DESIRA

DIGITISATION: ECONOMIC AND SOCIAL IMPACTS IN RURAL AREAS

Draft set of socio-economic sustainability indicators (SESI) for measuring the impacts of digitalisation in agriculture, forestry, and rural areas

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#DESIRA2020

Outline

- **Introduction**

- **Q&A for quick clarifications**

- **Plenary discussion via Mural**

Introduction

What is the SESI?

> **SESI = Socio-Economic Sustainability Indicators**

Indicator creation, selection, and assessment

- › to measure the impact of digitalisation on sustainable development

- › relevant for at least one, if not all, of the three domains covered by DESIRA Living Labs (LL): agriculture, forestry, and rural areas

- › to develop a set of indicators to measure different aspects of sustainability, based on a methodology called the Integrative Concept of Sustainable Development (ICoS) (Kopfmüller et al. 2001)

- › with these sustainability indicators it is possible to evaluate the perceived or anticipated **social, economic, and environmental** impacts of digitalisation

  - ▪ to inform and guide the political decision-making process.

Introduction

- Basis of indicator selection: Rules of Integrative Concept of Sustainable Development (Kopfmüller et al. 2001) as framework

1. Three general goals and preconditions for sustainable deveopment

2. Instrumental rules: conditions to achieve substantial sustainability

Substantial rules		
Securing human existence	Maintaining society's productive potential	Preserving society's options for development and action
1. Protection of human health	6. Sustainable use of renewable resources	11. Equal access for all to information, education and occupation
2. Satisfaction of basic needs	7. Sustainable use of non-renewable resources	12. Participation in societal decision-making processes
3. Autonomous subsistence based on income from own work	8. Sustainable use of the environment as a sink for waste and emissions	13. Conservation of cultural heritage and cultural diversity
4. Just distribution of opportunities to use natural resources	9. Avoidance of technical risks with potentially catastrophic impacts	14. Conservation of the cultural function of nature
5. Reduction of extreme income and wealth inequality	10. Sustainable development of man-made, human and knowledge capital	15. Conservation of social resources

Introduction

- Indicators are designed in coherence with the hypotheses and analytical questions of the Conceptual Analytical Framework (CAF)

  - *To be justified, discussed, improved during RDF meetings and communication*

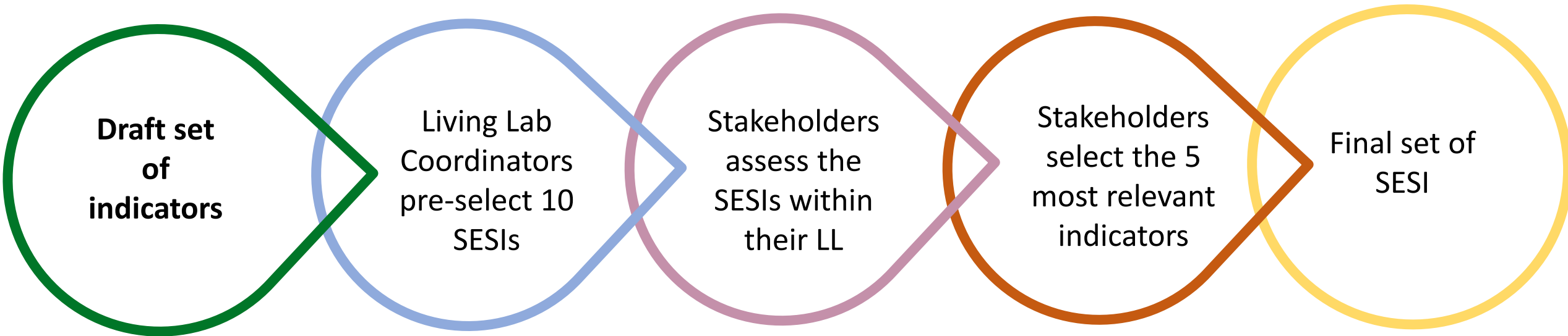*Eg.„How do stakeholders' needs and expectations change over time, for whom and in what way?",*

Eg. "How can or digital technologies (potentially) change the way activities are carried out in the area?",

ICOS Framework, CAF questions

Literature + Database Review

Refine with feedback from LL coordinators

Draft set of indicators

Introduction

How are the Living Labs using the SESI to assess the socio-economic impacts of digitalisation?

Draft set of indicators → Living Lab Coordinators pre-select 10 SESIs → Stakeholders assess the SESIs within their LL → Stakeholders select the 5 most relevant indicators → Final set of SESI

Introduction

iii) *Outline the key indicators*

(quick show of indicators)

ICoS Rule Group	ICoS Rule	Indicator	Indicator source	SDG	Applies to Domain	DESIRA sustainability target
Preserving Society's Options for Development and Action	Equal access for all to information, education, and occupation	Gender pay gap	DESIRA	5, 8, 10	all	decreased gender pay gap
		Average hourly earnings of female and male employees by occupation, age, and persons with disabilities	SDG 8.5.1	5, 8	all	increased hourly earnings, equal hourly earnings across all genders and abilities
		Person hours of production	Kruse et al. 2009[5]	5, 10	all	reduced person hours of production
	Participation in soceital decision making processes	Public awareness of a subject	EEA	4, 10, 16	all	increased public awareness
		Public image of a subject or product	DESIRA	4, 10, 16	all	improved image of a subject or product
		Marketing of a product	DESIRA	4, 10, 16	all	improved marketing of a product

strongly decrease likelihood of reaching target	slightly decrease likelihood of reaching target	neither increase or decrease the likelihood of reaching target	slightly increase likelihood of reaching target	strongly increase likelihood of reaching target	No answer

Introduction

How will the results of the assessment and selection of SESI be used?

- Analysis of similarities and differences of the relevance of SESI and the perceived impacts over all 20 LLs across topics, regions and countries.

  - In-depth analysis at LL level, as well as a comparative analysis between LLs and within the domains to identify possible correlation between the SESI assessment and stakeholder profession, age, country, rural or urban living location, and gender.

- Share the results with the scientific community and decision-makers in politics technology developers, and the general public to improve opportunities for co-design between users and producers of digital tools.

- SESI can be used to measure societal change in the shift towards digital agriculture, forestry, and rural areas over time.

Q&A for quick clarifications

Plenary discussion via Mural

1. *Are we covering all the socio-economic and sustainability areas?*

    ▪ *Comments + Examples*

2. Which indicators have you used in your initiatives to assess the impacts of digitalisation?

    ▪ *Comments + Examples*

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Thank you & follow us online!

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