

INtegrated Spatial PlannIng, land use and soil management Research AcTION:

National results: BELGIUM

Societal challenges and needs

- Our planet is confronted with some global **megatrends** that influence the societal challenges and needs in Belgium: changing demographic balances, accelerated technological development, scarcity of raw materials and resources, growing multipolarity, climate change and the increasing vulnerability of systems.
- Belgium is a very densely populated and small country with a high urbanization and industrialisation rate, especially in the North, which makes **land a scarce**, and often **fragmented**, resource. Counter **urban sprawl** and preserving the **quality of life in the cities** and a **high-quality open space** remain key challenges, together with an adequate **protection, restoration of soil and planing of land use**.
- (Soil) **Biodiversity** is under pressure and should be safeguarded. **Ecosystem services** should be conserved and preserved for future generations. A **healthy soil** is fundamental.
- **Climate change** is affecting Belgium as well as the rest of the world and could threaten our infrastructure. There are serious issues concerning the **supply of groundwater** for drinking, irrigation and production purposes.

Topics / research needs to be included in the SRA

- BE-1: Long term monitoring SSW-system
- BE-2: Survey and risk evaluation of contaminated soil, land, groundwater, sediment
- BE-3: Diffuse contamination
- BE-4: "New", non-common measured or "Emerging Contaminants" in soil, groundwater, sediment
- BE-5: Remediation technology for contaminated soil, groundwater, sediment
- BE-6: Integrated approach remediation /restoration and spatial planning
- BE-7: Integrated approach spatial planning in relation to soil and subsurface
- BE-8: Innovative funding systems for remediation / restoration soil and land
- BE-9: Excavated soil / sediment
- BE-10: Organic carbon (OC) in soil
- BE-11: Conservation soil fertility
- BE-12: Erosion
- BE-13: Soil sealing (covering of the ground by an impermeable material)
- BE-14: Soil compaction
- BE-15: Water retention capacity of soil
- BE-16: Soil and sediment ecosystem services
- BE-17: Recycling of soil nutrients
- BE-18: Soil biology and soil biodiversity
- BE-19: Remediation of "agricultural" contamination (phosphorus, nitrogen, pesticides, ...)
- BE-20: Integrated pest management – Use of pesticides, herbicides, ...
- BE-21: Pressure on land and spatial planning, fragmentation of land, scarcity of land
- BE-22: Conflicts on land use
- BE-23: Agricultural practices and land management
- BE-24: Spatial planning
- BE-25: High tech monitoring and data collection
- BE-26: Holistic approach
- BE-27: Integrated risk/impact assessment on industrial sites and for other activities
- BE-28: Ecosystem approach
- BE-29: Mind shift and change in behavior

Experiences regarding the connection of science to policy and practice

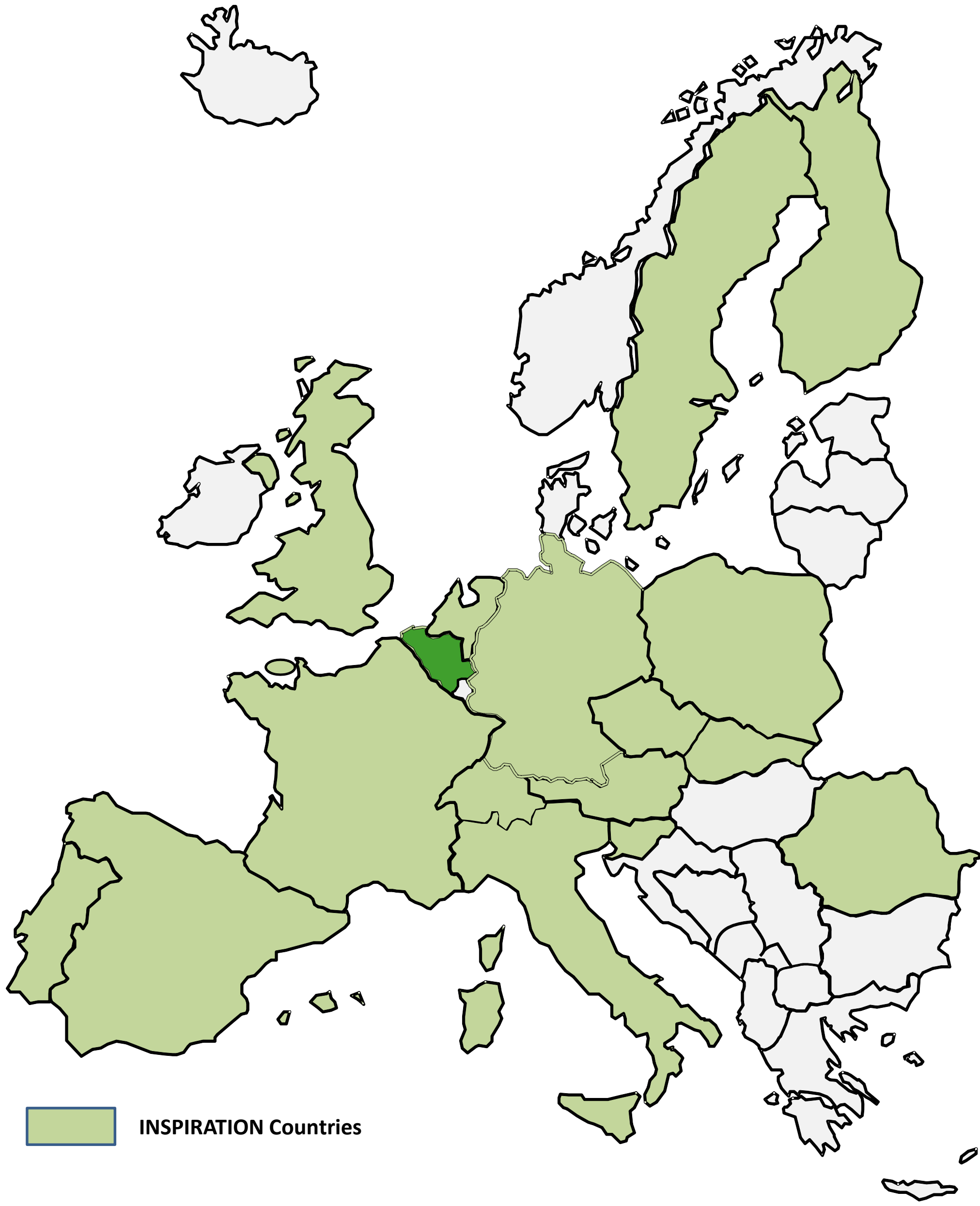
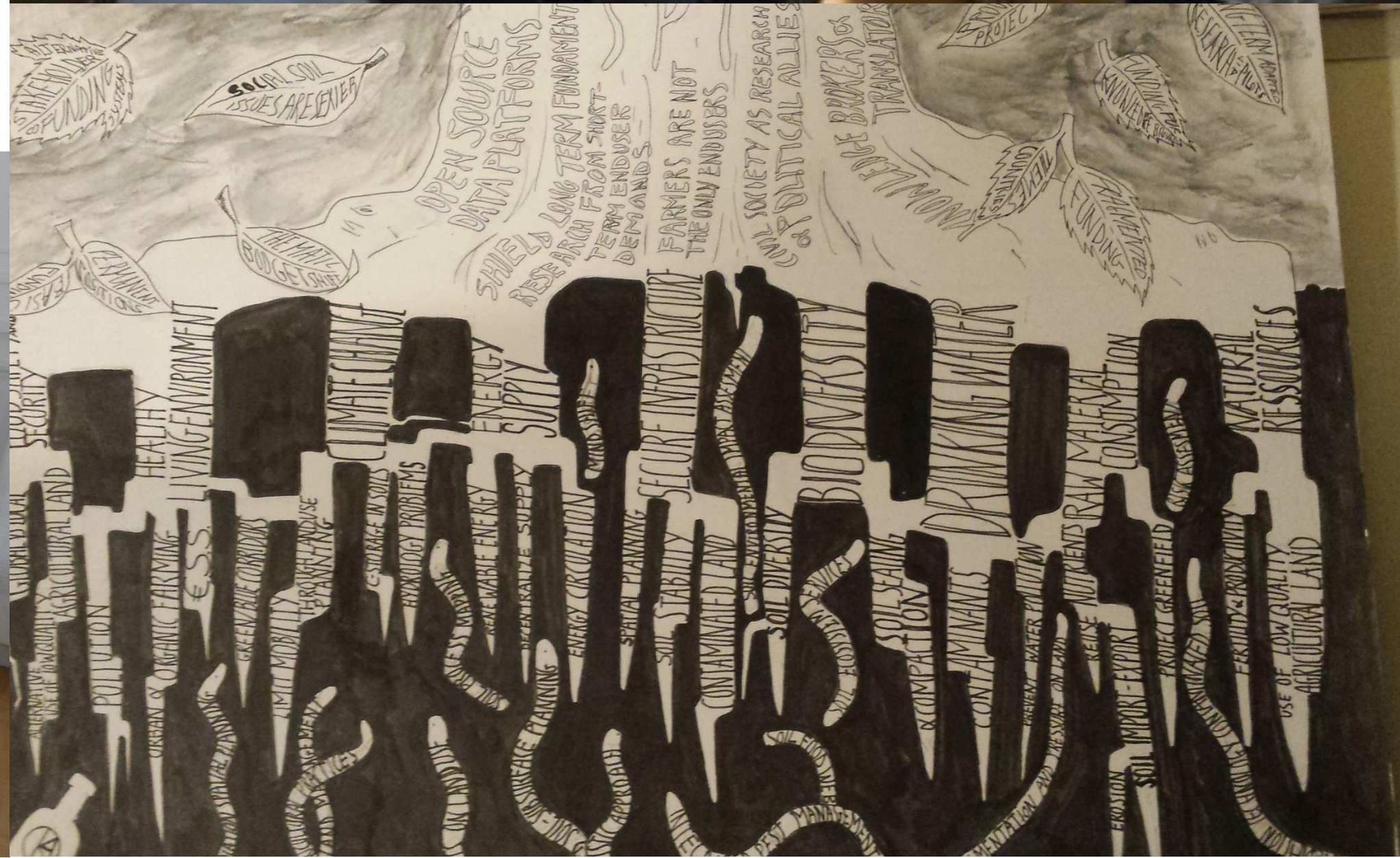
- From a fragmented research landscape to more **transdisciplinary cooperation**
- Need for linking the different themes into a **global connecting system and vision**
- Scientist and end-user **co-creation** is the key to well-balanced research (needs) and fosters the implementation and dissemination of the developed knowledge
- **Knowledge brokers, interactive digital platforms and learning stakeholder networks** foster the exchange of knowledge, data and experiences

National and transnational funding schemes

- Putting smaller budgets together to co-fund integrated long term research
- Show the added value ("tell the **WHY**") to convince funders: by **assessing** the societal costs and savings and by **visualizing** inspiring win-win examples

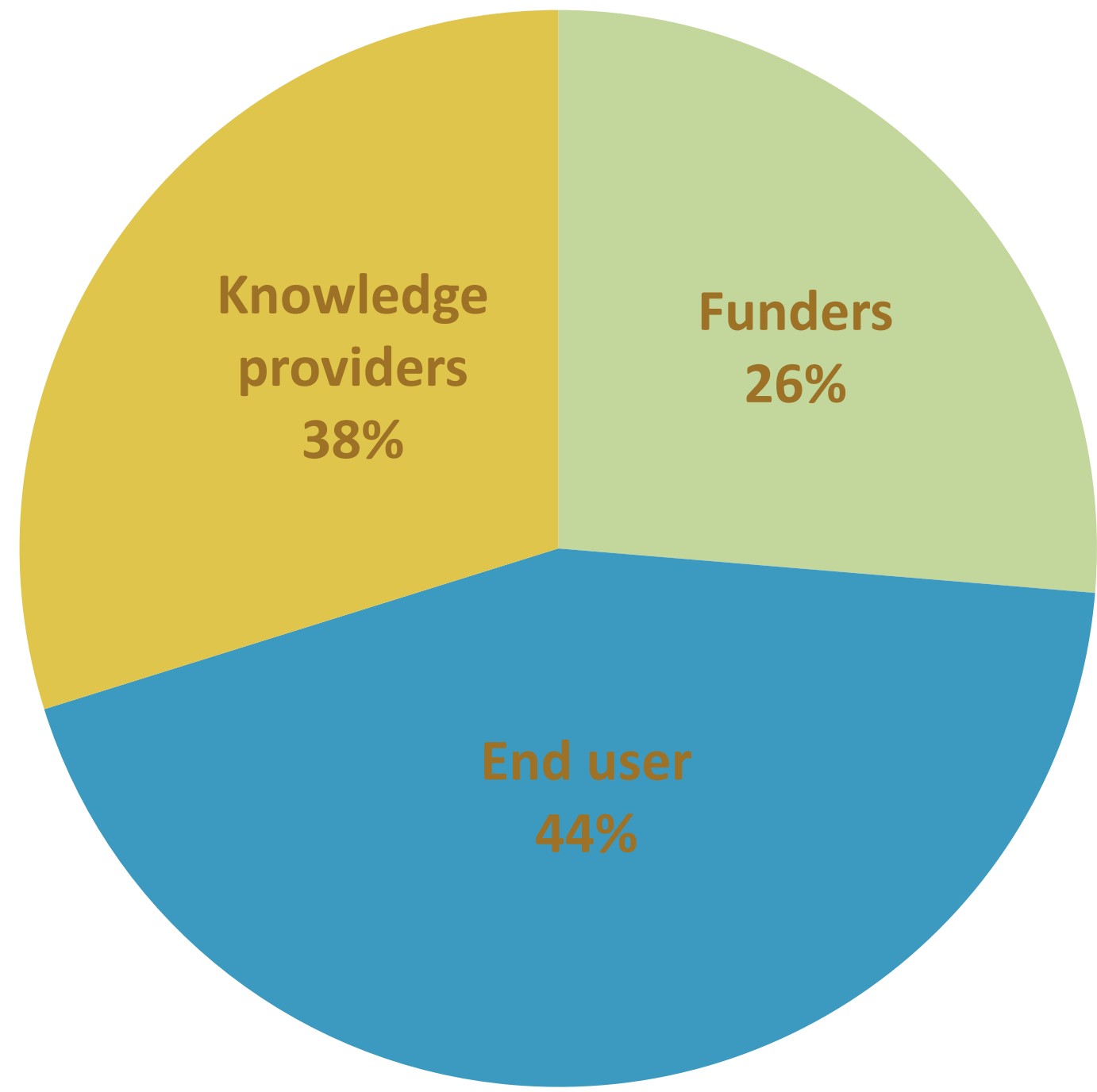
A key message from Belgium:

- A lot of knowledge is already available, but should be unlocked, connected, translated, implemented and disseminated into **applicable knowledge**, using e.g. tailor-made stakeholder coaching and communication
- A **mind shift and change in behavior** are the engine to the needed transition: raise **awareness** resulting in a "**call to action**" and support "**best practice pioneers**"



Background of Belgium's Key Stakeholders

- In total, 11 expert interviews were conducted.
- 36 experts participated in the national workshop in Brussels (Muntpunt) on 29th and 30th October 2015.



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National contact for Belgium: Nele Bal → nbal@ovam.be

Contact INSPIRATION coordination: Stephan Bartke → stephan.bartke@uba.de or Detlef Grimski → detlef.grimski@uba.de
Internet: www.inspiration-h2020.eu | Twitter: @inspiration4eu

