# EU Energy Winter Package (RED Recast) and Future of Forest Biomass

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# Policy Context

- 2020 **Climate** & **Energy Package** (2007)
- Europe 2020 - EU strategy for smart, sustainable and inclusive growth (2010)
- EU Roadmap to develop **competitive, resource efficient & low-carbon economy** by 2050 (2011)
- EU Bioeconomy Strategy (2012) – under revision now
- 2030 **Climate & Energy Framework** (2014)
- Circular Economy Package (2015)
- **Energy Union** (2015)
- **Renewables Directive Recast** (2016)

# Energy Union

**Objectives:**

- Worldwide leader in the promotion and development of renewable energy
- Steering the effort to combat climate change
- Encourage the shift to a low-carbon economy
- Stimulate high-potential economic growth

**Renewable Energy Sources** (RES):

- Are drivers emerging of inclusive economic growth, creating jobs and reinforcing energy security across Europe
- Contribute to climate change mitigation through:
- Reduction of greenhouse gas emissions
- Achieve sustainable development
- Protect the environment and improve citizens' health

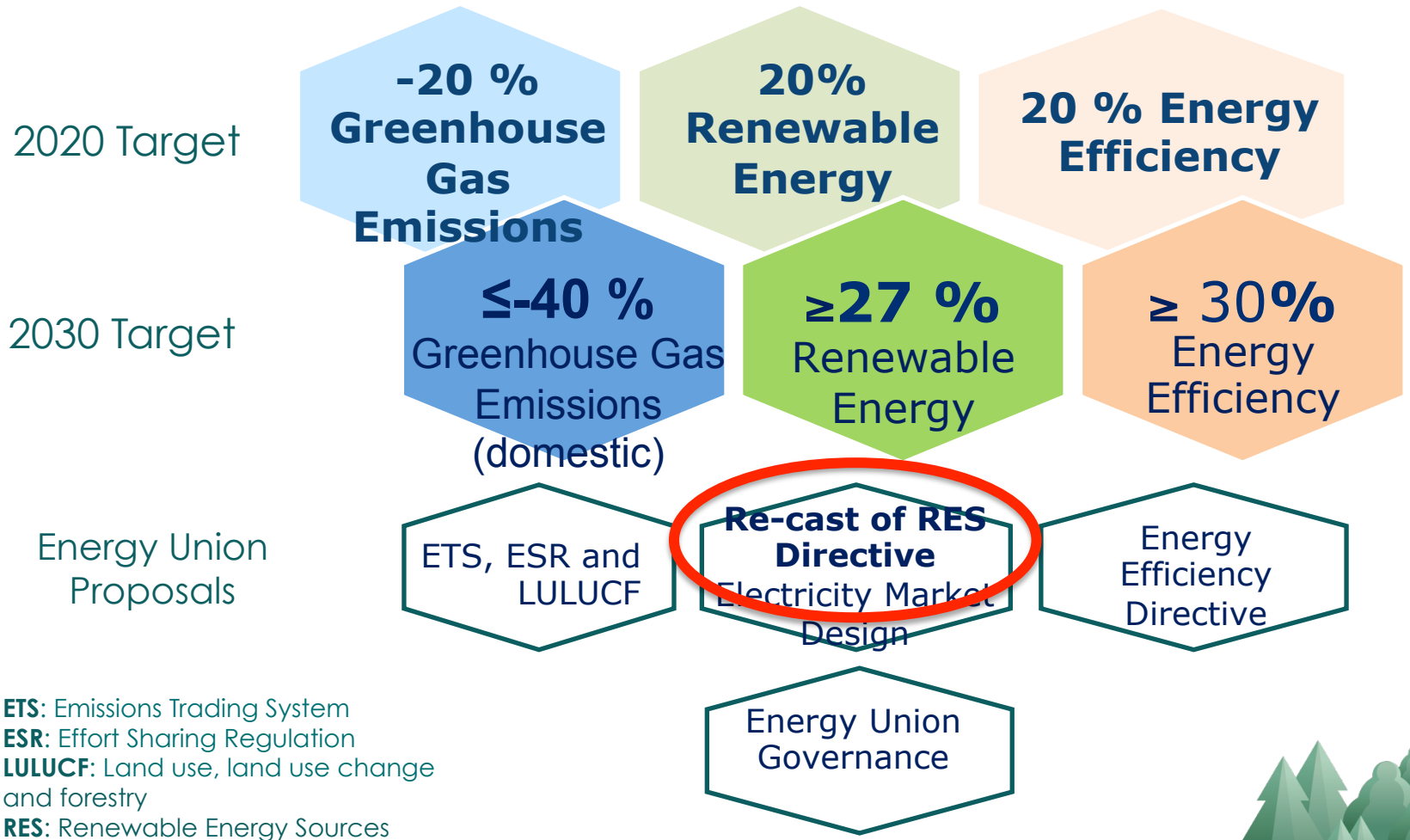
# Concepts, definitions

- **Renewable energy** - energy from renewable non-fossil sources: wind, solar (solar thermal and solar photovoltaic) and geothermal energy, ambient heat, tide, wave and other ocean energy, hydropower, biomass, landfill gas, sewage treatment plant gas and biogases

- **Biomass -** the biodegradable fraction of products, waste and residues from biological origin from agriculture, (including vegetal and animal substances), forestry and related industries including fisheries and aquaculture, as well as the biodegradable fraction of waste, including industrial and municipal waste of biological origin

- **Forest biomass** - biomass produced from forestry

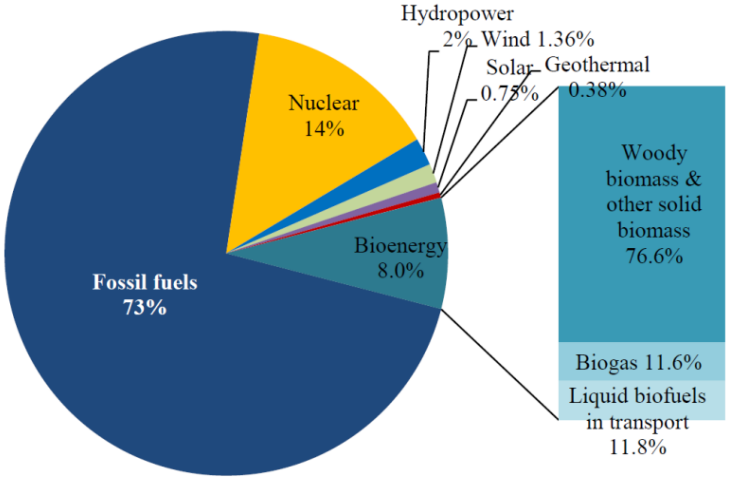
# EU Climate and Energy Framework




**ETS**: Emissions Trading System
**ESR**: Effort Sharing Regulation
**LULUCF**: Land use, land use change and forestry
**RES**: Renewable Energy Sources

*Source: European Commission*

# Sustainability of bioenergy – impact assessment




*Source: Impact Assessment on Bioenergy*

- **Renewable Energy Sources**: *13 % of EU gross inland energy consumption*
- **Bioenergy**: *65% of total Renewable Energy* Sources
- **Wood and wood waste**: *70% of total bioenergy*
- **Risks connected with use of forest biomass:**
  - *Climate performance of forest biomass*
  - *Adverse environmental impacts on biodiversity, soil and air quality*
  - *Availability of biomass and potential competition for biomass resources*
  - *Increase in imports (today is mostly domestic but will increase in future)*
- **Sustainability criteria** to minimise the risk of using unsustainable forest biomass, especially that it is produced in a way that does not cause deforestation or degradation of habitats or loss of biodiversity, delivers greenhouse gas emissions savings compared to fossil fuels and that it is converted into energy with high efficiency combined heat and power technologies.

*Source: European Commission*

# Recast of RED

**Strengthened EU sustainability criteria**, but separate by source (agriculture biomass, forest biomass) regardless of end use

- **Biomass production:**
  - Improved sustainability criteria for agriculture biomass
  - New sustainability scheme for forest biomass (risk-based approach)
- **Biomass end use performance:**
  - GHG saving requirements:
  - Biofuels/bio-liquids: 70%
  - Biomass & biogas for heat and power: 80%
  - Support to new biomass electricity only if with combined heat and power technology (exception for security of supply)

# Main elements of the scheme

- Obligation to provide evidence of meeting criteria lies with Operator of the Installation
- Operator gathers evidence minimising the risk of using unsustainable biomass, by applying:
  - **Risk-based approach** to comply with requirements of Art 26(5)
  - Gather evidence of compliance with LULUCF (Art26(6))
  - Operator has to demonstrate **GHG savings** compared to fossil fuels comparator (Art 26(7)(d))
- Operator has to provide all **evidence to verifier** (Article 27)
- If all the steps are complied with than operator can be eligible for support

# Target Instalations

Obligation to provide **evidence** only applies to:

- Installations producing electricity, heating and cooling or fuels with a fuel capacity equal to or exceeding **20 MW** in case of solid biomass fuels,
- Electrical capacity equal to or exceeding **0,5 MW** in case of gaseous biomass fuels

In order to lower the **administrative burden**

# Risk-based Approach

***What is Risk-based approach***

» *Two level approach to minimise the risk of using unsustainable produced forest biomass*

» *Builds on existing forest legislation at national level*

» *Evidence to be provided in proportion to the risk level:*

- For **"low risk"** Regions/Countries: evidence at macro-level
- For **"other"** Regions/Countries: more detailed evidence up to the forest holding level.

» *Is less burdensome where risks are lower and more comprehensive where risks are higher, i.e. proportionate and effective*

# Sustainability criteria for forest biomass

Set to minimise the risk of using unsustainable forest biomass production (**Article 26(5)**):

» the country of harvest has in place national and/or subnational laws, as well as monitoring and enforcement systems ensuring that:

- Harvesting is carried out in accordance to the conditions of the harvesting **permit** within legally gazetted boundaries
- Forest **regeneration** of harvested areas takes place
- Areas of **high conservation value**, including wetlands and peatlands, are **protected**
- **Impacts** of forest harvesting on soil quality and biodiversity are **minimised**
- Harvesting does not exceed **the long-term production capacity** of the forest

» if evidence on the above is not available, than management systems are in place at forest holding level to ensure the same requirements as above.

# Other provisions

- The country or regional economic integration organisation of origin of the forest biomass meets the following LULUCF requirements:
  - is Party to, and has ratified, the Paris agreement,
  - has submitted NDC in accordance with Art 5 of Paris Agreement
  - has national system for reporting GHG removals from land use including forestry and agriculture
- When evidence referred to in the first paragraph is not available, management systems are in place at forest holding level to ensure carbon stocks and sinks levels in the forest are maintained
- Sets the possibility that Commission may establish operational evidence for demonstrating compliance with the requirements of Risk-based approach
- Review clause: the Commission shall assess whether the criteria minimise the risk of using unsustainable forest biomass and address LULUCF requirements

# GHG savings

## GHG saving requirement shall be:

- (a) at least **50 %** for biofuels and bioliquids produced in installations in operation on or before 5 October 2015;
- (b) at least **60 %** for biofuels and bioliquids produced in installations starting operation from 5 October 2015;
- (c) at least **70 %** for biofuels and bioliquids produced in installations starting operation after 1 January 2021;
- (d) at least **80 %** for electricity, heating and cooling production from biomass fuels used in installations starting operation after 1 January 2021 and 85% for installations starting operation after 1 January 2026.

***Article 26(7)***

# Verification

- Operator can demonstrate they comply with the sustainability criteria through national systems or so-called voluntary schemes recognised by the European Commission.
- What is a voluntary scheme?
- Voluntary schemes verify compliance with the EU's biofuels sustainability criteria.
- National schemes
- The European Commission also recognises national sustainability schemes that have been notified to the Commission by EU governments.

***(Art. 27)***

# Support

- Requirements for which sustainability criteria has to be fulfilled:
  - Contribute towards the Union's target and MS renewable energy share
  - Measuring compliance with renewable energy obligations
  - Eligibility for financial support.

***Article 26(1)***

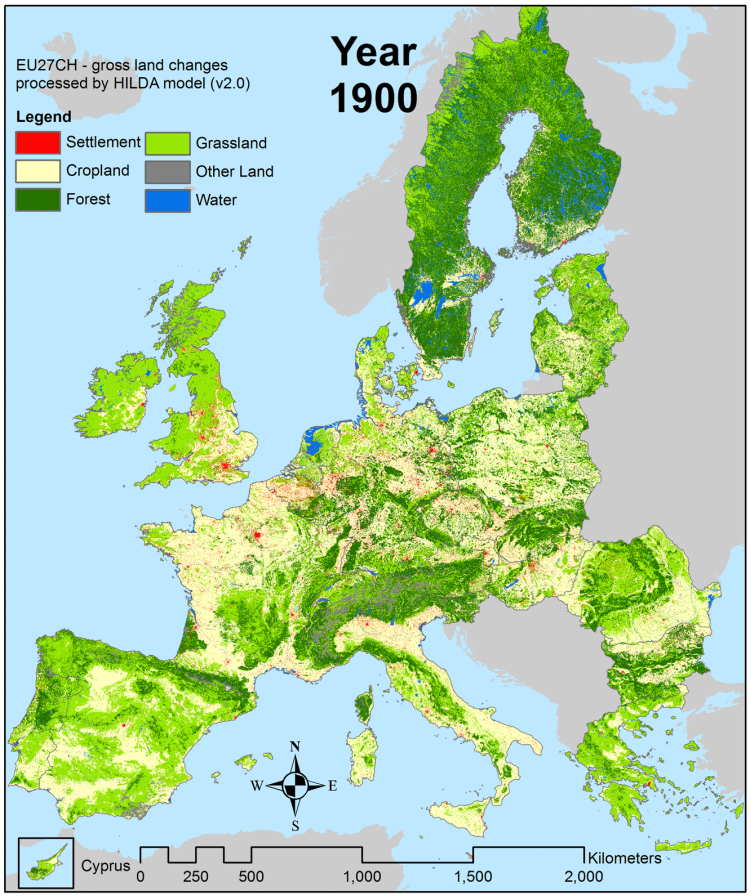
- Electricity from biomass fuels produced in installations with fuel capacity equal to or exceeding 20 MW shall be considered only if it is produced applying high efficient cogeneration technology

***Article 26(8)***

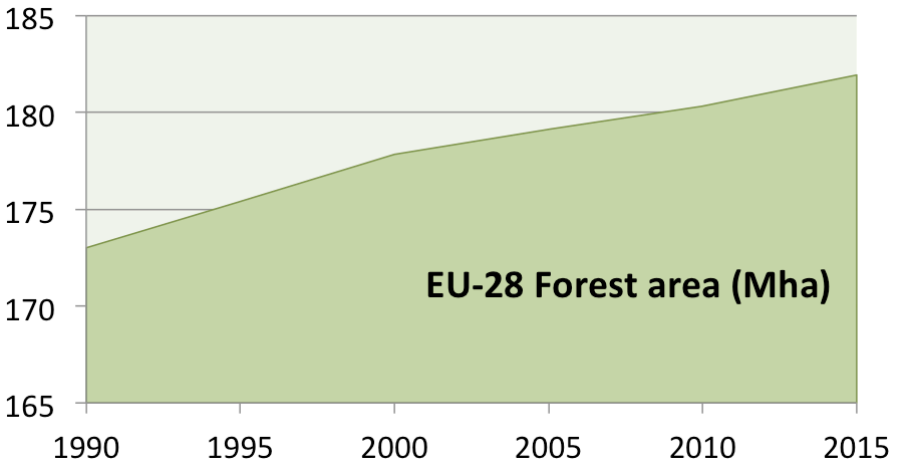
# Next Steps

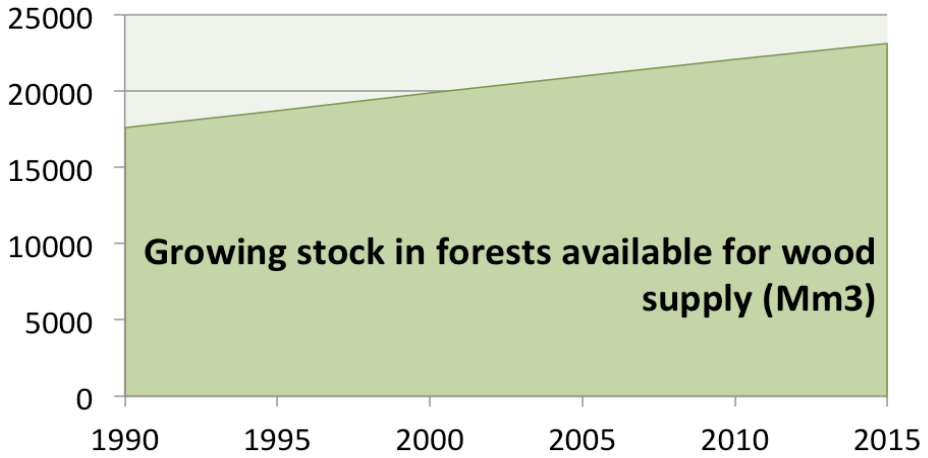
- Ongoing work in The European Council and European Parliament
- Stakeholders roles - EUSTAFOR is working on a position paper with other stakeholders in the forest-based sector
- Points of concern:
  - Future role of EU in forest management (Subsidiarity/competence division)
  - Use of forest biomass for Is bioenergy: is bioenergy policy a driver of wood harvesting in Europe?
  - Claims to establish cap or diameter threshold on round wood use for bioenergy
  - Energy efficiency of forest biomass versus fossil fuels

# European forests are growing




*R. Fuchs et al, Historic land changes in Europe, Biogeosciences, 10, 1543–1559, 2013*



# European forests in numbers

Today **182 Mha** ha of forests and OWL in the EU-28

Growing stock in forests available for wood supply: **23 148 $Mm^3$**

40,3% is publicly owned (mainly state **30%**)

Average size: public > **1000 ha** (differences among MS)

Round wood production in EU forests **435 mill. m3** (2013)

Approx. annual harvest amounts **66%** of annual increament

Approx**. 20%** of round wood produced is **fuel wood**

# State Forests vis-à-vis sustainability concerns

- Managed according to restrictive MS legislations on **SFM**
- Compulsory authorized long-term **forest management plans** in line with sustainability principles, standards and silvicultural guidelines
- Total land area managed ~49 mill. ha (~30% of EU forests)
- Total forest area managed ~42 mill. ha (including French overseas departments)
- Protected and protective forests ~16 mill. ha & ~ 8 mill. ha of N2K
- **Certification** in SFMO: 43,6 mill. ha (23,6 mill. ha PEFC & 19 mill. ha FSC & 0,6 mill. ha other); mind overlaps
- Annual increment ~200 mill. M3
- Annual harvest ~120 mill. M3
- Number of employees ~100 000

# Who are we?

- EUSTAFOR – 10 years in Brussels
- Non-profit international association based on BE law
- 32 Members from 22 countries - organizations of various organizational and legal form
- Membership open to all European countries

# SFM is our principle

European State Forest adhere to the principles of three pillars of SFM*:

1) **ECONOMIC VALUE**

- 1/3 of the EU's timber harvest
- Boosting economic prosperity and jobs
- Leading in moving Europe towards a bio-based green economy
- Reliable partners for industry, research and innovation

2) **ENVIRONMENTAL VALUE**

- Forerunners in ecologically sound silvicultural methods
- Home for biodiversity
- Regulate and control climate, nutrient and water cycles and protecting the soil
- Protect against diseases, flooding, erosion and fire hazards

3) **SOCIAL VALUE**

- Offering ecosystem services and other non-material benefits
- Provide clean air and water supplies, recreation, scenic and cultural heritage
- Protect infrastructure

**as defined by Forest Europe in Helsinki Resolution 1, 1993*

# Use forests, use wood

Thank you

# European State Forest Association (EUSTAFOR)

www.eustafor.eu

https://twitter.com/EUSTAFOR

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