

## Green economy is no cure but could help restore economy

### Actions at different territorial levels can be the first steps

The economic crisis of the last years has increased the pressure to make better use of all development potentials to support jobs and growth. This also accelerated green economy ambitions and practices in some regions. Green activities can complement and provide societal outcomes that could include the potential to act as a buffering influence on the possible risks associated with future economic shocks. Decoupling economic growth from resource and energy use is the most relevant dimension for transition processes towards a more sustainable and resource efficient economic structure. Economic decoupling should also be the goal of policies seeking to strengthen such transitions.

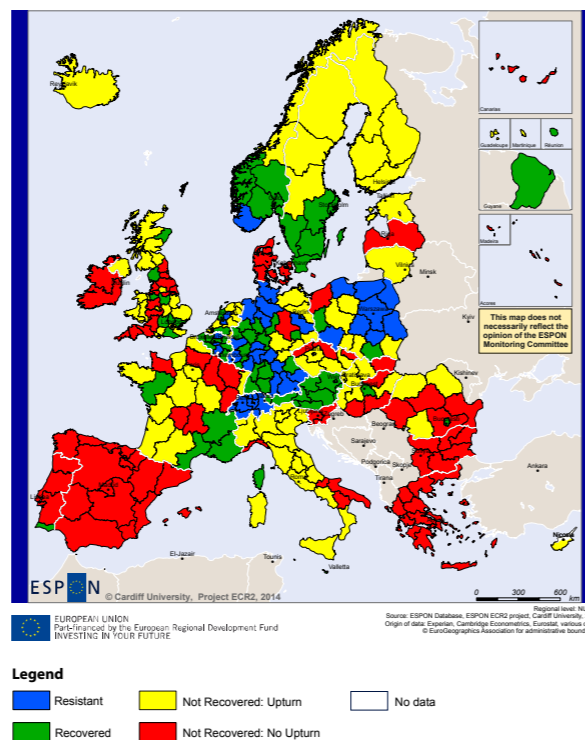
Nevertheless, green economy alone will not be the solution to overcome the current crisis. However, it can be an important step for the restoration of the economy and the creation of new and more job opportunities in Europe in the long term.

All opportunities to increase employment need to be explored, as the crisis meant drastic drops in employment figures in many European regions. However, the crisis has affected the employment in European regions to different extents. Looking at the employment resilience of regions across Europe, a diverse picture is visible (Map 2).

During the crisis, some regions did not experience a change in their employment rates. These include regions in Poland, Germany and southern Norway, as shown in blue. Other regions seem to have recovered to their pre-crisis employment levels, as southern regions of Sweden and Norway, regions in Western Germany, Austria, Eastern Poland and regions in France and the Algarve region in Portugal (shown in green).

Unlike regions in Italy, France, the UK, Sweden, Finland, Lithuania, Estonia, Iceland and some regions in Eastern Germany which show some potential for upturn (shown in yellow), regions shown in red demonstrate no recovery

Map 2. Employment resilience in Europe, 2011



and no upturn. Among these are regions in Greece, Spain, Ireland and Portugal, which were also hit stronger by the crisis, but also Latvia, regions in the UK, Denmark, some regions in France, in Bulgaria and Romania.

Green economy can be one ingredient in the economic recovery of these regions. Regions can benefit in the long run from green economy, through gradually adapting to more sustainable activities on the one hand, but also from the creation of new job opportunities on the other.

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### The shift towards green solutions in European regions

In the context of the recent economic crisis and the impacts of climate change, the Europe 2020 Strategy supports sustainable growth. The flagship initiative with regard to the latter aims at supporting the shift towards a resource efficient and low-carbon economy and at decoupling economic growth from resource and energy use. Also the Territorial Agenda of the European Union 2020 emphasises the need for a shift towards greener, low carbon economic activities as a consequence from rising energy prices and emissions.

Green economy is about enhancing regional competitiveness and territorial cohesion in the long term, through more sustainable use of natural resources, preservation of environmental capital and fewer environmental risks. Based on findings from the ESPON GRECO "Territorial Potentials for a Greener Economy" and ECR2 "Economic Crisis: Resilience of Regions" projects, this Evidence Brief sheds some light on the territorial dimension of the green economy.

### Regional green economic performance in Europe

#### Green economy spheres - a first way to measure performance

Green economic performance depends on two interrelated strands:

- the core dimensions or spheres of green economy (the territorial sphere, economic sphere, ecosphere, environmental sphere and social sphere); and
- the economic sectors relevant to the green economy.

Aggregating the performance of regions, according to several aspects of the five spheres (Table 1), provides an overview of the regional green economic performance.

Table 1. Headline indicators for regional green economic performance of core features of green economy

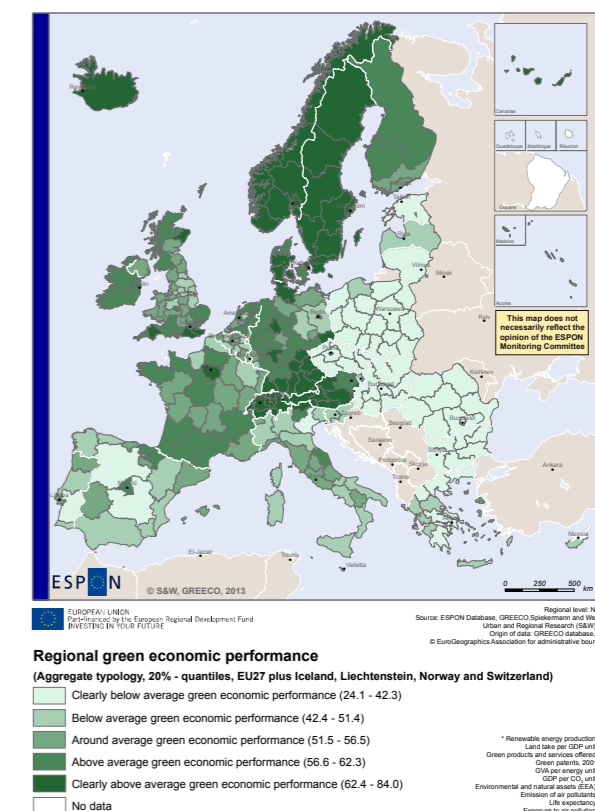
Green economy spheres	Headline indicator
Territorial sphere	Renewable energy production
	Land take per GDP unit
Economic sphere	Green products and services offered
	Green patents
Ecosphere (1)	GVA per energy unit
	GDP per CO <sub>2</sub> unit
Environmental sphere	Environmental and natural assets (EEA)
	Emission of air pollutants
Social sphere	Life expectancy
	Exposure to air pollution

(1) The ecosphere takes account of the extent to which decoupling of economic growth from energy consumption and resource depletion is taking place.

Each sphere contributes 20% to the overall performance of the region and a typology is built, composed of five quantiles (Map 1).

Not all regions in Europe perform equally as regards green economy. The current green economic performance is highest in the North and West of Europe and lower to the South and East.

Map 1. Typology of regional green economic performance, 2010



### Green economic performance in regions

Nordic and Alpine regions have a high performance in the environmental sphere, as an outcome of high environmental and natural assets combined with low emission levels. Their picture is similar on the territorial sphere, as a result of high level of production of renewable energy and high land productivity, and on the ecosphere, as they have a high economic output per energy unit used. On the other hand, Southern European regions suffer from high exposure to air pollution and Eastern European regions from low life expectancy. This explains the low performance of these regions in the social sphere.

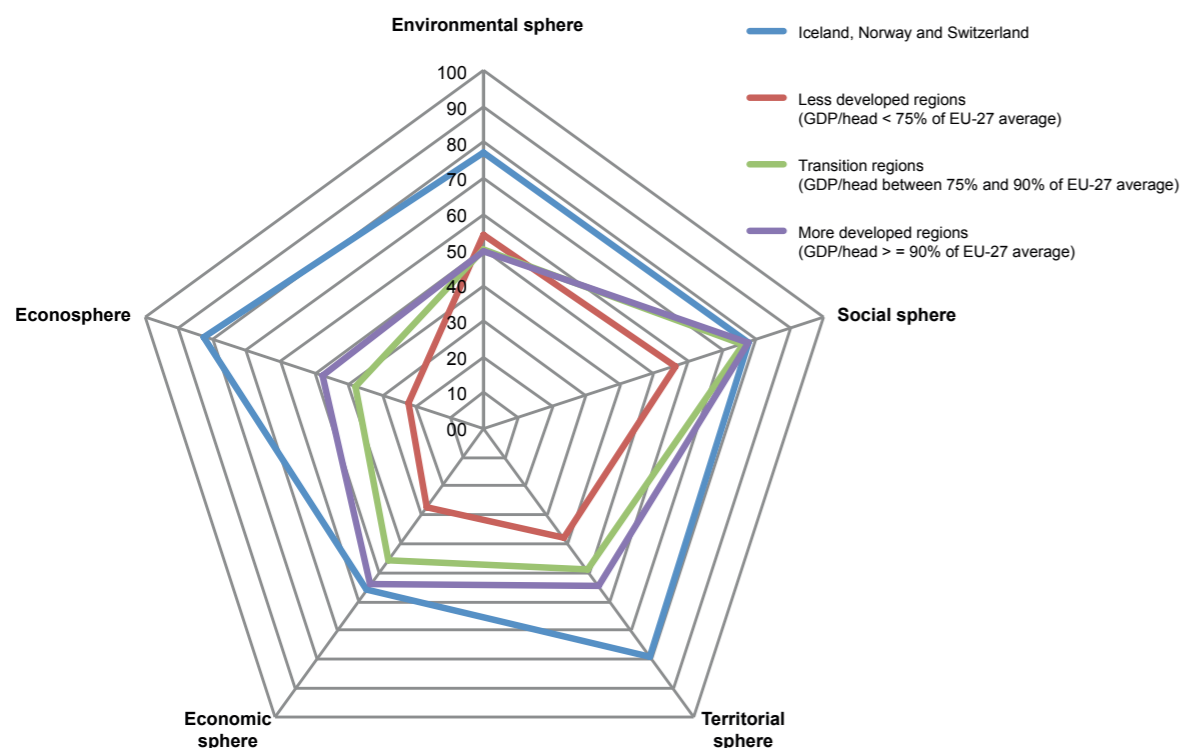
Combining performances in different spheres, one can observe that regions in Scandinavia, Iceland, Southern Germany, Austria and Switzerland show a clearly above average green economic performance. Also regions in Ireland, Finland, the Netherlands, the UK, France and Western Germany, as well as some regions in Italy and Spain, perform well in this field. On the other hand, typically regions on the Iberian Peninsula, in Greece and in Eastern Europe show clearly below average performance. Going into further detail, green economic performance in

urban and intermediate regions is higher than in rural regions even though the differences are relatively small.

The regional performance in the green economy spheres is also linked to their economic development (Figure 1). Grouping regions in EU Member States according to their economic development, in less developed regions (in red), transition regions (in green), more developed regions (in purple) and with regions in non-EU Member States, as Iceland, Norway and Switzerland as a separate group (in blue), provides the pattern shown.

Regions in the non-EU Member States have a high performance in all green economy spheres, when compared to regions in the EU. Taking a closer look at the ecosphere, economic sphere and territorial sphere, regions with high economic development have a higher green economy performance. In the social sphere, more developed regions and transition regions in the EU perform equally to regions in Iceland, Norway and Switzerland. Only in the environmental sphere, the less developed EU regions perform better than the other regions in the EU, but are still lagging behind the performance of regions in the non-EU Member States.

Figure 1. Economic development typology and regional green economic performance, 2010



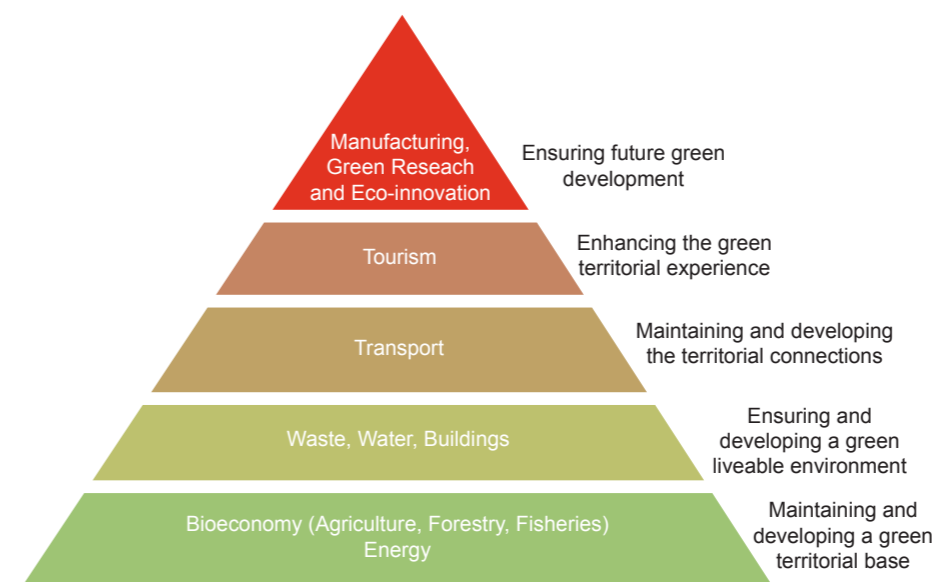
### Territorially relevant green economy sectors

#### Greening economic sectors to improve green regional performance

The second strand of regional green economic performance is economic sectors relevant to the green economy (Figure 2). The process of greening these economic

sectors is a first step towards moving to a green economy and achieving growth through environmental sustainable solutions.

Figure 2. Territorially relevant sectors in the green economy



Suggestions on greening the five sectors are presented below:

- Greening the bioeconomy and energy sector requires integrated and multifunctional land use solutions. This regards interconnections between economic, ecological and social values, food or renewable energy. A balanced land use with respect to the environment is necessary as regards the greening of these sectors.
- The improvement of resource efficiency and the re-use of resources are key for greening waste, water and building sectors.
- A greener transport requires multifunctional land use and environmental friendlier transport solutions.
- The tourism sector focuses often on the natural and cultural heritage. The sustainable management of the environment can form the attraction qualities of a region and appeal to more tourists and visitors.
- Concepts that regard the greening of the manufacturing and eco-innovation as well as other industrial sectors include the productivity improvement, resource efficiency and technological development.

Several of these sectors have a strong territorial dimension. Territorial bounds exit among others via their use of natural resources or by maintaining or developing territorial connections.

As intermediate bodies between the national and local level, regional authorities can be drivers towards greener economic sectors, coordinating transition processes towards a more sustainable and resource efficient economic structure. The regional administration of Puglia (Italy), for example, took important steps in changing the regional

innovation governance system in favour of renewable energy and it now ranks high in Italian classifications of green entrepreneurship.

Local authorities in cities and urban areas are the main actors in the transition process towards a green economy. They can promote the green economy by supporting voluntary agreements, regional or even international networks, local funding tools, green public transport in their region, or awareness raising. Local services can be used for knowledge and institutional support, which will be necessary for an envisaged complex and long-term transition process. As an example of greening the waste and energy sectors, the Kalundborg municipality (Denmark) supports the 'industrial symbiosis', according to which waste products from the production plants serve as inputs in other plants.

Green economy in rural areas is among many other sectors related to agriculture and tourism. The promotion of eco-labels for tourist accommodations and the promotion of local eco-products can raise tourists' sensitivity towards agricultural tourism and therefore be a first approach towards this sector. Small tourism enterprises in Estonia, for example, are exploring positive synergies between organic agriculture and tourism activities.

Greening the economy of sparsely populated areas could start with greening the transport sector. One example is the Green Highway project in the sparsely populated and peripheral county of Jämtland (Sweden). The project has transformed a transport corridor with high levels of greenhouse gases into a green transport axis along a renewable energy belt, including investments in electric vehicles and renewable fuels.

The process of greening economic sectors requires time, efforts, planning, investments in infrastructure and coherent actions. According to European strategies, steps need to be taken to improve regional green economic performance in Europe and create the ground for growth, jobs, sustainable solutions and economic development in the long run.