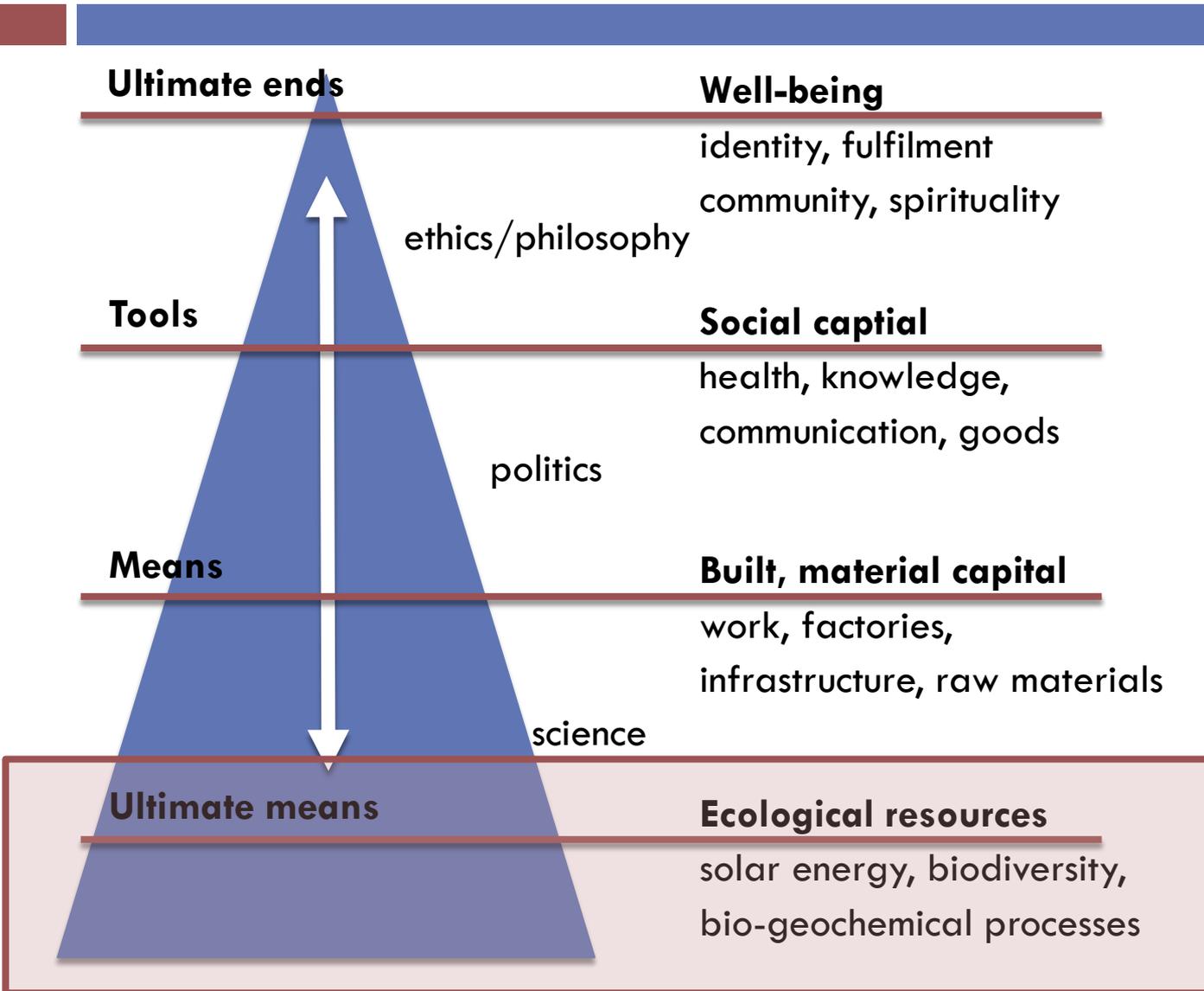


# THE FOUNDATION: NATURAL RESOURCES

János Zlinszky

# Environmental problems



# SDG: Protecting Ultimate Resources

- 12. Sustainable Consumption and Production
- 13. Fight Climate Change
- 14. Protect Marine Ecosystems
- 15. Protect Terrestrial Ecosystems

# Sustainable Consumption & Production

dangerous waste

public procurements

harmful subsidies on fossil fuel industry

# Targets

- 12.1 Implement the 10-Year Framework of Programmes on Sustainable Consumption and Production Patterns, all countries taking action, with developed countries taking the lead, taking into account the development and capabilities of developing countries
- 12.2 By 2030, achieve the sustainable management and efficient use of natural resources
- 12.3 By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses
- 12.4 By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment

# Targets

- 12.5 By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse
- 12.6 Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle
- 12.7 Promote public procurement practices that are sustainable, in accordance with national policies and priorities
- 12.8 By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature

# Targets

- 12.a Support developing countries to strengthen their scientific and technological capacity to move towards more sustainable patterns of consumption and production
- 12.b Develop and implement tools to monitor sustainable development impacts for sustainable tourism that creates jobs and promotes local culture and products
- 12.c Rationalize inefficient fossil-fuel subsidies that encourage wasteful consumption by removing market distortions, in accordance with national circumstances, including by restructuring taxation and phasing out those harmful subsidies, where they exist, to reflect their environmental impacts, taking fully into account the specific needs and conditions of developing countries and minimizing the possible adverse impacts on their development in a manner that protects the poor and the affected communities

# Chemicals and waste management



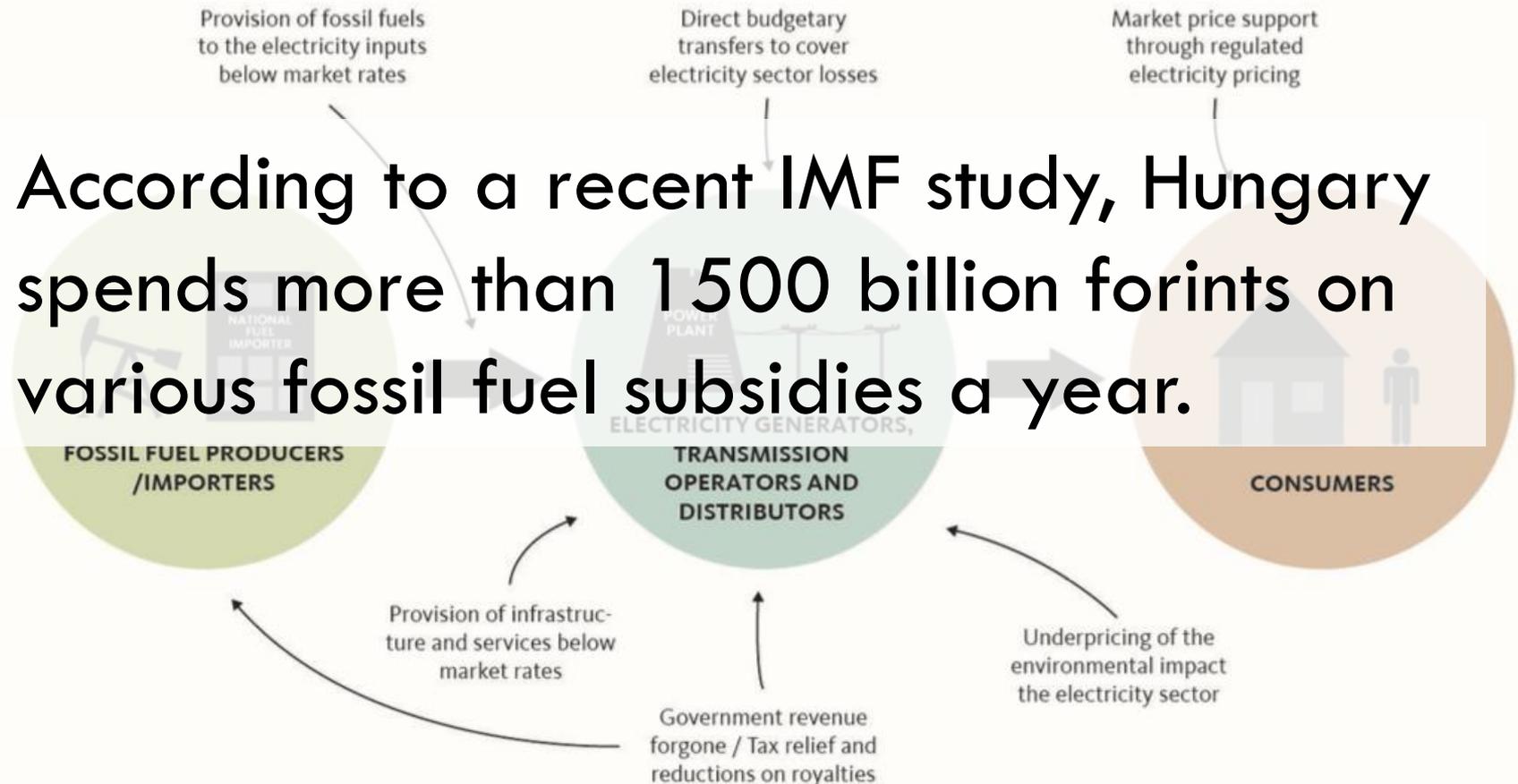
# Chemicals and waste management



# Public Procurements

- Most big investments are state sponsored in Hungary
- Most resources are EU funds
- The everyday operation of the state also runs on huge amount of energy and material
- Even corporate investments (car manufacturing) are supported by the state in various ways
- *Thus Public Procurement is an easy and powerful leverage point to change resource use patterns*

# Subsidies on Fossil Fuels



# Fight Climate Change

social resilience: health and climate change

economic effects of decarbonisation

# Targets

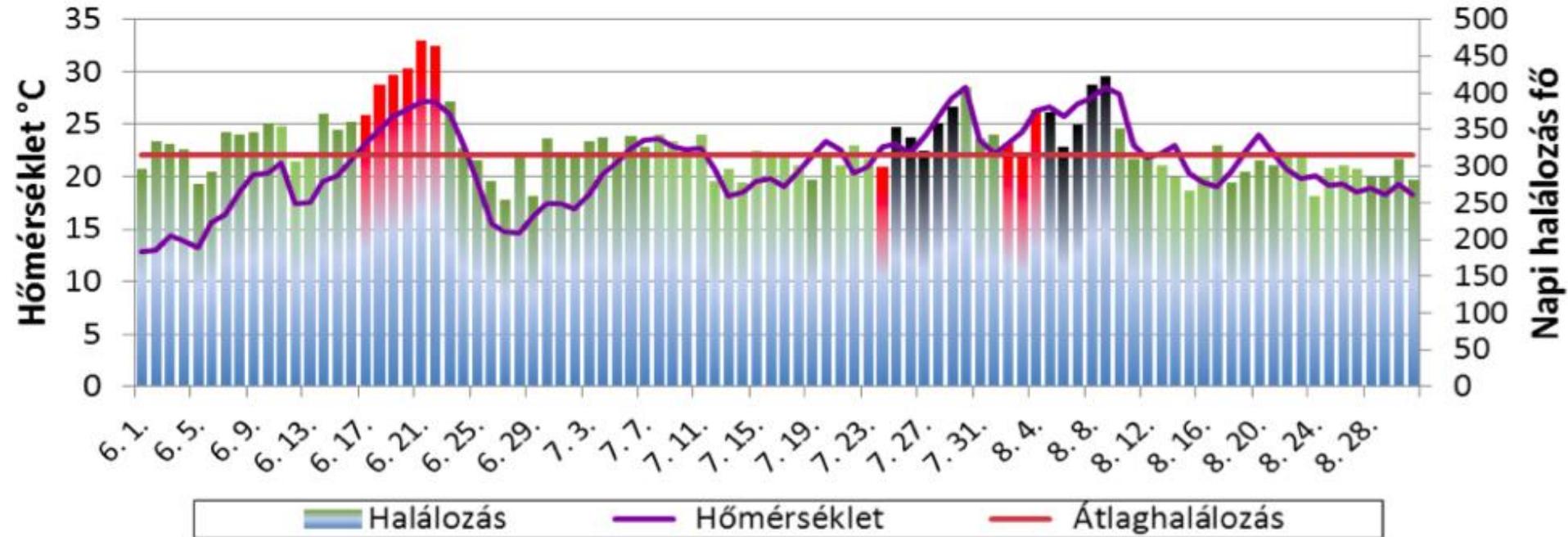
- 13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries
- 13.2 Integrate climate change measures into national policies, strategies and planning
- 13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning

# Targets

- 13.a Implement the commitment undertaken by developed-country parties to the United Nations Framework Convention on Climate Change to a goal of mobilizing jointly \$100 billion annually by 2020 from all sources to address the needs of developing countries in the context of meaningful mitigation actions and transparency on implementation and fully operationalize the Green Climate Fund through its capitalization as soon as possible
- 13.b Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities

# Health effects of Climate Change

Comparison of daily average temperature and deaths in 2013



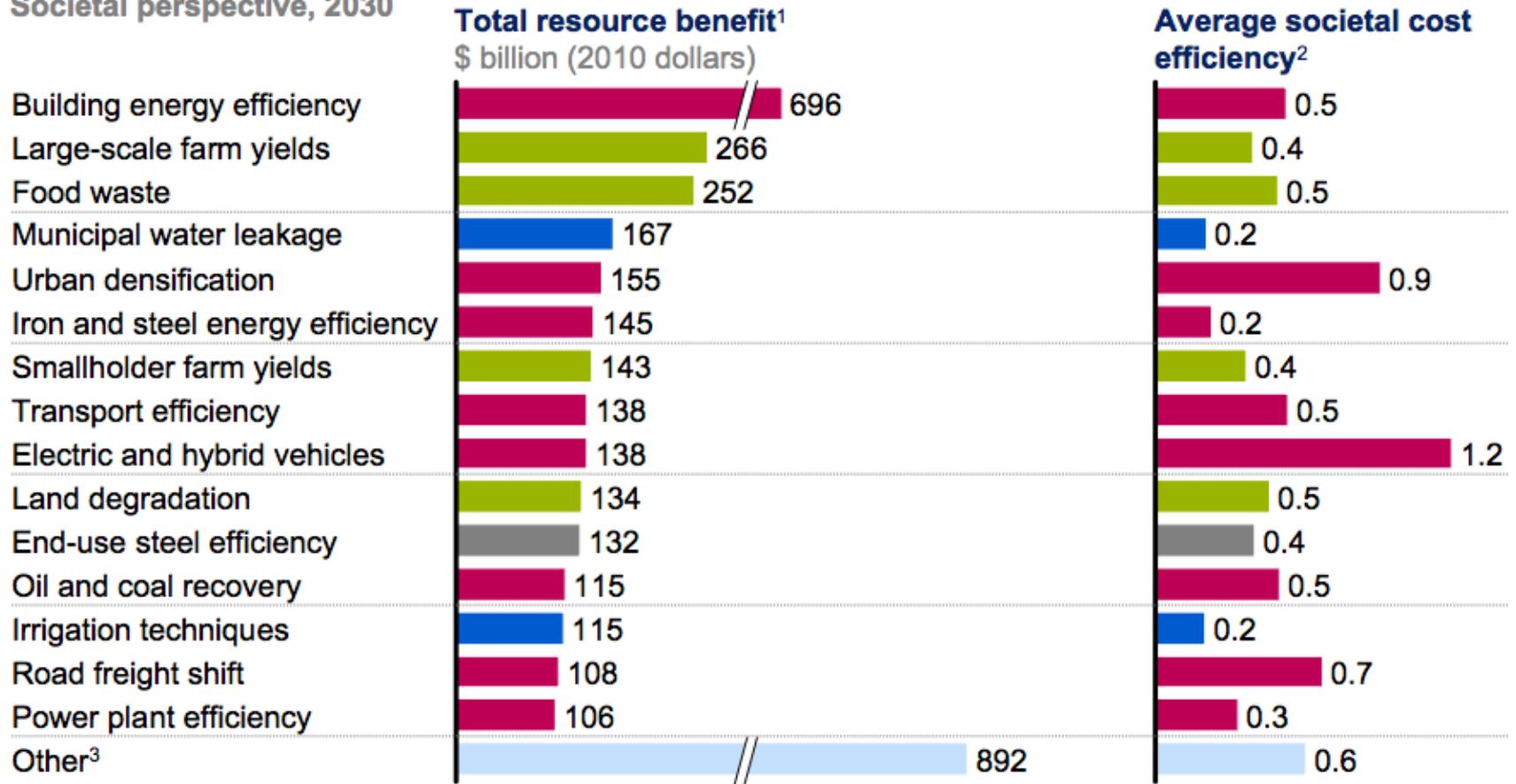
These „death peaks” are more than a slight variance in the normal death rate, the average number of deaths over a period of time also increases.

# Health Effects of Climate Change

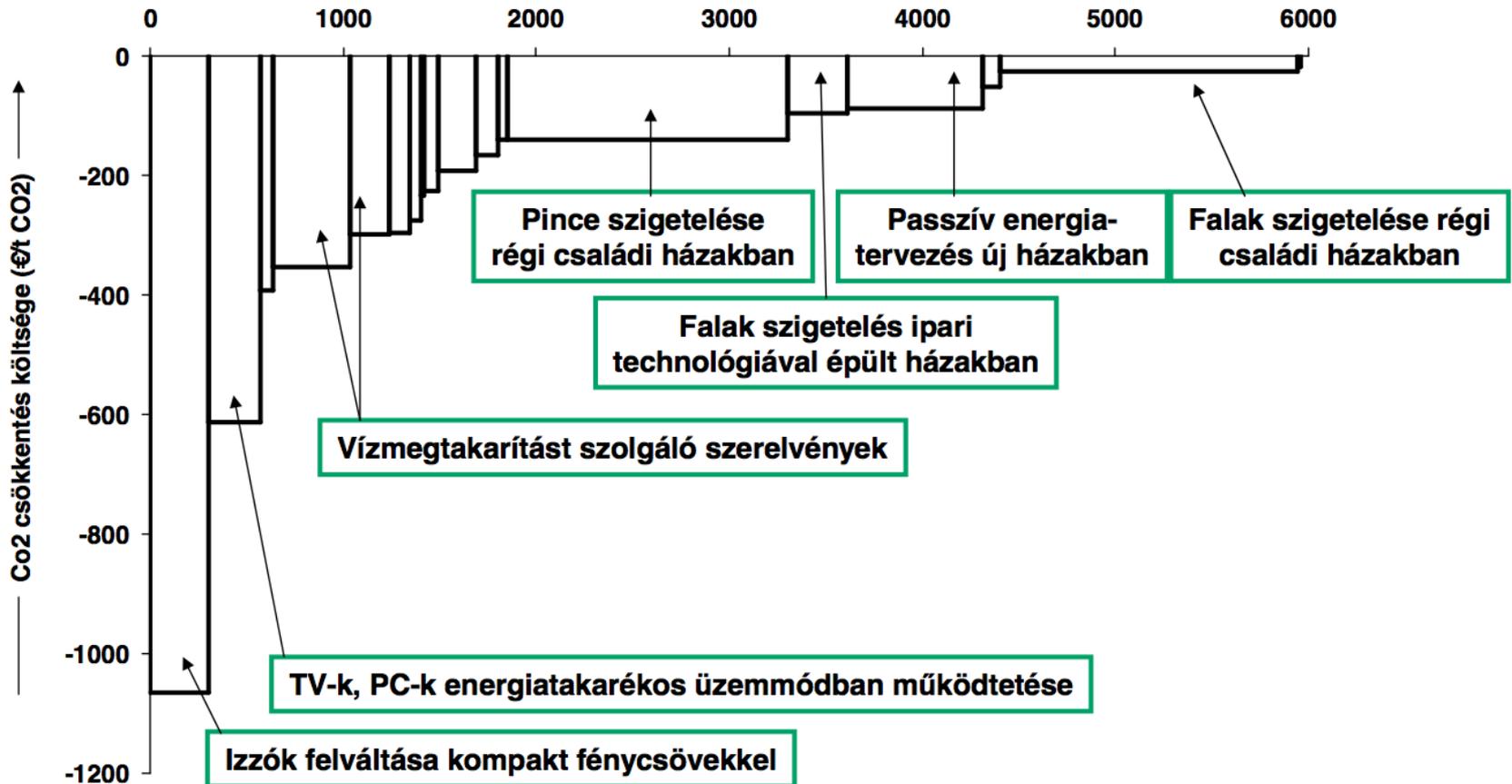
Strength of link with climate change in Europe	High		<b><i>Vibrio</i> spp.</b> (except <i>V. cholerae</i> O1 and O139)* <b>Visceral leishmaniasis*</b>	<b>Lyme borreliosis*</b>	Weighted high risk	
	Medium	CCHF Hepatitis A Leptospirosis	Tularaemia Yellow fever Yersiniosis	Campylobacteriosis <b>Chikungunya fever*</b> Cryptosporidiosis Giardiasis Hantavirus	<b>Rift Valley fever</b> Salmonellosis Shigellosis VTEC West Nile fever	Weighted medium risk
	Low	Anthrax Botulism Listeriosis Malaria	Q fever Tetanus Toxoplasmosis	Cholera (O1 and O139) Legionellosis Meningococcal infection		Weighted low risk
		Low	Medium	High		
		Potential severity of consequence to society				

# EU decarbonisation benefits

## Societal perspective, 2030



# Decarbonisation in Hungary



Ürge-Vorsatz, Novikova 2008: Possible economic effects of CO<sub>2</sub> emission reduction in the Hungarian residential sector

# Marine ecosystems' protection

# Targets

- 14.1 By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution
- 14.2 By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans
- 14.3 Minimize and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels
- 14.4 By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics

# Targets

- 14.5 By 2020, conserve at least 10 per cent of coastal and marine areas, consistent with national and international law and based on the best available scientific information
- 14.6 By 2020, prohibit certain forms of fisheries subsidies which contribute to overcapacity and overfishing, eliminate subsidies that contribute to illegal, unreported and unregulated fishing and refrain from introducing new such subsidies, recognizing that appropriate and effective special and differential treatment for developing and least developed countries should be an integral part of the World Trade Organization fisheries subsidies negotiation<sup>2</sup>
- 14.7 By 2030, increase the economic benefits to small island developing States and least developed countries from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism

# Targets

- 14.a Increase scientific knowledge, develop research capacity and transfer marine technology, taking into account the Intergovernmental Oceanographic Commission Criteria and Guidelines on the Transfer of Marine Technology, in order to improve ocean health and to enhance the contribution of marine biodiversity to the development of developing countries, in particular small island developing States and least developed countries
- 14.b Provide access for small-scale artisanal fishers to marine resources and markets
- 14.c Enhance the conservation and sustainable use of oceans and their resources by implementing international law as reflected in the United Nations Convention on the Law of the Sea, which provides the legal framework for the conservation and sustainable use of oceans and their resources, as recalled in paragraph 158 of “The future we want”

# Terrestrial ecosystems' protection

sustainable forestry

agrobiodiversity

poaching of protected species

invasion species

ecosystem services in national planning

# Targets

- 15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements
- 15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally
- 15.3 By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world
- 15.4 By 2030, ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development

# Targets

- 15.5 Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species
- 15.6 Promote fair and equitable sharing of the benefits arising from the utilization of genetic resources and promote appropriate access to such resources, as internationally agreed
- 15.7 Take urgent action to end poaching and trafficking of protected species of flora and fauna and address both demand and supply of illegal wildlife products
- 15.8 By 2020, introduce measures to prevent the introduction and significantly reduce the impact of invasive alien species on land and water ecosystems and control or eradicate the priority species
- 15.9 By 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts

# Targets

- 15.a Mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems
- 15.b Mobilize significant resources from all sources and at all levels to finance sustainable forest management and provide adequate incentives to developing countries to advance such management, including for conservation and reforestation
- 15.c Enhance global support for efforts to combat poaching and trafficking of protected species, including by increasing the capacity of local communities to pursue sustainable livelihood opportunities

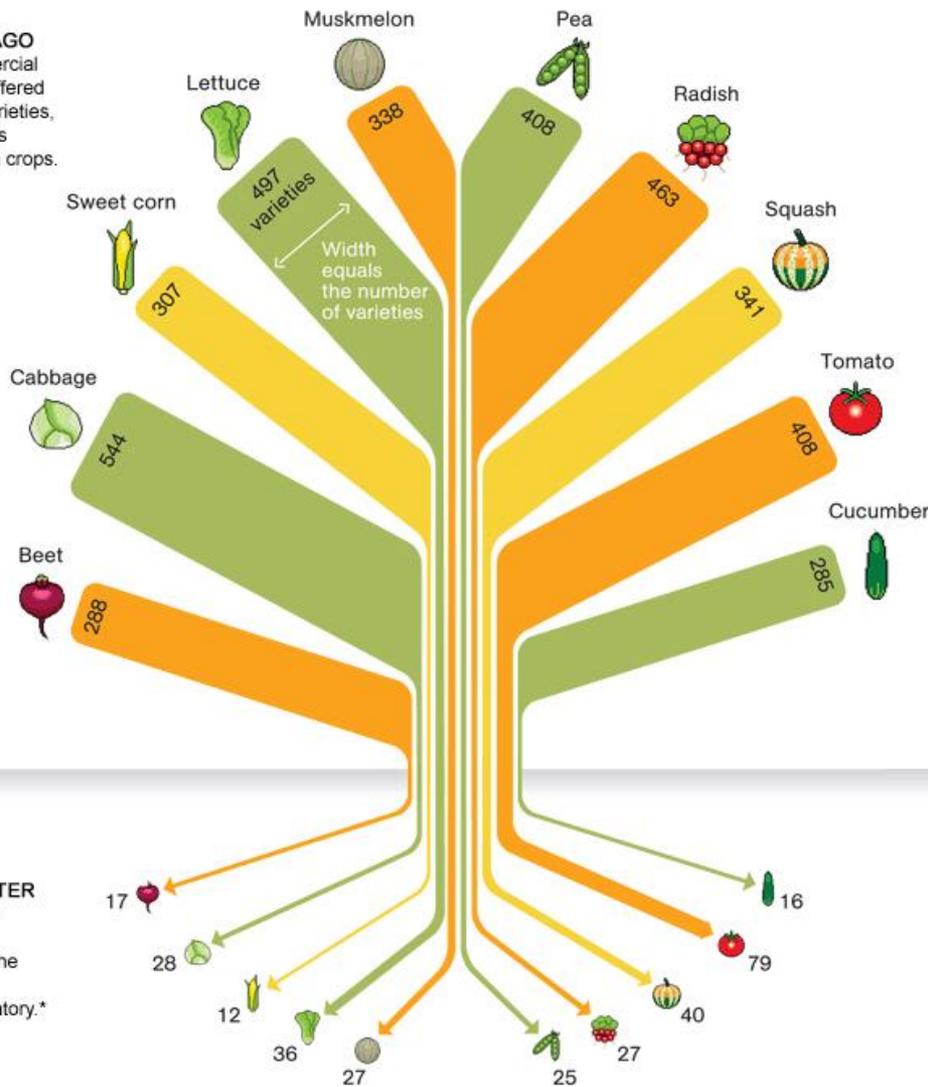
# Sustainable forestry

- Continuous-cover forestry: habitat protection with nearly conventional economic benefits



# Agrobiodiversity

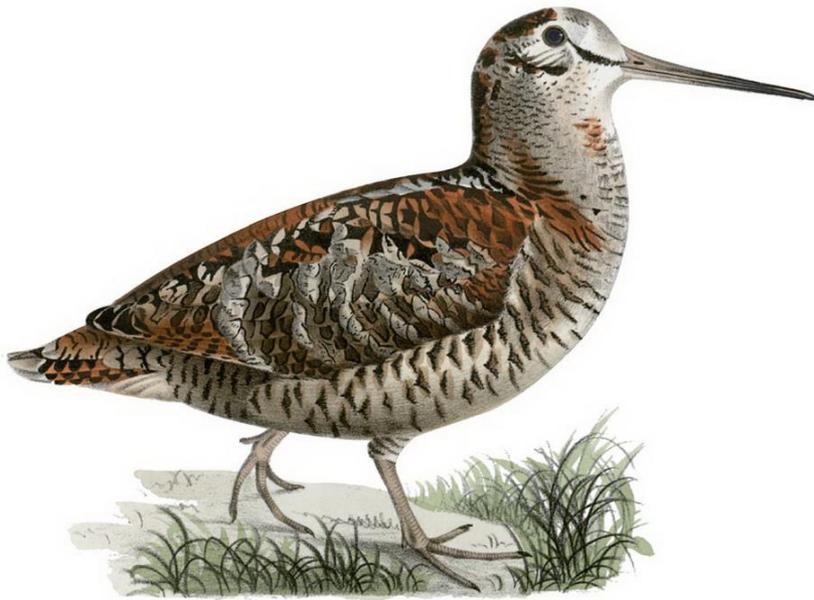
**A CENTURY AGO**  
In 1903 commercial seed houses offered hundreds of varieties, as shown in this sampling of ten crops.



**80 YEARS LATER**  
By 1983 few of those varieties were found in the National Seed Storage Laboratory.\*

Vegetable species in the US agricultural sector between 1903 and 1983.

# Hunting and Poaching



Hunting lobby sometimes claims right to kill protected species.

Overpopulation and winter-time feeding of herbivore beasts is a threat to forest recovery.

Poor vegetation hinders the spread of rare and valuable predators.

# Invasion species

- More than 2 million people are allergic to ragweed pollen in Hungary. The pollen pollution spreads hundreds of kilometres beyond our borders in Europe.
- Acacia trees besides their fast growth and excellent survival skills change soil chemistry, thus permanently preventing indigenous (and more valuable) species from renewing forests.



Thanks for your attention.