Integrated Agriculture and Food Assessment Report

Funded by the Climate and Clean Air Coalition

CLIMATE & CLEAN AIR COALITION
TO REDUCE SHORT-LIVED CLIMATE POLLUTANTS
a UNEP convened initiative

Partners include:

- University of York, UK
- Stockholm Environment Institute (SEI)
- Global Research Alliance on Agricultural Greenhouse Gases (GRA)
- Brazilian Agricultural Research Corporation (Embrapa)
- Food and Agricultural Organization of the United Nations (FAO)
- CCAC/United Nations Environment Programme (UNEP)
- International Fund for Agricultural Development (IFAD)

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Objectives of the Assessment

Identify and assess priority SLCP and greenhouse gases-focused policies, actions and measures in agriculture and food systems that support the development of a roadmap consistent with the Global Methane Pledge (GMP) target and 1.5°C climate scenarios and would also maximise synergies, and minimise trade-offs, for development and food security (e.g. SDG 2 on Zero Hunger)

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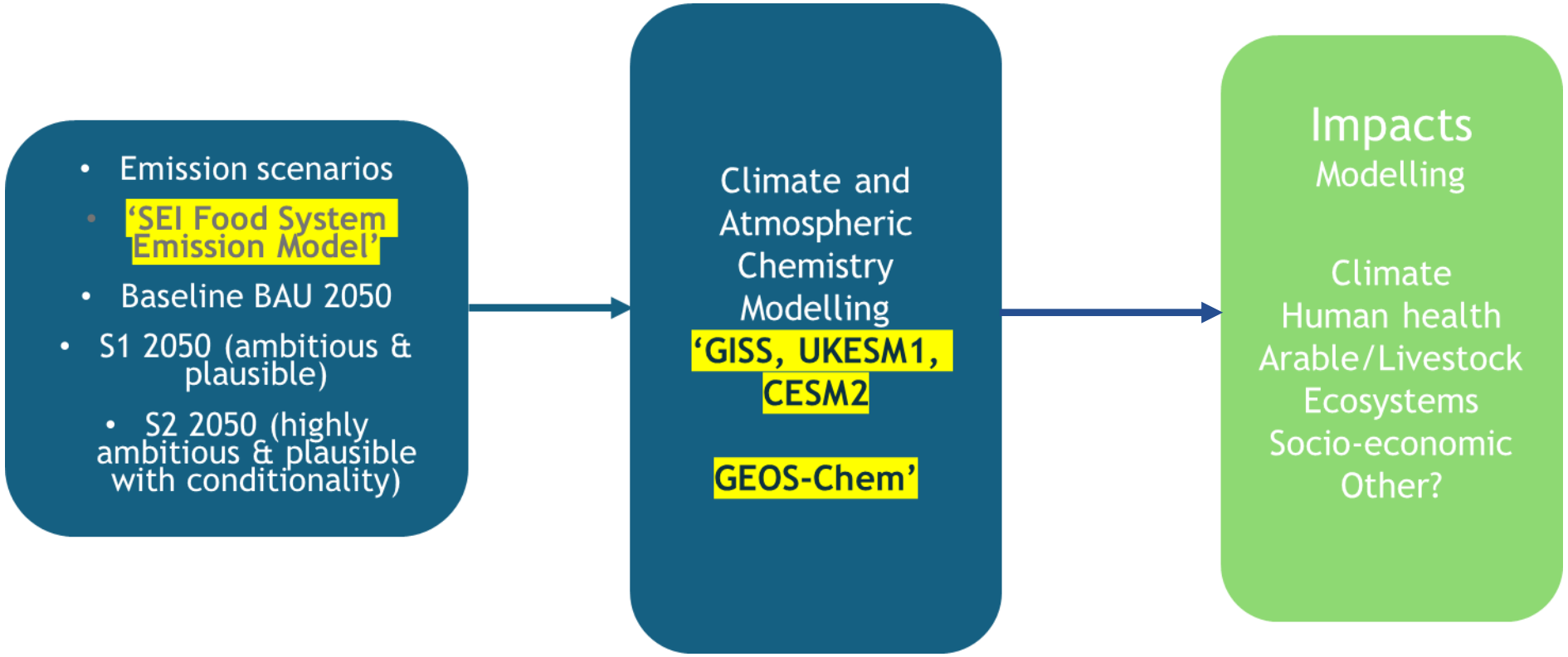
General approach



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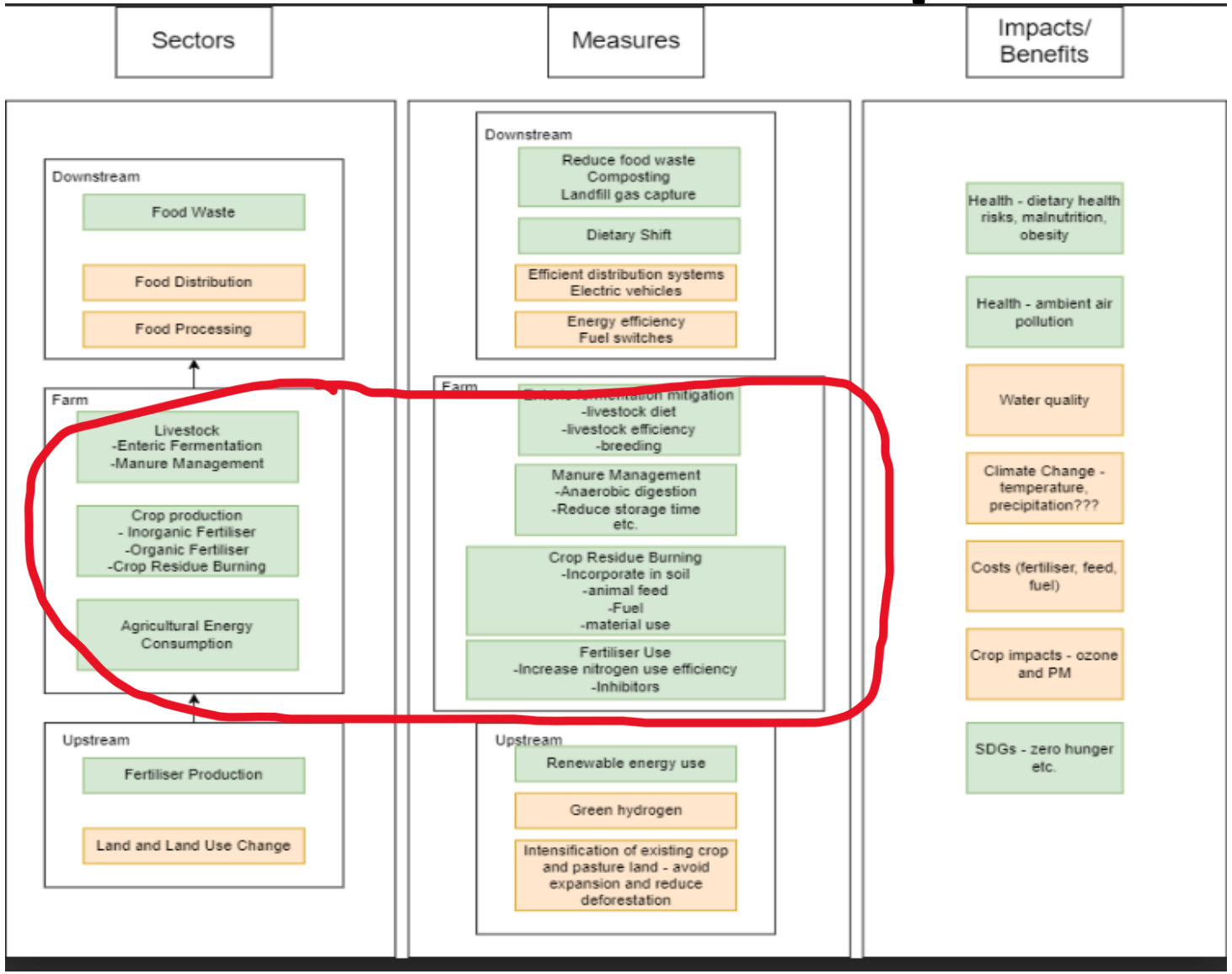
Emission scenario development



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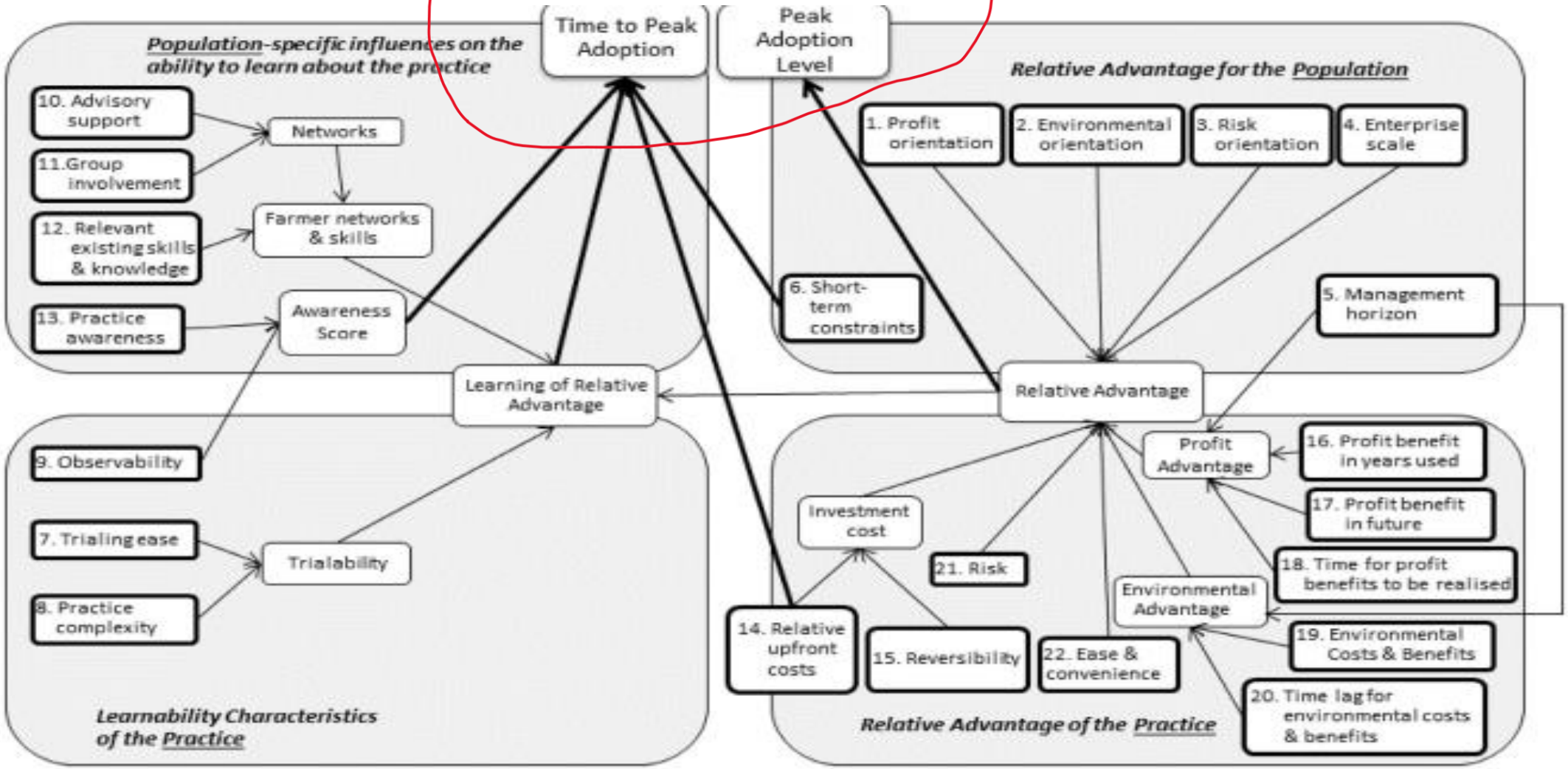
ADOPT model



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ADOPT model farmer characterisation

Food and Agriculture Organization of the United Nations

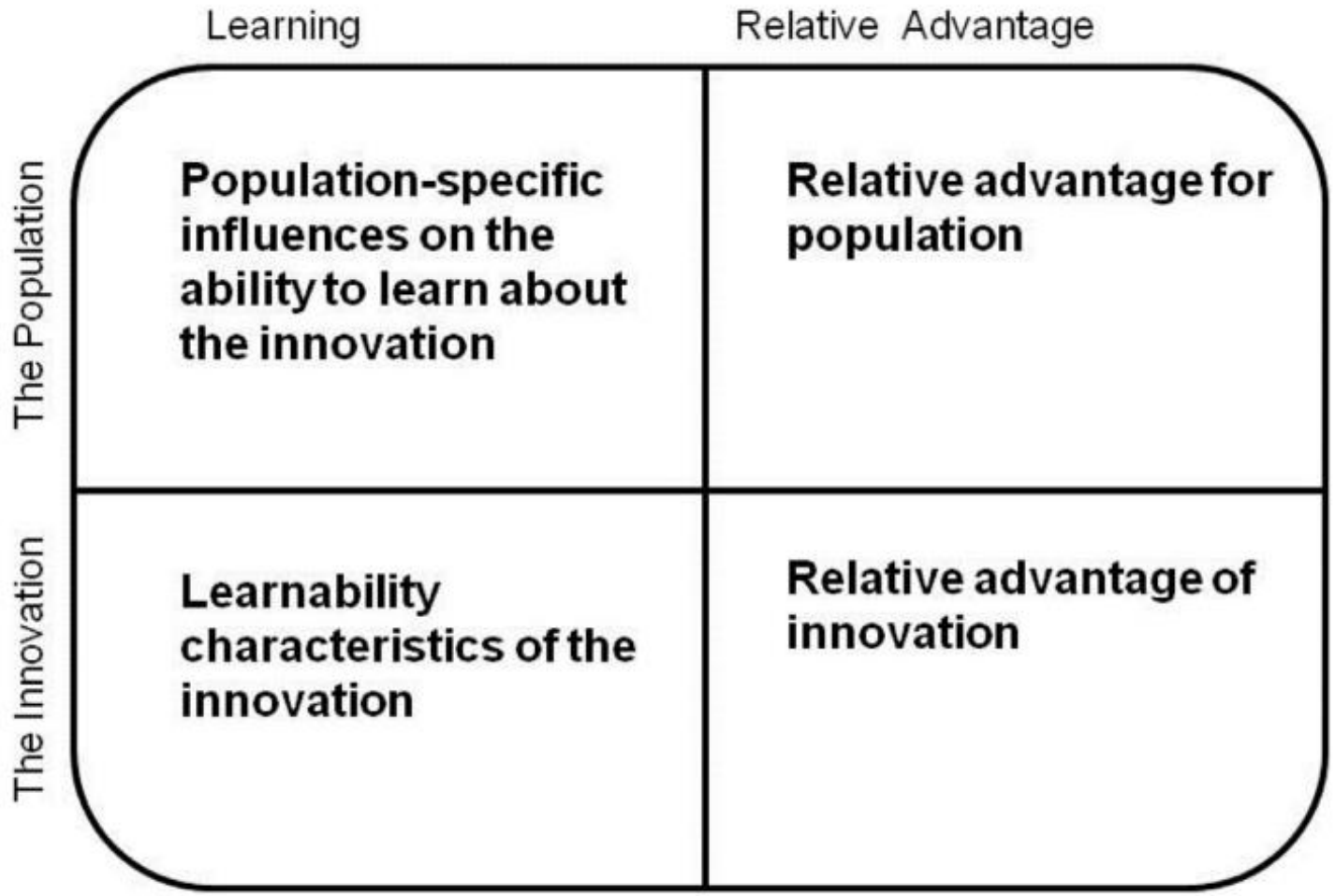
Discover

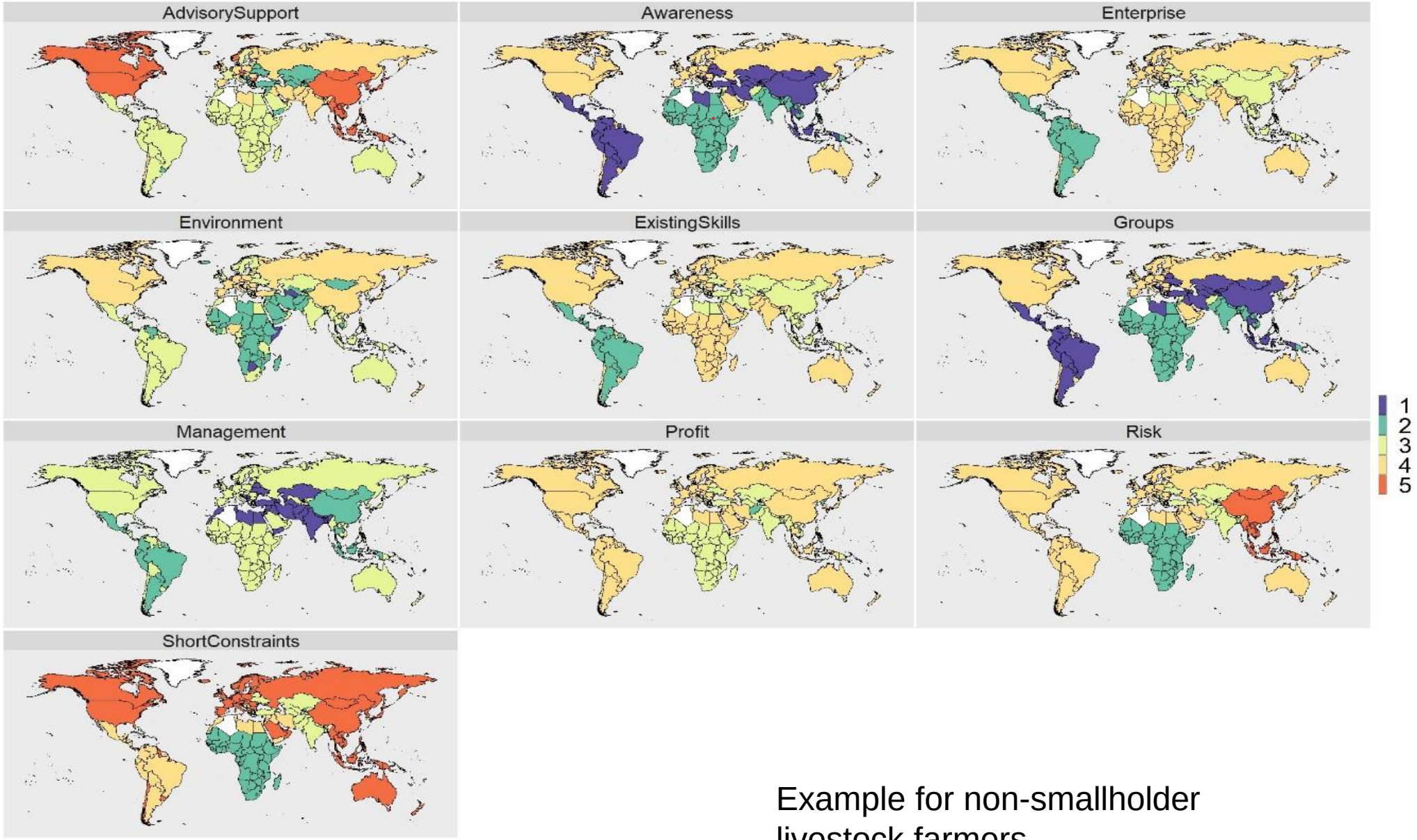
RuLIS - Rural Livelihoods Information System

Data application Resources

Food and Agriculture Organization of the United Nations

SDG Indicators Data Portal





Example for non-smallholder livestock farmers

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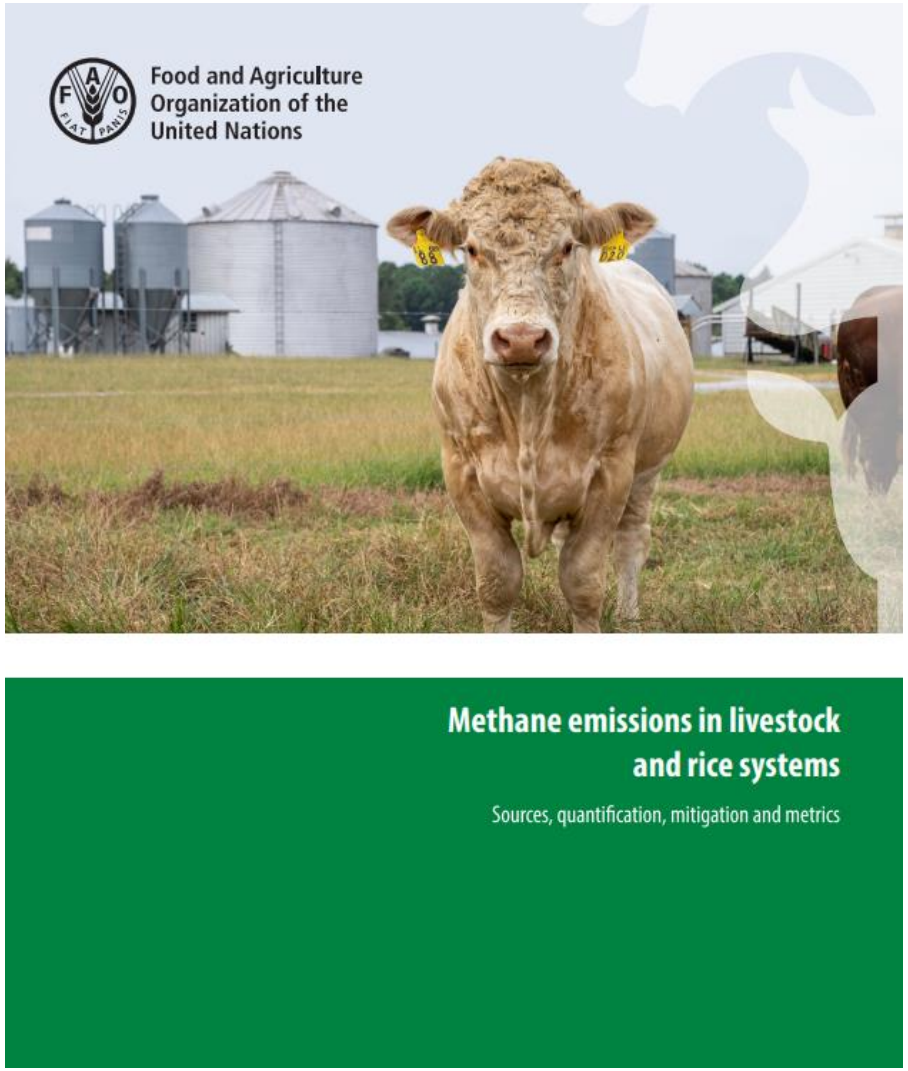
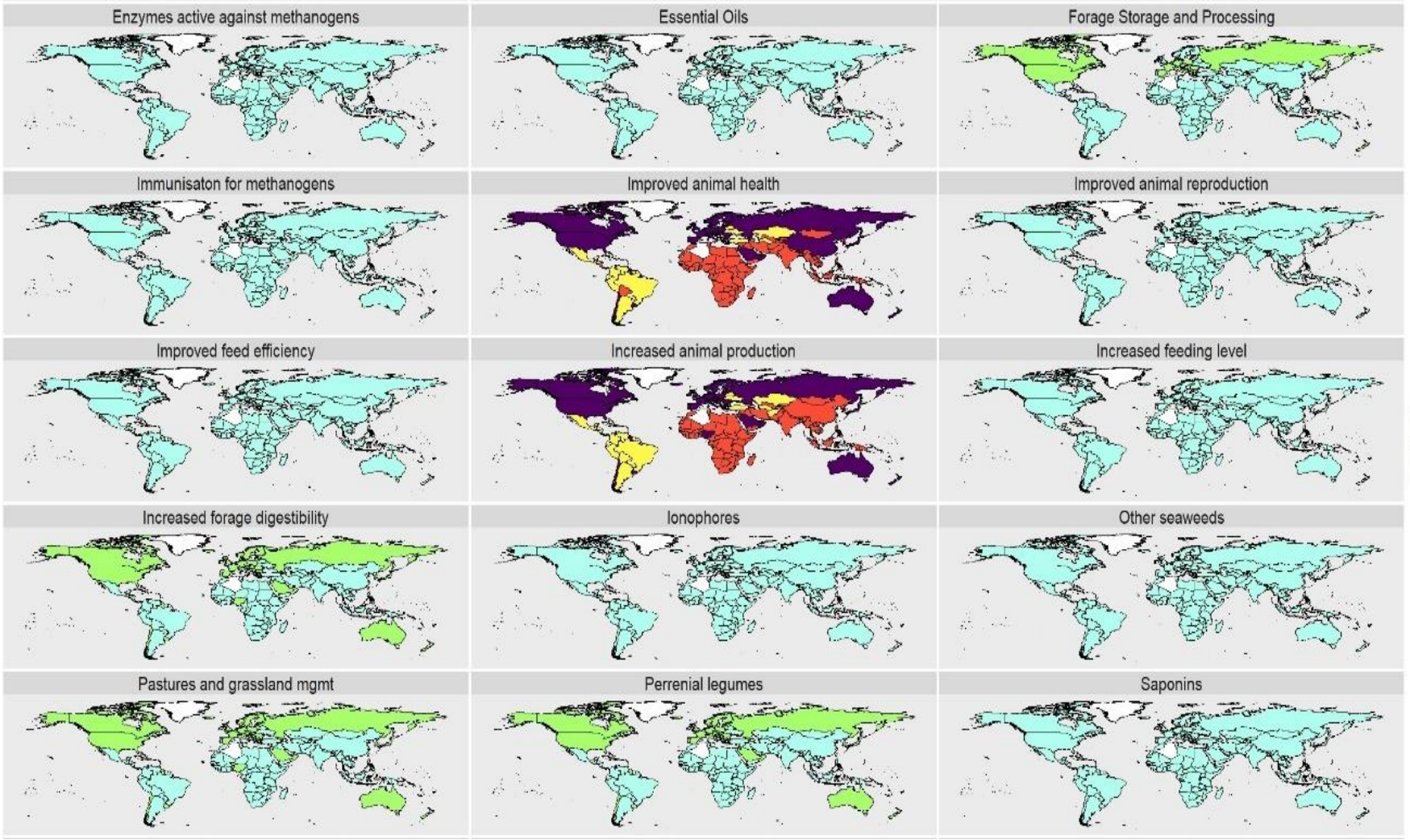
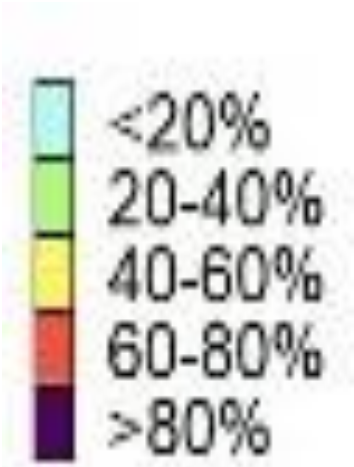
ADOPT model measure characteristics



	Learning	Relative Advantage
The Population	**Population-specific influences on the ability to learn about the innovation**	**Relative advantage for population**
The Innovation	**Learnability characteristics of the innovation**	**Relative advantage of innovation**

ADOPT model peak adoption: Livestock EF





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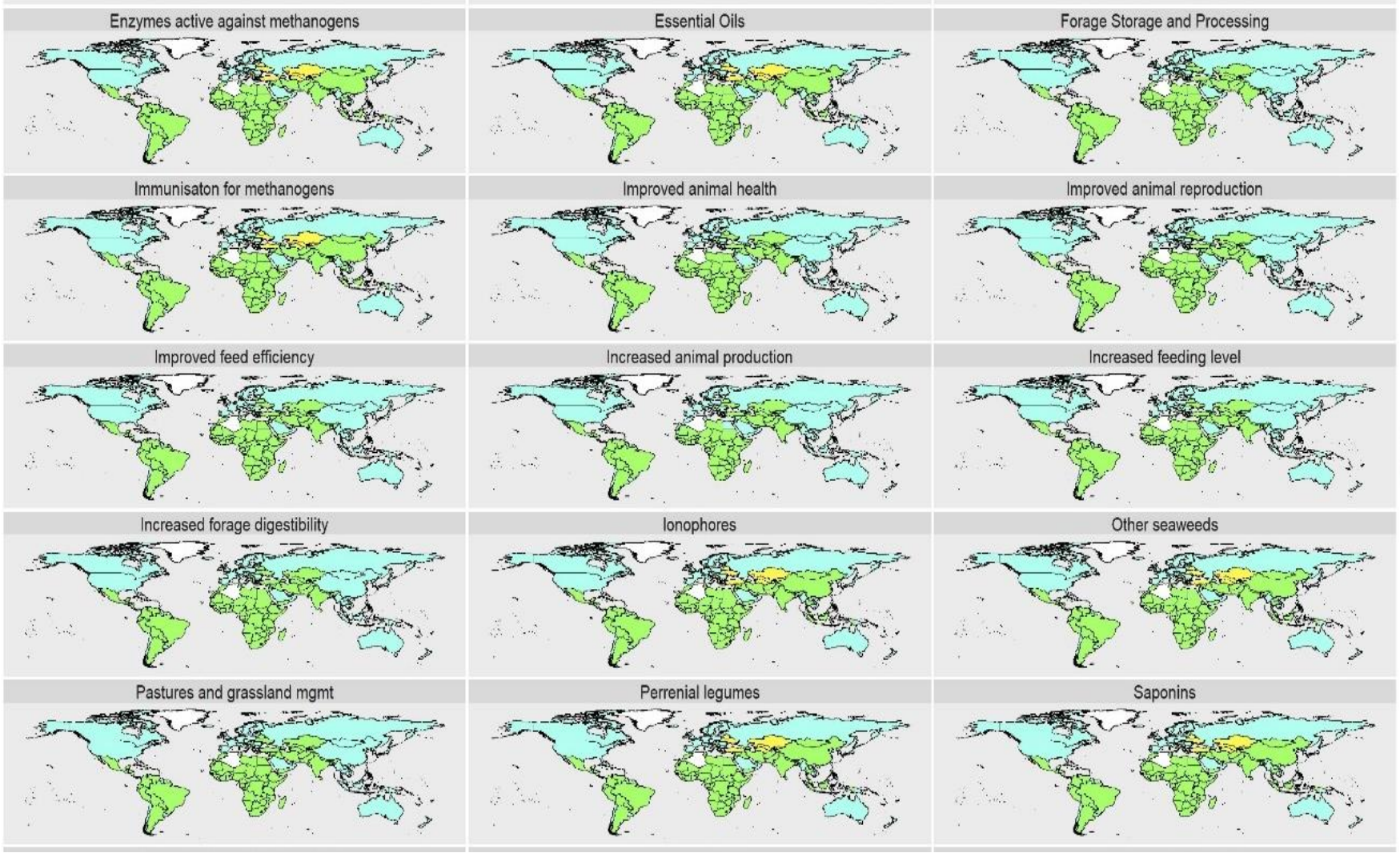
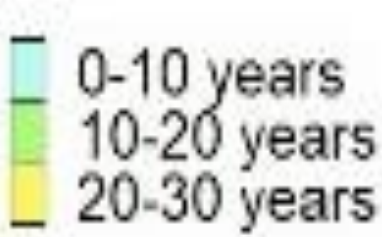
ADOPT model time to peak adoption





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Why we need your help?

- >100 measures assessed
- Farmer and measure characterisation >20 assessment questions
- Measures and farmer characterisation by region and farm type

How robust and realistic are the current peak adoption and time to peak adoption values?

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Testing our assumptions

- Use a survey approach with a subset of ADOPT questions and selected mitigation measures
- Questions chosen are those which appear to have the largest influence on peak adoption and time to peak adoption
- Measures chosen are those that potentially have large impacts
- 8 questions, 6 measures, and 2 farm types
- Answers compiled by measure, region and farm type
- Modelling inputs modified to reflect stakeholder feedback

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North America/Europe	Central & South America	Africa	Asia & the Pacific
Improved forage digestibility to reduce enteric CH4	Improved forage digestibility to reduce enteric CH4	Improved forage digestibility to reduce enteric CH4	Improved forage digestibility to reduce enteric CH4
Chemical inhibitors to reduce enteric CH4	Chemical inhibitors to reduce enteric CH4	Chemical inhibitors to reduce enteric CH4	Chemical inhibitors to reduce enteric CH4
Utilising animal wastes for biogas collection and utilisation	Utilising animal wastes for biogas collection and utilisation	Utilising animal wastes for biogas collection and utilisation	Utilising animal wastes for biogas collection and utilisation
Direct reseeding to reduce rice CH4 emissions	Direct reseeding to reduce rice CH4 emissions	Direct reseeding to reduce rice CH4 emissions	Direct reseeding to reduce rice CH4 emissions
Utilising crop residues for animal feed to reduce emissions from crop burning	Utilising crop residues for animal feed to reduce emissions from crop burning	Utilising crop residues for animal feed to reduce emissions from crop burning	Utilising crop residues for animal feed to reduce emissions from crop burning
Fertiliser/manure timing and placement measures to reduce N emissions including inhibitors	Fertiliser/manure timing and placement measures to reduce N emissions including inhibitors	Fertiliser/manure timing and placement measures to reduce N emissions including inhibitors	Fertiliser/manure timing and placement measures to reduce N emissions including inhibitors

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Relative advantage for the population					
On what proportion of the target farms is there a major enterprise that could benefit from the innovation?	Almost none	A minority	About half	A majority	Almost all
Smallholder/small family farms					
Large family/corporate farms					
Learnability characteristics of the innovation					
What proportion of the target population will need to develop substantial new skills and knowledge to use the innovation?	Almost none	A minority	About half	A majority	Almost all
Smallholder/small family farms					
Large family/corporate farms					
Relative advantage of the innovation					
Relative upfront investment by the user to implement the measure	Very large	Large	Moderate	Minor	None
Smallholder/small family farms					
Large family/corporate farms					

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Survey December 2 – 13th, 2024

Link to survey will be sent separately via email

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