

Working Group 1

Renewable energy production systems and impacts on landscape quality

Working group 1 reviews specific renewable energy production systems and their impacts on landscape character and quality in Europe from a past, present and future perspective and provides a systematic overview of the nexus between renewable energy systems and Europe's landscape qualities.

Objectives

- Review of specific renewable energy production systems and their impacts on landscape character and landscape quality in Europe from a past, present and future perspective
- Systematic review of the nexus between renewable energy production systems and Europe's landscapes as multifunctional spaces, cultural heritage and basis for individual and social identification
- Pan-European documentation and synopsis of landscape quality and character assessment methods

Methods

- Establishing criteria for reviewing of specific renewable energy production systems and their effects (negative, neutral or positive) on landscape character and quality in Europe
- Selection of bibliographical and documental sources (papers, books, book chapters, grey literature) with overall or more specific analysis of renewable energy targets, policy and landscape assessment, in order to establish comparison for different COST Action member countries
- Collecting data on installed capacity, number of plants, year of first plant, owner of plants etc. per RE type for every Action member country

Results

- Review of literature on landscape impacts of different types of renewable energy
- Tables and literature collection on environmental and landscape impacts of different types of renewable energy
- Thematic maps on different types of renewable energy in European countries
- Overview of the use and installation of renewable energy in European countries (bio-, hydro, wind, solar and geothermal)

Primary production of renewable energy in Europe

Each country is proportional in size to its use of primary energy from renewable sources

(a) All main types of energy (excluding marine)



(b) Biomass



(c) Hydro



(d) Wind



(e) Geothermal



(f) Solar



Figure 1: Primary production of renewable energy in Europe in total and by type

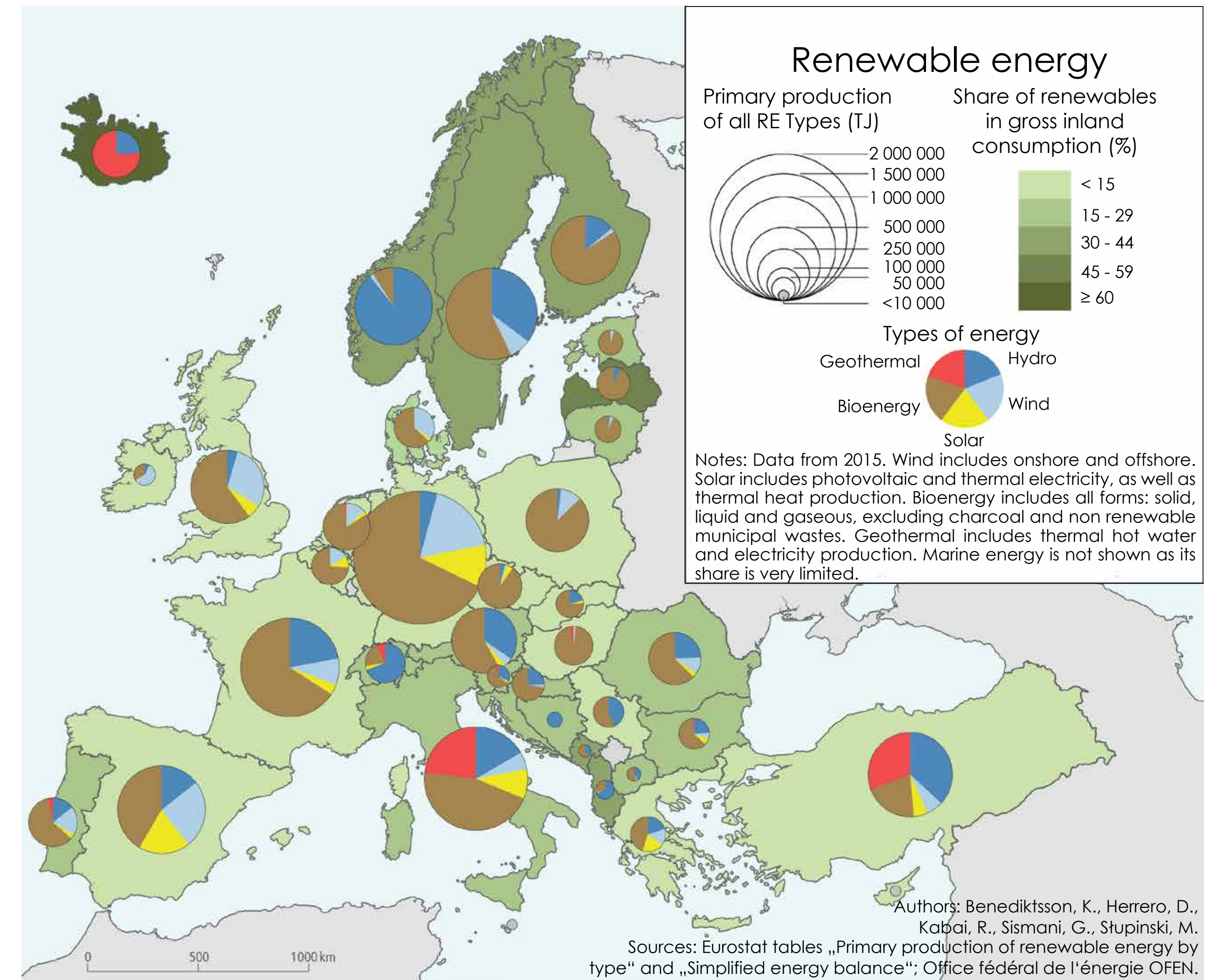


Figure 2: Share of renewable energy in primary production in total and by type

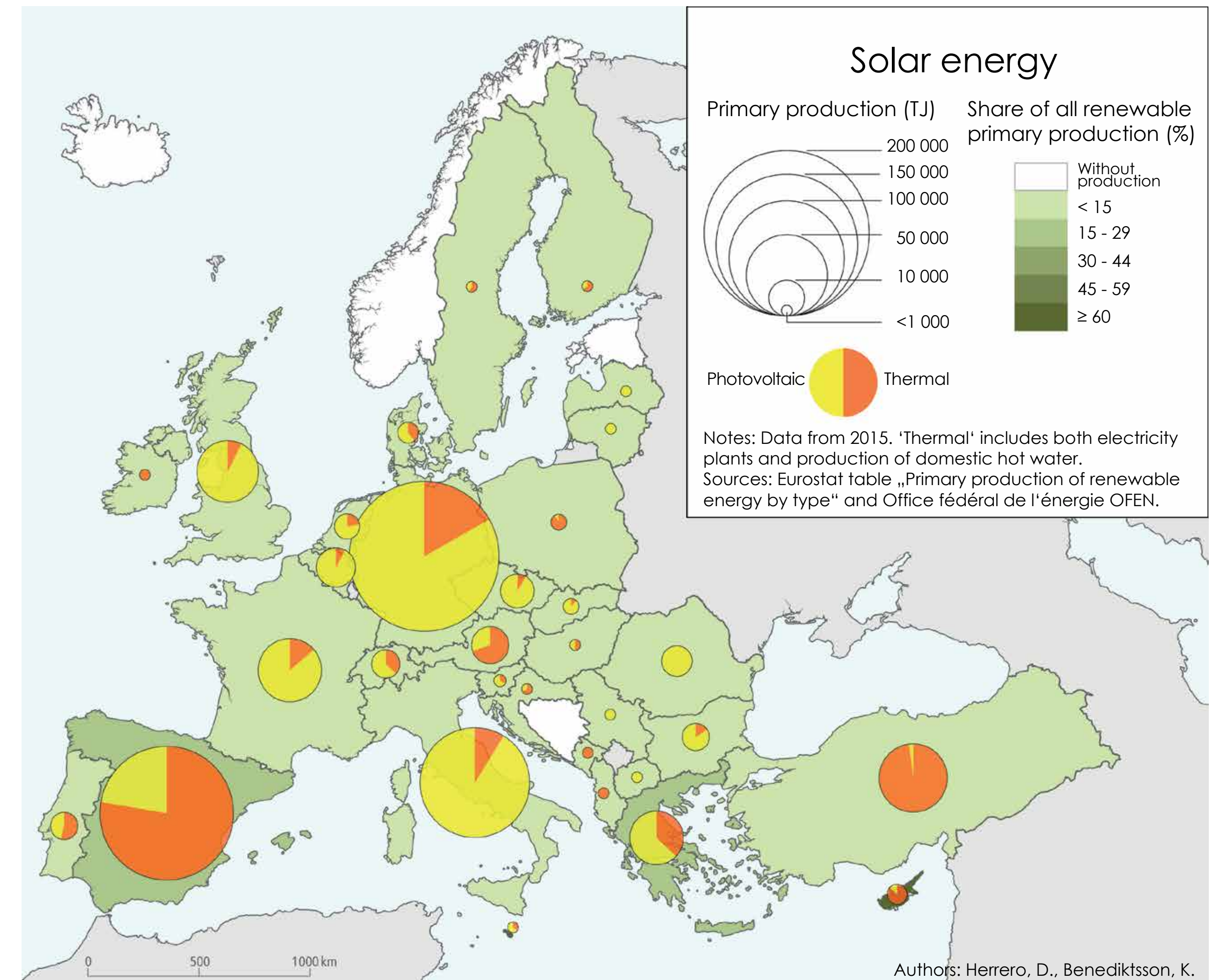


Figure 3: Share of solar energy in primary production

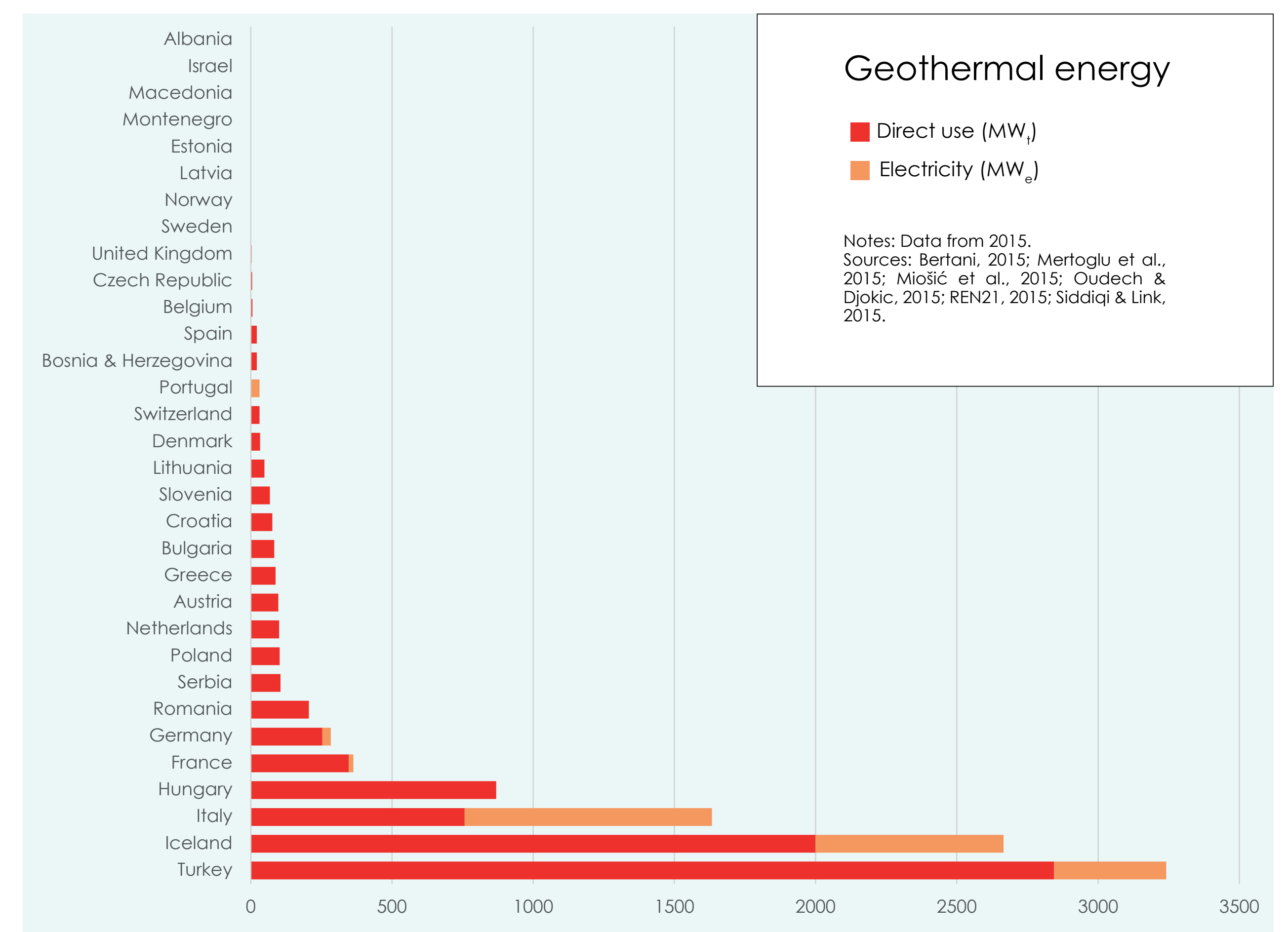


Figure 4: Geothermal energy use (direct and electricity generation)

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About COST

COST is the longest-running European framework supporting international cooperation among researchers, engineers and scholars across Europe. It is a unique means to jointly develop own ideas and new initiatives across all fields in science and technology, including social science and humanities, through pan-European networking of nationally funded research activities. Based on a European intergovernmental framework for cooperation in science and technology, COST has been contributing - since its creation in 1971 - to closing the gap between science, policy makers and society throughout Europe and beyond.



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