

Eionet webinars on resource efficiency policies

Webinar on national targets for resource efficiency

Thursday, 30 June 2016, 11:30 - 13:00 (Central European Time)

Final webinar report Agenda, background paper, presentations and participant list

Recording of the webinar on 30 June 2016 is available at:
<http://eu-wacs.adobeconnect.com/p9c43b37q0h/>

Prepared by:

ETC/WMGE 2.1.1.d Task Manager:
Bettina Bahn-Walkowiak (Wuppertal Institute)
European Topic Centre on Waste and Materials in a Green Economy

EEA project manager:
Paweł Kaźmierczyk

Documents, presentations and video recordings from past resource efficiency webinars are available on the Eionet Forum:
<http://forum.eionet.europa.eu/nrc-scp-waste/library/eionet-webinars/webinars-resource-efficiency>

Contents

- 1 Objectives of the webinar3
- 2 Targets for Resource Efficiency and A Circular Economy.....5
 - 2.1 Policy context.....5
 - 2.2 Why focus on targets?.....6
 - 2.3 Target types7
 - 2.4 What’s the situation?.....8
- 3 About the speakers..... 11
- 4 Webinar Agenda 12
- 5 Presentations..... 14
 - 5.1 Welcome and introduction to the webinar 14
 - 5.2 EEA Report "More from less – material resource efficiency in Europe" - An overview..... 16
 - 5.3 Targets for resource efficiency in Portugal 17
 - 5.4 Economy wide targets on resource use – the continuous development of raw material productivity in Germany..... 18
 - 5.5 Targets for resource efficiency in Latvia..... 20
- 6 List of registered participants..... 23
- 7 Instructions how to log in on the 30 June 2016 25

1 Objectives of the webinar

Webinars on resource efficiency policies and instruments, initiated in 2012, are organized by the European Environment Agency for the [Eionet network](#). They aim to support exchange of information and sharing of experience among national institutions responsible for practical implementation of resource efficiency policies at the country level.

The main objectives of resource efficiency webinars are to keep countries informed about on-going and upcoming EU policy initiatives, and to provide a forum where countries themselves can present examples of policy initiatives which they adopt and carry out under the heading of resource efficiency.

[Previous webinars](#) covered such topics as: national strategies for resource efficiency; targets and indicators; circular economy; industrial symbiosis; circular economy; RMC and the European target on resource productivity; decoupling; or mixes of policy instruments for resource efficiency.

In an effort to tackle inefficient and wasteful use of natural resources, the European Union has named resource efficiency as one out of seven flagship initiatives under so-called Europe 2020 strategy, which means the EU considers resource efficiency a top policy priority (European Commission, 2010). The "Roadmap to a Resource Efficient Europe" (European Commission, 2011a) describes a vision of an economy in the European Union in 2050, which is competitive and inclusive and has a high standard of living but grows economically in a way that the scarcity of resources and the limits of the planet are respected. In 2015, the European Commission published an Action Plan addressing the transition to a circular economy (European Commission, 2015, p.1)

"where the value of products, materials and resources is maintained in the economy for as long as possible, and the generation of waste minimised, is an essential contribution to the EU's efforts to develop a sustainable, low carbon, resource efficient and competitive economy."

However, development and implementation of policies to support resource efficiency and circular economy in a synergistic way are at a fairly early stage. Furthermore, the formulation of appropriate objectives and targets is clearly a challenge, at both the EU and national levels.

The goal of the webinar on 30 June 2016 is to share within the Eionet the information on national targets for resource efficiency collected in the More From Less report, and to invite three countries to present their experience and approach to setting resource efficiency targets.

The webinar began with an introduction by **Bettina Bahn-Walkowiak** who will briefly introduced the topic and the objectives of this webinar.

Paweł Kaźmierczyk gave an overview of the results of the recently published EEA report [More From Less – material resource efficiency in Europe](#) which presents a wide variety of topics reported by the [32 participating countries](#). The report examines the approach to targets for resource efficiency at the EU level (Chapter 1, section 5), and then discusses targets reported by countries (Chapter 9). Details of all reported targets are provided in Annex 8.

The three country presentations were made by:

- Ms. **Sofia Rodrigues**, NFP Portugal and Head of Department, Environment Agency, Portugal,
- Mr. **Jens Günther**, Federal Environment Agency, Germany,
- Ms. **Erika Lagzdina**, Environmental protection department, Ministry of Environmental Protection and Regional Development, Latvia.

The three presentations were chosen to present a variety of different country approaches to developing and adopting resource efficiency targets, and addressed both the targets themselves, and the way the process was organized to agree on those targets. Such information may serve as useful inspiration for other countries working towards targets.

Technicalities:

Adobe Connect, the new webinar software which we use, allows up to 100 participants to take part. While priority is given to Eionet participants, non-Eionet participants will also be able to register, so feel free to forward this invitation to other colleagues for whom such information may be of interest. To participate in the webinar, you need a computer with a fast internet connection, and equipped with a microphone and speakers (or a headset).

Prior to the webinar, please run a self-check to verify that your computer is correctly set up to use Adobe Connect: https://na1cps.adobeconnect.com/common/help/en/support/meeting_test.htm You can do this check at any time. If you encounter problems, please ask your IT team to help resolve issues – we are not able to help with local computer problems.

On Thursday, 30 June, please log in from 11:00 CET onwards. We will start the webinar at 11:30 sharp. To log in, please click on the link and fill in the information requested:

<http://eu-wacs.adobeconnect.com/targets/>

Detailed instructions explaining how to activate your speakers, microphone, etc., are included at the end of this document.

2 Targets for Resource Efficiency and A Circular Economy

2.1 Policy context

The Europe 2020 Strategy defines milestones for the EU to become a smart, sustainable and inclusive economy (European Commission, 2010). The strategy is built around seven mutually reinforcing flagship initiatives, one of which has resource efficiency at its core (European Commission, 2011b). As a follow up to this flagship initiative, the Commission adopted the Roadmap to a Resource Efficient Europe in order to set a framework for action that would pave the way towards an EU smart, sustainable and inclusive economy that by 2050 has grown in a way “that respects resource constraints and planetary boundaries, thus contributing to global economic transformation” (European Commission, 2011a, p.3).

Under the headline “Transforming the economy” the EU Roadmap describes four major guidelines and milestones:

- **Sustainable consumption and production** — By 2020, citizens and public authorities have the right incentives to choose the most resource efficient products and services and market and policy incentives that reward business investments in efficiency are in place.
- **Turning waste into a resource** — By 2020, waste is managed as a resource.
- **Supporting research and innovation** — By 2020, scientific breakthroughs and sustained innovation efforts have dramatically improved how we understand, manage, reduce the use, reuse, recycle, substitute, safeguard and value resources.
- **Environmentally harmful subsidies and getting the prices right** — By 2020, Environmentally harmful subsidies will be phased out and a major shift from taxation of labour towards environmental taxation will lead to substantial share of environmental taxes in public revenues (European Commission, 2011a).

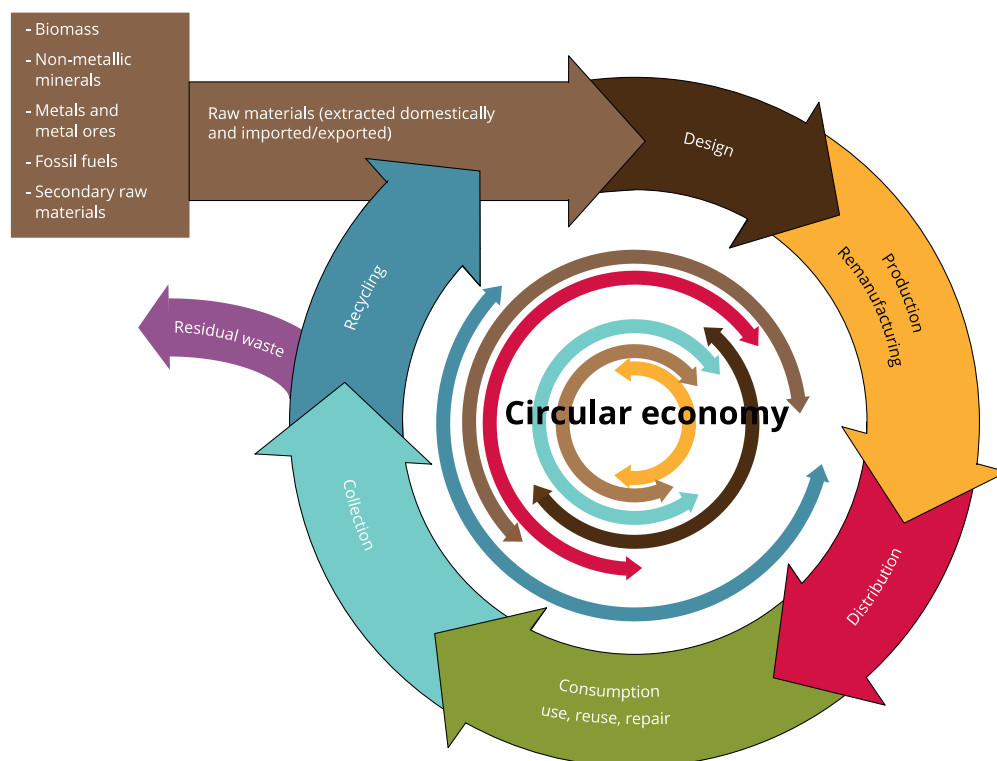
The 7th Environment Action Programme also highlighted the role which resource efficiency should play in this transformation by including it in one of its thematic priorities, namely to turn the Union into “a resource-efficient, green and competitive low-carbon economy.” The other two key objectives are to protect, conserve and enhance the Union’s natural capital; and to safeguard the Union’s citizens from environment-related pressures and risks to health and wellbeing (European Commission, 2014).

Waste management is a longstanding policy field in the EU and goes back to the Packaging and Packaging Waste Directive of 1994, the Landfill Directive of 1999, the Thematic Strategy on the prevention and recycling of waste of 2005 and the Waste Framework Directive of 2008. More recently, the Commission’s Communication on the Circular Economy and closing the loops acknowledged that moving “to a more circular economy, where the value of products, materials and resources is maintained in the economy for as long as possible, and the generation of waste minimised, is an essential contribution to the EU’s efforts to develop a sustainable, low carbon, resource efficient and competitive economy” (European Commission, 2015).

2.2 Why focus on targets?

Within the scope of the EEA report covering a wide array of issues reported by countries¹, targets for material resource efficiency are seen as an essential element for creating a strategic framework towards resource efficiency and circular economy.

Figure 1: Scope of material resources used in the EEA report More from Less



Source: (EEA, 2016, p. 17), adapted from the 2014 Circular Economy Package

Targets contribute to long-term orientation within complex multi-level political-administrative systems. While goals are set at all governance levels and for all areas of responsibility—global, regional, state, or municipal level, at the company or organization level, for sectors, for specific (environmental) policy areas—, the formulation of targets is challenging and can even be a policy objective itself, for instance, by constituting an element within a policy mix of different measures and initiatives or forming a step of the agenda setting. From an economic perspective, material resource efficiency and circular economy targets serve the society and the economy by overcoming orientation and information deficits. From a consumer and a business perspective, they can initiate or prepare for a change in behaviour and production processes.

While policy objectives set in material resource efficiency policies such as sustainability strategies often tend to be general and descriptive, targets are specific, quantifiable and measurable, and are usually accompanied by a deadline by which they are to be reached. Moreover, targets usually call for regular monitoring of trends or of the distance to a target (EEA 2016).

¹ i.e. national strategies or action plans for material resource efficiency and policy objectives, the country's scope of material resource efficiency, the perceived driving forces of material resource efficiency, country-specific priority material resources, industries and consumption categories, closing material loops in a circular economy, policy instruments and examples of good practice, indicators to monitor material use and resource efficiency, institutional set-up and stakeholder involvement

2.3 Target types²

Targets can be considered along different criteria and from different perspectives. National quantitative targets with relevance to resource efficiency may relate to the use of natural resources directly or only indirectly. They can be expressed in **absolute terms** (e.g. intended amount or levels of resource use, stock or savings, etc.), **relative terms** (e.g. intended levels of resource productivity/resource intensity or as percentage values, etc.) and also as a decoupling requirement.

Targets furthermore can be defined at **different levels of aggregation** (e.g. economy-wide targets vs. targets defined at the level of the different sectors, or targets defined for groups of resources vs. a particular resource, etc.) and in many contexts from production or consumption perspectives. In terms of **timing**, quantitative targets may be defined as intended outcome to be achieved per annum or by a given future time.

Relevant economy-wide resource target types as reported in the country profiles are:

- General improvement of resource efficiency and resource productivity implemented in sustainability strategies or programmes
- Quantitative relative improvement of resource efficiency and resource productivity, e.g. by 50% [factor 2] by 2030 compared to base year
- Quantitative relative reduction of resource use, for example, minus 80% by 2020 compared to base year
- General lowering of consumption per capita or economy-wide without further specification
- Extraction or consumption caps, specified in absolute terms
- Strive for a stabilisation of resource consumption

Waste and circular economy related target types as (partly) reported in the country profiles are:

- Waste generation caps and limits
- Waste reduction targets
- Collection targets
- Recycling targets
- Recovery targets
- Landfill targets
- Secondary input targets
- Waste prevention targets (EEA, 2016b)

Another area with many existing targets relates to energy use and energy efficiency, overwhelmingly driven by EU directives. For many countries energy and material resource efficiency are two different policy fields and several countries did not mention energy-related targets at all, despite having them. In addition to the resource productivity, waste and energy-related targets, countries reported more targets in various other areas considered relevant for material resource efficiency (e.g. forestry, land use, green public procurement, greenhouse gas emissions, etc.). These targets shall not be in the focus of this webinar (EEA, 2016a).

² Question 10 of EEA 2016 questionnaire: What targets (measurable and with a timeline) have been set for material resource efficiency?

2.4 What's the situation?³

Since the implementation of the EU Roadmap to a Resource Efficient Europe in 2011, EU policies and national policies have evolved and advanced. With the recently published Circular Economy Package (European Commission, 2015), efforts on resource efficiency have gained additional traction. The increased focus on closing material loops and waste reduction reflects the notion that incremental resource efficiency gains in a linear economic model may not be sufficient to achieve the 2050 vision.

At the national level, the concepts of resource efficiency and circular economy are increasingly taken up. With the introduction of the Roadmap to a resource efficient Europe (European Commission, 2011a) and the resource efficiency scoreboard with its lead indicator resource productivity, the EU has set a measurable impetus that encouraged many European countries to embed resource objectives in various national programmes, strategies and instruments.

Nine countries have adopted targets for national economy-wide resource productivity to date: Austria, Estonia, France, Germany, Hungary, Latvia, Poland, Portugal and Slovenia. In most cases, these targets are based on gross domestic product relative to domestic material consumption (GDP/DMC), the EU's lead resource productivity indicator. The EU itself does not have a target for material resource efficiency, and the formulation of appropriate objectives and targets is clearly a challenge, at both the EU and national levels.

Economy-wide resource productivity targets adopted by EU Member States include:

- Austria is striving for a 50 % increase in resource efficiency (GDP/DMC) by 2020 relative to 2008, and aspires to a four- to ten-fold improvement by 2050, as presented in its national Resource Efficiency Action Plan (REAP, Box 9.2).
- Estonia reports aiming for a 10 % increase in resource efficiency to EUR 0.46/kg (GDP/DMC) as part of a Coalition Agreement of the Estonian Government for the period 2015–2019.
- France aims for a 30 % increase in resource productivity (GDP/DMC) between 2010 and 2030 as well as a decrease in per person DMC over the same period.
- Germany has a target of doubling abiotic material productivity within the period 1994–2020, included in its 2002 National Sustainable Development Strategy.
- Hungary stipulates reducing its material intensity (DMC/GDP) to 80 % of the 2007 level, by 2020, in the 2011 National Environmental Technology Innovation Strategy (Box 9.3), which is part of the Hungarian National Reform Programme.
- Latvia adopted a target for resource productivity (GDP/DMC) to reach EUR 710/tonne in 2030, with intermediate targets of EUR 540/tonne in 2017 and EUR 600/tonne in 2020 (Box 9.4).
- Poland, in its Strategy for Innovation and Efficiency of the Economy, adopted a target of increasing resource productivity to EUR 0.45/kg by 2015 and EUR 0.5/kg by 2020 (GDP/DMC).
- Portugal stipulates an increase in national resource productivity from EUR 1.14/kg in 2013 to EUR 1.17/kg in 2020 and EUR 1.72/kg in 2030 in its Green Growth Commitment (Box 9.5).
- Slovenia's target for resource productivity anticipates that overall resource productivity by 2023 should increase to EUR 1.5/kg DMC, from 1.07 in 2011.

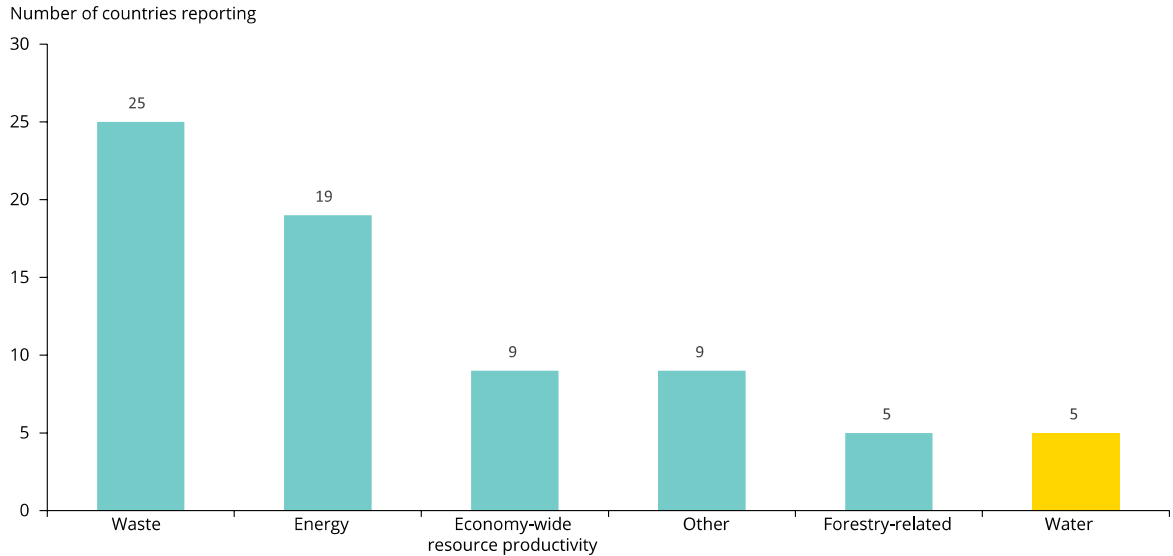
Targets for reducing the use of primary materials (metals, minerals or biomass), or for specific materials, however, including those on the EU list of critical raw materials have not been reported. In contrast, targets for reducing energy use and improving energy efficiency as well as waste management are fairly common.

³ The analysis of targets in the EEA Report 2016 is based on information provided by 32 participating countries on a voluntary basis within the scope of a standardised set of 20 questions.

This is clearly driven by EU regulations, though some countries have adopted targets that are more ambitious than those required by current EU legislation. Some non-EU participating countries also reported having targets for waste and energy in line with EU directives.

A majority of countries reported having national targets for the recycling of certain waste streams, including organic waste, paper, cardboard, glass, wood, metal, plastic and packaging wastes, electrical or electronic equipment and batteries, mainly to be collected from households, construction and demolition waste, metal wastes, and industrial and hazardous wastes, mainly from the industrial sector.

Figure 2: Number of countries reporting on targets, by type of targets



Note: Water is outside the scope of this report, but is shown here because five countries reported targets related to water.

Source: (EEA, 2016a, p. 82)

Resource use and waste – two sides of the same coin

The debate under the keyword of circular economy currently partially superposes the resource efficiency debate at least at European level. And, of course, recycling offers significant potentials to reduce resource consumption through an optimized use of recycled and secondary materials. There are many obvious areas where the use of resources and management of waste are linked. They share many of the same driving forces such as economic considerations, affluence, levels of consumption, and the state and pace of technology. In general, the higher the use of resources, the higher the emissions and the more waste generated.

However, a comprehensive understanding of waste and resource management in the sense of an overarching circular economy is not common yet. Currently, both areas are rather separate and the strengthening of links remains a challenge. The basket of targets which most countries report of are not as closely linked and aligned as one could think of for the future.

References

EEA, 2016a. More from less — material resource efficiency in Europe : 2015 overview of policies, instruments and targets in 32 countries (EEA Report No. No 10/2016). Copenhagen.

EEA, 2016b. Circular economy in Europe — Developing the knowledge base. European Environment Agency, Copenhagen.

European Commission, 2015. Closing the loop - An EU action plan for the Circular Economy (Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions No. COM(2015) 614/2). European Commission, Brussels.

European Commission, 2014. Taking stock of the Europe 2020 strategy for smart, sustainable and inclusive growth (No. COM(2014) 130 final), Commission Staff Working Paper. European Commission, Brussels.

European Commission, 2011a. Roadmap to a Resource Efficient Europe (Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions No. COM(2011) 571). European Commission, Brussels.

European Commission, 2011b. A Resource-Efficient Europe - Flagship Initiative under the Europe 2020 Strategy (Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions No. COM(2011) 21). European Commission, Brussels.

European Commission, 2010. Europe 2020 Flagship Initiative Innovation Union (Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions No. COM(2010) 546 final). European Commission, Brussels.

3 About the speakers

Ms. Sofia Rodrigues, Head of Department, Eionet National Focal Point, Portuguese Environment Agency, Portugal

Sofia Rodrigues, is the head of department at the Portuguese Environment Agency and the Eionet National Focal Point for Portugal. Her department is responsible for the yearly publication of the national State of Environment Report.

E-Mail: sofia.rodrigues@apambiente.pt

Mr. Jens Günther, German Federal Environment Agency, Section I 1.1 Fundamental Aspects, Sustainability Strategies and Scenarios, Sustainable Resource Use, Germany

Jens Günther has worked as scientific officer at the German Environment Agency since 2009, primarily on development of concepts, strategies and policy measures on resource efficiency, improving sustainable use of natural resources and indicator development. Jens graduated in Forest Science, and before joining UBA worked inter alia for the Forest Stewardship Council Working Group Germany and the European Secretariat of ICLEI – Local Governments for Sustainability. He was directly involved in the development of the German Resource Efficiency Programme (ProgRes)

E-Mail: jens.guenther@uba.de

Ms. Erika Lagzdina, Senior Expert, Environmental protection department, Ministry of environmental protection and regional development, The Republic of Latvia

Erika Lagzdina, MSc. in environmental management, now works as a senior expert at the Ministry of Environmental Protection and Regional Development of Latvia, Department of Environmental Protection. Former worked as a head of Climate Change and Adaptation Policy Unit at the Climate Change Department. Her main duties are related to environmental policy integration and cross-sectoral cooperation. Her daily work is focused on ensuring of Latvia's participation in OECD-Organization of Economic Cooperation and Development that includes also such issues as green growth and resources productivity. This is the linkage where her work overlaps with the EU circular policy development.

E-mail: erika.lagzdina@varam.gov.lv

Bettina Bahn-Walkowiak, Research fellow at the Wuppertal Institute for Climate, Environment and Energy, Germany, Business Unit Circular Economy, specialises in policy analysis, contributes to research projects on transition processes towards a circular economy, waste prevention and resource efficiency policy mixes.

E-mail: Bettina Bahn-Walkowiak bettina.bahn-walkowiak@wupperinst.org

4 Webinar Agenda

Webinar on national targets for resource efficiency

Thursday 30 June 2015, 11:30 - 13:00 (CET)

Webinar will be open for joining at 11:00 (CET) to ensure prompt start at 11:30 am. To log in please follow the instructions in the last section of this document

National targets for resource efficiency - policy context	
11:30	Welcome and introduction to the webinar by Bettina Bahn-Walkowiak (ETC-WMGE)
11:35 – 11:55	EEA Report "More from less – material resource efficiency in Europe" - An overview by Paweł Kaźmierczyk (EEA) Introductory reflections based on the recently published EEA Report "More from less – material resource efficiency in Europe" and 32 country profiles. <i>(15 min presentation+ 5 min Q&A)</i>
Country presentations: Experiences in target development and implementation	
11:55 – 12:10	Targets for resource efficiency in Portugal Presentation by Ms. Sofia Rodrigues, Head of Department, Eionet National Focal Point, Portuguese Environment Agency, Portugal <i>(10 min presentation + 5 min Q&A)</i>
12:10 – 12:25	Economy wide targets on resource use – the continuous development of raw material productivity in Germany Presentation by Mr. Jens Günther, Section I 1.1 Fundamental Aspects, Sustainability Strategies and Scenarios of Sustainable Resource Use of German Federal Environment Agency <i>(10 min presentation + 5 min Q&A)</i>
12:25 – 12:40	Targets for resource efficiency in Latvia Presentation by Ms. Erika Lagzdina, Environmental protection department of Ministry of environmental protection and regional development, Latvia <i>(10 min presentation + 5 min Q&A)</i>

General discussion	
12:45 – 12:55	General discussion and wrap-up
12:55 – 13:00	Closing by Bettina Bahn-Walkowiak and Paweł Kaźmierczyk

5 Presentations

5.1 Welcome and introduction to the webinar

Presentation by Ms. Bettina Bahn-Walkowiak (ETC-WMGE)

Eionet webinars on resource efficiency policies and instruments

National Targets for Resource Efficiency

30 June 2016, 11:30 – 13:00 CET

1

Participants today

45 participants from 21 countries :

- Austria
- Belgium
- Bosnia & Herzegovina
- Bulgaria
- Croatia
- Czech Republic
- Estonia
- France
- Germany
- Iceland
- Ireland
- Latvia
- Poland
- Portugal
- Slovakia
- Slovenia
- Serbia
- Spain
- Sweden
- Switzerland
- United Kingdom

2

Eionet webinars on resource efficiency

- Jointly organized by the EEA and the ETC/WMGE for the Eionet network
- Supporting exchange of information and sharing experiences among policymakers and researchers
- Main objectives are to keep countries informed about upcoming and on-going EU policy initiatives...
- ... as well as to provide a forum where countries themselves can present national examples of RE policy initiatives and good practices

3

European Topic Centre on Waste and Materials in a Green Economy (ETC-WMGE) – 2014-2018



4

Our topic today

- Targets and objectives are an essential element for creating strategic framework towards RE & CE and they contribute to societal orientation within complex multi-level political systems.
- The formulation of objectives and targets is a challenge, at both EU and national levels.
- Since the RE Roadmap (2011), EU and national policies evolved, the concepts of resource and circular economy are increasingly being taken up; additional traction by Circular Economy Action Plan (2015).
- Nine countries have adopted a national economy-wide resource productivity target, using the EU lead indicator (GDP/DMC).
- Today, three countries will present their different approaches to developing and adopting RE targets and the way the process was organized.

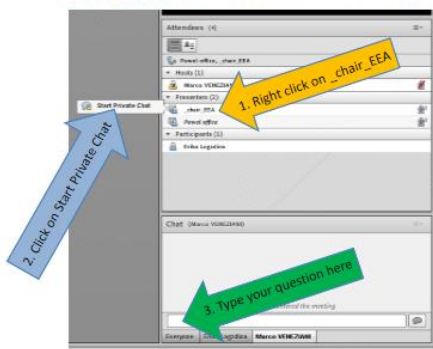
5

Our speakers (in the order of appearance)

- **Mr. Paweł Kaźmierczyk**, EEA project manager
- **Ms. Sofia Rodrigues**, NFP Portugal and Head of Department, Environment Agency, Portugal
- **Mr. Jens Günther**, Federal Environment Agency, Germany
- **Ms. Erika Lagzdina**, Environmental protection department, Ministry of Environmental Protection and Regional Development, Latvia

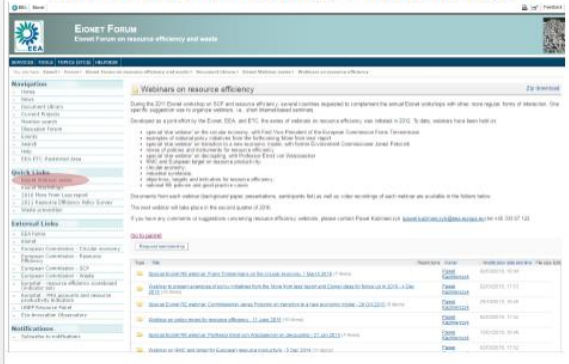
6

Please send your questions to
“_chair_EEA” using the Chat window



7

Webinar documents available via Eionet Forum



8

What next with the More From Less ?

- The publication of the MFL and the 32 country profiles is merely a milestone in a process, but not the end of the work
- In 2017-2018, we will work on a new and revised edition – which will change compared to the 2015-2016 work
- We would like to explore with you the topic, scope and your priorities – via consultation, the Eionet workshop in October 2016, e-survey.

9

Next steps

- Next Resource Efficiency webinar in Q4/2016
- Please save the date for the Eionet workshop on resource-efficient circular economy, which will be held on 20-21 October 2016 at the EEA
- Next week, we will send to Eionet a survey to help us identify your priority topics for the Oct workshop
- If you have any comments or suggestions concerning today's and future webinars, please let us know!

Thank you!

Bettina, Marco and Paweł

10

5.2 EEA Report "More from less – material resource efficiency in Europe" - An overview

Presentation by Paweł Kaźmierczyk (EEA) - Introductory reflections based on the recently published EEA Report "More from less – material resource efficiency in Europe" and 32 country profiles.

The "More From Less" report

Officially launched 9 June at the Environment for Europe ministerial conference in Batumi

Main goal of this work is to **encourage and support exchange of information and sharing of good practice within Eionet**

In addition to the report, **32 country profiles, self-assessments prepared by countries**

1

32 detailed country profiles

EEA Report No 10(2016)

The report presents an overview of approaches to material resource efficiency and to resource productivity in 32 European countries. It is a reference for policy-makers, business, academia, citizens, NGOs, and stakeholders, and the institutions of the EU. The report also provides a number of recommendations for resource efficiency and energy efficiency in material use and resource productivity between 2008 and 2015. Finally, it includes a number of illustrations for the development of future policies on material resource efficiency and the circular economy. The report is published under the auspices of the European Commission and the European Environment Agency.

Contents

- Introduction: material resource efficiency in Europe (2.1-10)
- Austria: material resource efficiency (2.1-10)
- Belgium: material resource efficiency (2.1-10)
- Bulgaria: material resource efficiency (2.1-10)
- Croatia: material resource efficiency (2.1-10)
- Czech Republic: material resource efficiency (2.1-10)
- Denmark: material resource efficiency (2.1-10)
- Estonia: material resource efficiency (2.1-10)
- Germany: material resource efficiency (2.1-10)
- France: material resource efficiency (2.1-10)
- Hungary: material resource efficiency (2.1-10)
- Ireland: material resource efficiency (2.1-10)
- Italy: material resource efficiency (2.1-10)
- Latvia: material resource efficiency (2.1-10)
- Lithuania: material resource efficiency (2.1-10)
- Luxembourg: material resource efficiency (2.1-10)
- Malta: material resource efficiency (2.1-10)
- Netherlands: material resource efficiency (2.1-10)
- Poland: material resource efficiency (2.1-10)
- Portugal: material resource efficiency (2.1-10)
- Romania: material resource efficiency (2.1-10)
- Slovakia: material resource efficiency (2.1-10)
- Slovenia: material resource efficiency (2.1-10)
- Spain: material resource efficiency (2.1-10)
- Sweden: material resource efficiency (2.1-10)
- Switzerland: material resource efficiency (2.1-10)
- United Kingdom: material resource efficiency (2.1-10)

2

Topics covered

PART I MATERIAL RESOURCE EFFICIENCY IN THE EUROPEAN UNION 20

1 Material resource efficiency policies in the European Union 21

2 Trends in the use of material resources and resource productivity in Europe, 2000-2014 32

PART II MATERIAL RESOURCE EFFICIENCY POLICIES AT THE COUNTRY LEVEL 41

3 National strategies or action plans for material resource efficiency and policy objectives 42

4 Scope of material resource efficiency 51

5 The driving forces of material resource efficiency 54

6 Priority material resources, industries and consumption categories 60

7 Closing material loops in a circular economy 68

8 Policy instruments and examples of good practice 76

9 Targets for material resource efficiency 82

10 Indicators to monitor material use and resource efficiency 92

11 Institutional set-up and stakeholder involvement 97

PART III THE ROAD AHEAD 104

12 Countries' reflections on the future direction of material resource efficiency policies and support mechanisms 105

13 Final thoughts on policy development and implementation 111

3

Annex 8 – details of reported targets

Annex 8 Targets for material resource efficiency reported by countries

The table below shows the targets reported by 32 countries. It particularly those that include energy. The table is divided into three parts: material resources, material resources and energy, and energy. It also includes a list of countries that do not have any targets reported.

Country	Targets reported in the country profile
Austria	Reduce material resource productivity (GDP/GVA) by 10% by 2020 compared to 2008 and 20% by 2030 compared to 2008
Belgium	Reduce material resource productivity (GDP/GVA) by 10% by 2020 compared to 2008 and 20% by 2030 compared to 2008
Bulgaria	Reduce material resource productivity (GDP/GVA) by 10% by 2020 compared to 2008 and 20% by 2030 compared to 2008
Croatia	Reduce material resource productivity (GDP/GVA) by 10% by 2020 compared to 2008 and 20% by 2030 compared to 2008
Czech Republic	Reduce material resource productivity (GDP/GVA) by 10% by 2020 compared to 2008 and 20% by 2030 compared to 2008
Denmark	Reduce material resource productivity (GDP/GVA) by 10% by 2020 compared to 2008 and 20% by 2030 compared to 2008
Estonia	Reduce material resource productivity (GDP/GVA) by 10% by 2020 compared to 2008 and 20% by 2030 compared to 2008
Germany	Reduce material resource productivity (GDP/GVA) by 10% by 2020 compared to 2008 and 20% by 2030 compared to 2008
France	Reduce material resource productivity (GDP/GVA) by 10% by 2020 compared to 2008 and 20% by 2030 compared to 2008
Hungary	Reduce material resource productivity (GDP/GVA) by 10% by 2020 compared to 2008 and 20% by 2030 compared to 2008
Ireland	Reduce material resource productivity (GDP/GVA) by 10% by 2020 compared to 2008 and 20% by 2030 compared to 2008
Italy	Reduce material resource productivity (GDP/GVA) by 10% by 2020 compared to 2008 and 20% by 2030 compared to 2008
Latvia	Reduce material resource productivity (GDP/GVA) by 10% by 2020 compared to 2008 and 20% by 2030 compared to 2008
Lithuania	Reduce material resource productivity (GDP/GVA) by 10% by 2020 compared to 2008 and 20% by 2030 compared to 2008
Luxembourg	Reduce material resource productivity (GDP/GVA) by 10% by 2020 compared to 2008 and 20% by 2030 compared to 2008
Malta	Reduce material resource productivity (GDP/GVA) by 10% by 2020 compared to 2008 and 20% by 2030 compared to 2008
Netherlands	Reduce material resource productivity (GDP/GVA) by 10% by 2020 compared to 2008 and 20% by 2030 compared to 2008
Poland	Reduce material resource productivity (GDP/GVA) by 10% by 2020 compared to 2008 and 20% by 2030 compared to 2008
Portugal	Reduce material resource productivity (GDP/GVA) by 10% by 2020 compared to 2008 and 20% by 2030 compared to 2008
Romania	Reduce material resource productivity (GDP/GVA) by 10% by 2020 compared to 2008 and 20% by 2030 compared to 2008
Slovakia	Reduce material resource productivity (GDP/GVA) by 10% by 2020 compared to 2008 and 20% by 2030 compared to 2008
Slovenia	Reduce material resource productivity (GDP/GVA) by 10% by 2020 compared to 2008 and 20% by 2030 compared to 2008
Spain	Reduce material resource productivity (GDP/GVA) by 10% by 2020 compared to 2008 and 20% by 2030 compared to 2008
Sweden	Reduce material resource productivity (GDP/GVA) by 10% by 2020 compared to 2008 and 20% by 2030 compared to 2008
Switzerland	Reduce material resource productivity (GDP/GVA) by 10% by 2020 compared to 2008 and 20% by 2030 compared to 2008
United Kingdom	Reduce material resource productivity (GDP/GVA) by 10% by 2020 compared to 2008 and 20% by 2030 compared to 2008

4

Policies and strategies mentioned

Figure 3.1 Overview of policies and strategies addressing material resource efficiency among various topics (*) (seven or more mentions)

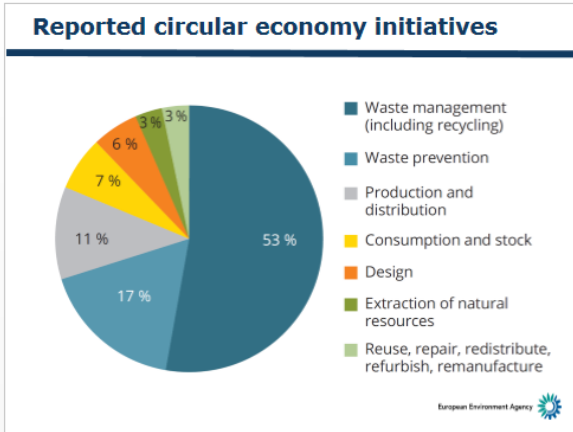
Topic	Number of mentions
Water management and recycling	28
Energy efficiency and energy	19
Innovation, research and development	19
Sustainable development, environment (in general)	18
Waste prevention	18
Green products, green (or grey) goods	13
Industry, sector	12
Climate action, low carbon	11
Renewable energy	10
Food, agriculture, rural development	9
Green public procurement	8
Water	7

5

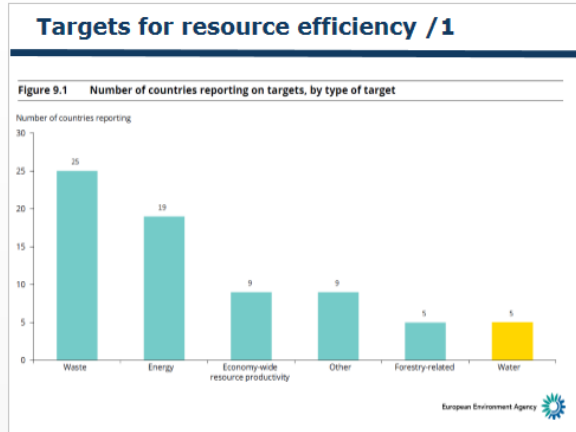
Reported drivers for resource efficiency

Driver	Percentage
Economic interests	51%
Environmental concerns	28%
Regulatory requirements	10%
Other	11%

6



7



8

Targets for resource efficiency / 2

Nine countries have adopted targets for national material resource efficiency: Austria, Estonia, France, Germany, Hungary, Latvia, Poland, Portugal and Slovenia.

In most cases, these targets are based on gross domestic product relative to domestic material consumption (GDP/DMC), the EU's lead resource productivity indicator.

Meanwhile, the EU itself does not have a target for material resource efficiency

The formulation of appropriate objectives and targets is clearly a challenge, at both the EU and national levels.

European Environment Agency

9

Targets for resource efficiency / 3

The two areas for which targets are common are waste and energy. This is clearly driven by EU regulations

Very few targets have been adopted at the level of individual economic sectors

An increasing number of material resource efficiency initiatives, accompanied by targets, are being introduced in the public sector and by local governments within their areas of competence.

Examples include reducing energy consumption in public administration, reducing the use of paper, and increasing the use of sustainable transport.

European Environment Agency

10

5.3 Targets for resource efficiency in Portugal

Presentation by Ms. Sofia Rodrigues, Environment Agency, Portugal

Targets for resource efficiency in Portugal

1

Resource efficiency policies in Portugal

No specific national resource efficiency strategy or action plan. National guidance regarding resource efficiency provided by:

- the Framework Act on the Environment;
- the Green Growth Commitment;
- the Operational Programme Sustainability and Efficiency in Resource Use.

2

Targets established in sectoral strategies/plans/legislation
<ul style="list-style-type: none"> Strategic Plan for Industrial Waste Management (mineral resources); Strategic Plan for Solid Municipal Waste (packaging waste; electrical and electronic equipment; batteries and accumulators; used edible oils); National Plan for Industrial Waste Prevention (products with high pollutant potential); Used Tyres legislation; Waste edible oils legislation; Strategy for Construction and Demolition Waste; Strategic Plan for Hospital Waste; National Renewable Energy Action Plan; National Energy Efficiency Action Plan; National Strategy for Forests; Strategic Framework for Climate Policy; National Programme for Climate Change; National Strategy for Climate Change Adaptation; National Strategy for Ecological Public Procurement.

3

Country	Targets reported in the country profiles
Economy wide resource productivity (3 countries, reporting 8 targets)	<p>Portugal</p> <ul style="list-style-type: none"> Increase the productivity of material (GDP/DMAC) from EUR 1.440/tonne of material consumed in 2013 to 1.170 in 2020 and 1.700 in 2030
Waste (29 countries, reporting 124 targets)	<p>Portugal</p> <ul style="list-style-type: none"> Increase the incorporation of waste in the economy from 56 % in 2012 to 68 % in 2020 and 80 % in 2030 By 2020, achieve a recovery of 47 kg/person of recyclable waste after sorting Reduce waste generation by 18 % by 2020, compared to the 2008-2012 average waste generation Increase the preparation of construction and demolition waste for reuse, recycling and other forms of material recuperation to 70 % by 2020 Increase the preparation of municipal waste for reuse, recycling and other forms of material recuperation to 50 % of the recyclable share by 2020 Reduce the share of biodegradable municipal waste sent to landfill by 30 % by 2020 relative to 1995 Progressively eliminate waste disposal in landfill, achieving 0 % direct disposal of waste in landfill by 2030 Achieve a minimum 7.8 % reduction (by weight) in per person municipal waste generation by 2016 relative to 2012 Achieve a minimum 10 % reduction (by weight) in per person municipal waste generation by 2020 relative to 2012, not to exceed 40 kg/person annually Ensure recycling of at least 70 % (by weight) of packaging waste by 2020 Limit the production of Group IV medical waste to 8 % by 2016 Decouple economic growth and waste production by reducing the amount of waste produced per EUR 1 000 of wealth generated from 0.10 tonnes in 2008-2012 to 0.082 tonnes in 2020
Energy (19 countries, reporting 76 targets)	<p>Portugal</p> <ul style="list-style-type: none"> Improve energy efficiency by reducing energy intensity from 129 toe/EUR 1 million of GDP in 2013, to 122 toe/EUR 1 million in 2020 and 101 toe/EUR 1 million in 2030 Reduce energy consumption in public administration by 36 % in 2020 and 35 % in 2030 Reduce energy consumption in buildings by 25 % in 2020 and 30 % in 2030 Increase the share of renewables in gross final energy consumption to 31 % in 2020 and 40 % in 2030 (from 25 % in 2010) Reduce primary energy consumption by 25 % by 2030
Water (9 countries, reporting 8 targets)	<p>Portugal</p> <ul style="list-style-type: none"> Improve water efficiency by reducing unutilized water from 35 % in 2012 to a maximum of 25 % by 2020 and 20 % by 2030
Forestry-related (3 countries, reporting 7 targets)	<p>Portugal</p> <ul style="list-style-type: none"> Increase the volume of certified timber and other forest products on the market by 50 % by 2020 compared to 2010
Others (8 countries, reporting 22 targets)	<p>Portugal</p> <ul style="list-style-type: none"> Increase the passenger kilometres in public transport by 15 % from 2014 to 2020

4

An ongoing experiment: the Green Growth Commitment
<ul style="list-style-type: none"> Goal: To drive green growth in Portugal, by stimulating green sectors of activity, <u>increasing resource efficiency</u> and promoting environmental sustainability; Coalition for Green Growth: Group of stakeholders from the Portuguese society (administration, business sector, universities and research centers, NGOs and banks) which agreed to work together to promote long term green growth in Portugal; Public consultation: Series of events organised by the coalition, aiming to reflect strategically about the challenges of green growth; to identify proposals for measures and projects to be developed; and to enhance collaboration between institutions through joint initiatives; Targets established for 2020 and 2030; Thematic working groups: Work, with support of an Executive Secretariat, to promote and monitor the implementation of the initiatives, develop and adapt new indicators and initiatives, enlarge the coalition and disseminate relevant information on green solutions, policies and programmes.

5



6

5.4 Economy wide targets on resource use – the continuous development of raw material productivity in Germany

Presentation by Mr. Jens Günther, German Federal Environment Agency

For our Environment **Umwelt Bundesamt**

EIONET Webinar „Targets for Resource Efficiency“

Economy wide targets on resource use – the continuous development of raw material productivity in Germany

Jens Günther
Fundamental Aspects, Sustainability Strategies and Scenarios, Sustainable Resource Use

1

Economy wide targets on resource use

Economic Challenges for Germany

- ❖ **Materials account for 43% of costs** in German manufacturing sector
- ❖ **Rising and volatile prices**
 - ❖ 85% of German entrepreneurs report a moderate or even dramatic rise in material costs in last 8 years
 - ❖ 97% expect rising costs in future
- ❖ **Germany depends on imports**
 - ❖ 66,8 % of metals imported in 2010
- ❖ **Secure resources supply and resource efficiency**

05.07.2016 2

2

Economy wide targets on resource use

National Strategy for Sustainable Development „Perspectives for Germany“

Sets the main route on resource efficiency policy:
Decoupling of economic growth and resource consumption and absolute reduction of resource use and its impact on the environment

- ❖ Doubling of the abiotic material productivity by 2020 based on 1994 (indicator GDP/abiotic DMI)
- ❖ Doubling energy productivity by 2020 compared to 1990 (indicator GDP/TPES)
- ❖ Reduction of land sealing to the daily growth of 30 ha in 2020 (indicator increase in sealed area per ha and day)




03.07.2016 3

3 ★

Economy wide targets on resource use

Abiotic material productivity

Components

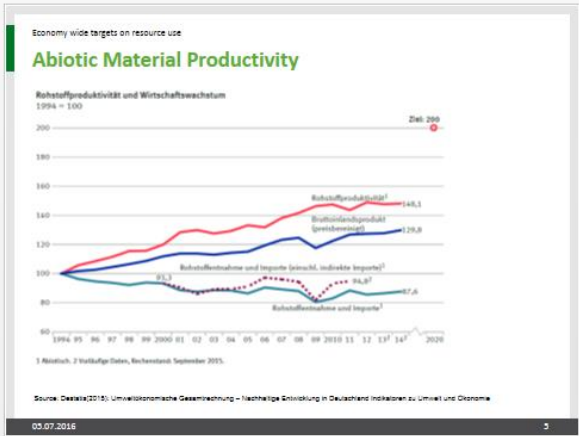
- ❖ Gross domestic product
- ❖ Abiotic Direct Material Input (abiotic DMI)
 - Domestic raw material extraction
 - Imports of raw materials, semi-manufactured and finished products

Why “abiotic” DMI?

- ❖ DMI as indicator to estimate the material use of German economy within its borders
- ❖ Dependency on abiotic raw materials e.g. metals
- ❖ At time of development biomass was seen as renewable and nearly unlimited available
- ❖ Substitution of abiotic material by biomass should be reflected

03.07.2016 4

4 ★



5

Economy wide targets on resource use

The German Resource Efficiency Programme (ProgRes)

Adopted 29 February 2012 by entire government and update in March 2016

Goals:

- ❖ **Decouple** economic growth from resource use
- ❖ **Reduce** environmental impacts of resource use
- ❖ **Improve** the sustainability and competitiveness of the German industry
- ❖ Doubling of the abiotic material productivity by 2020 based on 1994 (indicator GDP/abiotic DMI)



03.07.2016 6

6

Economy wide targets on resource use

ProgRes: Guiding Principles

Guiding principle 1:
Joining ecological necessities with economic opportunities, innovation support and social responsibility

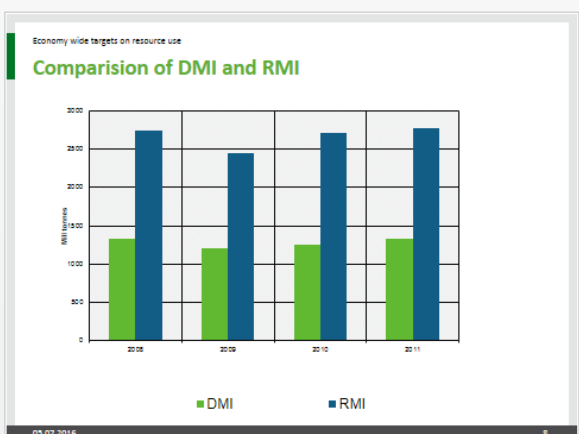
Guiding principle 2:
Viewing global responsibility as a key focus of our national resource policy

Guiding principle 3:
Gradually making economic and production practices in Germany less dependent on primary resources, developing and expanding closed cycle management

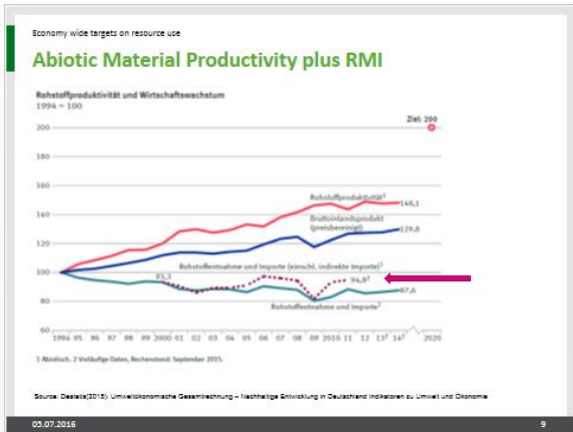
Guiding principle 4:
Securing sustainable resource use for the long term by guiding society towards quality growth

03.07.2016 7

7



8



Economy wide targets on resource use


Targets in Progress II

New indicator: Total Raw Material Productivity

- Gross Domestic Product + monetary value of imports (raw materials, semi-manufactured and finished products)
- Raw Material Input (including biomass)

Targets

- Doubling of the abiotic material productivity by 2020 based on 1994 (indicator GDP/abiotic DMI)
- Extrapolation of the development of total raw material productivity from 2000-2010 until 2030
- Plus targets on circular economy



05.07.2016 10

Umwelt Bundesamt

Thank you for your attention!

Jens Günther
jens.guenter@uba.de
<http://www.umweltbundesamt.de/themen/abfall-ressourcen>

European Resources Forum 2016
<http://www.resourcesforum.eu>

Conference Decarbonisation and Resource Efficiency – 100% Renewable Energy and more
<https://www.umweltbundesamt.de/en/conference-decarbonisation-ressource-efficiency>

Save the Date!
November 11, 10% book

11

5.5 Targets for resource efficiency in Latvia

Presentation by Ms Erika Lagzdina, Ministry of environmental protection and regional development, Latvia



Ministry of Environmental Protection and Regional Development
Republic of Latvia

Resource efficiency goals and targets in national policies: Latvia

Erika Lagzdina
Senior expert
Environmental Protection Department

1



General facts about Latvian economy

Population: 1.98 million (0.4 % of EU-28 total)

GDP: EUR 23.6 billion (0.2% of EU-28 total in 2014)
EUR 24.4 billion in 2015 with growth prognosis + 3% for 2016

GDP/ person : EUR 17,500 (in purchasing power standard)
(64 % of EU-28 average per person in 2014)

Use of materials:
42.9 million tonnes DMC (0.6 % of EU-28 total in 2014)
21.5 tonnes DMC/person (156 % of EU-28 average in 2014)

Resource productivity 0.51 EUR/kg
(26 % of EU-28 average in 2014)

Structure of national economy (2015):

- ✓ agriculture: 3,3 %
- ✓ industry: ~23 % (processing industry -12,5%, construction- 6,5% of total)
- ✓ services: ~ 74 % (public & business services, trade, transport – 9,5%)

2

Policy framework

Latvia does not have a dedicated to resource efficiency comprehensive national strategy or action plan.

However, resource efficiency is addressed in:

- ✓ Overarching national development vision - **Sustainable Development Strategy of Latvia until 2030**
- ✓ And in several **mid-term policy documents for current programming/planning period 2014-2020**:
 - National **Development Plan** of Latvia for 2014-2020
 - **Environmental** Policy Guidelines for 2014-2020
 - State **Waste** Management Plan 2013-2020
 - National **Energy** Development Guidelines for 2016-2020

and **less explicit in**:

- **Transport** Development Guidelines 2014-2020
- **Electromobility** Development Plan 2014-2020
- National **Industrial** Policy Guidelines for 2014-2020
- National **Science, Technology** Development and Innovation Guidelines 2014-2020
- **Rural** Development Programme 2014-2020
- **Forestry** Development Guidelines 2015-2020

3

Overview on general objectives related to resource efficiency in national policies

- ✓ increased resource productivity and effective governance of resources [Sustainable Development Strategy until 2030];
- ✓ material and resource efficiency and sustainable management of natural and cultural capital [National Development Plan for Latvia 2014-2020];
- ✓ foster resource efficiency through (green) innovation that would allow diverting secondary material from waste streams, promote material reuse, waste recycling and recovery;
- ✓ enhance the rational use of resources and new technologies to decrease emissions from industry, transport and households [Environmental Policy Guidelines for 2014-2020];
- ✓ energy efficiency objectives [National Energy Development Guidelines 2016-2020; Transport Development Guidelines 2014-2020];
- ✓ promotion of resource efficiency through low-carbon economy in the agriculture, food and forestry sectors [Rural Development Programme 2014-2020]

4

Indicators and targets in SD Strategy 2030

A concept of **green country** that is set as a national vision implies a holistic attitude towards the sustainable use of natural resources and energy.

Strategy addresses resource efficiency in three chapters:

- ✓ Innovative and eco-efficient economy
- ✓ Nature as capital for future and
- ✓ Spatial development perspective rural dimension).

General:

- ecological footprint – below 2.5 global ha/ inhabitant;
- resource productivity – EUR 710 per tonne of DMC;

Energy

- energy intensity in economy - gross domestic energy consumption against GDP: 120 kilograms of petroleum equivalent per EUR 1 000 of GDP;
- share of renewable resources: 50 % of energy produced from renewable sources in the total gross final energy consumption;

Waste

- 80 % of collected waste to be recycled;

Climate and air

- greenhouse gas emissions: 47 % of emissions against 1990;
- total state emissions to air – specific targets set for each polluting substance;

Agriculture, forestry and biodiversity

- 18 % of territory to achieve specially protected nature area status
- 15 % of managed agricultural lands under organic farming;
- managed agricultural lands to make up 55 % of total agricultural lands;
- forest coverage – to reach 55 % of total territory;

Transport

- 50 % coverage for local roads and 100 % for regional roads by asphalt (black)

5

Indicators and step-wise targets in National Development Plan

- increase in **resource productivity** (GDP/DMC) to:
 - EUR 540/t of resources in 2017, and
 - EUR 600/t in 2020
- increase in the proportion of energy produced from **renewable energy** resources in total gross energy consumption to at least 40 % in 2020;
- reducing **energy consumption** in generating GDP to
 - 280 kg of petroleum equiv. per EUR 1 000 of GDP in 2020 and
 - less than EUR 150 in 2030;
- reducing **intensity of GHGs emissions** in the economy (measured in t of CO₂ equiv. per EUR 1 423 * to
 - EUR 1 130 in 2020 and
 - below EUR 1 070 in 2030.

*Equivalent to LVL 1 000 (the LVL was the national currency before the introduction of the EUR)

6

Resource efficiency targets in environmental policy


- ✓ reduction of **greenhouse gas emissions** – limiting an increase of emissions to 17 % (compared to 2005) in the **non-emissions trading system sector** (non-ETS) and limiting **total country's GHGs emissions** to 12.16 mill. t of CO₂ equiv.
- ✓ ensured CO₂ sink in the forestry sector – 16.3 mill. t of CO₂ equiv.
- ✓ **water losses** in centralised water supply systems reduced to 5.5 % of the total amount of water supplied to the system;
- ✓ 100 % of groundwater bodies to remain in a good status, meaning that both chemical and quantitative statuses shall be good, and water abstraction volumes not cause depletion of resources.
- ✓ areas of territories with agro-environmental measures reach 80 000 hectares;
- ✓ proportion of agricultural land using organic farming methods to reach 12 %;
- ✓ **targets for the waste management sector** are defined separately

7

Resource efficiency targets in waste sector

- ✓ by 2020, the **preparation for re-use and recycling of waste materials** (paper, metal, plastic, glass from households), and possibly others will be increased to a minimum of 50 % overall by weight;
- ✓ by 2020, the preparation for re-use, recycling and other material recovery, including backfilling operations using waste as a substitute for other materials, will be increased to a minimum of 70 % by weight;
- ✓ reduce the amount of **biodegradable municipal waste** going to landfill after 16 July 2013 to 50 % of the total amount (by weight) of biodegradable waste produced in 1995, and further reduced to 35 % by 16 July 2020;
- ✓ by 31 December 2015, reach the 60 % (by weight) recycling and recovery target for **packaging waste** and reach the following minimum targets (by weight) for individual materials: 25 % for glass, 83 % for paper and cardboard, 50% for metal, 41 % for plastic and 25 % for wood;
- ✓ by 2016, reach the 55 % (by weight) recycling target for packaging waste and reach the following minimum targets (by weight) for individual materials: 60 % for glass, 60 % for paper and cardboard, 50% for metal, 22.5 % for plastic and 15 % for wood;
- ✓ by 2016 the reuse and recovery of all **end-of-life vehicles** will reach at least 95 % by an average weight per vehicle and year;
- ✓ by 2015 the re-use and recycling of all end-of-life vehicles shall be increased to at least 85 % by an average weight per vehicle and year;
- ✓ ensure that by August 2016 the collected amount of **WEEE from private households** will reach 4 kg per inhabitant per year;
- ✓ by August 2016 increase collection rate of WEEE to 40-45 % by an average weight per appliance that was placed on the Latvian market in the last three years;
- ✓ by August 2021 increase the collection rate of WEEE to 65 % by an average weight per appliance that was placed on the Latvian market in the last three years or by 85 % of all WEEE produced in Latvia;
- ✓ ensure recovery and recycling rates in compliance with Annexes I, III of Directive 2012/19/EU;
- ✓ By 26 September 2016 collect 45 % of waste **portable batteries and accumulators** by average weight of amount sold in Latvia in last 3 years.

8




Targets in energy sector for 2020

- ✓ share of **renewable energy** (% of energy produced from renewable resources in total gross energy consumption) – 40 %;
- ✓ share of renewable energy (% of gross energy consumption from transport) – 10 %;
- ✓ reduction of **greenhouse gas emissions per fuel** or energy unit supplied by 6% (base 2010);
- ✓ **energy efficiency targets** comply with the EU Energy Efficiency Directive (2012/27/EK);
- ✓ reduction of average energy consumption for **heating** by 50% compared to 2009 (when it was 202 kWh/m² (aspirational target));
- ✓ reduction of **energy intensity** to 280 kg of petroleum equiv. per EUR 1 000 of GDP;
- ✓ reduction of **greenhouse gas emissions** – limiting an increase of emissions to 17 % (compared to 2005) in the **non-emissions trading system sector** (non-ETS) and limiting **total country's** greenhouse gas emissions to 12.16 mill. t of CO₂ equiv.

9

9



Main policy instruments to promote resource efficiency

- ✓ **Market and economic instruments** (natural resource tax and fees)
- ✓ **producer- responsibility schemes** related to extraction and use of natural resources (materials);
- ✓ **mandatory targets** to ensure rational use of waste as a resource by returning it to the economy through reuse, recycling or in other useful forms;
- ✓ **public financial support** for development of waste collection and separation, as well as recycling capacity (infrastructure and new technologies);
- ✓ **bio-economy concept** introduction in forestry, agriculture and food industry;
- ✓ **public awareness rising** on sustainable consumption and behaviour
- ✓ extensive **energy efficiency** programmes and campaigns

10

10



Ministry of Environmental
Protection and Regional
Development
Republic of Latvia

www.varam.gov.lv
Erika.Iezadina@varam.gov.lv



11

11

6 List of registered participants

(https://docs.google.com/document/d/1DfTvF-dvXX_ZjmuX1OCpDDnCR1UdRF14tWtvfl30XaA/edit)

Person	Email address	Affiliation	Country
Christian Neubauer	christian.neubauer@umweltbundesamt.at	Environmental Agency Austria	Austria
Andreas Berthold	andreas.berthold@umweltbundesamt.at	Environment Agency Austria	Austria
Dagmar Hutter	dagmar.hutter@umweltbundesamt.at	Environment Agency Austria	Austria
Jan Hendrik Voet	voet@irceline.be	Flemish Environment Agency (NFP)	Belgium
Ive Vanderreydt	ive.vanderreydt@vito.be	Flemish Institute for Technological Research	Belgium
Yirka Beeckman	beeckman@irceline.be	Flemish Environment Agency (NFP)	Belgium
Marleen Van Steertegem	m.vansteertegem@vmm.be	Flemish Environment Agency	Belgium
Theo Geerken	theo.geerken@vito.be	Flemish Institute for Technological Research	Belgium
Mirza Agić	mirza.agic@bhas.ba	Agency for Statistics of Bosnia and Herzegovina	Bosnia and Herzegovina
Tanya Vladimirova	t.vladimirova@eea.government.bg	Executive Environment Agency (NFP)	Bulgaria
Borislava Borisova	borissova@eea.government.bg	Executive Environment Agency (NRC)	Bulgaria
Dunja Pofuk	dunja.pofuk@azo.hr	Croatian Agency for the Environment and Nature (CAEN)	Croatia
Pavel Ruzicka	pavel.ruzicka@empress.cz	EMPRESS	Czech Republic
Jana Bašistová	jana.basistova@cenia.cz	CENIA	Czech Republic
Gabriela Bulkova	gabriela.bulkova@mzp.cz	Ministry of the Environment	Czech Republic
Martin Racan	martin.racan@mzp.cz	Ministry of the Environment	Czech Republic
Jiri Hrebicek	hrebicek@iba.muni.cz	Masaryk University	Czech Republic
Vojtech Pilnacek	Vojtech.Pilnacek@mzp.cz	Ministry of the Environment	Czech Republic
Marco Veneziani	marco.veneziani@eea.europa.eu	European Environment Agency	Denmark
Mihkel Krusberg	mihkel.krusberg@envir.ee	Ministry of the Environment	Estonia

Sylvain Chevassus	sylvain.chevassus@developpement-durable.gouv.fr	French Environment Ministry	France
Bettina Bahn-Walkowiak	bettina.bahn-walkowiak@wupperinst.org	Wuppertal Institute for Climate, Environment, Energy	Germany
Jens Guenther	jens.guenther@uba.de	German Environment Agency	Germany
Guðmundur B. Ingvarsson	gbi@ust.is	Environment Agency of Iceland	Iceland
Shane COLGAN	s.colgan@epa.ie	Environmental Protection Agency (Ireland)	Ireland
Gosia Soltan	malgorzata.soltan@mos.gov.pl	Ministry of Environment	Poland
Beata Kłopotek	Beata.Kłopotek@mos.gov.pl	Ministry of the Environment	Poland
Sofia Rodrigues	sofia.rodrigues@apambiente.pt	Portuguese Environment Agency	Portugal
Fátima Azevedo	fatima.azevedo@sg.mamb.gov.pt	Ministry of the Environment	Portugal
Isabel Tomé de Andrade	isabel.andrade@apambiente.pt	Agência Portuguesa do Ambiente	Portugal
Ana Cristina Fernandes	ana.fernandes@apambiente.pt	Portuguese Environment Agency	Portugal
Maja Kronic-Lazic	maja.kronic@sepa.gov.rs	Serbian Environmental Protection Agency	Serbia
Tatiana Gustafikova	tatiana.gustafikova@sazp.sk	Slovak Environment Agency	Slovakia
Slávka Jurkovičová	slavka.jurkovicova@sazp.sk	Slovak Environment Agency	Slovakia
Soňa Sadáková	sona.sadakova@sazp.sk	Slovak Environment Agency	Slovakia
Alenka Burja	aburja@yahoo.com	NRC	Slovenia
Teresa Barres	tbarres@magrama.es	Ministry of Agriculture, Food and Environment	Spain
Annica Carlsson	annica.carlsson@naturvardsverket.se	Swedish Environmental Protection Agency	Sweden
Simone Jezler	simone.jezler@bafu.admin.ch	Federal Office for the Environment	Switzerland
Andreas Hauser	andreas.hauser@bafu.admin.ch	Federal Office for the Environment	Switzerland
Simon Johnson	simon.johnson@defra.gsi.gov.uk	Department for Environment, Food and Rural Affairs (Defra)	United Kingdom
Cecile Smith	cecile.smith@snh.gov.uk	Scottish Natural Heritage	United Kingdom
Alex Ross	alexander.ross@naturalresourceswales.gov.uk	Natural Resources Wales	United Kingdom
Michelle Griffiths	michelle.griffiths@naturalresourceswales.gov.uk	Natural Resources Wales	United Kingdom

7 Instructions how to log in on the 30 June 2016

***** please log in between 11.00 and 11.25 *****

Webinar will take place on Thursday 30 June 2016, 11:30-13:00 (CET)

Dear Colleagues,

Thank you for signing up for the EEA Resource Efficiency Webinar on national targets for resource efficiency, which will take place on Thursday, 30 June 2016, from 11:30 to 13:00 CET.

Many of you are already familiar with EEA resource efficiency webinars, but for the newcomers, a short note that the technical aspect of webinars is quite straightforward. You will need a computer with a fast and stable internet connection, and an external microphone and speakers (or a head set).

If you will be using a laptop, you would probably want to use an external microphone (or a headset), as the quality of sound from built in microphones is often quite poor. This can be a problem if you would like to ask a question during the webinar.

To log in, we invite you to:

- (1) First do a self-check, to make sure that your equipment is configured properly for Adobe Connect**

Prior to the webinar, we kindly ask you to test your software and equipment (microphone and speakers, headset, etc.) to make sure that everything is configured properly and works well. The link to do the test is:

https://na1cps.adobeconnect.com/common/help/en/support/meeting_test.htm

If you encounter problems, please ask your in-house IT support to help resolve the issues. This is why it is important to do the self-check well ahead of the webinar, and not in the last minute.

- (2) Log in on Thursday 30 June 2016 between 11:00 and 11:25 so that we can start at 11:30 sharp**

To log in, please click on the link:

<http://eu-wacs.adobeconnect.com/targets/>

and fill in the requested info.

You will not be asked for any password during the log-in.

Please refer to the quick guide below for further information how to get your speakers, microphone etc. set up.

See you on Thursday!

Adobe Connect: quick guide for participants

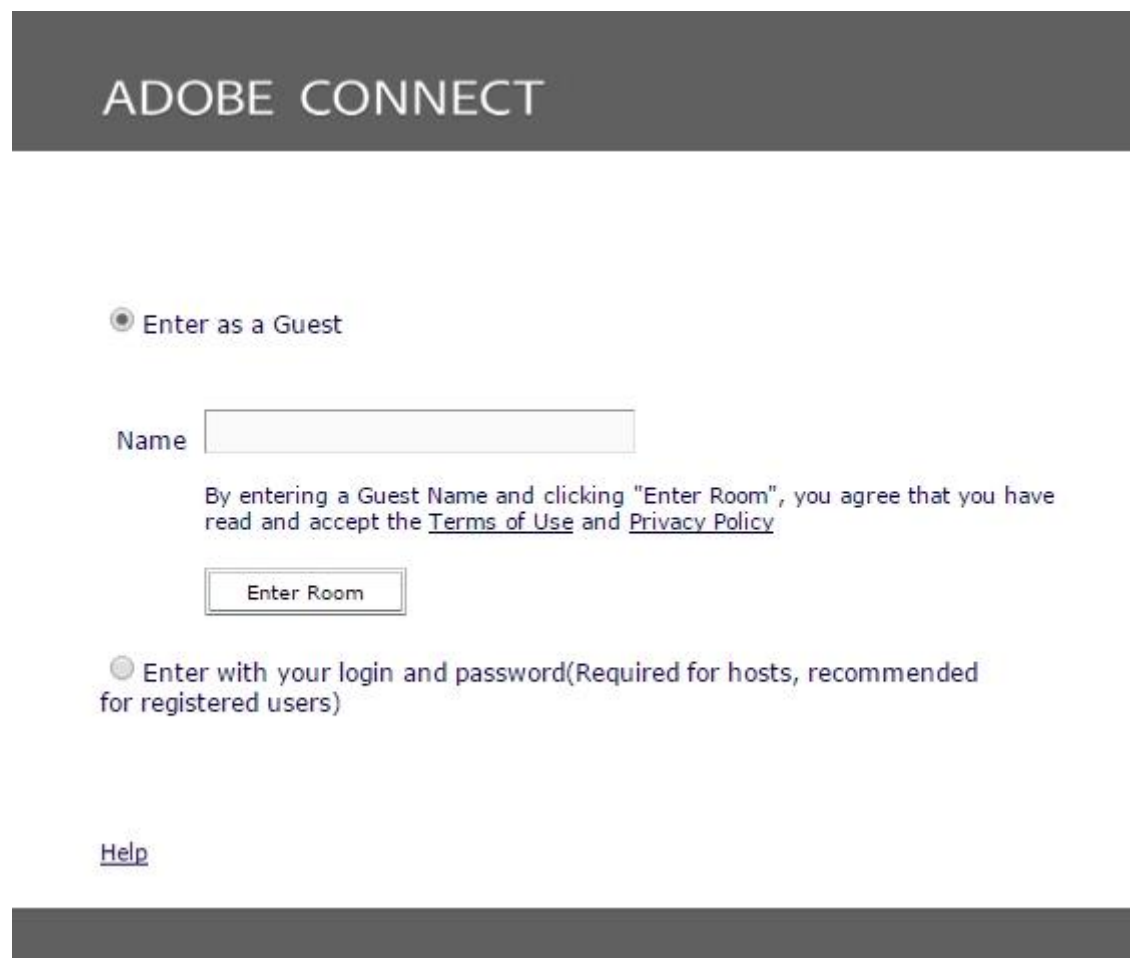
Adobe Connect, the new webinar software EEA uses, requires fast internet connection and a lot of free memory and space on the local computer. Therefore, before you log in, please close all the unnecessary applications, including your email browser. Otherwise, the overloaded system may crash.

To log in to the webinar on 30 June 2016, please click on the link:

<http://eu-wacs.adobeconnect.com/targets/>

and enter as guest. Please note that the name typed here will be the one visible to the host and other participants. To be able to introduce you if you ask a question to the presenters, the ideal thing would be if you could enter your name and country (eg. "Sofia Rodrigues, Portugal")

Note: there is no password for this meeting



ADOBE CONNECT

Enter as a Guest

Name

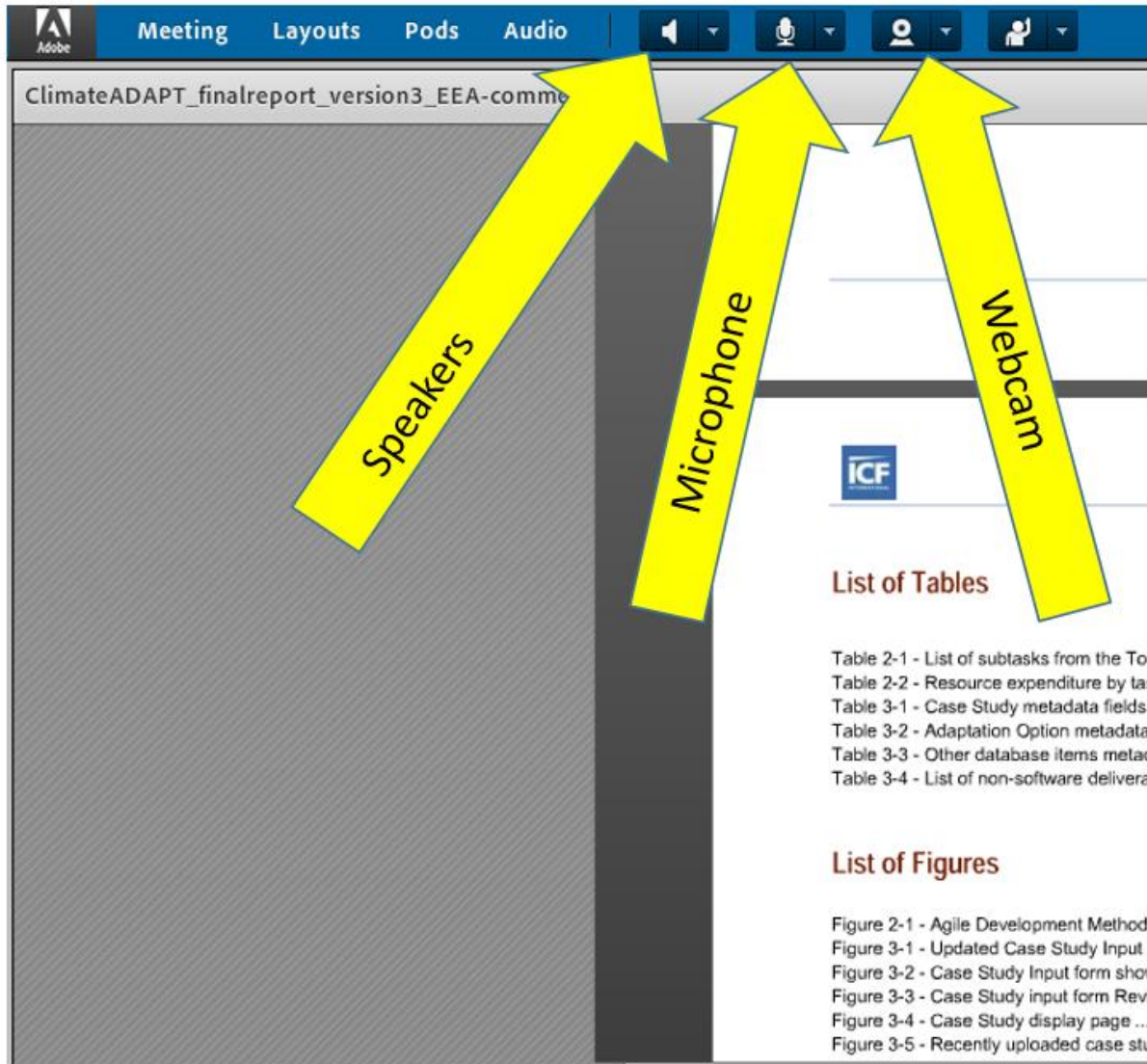
By entering a Guest Name and clicking "Enter Room", you agree that you have read and accept the [Terms of Use](#) and [Privacy Policy](#)

Enter with your login and password (Required for hosts, recommended for registered users)

[Help](#)

Activate your speakers to hear the webinar

Initially, the icons for speakers, microphone and webcam are white, which means they are inactive.



Click on the white speaker icon on the top of the screen. When your speakers are active the icon should become green (illustrated below).

The screenshot shows the Adobe Meeting interface. At the top, there is a navigation bar with tabs for 'Meeting', 'Layouts', 'Pods', and 'Audio'. Below this, a toolbar contains icons for audio (a green speaker icon), microphone, video, and chat. The main content area displays a PDF document titled 'ClimateADAPT_finalreport_version3_EEA-comments.pdf'. On the right side, there is a sidebar with the ICF logo and two sections: 'List of Tables' and 'List of Figures'. The 'List of Tables' section includes the following items:

- Table 2-1 - List of subtasks from th
- Table 2-2 - Resource expenditure l
- Table 3-1 - Case Study metadata f
- Table 3-2 - Adaptation Option metz
- Table 3-3 - Other database items r
- Table 3-4 - List of non-software de

The 'List of Figures' section includes the following items:

- Figure 2-1 - Agile Development Me
- Figure 3-1 - Updated Case Study li
- Figure 3-2 - Case Study Input form
- Figure 3-3 - Case Study input form
- Figure 3-4 - Case Study display pa
- Figure 3-5 - Recently uploaded cas

When the speaker icon is green, you will be able to hear audio. If it is not green = active, you will not receive sound. (NB, the microphone and webcam are still white = inactive)

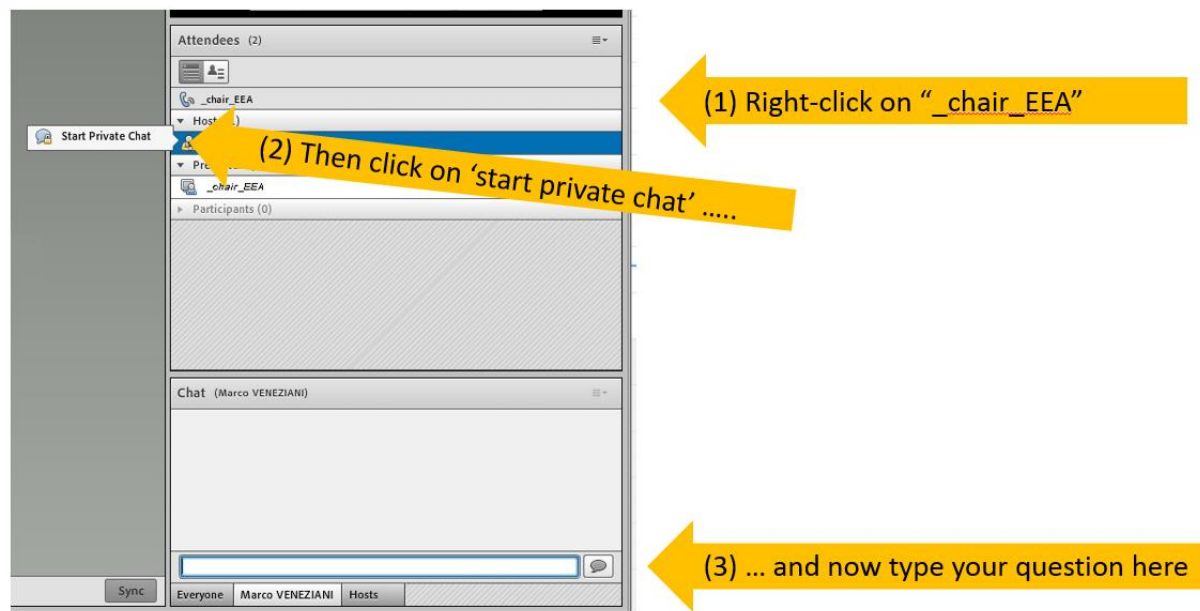
You should now be logged in as a participant, and able to follow the webinar.

If you want to ask a question...

If you wish to ask a question to the presenter, or make a remark, please send your question by chat to the **_chair_EEA**, who will then invite you to ask the question yourself.

Chat function

The chat window is usually at the bottom right part of your screen.



The easiest way to send a chat message to a single person (e.g. “_chair_EEA”) is to (1) right click on the name of that person, then (2) click on ‘start private chat’ pop up icon, and (3) type your message at the bottom box.

To ask your question/make a comment:

When your turn comes and you are invited to ask the question, the icon with the microphone will appear in white at the top of the screen (we need to activate this white icon before it appears on your screen).

Prior to asking the question you will need to click on this white microphone icon to make it green = active. This will make the microphone active. NOTE: the microphone is operational only if the colour of the microphone icon changed from white to green.