necessity to provide guidance to SMEs on
the cost-effectiveness of resource efficiency investments.

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- Support efficient technology transfer mechanism for green technologies;
- Facilitate the access to finance for resource-related improvements and energy efficiency in SMEs

3.2 Green entrepreneurship for the companies of the future

SMEs need a favourable business environment, in which green ideas can be easily developed, financed and brought to the market. “Green entrepreneurship” should already be addressed in (higher) education, to prepare the mind-set of future green entrepreneurs. [16] Green entrepreneurship should also be encouraged by helping potential entrepreneurs in identifying business opportunities resulting from the move towards a resource efficient, low carbon economy, including through new creative forms of cooperation between businesses and academia. All forms of innovation that foster green entrepreneurship should be supported.

The Commission has set several objectives to be achieved through the following actions:

- Promote all forms of eco-innovation, including non-technical eco-innovation;
- Facilitate business partnership, skills and knowledge for green entrepreneurship;
- Exploit better role of clusters in support of eco-innovative SMEs.

3.3 Opportunities for SMEs in a greener value chain

Re-manufacturing, repair, maintenance, recycling and eco-design have a great potential to become drivers of economic growth and job creation while, at the same time, making a contribution to addressing environmental challenges. Through innovation and the redesign of products and of production and business models companies can reduce the use of expensive primary raw materials and create less waste. The 60% of total waste in the EU which is not recycled, composted or re-used, offers economic opportunities for SMEs to capitalise on cross-sectoral value chains that make more efficient use of resources. [17]

The Commission has set several objectives to be achieved through the following actions:
Management, Enterprise and Benchmarking in the 21st Century
Budapest, 2017

- Address systemic barriers to cross-sectoral and cross-national value chain collaboration and business creation and cooperation, by facilitating the creation of service business models and the re-use of materials, products and waste;
- Facilitate cross-sectoral collaboration in view of promoting the circular economy;
- The forthcoming action on 'Cluster facilitated projects for new industrial value chains' under Horizon 2020 will allocate at least 75% of the total budget to support innovation in SMEs. It seeks to support cross-sectoral and cross-regional collaboration and innovation projects driven by SMEs by better integrating them into clusters and different value chains.

3.4 Access to the markets for green SMEs

The EU has a strategic interest to adequately tackle the major global environmental challenges such as climate change. With high economic growth and, in some cases, early stages of industrialisation, environmental depletion and emissions are growing at a high pace in many countries of the world.

The EU makes up roughly one third of the world market for environmental industries and is a net exporter. This world market is growing by 5% a year and is expected to triple by 2030, thus offering important opportunities for EU businesses. [18] However, few SMEs in the EU offer their green technologies, products or services in countries outside the EU. 87% of SMEs in the EU only sell in their national markets. [19] This lack of SME internationalisation is usually explained by the absence of a supportive framework that can help SMEs access foreign markets.

3.5 Governance

- The actions linked to this Green Action Plan for SMEs will be regularly monitored, including the dedicated financial resources, in dialogue with SME stakeholders, and the effectiveness of the programmes will also be evaluated. Updated information on the actions will be provided through the Commission website.
- The SME Performance Review monitors and assesses countries' progress in implementing the Small Business Act on an annual basis, including their performance in relation to its principle 9 'enabling SMEs to turn environmental challenges into business opportunities', thereby complementing the Green Action Plan monitoring. [20]
4 Green Entrepreneurship Award

4.1 European Entrepreneurship Promotion Awards

The European Enterprise Promotion Awards reward those who promote entrepreneurship and small business at the national, regional and local level. Initiatives from all EU countries, as well as Iceland, Serbia, and Turkey can take part in the competition. Since 2006, over 2,800 projects have entered the awards and together they have supported the creation of thousands of new companies. [21]

The competition has two stages. Applicants must first compete at national level to be eligible to compete at European level. For the national competition, each country will select two entries to be nominated for the European competition. A shortlist of nominees will be chosen by a European jury. All nominees from the national and European competitions will be invited to attend the awards ceremony.

In 2016, the winner of the category for support SME success to green markets was the Serbian “Lime Trees & Honey Bees for Sustainable Development of the Danube Micro-region” project strengthens the competitiveness of beekeeping in the Fruška Gora region and motivates young people to start beekeeping businesses. The project aims to increase the market share of Fruška Gora lime honey by investing in human resources and skills development, improved knowledge through scientific research, education and the introduction of new technologies. This project was founded by the European Union and the Austrian Development Agency. The project duration was 18 months. The project value was €222,658, out of which €171,915 was the grant amount.


4.2 Green Grog Award - GFA

The Deloitte Central European Sustainability Report Award – the Green Frog Award - is an award for best sustainability reports. The contest aims to identify and reward excellence in corporate non-financial reporting in Central Europe. [22]

The Green Frog Award (GFA) was launched in 2000 in Hungary and step by step embraced by other CE countries (Balkans joined in 2009, Czech Republic in 2012, and Baltics in 2013). From 2015, the GFA consists of a national and regional level. Reports rewarded at the national level will be automatically nominated to the Central European level.
Reports will be assessed according to these criteria:

1. Sustainability performance & strategic commitments
2. Materiality
3. Content
4. Structure and creativity in communication (getting the message across)
5. Impact measurement
6. Financial and non-financial data integration

The winner of the 2015 Sustainable Development Report was the Czech Plzeňský Prazdroj, a.s.

4.3 Green Economic Platform for SMEs - GreenEcoNet

The GreenEcoNet is the first global platform to support SMEs in the transition to a Green Economy, by providing:

- Access to the best in class green solutions, products and services;
- Access to the economic, financial and planning tools to transform their business into a green business;
- Access to new market opportunities by showcasing solutions, products and services;
- A space to have dialogue with policy makers and the research community involved in the green economy. [23]

GreenEcoNet is coordinated by a consortium of six leading research networks specialising in green economy transitions including the Stockholm Environment Institute (SEI), the Green Economy Coalition (GEC), the Dutch Joint Implement Network Climate and Sustainability, the Brussels based Centre for European Policy Studies (CEPS), Ecologic Institute and the University of Piraeus Research Centre (UPRC). The GreenEcoNet was funded by the European Commission through the Framework Programme 7 and its aim is to accelerate the uptake of green business practices across Europe.

4.4 European business awards for the environment

A growing number of businesses realise that protecting the environment is vital in maintaining Europe’s competitiveness. The European Business Awards for the Environment (EBAE) recognises these pioneers, celebrating those companies at the
forefront of eco-innovation, or which have a respect for the environment at the very core of their business principles. [24]

The awards are held every second year (the next cycle is 2016-2017), and winners are recognised in the following four categories: management, product and services, process innovation, and international business cooperation, with a special mention for business and biodiversity.

Conclusion

The European Commission, EU Member States and non-member countries, their Governments, the business community and the civil society have to search for new directions and embrace an economic model which is as low-carbon user-friendly and environmentally sustainable. In addition this model also fight against the poverty and inequality, while explores new market opportunities not only for smart and progressive, but also for average SMEs.

Solutions are urgently needed. We do not have too much time. Business as usual is not an option: choosing to “kick the can down the road” over the next few years will bring unacceptable environmental and social strains accelerating the natural disasters by climate disasters, foreshadowing the danger of a possible world war for drinking water and generating the African and Asian mass-migration.
EXHIBIT

The Global Goals for Sustainable Development


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