

TAKEAWAY FOR AUSTRIA

- Make use of the high public environmental awareness among the population in widening public participation in eco-policy making
- Consider an ecological reform of the general legislation and regulatory framework without discounts for certain industries or sectors
- Sustainable innovations in the transport and mobility sector especially from the social innovation part could be fostered by politics for quick and easy progress

THE ECO-INNOVATION ACTION PLAN IN AN ENVIRONMENTAL POLICY CONTEXT

Insights from and for AUSTRIA

ECO-INNOVATION ACTION PLAN ADDRESSES INNOVATION DIRECTLY

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.

ECOAP FOCUS ON GREEN TECH

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.

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

The EC and the Member States coordinate national and EU policies on eco-innovation for which a range of useful tools are 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 sectors where eco-innovation could contribute to greater resource efficiency. Partnerships are being set up for raw materials, sustainable agriculture, and water.

ATTENTION SHOULD BE PAID TO AN EXPLICIT ECO-INNOVATION POLICY PROGRAMME

This policy brief looks at how the eco-innovation policies in Austria 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 Austria relates to progress in the other countries.

Concerning Austria, attention should be paid to an explicit eco-innovation policy programme, ecological criteria for existing funding programmes, and learning from the successful model of Eco World Styria.



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

INCREASE OPPORTUNITIES FOR THE CREATION OF GREEN JOBS

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 Austria.

ECO-INNOVATION POLICIES AND INITIATIVES IN AUSTRIA

NO EXPLICIT ECO-INNOVATION POLICY IN AUSTRIA

There is no explicit eco-innovation policy programme implemented in Austria. However, a number of measures and strategies have been set up, which relate to eco-innovation issues. Overall, Austria’s eco-innovation policies are represented by a mix of first and second generation policies, e. g. policies with a strong focus on end-of-pipe environmental technologies and energy and resource efficiency. Third generation policies that support systemic/radical eco-innovations are still largely absent. In Austria the leading eco-innovation



CLEAN ENERGY, WASTE
MANAGEMENT, ECO-
EFFICIENT
CONSTRUCTION

sectors at this time are clean energy technologies, waste management and eco-efficient construction (Source: Eco country profile 2013).

Austria is seen in general as a leader in eco-efficient construction, and especially in passive house building in particular (see also the CASI sustainable innovation example of the L.I.S.I. House). Also in waste management, Austria's 30 year experience and the technological know-how of participating firms represents a clear advantage. The market potential within Austria nowadays is limited, given its already reached high standards, but there is a large export potential. In the clean energy sector Austria's suppliers of renewable energy services have shown good results, especially in the use of biofuels and small-scale hydropower, but also with heat pumps/exchangers and in using solar energy. The up and coming eco-innovative sectors are ecological forms of mobility (e. g. e-mobility, see again the CASI sustainable innovations nominated from the transport sector such as the Solartaxi Heidenreichstein), and resource efficiency, which includes resource reduction for products and processes.

CLEAN ENERGY, WASTE
MANAGEMENT, ECO-
EFFICIENT
CONSTRUCTION

Eco-innovation is playing an ever more important role in the Austrian economy. In 2011, 11.5% of Austrian production and service enterprises were categorised as being eco-innovative; their turnover was equivalent to 5.6% of total turnover in the production and service sectors (of enterprises with more than 9 employees). While this sector's turnover increased by 3.0% from 2008 to 2011, the eco-innovative shares of the sector increased by 16.6% to 18.6% in the same time. This is also reflected in employment growth: while the sector's employment grew by 0.4% from 2008 to 2011, the eco-innovative shares of the sector's employment grew by 4.9% to 7.4% in the same time (Source: Bliem M. et al., 2014).

Green Tech Valley – Eco World Styria

COMPANY CLUSTER IN
CLEAN ENERGY AND
ENVIRONMENTAL
TECHNOLOGY

Eco-World Styria is the largest cluster of companies in the area of clean energy and environmental technology in Austria, comprising 80 companies, which generate an annual turnover of more than EUR 3.6 billion and have almost 18,000 employees in eco-innovation related areas.

STYRIA HAS A STRONG
REGIONAL FOCUS ON
ECOLOGY

Eco World Styria supports the companies and the location Styria with basic services and projects with strategic levers along the growth drivers innovation, know-how, and new markets. ECO is the supporting organisation of the economic-political initiative in the areas of energy and environmental engineering of the province of Styria. With 173 cluster partners, Eco World Styria is aiming at "E-C-O 20-20-20" in the strength fields of biomass, solar energy, mass flow and water/wastewater:

E "Employment:" increase in the number of employees in Styrian environmental engineering companies to 20,000 until 2015

C "Competence:" roughly doubling of the number of Styrian technology leaders to 20 until 2015

O "On top:" increase in the international presentations in the media



and at trade fairs to around 20 per year until 2015 (see: [European Cluster Collaboration Platform](#), 2017).

History: Eco World Styria has its roots in the project Eco & Co (running from 1998 and 2004), operated by TRIGON Development Consulting, and the network was converted to the company “Umwelttechnik-Netzwerkbetriebs GmbH”, and the “Eco World Styria” brand established.

AWARD-WINNING
ECO CLUSTER

Facts about Eco World Styria

170 cluster-partner companies
 1,3 companies’ satisfaction with ECO (1=best grade, 5 = worst grade)
 97% of the cluster-partner use 1 ECO’s services actively
 62% of the cluster-partner use 3 ECO’s services actively
 1st result on google.at for "environmental technology"
 100K customer contacts worldwide and 3 printed media per year
 100K electronic customer contacts through 70 electronic media per year
 1.000 personal contacts per year at events and meetings
 120 individual consultations per year
 66% businesswomen as advisors
 (Source: [Greentech cluster 2017](#)).

Eco World Styria has been awarded with the following international prizes:

First prize World’s best Cleantech cluster

Ranking 2012 of Global Cleantech Directory as well as Ranking 2010 of the US-Investor Network Cleantech Group www.cleantech.com (criteria: concentration, dynamic, innovation) (regarding cluster-partners’ turnover, moderate comparability of sectors)

Gold Cluster management in Europe

With 98% of the achievable score, the cluster management of the Styrian environmental engineering cluster ECO WORLD STYRIA demonstrates excellence at the highest level and is awarded the Gold Label of the European Cluster Excellence Initiative (ECEI).

Star Growth through innovation in Europe

With innovative cluster services and double-digit growth rates in the industry, the Styrian green-tech cluster ECO WORLD STYRIA wins the prestigious “RegioStars Award 2012” for intelligent growth for Austria for the first time.

In its annual reports, Eco-World Styria provides an outlook to upcoming projects and products of future relevance. Among the issues listed in the latest Annual Report 2013 (Eco-World Styria, 2013), the following thematic areas and projects were featured:

- Landfill Mining Styria: re-opening landfill mines, in order to extract valuable raw materials from waste;
- Green Tech Tower: advancing renewable energy use in construction, e. g. through innovative, transparent photovoltaic cells on the buildings’ surface;
- Recycling of cars: develop “backward planning” technologies to optimise the re-use of raw materials at the end of a car’s products life-cycle.



Source: (Source: [Greentech cluster 2017](#)).

Ecoduna

HANGING GARDENS
AS AN ECO-
INNOVATION

Ecoduna is the global innovation leader in photobioreactors for the continuous industrial production of microalgae and has two patented systems, “hanging gardens” and “deep pond”, which are innovative systems of photobioreactors (PBR). Both technologies increase the photoactive volume as well as reduce the energy input and land demand for algae cultivation. Ecoduna’s technology hanging gardens is an algae cultivation system which enables the production of microalgae in a particularly effective manner.

Compared to other algae production system, ecoduna has developed key innovations. One of the most important features is that light inhibition is prevented by diluting sunlight. The second important feature of hanging gardens is the enormously increased surface exposed to the sun. By these measures, a far better productivity is achieved, resulting in a technologically outstanding competitive advantage in the cultivation of microalgae.

History: The company was founded by Franz Emminger and Martin Mohr in 2010 in Lower Austria after five years of R&D. Meanwhile ecoduna defines itself *‘as world’s first continuously-producing algaculture systems. ‘These patented photobioreactors work 24 hours a day, 365 days a year, constantly producing biomass from microalgae. This milestone of algae research has created a buzz and garnered important national and international awards (e.g. Energy Globe Award, State Prize for Innovation). (Cited from: [Ecoduna 2017](#)).*

Today, the “ecoduna algae pioneers” are the worldwide technology leaders in industrial-scale algae cultivation. Their methodologically-sound process makes possible the efficient production of biomass on an industrial scale. This new technology establishes a wide array of uses in the pharmacological, chemical, food and cosmetics industries in addition to energy and environmental technologies. (Cited from: [Ecoduna 2017](#)).

Ecoduna is mainly founded by equity capital from private investors, and Austrian and European development funds.

Ecoduna has been awarded with the following national and international prizes:

- 2014 Energy Globe World Award 2013 (Category Fire) – 1st place
- 2013 Energy Globe World Award, Lower Austria – 1st place
- 2012 Milestone, Dr. Erwin Pröll Zukunftspreis – 1st place
- 2010 Prize for Outstanding Innovation, province of Lower Austria
- 2010 Prize for Technical Innovation, Lower Austrian Economic Chamber
- 2010 ecoduna partners with Autodesk CleanTech
- 2009 RIZ Genius Award – 1st place (“Energy from Algae”)

(Source: [Ecoduna 2017](#).)

ANSWERS TO
INCREASING BIOFUEL
PRODUCTION WASTE



ab&cd Innovations

ab&cd innovations, located in Vienna, *developed a technology for the conversion of glycerol, a by-product of biodiesel production, into lactic acid.* (Source: [ad&cd innovations 2017.](#)) ab&cd deals on the one hand with the oversupply of glycerol and the rising demand for lactic acid on the other hand.

The process is especially developed for application in biodiesel production plants. It can even be integrated into existing production facilities and enables biodiesel producing companies the exploration of a new sector: the rising market of lactic acid. Due to the use of crude glycerol for the chemical fabrication of DL-lactic acid, the use of starch containing food crops can be avoided. ab&cd innovations works closely with biodiesel companies to leverage existing crude glycerol streams into lactic acid (Source: Eco country profile 2013).

ab&cd innovations has been awarded with the following prizes:

- 2014 nominated for the Energy Globe Award Vienna (category earth)
- 2013 GEWINN Young-Entrepreneur Competition 2013
- 2013 Environmental prize of the City of Vienna
- 2013 Mercur Innovation Award (2nd place in category Green Economy)
- 2012 Austrian federal prizes for environmental and energy technology
- 2012 Start Up – Ressourceneffizienz prize

(Source: [ad&cd innovations 2017.](#))

INSIGHTS FROM EUROPEAN POLICY ACTIONS

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.

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 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.

ECO-INNOVATION
POLICIES IN EUROPE
ADDRESS ISSUES AT
NATIONAL LEVEL

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

FUNDING INSTRUMENTS
COMMON

POLICIES RELY ON
MARKET ACTORS TO



REALIZE DIFFUSION OF ECO-INNOVATIONS

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).

CREATION OF ECO-INNOVATIONS FOR PROMOTION OF GROWTH AND COMPETITIVENESS

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.

LOW LEVEL OF PUBLIC PARTICIPATION.

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.

AUSTRIA IN A EUROPEAN PERSPECTIVE

STRONG FOCUS ON SMEs

In Austria the focus of eco-innovation policies is clearly set on two pillars: strengthening the innovative competencies in Austrian SMEs with ecological aspects playing a very important role and increasing ecological standards via general public legislation. The Austrian klimaaktiv programme is a major funding and innovation management programme fostering the eco-innovative humanpower of Austrian SMEs.

STRONGER GENERAL LEGISLATION NEEDED

Compared to Scandinavian countries Austrian eco-policies could be stronger still. Also the discounts for large industrial companies or the relatively poor benchmarking in the transport and mobility sector are still not being addressed adequately.



**RECOMMENDATIONS FOR POLICYMAKERS IN
AUSTRIA**

- Public participation is rather little even though public environmental awareness among the wider public is generally high
- The general legislation and regulatory framework is hardly ecologically oriented, rather than coming up with eco policies are general ecological standpoint could be implemented
- Austria could enforce stronger ecological restrictions in areas where it is lagging behind such as the mobility sector; a set of good social and ecological innovations could be fostered



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: Schwarz-Wölzl, Maria; Wollner, Maximilian; Matschoss, Kaisa; Kaarakainen, Minna; Repo, Petteri; Tregner-Mlinarić, Anita; (2014). CASI Policy brief: ECO-INNOVATION ACTION PLAN IN AN ENVIRONMENTAL POLICY CONTEXT, Insights from and for Austria.
www.CASI2020.eu

Contacts:

Zentrum für Soziale Innovation
Maria Schwarz-Wölzl
Email: schwarz@zsi.at
Phone: +43 1 4950442-52

Zentrum für Soziale Innovation
Maximilian Wollner
Email: mwollner@zsi.at
Phone: +43 1 4950442-36



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 tailor made products	sustainability from economic (local new business opportunities), social (new jobs, local production, short value chains) and environmental (products with a smaller ecological footprint, short value chain) perspective	(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.
UPV	new business model in which not only	sustainable from economic (recycling,	business and consumers	economic sectors create new

	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.	less import of (raw) materials), environmental (closing loops, recycling waste) and social (enhancing the environmental responsibility of business) perspective		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	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 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	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

	the country.	the health of the nation's people.	the areas in focus. A consultation with any and all interested parties was made available online in September, 2014.	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 demonstration of environmental technologies with focus on for example water, climate change adaptation, circular economy and recycling of waste.	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 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	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.

			participatory policy-making and increases the validity of future actions.	
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 future and the development of green technologies (Les investissements d'avenir pour le développement des technologies vertes)	Long-run investment programmes for the development of green-technologies first launched by the French government in 2010.	Development of green 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	This long run investment policy 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	A new budget for this policy was integrated in July 2013, incorporating additional environmental policies and measures. Most beneficiaries of this programme are privately owned companies.

		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.	risk-benefit analysis and their opinion on whether or not the investment will be constructive and profitable for France.	
ECO-TS	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.	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.	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.	ECO-TS took over from the ECOTECH programme that was previously launched.
Competitiveness clusters (Pôles de compétitivité)	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 expertise, an assessment, good practices in addition to innovative ideas for a common objective.	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 apply their work related to sustainability for the social and environmental benefits of France.	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 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.	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 innovation.
GERMANY				
Cluster environmental	The Cluster environmental technologies is a network fostering	The cluster's focus will be on integrated, preventive technologies,	As the cluster is not addressed to the common public, there is no public	Establishing a model for sustainable economy with an international impact

technologies North Rhine Westphalia	environmental technology in the Federal State North Rhine Westphalia	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	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.	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	

			<p>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.</p>	
<p>Decree “Competitività” 66/2014 and the protection of environment</p>	<p>The “Competivity” Decree addresses a series of long-term environmental actions.</p>	<p>Established cooperation with the 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>The objectives of the Decree are to 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</p>	

			Environmental Authorisation (AIA).	
LITHUANIA				
Eco-innovation in business	Support to eco-innovation in business to promote greening of existing industries by investing into technologies, environment management systems and eco-design	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	State aid-type support to businesses is driven by public needs of green economy, cleaner production and efficient use of resources	In eco-innovation policies implemented in a small country, there is a challenge to balance economical needs and gains with societal environmental needs.
Innovation in Waste Management System	To encourage modernisation and innovation in Waste Management Systems, first of all in providing innovative solutions in management, waste recycling, and energy recovery.	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.	WMS primarily serves societal needs, including management and utilisation of communal and also industrial waste. To large extent, it is managed by public bodies	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 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,	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	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	National plan for smart, sustainable and inclusive growth Luxembourg 2020 (NRP)

	<p>promoting biofuels and renewable fuels and focusing on eco-technologies.</p>	<p>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.</p>	<p>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 for Sustainable Development.</p>	
<p>Environmental Technology Action Plan</p>	<p>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.</p>	<p>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.</p>	<p>Based on a first brief analysis, it is already clear that several areas should be studied carefully, including:-</p> <ul style="list-style-type: none"> 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 	<p>Environmental Technology Action Plan</p>

			with interesting research capabilities.	
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 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.	The Laws of 05 June 2009 and 18 February 2010
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	The National Environment Policy takes	The policy aims towards improving	The policy provides the basis for wider	The National Environment Policy

Environment Policy	a detailed and holistic approach to addressing various environmental issues by building synergies among the various aspects of sustainable development	the overall economic and environmental sustainability of Malta.	public participation in projects initiated by national and local authorities	focuses 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 direct involvement of Poland in international Pilot Programme.	Sustainable from ecological perspective.	Results of the pilot programme will to be evaluated and considered in planning future actions.	Results of the pilot programme will to be evaluated and considered in 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	Portuguese Water Partnership (PWP)	The Partnership will intend to improve	The Portuguese Water Partnership's	The Portuguese Water Partnership's

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 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.	the recourse efficiency at national and European level and to address water issues and challenges in the water-using industry.	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 centres.	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.
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	To demonstrate the potential of	241 economic and social units	

	symbiosis (IS) principles in the area of Suceava county, also allowing for regional symbiotic development with the neighbouring counties.	industrial symbiosis for sustainable development of Romanian social-economic system. Reuse of 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.	participate in the network of IS; 170 units involved in completed synergies; 63 companies, from 48 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 with ENDESA. Other measures are: the</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 environmental impact by</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 in different areas and issues.</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>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>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>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 - The minimum solar contribution of hot water 	<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>

	- The minimum photovoltaic contribution of electric energy			
SWEDEN				
Sustainable Consumption and Circular Economy	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.	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.	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. 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”.	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.
ICT for a greener administration	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 sector action plan for ICT for the environment. This proposal was the basis for the policy analysed here.	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 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,	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 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	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 in a ministerial declaration stating that eGovernment should be used to promote a sustainable, low-carbon economy.

		and reduce resource consumption and negative environmental impacts by eliminating a need to travel to a meeting.	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.	
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.
UNITED KINGDOM				
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.