Stakeholder engagement for the development of indicators for sustainable energy development

Presenter: Ingunn Gunnarsdóttir, PhD student
ing47@hi.is
Co-author: Brynhildur Davidsdottir

UNIVERSITY OF ICELAND

Indicators

- A measurement tool to assess and track the performance of a system
- Monitor progress towards policy goals and inform decision-making
- Vary based on their purpose
- Criticism: inconsistency, limited scope, and lack of transparency

References:
- UN, 1992
- Narula & Reddy, 2015
- Shortall & Davidsdottir, 2017

Benefits of stakeholder engagement

- Capture diverse viewpoints
- Leads to a more comprehensive and representative picture
- Aids in the understanding of complex concepts
- Increases public acceptance
- Valuable during indicator development

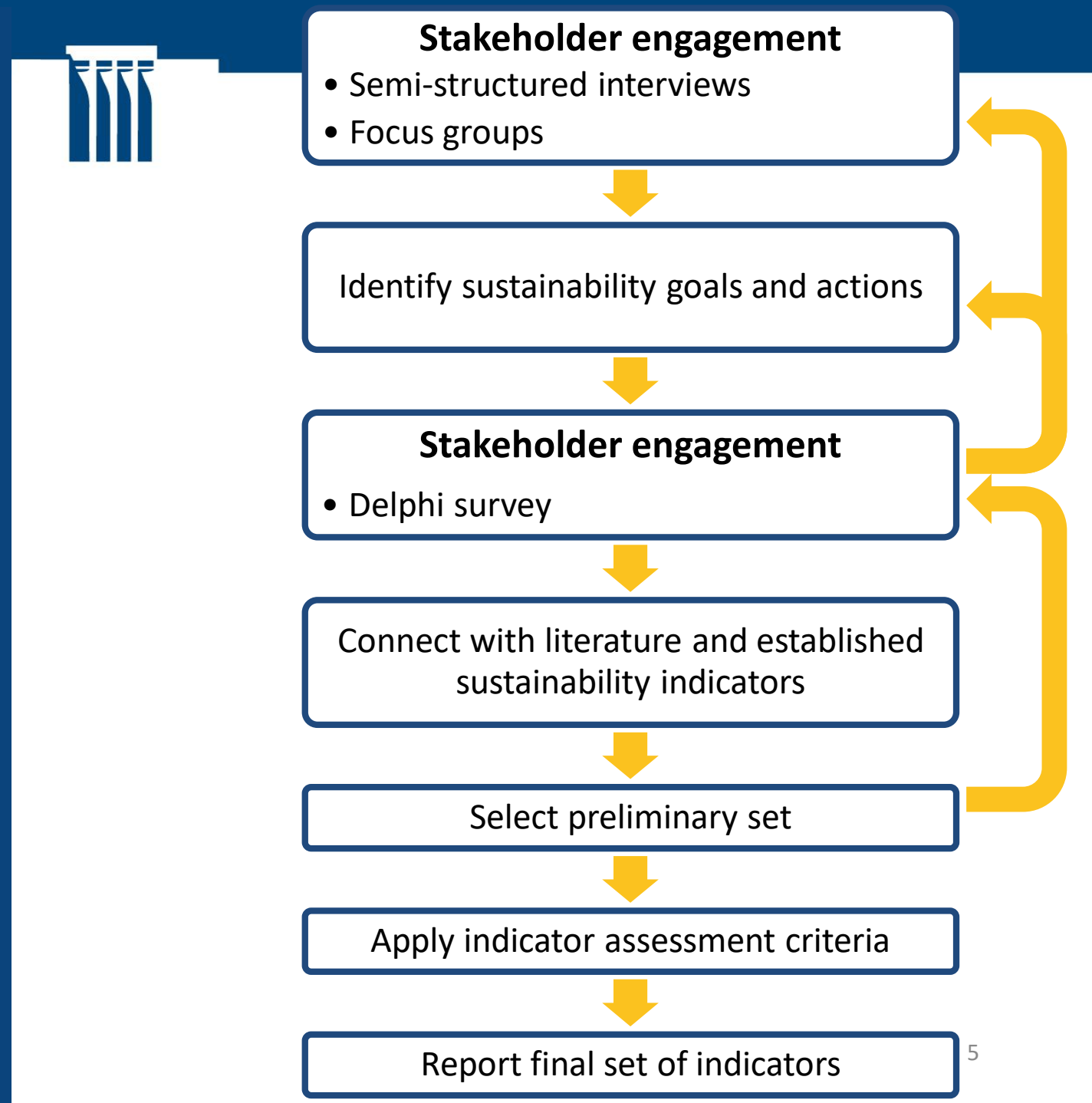
References:
- IAEA et al., 2005
- Pínter et al., 2012
- Sovacool, 2012

Research questions

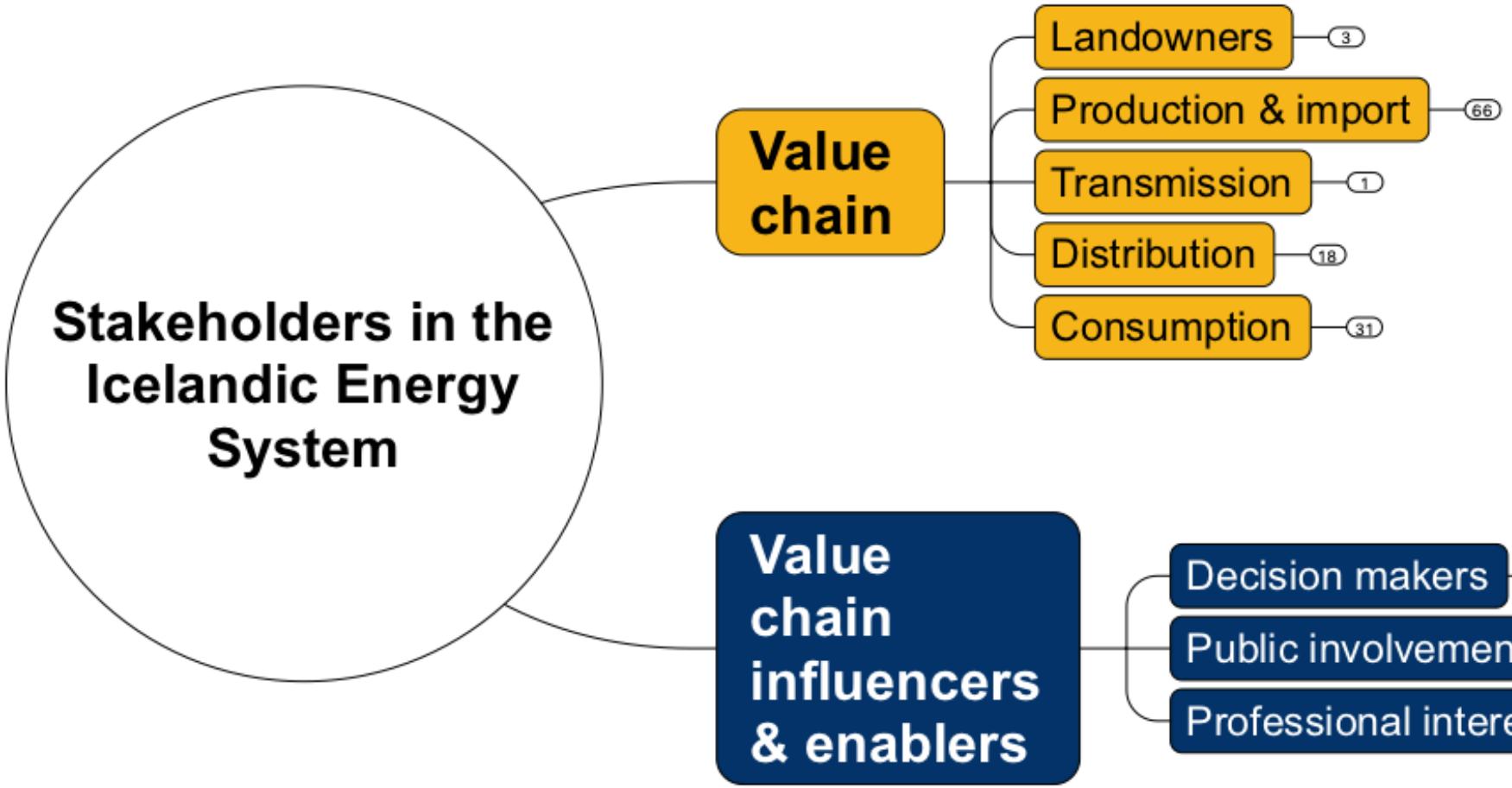
United Nations' SDG 7

- What does a sustainable energy future entail and how can it be accomplished?
- What do stakeholders value in a sustainable energy system?
- What should be measured to track progress towards a sustainable energy future?
- Case study: Iceland

Indicator development process

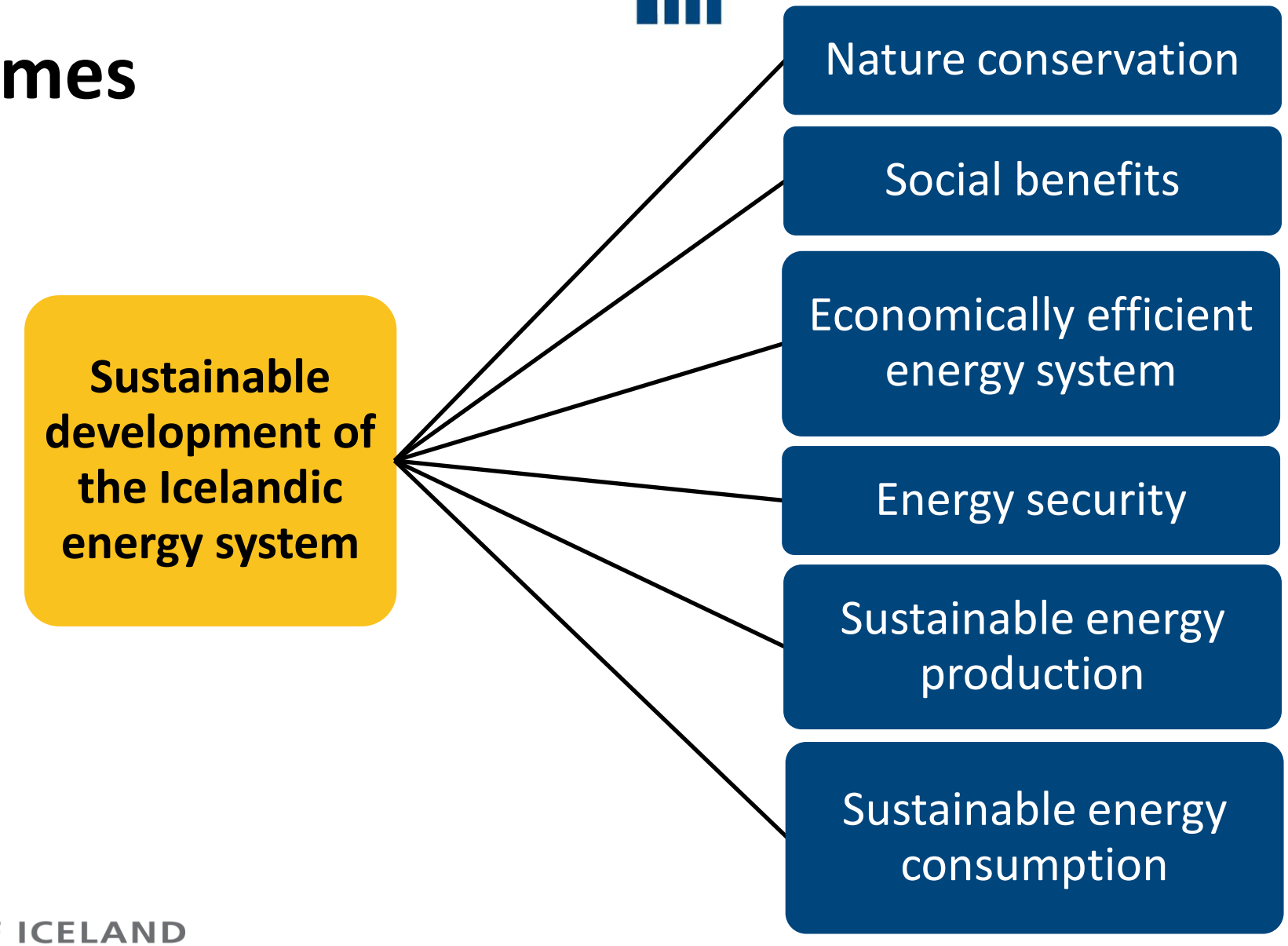


Stakeholder map

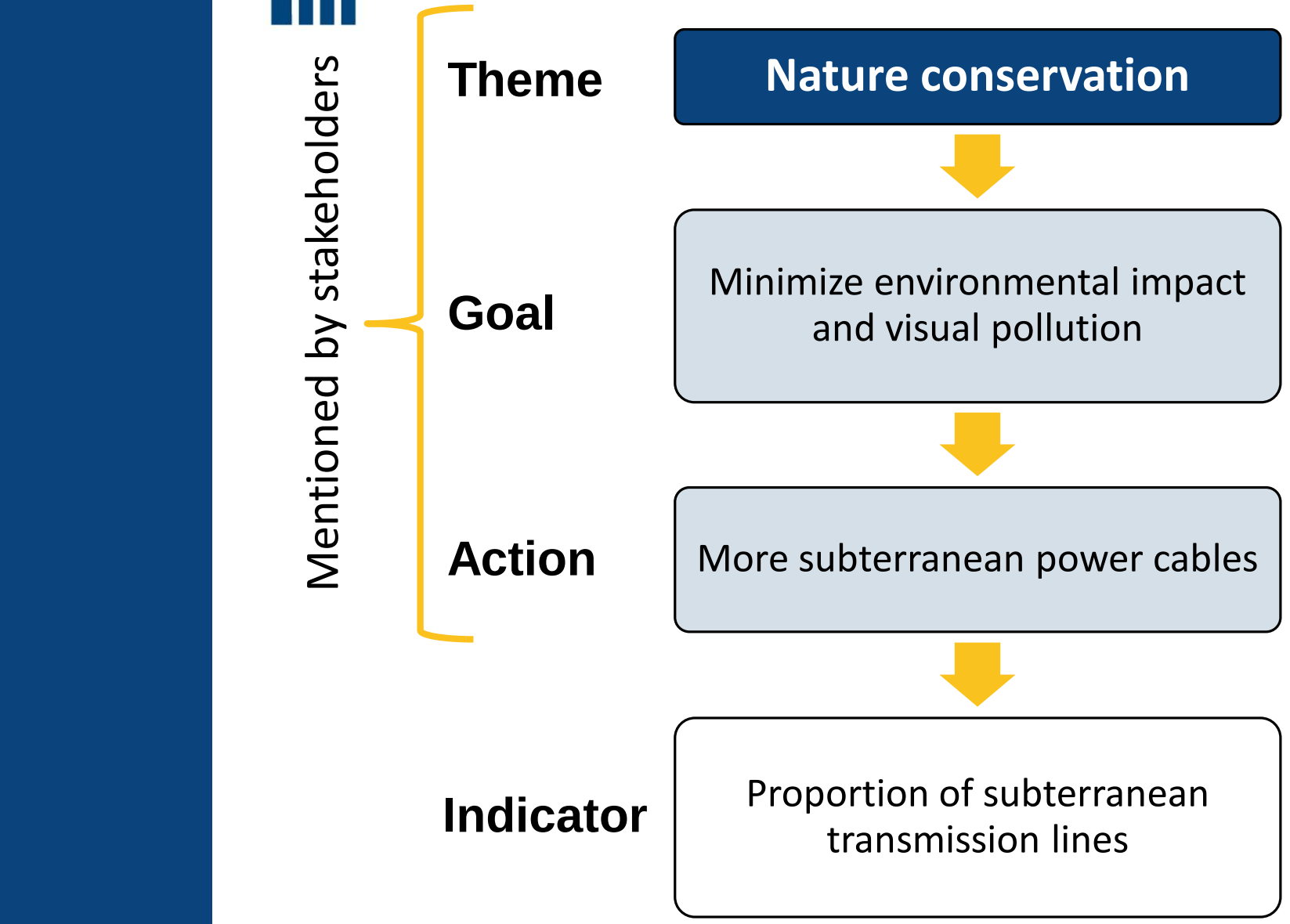


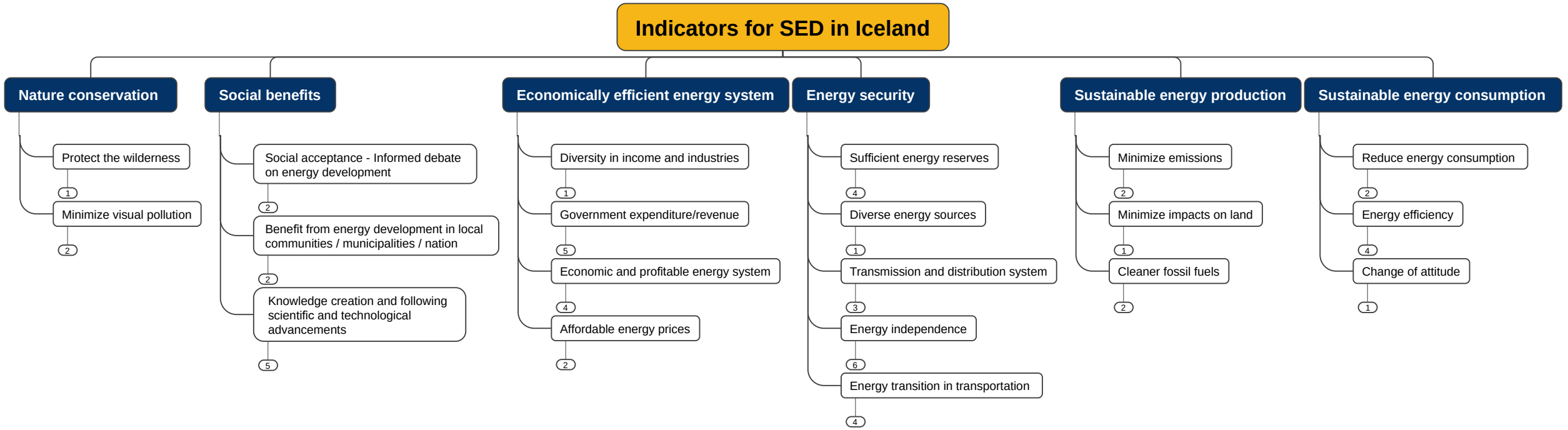
- 16 interviews
- 2 focus groups
- 2 rounds of Delphi survey

Themes

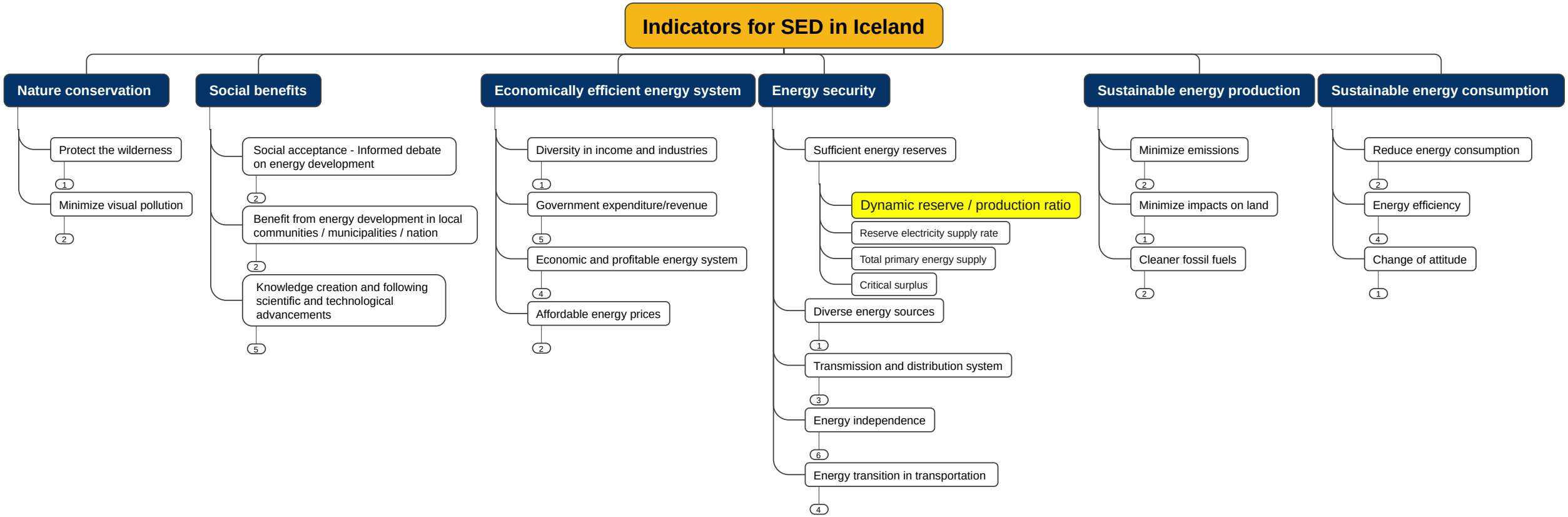

Sustainable development of the Icelandic energy system
Nature conservation
Social benefits
Economically efficient energy system
Energy security
Sustainable energy production
Sustainable energy consumption

Example of indicator development

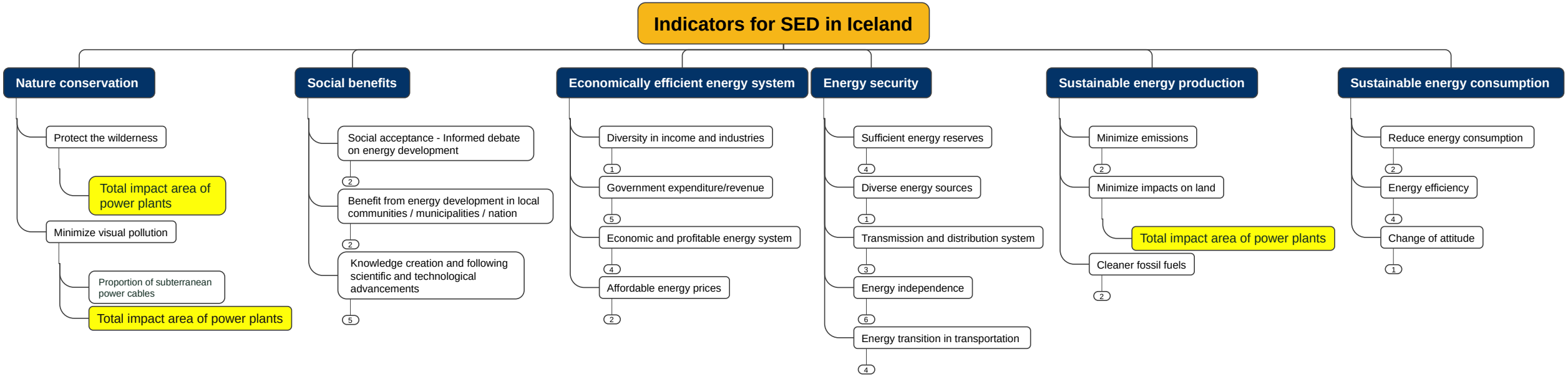




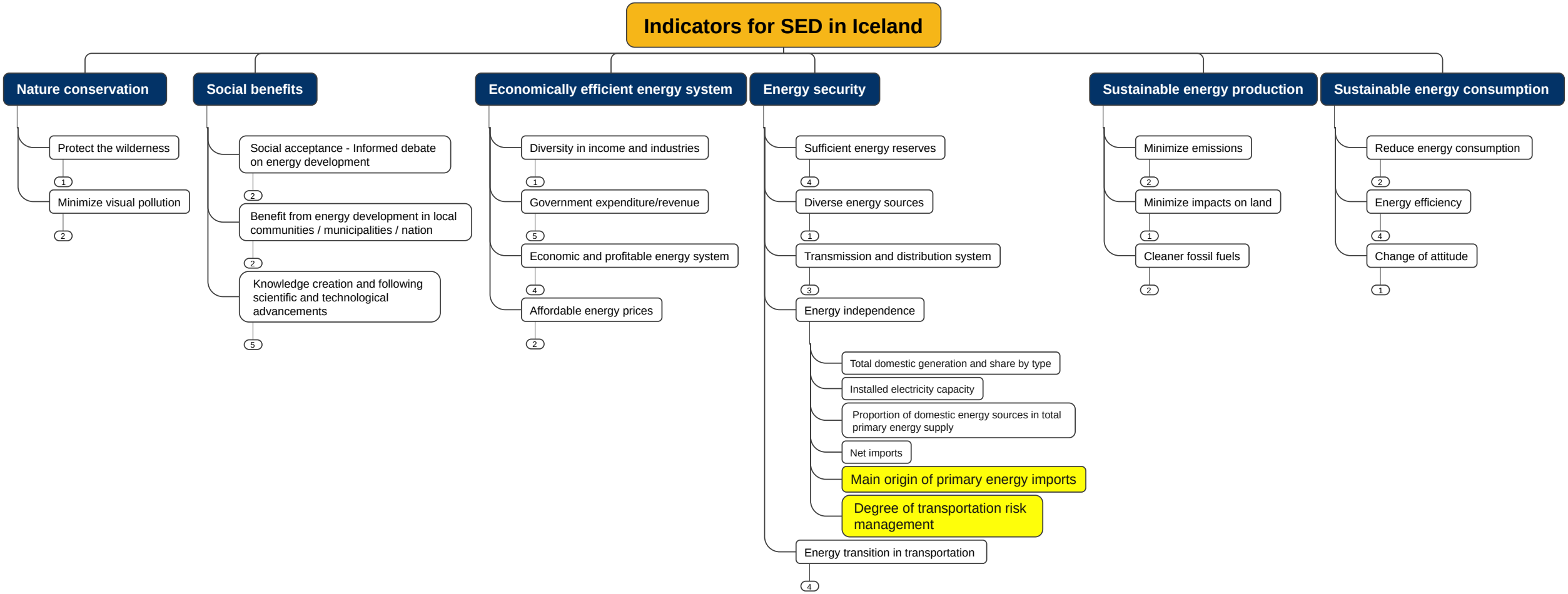
- 52 context-specific indicators across 6 themes
- Many stakeholder goals are binary (✓)



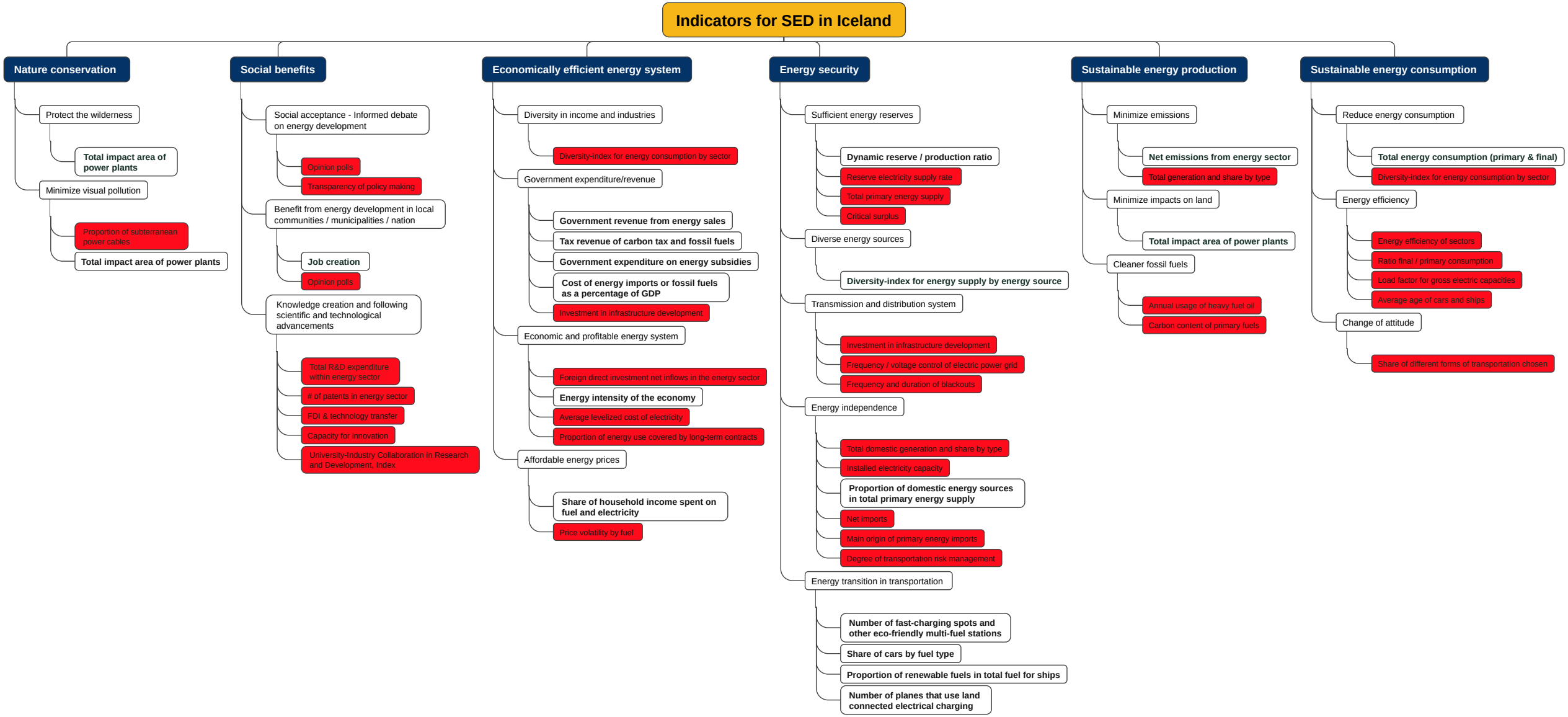
- The indicator set reflects energy-related challenges in Iceland



- Some indicators measure progress towards more than one theme



- Some indicators will be considered only when looking at certain development scenarios



- Some indicators are not captured in the current version of the model

Conclusions

- Sustainable energy development is complex and context-specific
- Stakeholder engagement is necessary when developing indicators for sustainable energy development
- Indicators should reflect the sustainability goals of stakeholders
- Context-specific indicators are more valuable for decision-making and policy development

Financial support:

- Rannís – The Icelandic Centre for Research
- National Power Company of Iceland
- Icelandic Road Administration
- Eimskip University Fund
- Icelandic Society of Women in Academia

For more information:
Ingunn Gunnarsdóttir
University of Iceland
ing47@hi.is

UNIVERSITY OF ICELAND

References

IAEA, UN DESA, IEA, Eurostat, EEA. Energy indicators for sustainable development: Guidelines and methodologies. Vienna: 2005.

Narula K, Reddy BS. Three blind men and an elephant: The case of energy indices to measure energy security and energy sustainability. Energy 2015;80:148–58.

Pintér L, Hardi P, Martinuzzi A, Hall J. Bellagio STAMP: Principles for sustainability assessment and measurement. Ecol Indic 2012;17:20–8..

Shortall R, Davidsdottir B. How to measure national energy sustainability performance: An Icelandic case-study. Energy Sustain Dev 2017;39:29–47.

Sovacool BK. The methodological challenges of creating a comprehensive energy security index. Energy Policy 2012;48:835–40.

United Nations. Agenda 21. Conf. Environ. Dev., Rio de Janeiro, Brazil: United Nations; 1992, p. U.N. Doc. A/CONF.151/26.

UN General Assembly. Transforming our world: the 2030 Agenda for Sustainable Development. 2015.