

TAKEAWAY FOR MALTA

- Deepen public participation with regards to eco-innovation policies and initiatives.
- European funding and Structural Funds are important to enable further eco-innovation action particularly for SMEs.
- Specific SI priorities should be addressed on a national level to further increase opportunities for the creation of green jobs.

ECO-INNOVATION ACTION PLAN ADDRESSES INNOVATION DIRECTLY

ECOAP FOCUS ON GREEN TECHNOLOGIES

ECO-INNOVATION ROADMAPS OFFER DATA ON NATIONAL ECO-INNOVATION PERFORMANCE

ATTENTION TOWARDS IMPROVING THE CREATION OF GREEN JOBS

THE ECO-INNOVATION ACTION PLAN IN AN ENVIRONMENTAL POLICY CONTEXT

Insights from and for MALTA

The Eco-innovation Action Plan (EcoAP, EC 2014a) is a key environmental policy of the European Commission. It applies to industry and technology, thus proactively highlighting activities rather than ecological ends considering e.g. air, land use and water. Thus, the EcoAP differs from other environmental policies because it addresses innovation directly boosting innovation and bridging the gap between innovation and the market.

The Europe 2020 strategy (EC 2014b) aims at resource-efficient, low-carbon economy setting the focus at smart and sustainable growth. The EcoAP, in support of the *Flagship initiatives Resource efficient Europe, Industrial policy for a globalised era, Agenda for new skills and jobs* and *Innovation Union*, aims at expanding the focus of innovation policies towards green technologies and eco-innovation and overcoming the gap between innovation and the market for the purpose of accelerating its uptake.

The EC and the Member States coordinate national and EU policies on eco-innovation for which a range of useful tools are be available, e.g. *Eco-innovation National Roadmaps* and *Eco-innovation Scoreboard* that gathers data on eco-innovation performance across the EU and beyond, thus helping to monitor and evaluate progress made by 2020. In addition, the European Innovation Partnerships aims to bring together public and private actors in key resource sectors where eco-innovation could contribute to greater resource efficiency. Partnerships are being set up for raw materials, sustainable agriculture, and water.

This policy brief looks at how the eco-innovation policies in Malta relate to sustainable innovation and public participation. The brief compares eco-innovation policies and initiatives in 20 European countries. Then it compares how progress on eco-innovations in Malta relates to progress in the other countries.

Concerning Malta, attention should be paid towards improving opportunities for the creation of green jobs, and further promoting innovation in eco-innovations for growth and competitiveness.



INTRODUCTION

ECO-INNOVATION ACTION PLAN RELATES TO INDUSTRY AND TECHNOLOGY

The Eco-innovation Action Plan (EcoAP) is a broad policy framework, which includes actions to help build stronger and more stable market demand for eco-innovation that focus particularly on market supply and demand, on research and industry, and on policy and financial instruments.

COUNTRY-SPECIFIC CHALLENGES AND OPPORTUNITIES IN FOCUS

The Eco-innovation Action Plan (EcoAP) addresses country-specific challenges and opportunities by shifting focus from environmental technologies to eco-innovation, thus leading towards positive environmental, economic and employment impacts, in conjunction with the Europe 2020 initiative. Social impacts are also expected in terms of quality of life, and health in particular.

ECO-INNOVATION AT THE FOREFRONT OF EU ACTIONS

EcoAP complements three other Flagship Initiatives - Resource efficient Europe, Industrial policy for a globalised era, and Agenda for new skills and jobs - with a goal to put eco-innovation at the forefront of EU actions to reduce pressure on the environment, bridge the gap between innovations and the market, and increase opportunities for the creation of green jobs.

REDUCE PRESSURE ON THE ENVIRONMENT

In 2015, EcoAP will enter a new phase that incorporates a systematic approach towards eco-innovation: a cross-sectoral approach engaging multiple stakeholders - individuals, public and private players - towards circular economy (EC 2014c). Research and innovation will have an important role in the new phase with goals to enable a long-term transformation, to integrate and coordinate R&I programmes, as well as to involve and engage regions and public authorities.

BRIDGE THE GAP BETWEEN INNOVATIONS AND THE MARKET

The Eco-innovation Action Plan (EcoAP) is one of the numerous environmental policies of the European Commission which focus on industry and technology, thus proactively activities to be realised into the foreground rather than ecological ends. Thus, the EcoAP differs from other environmental policies in the same domain since it addresses innovation directly, bridging the gap between innovation and the market. This policy brief adds to the continuation of the work previously done with the EcoAP roadmaps by recognising the most relevant and representative policy initiatives in Malta.

INCREASE OPPORTUNITIES FOR THE CREATION OF GREEN JOBS

ECO-INNOVATION POLICIES AND INITIATIVES IN MALTA

HIGH POPULATION DENSITY PUTS PRESSURE ON THE ENVIRONMENT

With a GDP of €6.4 billion and a population of around 415,000 living in an area of 316 sq. km., Malta is one of the smallest and most densely populated countries in the world which places considerable pressure on the consumption of resources. With an average trade to-GDP ratio of 82% since membership in 2004, it has the second most open economy in the European Union. The EU accounts for 61% of Malta's exports of goods and services. Malta's small size necessarily gives rise to a narrow export base, making the country susceptible to external shocks caused by changing levels of demand. Malta's near complete dependence on imported fossil fuels also characterises the Maltese economy by making it susceptible to price volatility in the oil sector. (MCAST 2011)

EU ACCOUNTS FOR 61% OF MALTA'S EXPORTS OF GOODS AND SERVICES

Strongly dependent on the tourism industry and with the highest population density in Europe, the Maltese sectors of tourism, water and waste



COMMITMENT TOWARDS THE ADOPTION OF ECO-INNOVATION SOLUTIONS

management are taking the lead and are nowadays considered to be the most promising eco-innovation sectors. Although still in its infancy, the issue of eco-innovation is increasingly appearing on the political agenda. The Maltese government has committed towards the adoption of eco-innovation solutions and is supporting eco-innovation activities mostly through provision of various incentives provided through the National R&I Programme and the Operational Programme.

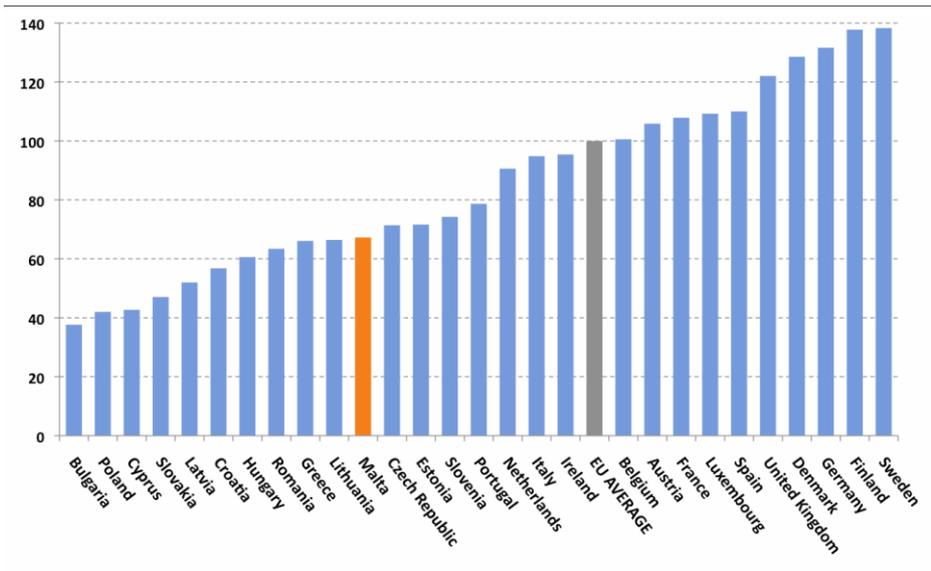
R&D INTENSITY ON THE INCREASE

In the last decade, R&D intensity has been on the increase, reaching 0.73% of GDP in 2011. (Innovation Union, 2013) and Malta has exceeded its stipulated target of 0.67% of GDP. Due to this progress Malta managed to become a 'moderate innovator' while still scoring lower than the EU average.

MALTA IS A MODERATE INNOVATOR

According to the Eco-innovation scoreboard, Malta's eco-innovation composite index in 2013 stood at 67 compared to the EU-28 average index of 100, falling from 72 in 2012. Malta was placed 17th, performing better than other new Member States with small populations like Cyprus and Latvia but worse than Estonia. At the same time, Malta exceeds the EU-28 performance in terms of Resource Efficiency Outcomes (110) but lags behind in eco-innovation inputs, activities and outputs and socio-economic outcomes (Eco Innovation Scoreboard, 2014).

Source: Eco-Innovation Observatory, Country Report Malta (2013)



Malta's Research and Innovation (R&I) strategy 2020, The Green Public Procurement (GPP) Action Plan, and the National Environment Policy provide the basis for the development of eco-innovation within the wider context of innovation on a national level.

National Research and Innovation Strategy 2020

MALTA'S NATIONAL RESEARCH AND INNOVATION STRATEGY 2020 PLACES RESEARCH AND INNOVATION AT THE HEART OF THE MALTESE ECONOMY

Malta's National Research and Innovation Strategy 2020 was approved by government on the 18th February 2014. It was prepared by the Malta Council for Science and Technology (MCST) following an extensive consultation process involving academia, private enterprise, the public sector and social partners. Malta's National Research and Innovation Strategy 2020 consolidates investments in innovation (including eco-innovation). The R&I system has experienced an evolution in the policy mix in terms of types of instruments



ACCELERATE
KNOWLEDGE-DRIVEN
ACTIVITY AND VALUE-
ADDED GROWTH

moving from a system dominated by supply-side policies to the inclusion of demand side policies including but not limited to green public procurement in the public sector.

The national strategy retains the same vision and guiding principles of the previous strategy, namely to place research and innovation (including eco-innovation) at the heart of the Maltese economy in order to accelerate knowledge-driven activity and value-added growth. It maintains a strong business focus and emphasis on applied research and innovation. The document identifies three main goals:

- a comprehensive research and innovation support ecosystem
- a stronger knowledge base
- smart, flexible specialisation

THE STRATEGY
IDENTIFIES EIGHT AREAS
FOR SMART
SPECIALISATION

In contrast to the previous strategy this policy can be considered a concise, high-level document and does not include detailed recommendations or proposals on specific measures which should be implemented in future years. The national strategy incorporates Malta's smart specialisation strategy and identifies eight areas for smart specialisation. This marks an important shift from the previous strategy, which had a focus on four thematic areas one of which was energy/environment. The main thematic area related to eco-innovation in the new strategy is called 'Resource Efficient Buildings', and includes aspects related to waste, water and energy.

INTRINSIC LINK TO
OTHER INNOVATION
STRATEGIES AND
POLICIES

The National Research and Innovation Strategy is also intrinsically linked to other innovation strategies and policies such as the Green Public Procurement Action Plan, the National Environment Policy, The National Energy Policy for the Maltese Islands, the National R&I funding programme, the Operational Programme, and related funding mechanisms such as the ERDF Innovation Actions Grant Scheme for the Environment (MRA), as well as the financial incentives offered by Malta Enterprise

The Green Public Procurement (GPP) Action Plan

THE NATIONAL ACTION
PLAN ON GREEN PUBLIC
PROCUREMENT IS
PROMOTING INNOVATIVE
PUBLIC PROCUREMENT
FOR 18 PRODUCT AND
SERVICE GROUPS

In Malta, despite various on-going green initiatives, the uptake of Green Public Procurement¹ has only gained momentum recently. An assessment and study of the national situation has indicated that the key barriers to the introduction of GPP in Malta include lack of policy and strategic vision, fragmentation of institutional responsibilities, poor awareness of the benefits of the GPP, and lack of technical capacity at the level of public procurers. To this end, the National Action Plan on Green Public Procurement (NAP GPP) has been adopted in August 2011 promoting innovative public procurement for 18 product and service groups.

The Tourism and Sustainable Development Unit (TSDU) within the Ministry for Tourism is the main entity responsible for GPP in Malta. The action plan requires all public sector organizations to follow the core EU GPP criteria according to the National GPP Guidelines. Moreover, the action plan establishes concrete targets for the greening of public procurement over 3 years.

The key policy objectives of the NAP GPP are to:

- Establish and maintain a strategic framework and structure within

¹ <http://www.gpp.gov.mt/>



THE ACTION PLAN
ESTABLISHES CONCRETE
TARGETS FOR GREENING
OF PUBLIC PROCUREMENT

which green public procurement can take place in Malta;

- Integrate the environmental dimension within the national public procurement process;
- Establish clear and measurable targets and objectives for green procurement in a range of sectors and ensure their achievement;
- Ensure that the implementation of the GPP is continuously monitored and any corrective actions are taken as may be appropriate;
- Engage procurers, suppliers and markets in the GPP process, provide guidance, and facilitate capacity building and training in this area.

PROMOTION OF
INNOVATIVE
PROCUREMENT

The Green Public Procurement (GPP) Action Plan promotes innovative procurement. Where possible GPP stimulates eco-innovation by specifying the desired innovation (for example, energy efficiency) without over-specifying the process for achieving this in tender documents.

As part of the National Action Plan a National GPP Task Force has been set up which is composed of the Ministry for Tourism, Culture and the Environment, the Ministry for Resources and Rural Affairs (MRRA), the Malta Environment and Planning Authority (MEPA), the Malta Council for Science and Technology, the Department of Contracts (DOC), Malta Enterprise (ME), the National Statistics Office (NSO), the Malta Competition and Consumer Affairs Authority (MCCAA), and the Department for Local Government.

The general legal basis for GPP in Malta is provided by the Public Procurement Regulations (LN296/10) which came into effect from 1 June 2010). There is no specific national legislation concerning GPP, however an administrative procedure is in place whereby all contracting authorities are required to complete a GPP checklist prior to tender publication. To this end, the Department of Contracts also issued a circular in November 2011, instructing contracting authorities to integrate Green public procurement with effect from 2nd January, 2012. In addition a revised version of the Tender Originator's Form has been published to facilitate the monitoring of GPP tenders.

National Environment Policy (NEP) 2012, final draft

THE NATIONAL
ENVIRONMENT POLICY
INTEGRATES MALTA'S
LONG-TERM
ENVIRONMENTAL
OBJECTIVES WITH OTHER
POLICIES AND
OBJECTIVES

Work on a comprehensive policy framework which integrates Malta's strategic long-term environmental objectives with other policies and objectives has only started relatively recent. The policy formulation process for Malta's first National Environment Policy² was launched in 2010 and included an extensive public consultation process. The National Environment Policy is a comprehensive environmental policy covering all environmental sectors and natural resources, including air, waste, water, land, soil, climate, biodiversity, coastal and marine areas, noise, chemicals, and mineral resources.

The aims of the national environment policy are to:

- Provide direction to all players in the sector;
- Ensure policy integration, such that all stakeholders work in a coordinated manner to achieve the national objectives and key priorities, not only in the environmental field, but also in areas that impact upon or are impacted by the environment, exploiting synergies, and addressing potential conflicts across sectors;

² <https://secure2.gov.mt/tsdu/environment-nep>



- Clearly and transparently articulate and communicate national environmental commitments and priorities.

IMPROVE INTERACTION BETWEEN ENVIRONMENT AND ECONOMY

Among other priorities, the NEP addresses the environment-economy interaction including “the impacts on the environment of specific key sectors, such as tourism, construction, agriculture, transport, and vice-versa, the implications on competitiveness, innovation, employment, GDP, and environment–society interaction (including health and quality of life considerations). Tools to implement the policy include legal instruments (such as regulation, penalties, permits and liability regimes), economic instruments (such as expenditure and funding, taxes, incentives, and tradable permits), and instruments aimed at voluntary compliance (such as education, and voluntary schemes).” The NEP also addresses financial investment in infrastructure, the role of local councils as well as other constituted bodies, and non-governmental actors.

ADOPTS A HOLISTIC APPROACH TO ADDRESSING VARIOUS ENVIRONMENTAL ISSUES

The NEP works hand in hand with the national R&I Strategy by placing an emphasis on the green economy and eco-innovation and identifying the need for “a high level of research and development (R&D) and innovation”. The policy document takes a detailed and holistic approach to addressing various environmental issues, whilst seeking to build on synergies among the various aspects of sustainable development, such as through promoting green jobs and fostering green public procurement.

INSIGHTS FROM EUROPEAN POLICY ACTIONS

ECO-INNOVATION POLICIES IN EUROPE ADDRESS ISSUES AT NATIONAL LEVEL

A review of the identified eco-innovation policies in the studied European countries reveals similarities in geographical and strategic scopes. Eco-innovation policies typically address issues at national levels rather than at regional or local levels. This is very understandable, as national systems have been recognized to be important for the development of innovations (Lundvall 1992). Furthermore, national innovation systems represent an adequate way to support desired development of technological and economic activity without distorting markets.

SIMILARITIES IN GEOGRAPHICAL AND STRATEGIC SCOPES

SI PRIORITIES RELATING TO CLIMATE ACTION, RESOURCE EFFICIENCY AND RAW MATERIALS ARE NOT SPECIFICALLY TARGETED

Sustainable innovation (SI) priorities relating to climate action, resource efficiency and raw materials are not specifically targeted within the policy initiatives. Instead, policies address sustainable innovation across these priorities and provide instruments to fulfil their targets.

FUNDING INSTRUMENTS COMMON

Funding instruments appear a common policy instrument in the studied European countries. Sustainable innovation is then realised through these instruments. If European countries were to address specific and detailed SI priorities, integrating more explicit SI targets in the funding instruments would be useful.

ROLE OF COMPANIES HIGHLIGHTED

Current funding instruments highlight the role of companies and the creation of innovations and eco-innovation is then seen to promote growth and competitiveness. Funding instruments put less emphasis on the use or adoption of eco-innovation. For large scale adoption of eco-innovation, demand-side instruments could complement supply-side instruments. Currently, eco-innovation policies rely on market actors and activities to realise the diffusion of eco-innovations (cf. Rogers 1995).



POLICIES RELY ON MARKET ACTORS TO REALIZE DIFFUSION OF ECO-INNOVATIONS

CREATION OF ECO-INNOVATIONS FOR PROMOTION OF GROWTH AND COMPETITIVENESS

LOW LEVEL OF PUBLIC PARTICIPATION.

The fact that the eco-innovation policies in the studied European countries do not generally fall under SI priorities that are in the focus of the CASI-project confirms the notion that the eco-innovation forms a special category under the policies related to environment. The focus in eco-innovation policy is to build economic growth, enhance national and global competitiveness, and increase employment while emphasising the ecological sustainability aspects whereas environmental policies, typically, focus more on reducing the adverse effects of these activities within specific fields showcasing that CASI concerns with sustainable innovation policy developments are highly relevant.

Eco-innovation policy initiatives throughout Europe showcase a low level of public participation. The methods of embracing the public in eco-innovation policies are conventional and not particularly novel or innovative meaning that public participation remains at similar levels as in other types of innovation policies. In addition, the public is mainly considered as actors and stakeholders rather than the general public and lay people. Moreover, the policy initiatives reviewed here usually consider the public rather as a target group instead of seeing it as an actor. Similarly, the general approach appears to be involving the public through representativity rather than directly, each calling for distinct measures when developing sustainable innovations.

MALTA IN A EUROPEAN PERSPECTIVE

In Malta, Eco-innovation policies typically address issues at national level rather than at regional or local level due to Malta's geographical size. Furthermore, funding instruments such as Structural Funds, the National R&I Programme, as well as European Funding instruments are the main tools for realizing eco- and sustainable innovation projects. However, Sustainable Innovation (SI) priorities relating to climate action, resource efficiency and raw materials are not specifically targeted within Malta's policy initiatives. Instead, policies address sustainable innovation across these priorities and provide instruments to fulfil their targets.

Besides deepening public involvement in eco-innovation policies, attention should be paid towards improving opportunities for the creation of green jobs, and further promoting innovation in eco-innovations for growth and competitiveness.

RECOMMENDATIONS FOR POLICYMAKERS IN MALTA

INCREASE PUBLIC PARTICIPATION

ADDRESS SI PRIORITIES ON NATIONAL LEVEL

BRIDGE GAP BETWEEN INNOVATIONS AND MARKETS

- Increase public participation on issues of sustainable innovation.
- European funding and Structural Funds are important to enable further eco-innovation action particularly for SMEs.
- Specific SI priorities related to climate action, resource efficiency and raw materials should be addressed on a national level
- Bridge the gap between innovations and the market



Further Reading and References:

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CASI Project Description

PROJECT TITLE: Public Participation in Developing a Common Framework for Assessment and Management of Sustainable Innovation (CASI)

COORDINATOR: ARC Fund, Bulgaria: Zoya Damianova.

CONSORTIUM: The CASI consortium consists of 19 partners representing 12 European countries. Country correspondents extend the reach to 28 countries.

FUNDING SCHEME: Coordination and support action, funded under the 7th Framework Programme of the European Community, SCIENCE-IN-SOCIETY-2013.1.2-1.

DURATION: 42 months, 1/2014-6/2017

BUDGET: 4.5 M€, 428 person months

WEBSITE: www.CASI2020.eu

REFERENCE: Restall, Brian; Schaa, Stefan; Matschoss, Kaisa; Kaarakainen, Minna; Repo, Petteri; Tregner-Mlinaric, Anita (2014). CASI Policy brief: ECO-INNOVATION ACTION PLAN IN AN ENVIRONMENTAL POLICY CONTEXT, Insights from and for Malta.

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Appendix 1 Eco-innovation policies and initiatives in 20 countries.

Country	Policies and initiatives	Sustainability	Public participation	Observation
AUSTRIA				
Green Tech Valley - ECO World Styria	support for eco-innovative enterprises in a region of Austria to strengthen the region's know-how and socioeconomic situation	a strong focus is put on eco-innovation such as cleantech and other environmental-technical aspects	Styria region supports the cluster (general support but also several prizes, awards, funds)	the Austrian region Styria focusses on support of innovative enterprises in the sector of recycling, renewable energy, clean and green tech, and similar sectors, thus fostering the growth of competences in this promising future sector in the region
ecoduna	development of algae cultivation systems to meet future's energy demands using one of the most promising renewable raw materials	researching key innovations for a large number of applications in raw materials and resources needs in the future (e. g. animal nutrition, biofuel production, technical implementations, water treatment, biomass, carbon capture and storage)	Lower Austria region supports the company's eco-innovation (several prizes, awards, funds)	a company from Lower Austria specialising in one of the hottest topics in clean tech research in the past years
ab&cd innovations	development of treatment technologies to deal with a by-product of increased bio-diesel and fatty acids production closing the gap between oversupply of glycerol and the rising demand for lactic acid	improved use of resources supporting the establishment of sustainability and eco-innovative chemistry into industrial production and processing	Vienna region supports the company's eco-innovation (several prizes, awards, funds)	a company specialising in eco-innovative technologies for efficient and environmentally friendly usage of by-products
BELGIUM				
Symbiose	not-for-profit, business led, government supported 'sustainable resource matchmaking valorisation platform' that searches for and exchanges 'want resources' and 'have resources'	sustainability from economic (reuse of a side-stream, less use of materials), and environmental (reuse and recycle, lower ecological footprint of end-products) perspective	business	businesses increasingly acknowledge the benefit of closing loops
iMade	new business model for a regional network in which cutting edge technology (e.g. 3D-printing) and shared infrastructure are used to locally produce small volumes of	sustainability from economic (local new business opportunities), social (new jobs, local production, short value chains) and environmental (products with a smaller ecological	(local) business and consumers	Although iMade is still in the phase of concept/idea, a number of local SMEs are showing interest in piloting this new business model.

	tailor made products	footprint, short value chain) perspective		
UPV	new business model in which not only the government is responsible for collecting and recycling waste, but producers themselves are more and more held responsible for the impact of produced products during all phases of its life cycle.	sustainable from economic (recycling, less import of (raw) materials), environmental (closing loops, recycling waste) and social (enhancing the environmental responsibility of business) perspective	business and consumers	economic sectors create new organisations that are given the task of collecting and recycling waste coming from the products produced in the particular sector.
BULGARIA				
Operational Programme Environment 2014-2020 (OPE) and The National Action Plan for the Promotion and Accelerated Uptake of Ecological Vehicles, Including Electric Mobility in the Republic of Bulgaria for the Period 2012-2014	OPE lays out a number of eco-innovation related priorities in the fields of waste management and air quality as it relates to the modernisation of the vehicle stock. The National Action Plan lays out a number of objectives and measures to increase production and accelerate the uptake of ecological vehicles in the country between 2012 and 2014. These measures include public support to innovation in the field as well as stimulating consumption through tax incentives.	This National Action Plan focuses on the creation of an environmentally sustainable transport system in Bulgaria, and elements of this strategy support national strategic documents such as the Sustainable Development Strategy of the Republic of Bulgaria.	As required under Article 5 of the Common Provisions Regulation and as detailed in the 'Code of Conduct on Partnership', the Operational Programmes are developed in partnership with regional, local, urban and other public authorities, economic and social partners and representatives of civil society, environmental partners, and NGOs.	This National Action Plan has resulted in changes to the Law on Local Taxes and Fees which has incentivised the purchase and ownership of eco-friendly vehicles. While the number of electric and hydrogen vehicles is still low in absolute terms, it seems to be rising and it is perceived that the implementation of the remaining measures within the programme can help to strengthen this trend.
Operational Programme 'Innovation and Competitiveness' 2014-2020 (OPIC)	Within the first Priority Axis of the most recent draft version of the Operative Programme 'Innovation and Competitiveness' 2014-2020, support to a green, efficiency economy and eco-innovation is part of Investment Priority 1.1.	One of the priority axes focuses on support to innovation, and the important contribution that could come from eco-innovation. Another one of the axes is Priority Axis 3 'Energy and Resource Effectiveness'. This one aims to develop financial instruments to help reduce the energy intensiveness of the economy and to reduce the resource intensity of small and medium sized enterprises	As required under Article 5 of the Common Provisions Regulation and as detailed in the 'Code of Conduct on Partnership', the Operational Programmes are developed in partnership with regional, local, urban and other public authorities, economic and social partners and representatives of civil society, environmental partners, and NGOs.	The Operational Programme 'Innovation and Competitiveness' makes it explicit that it does not try to deal directly with meeting environmental targets, which are within the purview of Operational Programme 'Environment'. Rather it aims to improve the resource efficiency within enterprises to help make them more innovative and competitive

Innovative Strategy for Smart Specialisation of the Republic of Bulgaria 2014-2020	The strategy is about identifying vertical and horizontal thematic areas where a specific focus would have an extraordinary possibility to help improve the innovative performance and bolster the economic strength of the country.	Within the strategy, an overall vision was developed which seeks to raise Bulgarian innovation performance and to address challenges in the fields of demography, sustainable development, intellectual capital, and the health of the nation's people.	The strategy has been developed through an intensive dialogue and consultations with public institutions, research institutes and universities, NGOs, businesses, NGOs, and regional and local authorities on a number of the areas in focus. A consultation with any and all interested parties was made available online in September, 2014.	Undertaking desk research of the smart specialisation strategy has revealed that it has gone through multiple iterations as a result of stakeholder consultations. A recent online consultation was held from September 9th – September 23rd, where more feedback was provided on the document including comments on its structure and logic.
CZECH REPUBLIC				
The State Environmental Policy of the Czech Republic 2012 – 2020.	Providing Czech citizens with better quality life and environment	Focus on economic, environmental and social aspects of sustainability	The public will benefit from the policy directions and various initiatives driven by them. There are increasing attempts to expand public participation in decision-making regarding environmental issues, but such participation is strictly limited to educated and informed citizens.	Environmental protection is high on the Czech policy agenda and the Government has set very ambitious goals to be reached by 2020.
The national priorities of oriented research, experimental development and innovations	Medium to long-term strategies focused on selected Czech national priority areas related to oriented research, experimental development and innovations.	Priorities for economic growth, environmental protection and the prosperity and development of Czech society.	Public not involved in the process, but direct beneficiary.	Removing barriers to eco-innovation and creating opportunities for typically underfunded areas of economy, in order to improve country's competitiveness
National System for Monitoring Green Growth	Establishing knowledge and insights for better-informed policy and decision-making.	Focused on maintaining harmony between economy and environment	Public not involved in the process, but directly benefiting from greening jobs, skills, investments, innovations, etc.	Ecosystem resilience as an important aspect of green growth.
DENMARK				
The Eco-Innovation subsidy scheme	The subsidy scheme is part of the Danish Eco-Innovation Program and provides financial support for development, testing and	The Danish Eco-Innovation Program focuses on eco-efficient technology, where environmental sustainability is a cornerstone.	The general public is not involved directly, but is a target in many of the supported projects.	During the recent budget negotiations for 2015 a reduction of the funding for MUDP was discussed. In a common address to

	demonstration of environmental technologies with focus on for example water, climate change adaptation, circular economy and recycling of waste.			the Danish Parliament the three organizations IDA (The Danish Society of Engineers), DI (Confederation of Danish Industry) and Dansk Miljøteknologi (the branch organization for eco-efficient technology in Denmark) advised strongly against it. Finally, funding was raised and secured over a four-year period.
Eco-Innovation public/private partnerships	Development of public/private partnerships for innovation is another cornerstone in the Danish Eco-Innovation Program. The aim is to create dialogue between regulation and development of eco-efficient technologies and to promote the export of Danish environmental technology.	The Danish Eco-Innovation Program focuses on eco-efficient technology, where environmental sustainability is a cornerstone.	The general public is not involved; instead stakeholders such as companies, knowledge institutions and public bodies are brought together.	The partnerships are both national and international. Example: Eco-efficient public procurement in Denmark, and environmental technology to the water sector in India.
Lighthouse projects	The Lighthouse projects have been launched as part of the Danish Eco-Innovation Program's subsidy scheme. These projects are receiving extensive funding beyond just testing and demonstration. For instance funds are given to e.g. the establishment of facilities.	The Danish Eco-Innovation Program focuses on eco-efficient technology, where environmental sustainability is a cornerstone.	The general public is not involved directly, but is a target in the projects.	Currently four Light house projects exist. Due to the increase in funding for MUDP, more Light house projects are expected.
ESTONIA				
Green Investment Scheme	The Scheme is a mechanism for trading excess CO2 quotas and channelling the revenue to environmentally friendly projects and programmes.	On the one hand, the Scheme presupposes employing modern technologies so that excess CO2 quotas could be traded, and on the other hand, the revenue is used to further decrease the emission of greenhouse gases.	The concluded deals have led to projects that benefit the wider society, examples of supporting the purchase of electric cars and reconstructing apartment buildings were described. As such, the scheme directs innovation directly to the community and raises awareness and availability of eco-innovative solutions.	Estonia has concluded more than 20 deals in the amount of 72.6 million units for 388 MEUR with e.g. Spain, Luxembourg and Austria.

National Development Plan of the Energy Sector	It is a strategic development plan which seeks to combine the specific development plans of the sector and to set the general objectives of energy policy until 2020.	The Development Plan seeks to support the Estonian energy sector in ensuring continuous, efficient and sustainable energy supply at a justified price and sustainable energy consumption.	In order to involve all the interest groups, the Ministry of Economic Affairs and Communications organised a series of public energy forums in order to involve the representatives of all the interest groups in the process of preparing the development plan. As such, ENMAK contributes to participatory policy-making and increases the validity of future actions.	The new elaboration plan of 2014 also drafts the benchmarks for renewable energy and energy efficiency operational programmes and the vision for the renovation of buildings.
Smart Specialisation Strategy	The Strategy is a step towards restructuring the Estonian economy for the purpose of fostering competitive and knowledge-based growth areas.	Through creating competitive advantages in areas that demonstrate higher than average growth, the Strategy supports the sustainable development of the Estonian economy.	Various stakeholders are involved in further concretising the growth areas of the Strategy that show the most promise of value added, including in resource efficiency. It could be said that the Strategy has the potential to become a comprehensive eco-innovation framework that prioritises public participation.	The Strategy is a step forwards from key strategic documents, the Estonian competitiveness strategy 'Estonia 2020' and the Estonian RD&I strategy 'Knowledge-Based Estonia'.
FINLAND				
The Finnish Bioeconomy Strategy	Objective to generate new economic growth and new jobs from an increase in the bioeconomy business	Creation of environmentally friendly business	Public participation in form of stakeholder consultations in workshops, three regional bioeconomy forums and sectoral consultations	
Programme for sustainable consumption and production (KULTU)	Funding instrument for projects that aim reducing the burden to environment close to the users	The focus of the programme and initiated projects is from the definition in sustainable solutions and processes	A lot of local participation through projects initiated through the programme	Focus more on ecological sustainability.
Green Growth	A funding instrument for projects focusing in creating green business models, services or products	The funding is explicitly targeted at radical innovative ways of creating green growth.	No definite requirement for public participation for funding. The projects funded vary in the amount of public participation.	Focus on support in ecologically sustainable innovations.
FRANCE				
Investments for the	Long-run investment programmes	Development of green	This long run investment policy	A new budget for this policy was

<p>future and the development of green technologies (Les investissements d'avenir pour le développement des technologies vertes)</p>	<p>for the development of green-technologies first launched by the French government in 2010.</p>	<p>technologies will have a long-run impact on the economy and thus, will bring new technological assets to the different sectors in order to increase sustainability. Examples to demonstrate this could be investment allocated for research and development that is done on more fuel-efficient types of vehicles and modes of transportation. Finding new alternatives for engines and reduced carbon fuels for the next generations of cars, planes and boats. Each investment made in green technology aims to contribute to an increase in sustainability for France.</p>	<p>was created by the Supplementary Budget Act which was voted in March 2010. It was largely based upon the recommendations made by Mr Rocard and Mr Juppé who jointly wrote a report which was submitted to the Hollande administration. A panel of key independent experts participate in the decision making process for every chosen investments by assessing a risk-benefit analysis and their opinion on whether or not the investment will be constructive and profitable for France.</p>	<p>integrated in July 2013, incorporating additional environmental policies and measures. Most beneficiaries of this programme are privately owned companies.</p>
<p>ECO-TS</p>	<p>ECO-TS is a funding programme that was launched in December 2012 by the French National Research Agency (ANR), it aims to strengthen the French community in the developing field of services in environmental management and related technologies.</p>	<p>The large selection of projects funded by the ECO-TS programme covers a very diverse range of sustainability areas. The forecasting and monitoring systems will help achieve a major increase in sustainability as it will take into account the upcoming environmental changes in the technical and modelling processes of the next generation of technologies related to environmental management and services.</p>	<p>ECO-TS is a funding programme open to everybody and all projects that have an eco-innovative aspect. Every citizen who can contribute to the development of the field of services in environmental management and related technologies can benefit from this fund. The ANR is funding both public and private scientific teams, as well as independent researchers who all add value to the research and development for the French national interest.</p>	<p>ECO-TS took over from the ECOTECH programme that was previously launched.</p>
<p>Competitiveness clusters (Pôles de compétitivité)</p>	<p>The competitiveness clusters gathers a panel of stakeholders together based on a common geographical location or region in order to cooperate for an increase in eco-innovation. These clusters offer the opportunity to share an</p>	<p>Clusters allow the transfer of knowledge and research from a wide range of different institutions for one common national interest. Innovation and sustainability are the core reason why these clusters are formed. All actors are able to</p>	<p>The French Ministry of Sustainable Development has mandated the DGRI (la Direction des la Recherche et de l'Innovation) to manage the clusters on their behalf and report to the inter-ministerial working groups on their</p>	<p>In addition to eco-innovation policy planning and parallel to this, competitiveness clusters work to find solutions to resolve the impacts resulting from delocalisation processes as well as unemployment issues through</p>

	expertise, an assessment, good practices in addition to innovative ideas for a common objective.	apply their work related to sustainability for the social and environmental benefits of France.	development and results. The DGRI include a number of researchers, higher learning institutions, and scientific organizations as well as a range of Professors who all contribute to the clusters through their areas of expertise. The sharing of their proficiency is fundamental to the good functioning of these clusters which rely exclusively on their contribution.	innovation.
GERMANY				
Cluster environmental technologies North Rhine Westphalia	The Cluster environmental technologies is a network fostering environmental technology in the Federal State North Rhine Westphalia	The cluster's focus will be on integrated, preventive technologies, services and products in the following fields: water and waste water, waste disposal, clean air, soil decontamination, measurement and control technology, environmentally friendly products, resource efficiency	As the cluster is not addressed to the common public, there is no public participation in its common understanding. As communication is important to the cluster's functioning, there are several means of participation for its members like surveys, round tables etc.	Establishing a model for sustainable economy with an international impact and expansion of the German top position in green economy
10-point energy agenda of the Federal Ministry of Economic Affairs and Energy	The 10-point energy agenda contains the key projects of the energy transition during the 18th legislative term. In addition to the projects in the electricity sector, it also contains the main projects for energy efficiency and in the building sector.	The agenda integrates the following fields of action in terms of substance and timing: Renewable Energy Sources Act, European Climate and Energy Framework 2030, reform of European emissions trading, electricity market design, efficiency strategy, buildings strategy, transmission grids, distribution grids, monitoring, and platforms	Public participation is embedded in several fields of action in the agenda. One of the key points of the agenda is completely dedicated to civic participation.	The energy transition from fossil to renewable energy sources
The DWA-Politikmemorandum for sustainability in the water economy	The DWA-Politikmemorandum 2014 contains the agenda setting for the water sector towards environmental policy	The agenda setting is focused on different aspects towards a sustainable water economy	The DWA is based 14.000 members and the self-commitment to organize the dialogue between experts, policy, industry and science	Face the change of framework caused by climate change
ITALY				

Italian Plan for Energy Efficiency 2014 (PAEE)	The set of horizontal measures implementing the energy efficiency directive at national level is vouching the sustainability of actions. Moreover, the objectives are set for period 2020, which are long-term.	Not evident.	The PAEE describes the energetic efficiency objectives for Italy for period 2020, including relevant policy measures and the target reached in 2012. It is a tool providing pointers for encouraging energy efficiency as an essential prerequisite for achieving the objectives related to renewable energy and the reduction of CO. It is a strategic plan of energy efficiency and the reporting of all savings, not only of the final energy consumption.	
Horizon 2020 Italia (HIT2020)	HIT 2020 is aiming at reaching goals of Europe 2020 strategy, addressing long-term actions.	HIT 2020 is aiming at boosting participation to EU programmes and assigning a strategic value to public-private strategies and knowledge transfer.	The Ministry of Education, University and Research launched in March 2013 a strategic document called HIT2020 (Horizon 2020 Italia) to boost the Italian participation to Horizon 2020 and to implement the Europe 2020 strategy. This document was the base of the new National Research Programme 2014-2020, presented in January 2014. The first innovation relates to the period addressed, which is 7 years, like the European framework programmes for research (the previous was addressing period up to 3 years). In the frame of this initiative an important part is dedicated to actions on eco-innovation and for renewable energies. In this document the priorities of Horizon 2020 for what concerns the secure, clean and efficient energies are scaled down at national level.	
Decree	The "Competivity" Decree	Established cooperation with the	The objectives of the Decree are to	

<p>"Competitivà" 66/2014 and the protection of environment</p>	<p>addresses a series of long-term environmental actions.</p>	<p>urban offices of the municipalities, the inter-regionals public works, being in charge of all the administrative procedure, which are including activities related to protection of the land. Recipients of supporting loans were schools and universities.</p>	<p>enhance the value of undeveloped land and to promote farming activity so as to maximise the use of the land as a resource to be protected, including from the standpoint of preventing hydro - geological risk. A new approach has been taken with regard to the reuse of developed land and building renovation, drawing on the relevant EU recommendations. Financing has been made available for the removal and demolition of unauthorised buildings. The "Competivity" Decree addresses a series of environmental actions. The Art.10 of the Decree is dedicated to the hydro-geological risks. The decree provides further simplification of the Environmental Impact Evaluation (VIA), the Strategic Environmental Evaluation (VAS) and the Integrated Environmental Authorisation (AIA).</p>	
LITHUANIA				
<p>Eco-innovation in business</p>	<p>Support to eco-innovation in business to promote greening of existing industries by investing into technologies, environment management systems and eco-design</p>	<p>Industrial symbiosis is promoted to ensure continuous environmental effect, t. y. investment in cleaner production innovation, thereby reducing the adverse effects of climate change and the greenhouse effect</p>	<p>State aid-type support to businesses is driven by public needs of green economy, cleaner production and efficient use of resources</p>	<p>In eco-innovation policies implemented in a small country, there is a challenge to balance economical needs and gains with societal environmental needs.</p>
<p>Innovation in Waste Management System</p>	<p>To encourage modernisation and innovation in Waste Management Systems, first of all in providing innovative solutions in management, waste recycling, and energy recovery.</p>	<p>Efficient and productive WMS allows an increase of performance in waste management in more environmentally-friendly way as well as new products/services e.g. recycled materials to be supplied to the market.</p>	<p>WMS primarily serves societal needs, including management and utilisation of communal and also industrial waste. To large extent, it is managed by public bodies</p>	<p>Regretfully, innovation matters are not explicitly demonstrated by WM policies. Introduction of innovation, e.g. innovative recycling technologies and/or smart ICT solutions into developed WMS is facing controversy of value</p>

				innovation as well as shortage of resources, especially on municipal level.
Renewable energy sources (RES) and Innovation	This eco-innovation policy initiative is promoting development and implementation of technological solutions solving energy efficiency and environment-protection purposes.	Current environment-protection targets in diminishing production and consumption of fossil fuels-based energy demand for exploitation of novel – environment-friendly and sustainable – energy supply, also based on local resources. It also increases energy independence of the country.	State aid-type support to businesses in wider use of RES is driven by public needs of green economy, cleaner production and efficient use of resources	Generation of profits in utilising renewable energy sources is a challenging task both for industries involved in use and production of energy as well as manufacturing industries supplying innovative technological solutions, e.g. solar technologies, to the sector. In addition, favourable legal and regulatory environment has to be fully elaborated for energy surplus supply to the grid.
LUXEMBOURG				
National plan for smart, sustainable and inclusive growth Luxembourg 2020 (NRP)	The NMP is focused on the significant reduction of emissions by supporting renewable electric energy, electric transport (City of Luxembourg tramway project), progressive energy performance requirement for residential and commercial buildings, promoting biofuels and renewable fuels and focusing on eco-technologies.	The Ministry of the Economy and Foreign Trade (Ministère de l'Économie et du Commerce Extérieur) is in charge of research in the private sector and the Ministry of Culture, Higher Education and Research (Ministère de la Culture, de l'Enseignement Supérieur et de la Recherche) is responsible for research in the public sector. In addition, the Inter-ministerial Coordination Committee organised by the Ministry of Research has the mission to submit proposals for R&D budget allocations in the public sector. The newly-formed Higher Research and Innovation Committee contributes to the development of national R&D policy by advising the government on its implementation.	Concerning eco-technologies, the government is seeking to converge policies for energy and the environment with the concept of economic diversification. Eco-technologies include technologies that seek to reduce consumption of energy and resources and to protect the environment. The government is particularly stressing subjects such as eco-construction, sustainable mobility and the circular economy. Sustainable construction skills Centres will bolster research and innovation and federate the players in this sector with a view to supporting the development of the eco-construction sector. A concerted approach featuring representatives of sustainable construction players will be guaranteed through the establishment of a National Council	National plan for smart, sustainable and inclusive growth Luxembourg 2020 (NRP)

Environmental Technology Action Plan	The Plan covers many different areas such as eco-construction and eco-materials; eco-design and eco-conception; the rational use of energy; and renewable energies. A special focus is geared towards the concept of the "circular economy", "smart mobility" concepts and sustainable construction.	The plan was prepared by a working group of the Ministry of Economy and Foreign Trade, in collaboration with Luxinnovation, the University of Luxembourg, the Centre de Ressources des Technologies pour l'Environnement (CRTE / CRP Henri Tudor) and the company RDI Consultant (Paris, F). There are currently nearly 200 eco-companies in the country, working mainly in renewable energy, recycling, water management, and eco-construction. The sector is supported by 28 public agencies and 6 research institutions.	for Sustainable Development. Based on a first brief analysis, it is already clear that several areas should be studied carefully, including:- a) Renewable energy, because the mapping study identifies a significant set of eco- enterprises and research skills in this area. In addition, opportunities to achieve a higher share of value added in Luxembourg seem possible. b) Energy efficiency and decentralized management of energy systems, because of the number of actors and the presence of subsidiaries of international groups, as well as possible convergences with the actions taken by certain municipalities and in different sectors. c) Eco-construction sector where there are early successes abroad, with a range of stakeholders ranging from engineering and consulting to industrials (production of building materials in particular), combined with interesting research capabilities.	Environmental Technology Action Plan
The Laws of 05 June 2009 and 18 February 2010	The Laws are promoting the development of eco-innovations with a special emphasis on SMEs. The Laws focuses on providing aid schemes for energy savings, renewable energy, increasing energy efficiency and environmental protection.	The laws are implemented by the Ministry of Economy. The beneficiaries are SMEs, industrial undertakings, service providers with a key impact on economic development, and private-sector research centres.	The Laws are supported by the National Agency for the Promotion of Innovation and Research, known as Luxinnovation. It provides companies with information, assistance and advice on innovation and R&D in Luxembourg. Additionally, the Luxembourg EcoInnovation Cluster helps companies develop	The Laws of 05 June 2009 and 18 February 2010

			sustainable capabilities through innovative materials and better use of natural resources. The agencies offer contacts and information by working as intermediary for developing public-private partnerships and by networking at both national and international levels, while also giving access to various specialized support services relating eco-innovation.	
MALTA				
National Research and Innovation Strategy 2020	The National Research and Innovation Strategy 2020 is a high-level document creating the basis for future recommendations, proposals, measures, or policies.	The approach of the National Research and Innovation Strategy 2020 towards sustainability is mainly via the three main goals: 1) a comprehensive research and innovation support ecosystem, 2) a stronger knowledge base, 3) smart, flexible specialisation.	The National Research and Innovation Strategy 2020 has been drafted and implemented involving actors at national and regional level.	The National Research and Innovation Strategy 2020 focusses on sustainable research and innovation of the main areas of the Maltese economy while improving competitiveness
The Green Public Procurement (GPP) Action Plan	The Green Public Procurement (GPP) Action Plan promotes innovative procurement in eco-friendly products and processes	The policy aims to green public services and municipalities. This will increase social sustainability of services	The policy has been drafted involving a wide range of actors at national and regional level	The GPP Action Plan will help municipalities and public authorities become greener and more forward looking in their purchasing and tendering processes.
National Environment Policy	The National Environment Policy takes a detailed and holistic approach to addressing various environmental issues by building synergies among the various aspects of sustainable development	The policy aims towards improving the overall economic and environmental sustainability of Malta.	The policy provides the basis for wider public participation in projects initiated by national and local authorities	The National Environment Policy focusses on sustainable environmental development of the main areas of national economy while improving Malta's competitiveness.
POLAND				
Poland in EU-ETV Pilot Programme	policies and initiatives Implementation of EcoAP through	Sustainable from ecological perspective.	Results of the pilot programme will to be evaluated and considered in	Results of the pilot programme will to be evaluated and considered in

	direct involvement of Poland in international Pilot Programme.		planning future actions.	planning future actions.
GEKON - Generator of Ecological Concepts	Initiative combining R&D activities with ecological dimension.	Sustainable from ecological perspective.	Public call for projects open for companies and R&D units.	Specific funding scheme matching ecological issues with innovation with a view to develop new solutions.
GREENEVO – the Green Technology Accelerator	Development and internationalisation of green technologies made in Poland.	Sustainable from ecological and economic perspective.	Polish companies which develop green technologies can participate the initiative.	Public incentive supporting development of existing green technologies.
PORTUGAL				
Inclusion of eco-innovation in the Organic Law of Government and policy plans	There is an increased interest at governmental level to create a dedicated policy strategy tackling eco-innovation as policy priority.	The policy plans implemented in 2013, namely National Urban Waste Strategy Plan, National Rural Development Program 2020, Strategic Plan for Tourism 2013-2015, National Action Plan for Energy Efficiency and Renewable Energies, tackle the main eco-innovation areas in Portugal related to sustainable construction, water and energy efficiency. The implementation of these policies aim at contributing to meet the Europe 2020 targets on climate change and energy by addressing challenges, such as support more R&D and innovation in the economy, more efficient use of resources and investing in cleaner technologies.	This initiative has an impact on the different players in the society, from Universities and the industry/end users, to public administration and the citizens. Each actor will contribute to the implementation of the policies and will be directly or indirectly influenced by the performance.	While there is no dedicated eco-innovation policy strategy in Portugal, eco-innovation is somewhat addressed in general innovation, S&T, environmental, and energy policies, however there is a need to create a strong policy framework to support and promote eco-innovation and employment in eco-industries.
Portuguese Water Partnership (PWP)	Portuguese Water Partnership (PWP) fosters the discussion and reflection on future challenges related to water sector. Furthermore, the PWP is highly involved in the European Innovation Partnership on Water, launched by the European	The Partnership will intend to improve the recourse efficiency at national and European level and to address water issues and challenges in the water-using industry.	The Portuguese Water Partnership's aims to promote an effective link between professionals, institutions and companies in order to enhance innovation in the water sector through facilitating cooperation between companies and research	The Portuguese Water Partnership's mission is to promote an effective link between professionals, institutions and companies in order to project the knowledge and skills of the Portuguese water sector in the world.

	Commission and endorsed by the EU Member States in 2012, where PWP contributes to facilitate the development of innovative solutions to deal with grand societal challenges such as water challenges.		centres.	
EnergyIN	EnergyIN is engaged in the discussions related to the Europe 2020 strategy for growth and employment. The initiative aims at supporting policy decisions towards renewable energy and energy efficiency.	Portugal is now one of the countries in the world that has had the fastest growth rate in green electricity. The renewable energy and the energy efficiency are perceived as important sectors for the economic activity in the country, as it has a large number of companies involved, and there is a growing activity in innovation uptake.	This initiative is a cluster that encourages cooperation between different multidisciplinary actors involved in EnergyIN aiming to create networking opportunities that lead to the outset of new ideas and projects and to position Portuguese companies as world players in the value chain of renewable energies and energy efficiency, and an important driver for new research and innovation.	Some success cases resulting from the EnergyIN networking activities and cooperation, as presented in the "Catalogue of Portuguese eco-innovation competencies", are: - Windfloat project consists of a floating offshore wind device, equipped with a 2MW turbine, with a prototype currently in the sea off the coast of Aguçadoura in the North of Portugal. - SolarSel - It is an innovative project to incorporate PV in glass, using simpler and cheaper production methods to produce a transparent solar cell (Graetzel cell). It has already produced several patents and it has now gone from the lab scale to a scaling-up phase. - Inovgrid – considered a reference project at EU level, it is a sophisticated system applicable to electricity distribution grids, currently installed in Évora, a city in Alentejo, where it allows for the utility to manage the grid at a distance.
ROMANIA				
ECOREG	Testing the application of industrial symbiosis (IS) principles in the area of Suceava county, also allowing for regional symbiotic	To demonstrate the potential of industrial symbiosis for sustainable development of Romanian social-economic system. Reuse of	241 economic and social units participate in the network of IS; 170 units involved in completed synergies; 63 companies, from 48	

	development with the neighbouring counties.	resources and by-products used in one production cycle into another, reduced emissions of greenhouse gases, reduced soil and water pollution and improved landscaping aesthetics.	industrial sectors surveyed. The project involved the government, local authorities, international partners and companies.	
RONDINE	Encourage sustainable use of natural resources, by fostering renewable hydro and geothermal sources to produce energy	Reducing GHG emissions, increasing the share of RES in final energy consumption	Central and local government, state owned companies in energy, energy companies	Romania's target for 2020 for RES already met, significant potential for biomass, geothermal and hydro still to be developed. Policy goes together with a green certificates scheme for RES. Investments in facilities have to be located in the areas where infrastructure already exists.
GREEN HOUSE	State incentive to support households to install new technologies like photovoltaics, solar panels, heat pumps, biomass boilers or other eco-efficient and energy efficient devices for heating	Increasing energy efficiency of buildings, increasing share of RES, reducing GHG emissions, reducing costs of house maintenance and utilities	Large support from house owners, more than 23,000 applications submitted in 3 years, more than 13,000 beneficiaries, local authorities, governmental bodies involved, producers of green technologies and other companies	Programme intended to be expanded for legal persons. RES legislation incomplete, physical persons cannot supply the grid, the energy surplus is lost.
SLOVENIA				
Slovenian industrial policy (SPI)	Main pillars only implicitly recognised Eco innovations as promoter of innovations and development.	Lack of clearly set measures, goals and timeframes makes judge of sustainability very hard.	Interested stakeholder were involved in preparation of the strategy.	Generally oriented toward eco innovations, but without implementation mechanism
Resolution on Research and Innovation Strategy of Slovenia 2011-2020 (RISS)	Green public procurement is recognised as only promoter of Eco Innovation in innovative economy.	Due to missing implementation legislation, sustainability is in question.	In the preparation phase wide public participation was foreseen and also reached.	Adopted strategy is not implemented due to political reasons.
Policies in adoption phase:	In the current version of the documents there is no strong focus on eco-innovations	Mid- term documents oriented in achieving also Europa 2020 goals	As all of mentioned documents are late and still in adoption phase, public participation is foreseen but sometimes looks not well organised.	In the period of preparation different versions of the document were prepared, opposite to each other's, as in case of Smart strategy due to a political reasons. Political crisis in last 3 years prevent to harmonise content and to adopt the documents.

SPAIN				
Waste Prevention State Programme	<p>The Waste Prevention State Programme develops the policy for waste prevention and its main goal is to reduce the waste that will be generated in 2020 by 10% in comparison to the weight of the waste generated in 2010 and it will carry out a biennial assessment of the achievements made in matters of prevention.</p> <p>This programme is structured around four strategic lines designed to affect the key elements for waste prevention: reduction of the amount of waste; reuse and extension of the useful life of products; reduction of the content of harmful substances in materials and products; and reduction of the impacts on human health and the environment.</p> <p>Each line will identify its sectors of activity or product areas in which priority action will be taken and the most effective prevention measures will be proposed. Its implementation will depend on a number of actions carried out in different fields.</p>	<p>Prevention yields tangible benefits that manifest themselves in savings made in the consumption of raw materials and a reduction in the cost of waste management. It also contributes to the generation of new business and employment opportunities.</p> <p>Waste prevention activities promote new economic activities related with reuse, repair or second hand markets. Many of these activities facilitate self-employment, the consolidation of activities carried out by micro and small and medium enterprises or the integration of people at risk of social exclusion.</p>	<p>The Waste Prevention State programme has been sent to the Autonomous Communities, to the different Ministries and to the interested sectors. It has been subjected to public participation by being published on the Ministry's website and it was also presented at the Sectoral Conference and at the Environment Advisory Council (CAMA).</p>	<p>The programme is based on existing prevention measures, it analyses them and it defines the new ones based on the four lines mentioned above. It establishes and analyses actions to be carried out in the different autonomous communities and encourages the use of R+D+I</p>
Smart City Malaga	<p>Malaga City Council has passed, in one of its plenary meetings, all actions related with Smart Cities, including this concept into a transversal policy in all of the municipality's different departments.</p> <p>Malaga has increased its energy efficiency measures thanks to the Malaga SmartCity project together</p>	<p>Malaga promotes energy efficiency through ENDESA's SmartCity Malaga project. Smartcity Málaga is a project which defines the model for the eco-efficient cities of the future. It is a smartgrid pilot initiative which is part of the European Union's 20-20-20 Plan, whereby Endesa and its customers are working together to reduce</p>	<p>The City Council of Malaga encourages citizen participation through actions carried out by electronic administration, e-government. The city council also has a department for citizen participation. An internal programme has been developed at the council called Participation Diary and the citizens are involved</p>	<p>Malaga Town Council is the Vice-president organisation for RECI. It was a finalist in the Smart City World Congress. It has signed agreements with Red.Es and EOI and it is a demonstration centre for the FIWARE platform. It has received the E-Visionary Award.</p>

	<p>with ENDESA. Other measures are: the use of biogas energy created at the local dumping site, drying of sewage sludge and photovoltaic power plants; promotion of sustainable movement with electric vehicles; improvement in the management of communications and red tape procedures with the citizens.</p>	<p>environmental impact by fostering the use of renewable energies, improving energy efficiency, bringing generation and demand into line, and encouraging rational and efficient consumption. An example of this is the use of smartmetering: over 17.000 smart meters have been installed, and a sample of 50 of these users have energy efficiency solutions for their homes. Over 10 SMEs and emblematic buildings in the area have energy efficiency solutions installed which enables them to monitor consumption and control some of their charging</p>	<p>in different areas and issues.</p>	
<p>DB-HE Basic Document "Energy Saving", Technical Building Code</p>	<p>It is an order from the Ministry of Public Works passed in September 2013. It is an adaptation of the national regulation from EU commitments such as the package of measures on energy and climate change that are included in the 20-20-20 objective. It is also used to reduce greenhouse gas emissions, in an approach to comply with the Kyoto Protocol – Framework Convention of the United Nations on Climate Change.</p> <p>The initiatives are related to energy saving in buildings when considering:</p> <ul style="list-style-type: none"> - The limitation of energy consumption - The limitation of energy demand - The performance of thermal installations - The energy efficiency in lighting installations 	<p>Energy efficiency in buildings is essential to ensure the country's energetic sustainability in terms of energy consumption and in terms of reducing greenhouse gas emissions. The aim of the main requirement "Energy Saving" is to achieve a rational use of the necessary energy to be used in buildings, reducing consumption to sustainable limits and accomplishing that part of this consumption be provided by renewable energy sources as a consequence of its project's features, construction, use and maintenance. This document specifies the procedures and aimed parameters that will make sure that the basic needs are satisfied and that the minimum quality levels of energy saving are surpassed</p>	<p>The passing of this order was accepted by the private and public sector after they were consulted. Public acceptance.</p>	<p>This order updates the existing regulation on building and adapts it to EU requirements.</p>

	<ul style="list-style-type: none"> - The minimum solar contribution of hot water - The minimum photovoltaic contribution of electric energy 			
SWEDEN				
Sustainable Consumption and Circular Economy	<p>A proposal of Measures for A More Sustainable Consumption by Swedish EPA includes: 1) Strategy for Sustainable Consumption; 2) Innovation Competitions and Innovation Award for Recycling and Circular Economy; 3) Good Practice Examples and Cooperation between Public Agencies for Circular Economy.</p>	<p>Average private consumption in Sweden is far from environmentally sustainable. To reduce environmental and health impacts, consumption patterns, levels and lifestyles need to change. Departing from this, Swedish EPA proposes that new policies are developed and existing instruments are revised. The policies for sustainable consumption should not only influence what we consume but also reduce our consumption levels and bring behaviour change. Economic development should be decoupled from the increased consumption, extraction of natural resources and negative environmental impacts. New measures of welfare need to be developed.</p>	<p>The policy focuses mainly on what the Swedish public agencies can do but recognises that private actors (i.e. businesses and consumers) play an important role in its successful implementation. The whole society should collaborate for sustainable and conscious consumption.</p> <p>The work within the focus area of sustainable consumption emphasises the role of consumers and the need for supportive frameworks, measures and instruments to accelerate the transition to a resource efficient society. New ideas often arise when people from different backgrounds, expertise, disciplines, sectors or organisations meet and interact. More and more companies therefore invite other stakeholders to participate in their development processes, which is often called "open innovation".</p>	<p>The policy recognises that a fundamental prerequisite for a more sustainable consumption is the internalisation of environmental costs in the price of goods and services.</p>
ICT for a greener administration	<p>In 2007 a feasibility study to summarise national initiatives and propose future initiatives on the governmental level was done. The Government then commissioned an analysis of the ICT activities of public agencies from an environmental perspective. In 2009-2010 Swedish EPA to developed a proposal for a public</p>	<p>The policy departs from the need to meet national climate targets and highlights the importance to reduce Sweden's environmental footprint. It highlights the need to reduce environmental impacts in the energy, transportation and building sectors via the increased use of ICT. The potential for annual energy saving, if all public</p>	<p>While the policy targets Swedish public agencies, who should become an example for other actors in the society on how to reduce environmental impacts with the increased use of ICT, public and private organisations are encouraged to follow the Government's recommendations. In particular, the business sector is</p>	<p>During the Swedish EU Presidency in autumn 2009, Sweden arranged a ministerial conference on Electronic Government (eGovernment). eGovernment relates to improving performance in public administration by taking an advantage of ICT use combined with organisational changes and new skills. The conference resulted</p>

	sector action plan for ICT for the environment. This proposal was the basis for the policy analysed here.	agencies chose the greenest ICT alternatives, is 16 000 MWh. Virtual meetings are expected to offer new and improved ways of meeting, which enhance time and space accessibility, and reduce resource consumption and negative environmental impacts by eliminating a need to travel to a meeting.	very active in the ICT for the environment area. Swedish IT & Telecom Industries has been running its Green ICT project, which includes a tool to measure the organisation's green ICT maturity against a green ICT index. The project has spread to other Nordic countries, and a Nordic portal featuring best practice examples from different sectors was established.	in a ministerial declaration stating that eGovernment should be used to promote a sustainable, low-carbon economy.
Strategy for a Bio-based Economy	The Swedish Research and Innovation Strategy for a Bio-based Economy	A transition to a bio-based economy is seen as a pathway to reduce climate effects and the use of fossil-based raw materials. Biomass materials also acquire added value as their use in a bio-based economy leads to the reduction of fossil fuel use, and recovery of nutrients and energy as additional end products. The ultimate objective is to optimise the value and contribution of ecosystem services to the economy.	Addressing the challenge of transition to a bio-based economy will require collaboration among actors and sectors, who should work together to deal with the complex issues and demands for solutions that the challenge gives a rise to. While the Swedish Government and Parliament dictate the overarching prerequisites in terms of legislation and governance to promote a transition to a bio-based economy, other actors such as universities, colleges and research institutes, as well as regions, municipalities and commerce are crucial to engage in the process. While R&D on solutions for an accelerated transition to a bio-based economy is a primary task for universities and research institutes, the Strategy recognises that public actors and civil society have also important roles in the process.	While the organisation of the funding of research, development and innovation within the area of bio-economy functions well, there is a need for a closer involvement of users/consumers in prioritising knowledge gaps and new problem areas.
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Adaptation to climate change	The policy is about adapting to the climate change to be better protected from its effects. For this, a number of actions have been put in place to assess risks and impacts and find solutions.	Proposals are planned for the long term, by reflecting climate risks and sustainable development, protecting the environment, promoting growth.	Some proposals are responsibility of the government, but others cover areas of joint responsibility where it is necessary to develop shared solutions. Local government, industry, communities and civil society all have important roles to play.	The observation includes risk assessments, analysis of opportunities from climate change for different sectors, projections of future changes of the climate in the UK, assessment of the progress of the implementation of the National Adaptation Programme.
UK Green Investment Bank (GIB)	The purpose of the Green Investment bank initiative is to accelerate the UK's transition to a greener, stronger economy by investing in Green projects on capital terms.	Every approved investment is subject to a robust, detailed and continuous green impact monitoring, spanning all aspects of its green performance including sustainability	The Green Investment Bank was created by the UK Government, the bank's sole Shareholder, who has committed to provide the bank with an initial £3.8bn of capital to invest in many projects which include both private and public stakeholders.	There is significant support for the Green Investment bank as it looks to continue the expansion of its portfolio across a range of green technologies.
Sustaining and enhancing trees, forests and woodland	The policy statement sets out priorities for future government policy-making. Showing that this will concentrate on protecting, improving and expanding public and private woodlands.	The DEFRA Government Forestry Policy Statement advises that a new body will be established to hold the Public Forest Estate in trust of the nation and manage it for the long-term benefit of people, the economy and the environment.	The DEFRA Government Forestry Policy Statement confirms that the Public Forest Estate will remain in public ownership. They further undertook to improve access to woodlands and to work in partnership to increase community involvement in the sector.	The policy highlights the priorities and focus for resources for the future. The Government accept that these are the first steps in a much longer journey that will only be realized without working with the community and other partners to achieve the policy's ambitions

Appendix 1 summarises relevant and representative eco-innovation policies and initiatives in 20 countries participating in the CASI project. Each of these summaries is presented in greater detail in respective national level policy briefs available on the CASI website at www.CASI2020.eu . A more in-depth European level policy brief is also available on the site.