

The need for biofuels in Europe


World Renewable Energy Council,
11 May 2011

Gustav Melin
President Aebiom



About AEBIOM European Biomass Association

- Represents and promotes interests of bioenergy stakeholders
- 30 national associations
- About 80 companies
- Activities: lobbying, workshops, newsletters, European projects, working groups, Conferences etc.
- Based in Brussels – Renewable Energy House
- Member of EREC



Bioenergy develops fast
Keep up the pace!

Join
AEBIOM!



AEBIOM

European Bioenergy Conference

&
RENEXPO[®]
BIOENERGY EUROPE EXHIBITION

June 29th - 30th, 2011 Albert Hall, Brussels, Belgium

**Join us at the 2nd Annual AEBIOM
European Bioenergy Conference &
RENEXPO Bioenergy Europe
Exhibition 2011.**


**Register now for substantial Early
Bird Discounts!**

For more information or
to register now visit

www.renexpo-bioenergy.eu

AEBIOM
EUROPEAN BIOMASS ASSOCIATION

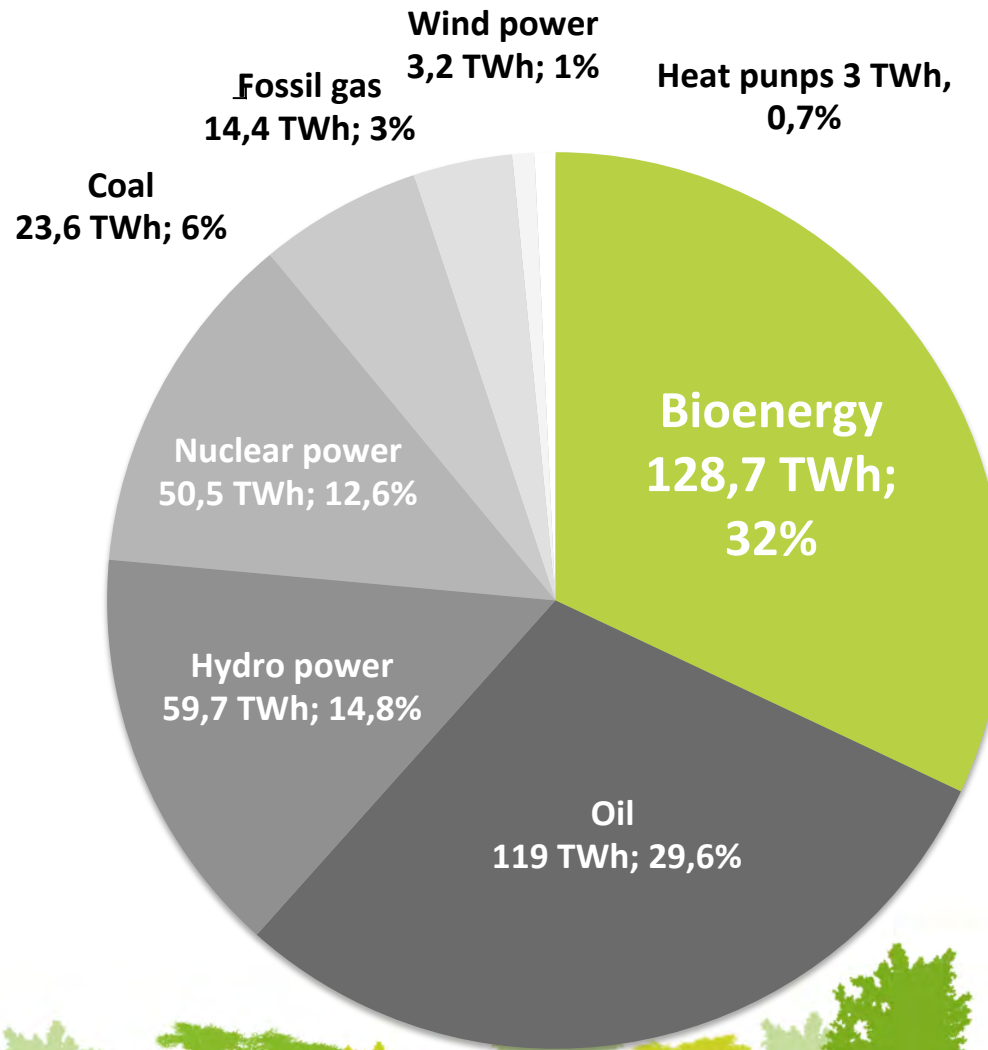


S  **VEBIO**

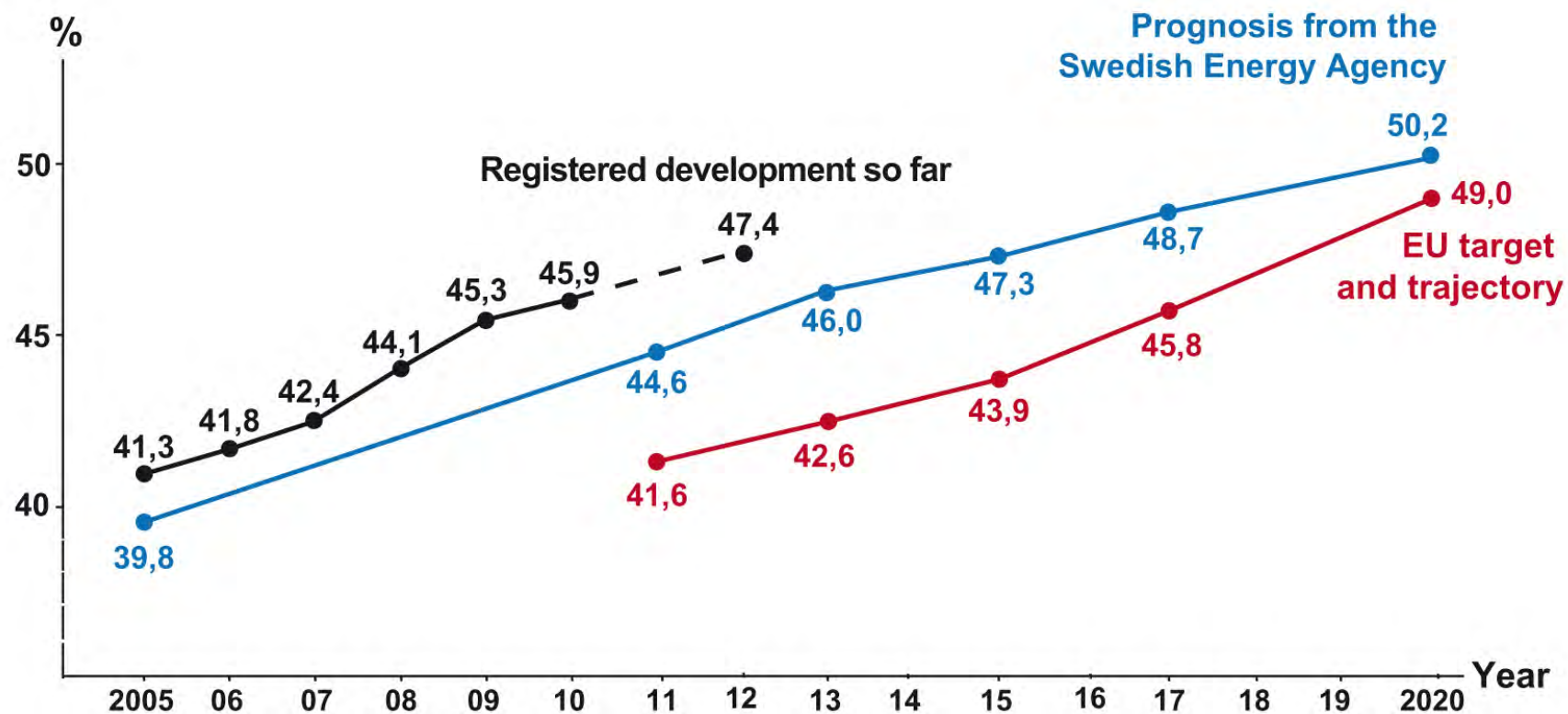
**To increase the use of Bioenergy in an
economically and environmentally
optimal way**



Share of final energy use in Sweden 2010



Share of renewable energy in Sweden's energy use

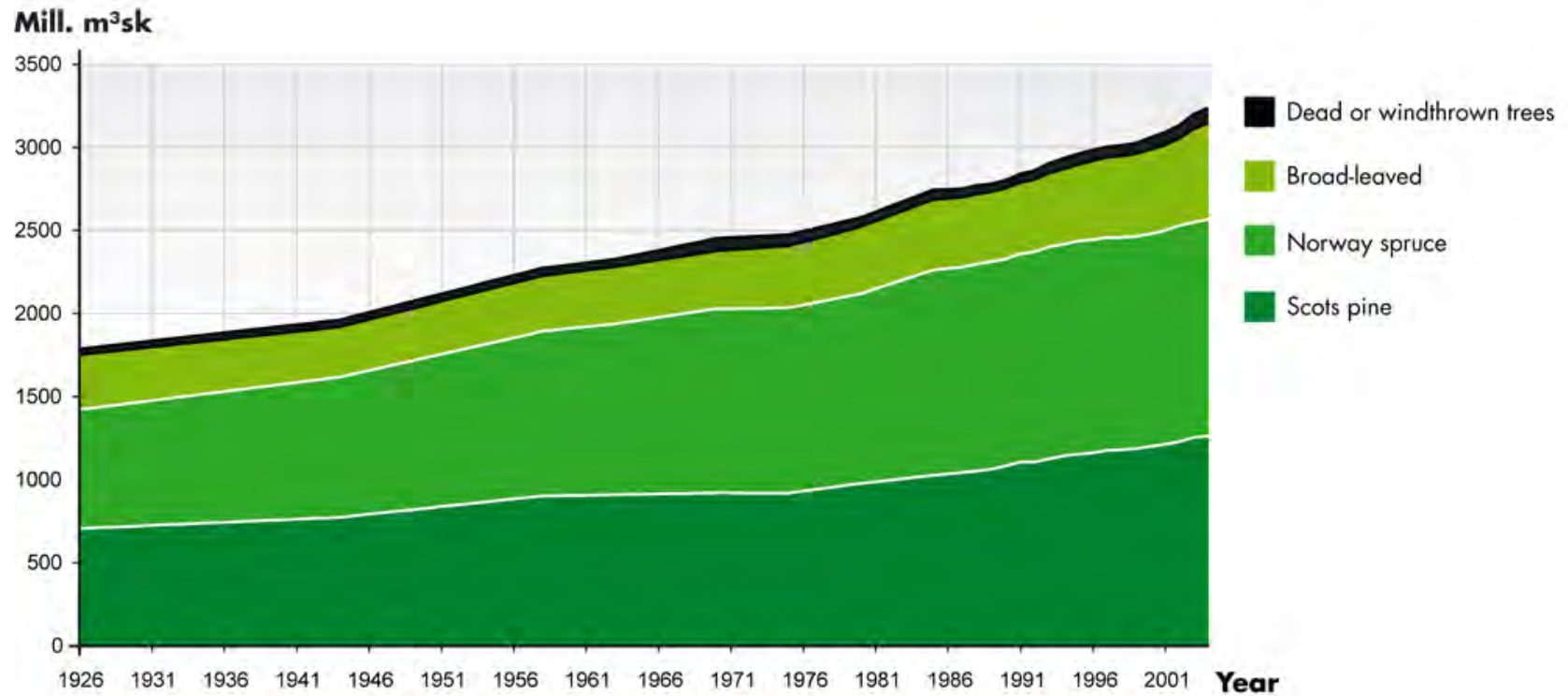


Andelen förnybar energi i Sverige var år 2009, 45,3 procent. Det betyder att Sverige ligger långt före tidtabellen när det gäller att nå EU-målet på 50 procent förnybart 2020.

Underlag: Energimyndighetens kortsiktsprognos 15 mars 2010.



Total standing volume of round wood in Swedish forest from 1924



¹ Excl. high mountains, restricted military areas, urban land and water surfaces.
Millions cubic metre standing volume (stem volume over bark from stump to tip)
Source: National Board of Inventory

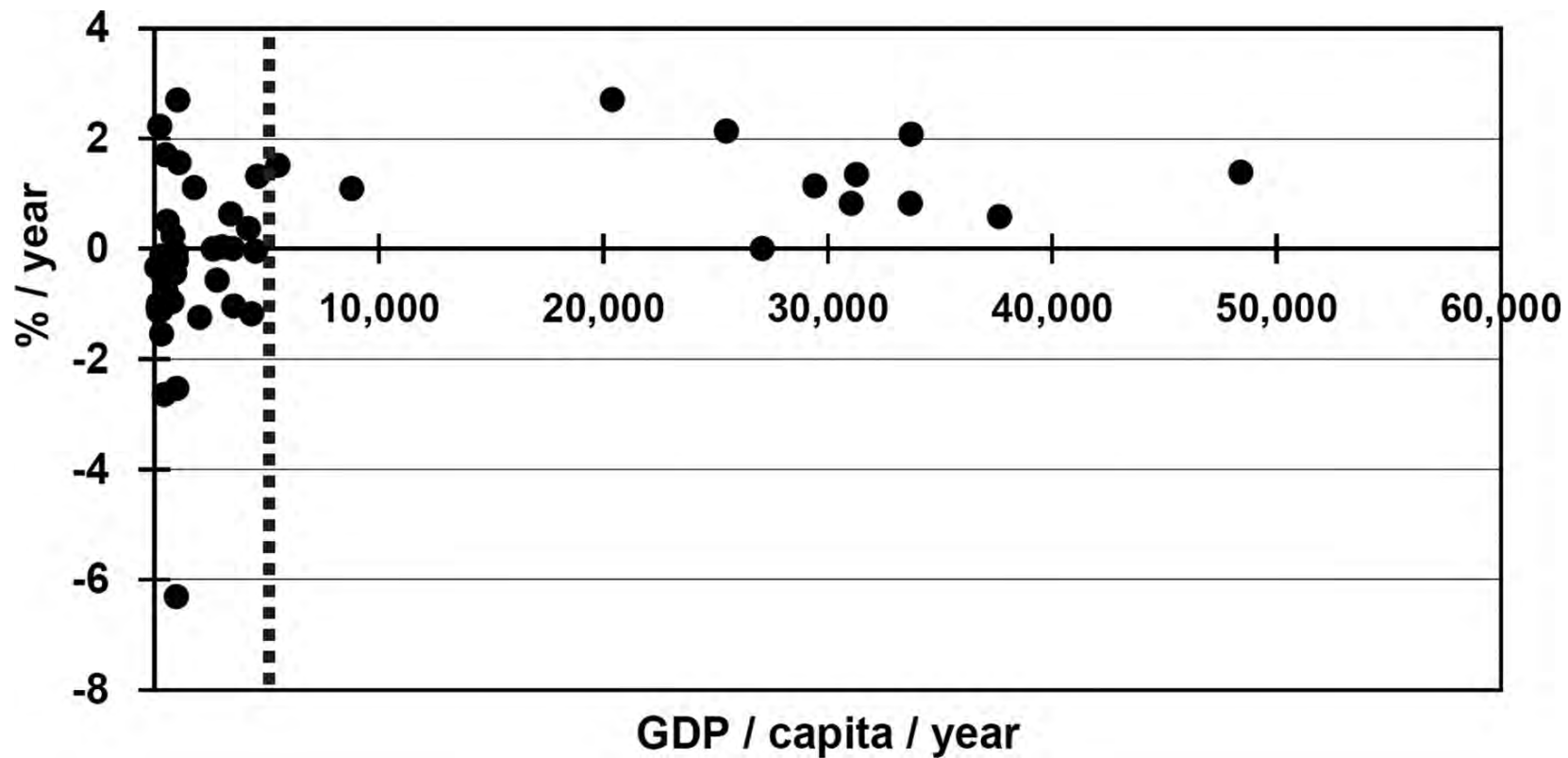


Forest volume increase in many countries

- The available forest increase in every country with a GNP > \$ 4 600 per capita.
- The table shows the decade of "transition point" in different countries, that is when forest volume in the actual country reach its bottom level and starts to increase. The last column gives the forest area in per cent of national land area in 2005.

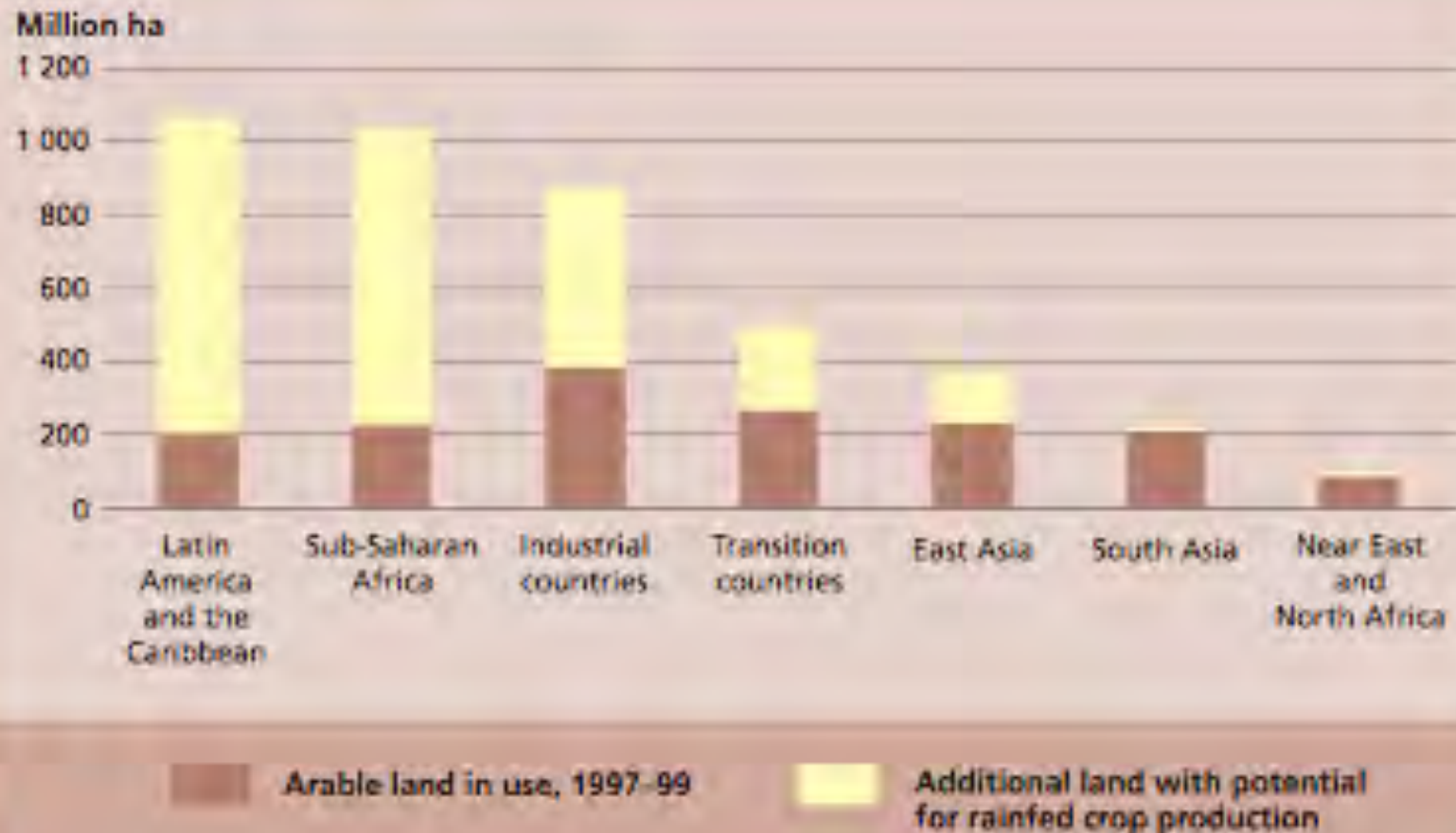
Example:	decade	transition point	year 2005
• Danmark	1810	4 %	11%
• Frankrike	1830	14 %	28%
• Portugal	1870	7 %	40%
• Schweiz	1860	18 %	30%
• Skottland	1920	5 %	17%
• Euro Ryssland	1930	28 %	39%

The average annual change $a + d$ of growing stock in nations plotted as a function of their GDP per capita.



Kauppi P E et al. PNAS 2006;103:17574-17579

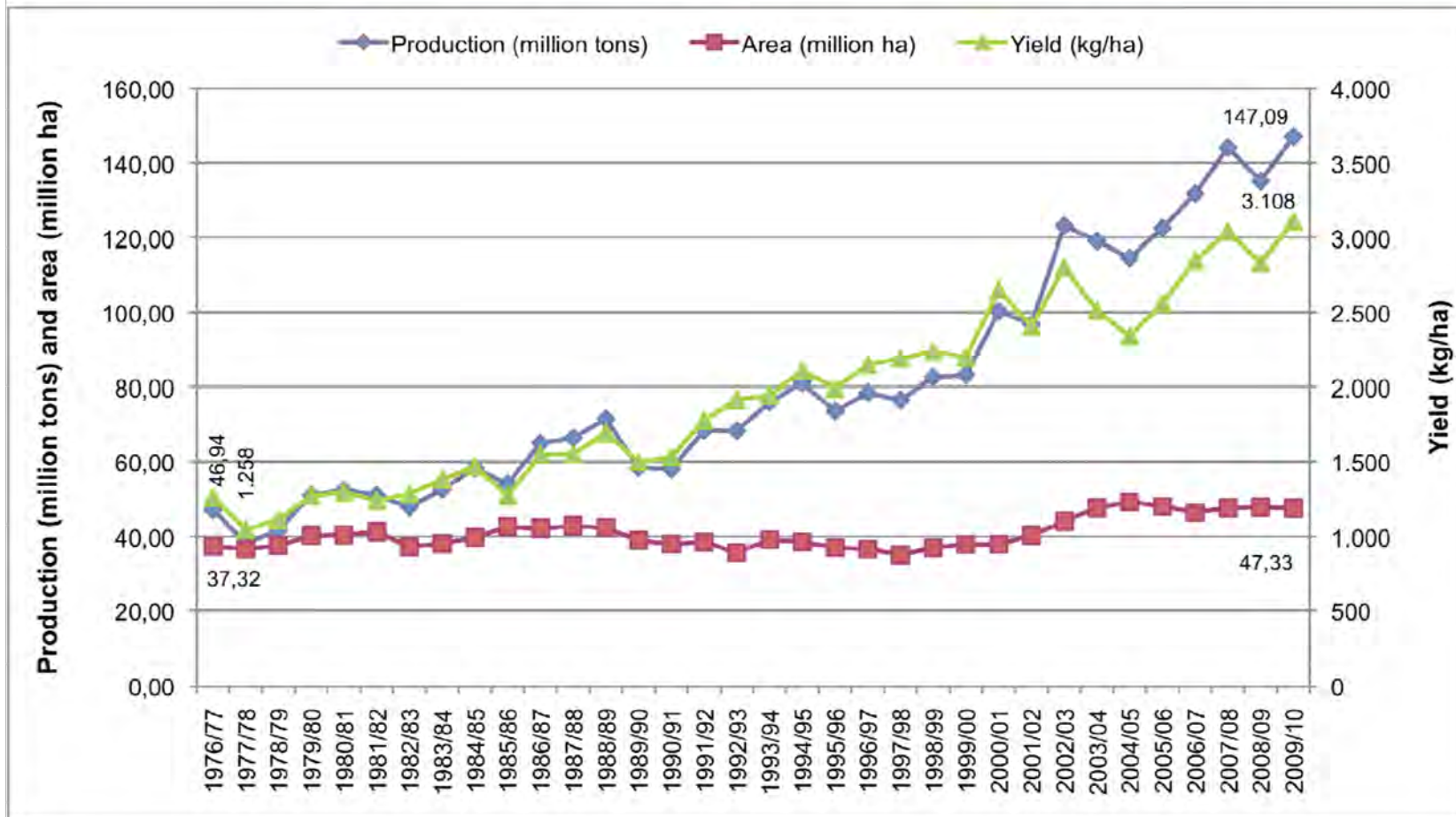
FIGURE 24
Potential for cropland expansion



Source: FAO, 2003.

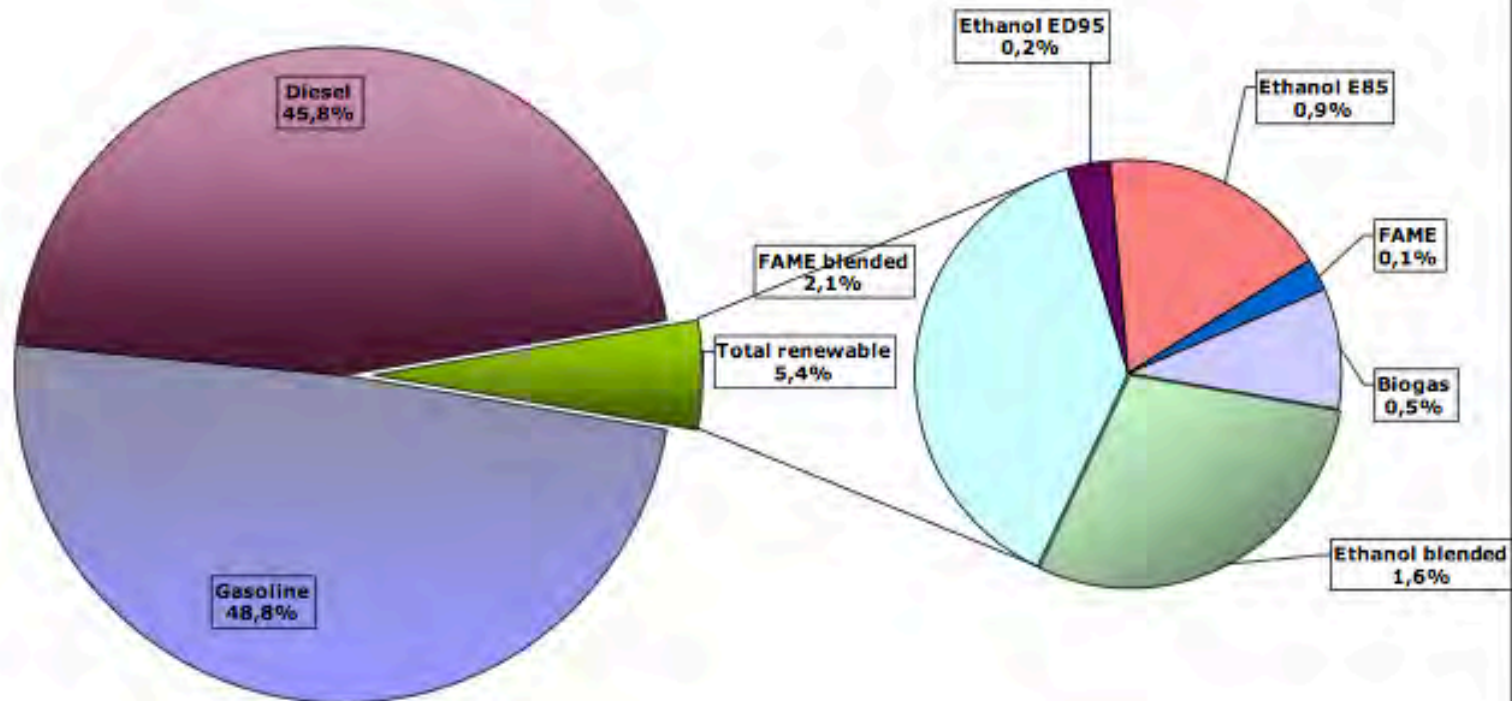


Grains: Production and Area (1975/2010)

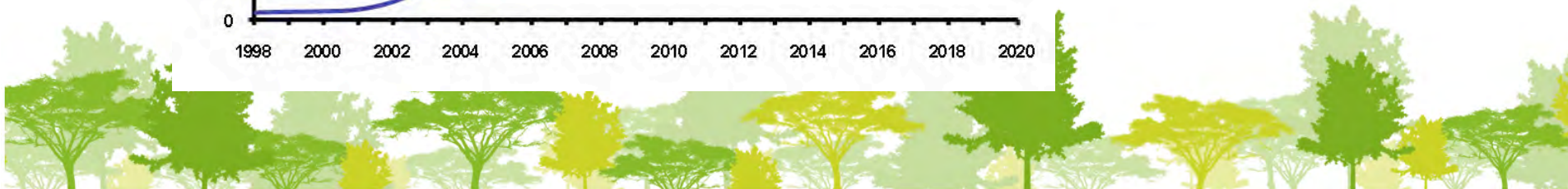
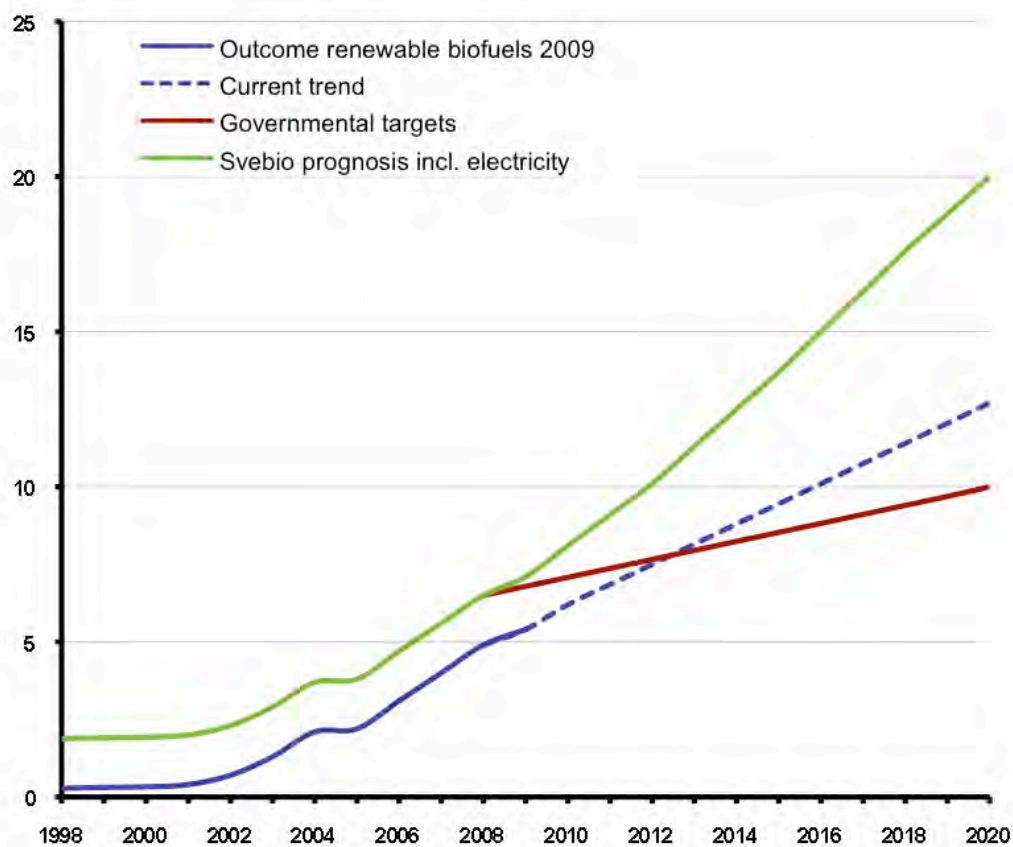


Source:after CONAB.

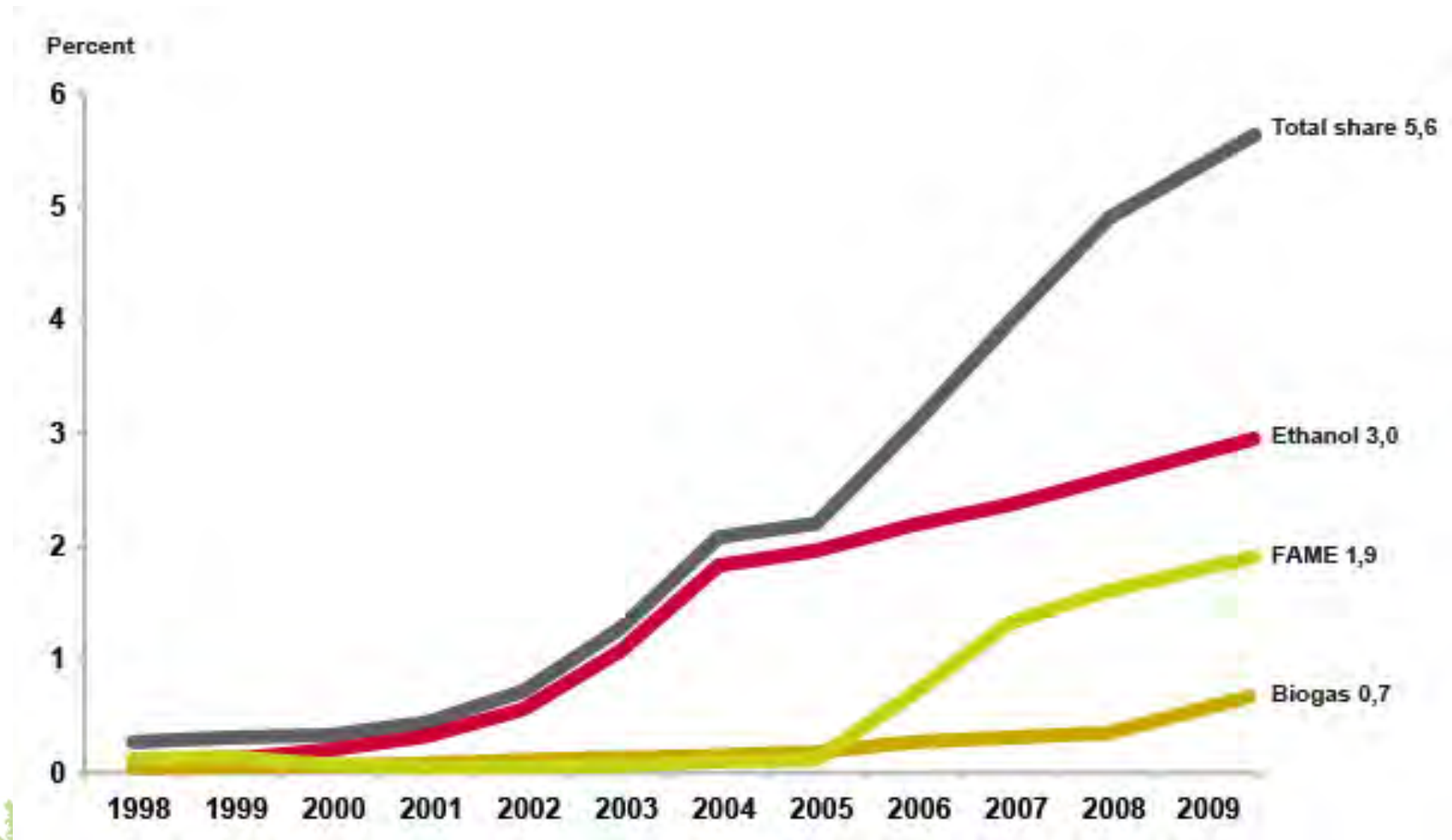
Share of renewable transport fuels, energy base, 2009



Share of renewable energy in Sweden's transport sector



Share of biofuels in transport sector in Sweden

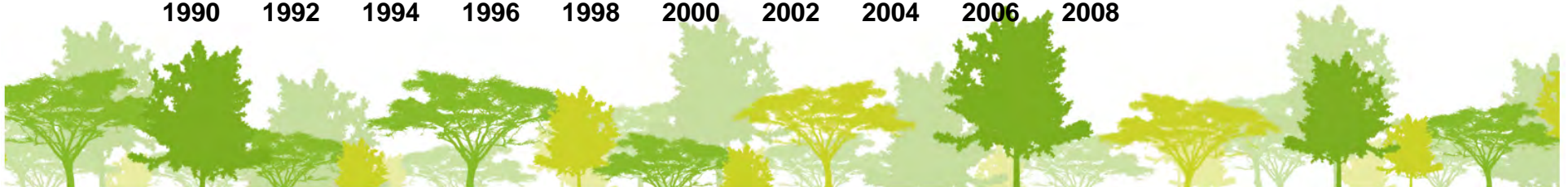
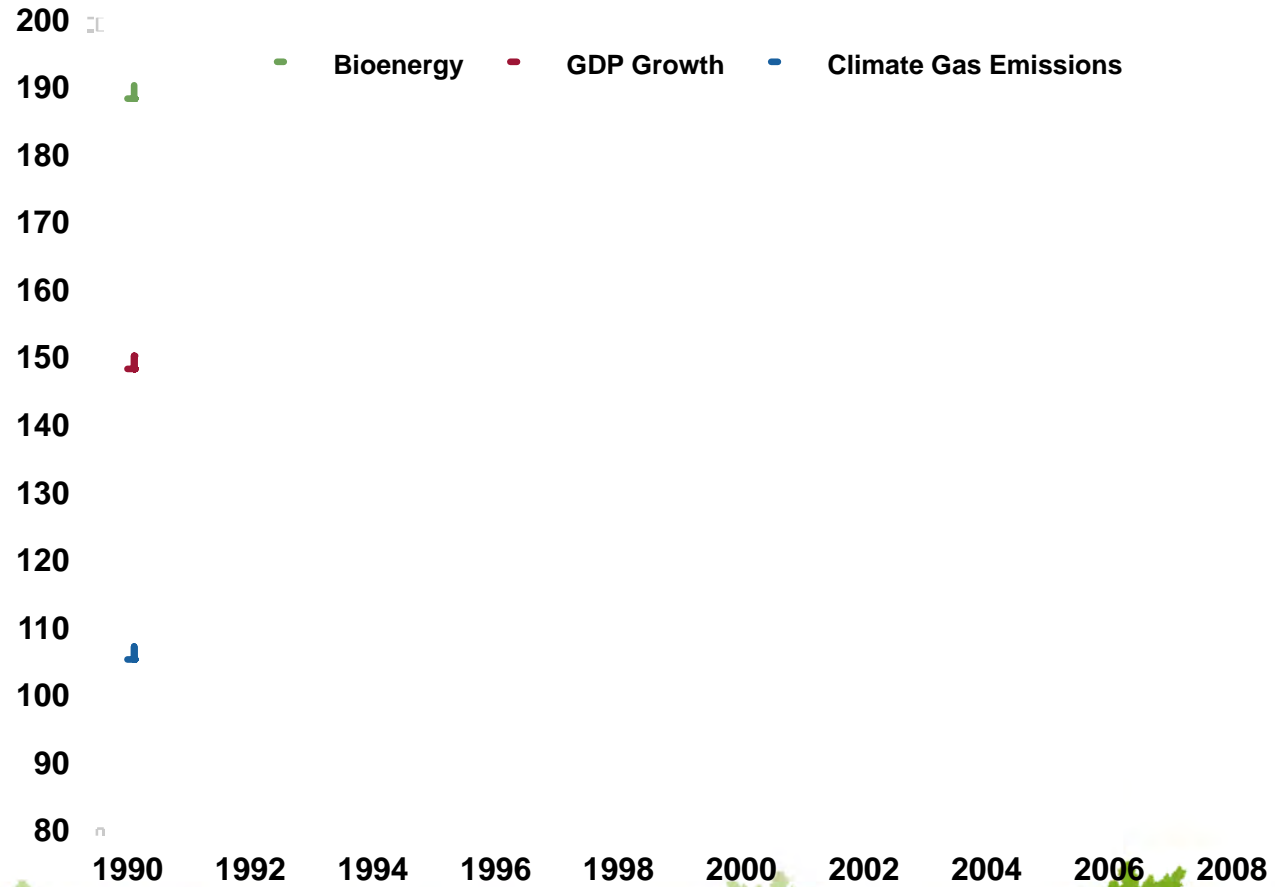


How can we increase the use of biofuels within EU, should we ?

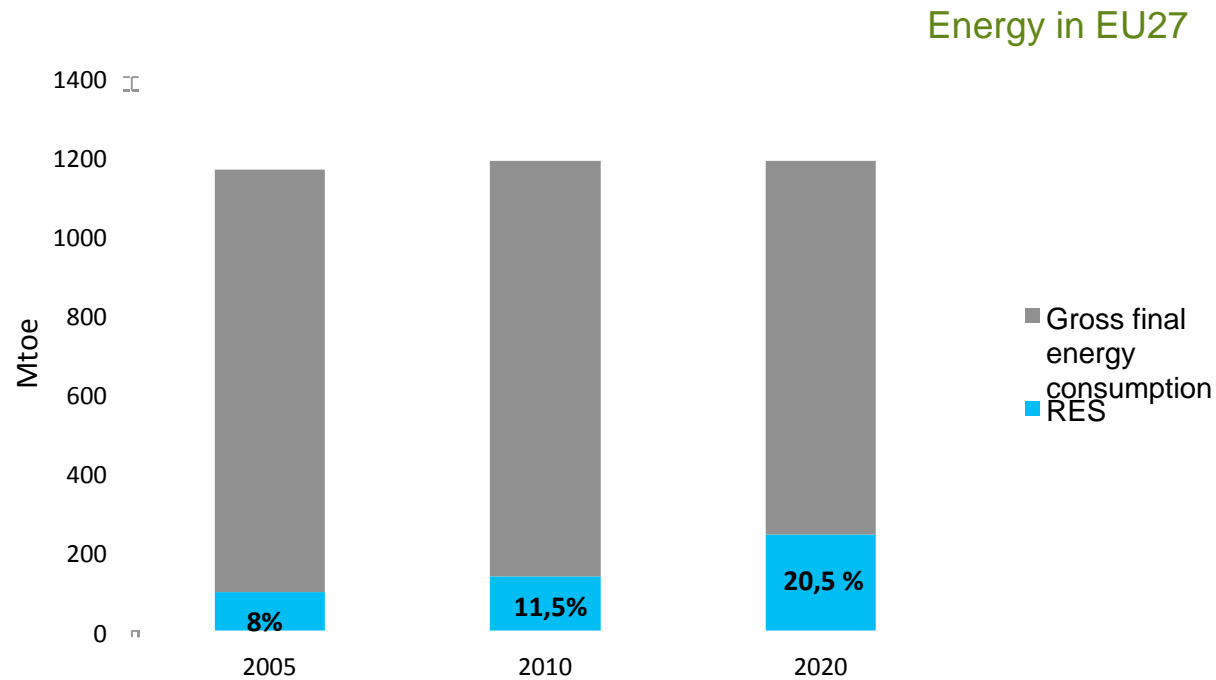
- Today's picture. Politicians are a bit mixed-up and have lost their vision of a renewable transport sector – it's so difficult, what to do?
- Fossil fuels are wrong.
- Power is too expensive and will take time. Power can't solve the issue for heavy vehicles in road transportation sector.
- Media express that biofuels create problems as starvation and environmental damage. Many believe this.



Increased GDP and reduced emissions with more bioenergy

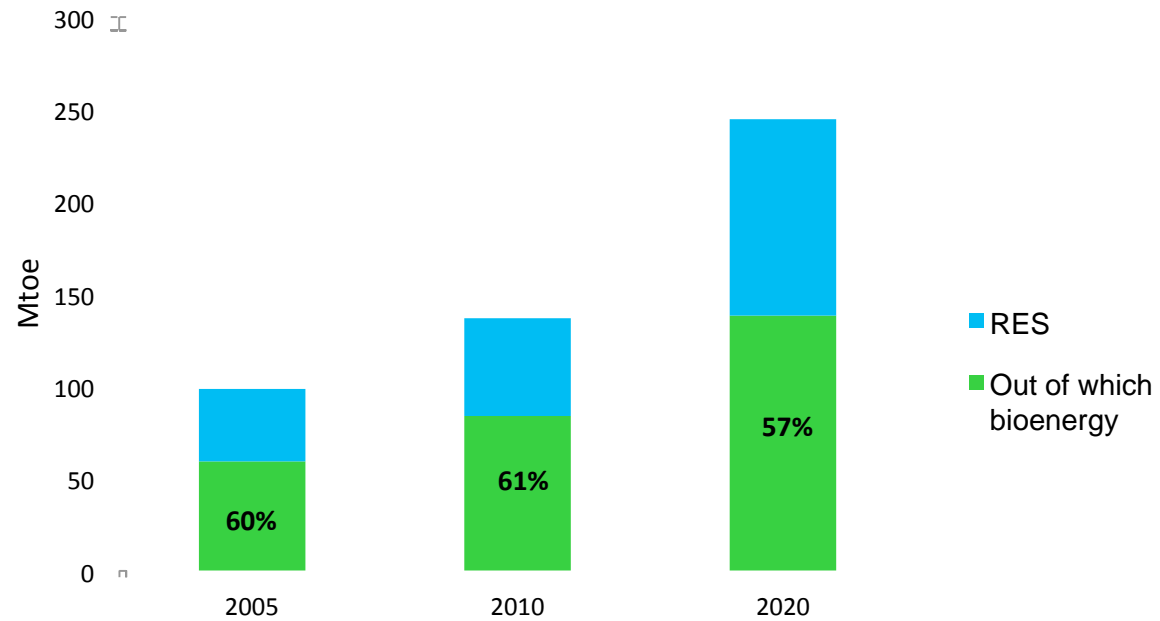


Energy, bioenergy and other renewables



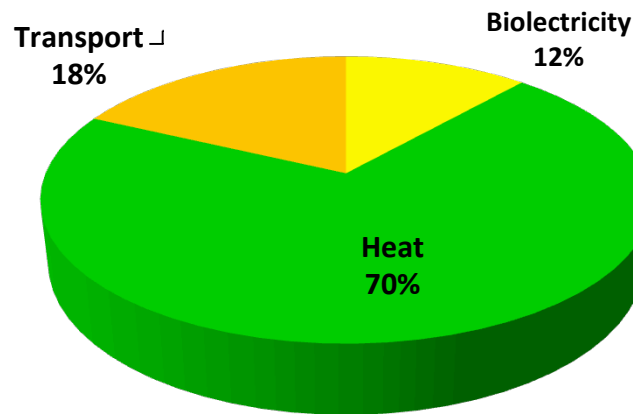
Share of Bioenergy in 2020

RES in EU27



Estimation of total contribution expected from bioenergy in EU27

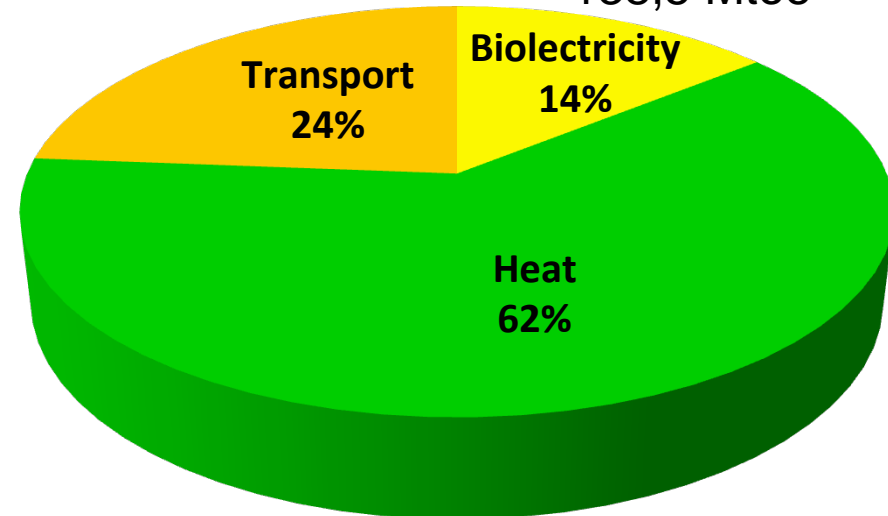
Total contribution of bioenergy in 2010 in EU27: 83,8 Mtoe



2010

Source: AEBIOM, based on NREAPs

Total contribution of bioenergy in 2020 in EU27: 138,5 Mtoe

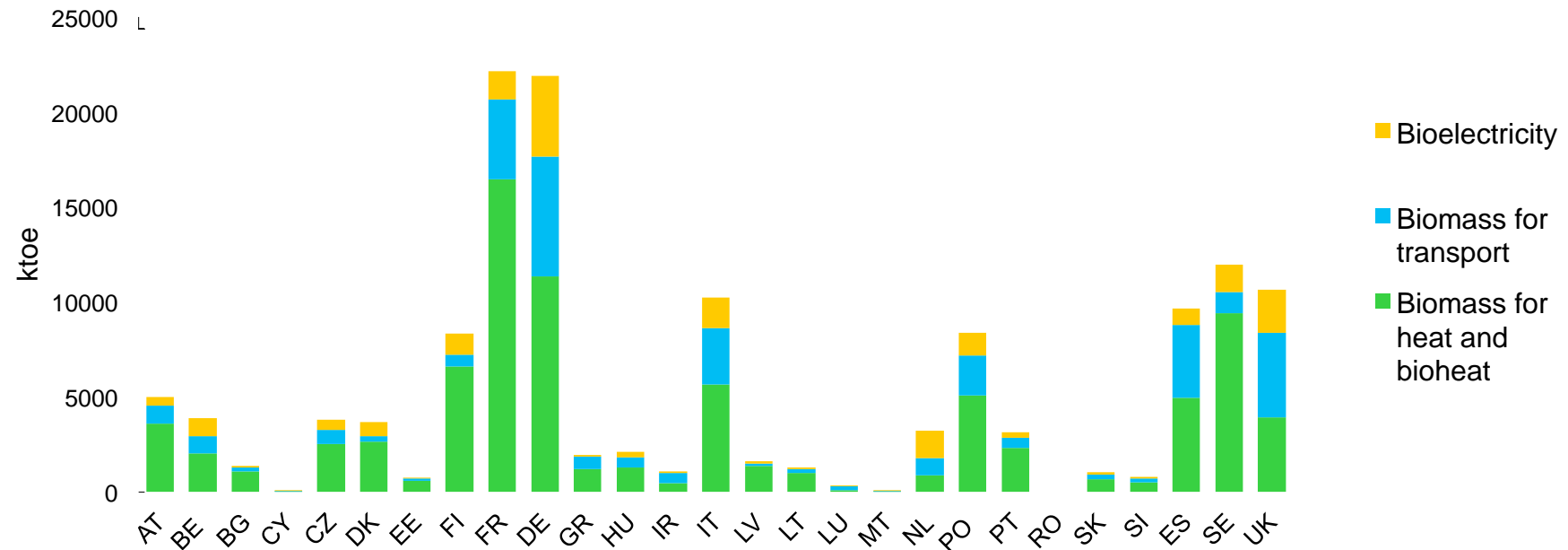


2020

Note: Bioenergy is considered as the gross final energy consumption, made up of the sum of bioelectricity, biomass for heat, bioheat and transport biofuels.



Estimation of total contribution expected from biomass in 2020



Note: We do not have enough data to represent Romania.



4 500 ±

4 000

3 500

3 000

2 500

2 000

1 500

1 000

500

0

■ Remaining predicted change until 2020

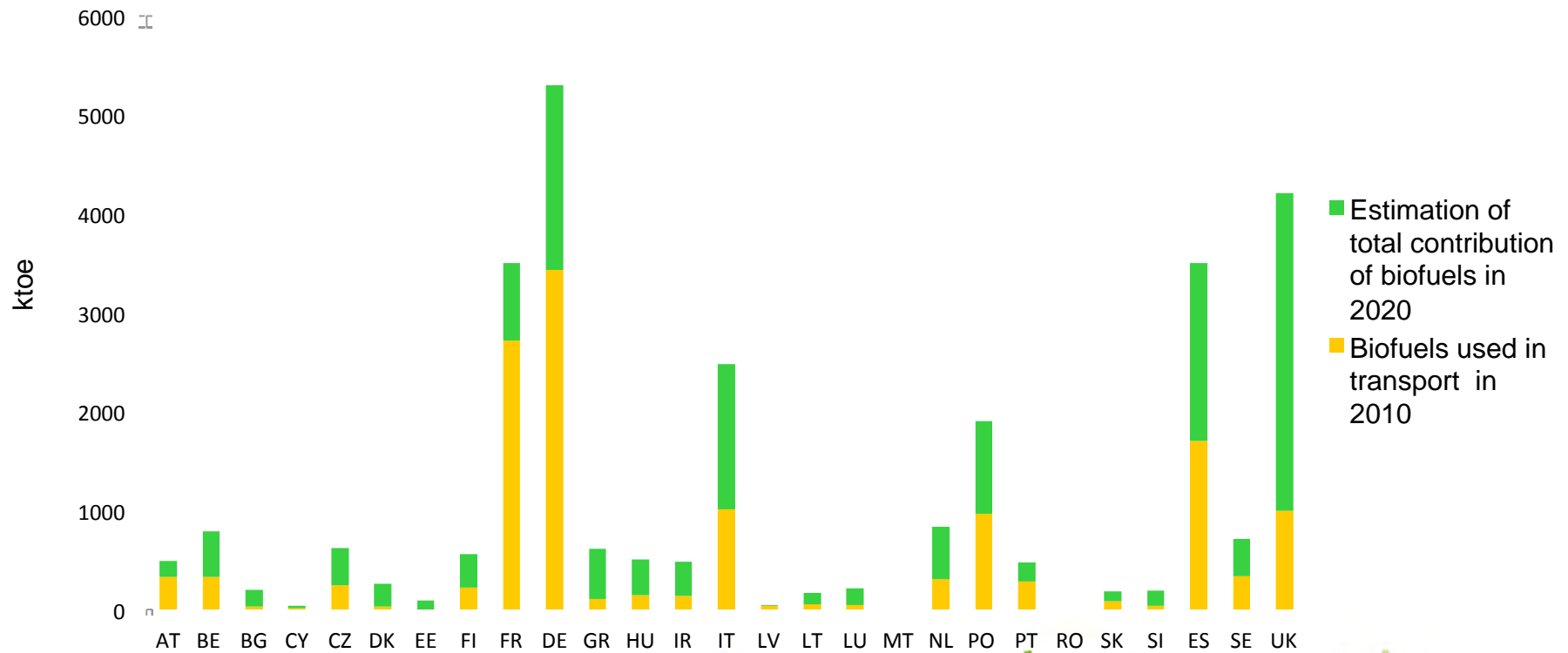
■ Biofuels volume increase during the period 2005-2010

AT BE BG CY CZ DK EE FI FR DE GR HU IR IT LV LT LU MT NL PO PT RO SK SI ES SE UK

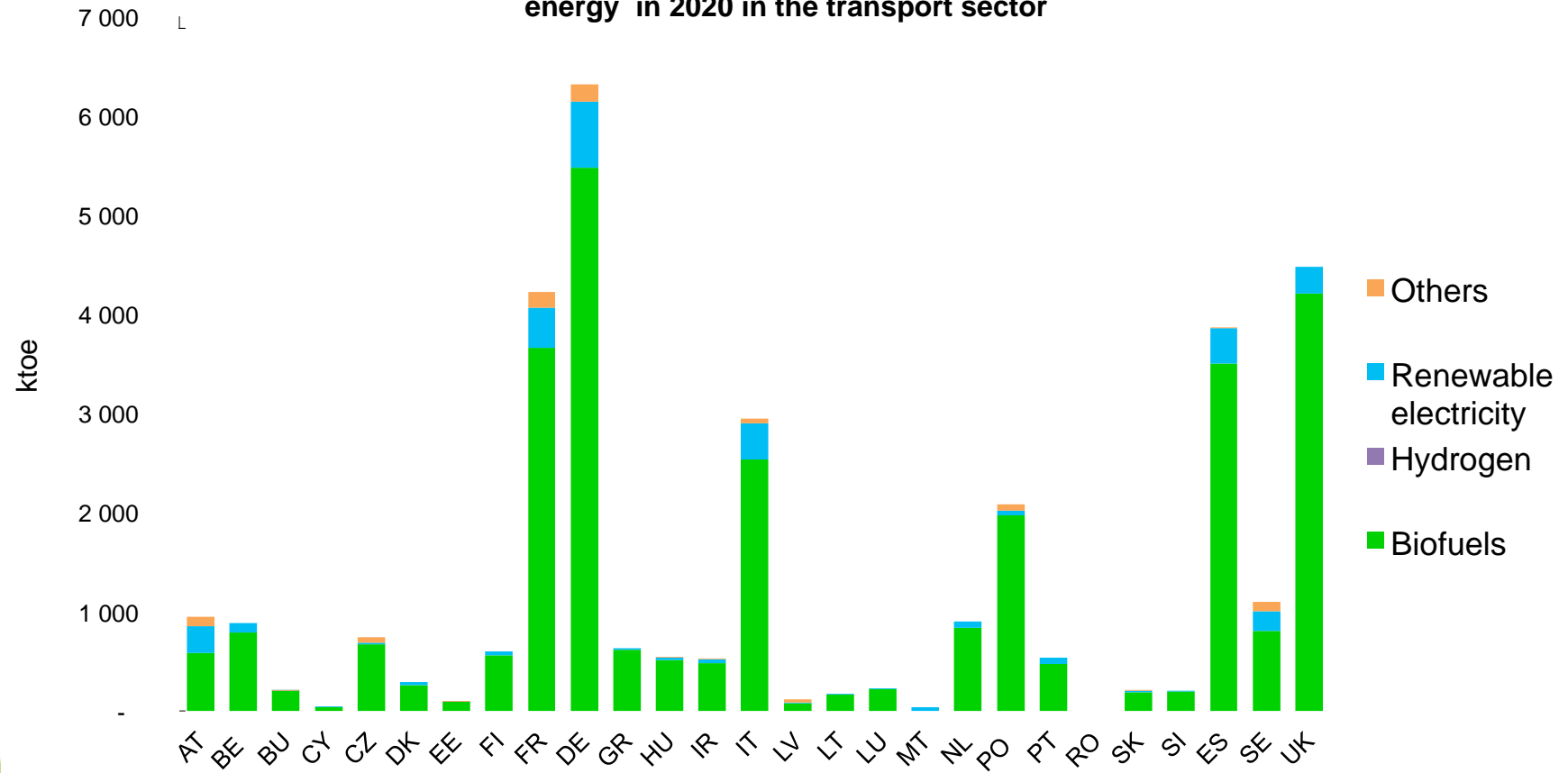


AT BE BG CY CZ DK EE FI FR DE GR HU IR IT LV LT LU MT NL PO PT RO SK SI ES SE UK

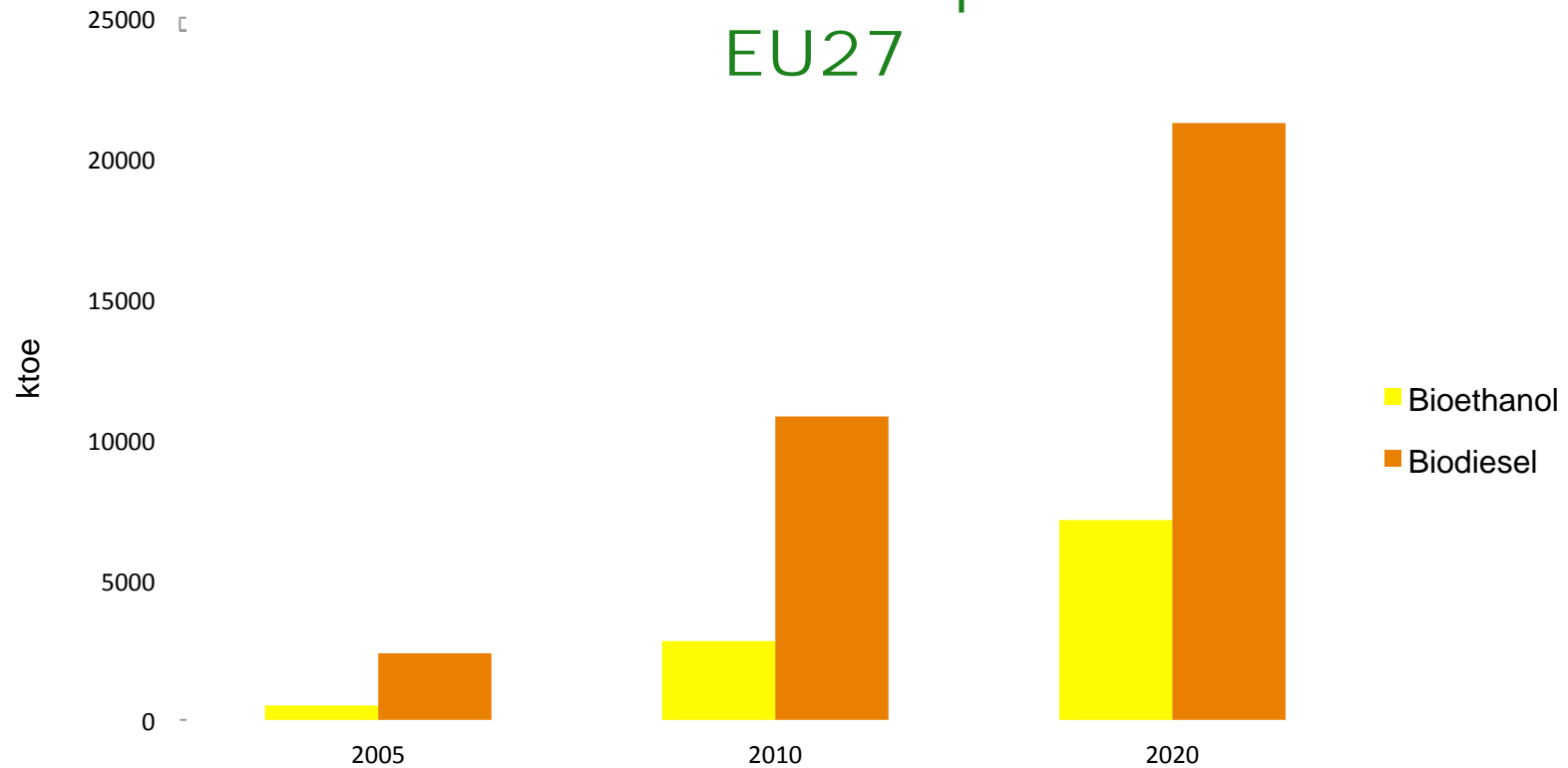
Increase in biofuels 2010-2020



Expected contribution from each renewable energy in 2020 in the transport sector



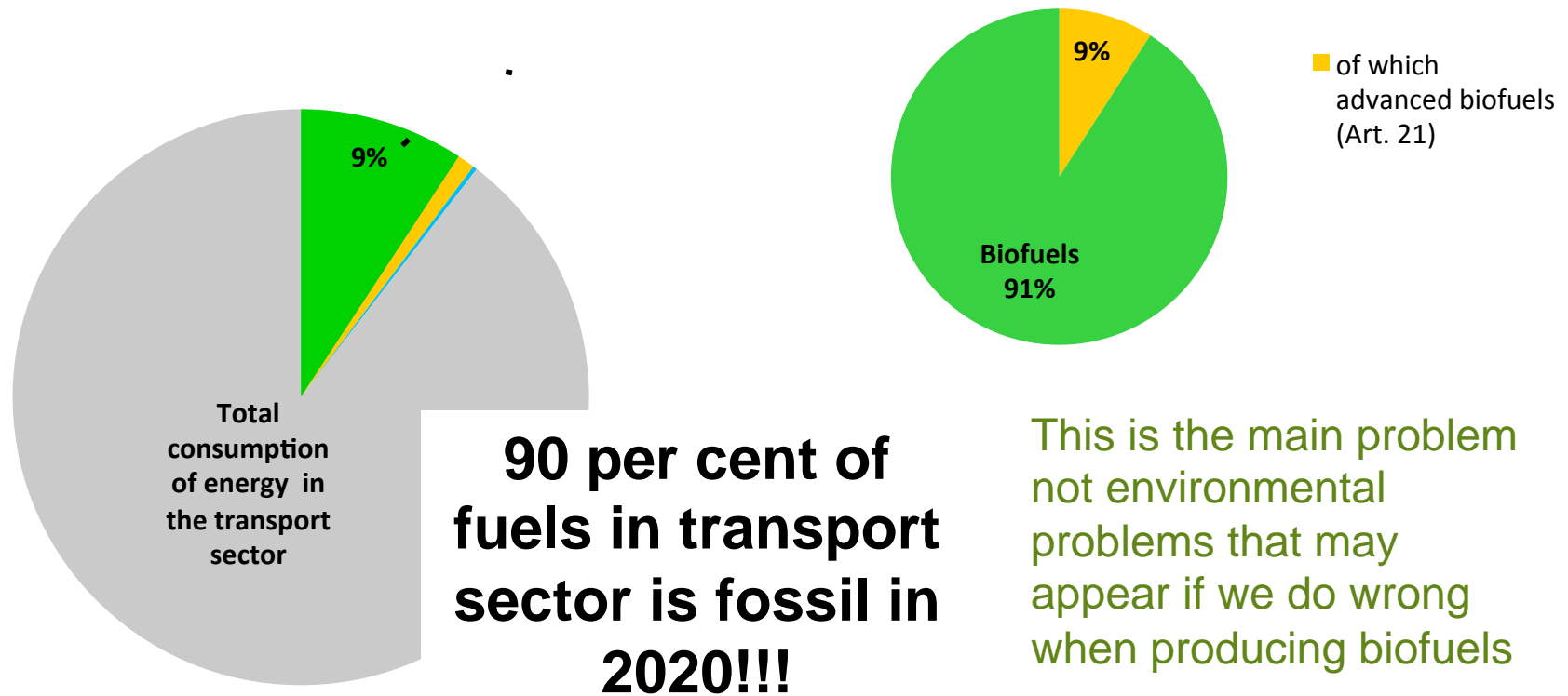
Contribution of bioethanol and biodiesel in the transport sector in EU27



Source: AEBIOM, based on table 12 of NREAPs



Consumption of energy in transport in EU27 in 2020



Source: AEBIOM, based on NREAPs



Global trends – How we see the world

- Fossil fuels get more and more expensive and damaging
- Biofuels get cheaper and cheaper and LCA improves.
- There is enough land and biomass available for powerful expansion of both food and energy production. Demand must come to make production possible.
- Biomass for energy can bring investments, work and wealth to rural areas and poor countries
- Good policy is to invest in development of biofuels. Fossil input is not needed to expand food production.



TAKING YOU FROM KNOW-HOW TO SHOW-HOW

WORLD BIOENERGY 2012

29 - 31 MAY, JÖNKÖPING - SWEDEN

WWW.WORLDBIOENERGY.COM



WORLD BIOENERGY 2012

Conference & Exhibition on Biomass for Energy

29 - 31 MAY 2012, JÖNKÖPING - SWEDEN

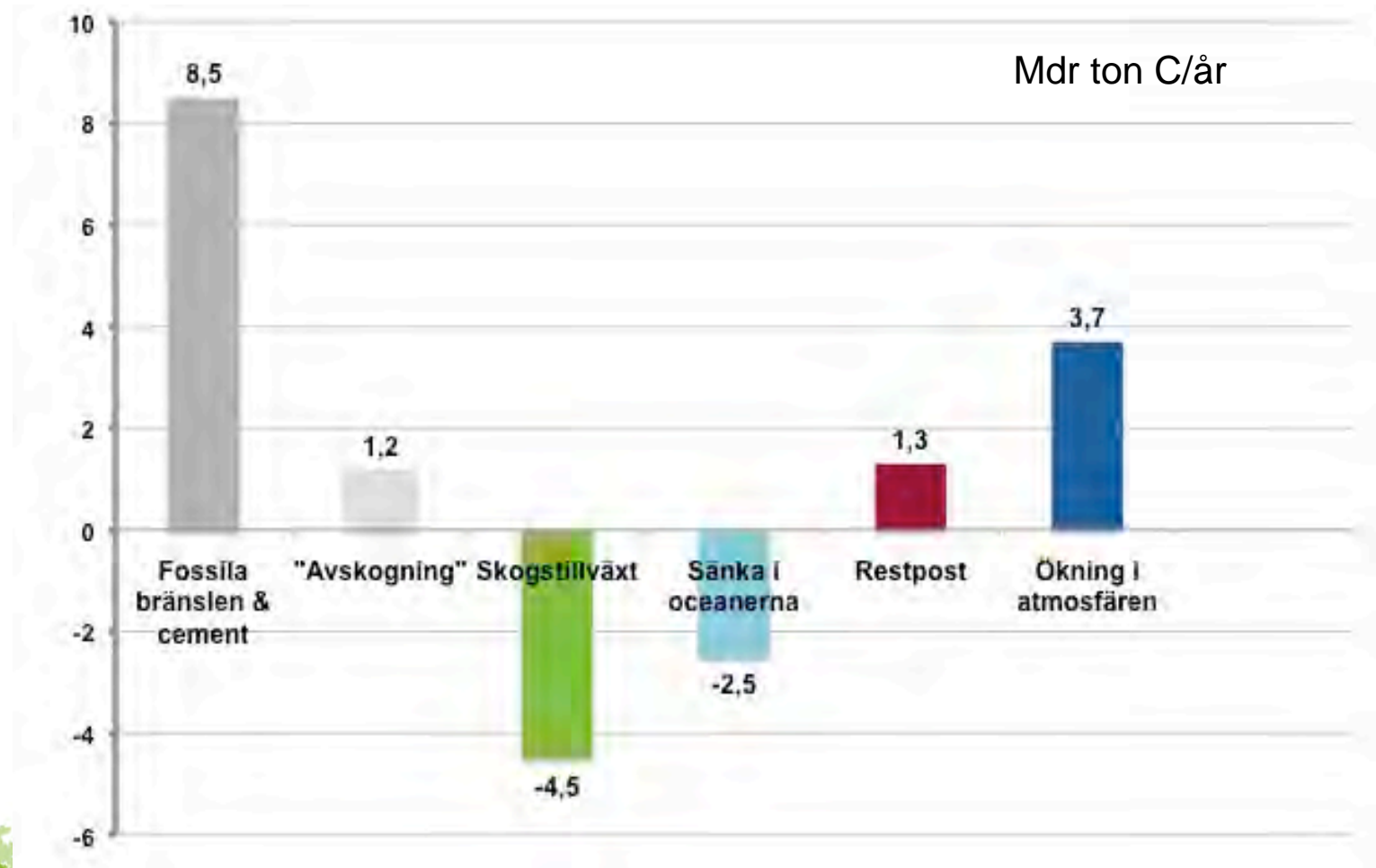


SVEBIO

www.aebiom.org



Globala utsläpp och sänkor för koldioxid 2008



Källa: Corinne Le Quéré et al, Nature's Geoscience 2009

The bioenergy market need:



- Political will
- Ambitious targets
- Correct incentives
- Reduced production costs
- Companies willing to lead the change

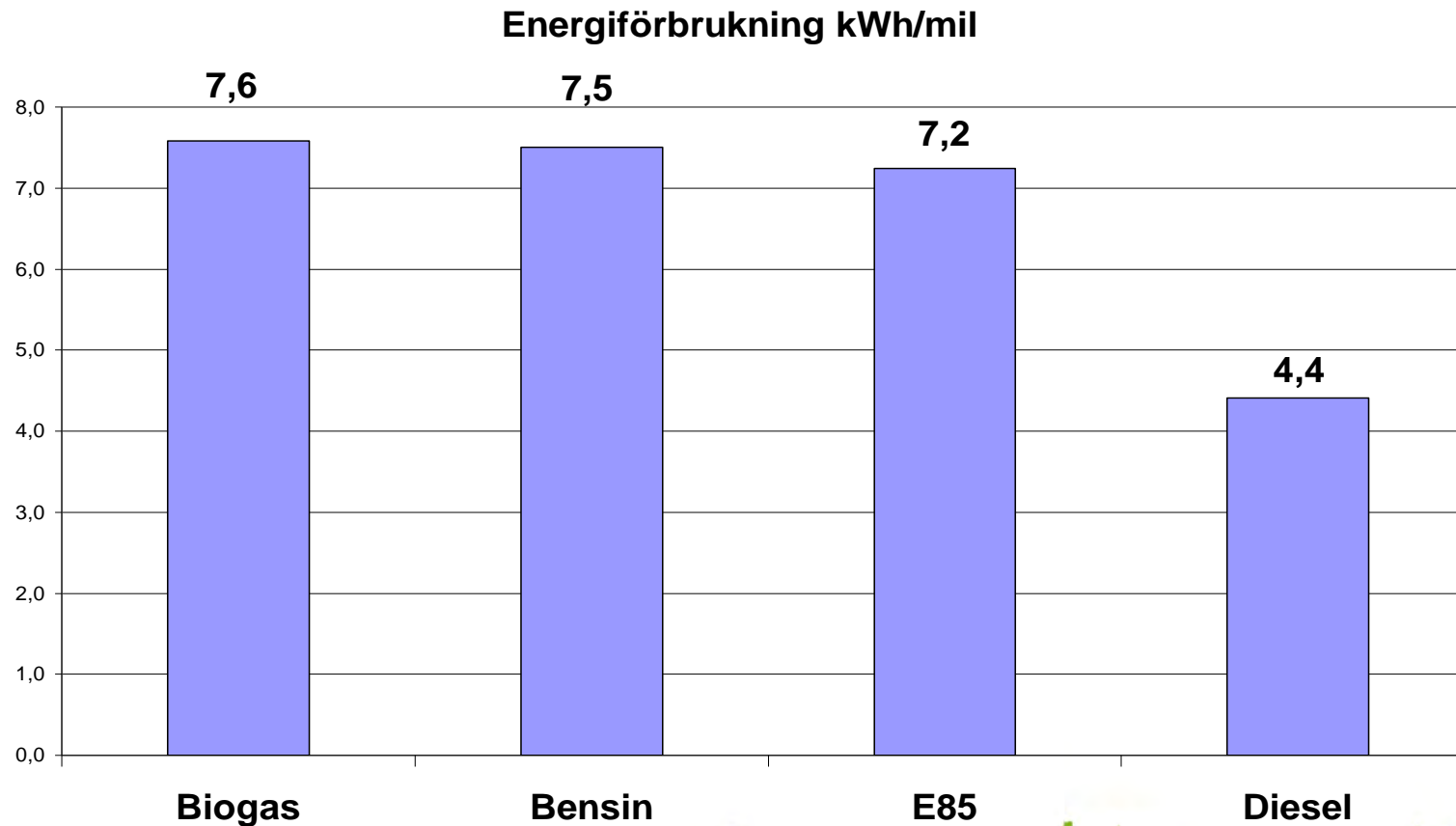


Development in SWE:

- GoBiGas - gasification
- Domsjö (Chemrec) - BioDME
- SEKAB - Ethanol
- Sunpine – Pine-Diesel
- Värmlands Metanol - Methanol
- Nordisk Etanol & Biogas – Ethanol Biogas
- F3 – Joint research centre



Jämförelse Volvo V70 – olika bränslen 2.0 F, Bi-Fuel CNG, 1.6 DRIVE



Jämförelse Volvo V70 – olika bränslen 2.0 F, Bi-Fuel CNG, 1.6 DRIVE

CO₂ WTW g/km

