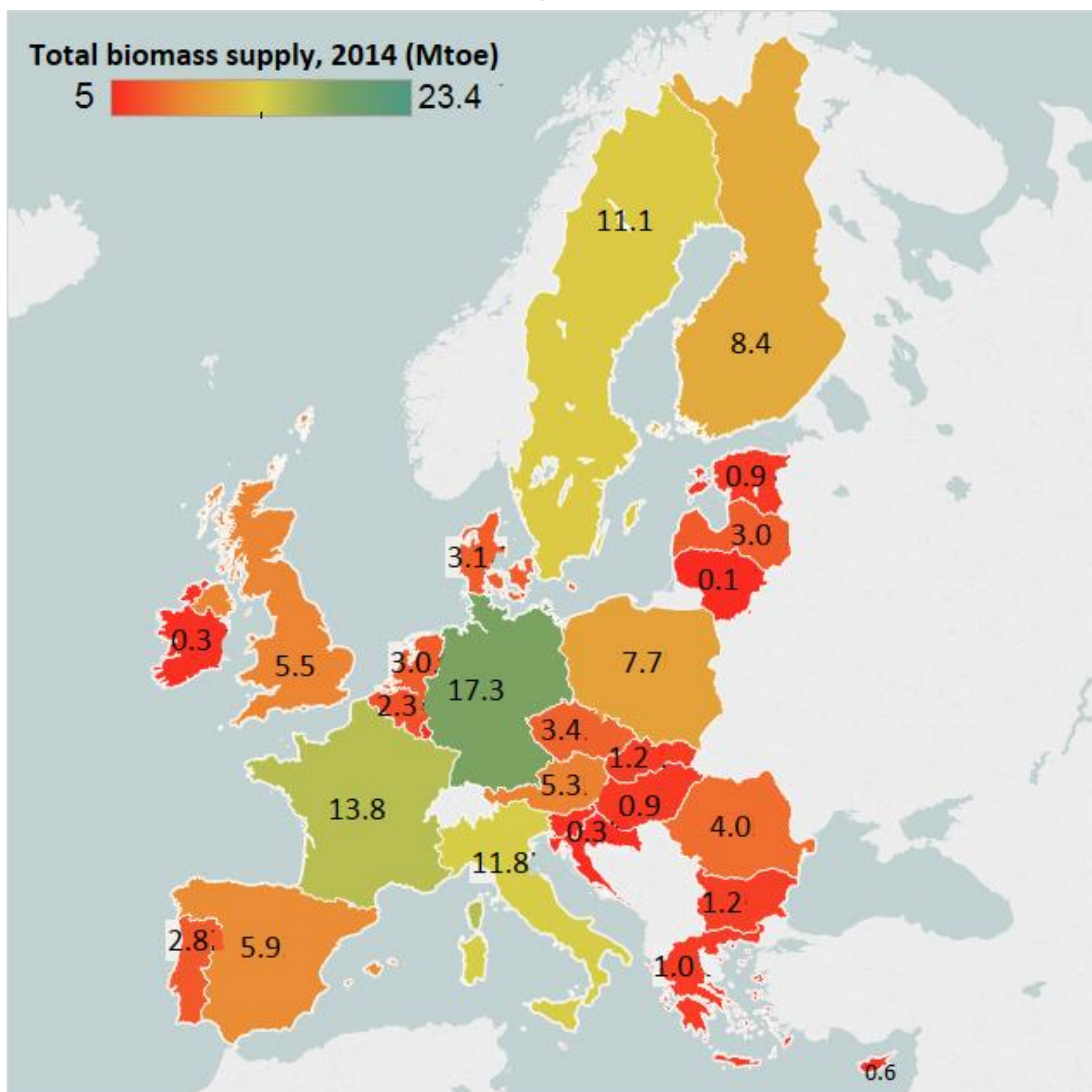


Biomass supply for energy use in the European Union

An overview from the EU Member States reporting under Renewable Energy Directive

- Currently the overall renewable energy share in gross final energy consumption topped at **16.7%**, with contributions from: (i) renewable energy in heating/cooling sector (8.4%); (ii) renewable electricity (7.0%); and (iii) renewable fuels in the transport sector (1.3%)
- In those three sectors, biomass (bio-energy) was the main source of final energy consumption in the EU (106 Mtoe in 2014) with a share of almost **60%**, with woody biomass the largest contributor. Other large renewable energy sources in the EU's energy pattern are wind, solar, hydro power and heat pumps.
- Germany, France, Sweden, Italy and Poland were the largest top five biomass suppliers for energy purposes in the EU in 2014

Figure.1 Biomass supplied for energy purposes in EU Member States, 2014

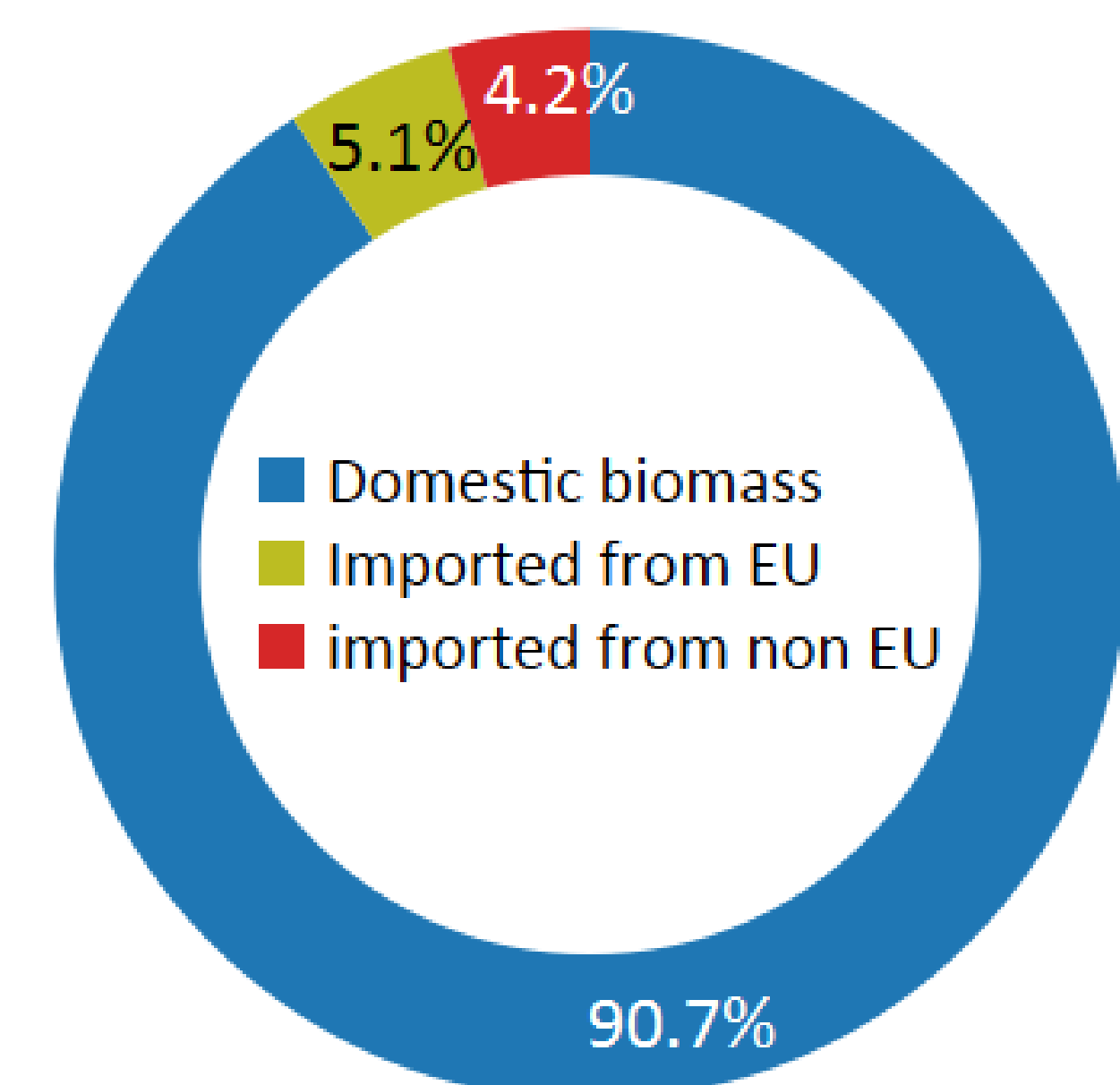


Progress towards 2020

- Final energy consumption from renewable energy is targeted at 20%; domestic biomass supply is expected to increase to about **143 Mtoe**;
- Agriculture by-products for energy will have the fastest increase until 2020, by **+12.5%** annually;
- Renewable waste will follow with an increase by **+11.5%** annually;
- Forest harvesting primary energy is expected to increase by **+3.4%** annually;
- Industrial wood processing will see an increase by **+0.6%** annually;
- The Member States expect to mobilize **60–95 million m³** of wood in 2020, in addition to the 2010 supplies by the EU's forest and forest industries.
- To cover the 2020 energy use, the EU needs to **outsource 35–120 million m³** of wood chips and pellets, mainly from North America and Russia.
- Germany, France, Italy, Sweden and the United Kingdom are expected to have the largest supply of biomass for energy purposes in 2020

- 130 Mtoe** was the primary energy in the biomass supplied in the EU in 2014 for the three sectors involved. About **91%** was from domestic origin, i.e. biomass sourced within the Member States and about 5% was traded between the EU Member States.

Figure 2. Origin of biomass supplied for energy in the EU, 2014



- EU's self sufficiency of agricultural biomass, forestry biomass and renewable waste reached **125 Mtoe in 2014**
- Woody biomass accounts for less than 55% of all biomass supplied by the EU itself, i.e. **68 Mtoe**. The remaining supplies are from agricultural origin or from renewable waste fractions.
- The self sufficiency of EU's wood resources for current bioenergy production is equal with about 140 million m³ from forest harvesting (forestry direct) and 135 million m³ from industrial wood processing (forestry indirect);
- EU's total roundwood harvest went up from 427 million m³ in 2010 to **447 million m³** in 2015 (Eurostat 2016).

Figure 3. Primary energy in domestic biomass feedstock's for electricity and heat, 2014

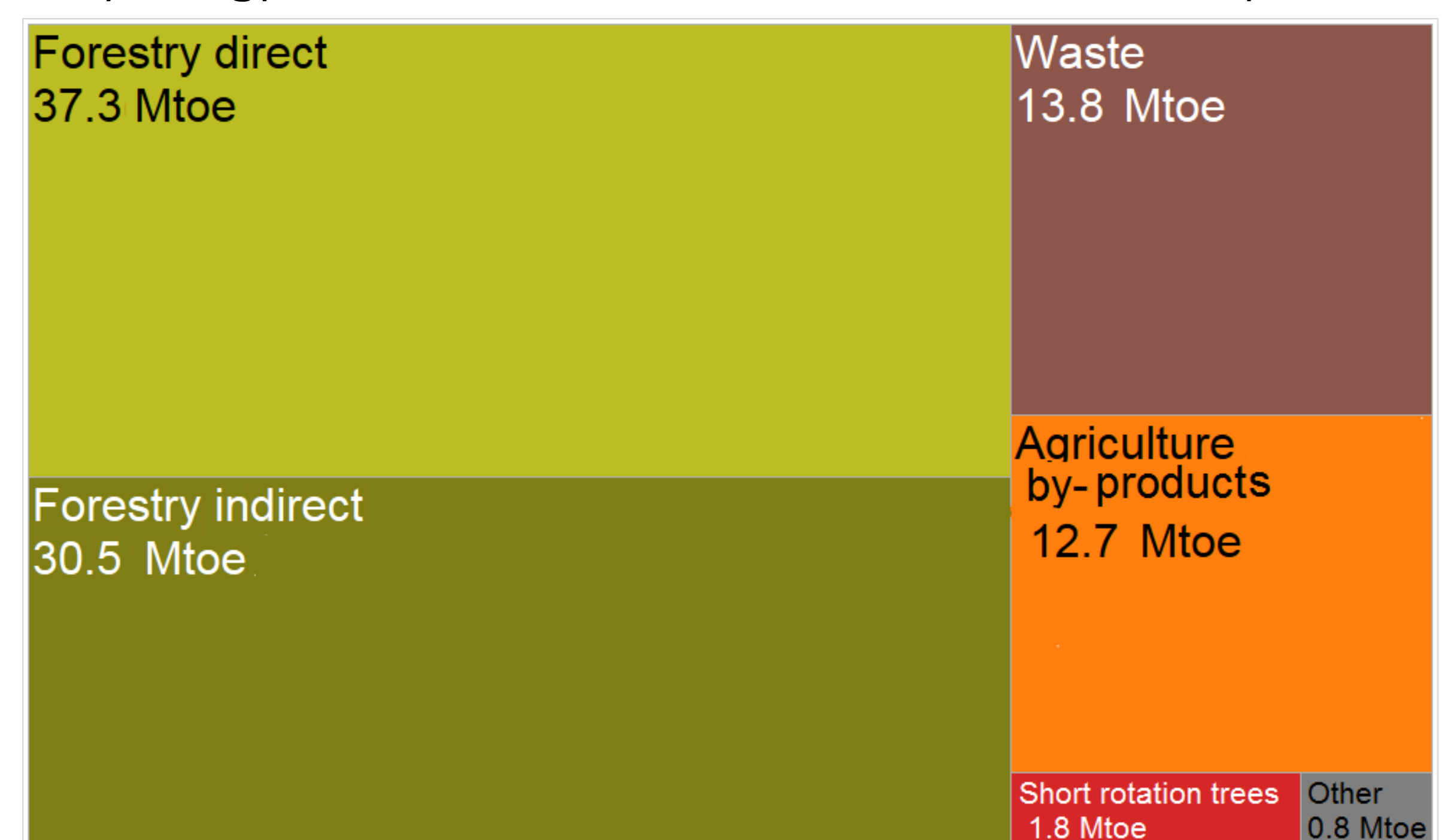


Figure 4. Breakdown of expected domestic biomass supply for energy, 2020

