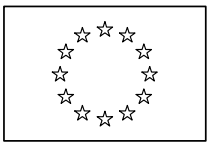

EUROPEAN COMMISSION

Brussels, 26.1.2011
SEC(2011) 92 final

COMMISSION STAFF WORKING DOCUMENT

of

Regional Policy contributing to sustainable growth in Europe 2020

COM(2011) 17

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of

Regional Policy contributing to sustainable growth in Europe 2020

1. INTRODUCTION

This Staff Working Document (SWD) provides a detailed complement to the narrative and proposals made in the Communication on "Regional Policy contributing to sustainable growth in Europe 2020"[1]. It is intended to support the authorities and any practitioner involved in Regional Policy (RP) with additional analysis and practical ways forward as well as a range of good practice examples along the priorities highlighted in the Communication. It will concretely help regional actors to deliver on sustainable growth for regional development through the current RP while setting the regions on track towards the objectives of the new "Europe 2020" strategy[2].

The sustainable growth priority of Europe 2020 underlines the imperative need to act on:

– combating climate change, strengthening our economies' resilience to climate risks and our capacity for disaster prevention and response;

– clean and efficient energy, reminding that meeting the EU objective of 20% of renewable energies sourcing could create more than 600.000 jobs and adding the 20% target on energy efficiency could mean well over one million new jobs in the EU.

– competitiveness, calling on the EU to maintain its lead in the market for green technologies while removing bottlenecks in key network infrastructures

Sustainable growth is both a major challenge and an opportunity for all Member States and regions[3] in the EU. A more competitive and sustainable economy, based on combating climate change, clean energy and resource efficiency, is a way of boosting jobs and market opportunities which can help the EU economies out of the financial crisis, while preventing environmental degradation and protecting biodiversity. This should underpin all economic, social and territorial cohesion efforts.

This Working Document stresses the role of RP, as an essential part of Cohesion Policy (CP), in delivering the second pillar of the "Europe 2020" strategy on "sustainable growth ", especially in its contribution to the flagship initiative on a "resource efficient Europe". It also draws on the recently adopted Fifth Report on Economic, Social and Territorial Cohesion[4], in particular its section on 'enhancing environmental sustainability'.

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1 COM(2011) 17

2 COM(2010)2020

3 The Committee of Regions has adopted a number of Opinions related to sustainable growth, underlining the role of local and regional authorities in this agenda, as well as the challenges and opportunities: http://portal.cor.europa.eu/europe2020/Pages/CoREurope2020RelatedOpinions.aspx

4 http://ec.europa.eu/regional_policy/sources/docoffic/official/reports/cohesion5/index_en.cfm

It underlines the opportunity to further mainstream the principles of sustainable development (SD) in the day-to-day operation of the RP programmes to maximise their impact on the sustainability of the EU regions. The EU Sustainable Development Strategy progress review[5] underlines the fact that SD goals and principles should be further integrated into regional development. Local and regional authorities (LRAs) are often the centre of actions to support sustainability embracing their role in land use planning, public transport, environmental infrastructure, education, health, training and social services. Hence, RP has a responsibility to engage with the LRAs in fostering the sustainability of their territories and societies in the context of the strategies and programmes of RP. The Green Paper on Territorial Cohesion[6] further underlines the importance of SD to strengthen territorial cohesion. These activities underline the environmental and economic pillars of SD[7] while highlighting the essential links to the social dimension.

In the next financial period, 2014-2020, the Commission will propose a closer alignment of regional funds with the priorities of the Europe 2020 strategy than is required by the current regulations, as underlined in the EU Budget review[8] and the Conclusions[9] of the Fifth Report on Economic, Social and Territorial Cohesion. However, in the current period there is still room for LRAs to deploy existing resources more effectively. While the Operational Programmes (OPs) for the current financial period are already set, there is scope to reconsider project priorities and launch new projects within the OPs.

2. CHALLENGES AND OPPORTUNITIES

The 'Europe 2020' strategy has set a new overarching focus on 'resource efficiency' including the preservation of natural resources and biodiversity. The role of the Structural and Cohesion Funds is particularly underlined in this flagship initiative on a 'Resource efficient Europe'[10].

In addition, since 2006 with the adoption of the Regulations on CP and the related Community Strategic Guidelines, a number of other key policy developments and socio-economic evolutions, not least the economic crises, have profoundly changed the regional development framework.

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5 COM(2009) 400 final

6 COM(2008) 616 final

7 The Brundtland Commission (World Commission Declaration on Environment and Development, 1987) defined SD as meeting the needs of current generations without compromising the ability of future generations to meet their own needs. This entails preserving enough economic, human, social and natural capital for production and direct consumption to ensure that future generations can meet their own needs

8 COM(2010) 700 final

9 COM(2010) 642 final; page 3: "The EU budget review outlined a new strategic programming approach for cohesion policy with a view to closer integration of EU policies to deliver the Europe 2020 Strategy and the Integrated Guidelines"

10 In this respect, see the 'Opinion of the committee of the regions on the contribution of cohesion policy to the Europe 2020 strategy', CdR 223/2010: "52.in respect of the "resource-efficient Europe" flagship initiative, welcomes the objective of decoupling economic growth from the use of resources in future, and feels that greater use should be made of Structural Fund resources, not least in relation to energy efficiency measures, alternative energy sources, the promotion of a recycling-based economy and the development of sustainable transport plans".

As highlighted in the Commission's working document 'Regions 2020'[11] and the fifth Cohesion report[12], EU regions face a number of key challenges such as globalisation, demographic change, energy security and climate change. On energy and climate change the EU has committed itself to the 20/20/20 objectives by 2020. Meeting such targets will have significant but variable effects on EU regions as some need to achieve much greater reductions than others. Beyond the efforts to mitigate climate change by tackling greenhouse gas (GHG) emissions regions also need to implement measures to adapt to climate change. It is anticipated that most European regions will be negatively affected by climate change[13], posing challenges to the environment and economic development as well as creating social fall-out (damage to homes from increased flooding, increased morbidity due to extreme heat waves, etc.). Those impacts will be asymmetric across European regions as it is outlined in a number of developments[14] including the recent White Paper on adaptation to climate change[15].

All those recent developments need to be quickly taken into account if the EU is to deliver on its 2020 targets. In particular the contribution of RP has to be aligned with the "Europe 2020" strategy.

Climate change, sustainable energy or protection of ecosystems and biodiversity have a strong regional dimension, including for instance the geographically diverse potential of renewable energy sources or the potential number of jobs linked with those investments. Hence, there is a need for public policy solutions to be designed and implemented at regional and local levels in partnership with the business and not-for-profit sectors. This also means that the success of EU policies in these fields will depend on the capacity to mobilise and empower regions and cities to implement and deliver on this vision of a low-carbon and resource efficient economy. The aim should be to reduce threats to long-term social well-being and build on opportunities to develop the innovations needed to deliver new sources of sustainable economic development.

A comparative analysis of the relative position of Member States on the sustainable use of resources[16] (see following Map1) with the planned investments into this area at regional level (see following Map 2) highlights a certain correlation between the potential needs and the geographic repartition of the investments. The details on the indicators and categories of investments which underpin those maps are available in the Annex II.

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11 SEC(2008) Regions 2020-an assessment of future challenges for EU Regions http://ec.europa.eu/regional_policy/sources/docoffic/working/regions2020/index_en.htm

12 "Protecting the environment and improving its quality, together with the effect of adapting to climate change and mitigating its consequences, are crucial issues for EU regions. However, their importance differs substantially across regions" p.143

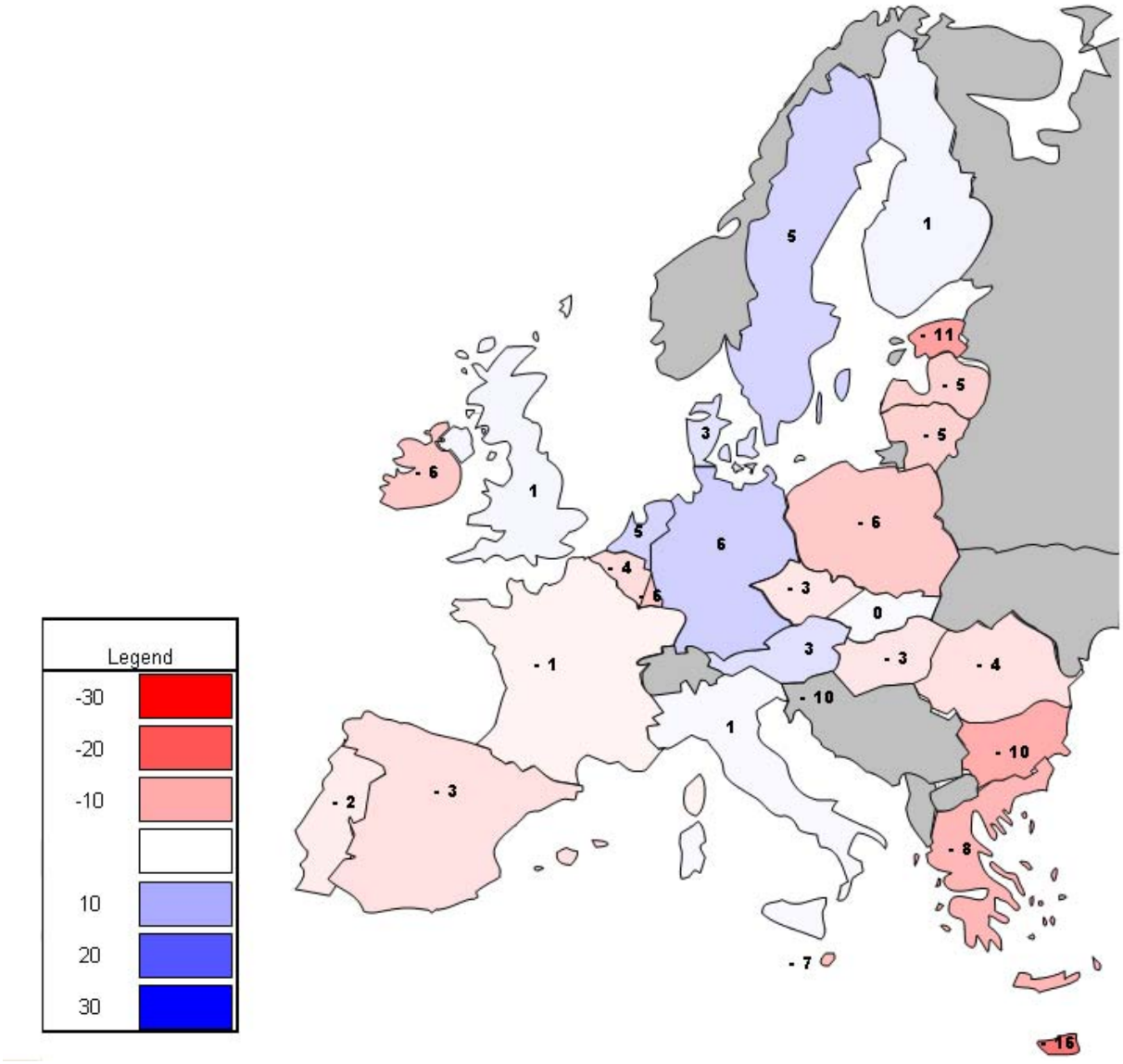
13 Annex 1: map on the climate vulnerability index

14 "Regions 2020 - the climate change challenge for European regions", March 2009, directorate general for RP, background document to commission staff working document sec(2008),2868 final http://ec.europa.eu/regional_policy/sources/docoffic/working/regions2020/pdf/regions2020_climat.pdf

15 COM(2009) 147 final

16 For the methodological background see the following article: http://ec.europa.eu/economy_finance/publications/economic_paper/2010/ecp401_en.htm

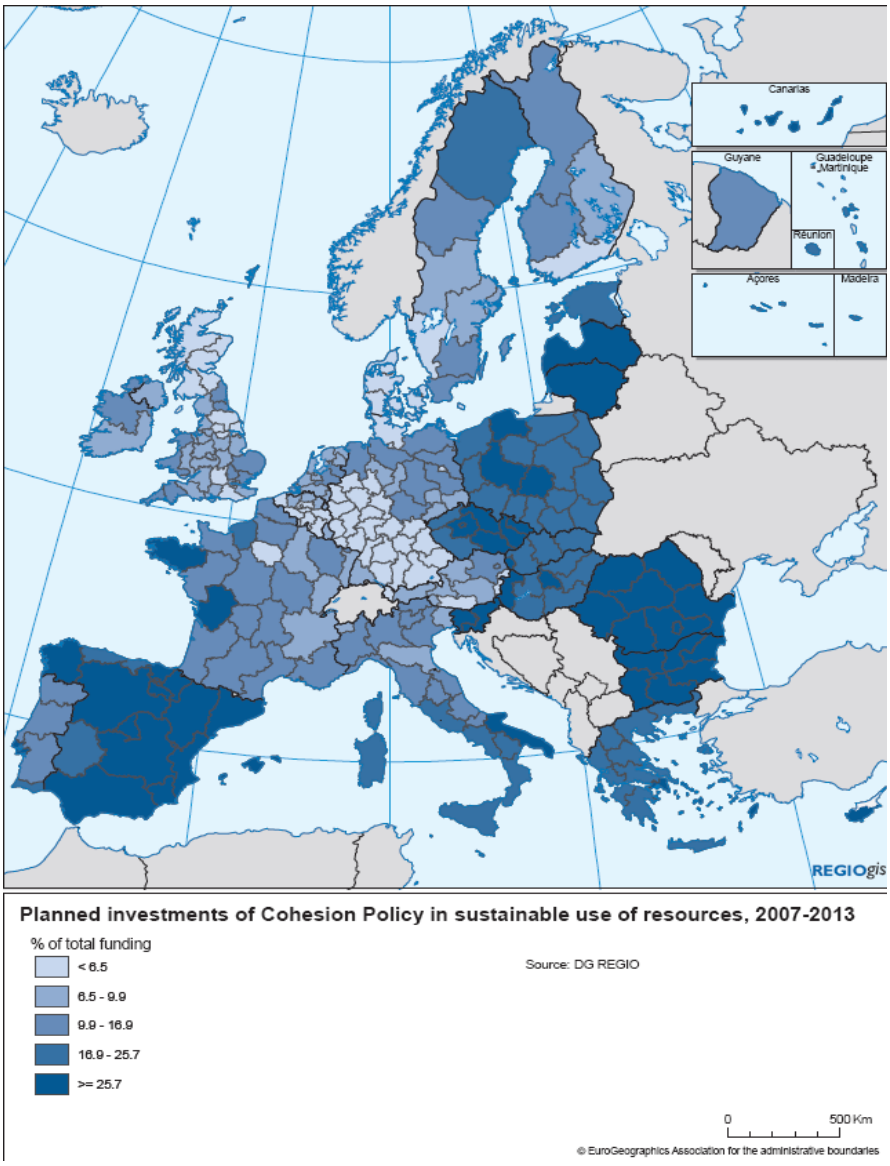
MAP 1: Relative position of Member States on 'sustainable use of resources'



Scores in 'sustainable use of resources'
Relative positions of MS: the higher the score, the better the situation

Source: European Commission, DG ECFIN

MAP 2: Planned investments of Cohesion Policy into 'sustainable use of resource' in 2007-13



Source: European Commission, DG REGIO

Over 2007-2013, about € 105 billion of RP funds will co-finance projects supporting sustainable growth, all across the regions as highlighted in Annex I, map 1. Data from the Member State 2010 strategic reports[17] highlights that there is still a lot of potential to use funds allocated to sustainable development of the regions. By end of September 2009[18] about 22% of available CP funding had been allocated to specific operations in favour of sustainable growth in comparison to approximately 27% on average for the overall CP in the MS. Across the main intervention categories and sub-categories progress varies markedly[19]. Results show

17 COM(2010)110

18 Six MS (DE, EE, EL, ES, FR, SI) have provided their data on allocation to selected projects at dates other than 30/09/09. This should be carefully taken into consideration when making comparative analysis of the graphics. It is recommended to compare MS progress to the EU average rather than making direct comparison between MS

19 Details in Annex III

that current investment of available funds for energy-related and environmental programmes is below average. At the start of this programming period, sustainable energy and climate change were not the priorities they are today limiting the development of projects. Other factors impacting on utilisation of funds are the financial crisis and restricted public budgets and insufficient technical expertise and administrative bottlenecks in what are sometimes relatively new areas of activity for managing authorities.

The still available funding in the different categories represents genuine opportunities to bolster sustainable growth at local and regional level. Policy-makers at all levels in the MS need to act without delay, invest more in sustainable growth, and more effectively mobilise funds in line with original programme objectives. Beyond the EU funding perspective, some regions are already actively engaged in the critical paradigm shift towards sustainable growth. Quite a number of regions have started implementing or are designing SD strategies such as the local or regional "Agenda 21"[20], as well as local or regional strategies on climate change. Regions are organising themselves in networks to exchange good practice and represent their interests in relation to these challenges not only at EU but also at UN level. In this perspective the urgency for RP to actively support and bolster such action should not be postponed until after 2013.

EU RP has now to flexibly adjust priorities to the emerging challenges and policy developments, be responsive to socio-economic needs and complement pro-active actions already taken at regional level. Accordingly, this SWD sets out a number of options still open to MS to seize the enormous potential to use the significant available funds to boost sustainable growth.

3. POLICY FRAMEWORK: THE UNIQUENESS OF RP FOR DELIVERING SUSTAINABLE GROWTH

Several attributes of RP make it particularly well-suited to address sustainable growth. As a place-based policy, it takes territorial characteristics into consideration, such as geographic, administrative, socio-economic aspects. Furthermore, it provides opportunities to forge public-private partnerships which represent an important tool for improved governance and sustainability.

The multi-level governance which is a cornerstone of RP also has the potential to reconcile various administrative levels dealing with sustainability topics. It provides a framework for integrating interventions within coherent EU, national, regional and local strategies, exploiting synergies between different investment decisions and controlling possible conflicting objectives and outcomes. In addition RP can be complemented by investments of the European Social Fund (ESF) in capacity building, training and new skills which are crucial for sustainable growth. Another unique feature of RP is its focus on cross-border, transnational and inter-regional cooperation. It is particularly well adapted to assist regions in solving environmental issues which often have wide geographic spill-over effects[21]. In this respect 35% of the funding available in the 2007-2013 period under the European Territorial Cooperation objective is already allocated to projects for sustainable growth. In addition the

[20] Agenda 21 is a programme run by the United Nations (UN) on SD http://www.un.org/esa/dsd/agenda21/

[21] Major river basins, trans-boundary pollution or cross-border/transnational climate change adaptation measures

macro-regional strategies on the Baltic Sea[22] and on the Danube[23] are also strongly built around the reinforcement of the sustainability dimension in this broader territorial cooperation initiative.

Evidence from the *ex-post* evaluation of Cohesion Policy in 2000-2006[24] on environment, underlines the importance of funding for the environment: the ERDF invested 21% or €25.5 billion of its total allocation in this area while another €15.8 billion was allocated to environment from the Cohesion Fund. The main areas of environment-related measures were environment infrastructure and rehabilitation measures. For example, the additional population connected to wastewater collection and treatment in the EU is estimated to be around 40 million (12% of the population) in the period 2000-2006, RP contributed to half of it. Data for the other sectors are more moderate but still very impressive: 14 million people are served by improved water supply, and waste treatment capacity increased by more than 230 000 m^3/day.

The *ex-post* evaluation further concludes that although very good environmental results were delivered, difficulties limited the effectiveness of the measures. For example, while the co-financed environmental investments have greatly contributed to meeting the requirements laid down in the environmental *acquis*, they were often not meant to deliver direct economic impacts. The evaluation concluded that, in many cases, environmental investments were not part of the general socio-economic development strategies or when environmental investments were intended for economic impact, the accompanying measures were not apparent and their coordination with other activities for regional economic development was limited. Most notably, problems with determining the appropriate treatment capacity and the trade-offs between the application of the polluter-pays-principle and what people in poorer regions could afford to pay for the services. In addition, environmental infrastructure does not have a sufficient short-term impact on the economic development of the region (apart from the demand side effect from the construction activities). To enhance its economic impact, there is need to ensure sufficient institutional capacity for the development of integrated strategies and a volume of good-quality projects, as well as to ensure that the measures adopted are specifically designed to correspond to region characteristics by integrating economic measures within the overall development strategy and exploiting synergies rather than in the special design of isolated environmental measures.

SD already constitutes a priority in the Regulation[25] and in the Community Strategic Guidelines on cohesion. Short after the mid-point of this programming period, this SWD provides policy practitioners with practical guidance for the current period and assists them to prepare the post-2013 programmes.

In order to increase the contribution of RP to sustainable growth this paper proposes a two pillar-approach:

Pillar I: investing more in sustainable growth: encouraging greater strategic focus in investments on sustainable growth with an emphasis on resource efficiency;

Pillar II: investing better in sustainable growth: improving policy delivery mechanisms by

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22 COM(2009)248 final

23 COM(2010) 715

24 http://ec.europa.eu/regional_policy/sources/docgener/evaluation/expost2006/wp5b_en.htm

25 Council Regulation (EC) No 1083/2006 of 11 July 2006, Article 16

reinforcing the application of sustainable development principles in the operational programmes.

It has to be a priority of all stakeholders in regional development to focus on opportunities that maximise economic, environmental and social benefits simultaneously. This necessitates identifying and making explicit the trade-offs between the two pillars during the early stages of the programme and project design phases in a much more systematic way. Subsequent investment decisions that fail to take into account the significance of these trade-offs should be given a low priority when selecting projects for funding under the RP funding. For the current and future programming periods, the integrated, multi-level governance and inter-regional co-operation approach privileged by RP needs to be maintained and reinforced across the board, with a view to strengthening the measurable outcomes[26] in terms of SD in the EU's regions and cities.

4. PROPOSED ACTIONS

Pillar I: Investing more in sustainable growth

This paper calls for greater focus of the investments targeting sustainable growth with an emphasis on three priorities:

(i) a low carbon economy (LCE),

(ii) ecosystem services and biodiversity,

(iii) eco-innovations.

In each of these areas the potential for securing jobs and improved economic competitiveness at local and regional level represents a genuine opportunity for development. The focus of investments should be towards win-win projects which benefit both the environment and socio-economic dimensions.

Furthermore, an evaluation[27] of the exit strategies from the economic crisis in a number of MS showed that the adopted stimulus packages were limited to short-term effects and they most often did not intend to resolve underlying structural issues in SD and social cohesion. Many structures of the economy - such as on transport and energy - are path-dependent and changes can involve high costs. Such changes can be easier to implement in times of economic crisis. The time is now ripe for shifting from short-term stimulus to mid-term policy frameworks.

The recent crisis has highlighted the need to increase efforts to decouple growth from energy use and become a more resource efficient economy, which will not only give Europe a competitive advantage, but also reduce its dependency on foreign sources of raw materials and commodities[28]. RP strategies and programmes need to dedicate greater effort to ensure a more comprehensive approach to sectoral investments and make them more effective. They need to cover both the development and wide utilisation of the green technologies of the

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[26] COM(2010) 642 final, p.4 chapter on 'Strengthening performance through conditionality and incentives'

[27] Taking advantage of the crisis: synergies between environmental policies and social inclusion, www.ecologic.eu

[28] COM(2010) 2020

future, as well as the ones improving today's resource efficiency. There is a need to ensure that the appropriate accompanying policies in areas such as promoting entrepreneurship, upgrading the workforce skills and making appropriate financing available are strengthened and factored in.

The substantial financial support provided by RP for investments in research, technological development and innovation must be closely aligned with the growth sectors of the future, helping regions to transform their challenges into opportunities, built on the basis of their indigenous resources.

1) Transition to a low carbon economy: focus on investments in energy efficiency, buildings, renewables and clean transport

Energy investments in buildings, renewable energies and clean transport are at the centre of the changes needed for transition to a low-carbon and resource efficient economy. Energy plays a crucial role in the cost basis and competitiveness of enterprises in general and of the energy intensive industries, in particular. Provided with the right conditions, enterprises will be able to adapt and seize the benefits of LCE, an essential condition to achieving a sustainable future and minimising the risk of carbon leakage[29].

A number of studies from public and private organisations[30] have identified possible roadmaps to meet a zero-carbon EU by 2050. The EU energy system needs to undergo a radical restructuring to meet the long-term objective of reducing GHG emissions by 80% by 2050 compared to the 1990 levels with the currently identified technologies. This effort cannot be achieved through only the energy sector becoming a low-carbon system but major contributions are needed from agriculture and land use, households, and the industrial and transport sectors[31].

The EU is at a strategic juncture in the coming five to ten years. The choices being made now and in the near future will ultimately be decisive in achieving the long-term vision. For example, over the next ten years, energy investments in the order of € 1 trillion are needed, both to diversify existing resources and replace equipment and to cater for challenging and changing energy requirements[32]. This is both a challenge and an opportunity: it can move the EU towards its goal in climate change mitigation or lock it into an unsustainable energy mix. It urges the EU to start investing substantially in the power grid of 2050 and boosting investment in energy research and innovation to accelerate the deployment of the low carbon technologies in the period 2020-30.

In relation to the present programming period, Managing Authorities (MAs) need to take greater advantage and accelerate investment of the already substantial support in RP to energy efficiency (EE) and renewable energy sources (RES). Secondly, whenever possible the total

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29 Commission Decision of 24 December 2009 determining, pursuant to Directive 2003/87/EC of the European Parliament and of the Council, a list of sectors and subsectors which are deemed to be exposed to a significant risk of carbon leakage

30 European Climate Foundation, "Roadmap 2050 - A Practical Guide to a Prosperous, Low-carbon Europe"; http://www.roadmap2050.eu/

31 Getting into the right lane for 2050, A primer for EU debate, by Netherlands Environmental Assessment Agency

32 Energy 2020: A strategy for competitive, sustainable and secure energy; COM(2010)639, 10 November 2010

level of investment to those priorities should be increased, given the key role they play in the sustainable development of the regions.

Energy investments in buildings

Over the recent years a number of major new EU policy measures as well as legislation have been adopted, including the climate and energy package 2008 and the recasting of the Directive on Energy Performance of Building[33] which is expected to create between 280,000 and 450,000 new jobs by 2020.

Buildings account for 41% of energy consumption, making this a key area for investment[34] to achieve EU 2020 targets, both in enhancing resource efficiency and creating local jobs.

Studies being undertaken to assess the impact of the present Energy Efficiency Action Plan[35] indicate that with the present and planned measures, the EU will fall (about 10%) short of fulfilling its commitment to reduce its energy consumption by 20% by 2020. The studies stress unsurprisingly the key role that increased energy efficiency in the building sector can play to meet the target, leading to a significant reduction in energy consumption. They also highlight the role that cities can play, particularly in the encouragement of new technologies and their diffusion.

Following the adoption of an amendment to the ERDF Regulation in May 2009[36], RP can now further (in addition to the existing contribution to sustainable energies in public, commercial and industrial buildings) assist investments in EE and RES in residential buildings that support social cohesion in the EU 27, with up to 4% of the national ERDF allocation available for this purpose. It represents a potential of € 8 billion of investments in this area through the 2007-2013 CP.

In addition an amendment to the same Regulation[37] extends the use of financial engineering instruments to investments in EE and RES in buildings, including existing housing.

RP encourages public-private partnerships based on a combination of grants and various forms of revolving funds that can be developed in collaboration with financial institutions and tailored to meet specific market needs. There are, for example, specific experiences with JASPERS[38] providing technical assistance to elaborate an energy efficiency scheme for public buildings in Warsaw, as well as with JESSICA[39], for example, in Lithuania and Estonia establishing holding funds to promote sustainable energies in the housing sector. Other interesting experiences exist with third private parties, known as ESCOs (Energy Service Companies) that may provide the financing for the energy investment and recover the incurred costs through the obtained energy savings. This approach has been followed by the

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33 Directive 2010/31/EU of 19 May 2010

34 SEC(2008) 2865, impact assessment for the recast of the buildings performance Directive 2002/91/EC

35 COM(2006)545 final

36 Regulation (EC) No 397/2009 of the European Parliament and the Council of 6 May 2009 amending Regulation (EC) No 1080/2006 on the European Regional Development Fund as regards the eligibility of energy efficiency and renewable energy investments in housing

37 OJ L158/1, 24.6.2010

38 JASPERS stands for Joint Assistance to Support Projects in European Regions. http://www.jaspers-europa-info.org/

39 JESSICA stands for Joint European Support for Sustainable Investment in City Areas. http://ec.europa.eu/regional_policy/funds/2007/jjj/jessica_en.htm

city of Berlin where about 1,300 public buildings have been refurbished through collaboration with ESCOs.

A number of EU cities have committed themselves to move beyond the EU 2020 targets on climate change and energy by joining the Covenant of Majors[40] which offers a further opportunity to achieve the EU goals with the support of the funds available under RP.

Building on the Covenant of Mayors approach

Within the 'Covenant of Mayors', the Province of Barcelona (ES) launched an ambitious sustainable energy plan in 140 municipalities covering 4.5 million people. The Province has promoted the participation of municipalities to the Covenant and is providing technical assistance to help prepare the Action Plans and providing coordination to ensure availability of public and private financial support as well as technical support for joint calls for tender for small municipalities. Further technical assistance is planned to assist in the preparation of concrete investment projects at municipal level partially funded by an EU ELENA grant. Based on preliminary studies CO_2 emissions reductions over 4 million tonnes/year are expected. The provincial plan focuses mainly on energy efficiency in public lighting and buildings and production of renewable energies such as solar roofs. The potential of investments in the next 3 years amount to € 500 million, to come partially from the EIB. The ERDF is considered to be used as a possible lever to enable housing providers and their local partners to make the investments.

A recent survey and report[41] by the Committee of the Regions with the support of the Covenant of Mayors initiative gathered further examples of good practices from EU regions and cities in the area of sustainable energy.

Investments in renewable energies

Achieving the EU target of 20% RES in final energy consumption in 2020 could provide about 410,000 additional jobs[42]. Furthermore, the deployment of RES can be an especially important driver of local economic development such as in rural areas as well as in peripheral regions or on islands. In this framework LRAs need to see RES as strategic investments securing employment and regional development. To reap the full benefits of the local RES potential (see map 3, Annex I for the example of solar energy), LRAs should address RES in a full life-cycle approach to develop an integrated regional supply chain on renewables, based on the local potentials. It will have cross-sectoral benefits at local and regional level from agriculture and forestry (biomass for energy) to SMEs, industry or the construction sectors.

In this encouraging framework, RP funding can currently assist in boosting RES in the heating and cooling sector, including efficient solutions such as district heating and co-

40 The Covenant of Mayors consists of the formal commitment by City Councils to go beyond the EU objectives in terms of CO2 reduction (more than 20%) through the preparation and implementation of Sustainable Energy Action Plans. To date over 2000 EU cities are committed members, see at http://www.eumayors.eu/

41 http://portal.cor.europa.eu/europe2020/news/Pages/SustainableEnergySurvey.aspx

42 The impact of renewable energy policy on economic growth and employment in the European Union; http://ec.europa.eu/energy/renewables/studies/doc/renewables/2009_employ_res_summary.pdf

generation or co-generation of heat and power from RES, and fostering renewable electricity from wind, biomass, solar, geothermal or marine energy.

MAs should also support investments in the local 'smart grids', as part of the wider TEN-E network, to effectively enable the exploitation of the decentralised RES potential. Further ways for LRAs to push forward the deployment of sustainable energy is to develop territorial energy agencies, possibly supported by RP funding[43], which provide the know-how, capacities and experience on integrated development of EE and RES. For instance MAs are encouraged to tap into the results of the Intelligent Energy Europe (IEE) programme[44] that has created 80 new local and regional energy agencies, adding to the 200 new energy agencies which were created during the 1990's by the SAVE programme[45]. It could be relevant to make use of these agencies in initiatives supported by RP.

Comprehensive development of renewable energy in Güssing, Austria

In a period of 15 years the town of Güssing[46] has been transformed from a state of economic decline to a thriving, forward-looking town, based on renewable energy. It used the targets in terms of renewable energy sources as a genuine opportunity for strong local development, rather than a constraint. Through the comprehensive use of renewable energies, especially biomass, it has created 50 new companies and 1 000 jobs in 15 years. The total reliance on local raw materials ensures a high level of value added for local producers, as well as sustainable woodland management. The town became self sufficient in the field of heat and electricity and can earn additional revenue by selling any surplus. During the 2000-06 period the ERDF supported those developments with € 15.8 million of investments. Cutting edge technology, and the commitment of the local authorities have driven the pace of change and now made a name for Güssing around the world.

Recovering from economic downturn with renewables: Bremerhaven, Germany

The economy of the city of Bremerhaven, based on shipping, shipbuilding and a commercial fishery faced a strong economic downturn in the 1990s forcing the local authorities to urgently look to economically diversify. Offshore wind energy was chosen as an alternative development since the region's historical strengths included comprehensive maritime technology know-how and an existing skilled workforce in this area. To date Bremerhaven has attracted four major manufacturers of wind turbines as well as companies specialised in offshore wind energy construction. Half of the €500 million invested in offshore wind power development along the German North Sea coastal region during the past years went to this city alone. The success of Bremerhaven is especially due to a clear and integrated industrial strategy, public ownership of land, and significant clustering of competencies. Bremerhaven's companies have already created some 700 new jobs and it is expected to rise to 1,000–1,200. To continue this growth, dedicated training schemes were put in place in the companies themselves, with the support of schools and universities in the region. Since summer 2008, the ERDF supports the 'POWER Cluster'[47] project, an Interreg IVB project which aims at

43 RegioStar project NRW Energy Agentur

44 http://ec.europa.eu/energy/intelligent/

45 http://www.managenergy.net/indexes/I30.htm

46 An extensive case study "ERDF – promotion of renewable energy sources in Burgenland: a model for other European regions" is available at: http://ec.europa.eu/regional_policy/newsroom/pdf/200912_burgenland.pdf

47 http://www.power-cluster.net/

building a northern European competence centre on offshore wind energy based on the learning and experience of 18 partners, especially those involved in Bremerhaven.

Finally**,** RP allocations to sustainable energy can be reinforced by working closely together with other EU policies. The objective is to develop synergies with the other EU funding instruments targeting energy efficiency and renewables. Hence, MAs are encouraged to draw on the assistance offered by the IEE programme as well as possibly by the LIFE+ programme[48] or FP7[49]. For the Covenant of Mayors initiative, RP could provide the technical assistance to assist the cities in preparing a pipeline of quality projects as well as financial engineering schemes to support the proposed investments. The aim should be to mainstream at regional level the successful small-scale projects on sustainable energy supported by other EU instruments and therefore ensure an efficient pipeline of projects.

Clean transport

The background for the RP intervention in this sector lies in the 2006 mid-term review of the White Paper on Transport Policy[50] that proposed a number of measures to overhaul the policy. Its objective is to make transport more sustainable and avoid the economic losses due to congestion, pollution and accidents. The mid-term review proposed a range of actions:

- the promotion of co-modality;
- an increased energy efficiency;
- the development of new technologies (i.e.: Intelligent Transport Systems) in all transport modes in order to cut costs and improve security; and
- the promotion of clean urban transport systems.

The 2009 Communication on the future of Transport Policy[51] underlines the need for an increased focus on environmental sustainability, shifting to more efficient transport modes and the introduction of innovative solutions. A new White Paper on Transport should be adopted soon for the period 2011-2020.

RP programmes for 2007-13 are already making a significant contribution to these sustainable objectives and in particular to the decarbonisation of transport[52]. However project delivery needs to be boosted. LRAs should build on the many opportunities offered by sustainable transport to create local employment, improve accessibility and reach a balanced territorial development while reducing their emissions and preserving resources. For example, during the present programming period further support can be provided, when appropriate, to sustainable transport projects that may be quickly implemented such as in urban public transport, intelligent transport systems or clean and energy efficient vehicle technologies or non-motorised transport. Priority should be given to projects that enhance sustainability and

48 http://ec.europa.eu/environment/life/

49 For instance 'The practical guide to EU funding opportunities for Research and Innovation' provides helpful support: http://cordis.europa.eu/eu-funding-guide/home_en.html

50 "European transport policy for 2010 : time to decide" (2001)

51 A sustainable future for transport: Towards an integrated, technology-led and user-friendly system' (COM(2009)279 final – 17 June 2009)

52 CP allocations for sustainable transport in the 207-13 period are of € 38 B and provide support for TEN and national/regional objectives investment in railways, mobile rail assets; cycle tracks, multimodal transports, intelligent transport systems, ports, clean urban transport

that are part of existing integrated EU/national/regional/urban transport strategies. The Irish example below illustrates an integrated approach to sustainable transport.

Sustainable transport scheme in Ireland

Ireland set up a new transport policy for 2009-2020 ("smarter travel – A Sustainable Transport Future") in which the Irish Government affirms its vision for sustainability in transport with an Action Plan, supported by the ERDF that includes:

(1) actions to reduce distance travelled by private car and encourage smarter travel, including pricing mechanisms or fiscal measures to encourage behavioural change,

(2) actions aimed at ensuring that alternatives to the car are more widely available, mainly through a radically improved public transport service and investment in clean and energy efficient vehicle technologies,

(3) actions aimed at improving the fuel efficiency of motorised transport through improved fleet structure, energy efficient driving and alternative technologies.

Concerning the 2014-2020 period RP programmes will have to build on the conclusions of the new White Paper on transport. Priority should be given to a radical renovation of road transport by decarbonising road vehicles and using the most appropriate transport type for the specific need. If road transport has a 70% share of the inland freight and passenger transport, and urban transport accounts for 40% of the CO_2 emissions from road transport, it seems clear that particular attention is needed for an integrated sustainable urban mobility. Moreover particular attention should be given to speeding up the implementation the € 19 billion indicative allocation from RP to TEN-T.

Further efforts are needed in technological development to accelerate the decarbonisation, such as RTD efforts with more focus on projects of a European dimension, boosting the development of alternative fuels from renewable energies and supporting intelligent transport systems and other related areas. Further, a high level of decarbonisation cannot be achieved by technological advances alone, and will need the contribution from a change in modal split too, as well as other behavioural changes as regards personal mobility.

2) Ecosystem services: focus on preserving and maximising the potential of the natural environment

The EU has missed its 2010 target of halting biodiversity decline[53]. One of the ten priority goals in the 2006-2010 Biodiversity Action Plan (BAP) was to ensure that EU funds for the regions benefit biodiversity and minimise and offset possible negative impacts of regional development. The final report of the BAP highlights the need for additional measures regarding RP such as careful infrastructure planning to ensure that development is compatible with and contributes to biodiversity protection.

To reinforce efforts the Member States[54] agreed on a new target for 2020 which will underpin the forthcoming new EU biodiversity strategy: to halt the loss of biodiversity and the

[53] COM(2010) 548 final

[54] Environment Council Conclusions 7536/10, 15 March 2010

degradation of ecosystem services in the EU by 2020, restore them in so far as feasible, while stepping up the EU contribution to averting global biodiversity loss. In this framework the Committee of the Regions recently underlined the role of local and regional authorities in halting the loss of biodiversity[55].

At international level, the EU has committed to the results of CBD COP 10[56], where one of strategic goals aims to enhancing the benefits from biodiversity and ecosystem services (and related targets) as part of the Strategic Plan for Biodiversity 2011-2020. To implement this Strategic Plan, all parties, including the EU, agreed to start working on a resources mobilisation process. Furthermore the international study on 'The Economics of Ecosystems and Biodiversity'[57] (TEEB study) co-driven by the Commission provides key inputs on where biodiversity strategies and policies should focus attention, in particular to deploy the approach in terms of ecosystem services. The TEEB report for Local and RP Makers[58] develops practical ways forward, underpinned by concrete examples, on how to protect and make a sustainable use of local/regional ecosystems. Along with other reports it shows the added value and efficiency from a comprehensive approach incorporating the conservation and sustainable use of ecosystems.

Investing in natural capital as a source of economic development

The way ahead for further protection of biodiversity and nature in the EU regions is to develop an integrated approach in terms of *'ecosystem services'*, the term used in the United Nations 2004 Millennium Ecosystem Assessment referring to naturally occurring benefits and the losses that can be suffered if they are not preserved. Such an approach requires a holistic view on the environment as a key overarching element of regional SD. Concretely any project touching mainly upon one dimension of the ecosystem should also take into account the relations and impacts on the other dimensions. The active protection of the different components of ecosystems such as its water resources, forests, soils[59], or arable land will ensure sustained basic services such as freshwater, food and biomass production, natural risk prevention, etc. The marine environment has also to be taken into account in this perspective, building on the objectives of the Marine Strategy Framework Directive[60]. It is therefore crucial at the local and regional level to promote the implementation of "win-win-win" measures, i.e. projects that benefit the economy, conserve biodiversity while actively contributing to climate mitigation and adaptation and ensuring further ecosystem services.

Biodiversity and ecosystem services constitute the underlying basis for all social and economic activities and provide ample opportunities for employment within SMEs and cultural activities. Economies and businesses depend directly (e.g. water supply and the tourism sector) or indirectly (e.g. pharmaceuticals, food and drink), on biodiversity and ecosystem services even where those services do not have market values. About 16.8% of

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55 CdR 112/2010 fin, Opinion of the Committee of the Regions on EU and international biodiversity policy beyond 2010

56 Tenth meeting of the Conference of the Parties to the Convention on Biological Diversity (CBD COP10), Nagoya, Japan 18-29 October 2010

57 More information available at: http://ec.europa.eu/environment/nature/biodiversity/economics/

58 http://www.teebweb.org/ForLocalandRegionalPolicy/tabid/1020/Default.aspx

59 Soil biodiversity represents a quarter of the global biodiversity and is directly involved in vital services such as mitigating climate change, storing and purifying water, providing antibiotics…To continue benefiting from theses services further efforts to value soil biodiversity are needed

60 Directive 2008/56/EC of the European parliament and of the Council of 17 June 2008

European jobs are indirectly linked to natural assets[61] while the estimated value of insect pollination for European agriculture is € 22 billion per year[62].There is growing attention given to the valuation of biodiversity and ecosystem services. Such investments can preserve biodiversity, strengthen adaptation to climate change, and indeed be financially profitable. Green infrastructure could also lead to new partnerships of biodiversity and CP funding with banks and financial operators, as they might realise that investing in green infrastructure could bring benefits in medium and long-term perspectives.

Investing in natural disaster prevention

In the last decade the EU has witnessed a significant increase in the number and severity of natural disasters such as flooding, forest fires or storms. Regions had to cope with the resulting major damage in terms of destruction of economic and social infrastructure as well as the degradation of often already fragile ecosystems. These catastrophes are expected to worsen as climate change increases the frequency and magnitude of extreme meteorological events. The recent Commission Communication on natural disaster prevention[63] further recognised natural disasters as an element which may adversely affect the economic growth and competitiveness of EU regions.

In this context, disaster prevention requires reinforced attention as a necessary objective in itself but also as a transversal issue to be integrated into regional development at large, beyond the sectoral approaches. Firstly, disaster prevention projects can have wide-spread and long-lasting co-benefits in terms of ecosystem services. Indeed well designed and implemented disaster prevention projects, such as the following Hungarian example on flood prevention, can also benefit biodiversity and preserve water quantity and quality, agriculture and eco-tourism. Secondly, disaster prevention needs to be viewed as a very sensible and effective investment since the costs of preventative measures are usually many times less than the potential costs of rehabilitation.

Concerning flood protection it might be for instance more effective to conserve or restore natural floodplains than to only construct artificial dikes that will increase the risk of flooding downstream (mal-adaptation). This is also underlined in the Commission's Directive on Flood Risks[64] which requires MS to carry out preliminary flood risk assessment by 2011.

Flood management along the Tisza River in Hungary

The Tisza River in eastern Hungary is flood prone. To tackle this threat a decision was made to create reservoirs on some of the original flood plains of the river which were curtailed by dikes over the centuries. It will also help to cope with climate change impacts. For the construction of six reservoirs and the relocation of some dikes, the ERDF and Cohesion Fund will invest € 290 million of a total of € 400 million. Those investments started in 2000-2006 and will continue over 2007-2013 which underlines the long planning and implementation time. A broad cross-sectoral approach was needed, involving several Ministries, the research and scientific community as well as local authorities and general public. The first reservoir was completed in 2008. In addition to helping to adapt to climate change, natural flood

61 TEEB – The Economics of Ecosystems and Biodiversity for National and International Policy Makers – Summary: Responding to the Value of Nature 2009.

62 Gallai et al. 2009

63 Communication on 'A Community approach on the prevention of natural and man-made disasters' adopted in February 2009

64 Directive 2007/60/EC on the assessment and management of flood risks

reservoirs have several co-benefits and are the typical win-win investments on ecosystem services:
- it is an efficient solution to significantly reduce flooding risks (buffer role of nature);
- it provides a storage of water for irrigation, thus offering a solution to ease droughts;
- it restores space to the river and nature thus protecting biodiversity (creation of wetlands);
- it addresses the problem of decreasing groundwater level (regular flooding of the reservoirs);
- it offers a new potential for eco-friendly agriculture, nature tourism and leisure activities.

Investing in "green infrastructure" and ecological networks

Green infrastructure[65] consists of spatially or functionally connected natural, semi-natural and man-made rural and urban elements such as forests, lakes, rivers, coastal zones, grassland, parks, green bridges... It can help to adapt to climate change and provides essential features for the maintenance of ecosystem services and is therefore key to maintaining a sustainable environment in which economies[66] can prosper.

In this respect managing authorities should further invest in the maintenance, creation or re-development of ecological networks and corridors such as Natura 2000 which already represents an essential building block (see map 4, Annex I) of an EU-wide nature network. The aim is to avoid fragmentation of landscapes and ensure connectivity to allow the free movement of wildlife. Ecological networks are an important feature of contemporary conservation of habitats and species.

ERDF funding for ecological corridors in Poland

Within Operational Programme “Infrastructure and Environment”, the 5th priority is focused on environmental protection and the promotion of ecological habits with a budget of € 89 million for 2007-13. In this framework, projects on green infrastructure are currently implemented. The Coordination Centre for Environmental Projects (CKPS) coordinates in Poland the implementation of nature projects co-financed by the ERDF and supports projects such as construction of animal passages, elimination of barriers for animal migration as well as small 'promotion' infrastructures (educational paths, touristic trail infrastructure). Natura 2000 is given priority since projects that focus on facilitating the integrity of Natura 2000 sites and the overall coherence of the network in Poland get higher scores during the selection process. Today CKPS supports actions related with green infrastructure in ca. 100 projects with overall budget of about € 50 million. One key role of those projects is about demonstration and feasibility, making the case for integrated approaches on gray infrastructure, nature conservation and water management.

65 Green infrastructure encompasses elements such as reforestation zones, green bridges and green roofs, green urban areas, fish migration channels, high nature value farmland or forest areas, which maintain ecological coherence as essential condition for healthy ecosystems. The added value of Green Infrastructure comes through its multifunctional use for greening transport, strengthening the functionality of ecosystems for delivering goods and services and for mitigating and adapting to climate change effects, for acting as barriers against erosion, and for enhancing the quality of life (health, tourism, conserving historic and cultural heritage).

66 The European Economic and Social Committee underlines that *'The concept of "green infrastructure" put forward in the Commission communication should be vigorously developed'* ; NAT/471 - CESE 1178/2010

One of the most effective ways of building green infrastructure is to adopt a more integrated approach to land management. This is usually best achieved through strategic spatial planning enabling spatial interactions between different land uses. It is therefore crucial that elements such as spatial planning, land use or forest and wetland management are taken into account when projects co-financed by RP have an impact on natural areas. This is especially the case for heavy and long-lasting infrastructures such as roads, motorways, railway lines, new business parks or waste water treatment plants. In addition, the construction of infrastructures leads to soil sealing as a result of covering of the soil surface with impervious materials. The sealed areas are lost to uses such as agriculture or forestry while the ecological soil functions are severely impaired or even prevented. Natural disaster prevention and adaptation to climate change actually starts at the very early stages of project development. Co-financed operations need to be undertaken respecting the relevant environmental legislation, in particular related to EIA, SEA and nature (appropriate assessment according to Article 6 of the Habitats Directive). Experience suggests that such assessments can bring economic and social benefits to project design through presenting different options at an early stage, thus avoid later problems. This should go hand and hand with an integrated planning approach, not only to minimise or avoid potential damage to the environment but rather to integrate environmental concerns in the planning stage.

Green Infrastructure can be more cost-efficient than technical solutions, Ireland[67]

In Anne Valley, Ireland, an integrated constructed wetland (ICW) was created instead of installing a traditional water treatment plant. Not only is the wetland is more efficient in clearing mostly livestock wastewater than a comparable traditional sewage plant, it also offers multiple benefits for the ecosystem services the wetland provides: water purification, fresh water, climate regulation and carbon sequestration, flood control, recreational aspects (it has been amended with hiking, pedestrian and cycling paths), soil formation and nutrient cycling - and it provides a suitable habitat for wetland flora and fauna (snipes and otters as example). Some economic benefits are hard to measure: for example, farmers are quoted that they only continue in farming due to the installation of this wetland, and the aesthetical value of the area has considerably increased. Capital costs for 1,750 population equivalents were € 770,000 plus € 165,000 for scientific monitoring of the project over three years. This sum includes costs for tourism facilities of € 220,000, meaning that the construction of the wetland was even cheaper, and maintenance costs are lower than for a traditional plant. This favourably compares to estimated costs of € 1,530,000 for an equivalent traditional plant. Financing stems from the EU LIFE programme and the ERDF through an INTERREG III A project and local funding sources.

As a further example, the management and/or development of protected areas in regions needs to be placed within the context of 'ecosystem services'. For example, nature parks are instruments and motors of regional sustainable growth in two ways. Firstly, they can provide important impulses for regional development through tourism, conservation activities, marketing of high quality regional goods and development of regional value-added chains. They also reinforce regional identity, improve the image of the region and contribute to education. Secondly, they conserve regional biodiversity and secure the crucial ecosystem services such as carbon sequestration, biomass production and climate change adaptation.

[67] Sources: Doody et al. (2009): Sewage treatment in an integrated constructed wetland. Municipal engineer 162 Issue ME4, p. 199-205. Harrington and McInnes (2009): Integrated constructed wetland (ICW) for livestock wastewater treatment. Biosource Technology 100 5498-5505

Investing in protected areas and parks is a smart investment in the regional environmental, social and economic assets.

Finally, MAs can seize the opportunities of developing synergies with other EU polices and funding instruments. Using RP the aim should be to mainstream at regional level successful small-scale projects supported by other EU instruments and therefore ensure an efficient pipeline of projects. MAs are especially encouraged to draw on the support offered by the LIFE programme[68] for nature and biodiversity protection, the European Agricultural Fund for Rural Development[69] and possibly also the European Fisheries Fund[70] and the research dimension through FP7[71].

3) Eco-innovations: focus on mobilising innovation partnerships and information technology

Eco-innovations are a natural junction of the pursuit towards resource efficiency, competitiveness and job creation as highlighted in several EU action plans[72]. The "Europe 2020" strategy stresses the need to drive investments towards a knowledge-based and resource-efficient economy. Within this framework a new EU Eco-Innovation Action Plan is currently underway. It will propose reinforced and new actions in order to deliver cleaner, resource-efficient and low-carbon economic growth, while helping to create new and better jobs in the EU. The aim is to harness the potential of eco-innovations to better protect the environment, significantly increase competitiveness and contribute to job creation in the long-term. Recent studies on the market for environmental technology[73] underscore the growing socio-economic potential of this sector. The eco-industry is one of Europe's biggest industrial sectors with around 3.4 million people directly employed in this sector in the EU. In recent years the eco-industry has grown by around 8% annually and 600,000 additional jobs were created between 2004 and 2008. Regions need to seize quickly the opportunities of investing in eco-innovations and Innovation in general as underlined in the recent Communication[74] on 'RP supporting smart growth in Europe 2020' such as through 'smart specialisation strategies'.

Greater support to eco-innovations

Public interventions such as RP are well placed to address some of the key hurdles to the deployment of eco-innovations. It can help to overcome the weak linkages between research and market, the skills gap as well as the problem of access to finance, especially in the area of ICT and for SMEs and clusters. The strategy to bolster environmental technologies and eco-innovations in general is already enshrined in a number of OPs of the current RP. The short-term challenge for each region is to develop strategies and projects tapping into their own eco-innovation potential. The specificities and conditions of each territory are paramount in this

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68 http://ec.europa.eu/environment/life/

69 Council Regulation (EC) No 1698/2005 of 20 September 2005

70 Council Regulation (EC) No 1198/2006 of 27 July 2006 on the European Fisheries Fund

71 For instance 'The practical guide to EU funding opportunities for Research and Innovation' provides helpful support: http://cordis.europa.eu/eu-funding-guide/home_en.html

72 COM(2004) 38 final, 'Environmental Technologies Action Plan (ETAP)' or COM(2008) 397 final 'Sustainable Consumption and Production and Sustainable Industrial Policy Action Plan'

73 The most competitive industries are the most resource efficient and the other way round Study 'The links between the environment and competitiveness', Project ENV.G.1/ETU/2007/0041, http://ec.europa.eu/environment/enveco/economics_policy/pdf/exec_summary_comp.pdf

74 COM(2010) 553 on RP and smart growth develops the concept of 'smart specialisation strategies'

respect. Successful eco-innovations for regional SD need also to factor in the relevant local actors (SMEs, universities, public authorities, etc).

In this respect SMEs have a central role. Enterprises are the cornerstone of socio-economic development in most of the regions. Therefore, to implement eco-innovative solutions, they should be fully integrated into the development and dissemination of environmental technologies and eco-innovations. Public investments are well placed to support those SMEs that bring about the necessary technical and managerial changes to save energy, resources and reduce pollution. It is a direct investment to sustainable growth as those SMEs will be more competitive, create jobs and help to better protect the environment. Programmes, as in the example below, can play an active role in bringing a well targeted business support and facilitating the exchange of good practices.

The 'Enworks' programme of North-West England (UK)[75]

'Enworks' is a business support programme, co-financed by the ERDF and established in 2001. It co-ordinates environmental advice, training and support to businesses and ensures that high quality environmental business support is available to all enterprises (especially SMEs) and is delivered in a co-ordinated way, increasing synergy and allowing good practice to be shared. Through 'Enworks' companies can access on-site support and an online toolkit to implement opportunities for improved resource efficiency. One 'Enworks' project specifically helped companies to improve resource efficiency and reduce waste thus increasing productivity and profitability. As a result since 2001 'Enworks' has helped:
- Over 3,600 businesses with £75 million cost savings;
- Save 190,000 tonnes of CO2 and 3,000,000 m3 of water;
- Save 180,000 tonnes of raw materials per annum;
- To provide more than 700 people with skills development.

Given its success 'Enworks' just received £9.9 million new investment (including £3.5 million ERDF) to extend its existing service with the following objectives, *inter alia*:
- Deliver 255,000 tonnes of CO2 savings;
- Create an additional 240 jobs in the region and safeguard a further 500.

Eventually the potential of eco-innovations for improved resource efficiency should be foreseen in a whole life cycle approach, integrating the production phase, the final product and the re-use or recycling. The ERDF already supports project related to the concepts of the 'closed-loop economy' or 'waste = food' such as the Interreg IVC Fast-Track project 'C2C Network'[76] or regional programmes[77] of the national industrial symbiosis programme in the UK. Those examples show that regions can already invest in regional strategies and projects to improve resource efficiency through eco-innovations.

Boosting eco-innovation through green technology clusters

RP can especially support eco-innovation projects such as through cluster development[78]. As shown in the following Austrian example MAs can use RP funding to develop a comprehensive strategy and related projects on eco-innovation clusters. Clusters and possibly also networks are concrete solutions that open up new opportunities to many companies while

75 http://www.enworks.com/

76 http://www.c2cn.eu/

77 Such as in the West Midlands, North East UK or Northern Ireland; http://www.nisp.org.uk/region.aspx

78 The geographical concentration of interdependent groups of firms, research institutions and other innovation stakeholders is often referred to as "clusters"

decisively strengthening their competitiveness. The Regions for Economic Change[79] initiative is an opportunity for further reinforcement of networking of eco-innovation and green technologies. Managing authorities are strongly encouraged to support environmental and energy clusters based on public-private partnerships as a means to further invest in eco-innovations.

Eco Innovation Support through Clusters in Lower Austria[80]

The region of Lower Austria developed a 'Networks & Clusters' programme co-financed by the ERDF. This initiative is managed under one umbrella by the regional Business Agency Ecoplus. It enables cross-cluster fertilisation, as well as implementing cross-cutting strategies such as fostering eco-innovation in all clusters. The cluster initiatives are part of the Regional Innovation System. The Green Building Cluster of Lower Austria bringing together expertise in energy efficient construction and rehabilitation of old buildings helped public authorities to define new technical standards and requirements. As a result the annual refurbishment rate has increased to about 2%. Within two years, it should be increase further to around 3%. This acts as a catalyst for technology, job creation and added value for Lower Austrian companies, with an estimated 6,000-9,000 new or safeguarded permanent jobs and a volume of building output of approx. €750m to €1b per year. The Plastics Cluster focuses on renewable resources. Results are now being turned into new products, e.g. PLA packaging films for food in cooperation with the Food Cluster. These successes are also linked to the close cooperation between the Lower Austrian companies, R&D and public authorities in combining ecologic challenges and business opportunities.

Promote Information and Communication Technologies (ICT)

Investments in the ICT sector represent an important step forward. It has been recently underlined in a Communication and Recommendations from the European Commission[81] which, like the Committee of the Regions[82], stress the role of regional and local authorities. Adequate ICT infrastructure has to be viewed as a key enabler for the deployment of green technologies and eco-innovations. It represents a sensible solution with potentially high return on investment. ICT is a powerful driver to maximise the results of investments in sectors like natural resource management, natural risk prevention, renewable energies or energy efficiency. The management of natural resources (water, biodiversity…) and natural risks can be improved through the implementation of ICT tools such as electronic maps, remote sensing, GIS (Geographic Information System) or EWS (Early Warning Systems). In the energy sector, the future lies in smart energy systems with a broad network of decentralised renewable energy production. Support to smart metering can lead to significant reduction in energy consumption and help tackle 'energy poverty'. Moving towards low-carbon transport will also require the deployment of intelligent transport systems. Overall the rapid deployment of broadband networks and access to modern ICT, even in remote areas such as on islands or mountains, is central to the implementation and reinforcement of eco-innovative solutions. In addition, it fosters reinforced social inclusion. An integrated approach to the use of RP funds

79 COM(2006) 675 final

80 www.ecoplus.at

81 COM(2009) 111 final and C(2009) 7604 final, on mobilising Information and Communication Technologies to facilitate the transition to an energy-efficient, low-carbon economy

82 CdR 254/2008 fin, opinion of the committee of the regions on addressing the challenge of energy efficiency through information and communication technologies

in this area will enable EU regions to maximise their investments in ICT through synergies in the environmental, energy, transport and social areas.

Regional Early Warning System (EWS) on water scarcity in the Alps

'Alp-Water-Scarce'[83] (Water Management Strategies against Water Scarcity in the Alps) is a three year project funded by the "Alpine Space programme" under the European Territorial Cooperation 2007-2013. The project commenced in October 2008, involves 17 partners from five countries in the Alps and is coordinated by the Mountain Institute, University of Savoy, France. It deals with developing water management strategies and especially the deployment of an early warning system (based on mobile phone supported hydro-climatological monitoring, hydrological models and GIS) to predict water scarcity at the seasonal and multi-annual level in the Eastern Alps (Regions of Veneto and Styria). Several universities, federal research institutes, regional provinces, local governments, regional agencies, alpine economical societies, geological surveys as well as chambers of agriculture and forestry participate in the project. It benefits from more than 20 observers including the Alpine Convention. The project strongly emphasises stakeholder participation within a Stakeholder Interaction Forum which is essential for exchange of experience, collection of information on water scarcity (which is often not yet available electronically) and distribution of information and knowledge. On the basis of questionnaires and with the support of a variety of ICT, qualitative information on problems and causes of water scarcity as well as possible solution strategies are transformed into quantitative information.

Last but not least, ensuring that people have the right skills for the jobs of today and tomorrow will be key to building resource efficiency. Investment in human capital to build the relevant skills-sets is a prerequisite. The European Social Fund can provide support to unlock the skills, creativity, entrepreneurialism and capacity of the workforce to innovate, in line with the Europe 2020 flagship initiative "An Agenda for new skills and jobs".

Furthermore it is essential that RP actions be designed in synergy with other EU polices in all the above fields. Hence, MAs should also use the support offered by other EU policies and instruments such as the Competitiveness and Innovation Framework Programme (CIP) and the 7th research Framework Programme, the European Agricultural Fund for Rural Development (EAFRD) and the LIFE+ programme. The practical guide to EU funding opportunities for Research and Innovation[84] provides helpful support in this respect.

Linking research and SD, the FP7-4-SD.EU website

A monitoring system "FP7-4-SD" was launched on April 2010 at: https://www.fp7-4-sd.eu. This web-based tool can help to identify at regional (and national) level the different FP7 research projects and participants, including SMEs and CSOs and measure their contribution to the operational objectives outlined in the Renewed EU Sustainable Development Strategy (Renewed EU SDS). Although the system had been developed on the basis of the content of the EU renewed SDS, it can be used for EU2020, to the extent that the flagship initiatives can be estimated by a set of operational objectives included in the EU renewed SDS. The

83 http://www.alpwaterscarce.eu/

84 http://cordis.europa.eu/eu-funding-guide/home_en.html

interactive database of FP7-4-SD.EU allows generating different analyses including the impact at regional level. For example, the Geographical View enables to zoom into a region and view the full list of projects and project partners related with the operational objective "Raising the level of Green Public Procurement". Information is available at regional level, which in principle corresponds to NUTS level 2, except for Belgium, Germany and the UK, where NUTS level 1 is used instead.

Pillar II: Investing better in sustainable growth for improving policy delivery

Achieving further integration of SD principles into regional development requires the adoption of a comprehensive approach that checks at every step in the decision-making process for opportunities to enhance the impact of investments on the sustainability of the region. Opportunities to foster SD exist from strategy preparation to project implementation and evaluation of its impact.

At project level, the basic approach consists of taking a holistic perspective that considers its whole life-cycle. The goal is to get the best possible added value in terms of SD out of each particular investment, taking into account all the opportunities for synergies. The project scope needs to be expanded in order not only to target the very part of the project which gets the co-financing but also the upstream and downstream parts in a fully integrated and cross-cutting attitude. In the context of the present RP procedures, it is proposed to enhance sustainability in each phase of the project cycle. It can be achieved by increasing the greening of public procurement and strengthening the climate resilience of investments to exploit every opportunity to develop a resource efficient economy and to deepen and apply a number of good practices in the area of good governance, an essential component of a successful SD strategy.

1) Integrating sustainability throughout the project life-cycle

Sustainable Development as an integral part from project design to delivery and monitoring

Project implementation can benefit from a broadened project cycle management approach. At the different stages of the project life-cycle opportunities exist to improve the sustainability performance of investments, requiring a consideration of the impacts of RP investments over appropriate timeframes.

The objective is to go beyond the sole 'delivery' perspective and to shift towards a long-term 'performance' perspective. This evolution is also needed to respond to the reinforced attention by the Court of Auditors on 'performance audits'. The recent Special Report[85] on waste water treatment measures in RP has to be placed into this context. It will increase the pressure on both the MS and the European Commission to deliver projects not only compliant with the relevant EU legislation but also performing adequately. Last year the Court of Auditors has also put "Climate change and sustainable Europe" in its new audit priorities[86]; it further

[85] Special Report No 3/2009, "The effectiveness of Structural Measures spending on waste water treatment for the 1994-1999 and 2000-2006 programme periods"; http://eca.europa.eu/portal/pls/portal/docs/1/2588293.PDF

[86] ECA/10/08; Presentation of the 2010 work programme of the European court of auditors to the committee on budgetary control of the European parliament; http://eca.europa.eu/portal/pls/portal/docs/1/3680724.PDF

underlines the necessity for RP to look specifically at the effectiveness of funding in the SD area.

As a promoter of public investment RP bears a responsibility in the process leading to the execution of the co-financed project as well as its aftermath. Some instruments, such as the SEA and EIA procedures, already provide a tool for verifying a number of key elements for ensuring the sustainability at the upstream phases for certain types of programme and project development. However, as sustainability is about a long-term commitment, the follow-up of co-financed projects and their impact also have to be considered. Over a reasonable timeframe, public investment should not only remain at the very least neutral in terms of impact on the sustainability of the territory, but lead to an improved situation in the region where the investment has taken place. This kind of approach requires project developers to look at the medium and long-term impacts of their developments and possibly integrate in the design, implementation, monitoring and evaluation of the project any corrective measure to avoid future imbalances.

Concretely, from the implementation perspective, a first step can take place at the 'project selection' phase that offers a clear way to reinforce the sustainability of the project. The procedure itself, the assessment criteria and the evaluation play a key role in ensuring that the projects adequately address SD considerations. MAs could consider the following ways to enhance inclusion of SD considerations:

(i) include SD aspects in calls for proposals,

(ii) tailor evaluation systems so that project proposals integrating SD are rewarded,

(iii) introduce checklists with stringent conditions to ensure that SD is included,

(iv) develop tender specifications for separate projects that are linked to the regional strategy in order to facilitate synergies between different sectors and individual projects, building on each other's strengths and weaknesses in terms of SD,

(v) develop a guide on how to enhance SD project identification and preparation.

The checklist for environmental impact assessment of project proposals in Finland[87]

To increase the commitment of the implementing authorities to undertake environmental impact assessment (EIA) of project proposals eligible to ERDF support, six regions in Finland have formed EIA panels. The role of the panel is to participate in and develop the EIA processes at authority level through dissemination of information and capacity building activities. By appointing EIA managers the task of developing the assessment procedure in the organization and the quality assurance is enforced. One practical way forward has been a standardised checklist for assessment of project proposals for the 2007-2013 period. Assessment concerns all projects and should indicate whether a project is environmentally neutral, beneficial or harmful. The main headlines of the assessment table are:

1. Impact on Climate change
2. Impacts on emissions

87 This project example and others are taken from the report by the European Network of Environmental Authorities (ENEA) on "***Improving the Climate Resilience of Cohesion Policy Funding Programmes***" available at: http://ec.europa.eu/environment/integration/pdf/enea/climate_resiliance_cfr_pr.pdf

3. Impacts on production and consumption
4. Impacts on the natural and built environment
5. Impacts on people
6. Impacts on traffic
7. Impacts on research and training

Guide for ensuring the integration of the horizontal Environment priority (Sweden)

A guide assisting supporting project promoters and desk officers in selecting and enhancing environmental aspects of the ERDF supported projects has been developed by the Swedish Environmental Protection Agency. The guide represents an awareness raising effort aimed at stimulating greater environmental awareness among both project applicants, managing authorities and selection committees. It has been widely accepted and is now used by the majority of project applicants to the ERDF. They are obliged to describe the impact of the project on the horizontal priority/criteria in the application form, responding to four compulsory questions:
- What are the environmental objectives of the project?
- What activities are planned in order to achieve the environmental objectives of the project?
- What effect does the result and impacts of the project have on the environment?
- Does the project have any impact on Natura 2000 areas?

The information provided in the application is followed up in progress reports during the implementation of the project.

Another way to implement a 'whole life-cycle' approach on projects is to move towards the internalisation of externalities. Environmental and social costs of projects, i.e. the externalities, need to be taken into account when assessing investments and possible alternative options.

A concrete way forward to be further explored is to adapt the 'Cost-Benefit Analysis' (CBA)[88] of projects. The aim is to consider the key sustainable factors for the projects, and integrate their long-term costs such as carbon, water use, land use, social inclusion, etc. In the short-term the focus on crucial factors such as carbon content or greenhouse gas emissions and their related costs represent a way to be further explored. The integration of the carbon factor into project development can be highlighted as a concrete procedure to significantly foster sustainability of the investment co-funded by RP. Future innovations might enlarge this approach to other important variables such as ‘land use’ or ‘water consumption’. This would also impact on the terms of the financial profitability of investments.

These various approaches and instruments are relevant to RP as they directly influence the decision procedure on co-financed projects and subsequently the quality of project delivery in terms of SD.

Reinforced use of Green Public Procurement (GPP)

A crucial stage of the project life cycle in terms of SD is linked to the procurement process. In this respect the potential of GPP as a policy instrument in addressing climate change and SD related issues is being increasingly recognised. Over recent years there has been a growing political commitment at the international, EU and national levels. In a recent

[88] http://ec.europa.eu/regional_policy/sources/docoffic/2007/working/wd4_cost_en.pdf

Communication[89], the Commission presented a proposal to set ambitious targets for green public procurement (GPP) linked to specific criteria. Public authorities in Europe spend €1.5 trillion a year on goods and services equivalent to 16% of EU GDP. Hence, public procurement is a key driver to strengthen SD in various sectors. From constructing transport infrastructures to renovating public buildings, and purchasing IT equipment to the rehabilitation of brown-field sites, public procurement has a huge impact in driving the market towards sustainable development. It is also crucial in the development of eco-innovation.

GPP represents a genuine opportunity and key instrument in projects co-financed by RP to foster SD. It needs to be factored in at a very early stage in project identification and preparation in order to get to a tendering procedure which fully integrates GPP requirements. In this respect, the Commission's tool kit to GPP[90] can be a helpful support for MAs and other local and regional authorities to overcome the challenges and barriers to the inclusion and deployment of GPP. There are a number of other supportive initiatives[91] in order to help authorities to implement GPP in the short-term. Spain provides a good practice regional example as outlined below.

The Green Public Procurement action plan of the Basque Country, Spain

The regional government of the Basque Country initiated a GPP Regional Action Plan (GPP RAP) in April 2008. In addition to boosting GPP the aim is also to show with real results how to fight climate change and promote local economy competitiveness, thus, helping other regions, provinces or supra-municipal organisation set their own strategies. The plan is developed and implemented through Ihobe[92], the Publicly Owned Environmental Management Company. The GPP RAP is especially innovative as it contributes, for instance:
- To highlight the role and importance of Regional Governments in promoting GPP;
- To develop a coordinated strategy with the demand and supply side of the market;
- To show the relation between procurement activities and climate change;
- To present real results/indicators (in CO2 and Euros) of environmental relief through GPP.

The successful elements of the GPP RAP are:
- Central coordination of the programme and one message from all regional public authorities;
- Best practices within the region and direct exchange in working groups, training sessions…
- Training courses and support in greening tender documents;
- Communication of experiences to gain internal support and political commitment;
- Support and preparation of the region's producer companies (supply side);

While regional action plans can represent a practical way forward to foster GPP, initiatives can also be taken at the local municipal level. The most common entry into GPP is then often through the procurement of office equipment which can be quickly extended to other categories of products such as energy or cleaning related products. The following example shows the room for initiative to support GPP both at regional and local level: a soft incentive in the form of an open competition at regional level can trigger practical implementation at municipal level.

89 COM(2008)400

90 http://ec.europa.eu/environment/gpp/toolkit_en.htm

91 The initiative 'Procura+' from ICLEI is designed to help support public authorities in implementing Sustainable Procurement – and help promote their achievements: http://www.procuraplus.org/

92 www.ihobe.net

Deploying GPP in municipal offices in the Czech Republic

A competition was organised in 2008 by the Hradec Králové region for environmentally-friendly operation of administrative offices and organisations. Around 350 entities from towns, municipalities and institutions in the region were invited to take part in the competition. With a questionnaire they were given an opportunity during three months to answer questions concerning the implementation of environmentally friendly operations within their organisations. A total of 62 institutions took part in the competition, of which 34 were municipal and city offices. Completed questionnaires were evaluated, and physical inspections of the actual situation were also carried out on the premises of the 20 best institutions. Assessments were conducted on the use of ecological resources which was the basis for purchasing and installing new, efficient lamps and for adopting other environmentally friendly measures. For instance products with ecolabels are purchased for running the office, specifically office items made from recycled materials, cleaning detergents, energy-saving fluorescent lamps, and recycled toners for printers. Those achievements are part of the project "Buy Smart"[93], funded by the European programme "Intelligent Energy Europe", which provides free consultation and information material on green procurement.

Overall, the integration of GPP stimulates local and regional economic actors to invest in more environmentally friendly processes, services and products. It also sends a clear message to all local and regional stakeholders as to where priorities are and the direction in which they should lead their company, SME, university, research centre, etc., in order to win tenders. In addition it will trigger a gradual adaptation of the skills, knowledge and capacities towards 'green skills' and support innovation towards SD.

Establishing proper indicators for monitoring and evaluation

Monitoring helps set the basis for informed policy making and reinforced SD. Designing appropriate indicators and collecting data on a set of economic, social and environmentally related criteria provides public authorities and project promoters with the necessary data and information to assess programme and project SD impact.

A first step is the setting up at national and regional level of a set of indicators informing on SD in general, even though not exclusively linked to RP programmes. A number of efforts are being made by MS and international organisations to develop representative headline indicators that can assist in measuring progress in SD. For example, Eurostat[94] has developed a number of such indicators that reflect the priority areas identified in the EU sustainable development strategies. In addition, the Communication 'GDP and beyond-Measuring progress in a changing world'[95], suggests the development of a SD scoreboard with up-to-date data that better reflects the concerns of citizens and recent developments such as governance and sustainable production and consumption.

Against this background, the contribution of RP supported investments could be traced through specific indicators at the appropriate level. For example, regarding the reduction of greenhouse gas emissions, 54 programmes out of 410 in the current programming period make provision for such indicators. This is a right step that needs to be replicated across all

93 http://www.buy-smart.info

94 Measuring progress towards a more sustainable Europe: SD indicators for the EU, data 1990-2005

95 COM(2009) 433 final of 20.08.2009

relevant programmes. Nevertheless, GHG emissions are only one element, of the environmental pillar of SD. Other indicators (such as waste per inhabitant, energy intensity, water consumption per inhabitant) should complement an SD monitoring framework that can be consolidated for regional SD scoreboards. The same applies to poverty and social exclusion, ageing society, public health or good governance themes that are also part of the SD strategy.

Even if such indicators have not been defined in current programmes, identifying and establishing them now will provide a baseline for future programmes. MA and regional authorities could also start to build on existing forms of monitoring with a view to develop a comprehensive monitoring framework such as in the following Bulgarian example.

Monitoring and evaluation of environmental issues in regional development: the example of Bulgaria

The project '*Integrating Global Environmental Issues into Bulgaria's Regional Development Process'* (Rio Conventions Project)[96] is a joint initiative of the United Nations Development Program (UNDP), the Bulgarian Ministry of Regional Development and Public Works (MRDPW) and the Ministry of Environment and Water (MoEW), financed by the Global Environmental Facility (GEF). The project supports the integration of three UN conventions (on biodiversity, climate change and combating desertification) into regional development and spatial planning processes in Bulgaria. The objective is to strengthen the capacities of MRDPW and MoEW for mainstreaming global environment into the formulation and implementation of regional and local development, as well as spatial planning policies. Specific indicators, training courses and a prototype application for a geographic information system (GIS) were developed. Seven specific strategic indicators were proposed to MoEW to be approved as part of the MRDPW monitoring system to assess the impact of regional development plans on climate change, biodiversity and land desertification. Those indicators were also officially included by MRDPW in guidelines to be used by district and municipal administrations.

Monitoring such SD indicators will provide helpful information for decision makers at regional or local level regarding key sustainability criteria. Nevertheless, the Strategic Report 2010 on the implementation of the 2007-13 programmes indicates clear scope for improvement in this area, with insufficient progress at this stage in data collection.

Another approach is the development of modelling systems which assess carbon emissions of certain type of investments, based on the information collected from selected indicators. These models support decision-making either on the proposed investments themselves to avoid CO_2 emissions or on palliative investments to compensate the emissions of other projects. The aim is to help reduce the CO2 emissions at programme level. The example below illustrates the use of a simulation tool to achieve these objectives[97].

The example of the French software as a carbon management tool

The National Strategic Reference Framework (NSRF) provided by France for the 2007-2013 operational programmes of Cohesion Policy states that "*all State-region project contracts and*

96 http://www.rioconventions.org/

97 http://www.datar.gouv.fr/IMG/Fichiers/DEVELOPPEMENT_DURABLE/Necater_presentation.pdf

operational programmes should aim to be carbon neutral. A monitoring system will be put in place to ensure this." A private company was commissioned to provide an IT system which enables regional authorities to make ex-ante assessment of the carbon impact of the regional development plans as well as monitoring the carbon impact (ex-post evaluations) at programme level. Based on the available national and regional statistics, the system turns the planned investments in Euros into CO2 quantities thus playing decision support tool role of. The CO2 emissions are calculated not only during the duration of the operational programme but also during and following project implementation. Once projects are implemented, the values or parameters can replace the funding amounts to refine the monitoring. In addition the use of this tool has a broad pedagogic aspect since it develops a "carbon culture" within the public planning authorities. The majority of the regions now have a good or very good track record in using this instrument and the provider has developed a new system which works also at project level.

2) Checking investments against climate resilience and resource efficiency

To deliver more qualitative projects in terms of SD, two methods of addressing programme and project development and implementation need to be considered by MAs:

(i) the climate resilience of their undertakings,

(ii) their resource efficiency.

Taking them into account will provide enhanced sustainability and a competitive advantage for their economies.

Screening operational programmes and projects for climate resilience

The impacts of climate change pose an unprecedented challenge to public policies and investments. While the current understanding of climate impact is still imperfect, policies and projects which risk to be directly or indirectly influenced by weather patterns can no longer be defined only according to past data and statistics but need to include the predicted changed conditions of the future. In this light the current policy choices regarding sensitive sectors such as agriculture, energy or water resources, and investment choices, for example, in infrastructure projects, will greatly influence the ability of regions to react to future climate change impacts. Since RP supports investments which will have a influence on local and regional development for decades to come, their climate resilience needs to be looked at.

Therefore, there is a need for decision-making on policy and investment choices to ensure that climate resilience is built in.

To achieve this goal, the outlined measures and strategies in this working document will contribute to building adaptive capacity and avoiding the potential adverse consequences that new investments may have on the vulnerability of existing ecosystems. It means that EU regions and cities need adequate information on climate change, the supportive social structure and the adequate governance mechanisms as a foundation in a first instance for delivering adaptation actions that directly help to reduce vulnerability to climate risks or exploit opportunities.

All those options can be enshrined in 'Regional Climate Adaptation Strategies'. The White Paper[98] on adaptation to climate change encourages EU regions to design such strategies by 2012. Those strategies are by nature 'place-based' and predominantly built around the local and regional socio-economic and environmental conditions. However, RP can provide support for the development of those strategies for which regions can make use of the recently developed guidelines[99]. In coastal areas, LRAs are encouraged to build on the developments of Integrated Coastal Zone Management (ICZM)[100] .

In practical terms a range of potential options should be evaluated in order to select the best possible measures to build climate resilience at local and regional level. The focus in the short term has to be on options often referred to as 'no-regrets', 'low-regrets' and 'win-win-win' options.

"No-regret" options are adaptive projects whose socio-economic benefits exceed their costs whatever the magnitude of future climate change. It includes actions that are already cost-effective under the current climate conditions and would be further justified under the increased risks of projected climate change. In short 'no-regret measures' are the guarantee of the best possible return on investments in terms of SD. Therefore a public investment policy such as RP is well placed to yield further support to those types of preventive measures. Avoiding building in flood plains or reducing leakage from drinking water pipes are examples of "no-regret" options to build climate resilience.

"Low-regret" options include adaptive measures with relatively low associated costs and potentially large benefits under the future climate conditions. Investments in preserving natural areas in support of biodiversity goals, creating green urban areas or the development of green roofs as shown in the Greek example below can be part of those options. Planning for future retro-fitting of investments, especially for certain type of infrastructure, is also in certain cases a low-regret measure. Both no and low-regret options will maximise the return on investment as the associated risk is low.

Green roofs for improved climate resilient building and cities

The Greek Ministry of Finance inaugurated in September 2008 a green roof on the building of its Treasury in Athens. The green roof covers 650m², equalling 52% of the roof space and 8% of the total floor space. Studies of the thermodynamics of the roof concluded that the thermal performance of the building was positively affected by the installation. In August 2009 energy savings of 50% were observed for air conditioning in the floor directly below the installation. Energy savings totalling €5,630 per annum were recorded, which translates to a 9% saving in air conditioning and a 4% saving in heating bills for the whole building. Beyond the energy aspect, green roofs have many potential benefits including:

- Controlling storm-water runoff, thus reducing urban flooding after heavy rain
- Providing green space in cities
- Creating wildlife habitat
- Improving water quality
- Mitigating urban heat-island effects
- Prolonging the service life of roofing materials
- Reducing sound reflection and transmission
- Conserving energy (less energy for heating and cooling)

98 COM(2009) 147

99 http://ec.europa.eu/environment/climat/adaptation/pdf/RAS%20Final%20Report.pdf

100 COM(2007)308

With limited additional investment, the co-benefits are therefore numerous and long lasting.

A 'win-win' option stands for measures which minimise the climate risks but have also other social, environmental or economic advantages. Relevant projects address climate impacts but can also contribute for instance to mitigation of climate change: increasing energy efficiency in buildings proves to be an investment with high return in any event: better insulated buildings offer improved protection against current and future heat and cold waves and also in the meantime reduces demand for heating and cooling, thus cutting energy bills and CO_2 emissions. An integrated approach to the development or re-development of a threatened area can also be build around win-win options such as in the following example on climate resilience of a coastal zone.

Adaptation of an infrastructure to climate impacts in coastal areas, France

On the French Mediterranean coast the "lido de Sète"[101] is a 12 km long coastal zone with high environmental value, several key socio-economic activities and important transport infrastructures (rail and road). It has to cope with severe coastal erosion and high tourism pressure threatening the sustainability of the whole area, including the coastal road which was regularly damaged. The decision was made by the competent national and regional authorities to invest € 60 million with the support of the ERDF for a major shift in the management of this area, taking into account adaptation to climate change and SD:
- the existing road will be destroyed and reconstructed further away from the beach;
- the beach and existing natural areas will be restored and newly protected (dunes, dikes);
- park places for cars will be regulated and made impossible close to the beach;
- soft transport modes to the beach will be developed (bus shuttles to the cities, bicycle lanes…);
- three type of beaches (all accessible to disabled people) will be created: a central "natural beach", two "semi-natural beaches" with basic facilities and two "urban beaches";
- economic activities (a research laboratory, one SME, wine-growing, a camping) are maintained in the new architecture of the coast;
This integrated redevelopment of the coast fulfils social, economic and environmental goals.

EU regions should take account of the 'climate dimension' of their development programmes and projects in order to improve their climate resilience. In addition it can be turned from a defensive approach into new opportunities for socio-economic development.

Investing in the most resource efficient options

The flagship initiative of "Europe 2020" on a "resource efficient Europe" has put resource efficiency under the spotlight in the context of a "resource constrained world". A number of other recent policy developments in the EU such as the Action Plan on "sustainable production and consumption"[102], the EU "Raw material initiative"[103] or the "Lead Market Initiative for Europe"[104] have also underlined the increasing pressure on resources. In this framework the policies aiming at SD, such as RP, need to reinforce the focus of programmes and measures on enhancing resource efficiency. The message of "Europe 2020" is a bold one in this perspective: the crucial role of structural funds to support this shift towards a resource efficient and low-carbon economy is clearly underlined.

101 http://www.pole-lagunes.org/ftp/dossier%20de%20presse%20lido%20sete.pdf
102 COM(2008) 397 final
103 COM(2008) 699
104 COM(2007) 860 final

Two key areas for the improvement of resource efficiency and of direct concern for RP are waste and water management. RP has provided significant investments in those areas over several programming periods. Nowadays they also represent an important economic sector in the EU under the heading of "eco-industry"[105], provide jobs and basic environmental services. Therefore EU co-funded projects on waste and water play an important role in SD at regional level. Indeed, a significant share of the Major Projects[106] actually concern water supply, waste water treatment or waste management. The EU has set a stringent legislative framework in both sectors with mandatory targets[107]. The deadlines to meet the requirements of those Directives can be addressed as true opportunities for the regions to improve their competitiveness, the state of the environment, tackle health issues and create jobs.

A fundamental element of the recently revised directive on Waste[108] is the legally binding new five step 'waste hierarchy'. It highlights the preferred options to be considered when designing waste management projects, i.e. waste prevention first, then preparing for reuse, followed by recycling, other recovery such as energy recovery and finally disposal. Any investment supported by RP in waste management projects should therefore be assessed against this framework to avoid a narrow approach only focused on the specific project itself. The revised Waste Directive also strengthens the existing provisions on waste management plans and introduces waste prevention programmes. But with the revised directive, waste management plans will now have to give a clear priority to waste prevention and recycling over other options. Regions can address this development as a true opportunity to create green jobs and capitalise on waste prevention and recycling projects to develop co-benefits as in the example below. In addition waste prevention and recycling make an important contribution to cutting GHG emissions from waste and therefore help meeting the EU 2020 climate targets.

Integrated recycling, composting and biogas plant in Sant'Antnin, Malta

The waste treatment plant of Sant'Antnin received €16.7 million EU in co-financing from the Cohesion Fund in support of upgrading the plant and acquiring modern technology as follows:

- Material Recovery Facility for the manual sorting of dry recyclable waste recovered by separation at source, including products received from the Bring-in Sites;
- Mechanical Treatment Plant (MTP) to mechanically separate the municipal waste received to prepare the organic fraction for further processing;
- Composting Plant, treating the source-separated biodegradable waste and mechanically sorted biodegradable waste from the MTP in order to produce biogas and digested material to be used as compost;
- Combined Heat and Power Plant (CHP), which will run on the produced biogas and return electrical power enough for 1,400 households of 4 persons each, besides the heat required to run the plant;

105 Ernst & Young, Eco-industry, its size, employment, perspectives and barriers to growth in an enlarged EU, August 2006; "The estimated total turnover of eco-industries in the EU-25 is €227 billion, of which €214,000 million corresponds to the EU-15 area. In constant prices, the turnover of the eco industries grew around 7% between 1999 and 2004 (for the EU-15 area)"[…] "The total direct and indirect employment due to eco-industries represent approximately 3.4 million full-time job equivalents, of which 2.3 million jobs are from pollution management activities. Resource management activities represent approximately 1 million full-time job equivalents. The majority (77%) of the jobs in the pollution management activities are in the waste water treatment and solid waste management sectors" http://ec.europa.eu/environment/enveco/eco_industry/pdf/ecoindustry2006_summary.pdf

106 Projects worth more than € 50 million

107 Directive 2008/98/EC on waste (Waste Framework Directive) and EU Water Framework Directive (Directive 2000/60/EC)

108 Directive 2008/98/EC of 19 November 2008 on waste and repealing certain Directives

With this upgrade, the plant annually processes and treats 36,000 tonnes of dry recyclables and 35,000 tonnes of organic waste mainly resulting from the municipal waster produced by residents in the vicinity.

Building on the EU Water Framework Directive, RP invests massively into the water sector such as in the management of drinking water. As for waste, investments in drinking water can be placed into a hierarchy of options based on the water hierarchy laid down in the Commission's Communication on water scarcity and droughts[109]. Water savings, increased efficiency in water utilisation, water pricing policy or cost-effective measures on demand management should be undertaken first. Other alternatives such as planning for additional water supply infrastructure should only be considered when those first options have been exhausted. At project level, local solutions such as reducing leakage in pipes, installing rain-water collectors or re-use of recycled water are practical ways forward. In addition, in water scarce regions it is paramount to engage in a wider systemic reflexion on the overall sustainability of regional water systems.

In the medium-term, RP could build further on the principle of recovery of the costs of water services, which are mandatory to MS since the end of 2010, and align funding for water projects with an effective implementation of this principle.

Eventually, the approach of investments in terms of a preference of options enables co-funded projects to maximise their added-value as it looks for the most efficient balance between the economic, social and environmental objectives. Furthermore, it is a good example for national, regional and local authorities as well as projects applicants to engage in SD for projects which do not get EU funding.

3) Better Governance

Europe 2020's objectives will be achieved more effectively if use of structural and cohesion funds is part of a broader policy framework providing the necessary legal certainty and appropriate incentives. In practice this means that regional policy programmes and projects should be accompanied by changes in the regulatory and administrative framework.

Broaden partnerships and reinforce the strategic content of Monitoring Committees

As underlined in a resolution of the European Parliament[110] regarding governance and partnership for projects in the sphere of RP, governance is a crucial building block to achieve SD. They are interconnected because they transcend the competencies of individual line ministries as well as the vertical tiers of jurisdictions, from supranational institutions to municipal authorities. In addition, successful experiences in policy delivery have demonstrated that a proper representation of socio-economic partners (for example, the business community, trade unions, consumer associations, universities and the training sector, NGOs…) has to be taken into account when designing and implementing SD.

The *ex-post* evaluation[111] of the governance systems for Cohesion Policy during the 2000-2006 period confirms that these systems are fit-for-purpose to deliver SD. The evaluation

109 COM(2007) 414 final

110 Own-initiative report by the European Parliament, 2008/2064(INI), Governance and partnership at a national, regional and project basis in the field of Regional Policy;

111 http://ec.europa.eu/regional_policy/sources/docgener/evaluation/rado2_en.htm

noted that across the EU initiatives were being taken to incorporate SD concerns into programme design and management. It facilitated the balanced consideration of economic, social and environmental factors. Rather than treating the different dimensions of sustainable development in a separate manner, some MS considered how they interact and benefit and potentially compromise each another so that programme and project activities integrate economic growth, employment generation, social cohesion and environmental improvement. Particularly important was a cross-sectoral approach in partnership-building, bringing together an appropriate range of expertise with horizontal and vertical interaction and shared decision-making that facilitated institutional learning and associated organisational change.

One of the most significant challenges of SD governance is to establish mechanisms to ensure effective horizontal policy integration, i.e. across sectors, at the different administrative levels (national/regional/local: vertical policy integration) which means developing a kind of "diagonal policy integration"[112].

SD design and implementation can benefit from an inter-ministerial structure instead of depending on one sectoral ministry or department. The following example illustrates the SD governance approach followed in France.

Inclusion of territorial authorities and socio-economic partners to strengthen SD

In June 2003 a new sustainable development governance structure was established in France with the creation of an "Inter-ministerial Committee for SD". It manages the SD policy of the French Government and looks also at the coherence of the actions of the different line ministries. This Committee is managed by an 'inter-ministerial delegate' who reports directly to the Prime Minister. It adopted the national strategy on SD in June 2003 (updated in 2007) which was developed in coordination with the "national council on SD" bringing together 90 representatives of the socio-economic area, civil society and the territorial authorities. In order to further engage regional and local authorities on SD, the Ministry in charge of SD launched in 2006 "calls for acknowledgment of territorial SD strategies": local and regional authorities are encouraged to submit their SD strategies or 'Agenda 21'[113] to the Ministry to get an official acknowledgment of their quality. In order to boost SD in France a vast national initiative[114] was launched in July 2007. Five categories of stakeholders including territorial authorities were involved in an extensive consultation process around six thematic working groups. The conclusions of those working groups were taken over by "operational committees", including one on the territorial aspect of SD. They came up with concrete proposals that were turned into a new law adopted by the French Parliament in August 2009.

The partnership principle underpins RP and constitutes an essential tool for improved governance. The RP regulations leave room for national practices in the application of the principle. It is important to underline the benefit that partnership adds to the sustainable development of programmes and projects. The involvement of civil society in public policies works best when it starts from the beginning (design stage) and lasts throughout the whole programme cycle. It is essential for creating ownership and consensus among the stakeholders that drive project implementation and the wider public thus fostering public acceptance. Mobilisation of civil society goes hand in hand with a bottom-up approach to project

112 European Sustainable Development Network (ESDN), Quarterly Report June 2009, http://www.sd-network.eu/?k=quarterly%20reports&report_id=13

113 http://www.agenda21france.org/

114 "Grenelle de l'Environnement" http://www.legrenelle-environnement.gouv.fr/

development strongly encouraging the population to participate from the beginning. Civil society inclusion is also key driver for social inclusion. In addition, co-financed projects may require mandatory environmental assessments. It implies a mandatory public consultation on project developments. In this aspect, following the spirit of the Aarhus Convention[115], national and regional authorities have further room of manoeuvre to build on the richness and diversity of civil society bodies when dealing with SD topics.

To enhance partnership, MAs can take a number of initiatives to further involve and commit the civil society. In particular, Monitoring Committees could benefit from a more active involvement of the socio-economic partners. They could be involved in the establishment of the meetings' agenda and in discussions requesting clarifications on issues of their direct interest. The Committees need to review periodically progress in meeting the stated objectives for the strategy and operational programmes, as well as the possible need to revise them, agreeing on the corrective measures needed. Active participation of programmes stakeholders will contribute to more effective exchanges and provide feedback for fine-tuning the programmes' orientations. RP can contribute to reinforce the capacity building of these partners, such as in the example below.

Increasing capacity building of socio-economic partners in Slovenia

Lack of capacity amongst NGOs in Slovenia was seen as a barrier to the effective implementation of the partnership principle in the 2004-2006 period. As a consequence, a specific priority to develop NGOs was established in the ESF Operational Programme 'Human Resource Development' in Slovenia. Around € 13 million has been allocated to improving the management, organisation and development capacities of NGOs working with vulnerable groups. This led to the Centre for Information Service, Cooperation and Development of NGOs, (CNVOS) being selected after a public call to support NGOs in the Structural Funds programmes. CNVOS was established in 2001. The aim of its 27 founding organisations is to empower NGOs in Slovenia and to promote their role as an important part of civil society. Over 200 organisations have now joined CNVOS which supports NGOs in their engagement in the CP and selects NGO representatives to participate in the Monitoring Committees of the Structural and Cohesion Funds.

The following good practice example from Germany illustrates an interesting approach to further engage local administrative levels in the implementation of regional strategies.

Engaging local authorities in regional strategies

The regional government of North-Rhine-Westphalia (NRW), Germany adopted in early 2009 a regional strategy on adaptation to climate change. In order to get broad involvement at municipal level of the regional authorities organised an open competition *"Aktion Klimaplus – NRW-Klimakommune der Zukunft*" for local municipalities who were encouraged to develop their own strategy and measures in the frame of the wider regional strategy. The two winners were rewarded with significant regional funding in order to implement their projects. The competition was an innovative way to publicise the strategy and stimulate creativity and new ideas on adaptation to climate change as well as ownership of the strategy at local level. In addition, as an un-planned consequence of the competition and a positive side effect, a

[115] UN Economic Commission for Europe, "Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters, known as 'Aarhus Convention', 25/06/98

network of more than 20 cities and municipalities emerged after the competition. It has been officially structured by the municipalities themselves to accompany the uptake of the regional strategy at local level. In an upcoming development it is planned to work with schools to further publicise the strategy and raise awareness among the population.

Another approach improving governance is the use of networks or platforms. The creation of cross-cutting networks to promote environmental policy integration and more largely sustainability is an efficient way to engage with a broad range of stakeholders in a structured manner. It also gives the possibility to address the issue of vertical integration. National strategies on adaptation to climate change or on SD can be reinforced through better involvement of sub-national authorities. For instance, many MS have established sub-national level 'councils', 'committees', 'commissions' or 'working groups' on SD. Local 'Agenda 21' initiatives represent also a concrete and powerful way forward to use platforms as building block for improved governance.

Networking of environmental authorities in Italy

For the period 2000-06 the Italian Network (Rete) gathered representatives from the environmental sector as well as from MAs. The network was intended to be a place for public sector experts to work together. These public sector experts were the national environmental authority (Ministry of Environment), the national managing authorities (Ministry of Economic Development, current Ministry of Economy and Finance), other central and regional Managing Authorities, environmental authorities, the statistical agency and the two main environmental agencies (Apat and ARPA). Regarding the involvement of NGOs, environmental NGOs were present in all Steering Committees of the OPs, as well as in the Monitoring Committee of the NSRF, having a consultative role. In the present period (2007-2013) NGOs are within the socio-economic partnership and explicitly mentioned together with other stakeholders (enterprise associations, trade unions, third sector associations, charities and not-for-profit organisations, and equal opportunities organisations). The role of this economic-social partnership is defined as important as regards the NSRF, and therefore to be applied in programming, implementation, monitoring and evaluation. Spain, Poland, United Kingdom, Germany, Greece are some of the Member States that have also developed a national network with the Managing Authorities in order to deal with the environmental sector.

Encouraging more public-private partnerships and exploring innovative approaches to financing

Public Private Partnerships (PPPs) offer another opportunity to explore for further ways to improve governance. Under RP, most experiences with PPPs are in the field of public service infrastructures. Nevertheless PPPs are due to become more numerous and diverse, not least because of the economic and financial crisis. Each PPP project offers an opportunity to integrate governance for SD and enlarge the partnership to other stakeholders such as NGOs who are often keen to participate. In this framework an efficient way to enhance the sustainability of projects can be to commit formal cross-sectoral bodies, such as Steering Groups, to ensure that projects are linked to the SD objectives of core planning documents such as master plans or development strategies. Those bodies imposed on the project promoters may be accountable to the MA. They are also an opportunity to improve the governance of the project as socio-economic and civil society partners, along with civil servants and experts representing authorities and the project promoters can be included. The following example illustrates the point.

Promoting SD through partnership, Newquay Cornwall Airport, UK

In order to ensure that environmental sustainability remains core to the development of Newquay Cornwall airport, co-funded by the ERDF, the Cornwall Council has prepared a variety of master planning documents. These documents have helped shape the airport's commitment to carbon neutrality: they aim to deliver carbon neutrality for its entire terminal and ground operations by 2015 and be carbon neutral in terms of aviation and surface access by 2030. It includes initiatives such as converting all ground vehicles to run on electricity, installation of wind turbines, energy saving initiatives and enhanced recycling, bio-diesel taxi fleet and enhanced public transport, etc. The MA felt it best to work with the Cornwall Council in establishing a 'World-Class Newquay Cornwall Airport Environmental Steering Group', which would provide expertise and help shape the concrete delivery of the airport's strategic environmental goals. This Steering Group, imposed on the Airport Delivery Team, as part of a contract condition of ERDF investment will ensure that there is on-going input and challenge from the environmental sector (via the Steering Group) in ensuring and helping Newquay Cornwall Airport deliver the highest possible standards of environmental sustainability. Thus, the decisions to deliver a 'whole-project' approach to environmental sustainability is core to the airport's development objectives and helps develop and embed environmental sustainability into non-ERDF funded investments.

Further PPPs can be a solution to trigger investments into cutting-edge technologies, leveraging public funds such as the ERDF. It may be especially fruitful in the case of pilot projects to demonstrate the feasibility of new developments.

Public private partnership for the fuel cell hub in West Denmark

'Hydrogen Link West Denmark'[116] is a public private partnership project between more than 20 various actors on development and pilot testing of hydrogen filling stations and fuel cell hybrid vehicles in a number of West Danish cities with a total budget of more than €1.8 million. The project was initiated in April 2006.The aim of the project is to develop and test fuel cell hybrid vehicles. As part of the project, research, development and pilot testing of smaller fuel cell hybrid vehicles and hydrogen filling stations will be implemented in several cities. The hydrogen for the project is based on inexpensive wind power electricity from an electrolytic hydrogen generator at a local energy company and distributed to a number of hydrogen filling stations. Seven various fuel cell hybrid vehicles will be put in operation in the cities at the various end-users. This project is co-financed by the ERDF

As a further step, financial engineering instruments should be considered to achieve better leverage of the limited resources available. Much greater use should be made within regional policy of JEREMIE or JESSICA[117] as well as learning from other instruments such as Risk-Sharing Finance Facility used in the EU framework research programmes.

116 http://www.hydrogenlink.net/vestjylland/HydrogenLink_West-Denmark_Brochure.pdf

117 Article 44 of Regulation 1083/2006

Reaping the full benefits of actions across borders

Regions should invest in sustainable growth through the integration of policies affecting EU territories and seas, especially coastal zones and river basins with high biodiversity potential. Co-operation between Member States and regions on coherent sets of actions and within specific territorial or maritime areas, such as sea basins, would bring additional value added.

In particular, MAs should take full advantage of the opportunities offered by cross-border, interregional and transnational co-operation in line with the new territorial cohesion objective introduced by the Lisbon Treaty. The Baltic Sea and the Danube Strategies illustrate the value of action at macro regional level.

Conclusions

The Communication "Regional Policy contributing to sustainable growth in Europe 2020" together with this Staff Working Document sets out some of the principles underpinning a realignment of current RP programmes in support of the "Europe 2020" sustainable growth objectives. The resource efficient Europe of the future requires all decision makers to take action now, and many of these decisions will fall at local and regional level.

It is therefore a call to action by EU, national, regional and local authorities to use available funds to promote sustainable growth in every European region.

The aim is twofold:

Firstly, to encourage an optimal use of and, if justified, a reallocation of regional funds with a view to meeting the resource efficiency objectives of the Europe 2020 strategy. This will require a concerted effort by all stakeholders to accelerate the pace of implementation of planned actions and a debate on realigning developmental priorities, as well as to step up efforts to mainstream the SD principles into day-to-day operation of programmes and projects.

Secondly, the Commission strongly encourages Managing Authorities to use the remaining years of the current programming period to prepare the ground for EU RP funds to play a major role in sustainable growth and resource efficiency in the future. This may require new or adjusted instruments, management methods and governance structures:

Here further consideration shall be given to establishing a stronger conditionality to the allocation and use of CP funds linked to objectives and targets set in priority EU policy areas.

At national level, Member States are encouraged:

- To realign expenditure within existing programmes priorities to boost the transition to resource efficient and low-carbon economy and examine the need for programme modifications, drawing on complementary support offered by Rural Development Policy, the LIFE+ programme, 7th R&D Framework Programme and the Competitiveness and Innovation Programme as regards:
    - Energy efficiency, renewable energy and de-carbonising transport;

    - Ecosystem services, in particular protection of biodiversity, adaptation to climate change and natural disaster prevention;

    - Eco-innovation support through clusters and ICT services and applications.

- To ensure the systemic integration of the sustainability principles in each step of the project life-cycle with particular attention to increase resource efficiency;

- To address climate change in their territorial planning, including local, regional and macro-regional strategies involving supranational areas linked to sea or river basins in particular.

- To carry out specific evaluations and to include a dedicated section within the Annual Implementation Reports of their Operational Programmes to assess the extent to which Regional Policy supported programmes match the guidelines set out in this Communication;

- To consider, in the context of the National Reform Programmes, the flexibility being offered within the Operational Programmes to reorient regional policy funding towards Europe 2020 priorities;

- To begin preparation for the next generation of programmes in terms of:

    - A greater thematic focus on green investment and a shift to a low carbon and climate resilient economy while ensuring an integrated approach to sustainable urban and/or rural development, and fully taking into account the territorial context and opportunities;

    - Capacity building, using technical assistance budgets, to involve local, regional and NGO actors in regional climate change adaptation and mitigation strategies.

At EU level, The Commission commits to swift consideration and support to any request for reprogramming for funding towards Europe 2020 priorities and will work**:**

- With International and national financial institutions to leverage resources and, as appropriate, maximise the use of financial instruments, including a more intensive use of JEREMIE and JESSICA. There will be a particular focus on sustainable energy in residential buildings to build on the recent amendments to Structural Funds regulations;

- With the relevant authorities in the Member States and regions to develop targeted pilot initiatives and seminars to deploy proposals outlined in this Communication;

- To assist national and regional authorities with thematic expertise in the implementation and monitoring of programmes;

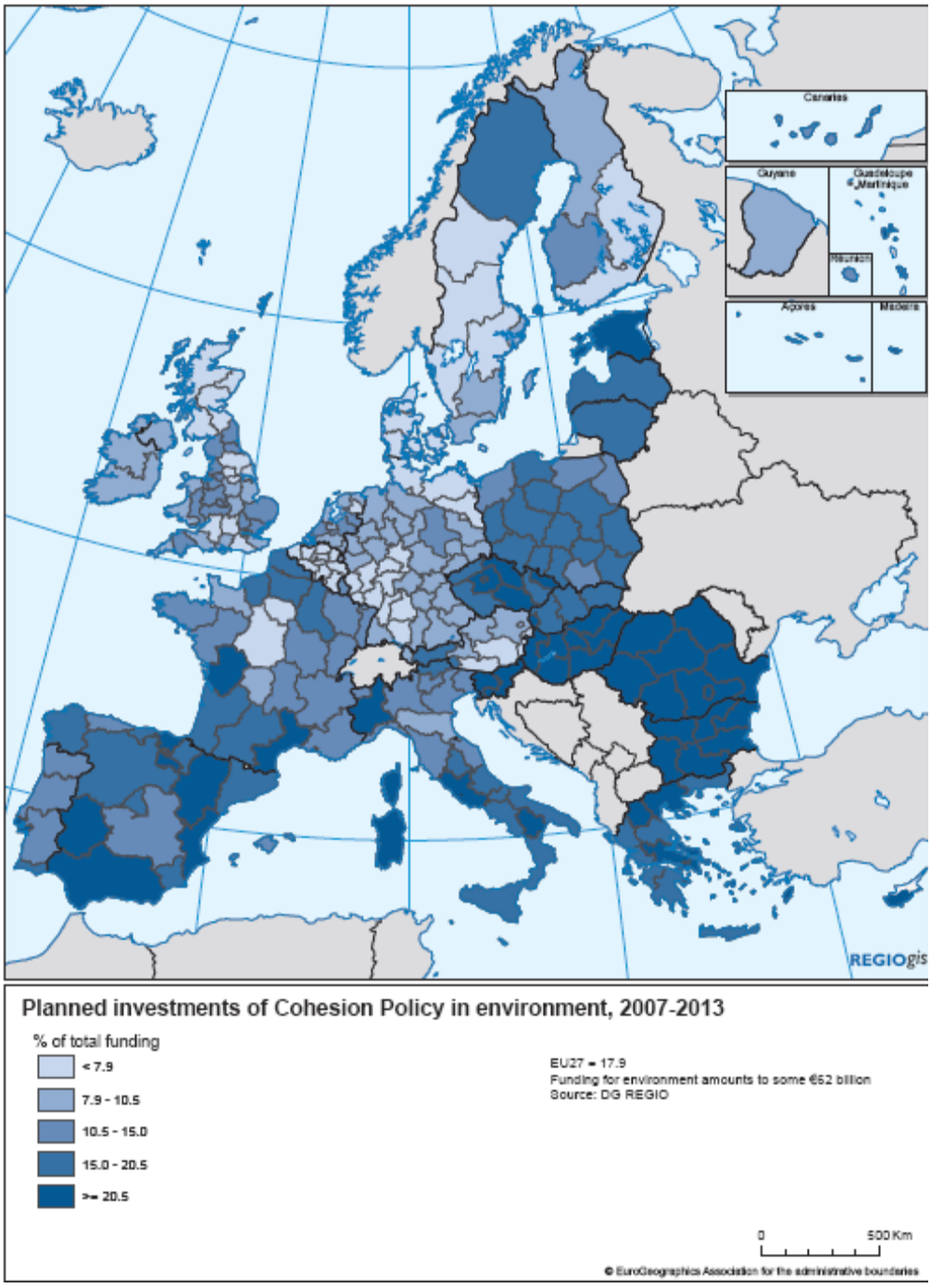
- To mobilise the available resources in existing Operational programmes to build up institutional capacity in order to ensure the application of the sustainable development principles, and unblock bottlenecks, especially with JASPERS;

- To further assist Member States in mobilising the available Technical Assistance of their programmes for boosting regional sustainable growth and to facilitate at all administrative levels the preparation of the pipeline of projects;

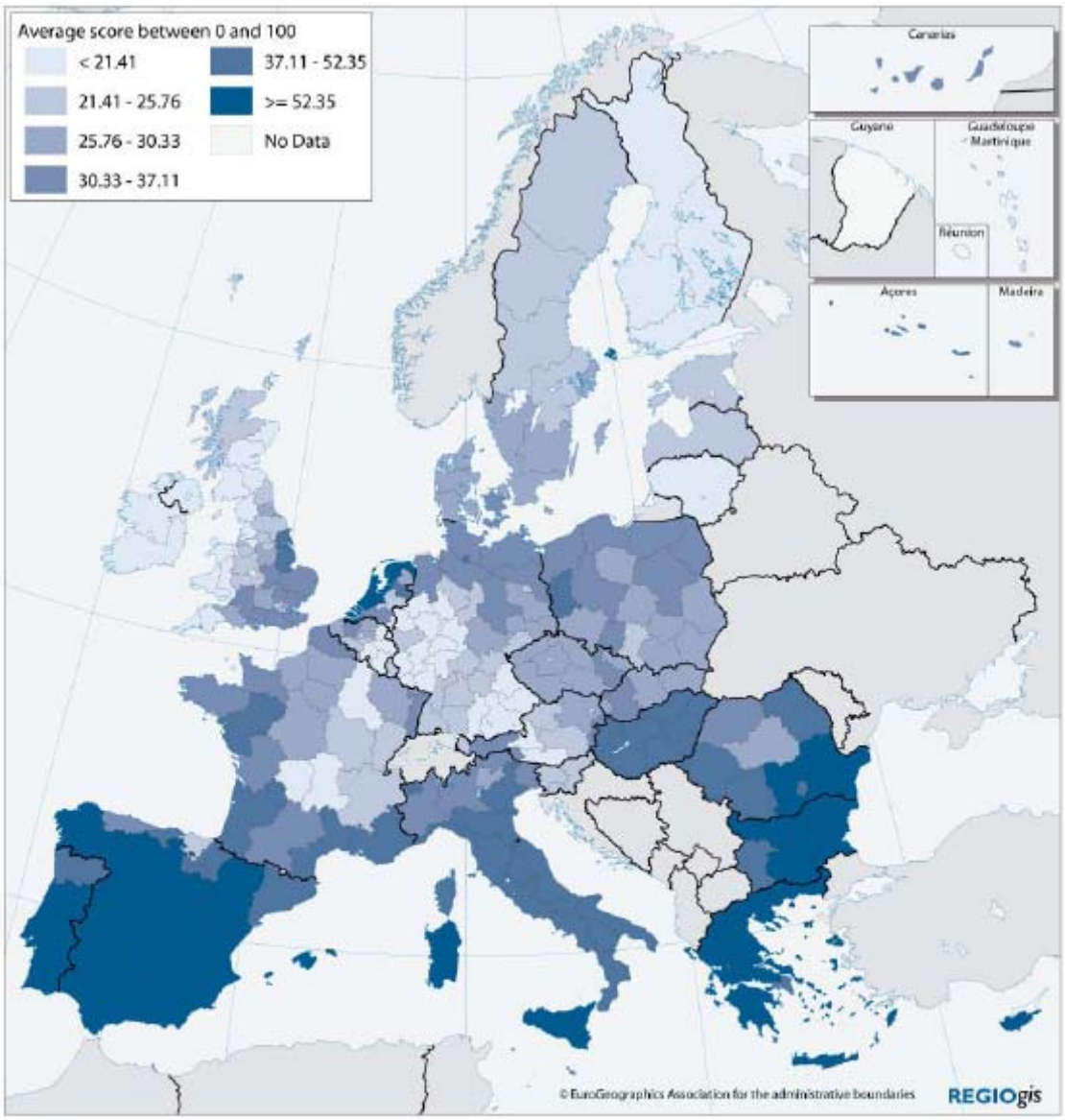
- To identify and encourage further exchange of good practice between Member States in areas related to sustainable growth through initiatives such as Regions for Economic Change or ESPON.

ANNEX I

Map 1: Cohesion Policy funding for environment 2007-2013



Map 2: climate change vulnerability index[118]

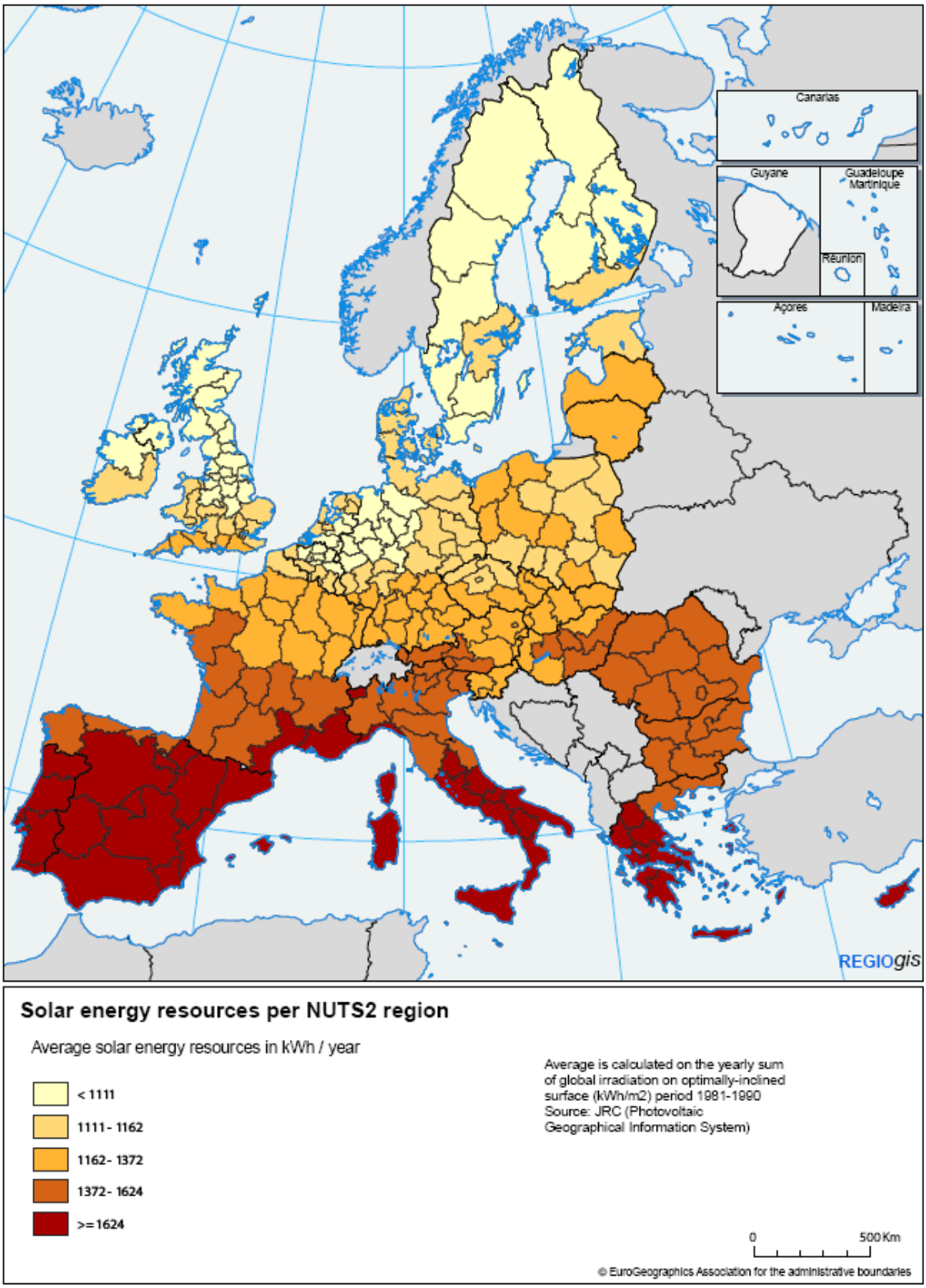


Note: *Index based on change in population affected by river floods, population in costal areas below 5m, potential drought hazard, vulnerability of agriculture, fisheries and tourism, taking into account temperature and precipitation changes.*

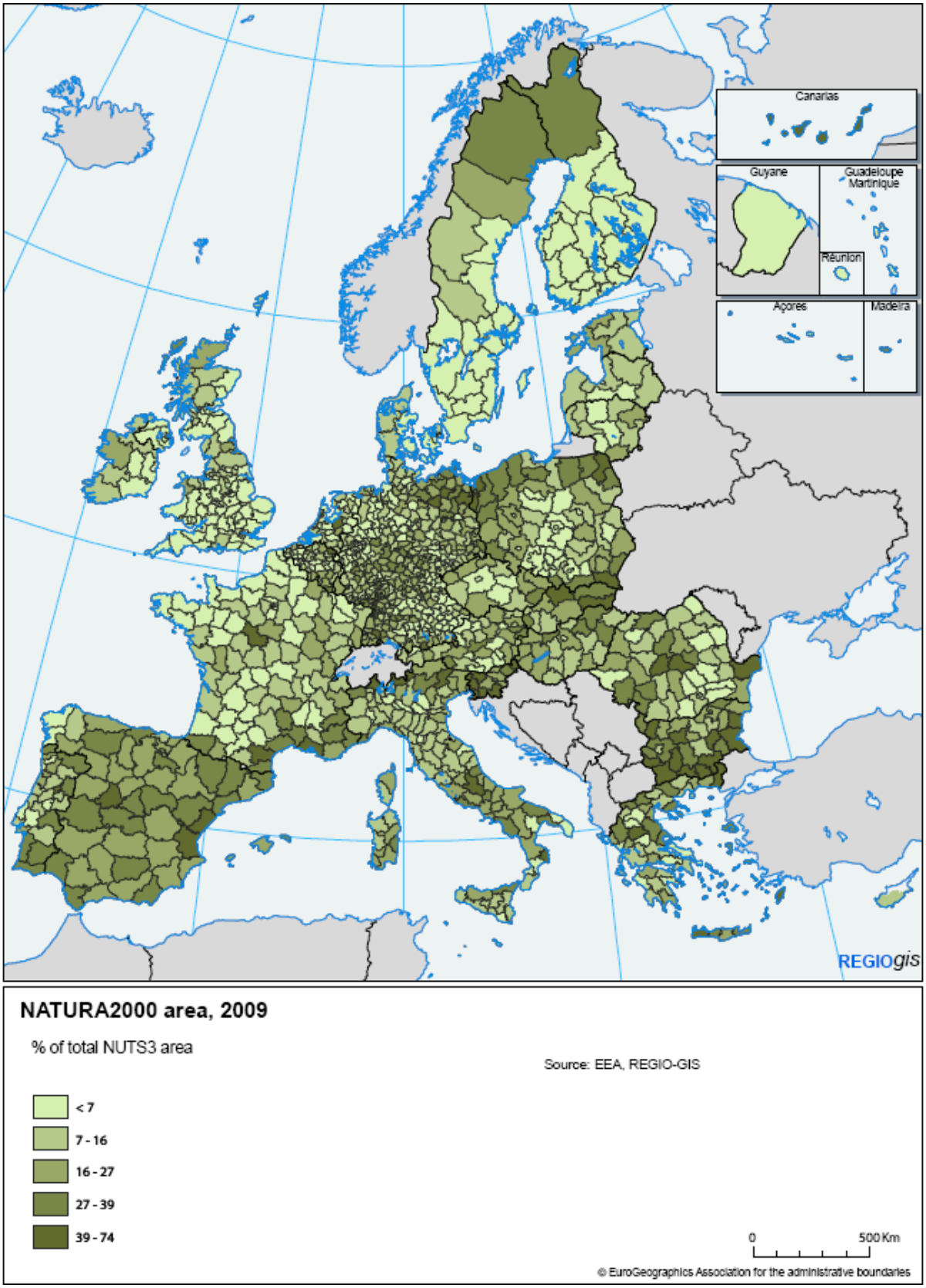
Source: Eurostat, JRC, DG REGIO

118 Source: Regions2020 - An assessment of future challenges for EU Regions; SEC(2008)

Map 3: solar energy resources



Map 4: Natura 2000 area



ANNEX II

A) Indicators for Map 1

Domestic material consumption per GDP
Total waste per capita
Municipal waste recycled (kg per capita) total - landfilled - incinerated
Collected Waste electr(on)ic equipment per total waste electr(on)ic equipment
Recycling of packaging waste (as % total packaging waste)
Ground water extraction as percentage of total available water resources
Surface water extraction as percentage of total available water resources
Surface + ground water extraction as percentage of total available water resources
GHG Emissions from transport / GDP
Final energy consumption of transport / GDP

B) Categories of expenditure taking into account for Map 2

06Assistance to SMEs for the promotion of environmentally-friendly products and production processes
16 Railways
17 Railways (TEN-T)
18 Mobile rail assets
19 Mobile rail assets (TEN-T)
24 Cycle tracks
26 Multimodal transport
27 Multimodal transport (TEN-T)
28 Intelligent transport systems
30 Ports
31 Inland waterways (regional and local)
32 Inland waterways (TEN-T)
33 Electricity
34 Electricity (TEN-E)
35 Natural gas
36 Natural gas (TEN-E)
39 Renewable energy: wind
40 Renewable energy: solar
41 Renewable energy: biomass
42 Renewable energy: hydroelectric, geothermal and other
43 Energy efficiency, co-generation, energy management
44 Management of household and industrial waste
45 Management and distribution of water (drink water)
46 Water treatment (waste water)
52 Promotion of clean urban transport

ANNEX III

Allocations to selected operations[119] in current RP 2007-2013

Sustainable energy & sustainable transport

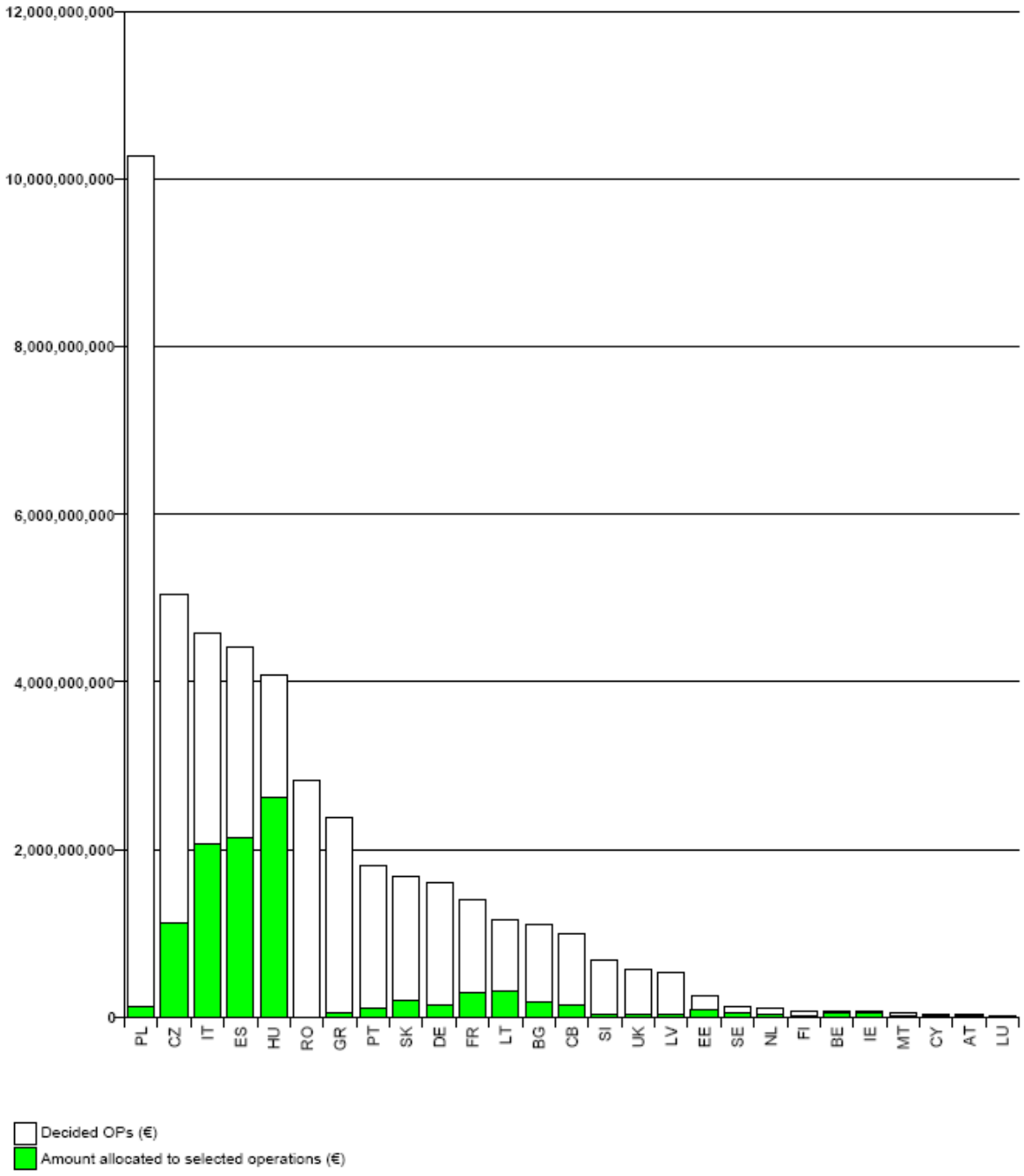
Sustainable Energy & Sustainable Transport related categories

Category Cd	Category	Adopted OPs - €	Community amount - Allocated to selected operations - €	%
17	Railways (TEN-T)	18.428.295.116	4.088.511.122	22,2%
52	Promotion of clean urban transport	6.126.564.580	1.982.867.452	32,4%
43	Energy efficiency, co-generation, energy management	4.270.266.273	894.407.700	20,9%
16	Railways	4.133.171.964	1.063.718.065	25,7%
41	Renewable energy: biomass	1.786.119.368	212.911.887	11,9%
25	Urban transport	1.660.210.940	229.901.772	13,8%
26	Multimodal transport	1.628.786.241	570.441.649	35,0%
42	Renewable energy: hydroelectric, geothermal and other	1.123.790.899	136.016.259	12,1%
28	Intelligent transport systems	1.085.513.854	122.532.143	11,3%
40	Renewable energy: solar	1.064.383.424	126.776.413	11,9%
39	Renewable energy: wind	785.490.798	23.068.741	2,9%
19	Mobile rail assets (TEN-T)	665.531.716	70.622.372	10,6%
18	Mobile rail assets	629.393.565	148.728.386	23,6%
24	Cycle tracks	603.669.290	144.156.133	23,9%
27	Multimodal transport (TEN-T)	446.841.078	42.030.497	9,4%
34	Electricity (TEN-E)	313.180.653	12.000	0,0%
33	Electricity	272.835.662	23.591.842	8,6%
Sum:		**45.024.045.421**	**9.880.294.433**	**21,9%**

Member State	LU	BE	IE	HU	CY	EE	ES	MT	IT	SE	FI	AT	NL	LT
% allocated to selected operations	225,6%	104,6%	67,5%	65,1%	61,8%	56,6%	48,7%	46,7%	45,2%	37,0%	28,3%	27,7%	26,7%	26,6%
Member State	CZ	FR	BG	CB	SK	DE	LV	PT	UK	SI	GR	PL	RO	DK
% allocated to selected operations	20,7%	20,4%	18,9%	15,6%	12,4%	9,1%	7,7%	6,1%	5,9%	5,8%	2,1%	1,2%	0,0%	No Funds
	Total EU + Cross-Border													
% allocated to selected operations	**21,9%**													

[119] Six MS (DE, EE, EL, ES, FR, SI) have provided their data on allocation to selected projects at dates other than 30/09/09. This should be carefully taken into consideration when making comparative analysis of the graphics. It is recommended to compare MS progress to the EU average rather than making direct comparison between MS

Sustainable Energy & Sustainable Transport related categories



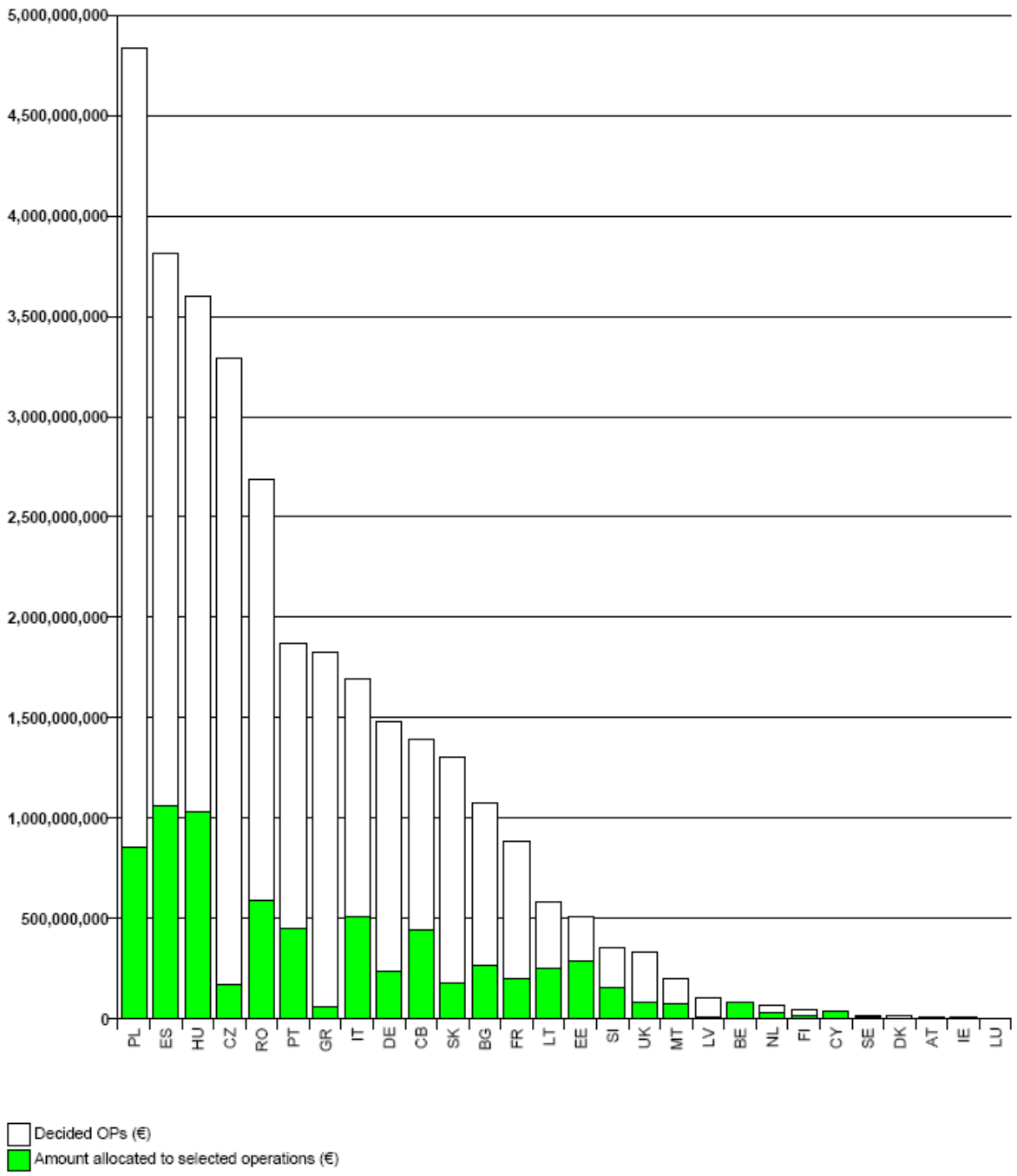
Ecosystem services

Ecosystem services related categories

Category Code	Category description	2007-2013 adopted OPs - €	2007-2013 amounts allocated to selected operations - €	%
46	Water treatment (waste water)	13.886.543.167	3.817.546.044	27,5%
53	Risk prevention (...)	5.803.809.917	706.753.238	12,2%
50	Rehabilitation of industrial sites and contaminated land	3.451.576.486	417.323.348	12,1%
51	Promotion of biodiversity and nature protection (including Natura 2000)	2.675.723.383	483.042.811	18,1%
54	Other measures to preserve the environment and prevent risks	1.675.670.593	799.896.097	47,7%
56	Protection and development of natural heritage	1.405.755.875	243.432.087	17,3%
55	Promotion of natural assets	1.136.966.058	249.861.896	22,0%
47	Air quality	1.018.376.565	63.647.821	6,2%
48	Integrated prevention and pollution control	739.343.905	67.660.706	9,2%
49	Mitigation and adaption to climate change	304.927.520	224.861.474	73,7%
Sum:		**32.098.693.469**	**7.074.025.522**	**22,0%**

Member State	CY	BE	EE	NL	SI	LT	SE	MT	FI	IE	AT	CB	IT	HU
% allocated to selected operations	146,5%	95,8%	56,2%	47,6%	43,3%	42,6%	41,4%	37,2%	33,3%	33,2%	32,2%	31,6%	29,9%	28,7%
Member State	ES	UK	BG	PT	FR	RO	PL	DE	SK	LV	CZ	GR	DK	LU
% allocated to selected operations	27,8%	25,4%	24,6%	24,0%	22,9%	21,8%	17,7%	16,1%	13,8%	6,4%	5,1%	3,4%	2,0%	0,0%
	Total EU + Cross-Border													
% allocated to selected operations	**22,0%**													

Ecosystem services related categories



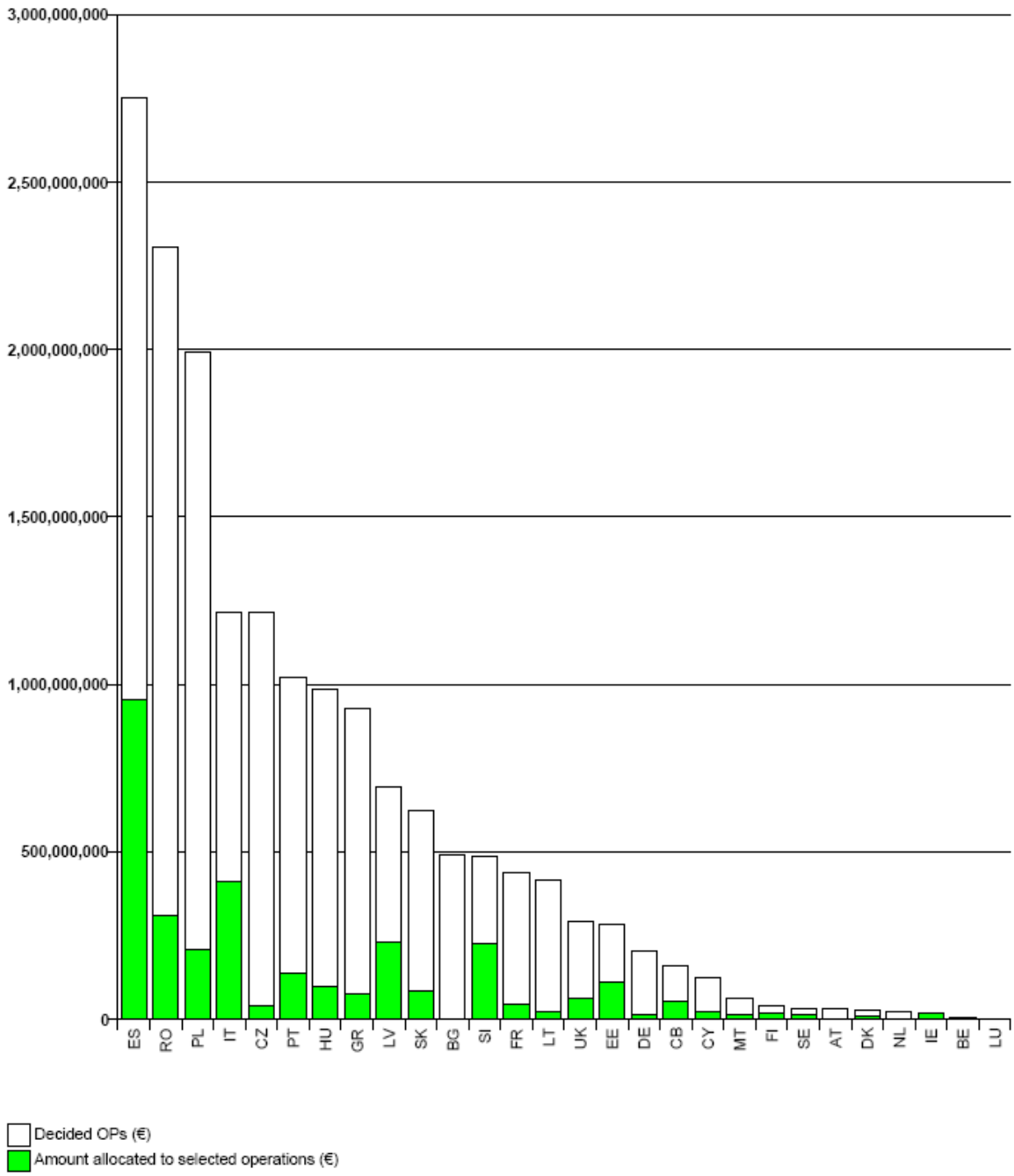
Eco-innovation & resource efficiency

Eco-innovation & resource efficiency related categories

Category Cd	Category	Adopted OPs - €	Community amount - Allocated to selected operations - €	%
45	Management and distribution of water (drink water)	8.143.908.866	1.677.872.585	20,6%
44	Management of household and industrial waste	6.239.824.404	1.017.714.614	16,3%
06	Assistance to SMEs for the promotion of environmentally-friendly products and production processes (...)	2.475.879.153	484.945.381	19,6%
Sum:		**16.859.612.423**	**3.180.532.580**	**18,9%**

Member State	IE	BE	SI	SE	EE	FI	ES	CB	DK	IT	LV	LU	UK	MT
% allocated to selected operations	160,0%	93,5%	46,3%	43,8%	39,2%	37,8%	34,7%	34,2%	34,0%	33,8%	33,4%	28,4%	21,2%	18,7%
Member State	CY	SK	RO	PT	NL	PL	HU	FR	GR	DE	AT	LT	CZ	BG
% allocated to selected operations	18,5%	13,7%	13,4%	13,4%	11,0%	10,3%	10,0%	9,7%	8,3%	6,5%	5,1%	4,9%	3,4%	0,0%
	Total EU + Cross-Border													
% allocated to selected operations	**18,9%**													

Eco-innovation & resource efficiency related categories



GLOSSARY:

CP: Cohesion Policy

EC: European Commission

EE: Energy Efficiency

ERDF: European Regional Development Fund

ESF: European Social Fund

GHG: Greenhouse Gases

GPP: Green Public Procurement

LCE: Low Carbon Economy

LRAs: Local and Regional Authorities

MA: Managing Authority

MS: Member States

OP: Operational Programme

RES: Renewable Energy Sources

RP: Regional Policy

SD: Sustainable Development

SG: Sustainable Growth