D5.1: COMMON APPLICATION AND EVALUATION FRAMEWORK FOR SIM4NEXUS TOOLS

LEAD AUTHOR: Maïté FOURNIER

OTHER AUTHORS: _

PROJECT	Sustainable Integrated Management FOR the NEXUS of water-land-food-energy-climate for a resource-efficient Europe (SIM4NEXUS)
PROJECT NUMBER	689150
TYPE OF FUNDING	RIA
DELIVERABLE	D5.1 Common application and evaluation framework for SIM4NEXUS tools
WP NAME/WP NUMBER	Implementing Nexus-compliant practices / WP5
TASK	Task 5.1
VERSION	3
DISSEMINATION LEVEL	Public
DATE	29/11/2016 (Date of this version) – 30/11/2016 (Due date)
LEAD BENEFICIARY	18 ACT
RESPONSIBLE AUTHOR	Maïté FOURNIER
ESTIMATED WORK EFFORT	1 person-month
AUTHOR(S)	Maïté FOURNIER
ESTIMATED WORK EFFORT FOR EACH CONTRIBUTOR	ACT : 0.5 person-month WUR-LEI : 0.2 person-month EURECAT : 0.1 person-day / PBL : 0.1 person-day / PIK : 0.1 person-day
INTERNAL REVIEWER	Floor BROUWER (WUR-LEI)

DOCUMENT HISTORY

VERSION	INITIALS/NAME	DATE	COMMENTS-DESCRIPTION OF ACTIONS
1	MAÏTÉ	10/11/2016	TEXT HIGHLIGHTED YELLOW STILL IN DISCUSSION
2	MAÏTÉ	21/11/2016	COMMENTS FROM BARCELONA WORKSHOP INCLUDED
3	MAÏTÉ	29/11/2016	WRITTEN CORRECTIONS RECEIVED BY XAVIER DOMINGO (EURECAT), MARIA WITMER AND STEFANIA MUNARETTO (PBL), HAGEN KOCH (PIK) FINAL REVIEWING BY FLOOR BROUWER (WUR-LEI)

SIM4NEXUS

Table of Contents

SIM4NEXUS

SIM4NEXUS

Executive summary

Changes with respect to the DoA

No changes.

Dissemination and uptake

This report has been written to support the development of the SIM4NEXUS case studies. It is aimed primarily at the Case study leaders. It is also of use for the other SIM4NEXUS Partners who have to interact with the case studies.

Short Summary of results

This report presents the framework for the case studies implementation, throughout the project and in coordination with the other Workpackages. The case studies have a central role in SIM4NEXUS as they represent the field of application and testing for all methods, concepts and tools created in other Workpackages.

The implementation of the case studies will follow 4 steps:

- Launching the case study processes;
- Description and prioritisation of the Nexus challenges;
- Addressing the Nexus challenges;
- From results to policy recommendations.

The tasks to be carried-out by the case study leaders can be divided in two parts: the "assessment" part relates to activities carried-out under WP1, WP2, WP3, WP4 and it focuses on assessing the Nexus, the incoherencies in the policies, and building the Serious Game; the "process" part relates to activities carried-out under WP5, WP6, WP7 and it relates to stakeholders interactions within each case study as well as promoting the project and its outputs.
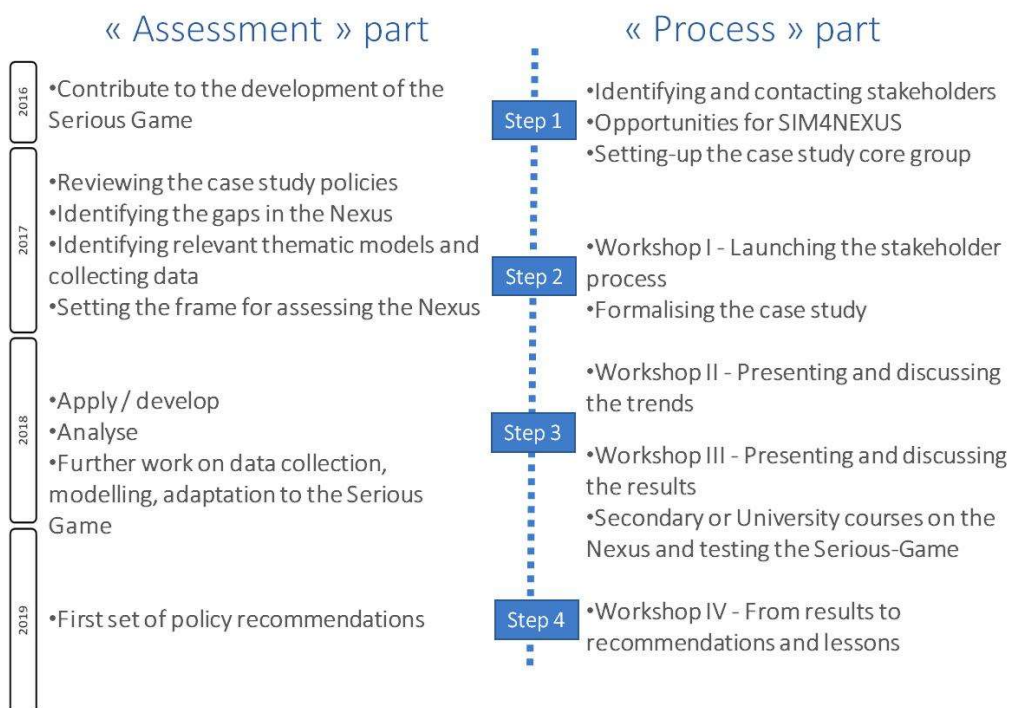
The focus of this report is put on the interaction with stakeholders, in order to move from sectored information towards an integrated participatory process. The engagement of local stakeholders will facilitate the understanding and spread of SIM4NEXUS outputs. Horizontal activities such as communication, monitoring progress and assessing success are also presented.

The report also presents the coordination activities to be developed by the WP5 coordination team in order to build a community of practice and to increase the performance of each case study.

Evidence of accomplishment

The deliverable itself can act as the evidence of accomplishment. Also communication (Teleconferences, emails) between ACTeon and the project Coordinator (WUR) can be revealed as evidence.

Reading tips

To facilitate the reading of the document, some information has been highlighted.

> ➢ When an action is related to another Workpackage Task, it is marked with an arrow.

When an action contributes to a WP5 deliverable (D) or milestone (MS), it is highlighted in red.

Glossary / Acronyms

TERM	EXPLANATION / MEANING
D	DELIVERABLE
MS	MILESTONE
KPI	KEY PERFORMANCE INDICATOR
SDG	SUSTAINABLE DEVELOPMENT GOAL
SDM	SYSTEM DYNAMIC MODELING
WP	WORKPACKAGE

1 Introduction

1.1 Goals of the report

This report is the deliverable of Task 5.1, which offers a participatory framework that will be followed in all case studies. It will ensure a coherent real-life application and evaluation of the complexity science modelling and of the Serious Game, so the added value of SIM4NEXUS is soundly assessed and lessons for wider application can be drawn. The application of the thematic models, the complexity science modelling framework and of the Serious Game as a tool in supporting Nexus-compliant decision making will take place in 12 case studies. Moreover, the thematic models offer the modelling capacity to implement the case studies. Each case study will follow a similar step-wise approach that will address the following questions:

- What are the main Nexus challenges that are to be addressed in the case?
- What are the risks and uncertainties within each case study?
- What is the current state of coherence between policies?
- How can existing thematic models help understand these challenges? And what are the main gaps in understanding the Nexus that arise from the application of these thematic models?
- How does the complexity science modelling help addressing these gaps? What improvements in understanding the Nexus emerge from the application of the complexity science modelling?
- What are the policy recommendations that can then be derived? How to put them in practice and what are the preconditions for their effective implementation?
- What is the added value of the SIM4NEXUS concepts, framework and tools for supporting decisions and for identifying recommendations that are Nexus-compliant?

1.2 Methodology to build the report

The present report builds on:

- The SIM4NEXUS Kick-off meeting (11th-13th July, 2016, The Hague, NL) and the WP5 sessions organised to present the case studies (poster session) and spark discussions on stakeholder engagement. The lessons learnt are presented in Annexe A.
- The case study leaders' interviews carried-out in August, September & October 2016 to understand better the case studies' scope and identify support needs. The synthesis of the interviews is presented in Annexe B.
- The WP5 workshop in Barcelona (16th-17th November, 2016, Barcelona, ES) where the first version of the present report was presented and discussed among participants: case study leaders and Workpackage leaders.

Plenary session of the SIM4NEXUS – WP5 workshop in Barcelona, 2016

SIM4NEXUS

2 Roadmap for the Workpackage 5

2.1 Goals of Workpackage 5

WP5 supports the implementation of Nexus-compliant practices in Europe. The methodologies of integration and tools of integrating the Nexus components are applied, addressing real-life challenges in 12 selected case studies at regional, national, European and global scales. A science-policy interface is established, guiding end-users towards Nexus-compliant practices that support a resource efficient Europe. More specifically, the objectives of WP5 are:

- Applying the SIM4NEXUS concepts, assessment frameworks and tools to address real-life Nexus challenges in selected case studies representing a diversity of scales for decision-making, as well as socio-economic and institutional conditions. These applications will be carried out within open processes that will closely associate relevant stakeholders and end-users of the SIM4NEXUS products to research activities. In line with the principles of participatory science and the living-lab concepts, end-users will be associated to research activities for: (a) specifying their demand in terms of tools for addressing Nexus challenges (input to WP3 & WP4); (b) applying the tools developed by SIM4NEXUS; and (c) evaluating the added-value of the SIM4NEXUS tools.
- Investigate the applicability and relevance of the tools developed for supporting decisions and raising awareness to other parts of Europe (regions, countries, transboundary river basins...) that have not been investigated in detailed case studies. Overall, this will pave the way to the legacy of SIM4NEXUS and future dissemination and use of its results/products.
- Contribute to the development of guidance for effective policy adaptation and implementation that supports a NEXUS compliant resource efficient Europe (input to D2.5).

The "philosophy" in Workpackage 5 is to consider evenly the expectations from researchers of the other workpackages and the needs and inquiries by the case studies' stakeholders.

The top-down provision of tools and methodologies will have to match the bottom-up expression of questions in order to co-design the most appropriate and practical solutions. The work will be organised in an iterative process, alternating between inputs and feedbacks on both sides.
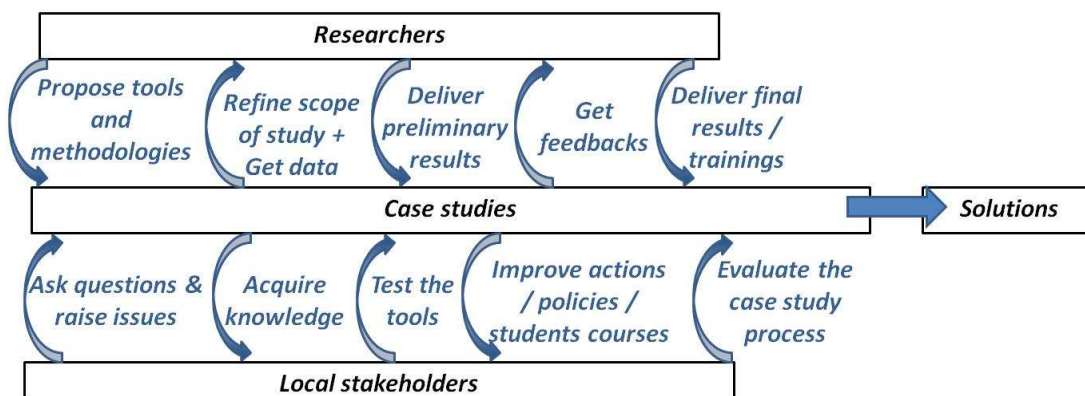
The challenge for Workpackage 5 will be to build a "community of practice" among the case studies, while at the time acknowledging a wide diversity of objectives, scales, practitioners, local interests, political contexts, etc.

2.2 Links to other workpackages

Workpackage 5 is at the core of SIM4NEXUS project. It provides the application field for all tools, concepts and experiments developed. The tasks and deliveries of this workpackage are very closely linked to the tasks and deliveries of the others, as represented in the graph.

The present report details when and how these relations will take place and will be organised with the case studies.

Workpackage 5 leaders' task is to ensure that these interactions are profitable to the case studies, efficient, and contribute to the overall SIM4NEXUS objectives. Frequent dialogue with the other WP leaders shall happen all along the project to ensure a smooth implementation of the workplan.

Please report to the SIM4NEXUS grant agreement for details on each task, deliverable or milestone.

D: Deliveries
MS: Milestones
T: Tasks
c.s.: case studies
S.G.: Serious Game

WP5 Implementing Nexus-compliant practices

WP5 Implementing Nexus-compliant practices

Project months		
25		*5.2.3. Modelling for addressing Nexus challenges* - Workshop : results of thematic models / gaps in the thematic models - Complexity science modelling
26		
27		
28		
29		
30		
31		*5.2.4. Putting policy recommendations and innovations into practice in c.s.* -Social implications of proposed policies + Interviews with stakeholders impacted -Interactive workshop : Serious Game / added-value of S.G. in policy making / evaluation of the overall participatory process
32		
33		
34		
35		
36	D5.3	
	MS26	
37		
38		
39		5.3 From c.s. to EU-wide recommendation -Interactive workshop with all c.s. : policy recommendations / lessons learnt on "effective science-policy interface" / lessons learnt on S.G. for policy making
40	D5.4	
41	D5.5	
42	D5.6	-C.s.12 reports combined
43	D5.7	-Report on policy recommendations -Report on S. G. & decision making
44		
45		
46		-Practical guidance on the application of S.G. in participatory processes
47	D5.9	-EU wide workshop for sharing results, experience -> wider application to other EU areas
48	D5.10	

WP1 WP2 WP3 WP4 WP6 WP7

T3.5 Start implementation of complexity science tools on c.s.

T2.2 Nexus-relevant policies for all c.s.

T4.5 Serious Game 1st version

T2.3 Policy success stories

T7.4 Dissemination of c.s.

T7.7 Communication with policy decision-makers

D2.4 Executive summary of nexus-relevant policies & recommendation

D4.5. Serious Game final version

D2.5 Strategies for low-carbon and resource efficient Europe

D3.6. Complexity science models implemented for c.s. : prototypes & manual

D6.5. SIM4Nexus Legacy report

2.3 Coordination of the case studies by Workpackage 5

Workpackage 5 is responsible for coordinating the case studies, especially as regards reporting and writing of deliveries. To achieve this, the coordination team will develop the following:

The design of a table to monitor the progress of each case study, report on these progresses to the EU and identify support required by each case study. This table should be user-friendly and provide a quick analysis of the data collected from all case studies. It will be developed in agreement with the settings of:

➢ Task 8.3 Quality assurance.

SIM4NEXUS

The development of methodological tools tailored to the needs of the case study leaders. For example, a first set of tools will be built to support the 1st WP5 Workshop trainings on stakeholders mapping and workshop facilitation techniques. Other tools could relate to involving students in testing the Serious Game, etc.

The promotion of publications (or other relevant promotional material) produced by several case studies. WP5 could also explore publication opportunities (book). This will be developed together with:

> Task 7.4 Dissemination of case studies.

The coordination of all WP5 reports writing, which includes: setting the timetable for Partners' contributions, outlining the table of contents, attributing tasks to each involved Partners, checking the contributions, finalising the reports.
Reports from case studies are independent sub-reports that altogether tell the story of becoming Nexus-compliant in a region / country / EU / Worldwide.

The organisation of an interactive workshop with all Task 5.2 case studies researchers and some stakeholders partners for: (1) Structuring policy recommendations in particular identifying the best scale at which these can be addressed (from case study to EU to global) and the pre-conditions for ensuring their effectiveness if implemented; (2) Identifying general lessons on "effective science-policy interface" (including on pre-conditions for success) building on the experiences from the different case study processes; and (3) Identifying general lessons on the use of serious game for supporting policy making, and defining a "common protocol" for effective application.

D5.4. Workshop for sharing/confronting results from all case studies and identifying common lessons/recommendations [oct.2019]

> D2.4: Executive summary of nexus-relevant policies and recommendations for policy improvements [42]

The organisation of an EU-wide (open) workshop for sharing the experience, the results and the recommendations of the case study real-life testing and collate feedbacks for strengthening recommendations for wider application / extrapolation to other decision making arenas. This workshop is part of the Conference that is in Task 8.3.

D5.10. Outcome of the EU workshop [may.2020]

Additional coordination activities can be planned during the project's lifetime to improve the "community of practice" between the case studies: regular workshops, site visits, etc.

2.4 Support provided under Workpackage 5 to case studies

Workpackage 5 not only coordinates the case studies but also provides direct support to the Partners involved. The support team can be contacted anytime by the Partners confronted with questions or difficulties regarding the implementation of their case studies. The support team will also undertake a pro-active approach and regularly contact the case study leaders by phone or email to check they have the case study under control and offer room for discussions. Contacts will be made every 4 months at the minimum.
The support team can either provide direct help to the Partners if it feels competent to do so, or provide with the contact details of relevant experts from within or outside the project. The support can be provided individually to a case study if the topic is very specific, or more broadly if several case studies are faced with similar issues (in such cases, the need for support can lead to a dedicated

SIM4NEXUS

workshop, a methodology document, a training, ...). All materials that can help the case studies will be made available through ProjectPlace.

Note that support to the case studies shall also come naturally from fellow Partners or fellow case studies. Partners facing the same difficulties will be put in contact, in order to help each other's and develop practical responses. Leaders from the other Workpackage will also be directly contacted by Partners in need of specific support related to Nexus assessment (WP1), policy assessment (WP2), models implementation or complexity science (WP3), Serious Gaming (WP4), exploitation of deliverables (WP6), communication (WP7).

When there is something strange in your neighbourhood, who do you call ?		
Case studies in relation with other WPs / vertical integration of case studies / SIM4NEXUS global project	Floor Brouwer	WUR-LEI
Progress of the case study / relations to stakeholders	Maïté Fournier	ACTEON

The support team will set-up a 'Helpdesk' with diverse tools, methodologies or examples. This could be available through Projectplace or any other platform that is suitable. Contacts of experts could also be provided.

Workpackage 5 activities are summarised below.
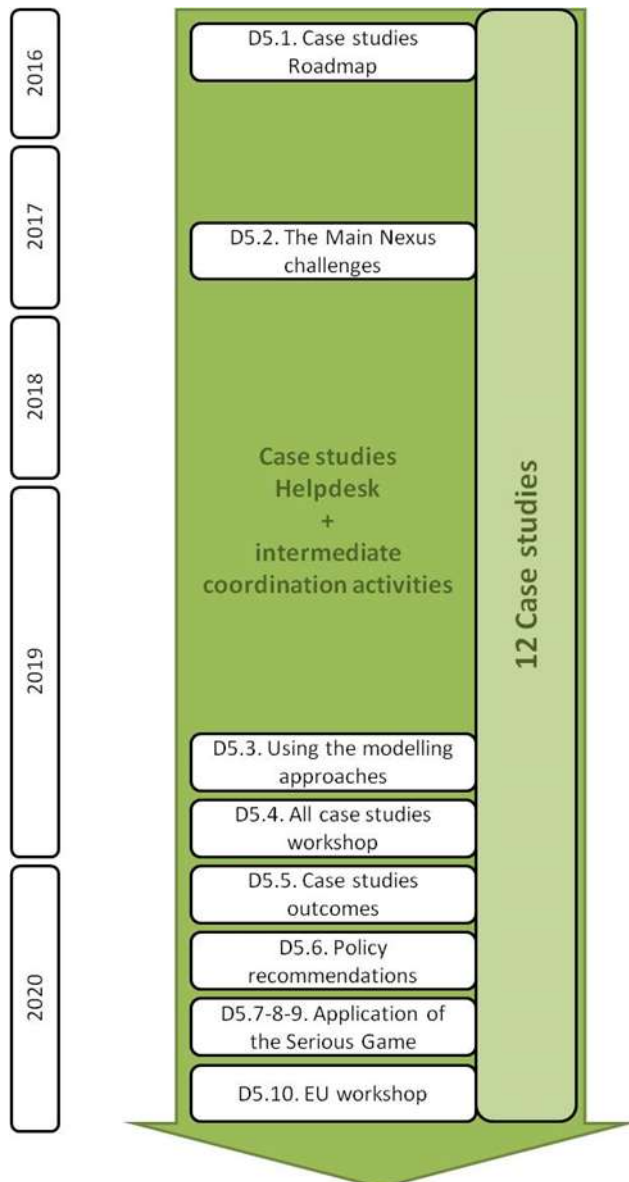
SIM4NEXUS

3 Roadmap for the case studies

This section describes the steps that each case study has to take in order to achieve the results and meet the deadlines set in the SIM4NEXUS project. The graph below details the stakeholders' process which is at the core of the case studies and how it interlinks with the other SIM4NEXUS activities.
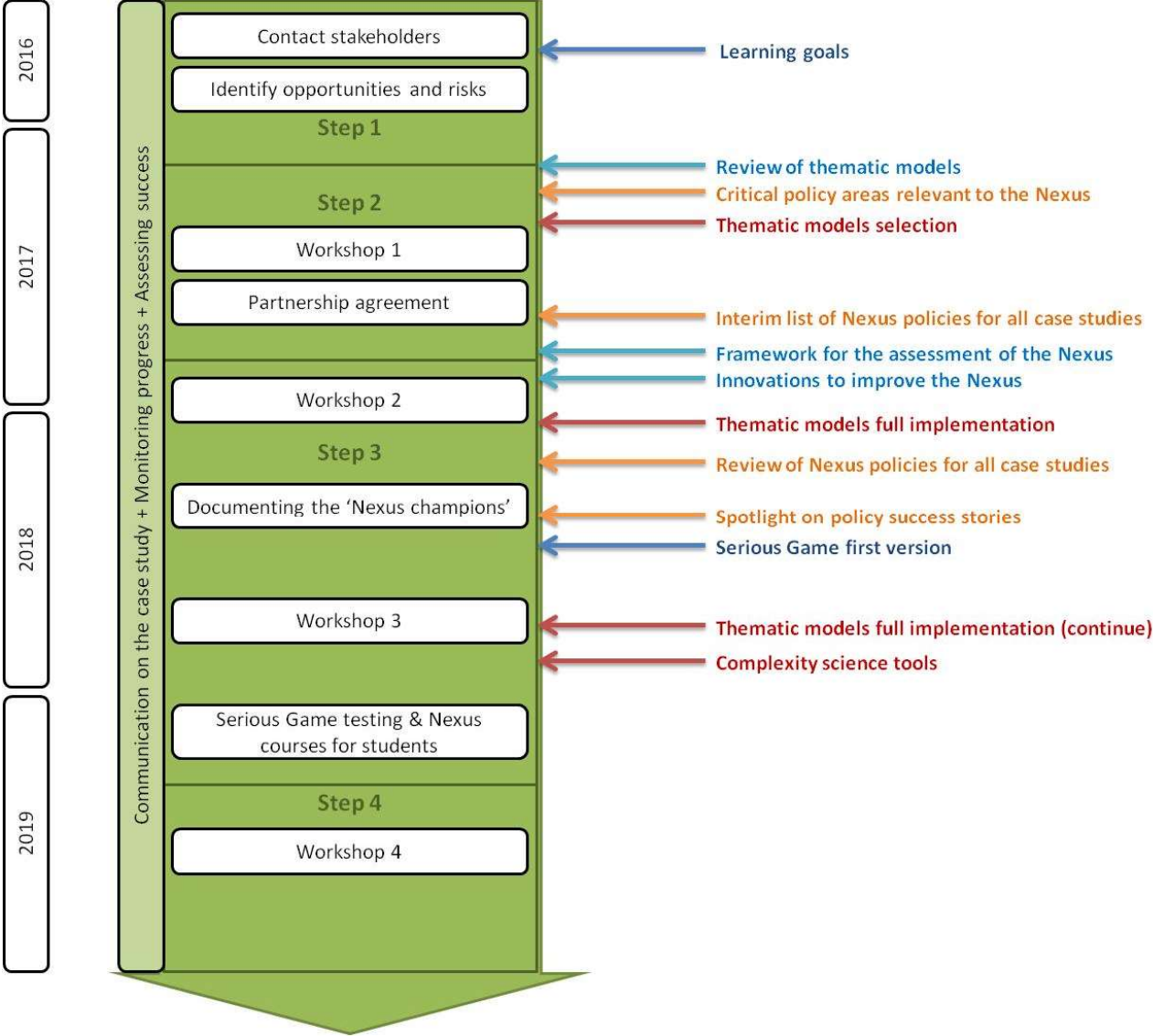
The roadmap described below is quite precise on the first year of implementation of the project (Steps 1 & 2). The later stages are less detailed as they strongly depend on the progresses of the other SIM4NEXUS tasks and the development of adequate methodologies. They will be periodically reviewed (every 6 months) in order to bring as much information to the case study leaders.

Beware! A "workshop" is a form of meeting where participants are actively involved through diverse facilitation techniques, in order to confront opinions, take decisions, test tools, share experiences, etc. This is different from a "conference" where some knowledge is passed-on to the audience without seeking for more interaction than a question / answer time. Therefore, the word "workshop" is used both for meetings within the case studies (between the case study leaders and the stakeholders) and within Workpackage 5 (between the WP leaders and the case study leaders).

SIM4NEXUS

3.1 Step 1 – Launching the case study processes

This first step is a major one since it will frame the partnership for the development of the case study, set the goals and identify the appropriate tools to meet them. It will establish an effective case study process along with all pre-conditions for making it effective. It builds in particular on establishing the terms of the "case study contract" between the SIM4NEXUS partners and other stakeholders in the case studies. The schedule and participation are defined, specifying the tasks and responsibilities between the stakeholders involved and the SIM4NEXUS partners. The pre-conditions are identified for the effective implementation, including risks, measures minimizing risks, agreement on the mechanisms for sharing information and dissemination of case study results.

Describing the case study

Octobre 2016

Identifying and contacting stakeholders

Opportunities for SIM4nexus

Setting up the case study core group

January 2017
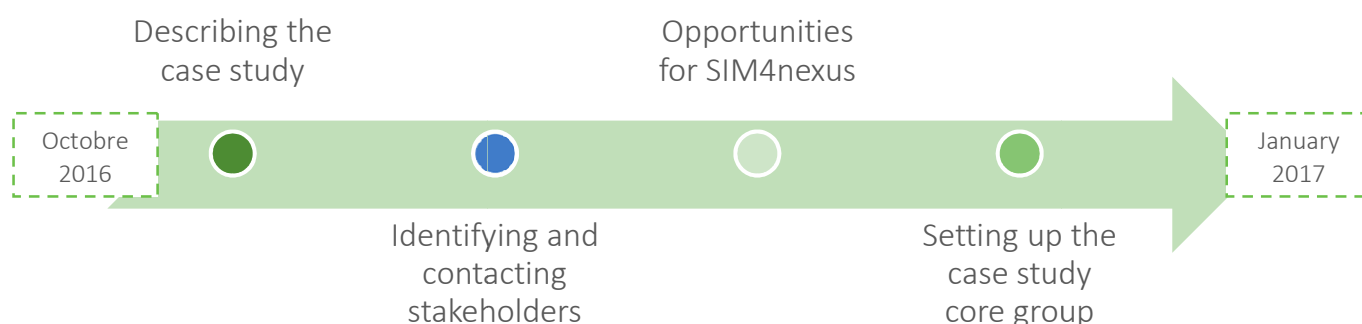
Each case study leader has already developed a poster presenting the main geographical characteristics of the area studied, the preliminary Nexus issues, and a list of potential stakeholders to be involved. The posters are used as introduction documents.

3.1.1 Identifying and contacting stakeholders

The potential stakeholders are contacted to ensure that:
- They are interested in the Nexus issues;
- They are willing to dedicate time and means to get involved in the project;
- They are interested in the tools that will be developed (the Serious Game, ...)

The discussion will also be an opportunity to make an inventory of the stakeholders' expectations from the project and what they believe to gain from it.

The case studies contact first the 'easy' stakeholders: organisations they are used to working with, organisations that have a clear interest in the Nexus issues. Through this first set of stakeholders, the case study can get access to other stakeholders, in other sectors or at the local level. It is important that stakeholders who have different views on and interests in the nexus issues are represented.

The contact can be supported by the SIM4NEXUS website, and the SIM4NEXUS leaflet which will be available at a later stage. We recommend the leaflets are translated in the local languages, for use in the case studies.

Another way to identify stakeholders is to launch a survey to a large number of communities, industries and businesses, associations, universities, etc in order to assess their interest in the Nexus.

Once most stakeholders have been contacted, **each case study draws a map of stakeholders representing their interrelations and their potential role in the project**.

SIM4NEXUS

WP5 and WP2 coordination teams will provide guidelines on how to draw such a map. The WP2 coordination team will also provide Partners with a "stakeholders' table" to describe them and keep track of evolutions, roles, involvement, etc.

Not everything can be discussed in a first contact. A second interview shall be planned with those interested to discuss the policy assessment (see 3.2.1. below).

3.1.2 Opportunities for SIM4NEXUS

It is important to identify from an early stage how SIM4NEXUS activities could fit into the stakeholders' agendas. From the Partners' own knowledge and from the stakeholders' first discussions, **each case study makes a list of**:

- Relevant events / reviews to speak / write about the SIM4NEXUS results and tools;
- Relevant events to link-up to in order to organise the case study stakeholders' workshops;
- Influential stakeholders who could support or promote the organisation of the case study stakeholders' workshops;
- Key milestones in the stakeholders' agendas between 2016 and 2020 in relation to the Nexus issues; including policy opportunities and risks (e.g. elections);
- On-going projects to link-up to SIM4NEXUS in order to give it a stronger relation with local initiatives and a larger visibility;
- Potential risks as regards the implementation of the case study as well as actions to prevent or minimize the risks.

3.1.3 Contribute to the development of the Serious Game

The Serious Game is an essential deliverable of the project and a major tool for spreading knowledge about the Nexus. Each case study will be deeply involved in the development of the Serious Game. Based on the Partners' own expectations as well as feedback from early discussions with some stakeholders, each case study defines potential uses for the Serious Game: target group, learning goals... It also identifies training opportunities (training centres). This task is carried-out in relation with WP4 coordinators.

➢ T4.1 Learning goals definition [by nov.2016 and later update]
➢ T4.2 Game logic definition - system requirements [by jan.2017]

3.1.4 Setting-up the case study core group

The case study core group involves a limited number of people (less than 10) who are deeply involved in the case study development. This group assists the case study leader in the implementation of the tasks described below. Regular meetings are planned among this group. The roles of each member are clearly identified: a partnership agreement (or equivalent) is relevant to describe these roles. The members of this group are:

- Local stakeholders who are willing to take a major role in the case study (organising workshops, providing data, providing expertise, etc) or who have a leading role among relevant stakeholders.
- SIM4NEXUS Partners who have an interest in following closely the case study.
- External advisors of the case study leader.

Based on first contacts with the stakeholders, as well as the identification of risks and opportunities, the case study leader understands who the most relevant members of this group are. A meeting is organised to agree on the tasks, schedule and governance of the group. The core group is also involved in the preparation of the 1st Workshop.

SIM4NEXUS

3.2 Step 2 – Description and prioritisation of the Nexus challenges

This second step will prepare the development of SIM4NEXUS tools on the case studies.

This sub-task collects data from the case studies, complemented by interviews with key experts, stakeholders' representatives and decision makers that are relevant to the Nexus challenges in the case study area. A workshop with relevant stakeholders and decision makers is organised in each of the 12 case studies.
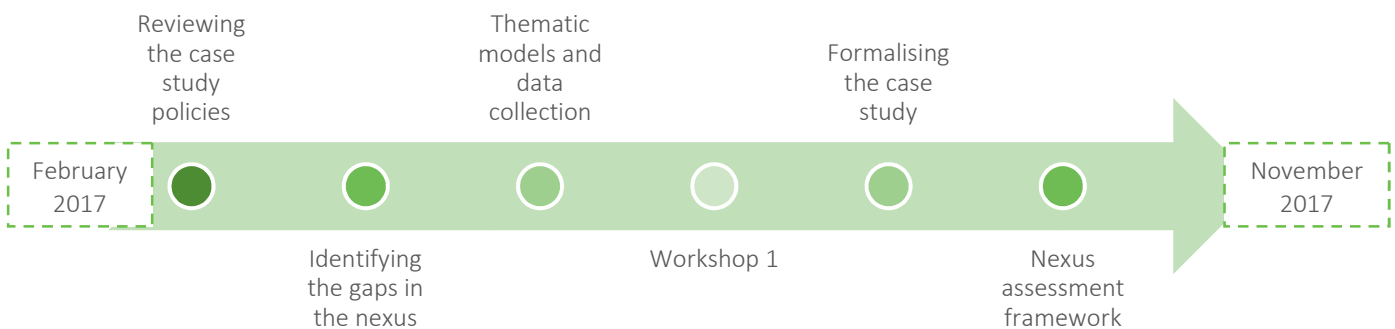
3.2.1 Reviewing the case study policies

The policy analysis aims to provide information about policy goals, instruments and implementation practices existing and in development in the case studies. This information will feed the thematic models, complexity models and the serious game.
Based on a critical analysis of documents at different scales (national, regional, local), combined with interviews with key stakeholders, each case study maps the policy environment of the case. Specifically, the mapping includes:

- socio-economic context;
- regulatory and legislative documents in the policy domains relevant to the case study;
- policy goals and instruments outlined in the regulatory and legislative documents;
- public and private stakeholders involved in the issues investigated in the case study including their vision on problems and solutions, interests, and power to influence decisions;
- official and informal rules and practices for the implementation of policies;
- policy success stories.

For their policy analysis case studies can find useful the outputs of T2.1 that will be available in May 2017. The report will include the identification of critical policy areas relevant to the nexus and an assessment of the coherence of global and EU policies in the nexus.

➢ MS14 : Interim list of nexus-related policies for all case studies [by November 2017]

The policy analysis is carried-out in collaboration with WP2. WP2 will provide support and assistance for collecting and analysing the information. Specifically, WP2 will develop a template for the collection of data, standard templates for the illustration of policy goals, instruments, actors and implementation arrangements, and a methodological framework for the analysis of policy coherence in the case studies. Furthermore, WP2 is currently working with Sardinia as pilot for policy analysis. Sardinia will test the templates and methodology. Feedbacks from the pilot case will be used to finalize the tools which will then be used in all other case studies. Finally, a work plan has been elaborated to support partners in the development of the activities related to the policy analysis (see Annex-C).

SIM4NEXUS

A thorough stakeholder analysis is needed to identify formal and informal institutions including organizations, regulations, norms and practices at case study level in the nexus domains relevant to the case study. For the policy analysis it is crucial that stakeholders with different interests representing different nexus domains contribute, which is part of the above mentioned stakeholder analysis (see 4.1.1. above). The selection of stakeholders should not be too limited to start with, as this choice is crucial for the results of the case.

3.2.2 Identifying the gaps in the Nexus

This task starts with the identification of the gaps in the Nexus, at the level of each case study. This results from the above policy analysis, as well as discussions with WP1 Partners who have described the relations between Nexus components and WP3 Partners who have done a first run of the thematic models during the 1st semester of 2017:

  ➢ T1.1 Scientific inventory of the Nexus
  ➢ T3.3 Prelim use of models to identify gaps in the Nexus in c.s.

3.2.3 Identifying relevant thematic models and collecting data

In order to fill the gap, and in coordination with WP3 Partners, the thematic models relevant for the analysis on each case study are identified as well as the input data that needs be collected. The local scenarios that will be implemented in the models are discussed.

  ➢ Task 3.3: Thematic models: Application to all case studies under selected scenarios

  • Selection and adaptation of the suitable thematic models for each simulation scenario and case study. The results of the assessment with the SIM4NEXUS Framework, which includes data collection from the case studies, will be used to facilitate the selection. [by feb.2017]
  • Preliminary use of the thematic models in order to identify the gaps in the Nexus for the case studies. It involves running the thematic models for the case studies, separately, based on general requests and guidelines implied by WP5 [by May.2017].
  ➢ D1.3 A review of thematic models and their capacity to address the Nexus and policy domains—Key Gaps [by May.2017]

3.2.4 Workshop 1 - Launching the stakeholder process

Since the first contacts with stakeholders, the SIM4NEXUS project has made progress and there is a clearer view of tools and expected results from the other workpackages. All interested stakeholders are contacted again and invited to a first Workshop.

Great care should be given to the list of stakeholders invited. It should be representative of the territory, the Nexus issues, the organisations (State and administration, businesses, research and universities, civil society and NGOs) and their different interests.

The goals of the Workshop 1 are to:

  • Present in more details the work that will be performed;
  • Present the timeframe;
  • Build the "team" of stakeholders involved in the case study.

Other goals related to local priorities can be added.

The agenda of the Workshop includes:

  • A presentation of SIM4NEXUS and the case study,
  • A presentation of the tools that will be available,

- A discussion on the policy challenges (in light of characterisation, system characterisation, policy review and baseline),
- A discussion on the main questions to be addressed,
- A discussion on relevant indicators to assess the Nexus and policies,
- A proposition of working process (including how to communicate between stakeholders and SIM4NEXUS Partners) and next steps.

The Workshop alternates plenary sessions (for information purposes: unilateral communication) and group sessions (for discussion purposes: interactive communication). The focus of the cases and main nexus challenges should be decided by the stakeholders.

Since stakeholders are participating for free, it must be clear and visible what is in for them. And what is in for them has to be framed in such a way that it resonates with what they think they would like/need to get out of the project, so as to trigger their motivation to get involved.

Guidelines on Workshop organisation and Workshop facilitation will be provided by the WP5 coordination team.
Any question on Workshop organisation can be addressed to WP5 coordinators.
If a Workshop is not a suitable tool to launch the stakeholder process, contact the WP5 coordinators and discuss alternative solutions and how to implement them.

Outputs from Workshop 1 as well as productions from Step 1 (map of stakeholders, list of opportunities for SIM4NEXUS) are integrated into:
D5.2. The main Nexus challenges in 12 case studies [by aug.2017]

Outputs from Workshop 1 also feed into:
➢ T2.2 and MS14: Interim list of nexus related policies for all the case studies [by nov.2017]

3.2.5 Formalising the case study

Formalising the case study is important to ensure the process will be followed and progress can be monitored. This task can be carried-out during the Workshop (signatures organised at the end of the day for example) or after the event (bilateral contracts). It can take different formats, depending on the legal level which is relevant for each case study purposes: letter of intent, unbinding agreement, partnership agreement, contract... It may require a significant preparation and be discussed with stakeholders at an early stage.
It is not necessary that all stakeholders involved take part in a formal agreement. It is up to each case study leader to identify the stakeholders having a major role to play and/or being mobilised all along the project.
It includes details on:
- Common objectives and expected results
- Stakeholders' tasks and responsibilities
- Timeframe, milestones and deliverables
- Monitoring and reporting
- Communication plan for the case study
- Rewards or payments if applicable

MS3. Partnership agreement in each case study [by nov.2017]

3.2.6 Setting the frame for assessing the Nexus

This task is built in close relation with Partners from WP1 and WP3 as it sets the framework for assessing the Nexus in each case study through the set of thematic models, complexity science and Serious Game.

➤ T1.5 SIM4NEXUS Framework for the Assessment of the Nexus in Case Studies [nov.2017]

3.3 Step 3 – Addressing the Nexus challenges

The third step is the operational implementation of the project's tools on the case studies.

The SIM4NEXUS project has made progress and there are preliminary results available. More specifically, this Step builds on:

➤ D3.1 Report on the "first run" simulation results of the thematic models: Identifying the gaps [available jul.2017]
➤ The "fast track" approach carried-out on the Sardinia case study which consists in following the assessment steps (thematic modelling, SDM, Serious Game) in order to establish and validate the framework which will later be used for all other case studies [results available march 2017].

The outcomes from the thematic models and complexity science modelling (available from WP3) are applied and developed on the case studies. The Nexus challenges for each case study are made explicit, (a) identifying current policy coherence and the performance of policies in contributing to resource efficiency; (b) identifying policy recommendations and innovations that arise from the thematic model results; and (c) identifying gaps in thematic models that will need to be addressed in the complexity science modelling. The results of the thematic models, and the gaps that the complexity science modelling will need to address, will be discussed in a working meeting/workshop, organised in each of the 12 case studies.
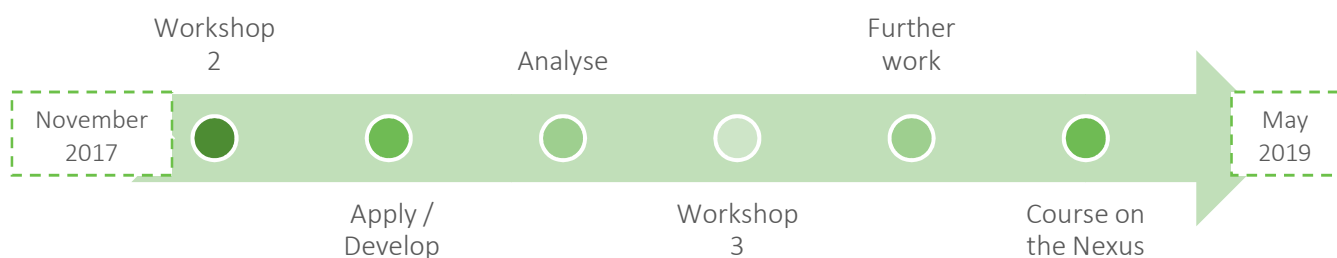
3.3.1 Workshop 2 - Presenting and discussing the trends

The second Workshop is organised about 6 months after the first workshop.
The goals of the Workshop 2 are to:

• Present preliminary trends and confront it with stakeholders knowledge;
• Present hypothesis for carrying-out the modelling on the case study;
• Start learning about the Nexus.

Other goals related to local priorities can be added.

Since this second workshop is fairly technical, not all stakeholders have to be invited and/or present. All stakeholders should however receive non-technical summary of the workshop outcomes.

SIM4NEXUS

The agenda of the Workshop includes:
- A presentation of modelling gaps,
- An analysis of interlinkages between the Nexus issues,
- The building of the conceptual model (input to the SDM),
- An analysis of incoherencies between policies,
- A discussion on complementary questions to be addressed,
- A proposition for next steps.

SIM4NEXUS Partners or other case studies' stakeholders can be invited to share experiences, especially if the models used, Nexus issues, or policies are related.

The Workshop alternates plenary sessions (for information purposes: unilateral communication) and group sessions (for discussion purposes: interactive communication).

Any question on Workshop organisation can be addressed to WP5 coordinators.

If a Workshop is not a suitable tool to launch the stakeholder process, contact the WP5 coordinators and discuss alternative solutions and how to implement them.

3.3.2 Apply / develop

This task is carried-out in close collaboration with WP3 Partners. It consists in in-house development with skype meetings between model developers and case study leads for discussing preliminary results, identifying gaps in data, collecting complementary data if required.

➤ Task 3.3: Thematic models: Application to all case studies under selected scenarios (c) Full implementation of the thematic models for each case study for specific scenarios [until may.2018]

The case study leaders shall have already a clear understanding of the relations between the Nexus components, in order to accompany this step. The representation of the Nexus components in the case study, as well as their relations, can be drawn schematically, highlighting the inputs and outputs of the system. This exercise shall be developed in close collaboration with WP3 experts and a few key stakeholders that have a clear understanding of the relations between different Nexus sectors. This schematic representation of the case study can be used as the basis for building the complexity science modelling.

3.3.3 Analyse

This task is carried-out in close collaboration with WP2 Partners. The outputs of the thematic models will shed light on policy synergies and conflicts that may not have been apparent from the initial mapping of the policy context and assessment of coherence. Based on this analysis the initial policy assessment will be finalized. Furthermore, positive "Nexus-compliant" initiatives or "Nexus champions" will be thoroughly documented in order to draw lessons-learnt.
➤ D2.2: Final review of nexus relevant policies at national and regional scale (July 2018)
➤ D2.2 : Nexus-relevant policies at national and regional scale [by July 2018]
➤ T2.3 - Spotlight on policy success stories [by nov.2018]

3.3.4 Workshop 3 - Presenting and discussing the results

The third Workshop is organised about 9 months after the second workshop. The SIM4NEXUS project has made progress and there are preliminary results available. More specifically, it builds on:
➤ MS22 Serious Game tool first version (T4.5) [available jul.2018]

The goals of the Workshop 3 are to:
- Present preliminary results and confront it with stakeholders knowledge;
- Start discussing potential for policy improvement;
- Presenting "Nexus-compliant" initiatives.

Other goals related to local priorities can be added.

The agenda of the Workshop includes:
- A presentation of modelling results,
- A presentation of positive initiatives (from the case study itself of from abroad) that have integrated different Nexus sectors or solved policy incoherencies,
- Testing the Serious Game,
- A discussion on complementary questions to be addressed,
- A proposition for next steps.

SIM4NEXUS Partners or other case studies' stakeholders can be invited to share experiences, especially if the models used, Nexus issues, or policies are related.

The Workshop alternates plenary sessions (for information purposes: unilateral communication) and group sessions (for discussion purposes: interactive communication and Serious Game testing).

Any question on Workshop organisation can be addressed to WP5 coordinators.

If a Workshop is not a suitable tool to launch the stakeholder process, contact the WP5 coordinators and discuss alternative solutions and how to implement them.

3.3.5 Further work on data collection, modelling, adaptation to the Serious Game

This task is carried-out in close collaboration with WP3 Partners.
- ➢ Task 3.3: Thematic models: Application to all case studies under selected scenarios (d) Additional unforeseen applications of the thematic models after the initial development of the complexity models, if needed, as and when required by WP5 or by T3.4 or 3.5, or, during the validation of the models.
- ➢ Task 3.5: Implementation of the complexity science tools for each case study under different scenarios.

The results of this work and the feedback from case studies will be reported in:
D5.3. Using the modelling approaches in 12 case studies [may.2019]

3.3.6 Secondary or University courses on the Nexus and testing the Serious-Game

The Serious Game is a useful tool for students to explore policy interlinkages, decision-making, modelling, game designing, impact assessment... Student courses would also offer the opportunity to test a first version of the Serious Game during the school year 2018/2019. It builds on:
- ➢ MS22 Serious Game tool first version (T4.5) [available jul.2018]

This requires that each case study identifies the appropriate courses (topic, level), meet the teachers and involves them in the project, organises the appropriate setting for testing the Serious-Game, defines what to test and how to report to WP4 developers.

The experiences from each case study will be reported in:
D5.7. Report on the application of the Serious Game for secondary and University education [dec.2019]

SIM4NEXUS

3.4 Step 4 – From results to policy recommendations

The fourth step will draw on step 3 results to provide recommendations both at the case study level and at the EU level.

Adaptations are identified to make policies Nexus-compliant, as well as innovations, low-carbon options and the preconditions (governance and institution, knowledge, financing, etc.) for putting policy recommendations in practice. This builds on: (a) a social analysis of the social implications of the proposed policies, including the pre-conditions for policies; (b) a series of interviews with key stakeholders and decision makers – in particular those which might be affected most by a Nexus-compliant implementation of policies, or which behavioural change is central to the achievement of a resource efficient Europe; (c) the organisation of an interactive workshop using the Serious Game developed under WP4.

Each case study leader is responsible for these tasks with a strong support from WP2 and WP4.

First set of policy recommendations

June 2019 · · Workshop 4 · December 2019

3.4.1 First set of policy recommendations

Building on the complementary work carried-out in Step 3 (additional modelling, outcomes from Workshop 3...), **a note is written presenting first policy recommendations for the case study level**. The contents of such note still need to be discussed. It could include recommendations to reduce policy conflicts and strengthen policy synergies; to address trade-offs; at national and regional, or also EU and global levels.

3.4.2 Workshop 4 - From results to recommendations and lessons

The fourth Workshop is organised about 9 months after the third workshop. The SIM4NEXUS is close to its end and it is time to draw conclusions and recommendations for the future.

The goals of the Workshop 4 are to:
- Sharing and confronting the results;
- Co-develop policy recommendations;
- Evaluating the case study.

Other goals related to local priorities can be added.

The agenda of the Workshop includes:
- A presentation of modelling results,
- A revised analysis of interlinkages between the Nexus issues,
- Playing the Serious Game,
- A discussion on policy recommendations at the case study level,
- A discussion on policy recommendations for the EU level (a synthesis of these recommendations as well as best practices will feed into WP2 reports);

SIM4NEXUS

- Evaluating the case study process,
- Evaluating the added-value from SIM4NEXUS.

SIM4NEXUS Partners or other case studies' stakeholders can be invited to share experiences, especially if the models used, Nexus issues, or policies are related.

The Workshop alternates plenary sessions (for information purposes: unilateral communication) and group sessions (for discussion purposes: interactive communication and feedbacks).
Any question on Workshop organisation can be addressed to WP5 coordinators.

If a Workshop is not a suitable tool to launch the stakeholder process, contact the WP5 coordinators and discuss alternative solutions and how to implement them.

The conclusions of the third workshop will be reported in:

D5.7. Report on the application of the Serious Game for supporting decision making [dec.2019]

In addition to its policy-focus, the workshop will also discuss the added-value of the Serious Game as support to policy making (be it for: understanding the Nexus challenges, screening policy areas and challenges that requires "adaptation", identifying policy recommendations, or establishing pre-conditions for their effective implementation).
and:

D5.5. Twelve reports, combined, presenting the outcome of task 5.2 [dec.2019]

The workshop will help evaluating the overall participation implemented under Task 5.2, and its outcome/results – identifying in particular adaptation in the process that could be proposed for enhancing the policy-relevance of process and of the tools applied.

Finally, this Workshop will also help gather feedbacks, political solutions and/or new governance options to be used in WP2 outputs, especially :

- D2.5: Strategies towards a low-carbon and resource efficient Europe [by May 2020].

3.5 Horizontal activities

Horizontal activities must be implemented all along the project [2016-2020]. There is no milestone for these activities but they fully contribute to the regular reporting for Workpackage 5 deliverables and for the SIM4NEXUS project progress reports.

The case study partners will adhere to the ethics requirements and adopt what is agreed in Deliverables D9.1, D9.2 and D9.3 Partners using personal data (e.g. names, e-mail address and function) will adopt the templates from D9.2.

3.5.1 Communication within the case study

Each case study develops its own communication strategy and tools. The interactions with the stakeholders shall not be limited to the four Workshops. They shall be regularly informed of progresses made in the case study, and more broadly about the Nexus, to ensure they stay mobilised all along the Project.
Each case study leader must identify its target publics and the suitable tools to address them.
This activity is developed together with:
  ➢ Task 7.4 Dissemination of case studies.
  ➢ The partners can make use of the tools under WP7, in particular the templates for developing notes, developed under Task 7.6.

3.5.2 Monitoring the case study progress and evaluating success

Key Performance Indicators (KPI) are being developed by SIM4NEXUS. The case studies will contribute to these KPI.
Task 1.5 of SIM4NEXUS "Framework for the Assessment of the Nexus in Case Studies" will also develop a step-by-step methodology to assess the context status and the impact of specific interventions from a Nexus perspective. It is planned to develop a Framework for the Assessment of the Nexus for the Case Studies (WP5) using and expanding the CLEWs framework, which will be specifically used for the resource systems analysis. Each of the sectors will be analyzed, following roughly the logic of the Drivers-Pressures-State-Impacts-Responses (DPSIR) framework, pursuing a weighted intersectoral mapping.

Therefore, the following is aimed to complement the above indicators by evaluating the participatory process within each case study.

Defining success

What does it mean for a case study to be successful?
The case study will be successful if it has brought an added-value compared to the initial situation. The added-value is estimated both from the SIM4NEXUS Partners point of views (scientific, new methods) and from the stakeholders' point of view (improved policies and policy making, enhanced knowledge about nexus, consequences of applying policies considering all nexus concepts).
It should be distinguished between outputs, outcomes and impacts:
  • Outputs are the direct immediate (short-term) results associated with a project and are relatively easy to count (e.g. # of meetings; # of stakeholders involved).
  • Outcomes are the medium term consequences of the project and are usually related to the project goals (e.g. # of policy makers using the serious game to understand nexus relations).

- Impacts are the long-term consequence of a project (e.g. improved policy coherence). It is very difficult to ascertain the exclusive impact of a project since several variables can contribute to long-term impacts.

Therefore to assess the success of case studies, we will only use <u>outputs</u> (or performance indicators).

Defining indicators

The indicators need to be measurable, usable, sufficiently detailed and structured so that they can be applied in multiple settings and on multiple occasions, they should be reliable (consistent through time and space) and should accurately reflect reality.

The number of indicators shall be limited. Each case study leader is free to add to the list for its own purposes (internal procedures, link with another project, etc.). Specific indicators could also be added based on the assessment of opportunities and risks carried-out in Step 1: these will be tailored to each case study unique situation.

A proposed list of indicators can be based on Özerol & Newig (2008), who identify five key constituents that affect the success of public participation processes:

1) the scope of the participants: stakeholders analysis and prioritization; transparent process for decision making; sound representation of a broad and cross-cutting section of society and interest groups;

2) communication with the public: establish a two-way interaction; continuous exchanges and feedbacks; objective, accessible, consistent and concise information supplied; progress towards goals; detailed agenda with deadlines; easy access to information; provide a ''space of exchange'' where people feel comfortable sharing their needs, concerns, and values;

3) capacity building: training activities, common understanding of the results; use of outreach material (or even field trips) to facilitate the understanding and the process; provide adequate scientific and technical resources;

4) timing: early involvement; continuous involvement;

5) financing of participation: organising activities, involving stakeholders, employment of consultants.

A common list of indicators for all case studies will be developed along the KPI and the Task 1.5. by the WP5 coordination team, and discussed with the case study leaders. The case study leaders will add their own list of specific indicators.

Defining monitoring tools and reporting

Monitoring should be carried-out every 6 months and reported. Some indicators being related to workshops, it is strongly recommended to ask for the participants' feedbacks immediately at the end of the workshop (either orally, if time allows, or in writing). Tools to collect participants' feedbacks will be presented in a guideline to be written by the WP5 coordination team.

The WP5 coordination team will produce synthesis based on the reporting in order to get a global overview of all case studies' progresses, and identify good practices and/or room for improvements.

The reporting must be consistent with the reporting organised under WP8 and WP1.

SIM4NEXUS

4 Specific tools developed for case studies

This chapter describes briefly some specific tools or some adaptations that have been identified for particular case studies. This not an exhaustive list. All case studies are specific in a way.

4.1 Global case study

The Global case study does not require specific "tools" at this stage but rather adaptations on the above roadmap because the worldwide scale does not fit with all recommendations. There is no stakeholder at the global scale, at least not "stakeholders" as defined for the other case studies. The Global case will target global bodies and UN institutions. Therefore, approaching them and working with them will be entirely different. Indicators will also be adapted in order to refer to the SDG – Sustainable Development Goal. The WP5 lead will discuss the two case studies how we could establish mutual relations between the global & continental case studies and the regional & national & transboundary cases.

4.2 European case study

The European case study is somehow similar to the Global case study since it will target EU institutions and cannot follow exactly the recommendations set-up in Chapter 3. The stakeholder process is less formal in the continental. SIM4NEXUS will organise events to present and discuss progress at the EU level (in November 2017, we might organise an event on the Nexus and the low-carbon economy). The European case will cooperate with WP2 to involve stakeholders at EU level. Relevant policies and policy documents for the nexus will be gathered in T2.1 by WP2 and shared with the European case study. The European case study will also proceed at a higher speed as regards thematic modelling, thus providing trends and contexts to the national, regional and transboundary case studies. The WP5 lead will discuss the two case studies how we could establish mutual relations between the global & continental case studies and the regional & national & transboundary cases.

4.3 Azerbaijan

The Azerbaijan national case is also identified from the start as a specific case. Indeed, the leading Partner is not settled in the country and does not speak the language, though there is work experience there and a good understanding of local issues. The stakeholder process will therefore be limited. It is likely that no more than 2 Workshops can be organised with local authorities and experts. The range of stakeholders may also be limited due to other participants' vetoes. The case study will however follow the assessment part set under WP1, WP2 and WP3. First discussions with local experts have demonstrated that implementing the Serious Game there is not realistic.

4.4 Germany – Czech Republic – Slovakia

There is a need to enhance the transboundary features of this case study, and WP5 leads will clarify this with the three partners involved.

The lead partners (with the help of the WP5 coordination team) should regularly evaluate the common points: these can be related to the Nexus issues, to the models used, to the stakeholders involved, to the development of the Serious Game, ... Each of the Steps listed in the roadmap is the occasion to review the links between the three sites and to develop tailored solutions to increase the level of integration.

Solutions to foster transboundary cooperation include:

- **Carry-out the policy reviewing at the national scales**. The policy reviewing to be carried-out under WP2 should be conducted up to the national scale, even if the case studies focus on a more local level for further work. This will help both to understand better the local situations and to widen the views of Partners (and hopefully help identify connexions between the cases).
- **Broaden the awareness raising campaigns**. Communication and awareness raising campaigns carried-out by all three cases should not be limited to the local populations and decision makers but reach for a broader audience. Common communication tools can even be developed by the three cases, providing the messages and the target publics are similar.
- **Participation in one another's workshops.** Each country invites the case study leaders of the other countries (workshop 1) but also relevant stakeholders from the other countries (workshops 2 & 3). Foreign participants can be invited to contribute during the workshop by presenting challenges, solutions, and approaches. Language barrier can be a constraint in the choice of the relevant foreign participants or in the organisation of the workshop (translation to be provided).
- **Evaluation of the global sustainability of local solutions.** There is a high chance that each case study develops its own solutions regarding its own policies and issues, adapted to its local stakeholders' needs. However, in the framework of Step 3, it is relevant to evaluate how locally designed solutions can be integrated at a broader scale, and to ensure that they do not have negative side effects on the neighbour country.

5 References

Özerol, G. & Newif, J. (2008). Evaluating the success of public participation in water resources management: Five key constituents. *Water Policy, 10,* 639-655.

Appendix A: Kick-off meeting, Session on "Stakeholder engagement"

SIM4Nexus – Kick-off meeting – 12th july 2016

Session on "Stakeholder engagement"

See powerpoint presentation for an introduction to the session

The session was facilitated by **Alexandre Bredimas** (Strane innovation), **Floor Brouwer** (LEI), **Maïté Fournier** & **Pierre Strosser** (ACTeon environment). This document summarizes the findings of each of the 4 groups.

General messages

- The **focus of individual case studies** (which NEXUS challenges to address) needs to be further discussed and clarified – including as part of the stakeholder process to be established in each case study. The poster session and follow-up discussions helped identifying potential priority issues for individual case studies. It also stressed possible links between case studies, be it because they address common NEXUS questions (e.g. Sweden and Latvia, or Sardinia and Greece) or because they could be "vertically integrated" (e.g. the global case study delivering a global socio-economic scenario that is used as input to the European case study that will deliver an EU socio-economic scenario that will be used as input to some national case studies…).

- The **role of the thematic models, the complex modeling and/or the Serious Game in the case studies** will be clarified in coming months, specifying in particular: (a) the goal of such application – informing, raising awareness, training, supporting decision, ... in line with the possible uses identified under WP6; (b) the steps that will be followed in case studies that are relevant to specific/other WPs (e.g. preparing the "basic information pack" for case study leaders – link to WP7; defining the assessment framework – link to WP1; analyzing policies in practice – link to WP2; applying models/the Serious Game – link to WP3 & WP4….).

- Much attention has been given to the **stakeholder processes** to be put in place in individual case studies, in particular during the group sessions (see below). This will be the focus of the forthcoming activities of WP5 and of the preparation of the first deliverable of the WP (Deliverable 5.1) to be delivered by the end of October 2016.

- **Preparatory activities before launching the stakeholder process** in individual case studies are seen as key to success. Suggestions for preparatory activities made by the group include:
  - the preparation of a "communication pack" for case study leaders including: a leaflet presenting SIM4NEXUS – translated into case study languages, a short presentation (see discussions between WP7/WP3) of each model, a short presentation note of what the serious game is expected to do, etc.;
  - the organization of a training session for case study leaders on the different models / Serious game (using Aqua Republica as illustration) so case study leaders understand the potential of these tools and can easily communicate about them;
  - learning how to facilitate stakeholder processes and workshops.

What do we expect from stakeholders?

- to share their interest in, and expectations from, our work / our approach – in particular how this can support decision making
- to get their views on the Nexus (what do they understand of the interlinkages, synergies and trade-offs ? what are the most relevant linkages ?) and across different scales
- to get their narratives : what is urgent, popular, … to help frame a communication that speaks to the stakeholders
- to structure the research methodology in a way that is meaningful to people
- to understand their perception and priorities vis-à-vis Water/Energy/Food
- to exchange knowledge and best practice with us
- to provide information & quantitative data, to find-out how diverse the country is
- to cooperate
- to build together our assessment, tools and recommendations
- to specify their needs, problems, (policy) positions, bottlenecks
- to discuss responses as well as actions they are willing to do or to pay for
- to apply the Serious Game
- to be clients for the Serious Game
- to test the SIM4NEXUS concepts, tools, etc. in the reality of decision making
- to provide feedbacks on their experience in using the Serious Game, and on the effectiveness of the Serious Game/the SIM4NEXUS approach in delivering "better policy options"
- to encourage future interest / use / involvement via their involvement in the process
- to be committed in SIM4nexus, through publications, being a member of the board, …
- to refine or redirect the use cases, to prioritize the issues
- to identify the Nexus hotspots in the case study

What can SIM4NEXUS offer to stakeholders (to persuade them to work with us)?

- a training capacity
- a capacity to address questions and assumptions that stakeholders ask themselves
- good solutions for policy & decision-makers, that match their interests
- knowledge and insights
- an awareness of how they contribute to solution or how they avoid problems elsewhere
- an awareness of the 'hidden' Nexus issues
- delivery of timely and relevant information
- an "open space" for addressing policy integration issues that usually does not exist in individual MS/case studies
- an objective (external) point of view for addressing case studies issues on which conflicts might exist
- a platform for exchanging experiences between case studies (including from outside the SIM4NEXUS case study family), a way to stimulate exchange of experience

Is there a logical approach to mobilize stakeholders?

- make a mapping of stakeholders of the different policies
- start with a wider group of stakeholders, then narrow down to a smaller size, more targeted

- involve them early in the process
- identify "influencers" that can indirectly affect policy (even if they are not policy makers themselves)
- identify the dynamics in the panel
- identify "policy & institutional opportunities" that might welcome input from SIM4NEXUS

Which conditions to ensure effective and successful stakeholder mobilisation?

- have the right attitude
- put in place the right approach – and start as early as possible
- identify the right time/place to mobilize/involve them in discussions
- be there at the right time (in the policy process)
- look for policy-making opportunity windows
- look for existing policy movements and visions that can be supported with evidence
- identify representative stakeholders, and manage a small group
- established networks of stakeholders are presumably easier to use
- identify and effectively respond to the demands / questions of stakeholders (including for assessing conflicting views)
- identify possible "risks of failing" with the process, and adapt the process so as to minimize risk
- possibly limit to less conflictual stakeholder groups (how disparate can the interests be?)
- keep them involved throughout the process as much as possible, share results, seek feedback
- effectively communicate (requires changing the presentation of information)

What does it imply for the way to do research?

- to shorten/focus the list of targets/goals
- to get data from 3rd parties (as much as possible)
- to get feedback on data from stakeholders
- to seek feedback from stakeholders, which might possibly make the research goal more targeted
- to take the risk that some stakeholders can make the research target more complicated
- to listen to their views without interfering
- to increase our awareness of levers and barriers for implementation in practice
- to get them motivated so that they will participate
- to deal with conflicting objectives

What do I need as "case study lead" to support my case study work and process?

- patience
- the capacity to listen carefully without revealing ones thoughts
- a definition of stakeholders and end-users (maybe some overlaps) or even teachers (for the game)
- the partners' network is important for identifying stakeholders
- feedbacks through inquiries and interviews
- feedbacks from selected stakeholders – future users of game
- a common approach / instructions?
- have a consistent narrative across the consortium
- an understanding of how to communicate science to non-scientists

- support communication on awareness building on the nexus in a neutral way, and on the sim4nexus approach
- an understanding of existing constraints (politics, interests)
- a one-page pdf of what serious game is or will be (for advertising purposes)
- workshops, and incentives to come to the workshops (how to make it attractive to all ?)
- a 'forum' or event in which stakeholders will exchange knowledge / ideas for each use case
- a serious game that is fun, engaging and informative

Overall, it is important that researchers from other WPs recognize the central role of Case Studies in SIM4NEXUS – and allocate resources accordingly.

More generally, two issues to be considered & discussed within the wider frame of the SIM4NEXUS project were identified: (a) how to **connect to the MAGIC project**, and in particular avoid duplication/enhance synergies in the approach of both projects to stakeholders; and, (b) how to mobilize – or connect to – **other models** that might be available in case studies and that could strengthen the knowledge and answers to policy questions?

Appendix B: Synthesis from the case studies interviews

INTERVIEWS

WP5 CASE STUDIES

SYNTHESIS

0 Introduction

A first series of interviews between the WP5 coordination and the SIM4NEXUS case study leads was proposed to launch the WP5 process and activities. The main objectives of these interviews were:

➢ To collect more specific information on individual case studies as input to the development of the WP5 case studies roadmap (Task 5.1 and Deliverable 5.1);

➢ To identify/design specific support activities for WP5 case study processes in line with the wishes and requirements identified by case study leads.

The list of questions was developed on the basis of the WP description presented in the Grant Agreement; the case studies posters prepared for the Den Haag Kick-Off Meeting (KOM); and the first Partners' wishes and requirements identified during the SIM4NEXUS KOM. The idea is to initiative discussions and thinking, so practical answers and solutions are progressively spelt out. The results presented in this report will guide the implementation of case study activities and process.

The SIM4NEXUS project gathers 12 case studies at different geographical scales:

• Global scale : Global case study
• Continental scale : European case study (sometimes referred to as "EU case study")
• National scale : Azerbaijan, The Netherlands, Sweden, Latvia, Greece
• Regional scale : South-West UK, Andalucía, Sardinia
• Transboundary scale : East Germany/Czech Republic/Slovakia (in this summary report, Slovakia is presented separately because there are some local differences that the coordinators had to be aware of) and France/Germany (referred to as "Upper Rhine" since the case study does not cover both countries but only the border regions along the Rhine).

1 The Nexus issues

What are the main "NEXUS questions", challenges or sectors, you think should be the focus of your case?

Only the first word is counted

> ## Water
>
> ## Energy and the low-carbon economy
>
> ## Agriculture, forestry or land-use
>
> ## Climate-change

Water is the main issue in 5 case studies: 3 cases are concerned with water scarcity (Greece, Andalucía and Sardinia), 2 cases are concerned by floods (Germany / Czech Republic and South-West-England). Energy and the transition towards a low-carbon economy is the main focus for 4 case studies (The Netherlands, the Rhine, Latvia and Azerbaijan). Three case studies face land-management issues but these are very heavily linked to the other sectors: forestry & energy for Sweden, agriculture for Europe, competition between all sectors for land at the Global scale. Finally, Slovakia's principal threat is the change in local climate patterns.

The table below shows all key words used by the case study leads to describe their situation.

Dark grey: prior sector mentioned
Light grey: other sectors mentioned

	Water	Energy	Low-carbon economy	Agriculture	Climate Change	Land	Forest	Food	Tourism	Biodiversity
Europe	▓	▓	▓	■						
Slovakia	▓	▓			■	▓		▓		▓
Global	▓	▓		▓		■		▓		▓
Sweden	▓	▓			▓		■			
The Netherlands	▓	▓	■	▓		▓				
Upper Rhine	▓	▓	■			▓		▓		
Latvia	▓	▓	■	▓	▓	▓	▓			
Azerbaïjan	▓	■		▓	▓	▓	▓			
Greece	■	▓		▓	▓			▓		▓
Germany / Czech Republic	■	▓			▓	▓		▓		
South-West UK	■	▓		▓		▓				
Andalucia	■	▓		▓	▓					
Sardinia	■	▓		▓					▓	▓

SIM4NEXUS

All case studies wish to take into account water and energy issues, either as the main focus of their study or as an impacted sector. If the sectors 'food' and 'agriculture' are put together, we can also consider that all case studies (except Sweden) wish to include it in their analysis.

  ➢ This confirms that the case studies are in line with other 'WEF-Nexus' initiatives (nexus of water-energy-food).
  ➢ The SIM4NEXUS case studies add at least a fourth sector to the WEF-Nexus core, be it Tourism (Greece, Sardinia, Andalucia, South-West UK), Land-management (Germany / Czech Republic, Rhine, The Netherlands, Slovakia and the Global case), or Forestry (Sweden, Latvia, Azerbaïjan).
  ➢ Half of the case studies explicitly refer to climate-change as a field of investigations, though most probably all cases will include it as a parameter in the modeling.
  ➢ Biodiversity is never considered as a principal focus; only three cases mention it as a sector negatively affected by incoherencies in the policies.

How did you come up with the idea of the case study? What has been the main driver(s) or factor(s) that explain(s) the case study you have proposed for SIM4NEXUS?

Open answers

It was requested from SIM4NEXUS itself

We analyse there are local issues

It is a follow-up to a previous project

We will link to another research project

The area is advanced on energy transition

It brings light on the organisation

The case studies were chosen for a wide variety of reasons but the principals are that the Partners are involved in other WPs and needed experimental cases; and that they analyze their own country or region faces Nexus challenges. Six case studies are also linked to other research projects, either past or present.

  ➢ This shows that the case studies are very closely linked to research needs and Partners' research fields. They were not explicitly motivated by a social or political demand (though we can assume the Partners have a good understanding of the local issues). This will require an important dialogue with the stakeholders in order to ensure that their own interests match with SIM4NEXUS, and that they agree on the scales, topics and methods of each case study.

SIM4NEXUS

What is your main goal/expectation with the implementation of your case study?

Open answers

	Raising awareness	Acquiring knowledge	Influencing political decisions	Training stakeholders	Developing methods &tools	Advertising the organization	Sharing experience	Providing money-saving solutions
Germany / Czech Republic	X							
The Netherlands	X			X	X			
Azerbaïjan	X			X				
Andalucia	X		X					
Sardinia	X		X					
Latvia	X	X	X					
Global	X	X						
Europe	X	X						
Slovakia	X	X					X	
Greece		X	X	X				
Sweden		X				X	X	
South-West UK			X			X		X
Upper Rhine					X			

The case studies have different goals. The most prominent one is raising awareness, followed by acquiring knowledge, two goals that are expected from H2020 research projects. Influencing political decision and training stakeholders with the Serious Game come next, and are closely linked to the project's deliveries (respectively in WP2 and WP4).

➢ Raising awareness will require identifying precisely the target groups at an early stage, developing educational tools and outreaching activities, sharing results on a regular basis. This should be taken into account by WP7. Moreover,

➢ Influencing political decision is more complex since it requires to understand how political decision is made, to be present in the political arena and to match the political agenda. The case study leaders will need to be supported in this by WP2.

➢ Sharing experience is hardly mentioned though it could help significantly the development of the case study. The input experiences could be brought by the stakeholders of the case study, by stakeholders from other related case studies, or by other Partners. This highlights the need for WP5 to promote and assist in the organization of experience sharing events.

➢ The shared expectation to acquire knowledge demonstrates how little the Nexus is yet sufficiently understood. Therefore, the main concern of the case study leaders is on learning and not yet on developing tools or solutions, though a few Partners have this ultimate goal in mind. This should be of concern for WP6 activities.

SIM4NEXUS

Do you see specific interactions and synergies with other SIM4NEXUS case studies on the same challenges?

Large double arrows: both Partners recognize the link between the cases.
Thin arrows: only one Partner identified the link between the cases so far.
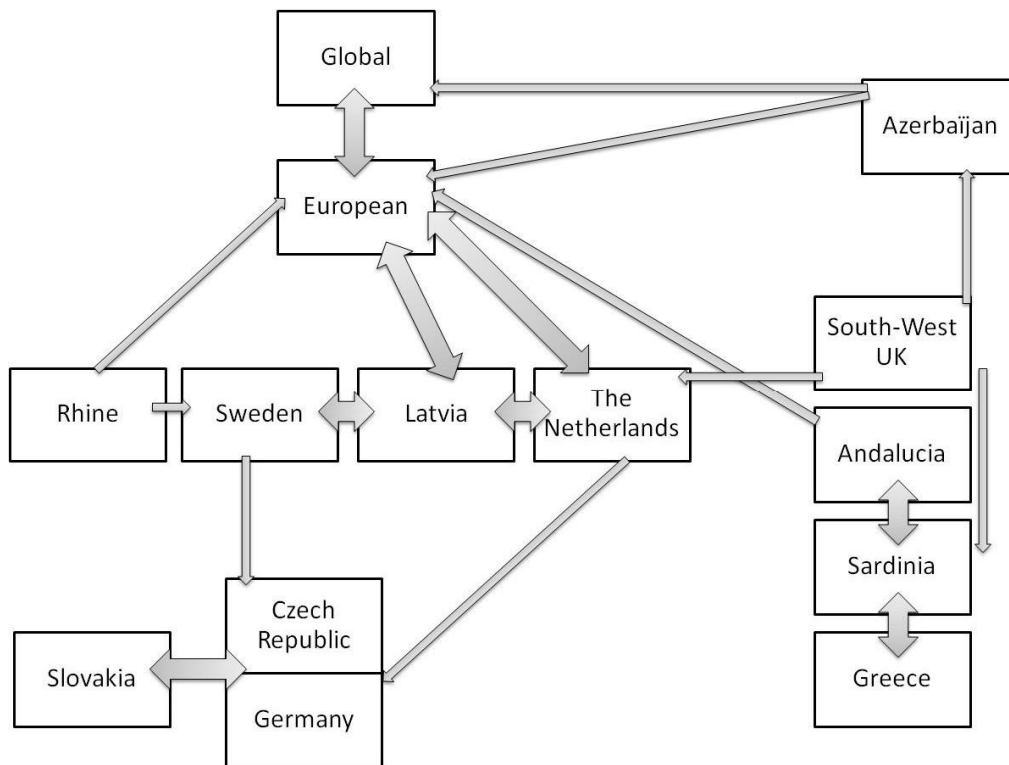
Many Partners have expressed the wish to create a link with the Continental case study, which could have been expected considering the strong relation between EU regulations and directives, and the national or regional policies.

Interestingly, there are two different groups that emerge from this analysis:

➢ The "water-group" (Greece, Sardinia, Andalucía, South-West UK) have all identified Water as the main issue on their territory. They share concerns as regards Tourism. And they also share the ambition to influence political decision through the project (only Latvia also had this expectation).

➢ The "energy-group" is so far composed of the Rhine, Sweden, Latvia and the Netherlands. Azerbaijan surely could join the group but when the interviews were carried-out, the Partners had no confirmation the case would stay in the project, which explains why it was hardly mentioned. They are all cases at the national level, except for the Rhine which has a transboundary dimension.

SIM4NEXUS planned to integrate vertically (from global to regional) the cases as well. There is a clear wish for integration with Latvia and the Netherlands (both national cases).

➢ Andalucía could be a case of integration between the EU and the regional level; whereas the Rhine could be a case of integration focusing on the transboundary issues. The Azerbaijan case would offer the opportunity to analyze the differences between EU and non-EU countries.

Finally, smaller groups will also exist, on more specific issues, for example: Sweden and Latvia on forestry issues, Germany / Czech Republic and Slovakia on extreme weather events, South-West UK and the Netherlands on flood mitigation, the EU and Global cases, Slovakia and Latvia on biodiversity, South-West UK and Azerbaijan on fossil fuels, etc.

➢ WP5 coordination team will need to promote the development of the groups and ensure it leads to concrete outcomes: sharing of experiences, participation in one another events, common publications, common recommendations, etc.

SIM4NEXUS

2 Synergies with on-going initiatives

	Do you know of on-going policy initiatives?	Do you know of other research initiatives?	Have you identified opportunities planned on 2016-2020 where SIM4NEXUS results could be used / fed into?
Global	Sustainable Development Goals; FAO; WWF	OECD Circle IIASA	not checked yet
Europe	Paris-agreement Water-Framework-Directive Common Agriculture Policy	MAGIC ICT4WATER DAFNE	WssTP conferences
Greece	Water policy plans Operational plan on agriculture	LIFE projects Adapt2climate AgroClimaWater i-adapt Adapt2Change CYPADAPT	national network on agriculture
The Netherlands	nothing very precise	MAGIC the Delta Program	Dutch Delta Program
Latvia	National strategy on low-carbon economy Energy strategy until 2030	Life projects BONUS Miracle project	Annual international exhibition & conference "Environment & Energy"
Sweden	Swedish Forest Act Environmental Code Chapter 2 EU Water Framework Directive Swedish environmental quality objectives Forest certification	Claudia Teutschbein (hydrological processes in a changing climate) Giulia Vico (micro-climates; water-forest interactions)	European Geosciences Union Swedish Hydrology Days HUVA day ELKRAFT
Azerbaïjan	UNECE	UNECE	UNECE
Germany / Czech Republic	Water Framework Directive; Floods Directive	some hydrological studies	Annual conference of the European; Geosciences Union (EGU)
Slovakia	Former support from the government but no longer...	University in Kosice; Institute of Hydrology - Bratislava	People & Water annual event
Upper Rhine	?	OUI Biomasse SCCER–CREST activities (Switz.)	TRION conference
South-West UK	very few policies initiatives that address the issues of the nexus uncertainty due to Brexit	Many! West Country River Trust projects STEPPING UP WEFWEBS RESilience to cope with Climate Change in Urban arEas (RESCCUE)	West Country River Trust events Annual conference on "water efficiency" Royal Geography Society IAHR conference
Andalucia	Water Framework Directive Common Agricultural Policy	Evaluation of the effects of rural development programmes Trade-offs between economic development and the environment Models to support agriculture policy CAPRI-water Cf research centre in Cordoba	Many ! EU conference on agriculture economics
Sardinia	Regional rural development programme National adaptation plan Water Framework Directive	not much at this stage	Italian Society of Climate Science Dresden Nexus conference

SIM4NEXUS

The results presented in the table above are a fixed picture of the state of knowledge regarding the possible synergies, collected at the start of the SIM4NEXUSproject. The goal of asking the questions was also for the Partners to be conscious that they need to find these synergies and understand the benefit they could draw from it in order to help the development of the case study. These informations are regularly evolving and will be periodically assessed.

The grey cells show where information was lacking (dark grey: no info available, light grey: some info but not sufficient). Partners have, since then, taken steps in order to refine the information.

➢ The two transnational cases are the ones where most efforts are needed to understand the political context, to be aware of research initiatives to link-up with, and to identify the networks and events to mobilise.

➢ The Azerbaijan case lead Partner changed very recently, which explains why little information has so far been collected; however, the UNECE initiative will be a good basis.

➢ Globally, all other cases have a good view of potential synergies to develop the cases further.

3 The thematic models

The Grant Agreement already gives information on the potential use of thematic models for each case study. The survey aimed at clarifying the level of knowledge the Partners had on these models, as well as the potential uses in the case studies.

Among the models chosen in SIM4NEXUS, have you already identified 1 or several models that you intend to use?

Open answers

Which of the Sim4Nexus models do you plan to use ?
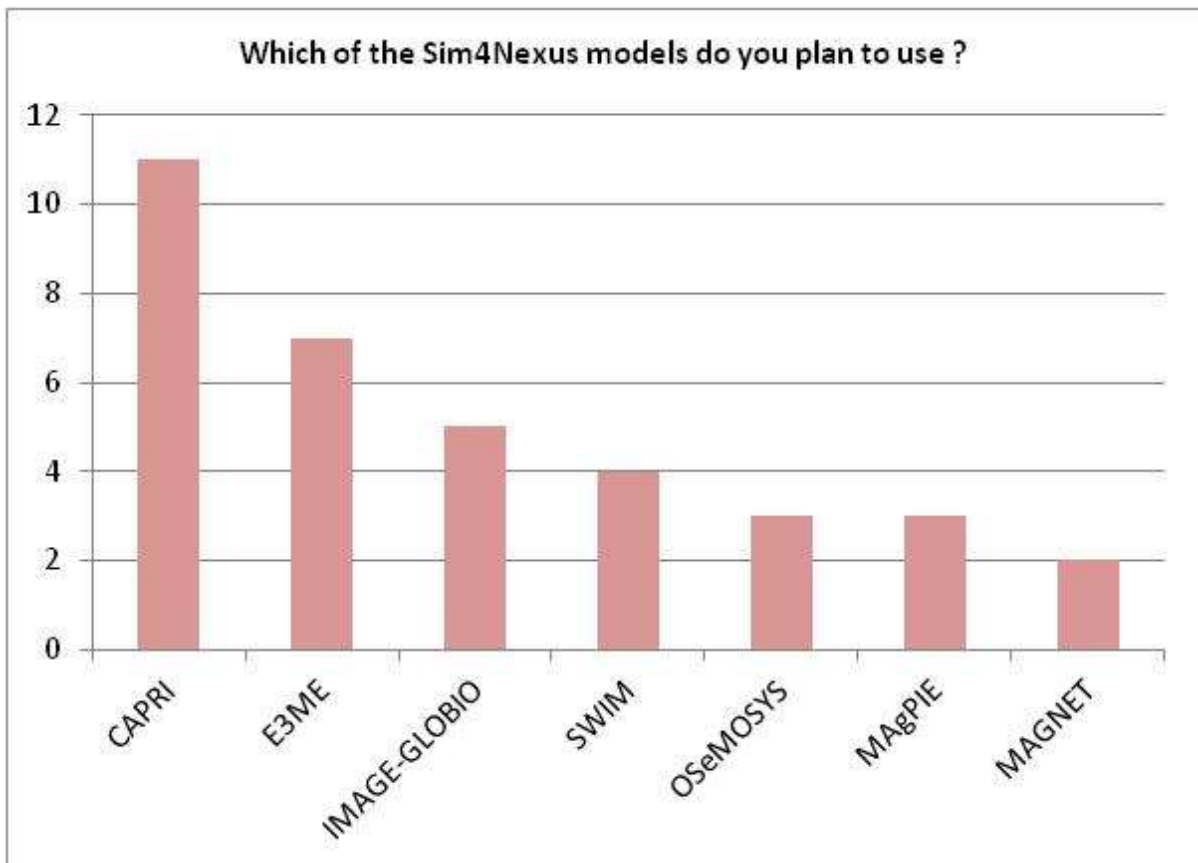
CAPRI is by far the model that all Partners would like to use on their respective case studies. The other models are less well-known. It is expected that the production of models' summaries, as well as demonstrations during the next WP5 workshop will improve the above figures.

Though some models are not suitable to produce data at the national or regional scale (like IMAGE or MAGPIE), they are still very useful to produce trends and contexts that will help case studies build their scenarios and hypothesis. Therefore, leaders of the case studies at national or regional scales are interested in these models.

In more details, the answers have been as follows:

Bold letters: the case study leader is already using the model
Dark red: geographical scales for which the model has been developed
Light red: geographical scales for which the model could be used

	CAPRI	E3ME	IMAGE-GLOBIO	SWIM	OSeMOSYS	MAgPIE	MAGNET
Global	yes	yes			yes	yes	yes
Europe	**yes**	**yes**	**yes**				**yes**
Greece	yes		yes		yes		
The Netherlands	yes	yes	yes	yes		yes	
Latvia	yes	yes					
Azerbaïjan	yes	yes			yes		
Sweden			yes	yes			
Slovakia							
Germany / Czech Republic	yes			**yes**			
Upper Rhine	yes			yes		yes	
Andalucia	**yes**						
South-West UK	yes	yes					
Sardinia	yes	yes	yes				

This is striking that some Partners have expressed an interest in models which are not suitable for their geographical scale (white cells in the above table). For example, E3ME is relevant at the national, continental or global level; but Partners from Sardinia and South-West England have expressed an interest in it. Once again, discussions between the modellers and the case study leaders during the WP5 workshop will help clarify the models that best match the needs of each case.

	Have climate change scenarios been used/applied?	*Have socio-economic scenarios been used/applied ?*	*Are there other models that are applied or have been tested in your case study area?*
Global	RCP	SSP	?
Europe	RCP	SSP	Global Trade Analysis Project (GTAP); Global Biosphere Management Model (GLOBIOM)
The Netherlands	RCP	SSP	National Hydrological Instrument (NHI)
Sweden	RCP	SSP	HBV; HYPE; "Heureka Forestry Decision Support System" (DSS);
Azerbaïjan	RCP	SSP	water basin methodology
Germany / Czech Republic	RCP; Eurocordex	SSP	agricultural production models
Slovakia	National scenarios	National scenarios	?
Latvia	no	National trends	?
Andalucia	ISPRA data; ACME data	SRES; national data (no regional)	?
Greece	Cf LIFE projects; National Observatory of Athens	Too uncertain due to economic crisis	PRECIS; MIKE; MODFLOW
Upper Rhine	RheinBlick 2050; KLIWAS	SRCAE (not scenarios but trends)	POLES; IMACLIM-R
South-West UK	many	many	Many, for example:CADIS
Sardinia	downscaled GCMs	to be investigated	crop models ; models to quantify evapotranspiration

SIM4NEXUS

Half of the case studies already have climate change and socio-economic scenarios in line with the IPCC scenarios (RCP & SSP). The other half also has locally developed scenarios which will have to be taken into account when confronting the SIM4NEXUS results with the stakeholders.

> ➢ Inputs from the stakeholders as regards their knowledge of climate or socio-economic trends will be important, especially if it is specific to a territory or to an economic sector.
> ➢ Locally developed scenarios will have to be confronted to the IPCC scenarios chosen within SIM4NEXUS to spot and explain the differences.

Other models than the seven chosen within SIM4NEXUS could potentially be used to answer specific issues on each case study. If other models are relevant for the objectives of the SIM4NEXUS project, WP3 Partners and the case study leaders will need to detail in which conditions the additional models will be used and by whom.

4 The Serious Game

Have you already used or applied Serious Games?

Dark grey: the case study leader or colleagues have used Serious Games
Light grey: the case study leader has already thought about potential users
White: the case study leader is interested but unclear in which framework to use it

The Netherlands	Vincent : Yes. Nico : No but familiar with Agen-Based-Modelling. Potentially used for policy makers.
Germany / Czech Republic	Yes, cf the 'Keep Cool' game.
South-West UK	Yes, there is one in development for Somerset. Potentially used for graduate and post-graduate students.
Global	No, but we had developed the EUruralis discussion tool based on model results.
Upper Rhine	No but interested in the learning goals. Potentially used for students of Freiburg, Basel, KIT, ENGEES.
Andalucia	No but interested. Potentially used for students (or even decision-makers?).
Greece	No but interested. Potentially used for students.
Latvia	No but interested. Planned to be used for stakeholders - decision makers at local and regional authorities.
Slovakia	No but interested. Potentially used for stakeholders.
Sardinia	No but interested for training purposes.
Azerbaïjan	No but interested for training purposes.
Europe	No but interested.
Sweden	No but interested.

Only four case studies have experience with Serious Gaming, either as players or colleagues of developers. All Partners are interested and eager to know more about it before deciding how to use it. The demonstration organized in the WP5 Workshop will hopefully change the above answers and provide a clearer picture of the potential end-users.

➢ WP5, in coordination with WP4 and WP6, will further monitor the potential for using the Serious Game in the case studies, and will have to provide assistance in due time to develop, test and spread the Serious Game.

SIM4NEXUS

5 The relations with stakeholders

	Have you already worked with stakeholder in past projects and activities?	Have you already applied stakeholder mapping in other projects?	Have you already applied stakeholder facilitation techniques?	Do you have officers to support you in: communication; workshop organisation; stakeholder facilitation; education?	Do you plan to involve teaching and research organisations in your case study?
Latvia	Yes	Yes	Yes	Yes	Yes
Upper Rhine	Yes	Yes	Yes	Yes	Yes, the Universities of Freiburg and Basel, the KIT, ENGEES.
Slovakia	Yes	No	Yes	No	No
The Netherlands	Yes	No	Yes	Yes	Master students ?
Germany / Czech Republic	Yes	The mapping of political levels is completed.	Yes : present results and discuss them	Yes	University of Potsdam
Europe	Yes	No	Yes but help welcome	Yes	Feasible
Greece	Yes	No	Yes but help welcome	Not really	PhD Students or post-docs : data collection. Serious Game testing : diploma thesis level.
South-West UK	Yes	No	No	Press officer	Yes to validate the SG and the models
Sardinia	Yes	No	No	Communication officer	Yes up to PhD level, and linked with Crenos
Global	Yes : "lunchtime seminars", workshops	Lists	No	communication; workshop	No
Azerbaijan	Yes	No	No	?	?
Andalucía	Long time ago	No	No	Logistics	Not clear yet
Sweden	No or limited	Part of another project	No	Information officer	Yes to support the case study

Nearly all case study leaders had experiences with stakeholders, though the level of engagement was quite diverse. The answers also show there are different interpretations of the meaning of "stakeholder mapping". There is a clear need for guidance on stakeholder facilitation techniques, even for some Partners who have experienced it before. Half the Partners do not have a full support team within their organization to assist them in communication, meetings, workshops, conferences or teaching. Finally, teaching is foreseen in half of the case studies, mostly targeting the Masters, PhD or Post-Docs levels.

➢ Special assistance could be provided to the Andalucía and Sweden cases.
➢ Guidance must be provided by WP5 on stakeholder mapping and facilitation techniques. Training is planned during the WP5 workshop. Regular contacts by the WP5 coordination team all along the project's duration will ensure the Partners get the necessary motivation and methods to deeply involve stakeholders in the case study.
➢ The lack of support teams in the organizations must be taken into account when designing events.
➢ The involvement of students will probably become feasible once the timelines, the tools and the Serious Game become clearer. It must be monitored throughout the project.

SIM4NEXUS

What do you expect from "stakeholder mobilisation" in your case study? What will be its added value?

Share different ideas, opinions, issues

Raise their awareness and understanding

Integrate expert knowledge

Get feedback on the modeling work and research results

Sharpen the research questions

Contribute to the implementation of solutions

Legitimise the use of EU finding

Half of the case studies intend to take an open approach and collect the stakeholders' ideas, opinions or issues into their work.

➢ The case studies that had already a clear list of stakeholders fit in this first answer: which means their list of stakeholders was built with this expectation in mind. We can assume the stakeholders already identified are willing to share, have trust in the Partner, and are expert enough to voice different opinions or identify issues.

The second answer matches the case studies' overall goals (chap.1) where raising awareness ranked first among the 12 cases.

➢ Communication and outreaching activities seem to be a must for most cases.

'Integrating expert knowledge' and 'getting feedback on research results' would rank second as well if combined.

➢ This demonstrates that the choice of the stakeholders is also driven by their ability to analyze and validate the SIM4Nexus results. 'Integrating expert knowledge' will require the stakeholders are involved at an early stage in the project whereas 'seeking for their feedbacks' can wait until preliminary results are produced.

The other answers are specific to one or two cases only. Hardly any project seems concerned about producing solutions for the stakeholders to implement.

SIM4NEXUS

What are pre-conditions that will make "stakeholder mobilisation" in your case study successful and effective?

Provide answers to their concerns

Discuss with them on a regular basis

Know their expectations / their agenda

Build trust

Be clear why you contact them

Provide translation (language barriers)

Have face-to-face meetings

Be patient and listen to them

Dedicate means

Be clear what can be achieved

Share outreach material

Share information among case studies

There is a wide range of answers to this question, highlighting the diversity of experiences of each case study leader. All contributions are useful and must be kept in mind throughout the project to ensure the stakeholders stay on board.

The answers also demonstrate a real concern for the stakeholders' issues and needs, and an acknowledgment that good personal relations and transparency are at the core of their engagement.

More specifically, will you need support to mobilise stakeholders? If yes, which type of support?

The WP5 coordination team will have to provide tailored support to the case studies, as all cases are very much different. However, some common needs could be extracted from the interviews:

> Guidance on how to work with and mobilise stakeholders;
> Support to involve high-ranked stakeholders;
> Training on stakeholder involvement.

The WP5 workshop in Barcelona (November 2016) will be a first step in guiding the Partners through their relations with stakeholders.

6 The case study development process

The SIM4Nexus project has only just started, the workpackages are structuring the work, the case studies are getting organised. So far, neither global framework nor guidance has been given. The table below is an overview of the actions already undertaken or planned within each case study, at the moment of the interview (see interview dates in Annexe 7.1).

	Team organisation (also with SIM4NEXUS Partners)	Research, bibliography on the Nexus in the case study	Stakeholders contacted	Case study goals, frame, …	Events related to case study
Global	planned	on-going	not started	on-going	not started
Europe	planned	not started	planned	planned	not started
Greece	on-going	on-going	planned	on-going	not started
The Netherlands	planned	on-going	planned	planned	not started
Latvia	ready	on-going	on-going	ready	not started
Sweden	ready	on-going	planned	planned	not started
Azerbaïjan	on-going	on-going	not started	planned	planned
Germany / Czech Republic	on-going	on-going	planned	not started	not started
Slovakia	ready	on-going	planned	ready	planned
Upper Rhine	planned	on-going	planned	planned	not started
South-West UK	planned	on-going	planned	planned	not started
Andalucia	on-going	on-going	planned	not started	not started
Sardinia	ready	on-going	on-going	ready	not started

Color code					
not started yet					
planned in coming weeks					
on-going					
ready					

At the time of the interviews, not all Partners have clearly defined the teams working on the case study. New colleagues are being mobilised and must be trained, alliances needs to be built with other organisations on the consortium. Nearly all Partners have declared they are undertaking bibliography reviewing in order to understand better the Nexus on their case study, which is an important step to define the frame of the case and to identify the thematic models that will be needed. The interviews being conducted in summer, first contacts with the stakeholders were planned for later when people are more available. The case studies are at very different levels of definition: the first contacts with the stakeholders shall also help define the Nexus questions and the boundaries of the case study. Finally, nearly no event was yet planned in relation to the SIM4NEXUS case study, which could have been expected, considering that the workplan is not yet defined.

> ➢ Such monitoring of the progresses of the case study must be continued within WP5 and linked to the future Roadmap.

7 Overall conclusion and need for support

The Partners were asked what the WP5 coordination team could do to build a community of practice among the case studies. The following ideas were given:

➢ Identify the relevant links between the case studies;
➢ Update the case study posters;
➢ Provide the plan for developing the case studies in accordance with the other WP (assign tasks to the case study leaders);
➢ Send-out the invitations to other Partners to contribute in the case studies;
➢ Promote publications that case study leaders can write together;
➢ Keep having bilateral discussions to support each case study implementation;
➢ Organise group discussions, webinars or events on specific topics, methods or difficulties;

The interviews were also an opportunity for the Partners to identify specific support requested from the other WP. Some of the needs had already been identified during the Kick-off meeting, and have been repeated. They are considered as key elements to help them further develop their case study and meet the objectives of SIM4Nexus:

➢ Share a common language within the Partnership : WP1 should see to that;
➢ Understand the Nexus interlinkages that are crucial for each specific case study;
➢ Receive guidance on policy analysis;
➢ Know the thematic models better, in order to choose which ones are appropriate;
➢ Get a clearer view of what will be demanded from the other WP;
➢ Get feedback from the Sardinia case in order to understand the relations between thematic models, complexity science and the Serious Game;
➢ Identify the conferences to attend, in order to bring an added-value for the case study and the whole project;
➢ Get support on communication material (case study flyers, case study web page)).

It can be noted that questions about complexity-science modelling, about reporting on the nexus-champions, or about organising trainings, have not been expressed, though it is part of the project. This is because these tasks are foreseen much later in the project, and do not worry the case study leaders yet.

8 Annexes

8.1 List of persons interviewed and interview dates

CASE STUDY	Persons interviewed	Date of the interview
Greece	Maria Papadopoulou & Chrysi Laspidou	09/08/2016
South-West UK	Lydia Vamvakeridou-Lyroudia	11/08/2016
The Netherlands	Vincent Linderhof & Nico Polman	12/08/2016
Slovakia	Michal Kravcik	19/08/2016
Upper Rhine	Christophe Rynikiewicz	19/08/2016
Latvia	Ingrida Bremere & Daina Indriksone	23/08/2016
Czech Republic	Jan Pokorny	26/08/2016
Azerbaïjan	Georgios Avgerinopulos & Chris Arderne	05/09/2016
Global	Elke Stehfest	12/09/2016
Europe	Jason Levin-Koopman & Floor Brouwer	22/09/2016
Andalucia	Maria Blanco	26/09/2016
Sardinia	Simone Mereu & Antonio Trabucco	06/10/2016
Sweden	Claudia Teutschbein & Giulia Vico	14/10/2016
Germany	Tobias Conradt	20/10/2016

SIM4NEXUS

8.2 Interview template

Name(s) of person(s) leading the interview
Name(s) of person(s) interviewed + their role in the case study
Date of the interview
Report written by
Date of approval of the report

1/6. ABOUT THE NEXUS ISSUES

How did you come up with the idea of the case study? What has been the main driver(s) or factor(s) that explain(s) the case study you have proposed for SIM4NEXUS? (e.g. area where you already perform activities, demands from the government/services, link to other initiative, importance of the question raised, etc.)

What is your main goal/expectation with the implementation of your case study? (e.g. develop new knowledge, raise awareness – of whom?, train people, influence decision – if yes, which ones, etc.)

What are the main "NEXUS questions", challenges or sectors, you think should be the focus of your case? Why? *(why do you see this as priority).* And has the poster session in The Hague changed the list of Nexus challenges you had in mind, that could be investigated in your case study?
(read list of written contributions). How would you recommend to clarify the NEXUS in the context of your case study?

Do you see specific interactions and synergies with other SIM4NEXUS case studies on the same challenges? If yes, which case studies? How could "better integration" with such case studies be put in place? What are the potential benefits of your Case Study to be linked-up to other Case Studies at different spatial scale?

2/6. ABOUT SYNERGIES WITH ON GOING INITIATIVES

Do you know of on-going policy initiatives that are taking place in the same territory (at national scale) that we could liaise with? If yes, which ones – and how should/could we best integrate/liaise/work with these different initiatives?

Do you know of other research initiatives that are taking place in the same territory that we could liaise with? If yes, which ones – and how should/could we best integrate/liaise/work with these different initiatives?

SIM4NEXUS

In particular, are there <u>other</u> models that are applied/have been tested in your case study area? If yes, which ones – and how to get organised to benefit of (the results of) such initiatives?

_____

Have you identified opportunities (major workshops and conferences, policy review processes, milestones in the implementation of (national) policies and strategies....) **planned between 20yes6-2020 where SIM4NEXUS results could be used/fed into? If yes, which ones – and how to get organised to make this happen? If no, how to identify such opportunities?**

_____

3/6. ABOUT MODELS and SCENARIOS

Among the models chosen in SIM4NEXUS, have you already identified yes or several models that you intend to use? (reminder: models include MAGNET, MAgPIE, CAPRI, SWIM, E3ME, IMAGE-GLOBIO, OSeMOSYS) If yes, explain the reason(s) why this or these models seem(s) adapted/relevant.
What outputs / variables do you need for your case study?

_____

In the past, have you already used or applied the outcomes from one of these models – or used the results of one of these models? If yes – explain under which circumstances, and what for?

_____

Do you use – or have you used – <u>other</u> models? If yes, which ones, for which territory and for which purpose?

_____

Have climate change scenarios developed at the national/regional level(s) been used/applied in your case study? If yes, indicate which climate scenario and their time horizon(s).

_____

Have socio-economic scenarios developed at the national/regional level(s) been used/applied in your case study? If yes, indicate the sectors considered in such scenarios and their time horizon(s).

Ex. Pop° growth, GDP, consumption and production patterns, ...

4/6. ABOUT SERIOUS GAMES

Have you already used or applied Serious Games? If yes, which Serious Game – for which purpose, with whom, with which results? What are the main lessons and recommendations you have from such application that could guide the application of SIM4NEXUS Serious Game in your case study/all case studies?

_____

5/6. ABOUT STAKEHOLDERS PROCESSES AND SCIENCE/POLICY INTERFACE

Have you already worked with stakeholder in past projects and activities? If yes: in which circumstances, with which stakeholders, for which purpose, and how ?

What do you expect from "stakeholder mobilisation" in your case study? What will be its added value?

What are pre-conditions that will make "stakeholder mobilisation" in your case study successful and effective? Explain why.

Have you already applied stakeholder mapping in other projects? If yes, for which purpose/in which project?

Have you already applied stakeholder facilitation techniques? If yes, which techniques, for which purpose, in which project?

In your organisation, do you have officers/experts specialised in: (a) communication; (b) workshop organisation; (c) stakeholder facilitation; (d) education?

Which stakeholders will you mobilise in your case study? *(read the list that was presented in the poster, complement if additional ideas have emerged)*

Have you already worked with these stakeholders before? If yes, with which ones in particular – and under which conditions?

Who are the 2-3 key stakeholders that it will be essential to work with/mobilise in your case study process? Why, when and how to ensure they "are on board"?

Which additional stakeholders should be mobilised to strengthen the case study process (e.g. to cover a wider range of NEXUS issues and sectors)? During the poster session at the Kick-off meeting, some participants recommended you to contact additional stakeholders *(read the list)* => do you think these are relevant and should be mobilised?

Do you plan to involve teaching and research organisations in your case study? If yes: which ones, how, and for which purpose? (e.g. collecting data, strengthening curriculum on NEXUS issues, testing and applying the Serious Game, etc.)

What are the key issues/challenges that you need to address today to develop/finalise/refine your case study – and to develop your own case study road map?

Since the Kick-off meeting, which steps have you taken with regards to the organisation of your case study?

Which additional (preparatory steps) do you intend to do in the coming weeks/months to refine/develop your individual "case study" road map?

In particular, have you contacted SIM4NEXUS partners who registered their interest in your case study *(read the list)*? *If none registered*: Did you have the opportunity to discuss with other Partners from SIM4nexus project and are there persons you would like to team-up with?

Which specific support will you need to implement your case study in line with SIM4NEXUS principles and objectives?

More specifically, will you need support to mobilise stakeholders? If yes, which type of support?

What should we (WP5 coordination) put in place to support the WP5 activities, and to build a "community of practice" for all case study leads/partners/experts involved in SIM4NEXUS case studies? Mention the level of interaction you consider important (regular Skypes with a couple of case studies, bilateral Skypes, physical meetings…).

Any additional issue, comment, contribution you would like to make at this stage (be it linked to the case study, case study road map, stakeholder mobilisation, wider issues relevant to the SIM4NEXUS project….)?

Appendix C: Task 2.2 Time schedule of activities for policy analysis of case studies

T2.2 AND T2.3 WORK PLAN FOR POLICY ANALYSIS OF CASE STUDIES

	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Project month / YEAR 2017 – YEAR 2018	nov	dec	jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec	jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec
WP5 meeting in Barcelona: illustration of approach and time schedule for WP2.2	■																									
Official kick off WP2.2 (some activities start before, depending on status of case studies)				■																						
Understanding the current state of policy coherence																										
Identify nexus sectors that are relevant to the case study		■																								
Analyse socio-economic context based on document review		■	■																							
Collect national and regional regulatory, legislative, planning and programming docs for relevant nexus sectors in case study		■	■																							
Identify public and private stakeholders who may be affected or have an effect on policies in the relevant nexus sectors: fill in the stakeholder register (excel template)		■	■																							
Using stakeholder register, identify key stakeholders to interview to understand what happens in everyday practice of policy implementation, identify their interests and their influence in policy making				■																						
Extract information from policy docs (fill in excel spreadsheet)					■																					
Analyze excel spreadsheet: generate summary outputs about goals, instruments and implementation practices of each nexus sector (use provided templates)						■																				
Organize and conduct interviews; a standard questionnaire is provided with questions about: formal and informal implementation practices, solutions found to implementation problems, synergies and conflicts across sectors, success stories, existing problems, interaction with stakeholders in other sectors, etc.; the questionnaire will have to be adapted to the specificity of the case studies when needed							■																			
Analyze interviews and generate outputs (use provided templates): e.g. stakeholder power/interest grid, stakeholder conflicts/synergies, impacts of stakeholder conflicts and synergies on policy coherence, informal practices in the different sectors, success stories								■	■																	
Assess policy coherence: interactions between goals, instruments and implementation practices across sectors and between national and regional policies (use provided template)								■																		
Write report to send to WP2 by end of July 2017 (use provided template)		■	■	■	■	■	■	■	■																	
Generate synthesis of results in the format that is required for the models																										
Adapt the outputs of the analysis to the needs of the models (in dialogue with WP3, WP4); iterative process that evolves together with the development of the models										■	■	■	■	■	■											
Improving policy coherence																										
Based on output of models develop policy recommendations																		■	■							
Collect data on success stories																				■	■					
Update report with success stories and policy recommendations																						■	■			