

#### Appendix 4. Methodological approach.

	% of case studies	N
1. Background information source		
Was background information collected?		
Yes	100	23
When was background information collected (one case collected information both before and after)?		
Before	87	20
After	17	4
How was background information collected?		
Desk research (e.g. literature search, public sources, census data)	57	13
Part of larger project	22	5
Participatory process (e.g. workshops, interviews, focus groups)	52	12
Expert knowledge (e.g. expert workshops)	30	7
Different types of analysis by researchers (e.g. climate projections, morphological analysis, social metabolism analysis)	35	8
What was the motivation to look for background information?		
Fact check	22	5
To expand participants comments, flesh out scenarios	43	10
To prepare researchers/organisations of workshop/design workshop	70	16
To identify key variables/drivers/shocks	52	12
For back-casting	17	4
To map system and change	22	5
To identify stakeholders	22	5

#### 2. Background information use

How did background information support scenario planning?

As information, inspiration for organisers of workshop	43	10
To reflect on/select drivers, key-variables, power relations, land change	30	7
As background for stakeholders	17	4
To inspire discussion	43	10
To find stakeholders	4	1
To build/support models	35	8
Context, timeline	30	7

Was background information integrated in the scenario building?

Yes	78	18
No	22	5

How was background information integrated into the scenario building?

Using archetypes	13	3
For the scenario guidelines	13	3
To create the context, draw relationships	30	7
To identify drivers	43	10

What motivated how/if background information was used?

Context	43	10
Not constrain creation	9	2
Connect with previous project	26	6
Time	26	6
Inform debate	30	7
Find stakeholders	13	3
Design workshops	22	5

	Consistent	30	7
	Ensure integrative process	48	11
How long did it take until final scenarios where done (months)?			
	0-5	17	4
	6-10	35	8
	11-15	17	4
	16-20	9	2
	>20	22	5
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3. Did the team base the process on previous processes or published guidelines?			
	Previous published guidelines	100	23
	Previous process	78	18
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4. Process for the identification of drivers of change			
Participatory process:		91	21
	Focus groups	30	7
	Workshops	74	17
	In depth interviews	30	7
	Surveys	9	2
External (external to the participatory process):		61	14
	Researchers notes, proposed by researchers	43	10
	Previous research/literature review	48	11
	Predefined by project scope, predefined categories	17	4
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## 5. Use of drivers of change for scenarios<sup>1</sup>

Morpho-matrix	13	3
2 axes=4 scenarios	43	10
Uncertainty scenarios	13	3
Hunt's archetypes	13	3
To elicit responses	17	4
Derive models for forecasts	17	4
ABM (agent based models)	4	1
Flesh out storylines, basis and breath of storylines	65	15
NA	9	2

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## 6. Drivers identified?

How many drivers where identified?

0-10	43	10
11-20	26	6
21-30	4	1
31-40	0	0
41-50	4	1
>50	22	5

Where they ranked?

Yes	43	10
No	52	12

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<sup>1</sup> For the classification of drivers of change we adopted the Millennium Assessment framework. However, there are other frameworks available such as STEEP, which is typically used as a prompt for Social, Technological, Environmental, Economic and Policy drivers (Bradfield et al. 2005) and was used by cases #4, #5 and #6. Bradfield, R., G. Wright, G. Burt, G. Cairns, and K. Van Der Heijden. 2005. The origins and evolution of scenario techniques in long range business planning. *Futures* 37(8):795-812. <http://dx.doi.org/10.1016/j.futures.2005.01.003>

	NA	4	1
How where they ranked?			
	q-sort	4	1
	Impact, probability of influence, importance, relevance	26	6
	Uncertainty	13	3
	NA	35	8

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## 7. Type of drivers

	Social driver:	78	18
	Health	4	1
	Demographics	52	12
	Employment	26	6
	Poverty/inequality	17	4
	Social e.g. values	48	11
	Technology	39	9
	Development e.g. Energy use	30	7
	Urbanisation	17	4
	Globalisation	17	4
	Economics/market conditions	57	13
	Tourism	26	6
	Governance	52	12
	Legislation/policy	52	12
	Ecological driver:	48	11
	Environmental change, e.g. land cover, biodiversity loss, coral bleaching, deforestation	48	11
	NA	22	5

Direct or indirect driver?

Direct	35	8
Indirect	43	10
Not categorized	57	13

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8. Type of scenario design

Participants/stakeholder driven	61	14
Driven by researchers/project team	26	6
Previous work/literature	43	10
Other (2x2 matrix, morphological matrix)	43	10

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9. Criteria for prioritisation of driver

What were the criteria for prioritisation of drivers of change for guidelines for scenarios?

Uncertainty	26	6
Relevance, Importance, Impact, Influence	70	16
No prioritization	87	2
Structural analysis	17	4
Contrast	13	3
Likelihood	9	2
Vulnerability	13	3

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10. Time projection

Was there an end year used?

Yes	91	21
No	9	2

If yes, what was the end projection year?

	2025	9	2
	2030	39	9
	2032	4	1
	2034	13	3
	2035	4	1
	2040	4	1
	2043	4	1
	2050	9	2
	2030, 2060, 2090 (three time projections where used)	13	3
Time span			
	10-20	61	14
	21-30	22	5
	31-40	9	2
	>40	9	2
Motivation for choosing this time projection			
	Data availability	13	3
	Drivers	9	2
	Generations	26	6
	Link to other scenarios	4	1
	Stakeholders/local people	30	7
	Visionary, non-fictionary, manageable, far but not too far, imaginable, reasonable, related to current situation, related to current policy and drivers	17	4
	Previous experience	17	4
	Literature	4	1
	Researchers	13	3

Other	17	4
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11. Number of scenarios created

Did the case create scenarios?

Yes	91	21
No	9	2

How many scenarios where created?

0	4	1
3	9	2
4	65	15
5	4	1
8	8	2
17	4	1
24	4	1

Where all scenarios created used?

Yes	70	16
No	30	7

Number of scenarios created and not used

0	70	16
3	17	4
15	4	1
20	4	1

Motivation to include/not include scenarios

Implausible, unviable for local people	65	15
Drivers, Positive/Negative, Current/Business as usual	34	8
Minimize overlap, ensure contrast, high variability	13	3



Group size, number of subgroups	13	3
Data availability	13	3
Researchers decided	4	1
Feasibility manageable	39	9

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