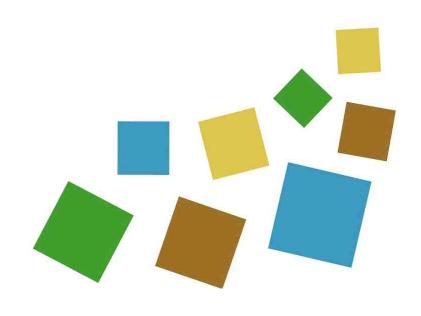


D2.3 – update 1

Template for national information collation

Jos Brils, Linda Maring et al.



Deliverable D2.3 – update 1: Template for national information collation



Document information

Project acronym: INSPIRATION

Project full title: INtegrated Spatial Planning, land use and soil management Research

ActTION

Project type: Coordination and Support Action (CSA)

EC Grant agreement no.: 642372

Project starting / end date: 1st March 2015 (month 1) / 28th February 2018 (month 36)

Website: www.inspiration-h2020.eu

Document status / date: Updated version as of 13/07/2015

Deliverable No.: D2.3

Responsible participant: DELTARES (participant number 14)

Due date of deliverable: 01/06/2015

Actual submission date: 01/06/2015

Date of update 1: 13/07/2015

Dissemination level: PU - Public

o - i ubiic

PP - Restricted to other programme participants*

RE - Restricted to a group specified by the consortium*

X CO - Confidential, only for members of the consortium*

(* = including the Commission Services)

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To be cited as:

Brils J, Maring L, Darmendrail D, Dictor MC, Guerin V, Coussy S, Finka M, Bal N, Menger P, Rehunnen A, Zeyer J, Schröter-Schlaack C, Villeneuve J, Gorgon J, Bartke S (2015): Template for national information collation. Update 1 version as of 02.07.2015 of deliverable D2.3 of the HORIZON 2020 project INSPIRATION. EC Grant agreement no: 642372, UBA: Dessau-Roßlau, Germany.

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List of abbreviations

DoA Description of Action

IAB International Advisory Board

NFP National Focal Point

NGO Non-Governmental Organization

NKS

Rational Key Stakeholder
R&I

Research & Innovation

SPI

Science Policy Interface

SRA

Strategic Research Agenda

SSW(-system) Soil-Sediment-Water(-system)

WP Work Package



1. Introduction

1.1. About INSPIRATION

The aim of INSPIRATION is to establish and promote the adoption of a strategic research agenda for land use, land-use changes and soil management in the light of current and future societal challenges. Main objectives are:

- Formulate, consult on and revise an end-user oriented strategic research agenda (SRA);
- · Scope out models for implementing the SRA;
- Prepare a network of public and private funding institutions willing to commonly fund the SRA.

The proposed methodology is based on a multi-stakeholder, multi-national and interdisciplinary approach that covers the variety of stakeholders (public bodies, business, science, citizens and society) and the variety of relevant funders. The vehicle to engage with all relevant stakeholders across the Member States is a National Focal Point (NFP) in 16 countries. The NFP's will interview national key stakeholders (NKS), perform a desk study and organize workshops with national stakeholders of funders, end-users and researchers across the various soil and land management disciplines. The goal of these exercises is to gather information and support the main objectives as stated above.

The results will be taken up, structured along four integrative themes (1) resources demand and efficiency; 2) natural capital stewardship; 3) land management; 4) net impact on global, EU and local scale) and merging into thematic knowledge needs to satisfy the as yet unmet societal challenges and to ensure that knowledge contributes primarily to enable meeting these challenges.

Based on these results, a cross-country and cross-discipline dialogue will subsequently be organized among the relevant user communities, funding bodies and scientific communities in Europe in order to reach a trans-national, prioritized SRA as well as a model for execution of this SRA. Thus a SRA will be produced which will give national funders confidence that for each Euro they spend, they will get multiple Euros worth of knowledge in return in order to address their national societal challenges.

Learn more about the INSPIRATION coordination and support action on the project's website: www.inspiration-h2020.eu

1.2. This deliverable

This report – i.e. INSPIRATION deliverable 2.3 – describes the template for national information collation. This deliverable relates to INSPIRATION Work Package (WP) 2 "Demands of research from industry, end-users and funders (State-of-the-art at national levels)", task 2.3 "*Prepare a harmonized template for information collation*". In the WP2 description this task is described in the following way:

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"Work will start off with preparation of a template – including a questionnaire – that will be used for the information collation in a harmonized approach at national levels (task 2.4 [i.e. Collate information at national levels]). The template will be prepared at the start of the project under lead of the WP2-leader with help of the NFPs and core group. The template will be tailored to achieving the WP2 objectives. As this template is going to be used to lay the fundament under INSPIRATION, the template will be pre-tested in one country and also the international advisory board will be asked to reflect (something essential missed? something redundant?) on the template before it will be actually used" (INSPIRATION Grant Agreement - Description of Action - DoA).



2. The template to collate information at national levels

2.1. Template

2.1.1. Objective

Template, according to WikiPedia¹:

A generic model or pattern from which other objects are based or derived

As stated in section 1.2, the template will be used for the information collation in a harmonized approach at national levels (WP2, task 2.4) and tailored to achieving the WP2 objectives. The WP2 objectives are (source DoA):

"Continuously keeping the tackling of the societal challenges in mind, the main objective of this WP is for each of the 16 European countries addressed collate, review and synthesize:

- a) <u>Demand-driven</u>* suggestions for the Strategic Research Agenda (SRA), i.e. suggestions from the perspective of industry, end-users and funders. Related key question to be answered: What (new) knowledge do these parties need to tackle societal challenges including the increase of job opportunities)?
- b) Experiences regarding the exploitation of scientific knowledge to improve business opportunities and/or tackle other societal challenges. Related key question to be answered: Where to improve the science-policy interface so that (new) knowledge can and will be more effectively exploited by the demand side?
- c) Predominantly used as well as promising alternative funding schemes / mechanisms / programs for knowledge production and dissemination.

 Related key question to be answered: How to get with one Euro of national/regional funding a multitude of Euro's (from all sources) worth of knowledge in return contributing to EU and national demands? Or even how to get with one euro of EU funding a multitude of euro's (from national, regional, local, and private sector) worth of knowledge in return contributing to the R&I demands on Land and the Soil-Sediment-Water system.
- d) Experiences regarding the use of any trans-national, common budget for scientific knowledge production related to the scope of INSPIRATION.

 Related key question to be answered: How to set up/govern the appropriate funding option(s) resulting from INSPIRATION based on previous learning experiences so that: (1)the above demands will be fulfilled, (2) knowledge resulting from implementation of the SRA will be taken up and used and (3) funders experience that their invested, national Euros are indeed multiplied?"

*Demand-driven in INSPIRATION means focusing on the demands of those who are responsible or feel committed to tackle the societal challenges related to the INSPIRATION

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¹ See: https://en.wiktionary.org/wiki/template accessed 27th May 2015.

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scope and themes, i.e. industry, end-users and funders. These parties could improve their business opportunities and/or take better informed decisions on what measures to take and execute in order to tackle other societal challenges if they would (be enabled to) use the knowledge as resulting from execution of the INSPIRATION SRA.

2.1.2. Outline

The outline of the template is:

•	Who?	Who to collate information?	See section 2.2
•	Why?	Why to collate the information?	See section 2.2
•	What?	What information to collate?	See section 2.3
•	When?	When to collate the information?	See section 2.4
•	Where?	Where to collate the information?	See section 2.4
•	How?	How to collate the information?	See section 2.5

2.2. Who and why to collate information?

These two questions are quite straight-forward to answer:

"Who?": The National Focal Points (NFPs)

"Why?": To achieve the WP2 objectives (see previous section)

2.3. What information to collate?

2.3.1. Our common language

We realize that the several disciplines engaged in INSPIRATION use their own jargon/language and give different meanings to keywords. To achieve our objectives, it is essential to commonly share and use the same definitions of the important keywords within INSPIRATION. Thus the WP2 "Demand from end users and funders" and WP5 "External affairs – strategic input and dissemination" leads prepared the first DRAFT of a glossary that provides the 'common language' to be used in INSPIRATION.

This 1st DRAFT for the GLOSSARY is attached as Annex I.

This DRAFT GLOSSARY will further evolve and be updated throughout the duration of the project and will be made public available via our INSPIRATION website. Thus the most upto-date version of glossary is always to be found at our website that is maintained under WP5 lead.



The basic/guiding principles proposed for the INSPIRATION glossary:

- 1. If there is a definition available from an EC policy document relevant to the scope of INSPIRATION, we prefer to use that definition;
- 2. Otherwise we use definitions from the most important/influential 'other' documents;
- 3. Where a definition cannot be found in this way (principle 1 or 2), or where the definitions obtained from these sources are not yet fully adequate related to the scope of INSPIRATION, the definition will be developed or updated in discussion with the relevant communities or networks related to research, use and management of land and the affected compartments of the soil-sediment-water system.

2.3.2. Further sharpening of our scope

The scope of INSPIRATION is already defined to a large extent in the project's DoA. However, at the kick-off meeting of INSPIRATION (Berlin, 1-2 April 2015) it was expressed by the NFPs, as well as the IAB to attempt to jointly – i.e. within the INSPIRATION consortium – further sharpen this scope as further guidance to collate information by the NFPs. This covers the three following elements:

- A. Societal challenges we address;
- B. What is in, what is out of our scope of attention;
- C. WP3 themes scope of attention.

A. Societal challenges we address

As INSPIRATION is to achieve a strategic <u>research</u> agenda (SRA), we acknowledge the societal challenges as defined in the context of the HORIZON 2020 (H2020) programme². INSPIRATION will derive a SRA to directly address these challenges through enabling more sustainable and efficient land use and land management based on a deeper understanding of the affected compartments of the Soil-Sediment-Water (SSW) system in order to identify land use and land management practises that can:

- Contribute to food security and food safety;
- Ensure secure supplies of safe drinking water;
- · Secure energy supply and distribution;
- Efficient use and reduction of raw material and (natural) resource consumption;
- Contribute to climate change mitigation and take into account the soil and environment in the effort of societal adaption;
- Contribute to a healthy living environment;
- Ensure secure infrastructure.

We will refer to these as societal challenges.

² See: https://ec.europa.eu/programmes/horizon2020/en/h2020-section/societal-challenges



B. What is in, what is out of our scope of attention

Important notes for starter:

- Leading is the information suggested to us as priority/important by the National Key Stakeholders (NKSs) in the interviews and in the NKSs workshops. This is leading as the NKS are supposed to have a state-of-the-art overview of the research needs in their area of expertise.
- Information from documents (desk-exercise) should be seen as supportive/underpinning to the information provided by the NKSs. Not the other way around, otherwise the NFPs may get lost in the info available in the (in some cases) many documents.
- For the beginning all NKS proposed research questions are interesting. Later on in the INSPIRATION project we will seek for the matchmaking of research questions and funding options etc. So in this stage of our project we do not yet assess if a proposed research question is unique to a single country or shared by others. And even if the question is unique, it may still be of interest to e.g. a regional program such as Interreg.

The following table summarizes the 'what's in, what's out'.

IN: NFPs do collate info related to:	OUT: NFPs do NOT collate info related to:
 Knowledge demand, i.e. demand driven research questions <i>Main issue: we aim for a strategic research agenda, i.e. for careful development of something new, creation of new knowledge!</i>³ Science-Policy-Interface (SPI): what works, what not? R&I funding national/international⁴ 	 Solutions / answers⁵ Financing, taxation, etc. for pure budgetary reasons Impact assessment, decription and comparison of status quo Inventories about the current state of land-use and of the soil-sediment-water system⁶
Land use and management in rural and urban areas, including natural, nature-sanctuary, coastal areas, deltas, estuaries	Marine areas
and river basins. Smart cities; future scenarios of urbanisation and its pressures on land and soil; urban/spatial planning: spatial issues and regeneration of land	Object (building) scale

³ Note: Identify connections to other SRAs and look for synergies (ask interviewees for that). Explicitly express that integrated approaches are in the scope of INSPIRATION.

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⁴ Note: Explicitly ask for crowd-funding or other alternative funding experiences.

⁵ Note: (innovative) solutions and answers is what we will address in WP5, but it is not the focus of the information to collate under WP2.

⁶ Malfunction of the current system is a description of the current state. This is not seen as a research question.

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Examples of topics: capacity of the SSW system to deliver ESS; effects on health; environmental focus/issues; soil regeneration; geo-data; biodiversity as a societal challenge; periodization of areas and issues according to the strength of human impact; bio-economy; circular economy; soil contamination; region specific problems (e.g. mountains, Mediterranean, coastal ...)

Topics when not related to land / soil (surface water as such, hydraulic behaviour)

The complete soil and subsurface (= ground), including groundwater. We go as deep as the bedrock, to where human activities reach. Focus is on activities where it generates land-use conflicts or whether it can be used to solve societal challenges.

Subsurface, so deep that there is no more influence of human activities and/or no more concerns about land-use conflicts resulting from these activities.

Land management and use of land and its (impacted) compartments (including interrelations between compartments), i.e. the Soil-Sediment-Water (SSW) system. And the capacity of the SSW system to deliver ecosystem services.

Policy making, such as regulation and taxation issues, that do affect land-management and land use, but do not contribute to more effective addressing of societal challenges.

Questions how land management and use of land and related compartments (SSW-system) can help overcoming societal challenges, meeting societal needs. (mitigation of driving forces, e.g. lower eco footprint and sustainable use of ecosystem services provided by the SSW system)

Status quo description of how resources and SSW ecosystem services are used and managed now on national level.

Governance questions and funding possibilities related to the topic mentioned above. Hence specifically governance directed towards more effective land management and use of land and related compartments so that it provides a better contribution to overcome societal challenges

Note: still have to define boundaries here, i.e. where it overlaps with WP 4/5. Later on in the project, WP4 will develop implementation plan on the basis of the declaration of all funders. And later on WP5 will work on top priorities (IAB) and reports to funders (communication at different levels)

State-of-the-art on research <u>questions</u>, i.e. gaps in our current knowledge (agendas), i.e. what to do to advance the state-of-the-art

State-of-the-art in <u>research.</u> We do not need to describe that, as it is already known, at least to the experts (i.e. our NKS), or anyone who takes the effort to collate that state-of-the-art

EU and national policy when/where related to the research topics proposed by the NKS

Specific (conflicting) national policy, when not shared by, felt as bottleneck by more member states.

Topics mentioned and prioritized by the NKS. So first let the NKS speak and thereafter please check what they think of topics they do not mention themselves but which are e.g. mentioned as important under the WP3 themes (see next section)

Topics as suggested under the WP3 themes (see next section) and EU policy documents, but which are not endorsed by the NKS.

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C. Themes scope of attention

The suggested topics/keywords from the WP3 themes to check with NFPs are:

- 1) Assessment of land resources (including ecosystem services)
- 2) Potential productivity of land and soils (time scale of human action)
- 3) Demand for soil/land resources, imports and exports
- 4) Competition between land uses (land-use conflicts)
- 5) Concepts to identify and quantify relevant impacts
- 6) Instruments to avoid / minimise impacts (feedback to decision-making process)
- 7) Opportunities of innovative land-use technologies
- 8) Resource-oriented land management systems
- 9) Soil and groundwater remediation
- 10) Soil regeneration

11)...

The listed keywords are conclusive, simplified and overall for the four integrative WP3 themes. When it might help the discussion, it is suggested to raise these keywords during the NKS interviews and then to ask if they are relevant to the NKS. Note that this list is indicative.

Note: also related to these keywords we aim for a strategic research agenda, i.e. for careful development of something new, creation of new knowledge and not for *status quo* assessment

2.4. When and where to collate the information?

The answer to these two questions:

- "When?" Ca. May 2015 to February 2016 (see Fig. 1)
- "Where?": NKS interviews, NKS workshop and

complementary desk-exercise (see Fig. 1)



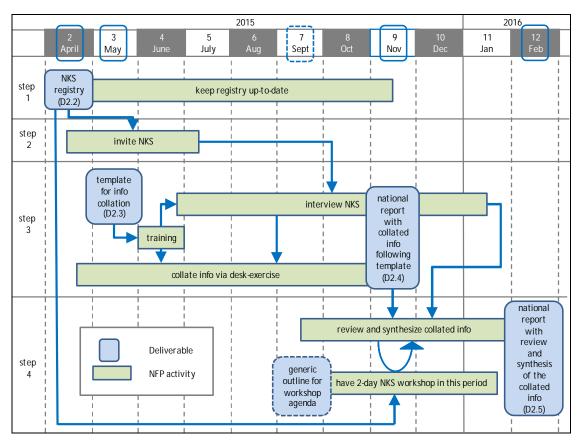


Figure 1: The NFP workflow describing when and where to collate information.

Source: Workflow in line with INSPIRATIONS Description of Activities

2.5. How to collate the information?

2.5.1. Training

To further enhance the likeliness that the information will indeed be collated by the NFPs in a harmonized way – as far as realistically possible – in the different countries that INSPIRATION addresses, it was agreed among the NFPs at the Berlin INSPIRATION kick-off meeting (April 1-2, 2015) to have a **full day training session on how to collate the information**.

Bases for the training session was the original deliverable 2.3. Especially section 2.3 (What information to collate) and this section, i.e. section 2.5 (How to collate the information) was the core of the training activity. **Training on how to use, and – where needed – further sharpening of the NKS questionnaire (see Annex IIa) will be a crucial element**. Besides the NFPs, the WP2 leader and a representative of the coordinator and of the WP3 Themeleaders were involved in the training.

An important element in the training is also to understand **timelines of national R&I funders**. Are they connected to the H2020 timelines? France, e.g. tries to align to that, but not the Netherlands, where they align to 'top-sectors'. In the training we also focussed on

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how the NFPs can document/record/prepare the national timelines. For NFPs it is crucial to know these timelines for deciding the best moment for interviewing of some NKS (i.e. the selected national R&I funders): there is a window-of-opportunity for that! This 'timeline aspect' was further elucidated during the training.

The training gave the option to exchange on interview techniques, it clarified how to use the interview questionnaire template (in Annex IIa) and how to handle potential problem situations. Furthermore, at the training there was an exchange of suggestions and tips on how to perform the desk-exercise (see next section).

The training (see also Fig. 1) was scheduled from Monday 22nd of June (start 12.00 h) to Tuesday 23rd of June (end 12.00 h). The venue for the training was the BoKu premises in Vienna, Austria. This venue was selected as it met the following selection criteria: (1) relatively easy to reach for most of us, so centrally located, (2) tickets and hotels are relatively affordable and (3) there is a local partner to host us, i.e. provide us the venue.

The training as well as the inputs of the International Advisory board (IAB) were used to adapt the questionnaire in Annex IIa towards this updated version of deliverable 2.3. An extra Annex was added: Annex IIb: "NKS hand-out: INSPIRATION interview at a glance" containing a hand-out with information on INSPIRATION, the envisaged role of the interview and NKS in the project and some example questions. This hand-out can be used in the introduction of the interview and can be sent out to the NKS before the interview.

2.5.2. Desk-exercise

Via a desk-exercise NFPs will collate and summarize in English information (publications, reports, etc.) that is publicly available at national levels regarding: R&I needs; Connection science - policy/practice; National funding schemes and Trans-national funding schemes (see section 2.1.1). It is recommended to start this desk-exercise collation as soon as possible (now), but in particular to identify/verify important document with interviewees.

Note (as stated already in section 2.3.2): information obtained through this desk-exercise should be seen as supportive/underpinning to the information provided by the NKS. Not the other way around, otherwise the NFPs may get lost in the info available in the (in some cases) many documents.

Report your findings in English, so, where needed, summarize/translate the information from publications/reports in national languages into English.

2.5.3. NKS interviews

Whom to interview? In the interviews we are focusing at a strategic level, interviewing those NKS who champion, oversee, guide, audit or write guidance for the mentioned research. As discussed in INSPIRATION deliverable 2.1 "Memorandum of Understanding on how the National Focal Points should execute their tasks", the suggested profile for a suitable NKS: He/she: is a leading person in his/her field of profession; has a good overview on opportunities; has a clear vision on, and insight in knowledge demands (short & long term); is well positioned and participating in relevant network(s) and has potential to become an ambassador for INSPIRATION. Furthermore, the selection should represent a balanced distribution and representation of individuals deriving from; hence representation of (with a

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maximum of 1/3 being scientists): (1) water, soil, sediment, land-use and land management experts; (2) local/regional/national government authorities, industry, knowledge institutes, universities, consultants, NGO's, networks and (3) different sectors: construction/building industry, agro, banks, energy and drinking water producers.

For the collation of information at national levels the NFPs will use the questionnaire template provided in Annex II to interview NKSs of industry, end-users and funding agencies to identify their demands related to the scope of INSPIRATION as detailed in this document (i.e. the template).

Where needed, the questionnaire should be translated in national languages by the NFPs.

The questionnaire template is meant as a guide with sample questions and points of attention for the discussion with the NKSs. It is not prescriptive and not restrictive. The topics in the questionnaire are guiding. The sample questions can be used as example. The main objective of the interviews is to obtain the information needed to give a foundation to the SRA at national levels regarding: R&I needs; Connecting science - policy/practice; National funding organisations and schemes; and Trans-national funding schemes (see section 2.1.1).

Some generic questions the NFPs can pose to the interviewees regarding the SRA:

- Uniqueness: Is the issue that you propose for the SRA a unique issue for our country, or are there other countries that (should) have the same issue?
- Consequences: What is the consequence and to whom if we do not address the issue in the SRA?
- What R&I: Suggestions on what kind of R&I is needed to overcome the issue?
- Funders: Suggestions for who to fund the R&I and why they should fund?

Summarize/translate the information you obtained in your national languages into English.

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- 1. The NFP were highly recommended to conduct 1 interview before the training in June (see Fig. 1). This increased the effectives of the training enormously by being able to discuss/review/learn from experiences/challenges observed.
- 2. The NFPs should also remember that four NKSs shall be selected for further engagement during the rest of project. The real motivated persons should be identified in the interviews and workshop. So it should be asked already in interview if/how pro-active the NKS can/wants to be. The (later) actual selection will depend also on the priorities that will arise so the final decision should be taken *after* the NKS workshop (see next section) in close communication with the core group.

2.5.4. Review and synthesis, including 2-day NKS workshop

The NFPs have to organize at national level a 2-day workshop, where the collated information (NKS interviews and desk-exercise) will be reviewed and synthesized and prioritized by the NKSs, under NFP facilitation.

It is highly recommended to make it indeed a 2-day workshop as it thus provides the possibility to have an evening program, including dinner etc., which can be a key feature for better networking. Ample time should be taken to prepare this workshop very well: the better it is prepared: the higher the quality of its outcome. Thus it is highly recommended / preferred to already have a first DRAFT available of the 'digested' information, i.e. the NFPs already performed a DRAFT review and syntheses of that information. Thus it will be that draft reviewed and synthesized information that will be discussed and fine-tuned in the 2-day workshop based upon input from the NKS.

Ca. September 2015 (see Fig. 1) the NFPs will receive from the WP2 leader a generic outline for the agenda of the 2-day workshop. That agenda will be developed also in close consultation with the core group. However, as no country is the same, the NFPs have to tailor that agenda to their specific national situation and circumstances. This should then be done in close consultation with the WP2 leader and where needed backed-up, also consulting the core group.

However, it can now already be recommended to think of concluding the workshop by jointly formulating/agreeing upon the English executive summary of the workshop, i.e. the national key conclusions regarding: (1) R&I needs (of funding agencies, industry and other end-users; (2) how science is connected to policy/practice; (3) existing national funding schemes; and (4) existing transnational funding schemes.

The reports must be written in English and must contain for the specific country and related to the scope of INSPIRATION (see this document: the 'template') a reviewed and synthesized state-of-the-art overview of: (1) R&I needs (of funding agencies, industry and other end-users); (2) how science is connected to policy/practice; (3) existing national funding schemes; and (4) of existing transnational funding schemes.

Before finalizing the reports, the NKSs as well as the IAB Board must be given the opportunity to review the draft report.

If English is not the native language, the national report must also contain an executive summary (policy brief) in the native language.



Annex I: INSPIRATION glossary (1st DRAFT)

Notes:

- This is a DRAFT of the glossary, so the starting bases
- The most up-to-date version of the glossary is available at the INSPIRATION website: http://www.inspiration-h2020.eu/page/glossary-0
- Please see further remarks in section 2.3.1

	1	
Key words	Our common language	Source
aquifer	a subsurface layer or layers of rock or other geological strata of sufficient porosity and permeability to allow either a significant flow of groundwater or the abstraction of significant quantities of groundwater	Water Framework Directive
biodiversity	The variability among living organisms within species and populations, between species, and between ecosystems	Ecosystem Services: A Guide for Decision Makers, World Resources Institute
biomass	The biodegradable fraction of products, waste and residues from biological origin from agriculture (including vegetal and animal substances), forestry and related industries including fisheries and aquaculture, as well as the biodegradable fraction of industrial and municipal waste	EU Renewable Energy Directive
circular economy	Development strategy that enables economic growth while optimising the consumption of natural resources, deeply transforming production chains and consumption patterns and redesigning industrial systems.	EC communication on Circular economy, 2014
damage	A measurable adverse change in a natural resource or measurable impairment of a natural resource service which may occur directly or indirectly	Environmental Liability Directive
ecosystem	A dynamic complex of plant, animal, and micro- organism communities and the non-living environment interacting as a functional unit	Ecosystem Services: A Guide for Decision Makers, World Resources Institute
ecosystem services	Benefits people derive from ecosystems. These can be divided into four categories: provisioning services, regulating services, habitat or supporting services, and cultural services.	Millennium Ecosystem Assessment
footprint	Resource consumption and waste assimilation requirements of a defined human population or economy in terms of a corresponding productive land area	Wackernagel & Rees, 1996



Key words	Our common language	Source
Funders	Public as well as private parties (agencies, institutions, industry etc.) willing to fill (part of) a common pot of money for execution of the INSPIRATION strategic research agenda	INSPIRATION
ground	>>> to be included <<<	
groundwater	All water which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil.	Water Framework Directive
land	The terrestrial bio-productive system that comprises soil, vegetation, other biota, and the ecological and hydrological processes that operate within the system	Article 1 of the UNCCD
land cover	The observed (bio)physical cover on the earth's surface (vegetation and man-made features)	Food and Agriculture Organisation of the United Nations
land degradation	Reduction or loss of the biological or economic productivity and complexity of rain-fed cropland, irrigated cropland, or range, pasture, forest and woodlands resulting from land uses or from a process or combination of processes, including processes arising from human activities and habitation patterns, such as: (i) soil erosion caused by wind and/or water; (ii) deterioration of the physical, chemical and biological or economic properties of soil; and (iii) long-term loss of natural vegetation.	Zero net land degradation, Rio+20, 2011
land degradation neutral	Is achieved when globally or in a given landscape or terrestrial ecosystem the area of productive land (and therefore sustainable land use) remains stable or increases	Zero net land degradation, Rio+20, 2011
land management	The process of managing the use and development (in both urban and rural settings) of land resources	CEN 5th Draft CWA
land restoration	Reversing land degradation processes by applying soil amendments to enhance land resilience and restoring soil functions and ecosystem services.	Zero net land degradation, Rio+20, 2011
land take	Increase of settlement areas over time. This process includes the development of scattered settlements in rural areas, the expansion of urban areas around an urban nucleus (including urban sprawl), and the conversion of land within an urban area (densification).	EC Guidelines on best practice to limit, mitigate or compensate soil sealing



Key words	Our common language	Source
land use	The arrangements, activities and inputs people undertake in a certain land cover type to produce, change or maintain it	Food and Agriculture Organisation of the United Nations
risk-informed management	The integrated application of three key-principles: be well informed, manage adaptively and pursue a participatory approach	EC FP6 CA project RISKBASE
natural capital	A stock of natural resources- such as land, water, and minerals- used for production. Can be either renewable or non-renewable.	World Bank Glossary
(natural) resources	It includes raw materials such as minerals, biomass and biological resources; environmental media such as air, water and soil; flow resources such as wind, geothermal, tidal and solar energy; and space (land area).	Thematic Strategy on the sustainable use of natural resources (COM(2005) 670 final)
natural resources services	The functions performed by a natural resource for the benefit of another natural resource or the public	Environmental Liability Directive
net land take	net use of land for housing, industry, roads or recreational purposes	Roadmap to a Resource Efficient Europe (COM(2011) 571)
non-renewable natural resources	Natural resources that cannot be replaced or replenished	World Bank Glossary
pollution	the direct or indirect introduction, as a result of human activity, of substances, vibrations, heat or noise into air, water or land which may be harmful to human health or the quality of the environment, result in damage to material property, or impair or interfere with amenities and other legitimate uses of the environment	Industrial Emission Directive
raw materials	A material or substance used in the primary production or manufacturing of a good. Raw materials are often natural resources such as oil, iron and wood. Before being used in the manufacturing process raw materials often are altered to be used in different processes. Raw materials are often referred to as commodities, which are bought and sold on commodities exchanges around the world.	www.investopedia.com



Key words	Our common language	Source
renewable natural resources	Natural resources that can be replaced or replenished by natural processes or human action. Fish and forests are renewable natural resources. Minerals and fossil fuels are non-renewable natural resources because they are regenerated on a geological, rather than human, time scale. Some aspects of the environment-soil quality, assimilative capacity, ecological support systems- are called semi-renewable because they are regenerated very slowly on a human time scale.	World Bank Glossary
remedial measures	any action, or combination of actions, including mitigating or interim measures to restore, rehabilitate or replace damaged natural resources and/or impaired services, or to provide an equivalent alternative to those resources or services as foreseen in Annex II	Environmental Liability Directive
remediation	Actions aimed at the removal, control, containment or reduction of contaminants or exposure pathways so that the site, taking account of its current use or approved future use, no longer poses a significant risk to human health or the environment. Remediation actions may involve monitored natural recovery	Draft Soil Directive (agreed by all countries)
science-policy interface (SPI)	Especially in the area of environment, it is important for researchers to communicate scientific findings in an appropriate and accessible way to policy-makers in order for them to make the right choices in drawing up policies aiming at sustainable solutions to environmental problems. An improved dialogue between the scientific and policy-making communities is necessary to improve linkages between policy needs and research programs as well as to enhance the accessibility of scientific knowledge to policy makers. This dialogue should and is taking place at all levels - local, regional, national as well as international.	http://ec.europa.eu/environ ment/integration/research/i nterface_en.htm
sediment	Suspended or deposited solid, of mineral as well as organic nature, acting as a main component of a matrix, which has been, or is susceptible to being transported by water	The SedNet Strategy Paper – The opinion of SedNet on environmentally, socially and economically viable sediment management, SedNet, June 2004



Key words	Our common language	Source
soil	Upper layer of the Earth's crust transformed by weathering and physical/chemical and biological processes. It is composed of mineral particles, organic matter, water, air and living organisms organised in genetic soil horizons.	ISO/DIS 11074
	Note 1 to entry: In a broader civil engineering sense soil includes topsoil and sub-soil; deposits such as clays, silts, sands, gravels, cobbles, boulders and organic deposits such as peat; and materials of natural origin or of human origin.	
soil functions	Environmental, economic, social and cultural functions of natural and artificial soil: (a) biomass production, including in agriculture and forestry; (b) storing, filtering and transforming nutrients, substances and water; (c) biodiversity pool, such as habitats, species and genes; (d) physical and cultural environment for humans and human activities; (e) source of raw materials;(f) acting as carbon pool; (g) archive of geological and archeological heritage	Proposal for a Directive of the European Parliament and of the Council establishing a framework for the protection of soil and amending Directive 2004/35/EC
soil sealing	Permanent covering of an area of land and its soil by impermeable artificial material (e.g. asphalt and concrete)	EC Guidelines on best practice to limit, mitigate or compensate soil sealing
soil-sediment- water system	see ecosystem	-
soil-sediment- water system services	see ecosystem services	-
soil threats	The main eight soil degradation processes to which soils in the EU are confronted. These are: erosion, organic matter decline, contamination, salinisation, compaction, soil biodiversity loss, sealing, landslides and flooding	Proposal for a directive establishing a framework for the protection of soil (COM(2006) 232 final)
spatial planning	Methods used largely by the public sector to influence the future distribution of activities in space with the aims of creating a more rational territorial organization of land uses and the linkages between them, to balance demands for development with the need to protect the environment and to achieve social and economic development objectives.	Compendium of European Spatial Planning, EC, 1997



Key words	Our common language	Source
stewardship	The responsible use (including conservation) of natural resources in a way that takes full and balanced account of the interests of society, future generations, and other species, as well as of private needs, and accepts significant answerability to society	Worrell & Appleby, 2000
sustainable land management	A knowledge-based combination of technologies, policies and practices that integrate land, water, biodiversity, and environmental concerns (including input and output externalities) to meet rising food and fibre demands while sustaining ecosystem services and livelihoods	World Bank, 2006
sustainable use / development	use/development that meets the needs of the present without compromising the ability of future generations to meet their own needs	Report of the World Commission on Environment and Development, United Nations
urban sprawl	The spreading of a city or its suburbs. It often involves the construction of residential and commercial buildings in rural areas or otherwise undeveloped land at the outskirts of a city.	www.wisegeek.com
zero net land degradation	The achievement of land degradation neutrality, whereby land degradation is either avoided or offset by land restoration.	Zero net land degradation, Rio+20, 2011



Annex IIa: NKS questionnaire template

This is the updated version of the questionnaire - reflecting inputs from the IAB and discussions at the NFP training on $22^{nd} - 23^{rd}$ June 2015.

[Note: this questionnaire template is meant to help National Focal Points (NFPs) to facilitate the interview/conversation with the National Key Stakeholders (NKS). Some questions are relevant to one NKS, other questions to another NKS. Hence, not all questions are relevant to each single NKS. The NFPs are required to adapt the template accordingly – keeping in it as many as possible of the issues to be addressed. If needed, the NFPs also translate the questionnaire into their national language.]

The questionnaire (see next pages) has the following outline:

- A. Interview information:
 - To be filled out by the interviewer
- B. Introduction:

That the interviewer can use to start the NKS interview

- C. Background information of the NKS interviewed: Mostly 'tick-boxes'
- D. Strategic Research Agenda (SRA): NKS preferred topics, overarching themes and scope for the SRA and national state-of-the-art on research agendas that the NKS is aware of
- E. Science-Policy-Interface:

NKS experiences regarding the exploitation of scientific knowledge to: improve business opportunities; tackle other societal challenges; assist policy-implementation and/or policy revision

- F. Funding:
 - Predominantly used as well as promising alternative funding schemes / mechanisms / programs for knowledge production and dissemination that the NKS is aware of
- G. Other:
 - At the end there is some time advised to let the NKS give us their advice, some nice quotes (that we can use anonymously in our communications), examples etc.
- H. Ending the interview:
 - Explain follow up and if/how NKSs will be involved in the next steps of INSPIRATION



Questionnaire template:

A. Interview information

Country:

Name of INSPIRATION Researcher:

Date of Interview:

How does the NKS wish to be referred to:

[Anonymous, personal opinions, company's opinion. Choose when it is a good time to discuss this. In the beginning or later on.

SHOW the interviewed NKS the ENGAGEMENT CONSENT FORM and ask him/her to fill it out. Please introduce the engagement consent form (available in 'D2.1 MoU' and editable by yourself) and hand a copy to the interviewee to read and fill in – make sure that you take this away with you and keep for your own records]

B. Introductions

[Please introduce yourself, the project and the purpose of the interview. You can use the handout as provided at the end of this template. This can also be sent beforehand to the NKS. Agree on a time span: approximately one and a half hour.]

C. Background information on the interviewee

- 1. Name of NKS interviewed:
- 2. Institution:
- 3. Role:
- 4. Are you a (multiple answers possible):
 - o National-regional-local authority
 - o University/research institute
 - o Small or Medium sized Enterprise (SME, i.e. < 500 employees) / consultant
 - Business and industry
 - Non-Governmental Organisation (NGO)
 - Network representative / leader
 - Other, specify: ...
- 5. Fields of expertise (multiple answers possible):

[Ask to specify background regarding the selected item(s) in order to understand expertise background of interviewee]

- o Soil
- o Water
- o Sediment
- o Urban / spatial planning
- o Landscape design
- Land management
- o Other, specify:
- 6. Does your organisation provide external research funding?
 - Yes. Please specify: ...
 [e.g. as programme holder, public, private, ...]
 - o No



D. SRA

7. Which societal challenges do you regard as important?

[If needed, you can use the European Commissions (EC) list of societal challenges here. These EC themes are:]

- Contribute to food security and food safety;
- Ensure secure supplies of safe drinking water;
- Secure energy supply and distribution;
- Reduce raw material and resource consumption, Ensure efficient use of natural resources:
- Contribute to climate change mitigation and societal adaptation;
- Contribute to a healthy living environment;
- Ensure secure infrastructure

[Explain that these challenges may be used as bases for defining of the overarching themes for aggregating the research topics of our SRA.]

a. If applicable, what additional, other or alternative challenges would you suggest/prefer?

[When needed, you can mention challenges as nature conservation, sustainable use of ecosystem services, halting the loss of biodiversity]

8. Starting with your own experience: which <u>specific topics</u> (research needs) should be included in the SRA?

[For each single topic mentioned by the NKS, use the following follow-up questions. The a, b and c sub-questions are mandatory. The other sub-questions are optional]:

- Explain elaborate the topic
 - Who will be affected?
 - Who is responsible?
 - Is it a topic of concern of your organisation / department
 - Is it only a national topic, or a shared topic by multiple countries?
 - Where are we now, where do we want to be in x years (point on the horizon)?
 - How can the newly gained knowledge be effectively used?
- Priority:
 - 1. High priority
 - 2. Some priority
 - 3. Neutral priority
 - 4. Low priority
 - 5. No priority
 - What is the urgency, i.e. what goes wrong if we do nothing?
- Who wants to/should fund this kind of research?

[Optionally: check the following WP3 key-words for relevance, i.e. if they raise any additional topics by the NKS. The key-words can be used as support / check list Be sensible as interviewer if this is needed.]

- Assessment of land resources
- o Potential productivity of land and soils
- o Demand for soil/land resources, imports and exports
- o Competition between land uses (land-use conflicts)
- o Concepts to identify and quantify relevant impacts
- Instruments to avoid / minimise impacts (feedback to decision-making process)
- Opportunities of innovative land-use technologies
- Resource-oriented land management systems]
- Soil regeneration
- o Soil and groundwater remediation



- 9. Linked to topics mentioned by the NKS:
 - a. What are the important / relevant documents, research agendas, research programmes underpinning these topics? (state-of-the-art)
 - b. Related to these agendas and programmes: what are timelines of programming and windows-of-opportunities to influence agendas / programmes? [Note: question 9b is input for work package 5]

E. Science-Policy-Interfacing (SPI)

- 10. How would you define 'scientific knowledge'?
- 11. For what do you use scientific knowledge in your job?
- 12. Which sources of (scientific) knowledge do you use for doing your job?

 [Open question and you can mention some of the sources underneath as examples]
 - o scientific paper
 - o consultants
 - o reports
 - o colleagues
 - experiences /examples within my own country
 - o experiences /examples abroad
- o newspapers
- television
- conferences Involvement in research projects
- o data (bases)
- o websites, such as:
- o other, specify:
- 13. To what extend do you use most recent/new scientific knowledge (i.e. state-of-the-art scientific insights/findings) for doing your job?
- 14. To what extend are you able to influence (and how) the setting of scientific research policies/agendas in our country?
- 15. To which extend do our national policies/agendas reflect your specific needs and priorities?
- 16. To what extend has been made use of the state-of-the art in scientific research for the formulation of existing policies in our country?

[Questions only for NKS from the non-science sector (business and policy):]

- 17. Have you ever been involved in:
 - a. the formulation of scientific research questions?
 - b. doing scientific research (i.e. knowledge co-creation)?
 - c. synthesizing/wrapping-up of scientific knowledge, e.g. to feed into policy making or to increase business opportunities?

[When yes: Follow-up questions]

- How successful/satisfying was this, on a scale of 1-5?
 - 1. Very successful/satisfying
 - 2. Successful /satisfying
 - 3. Neutral
 - 4. Unsuccessful/unsatisfying
 - 5. Very unsuccessful/unsatisfying
- What went well
- What could be improved?
- What to avoid/not to do?
- Additional remarks?

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[Question only to NKS who are likely to have insights here (e.g. research funders)]

18. (How) is the societal impact of scientific research related to the scope of INSPIRATION being assessed in our country?

[If they know: Follow-up questions:]

- How successful/satisfying is this, on a scale of 1-5?
 - 1. Very successful/satisfying
 - 2. Successful/satisfying
 - 3. Neutral
 - 4. Unsuccessful/unsatisfying
 - 5. Very unsuccessful/unsatisfying
- What indictors are used?
- What goes well?
- What can be improved?
- What to avoid/not to do?
- Additional remarks?
- 19. Which national Science-Policy-Interface documents do you know of / can you recommend?

F. Funding

- 20. Which experiences and expectations in funding schemes (public / private) do you have in your own field that could offer opportunities for future research on land-use and -management and related impacts to Soil-/Sediment-/Water-systems:
 - Sub-nationally /regionally?
 - Nationally?
 - European? [e.g. H2020, Interreg, multi-lateral such as the Joint Programming Initiatives]
 - International? [e.g. Belmont Forum, Foundations etc.]

[For all R&I questions aiming at achieving policy targets in the Land & SSW related system (like e.g. Sustainable Development Goals on soils -to be adopted at UN level in September 2015-, existing EU directives such as the Environmental Liability Directive, etc.) Consider all Public and Private funding sources. Please ask to provide details and give most important references (documents, website) that could be relevant for explaining the answer]

- 21. How to increase the added value of different financial resources (i.e. achieve a multiplier) for doing research that contributes to EU and national demands, in particular to the R&I demands on Land and the SSW-system?

 [CONSTRUCTIONS that (could) work. PP, PPI, etc. Just ask for, as open as possible for suggestions, ideas, experiences, good examples]
- 22. Are there areas of research and innovation (R&I) that you are aware of that are not (yet) covered by current funding mechanisms and which would need new/different funding schemes / infrastructures?
- 23. Integrated approaches (necessary for addressing particular societal challenges related to the use and management of land and related impacts to SSW systems) are usually difficult to fund / get recognised by the research funding communities. What would be necessary to improve this?



24. Based on previous learning experiences that you are aware of: how to best set up / govern funding option(s), so that societal demands will be fulfilled, knowledge resulting from execution of the SRA will be taken up and used; and funders experience that their invested, national Euros are indeed multiplied?

[if they know: Follow-up questions]

- How successful/satisfying was this, on a scale of 1-5?
 - 1. Very successful/satisfying
 - 2. Successful/satisfying
 - 3. Neutral
 - 4. Unsuccessful/unsatisfying
 - 5. Very unsuccessful/unsatisfying
- What went well
- What could be improved?
- What to avoid/not to do?
- Additional remarks?

G. Other (remarks, suggestions, examp)les)):
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H. Ending the interview

Thank you for taking the time to participate in this interview:

- Would you like us to keep you updated about INSPIRATION progress?
- Would you suggest anyone else who we should be interviewed by us?
- Do you have further questions arising from this interview, or would you like to add anything else?
- What information are you interested in, and willing to give feedback on? [Discuss the feedback mechanism and if they have expressed their opinions as a person or as a representative of their organisation/network. Checklist:]
 - a. Information to exchange / willingness to give feedback on:
 - o (complete interview, not recommended)
 - o summary of main conclusions
 - o national report, national contribution to D2.4
 - o complete D2.4, all countries
 - b. Preferred level of feedback:
 - o no feedback
 - o informal feedback
 - o formal feedback (e.g. on behalf of represented organisation)

[Check: have you discussed consent form / how to refer to interviewee]

INSPIRATION acknowledges the received funding from the European Community's HORIZON2020 Framework Programme under grant agreement no 642372





Annex IIb: NKS hand-out: INSPIRATION interview at a glance

INSPIRATION interview at a glance

Aim of INSPIRATION:

The main purpose of the EC-funded INSPIRATION project is to formulate an end-user driven strategic research agenda (SRA) for land-use, land-use changes and the related, impacted compartments of the Soil-Sediment-Water (SSW) system in order to meet current and future societal challenges and needs. Next to that, the project aims to scope out models of implementing the SRA and to prepare a network of public and private funding institutions willing to commonly fund the execution of the SRA.

National Key Stakeholders (NKS):

In a series of NKS interviews across EU nations the "National Focal Points (NFP) gather for nations individually information related to the INSPIRATION scope (land and SSW-system use and management) on:

- Research and Innovation (R&I) needs
- · Experiences regarding connecting science to policy/practice
- National and transnational funding schemes

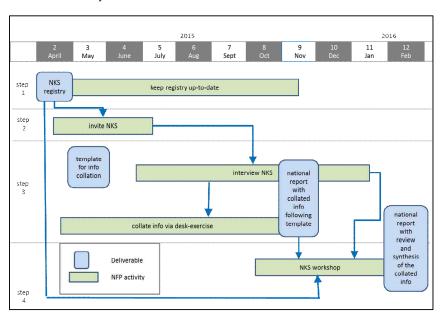
In the interviews we focus at NKS – like you – positioned at a strategic level, i.e. leading persons in their field of profession; with a good overview on opportunities; a clear vision on, and insight in knowledge demands (short, middle and long-term). Furthermore, these NKS are well positioned and participate in relevant professional network(s) and may also have potential to become an ambassador for INSPIRATION. We selected NKS to represent different disciplines and institutional backgrounds including: land-use planners; managers; soil, sediment and water experts; researchers, funders and regulators/policy makers.

This interview:

Collecting input from you – an expert in your field – is crucial for the project in order to help us describing the state-of-the-art in our country as input into the European research agenda. In the interview we will go through a series of topics and questions: The interviews of NKS (ca. 20 per nation), together with

a desk study on research needs and funding possibilities will be synthesized to a 'national report'. This synthesis will be reviewed in a national workshop, to prioritize the topics for the suggested Strategic Research Agenda (SRA) from our country's point of view. The national reports will finally be used as input for elaborating the European SRA and crossnation matchmaking (matching research needs to possible funding).

Workflow in first year of INSPIRATION



Deliverable D2.3 – update 1: Template for national information collation



Example questions:

Research and Innovation (R&I) needs

- Which societal challenges do you regard as important?
- Starting with your own experience: which specific topics (research needs) should be included in the SRA?

Experiences regarding connecting science to policy/practice

- How would you define 'scientific knowledge'?
- To what extend has been made use of the state-of-the art in scientific research for the formulation of existing policies in our country?

National and transnational funding schemes

- Does your organisation provide external research funding?
- Which experiences and expectations in funding schemes (public / private) do you have in your own field that could offer opportunities for future research on land-use and -management and related impacts to Soil-/Sediment-/Water-systems

Your benefits from participating:

- A chance to influence the European SRA on land and SSW management in the light of societal challenges and needs;
- Being able to make use of the results of the project: overview of research need and of existing
 and promising funding schemes on different levels (sub-national, national, European,
 international) and opportunities for a better connection between science and policy/practice;
- Use the matchmaking opportunity to get in contact with other networks in- and outside our country, and countries learn which shared challenges can be taken up jointly.

Contact and further information:

For general information on the INSPIRATION project visit our website: www.inspiration-h2020.eu

Contact the National Focal Point:	Contact the general project coordination:
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