



LANDMARC

D2.6: CASE STUDY SCALING SCENARIO FINAL REPORT

**INPUT FOR SIMULATION MODELLING OF SCALING LAND-BASED MITIGATION
SOLUTIONS IN THE LANDMARC CASE STUDY COUNTRIES**

LEAD BENEFICIARY: JIN CLIMATE & SUSTAINABILITY
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Annex I

A stepwise approach to generate LMT scenarios including input for LANDMARC model simulations.

This guide was developed by J. Onigkeit (University of Kassel), with support from M. Laub (ETH Zürich), and J. Lieu (TU Delft) and provided to the LANDMARC case study leaders.

Summary of procedure

Context: Co-develop qualitative storylines of LMT development and potential with stakeholders:

This has been developed via the development of qualitative narratives for the LMT portfolio in the country (2 years). Now we need to translate the narratives/storylines into a usable scenario storyline. These are the steps to translate the narratives. This process is estimated to take around 6 months:

- **Consider realistic potential:** Define the type of scenario you would like to develop for each LMT in the portfolio and give a name to it (E.g., a scenario for a plausible maximum of LMT implementation until 2050 in contrast to a scenario with medium LMT implementation). **By Case Study leads**
- **Scenario-storyline development for each LMT (see Table 2):** Based on the interview results - summarized in LANDMARC deliverables D4.1 (*Climate risk assessment*) and D5.2 (*Results from risk, co-benefit and trade-off assessments*) and associated workshops and other stakeholder engagement activities - translate the opportunities and risks for each LMT implementation that are relevant for a country into a scenario-specific set of measures and actions (e.g., policies, education/training on technologies and practices, funding etc.). These actions together could, for example, either delay and/or hinder or promote the implementation of a particular LMT. This scenario-specific set of actions would need to be defined for each LMT option (e.g., agroforestry, paludiculture, etc.) and each scenario period (2020-2030 and 2030-2050). **By Case Study leads**
- **Quantifying pace of implementation for each LMT (see Table 3):** These qualitative trends must be quantified in a meaningful, realistic, and transparent way. What will be the percent change of LMT area relative to the current situation or in hectare LMT realized? To make this quantification realistic, information on historic trends, existing national policy targets or targets under discussion from the country narratives (D2.6) or other sources should be used. It is important to give as much evidence as possible to the quantified storylines. The outcome of this final step can then be used by the simulation models to quantify LMT scenarios under the given qualitative scenario storylines. **By Case Study leads and modeller**
- **Running LMT portfolio simulations:** Implement quantified scenario assumptions and perform model simulations. **By modellers**
- **Present initial results** (scenario storylines and simulations) **to stakeholders.** Modify scenarios including model input if necessary. **By Case Study leads, modellers, and stakeholders**
 - **Documentation:** make transparent and assessable how the assumptions were made inspired by stakeholder statements
- Final model simulations. **By modellers**

- **Present & report case study findings:** in LANDMARC deliverables D5.3 (Model run outputs from model set) and D5.5 (E3ME model simulations), publications, presentation to stakeholders and others. *By modellers and Case Study leads*

Translating SH preferences to qualitative storylines

Aim of scenario development: including stakeholder’s knowledge into LMT portfolios. This reference table will be used for inputs for ALCES, LandSHIFT and E3ME and provide indirect guidance for DayCent scenario development. This is an initial table that will be updated throughout the next months to document the development of story lines in case studies.

Step 1

- Draft qualitative storylines by identifying measures and actions from interviews (including D5.2) for each LMT scenario.

Table 2: Qualitative Storylines of implementation for each of the LMT options

Country X LMT 1:

	1. What are the wishes of the future for the LMT: include timing	2. How to achieve the wishes <ul style="list-style-type: none"> • How much does it cost? • Who pays for the cost? • Who implements? 	3. Target/Actions <ul style="list-style-type: none"> • policies, strategies, projects
Scenario 1: “ ” Stakeholder representations:			
Scenario 2: “ ” Stakeholder representations:			
Scenario 3: “ ”			

Country X LMT 2:

	4. What are the wishes of the future for the LMT: include timing	5. How to achieve the wishes <ul style="list-style-type: none"> • How much does it cost? • Who pays for the cost? • Who implements? 	6. Target/Actions <ul style="list-style-type: none"> • policies, strategies, projects
Scenario 1: “ ” Stakeholder representations:			

Scenario 2: “ ” Stakeholder representations:			
Scenario 3: “ ”			

Step 2

Quantitative storylines: pace of implementation for each LMT.

- Please fill the following table with expected qualitative trends on speed of change resulting from the storyline drafts from previous step.
- Provide sources from literature and interviews (include reference section).

Table 3: Quantitative trends/pace of implementation of LMT options

Year	Current situation (baseline)	SCEN-“ ” SH perspective:		SCEN-“ ” SH perspective:		SCEN-“ ” SH perspective	
		2030 (change relative to the current situation) (provide sources)	2050 (change relative to the current situation) (provide sources)	2030 (change relative to the current situation) (provide sources)	2050 (change relative to the current situation) (provide sources)	2030 (change relative to the current situation) (provide sources)	2050 (change relative to the current situation) (provide sources)
LMT 1:							
LMT 2:							
LMT 3:							