



“NAture Insurance value: Assessment and Demonstration”

NAIAD

SC5-09-2016 Operationalising insurance value of ecosystems
Grant Agreement n° 730497

Deliverable 5.3

E-Guide Outline

Due date of deliverable: 30/09/2019
Actual date of submission: 23/10/2019
Date of revised deliverable submission: 10/10/2020

Start date of project: 01-12-2016
Duration: 45 months

Name of partner responsible for deliverable: HZG

Authors: Máñez Costa, María, Šinkovec, Zarja, Gómez Martín, Eulalia and Metelitsa, Vladimir. (2020):
“DELIVERABLE 5.3 E-GUIDE”. EU Horizon 2020 NAIAD Project, Grant Agreement N°730497

Dissemination Level		
PU	Public	X
CO	Confidential, only for members of the consortium (including the Commission Services)	

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 730497.

The opinions expressed in this document reflect only the author's view and in no way reflect the European Commission's opinions. The European Commission is not responsible for any use that may be made of the information it contains.





EDITION INFORMATION

Table 1: Versions

VERSION	EDITION DATE	MODIFICATION	WRITTEN BY	CONTROLLED BY
1	23/10/2019	FIRST EDITION	MMC, EGM,	NVC
2	30/10/2019	SECOND EDITION	MMC	NVC
3	09/10/2020	THIRD EDITION	MMC	VM
4	10/10/2020	SUBMIT TO THE EC		CO



INDEX

EXECUTIVE SUMMARY	4
INTRODUCTION	5
STRUCTURE OF THE E-GUIDE	6
USING THE E-GUIDE	8
DEMOS (http://naiad2020.eu/demo-cases/)	9
MODELS (http://naiad2020.eu/about-the-e-guide/models/)	9
TOOLS (http://naiad2020.eu/about-the-e-guide/tools/)	9
CAPACITY DEVELOPMENT (http://naiad2020.eu/about-the-e-guide/capacity-building/) ..	9
PAPERS (http://naiad2020.eu/about-the-e-guide/papers/)	10
AN EXAMPLE ON USING THE E-GUIDE	10
DISSEMINATION OF THE E-GUIDE	12



EXECUTIVE SUMMARY

This report describes the conception of the E-GUIDE as an instrument for increasing the uptake of NAIAD results. The E-GUIDE will support external users navigate through the vast results of NAIAD and will enhance this way the capability of users to investigate the possibilities of including science related that are relevant for local problems and help formulate solutions.

The NAIAD e-guide is aimed at a broader audience of NAIAD (potential) users of NAIAD modelling approaches, tools and methods, and at all those who are interested in quickly gaining knowledge on products developed within NAIAD. The models, tools and methods are briefly outlined on compact internet webpages in a form understandable to non-experts.



INTRODUCTION

Nature-Based Solutions (NBS) have proven to be effective measures for enhancing urban and rural resilience to climate risk through the restoration and rehabilitation of ecosystems that support, for example, the reduction of urban heat islands, increase the buffer capacities for flooding, or reduce air pollution. NBS also provide important co-benefits to local communities, thus supporting the implementation of the Sustainable Development Goals, especially those referring to Sustainable Cities and Communities and Climate Action.

However, the implementation of NBS is often hampered by a high level of uncertainty regarding future climate scenarios, and the actual effectiveness of specific NBS. These challenges also result in a high level of uncertainty for users when it comes to analysing the added value of implementing NBS instead of traditional grey infrastructure. Users and stakeholders need support in assessing the feasibility of implementing NBS to increase their socio-ecological resilience to global environmental change.

Everything we know about learning and bringing knowledge from diverse scientific disciplines to decision-making processes is not properly working for the actual challenges we face. Learning from scientific results must be at the center of societal efforts towards transformation.

The E-GUIDE will ensure that data, information and knowledge generated during the project implementation period are translated and shared across multiple platforms in order to meet the needs in the respective regions. Additionally, we aim to contribute to reducing the “valley of death”, representing the difficulty of translating research into commercial or public applications. Therefore, the NAIAD e-guide is aimed at a broader audience of stakeholders, (potential) users of modelling approaches, tools and methods, and at all those who are interested in quickly gaining knowledge of models, tools and methods developed within NAIAD for testing and evaluating the possible implementation of Nature-Based Solutions to reduce climate risks.

The E-GUIDE is based on the principle that knowledge translated into appropriate packages/formats ensures a maximum uptake and impact. In accordance with the above principle, the project will disseminate and integrate the E-GUIDE in existing platforms related to Nature-Based Solutions Research (such as Think Nature) and Adaptation Platforms (such as Climate-ADAPT).

Models, tools and methods are briefly described on compact internet webpages in a form understandable to non-experts. Particular attention is paid to the following questions that (potential) users of NAIAD products should ask first:

- What are (potential) categories of users of the model/tool/method?
- What are (potential) applications of the tool to decision making in the water sector?



- What is the added value of the tool?
- What decisions can be improved with this tool?

For the readers interested to get further information on the tools described, references to relevant NAIAD deliverables and publications, links to dedicated internet webpages and contact details of responsible persons from the NAIAD team are provided on the page.

STRUCTURE OF THE E-GUIDE

We have structured the E-GUIDE dividing the diverse knowledge created in NAIAD into the categories presented in Figure 1 below. The decision tree includes:

- a) Information, reports and knowledge acquired in the DEMO sites of the project
- b) Models to be used for assessing the benefits and costs of NBS implementation (including the insurance value)
- c) Publications, including scientific ones, and links to access them
- d) Access to the MOOC (Massive Online Open Course) on NBS implementation and other capacity development activities within NAIAD
- e) Tools to be used in similar conditions

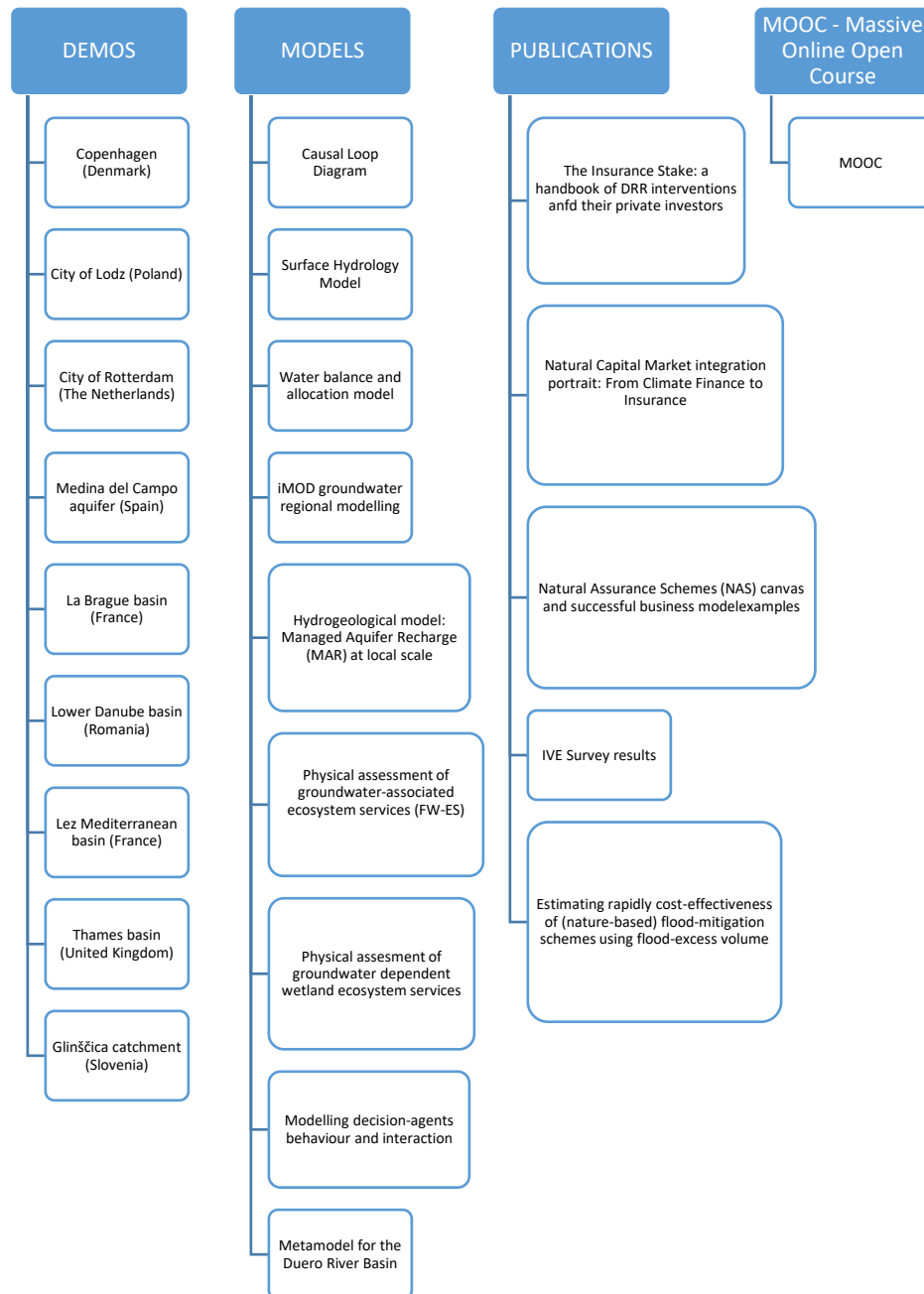
This structure, as described above, was decided and tested together with users outside the NAIAD project during a workshop organised as part of the project INNOVA with external stakeholders who might profit from the use of the knowledge created in NAIAD.

The stakeholder workshop held in Valencia in April 2019 was part of an on-going multi-stakeholder dialogue around the topic of Innovation in Science-based services design, which aims at contributing to developing a Research & Innovation (R&I) agenda on the co-design and co-creation of science-based services. The objective of the particular action related to Nature-Based Solutions was to crystalize the way in which stakeholders will look for information and to co-create a decision tree that would represent their mind-map for searching for information on NBS. Four challenges were highlighted:

- adequate description of „titles“ to understand what the content is about
- keywords responding to their practices
- access to key informants or contact persons
- access to documents and plain explanations



Figure 1: Decision tree for the E-GUIDE



Decisions made in traditional decision-making processes within municipalities or private companies are mainly tested against the usability of the contents provided. Information



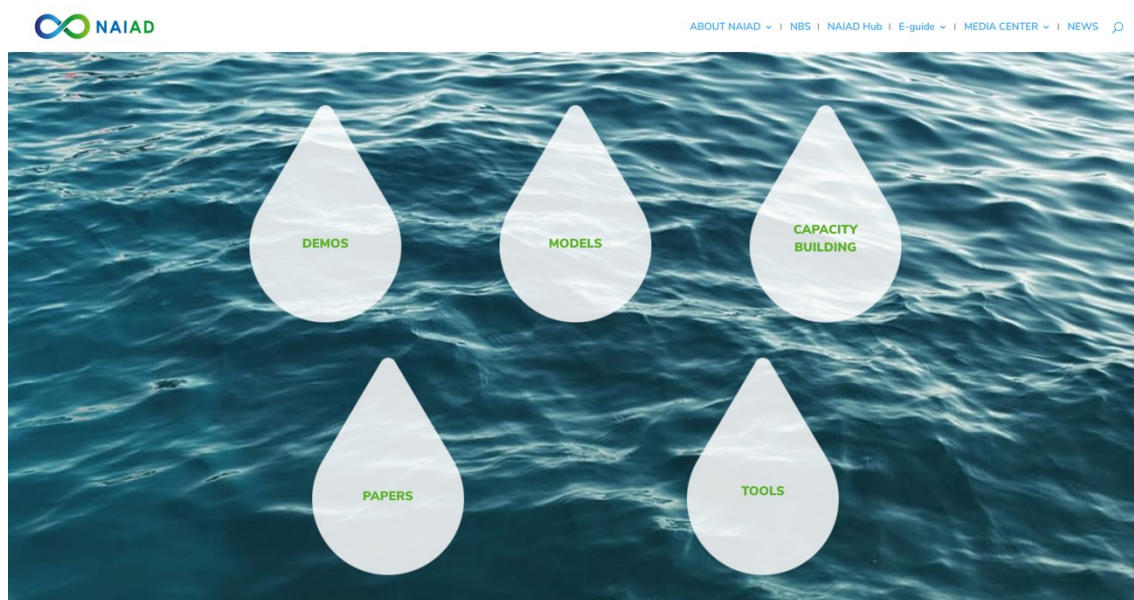
provided by research project is limited in its use and acts mainly as a mediating factor to support decision-making. Information gathering therefore has to be fast and uncomplicated. The longer (in time) the search for information takes, the less the information has the possibility to be embedded in the decision-making process. Therefore, this e-guide will provide a fast-track vision of the knowledge created in NAIAD.

Based on the results of this workshop, we designed the contents and structure of the e-guide. Additionally, an entry point is created to facilitate the access of a user to information based on the user's own description.

USING THE E-GUIDE

The physical interface has following partitions allowing the users to easily enter the contents of NAIAD (see Figure 2). The description will be done in an easily accessible language to allow also a non-scientist to understand and possibly uptake the knowledge created.

Figure 2: E-Guide entry page



When deciding about which one of the possible entry points (see Figure 2 and under <http://naiad2020.eu/about-the-e-guide/>) a user might choose, an additional webpage will open up showing a diversity of entry points in NAIAD. Please note that these categories were selected based on the inputs of the workshop described above.



An additional filter entry-point feature called USERS CATEGORIES, has also been added. This feature will show a user only the content relevant to that user's category (e.g. water managers).

Taking the example of the entry point "models", we will specify the possibilities a user has for using the e-guide. If a possible user is interested in models, when clicking to the drop-shaped "Models" button, the user will access a webpage that is the next step in the decision tree. On this webpage all available models produced in NAIAD will be presented (see Figure 3 and under <http://naiad2020.eu/about-the-e-guide/models/>).

The different entry points available from the front page of the E-GUIDE are:

DEMOS (<http://naiad2020.eu/demo-cases/>)

There are nine demonstration sites (demos) for which the NAIAD objective of demonstrating the insurance value of Nature-Based Solutions to mitigate natural hazards is carried out. You will find additional information on the individual DEMOS. We have assessed the by biophysical, socio-institutional risk and have done an economic valuation of the DEMOS. In-depth information can be found under <http://naiad2020.eu/media-center/project-public-deliverables/> by clicking on WP6.

MODELS (<http://naiad2020.eu/about-the-e-guide/models/>)

Models are simplified representations of reality that help us assess the impacts and degree of the NBS implementation. In NAIAD we have implemented physical models that contributed to increasing the understanding of the biophysical context for NBS in the DEMOS. We developed also Socio-Economic Models that allowed us to quantitatively and qualitatively assess the benefits and co-benefits of NBS.

TOOLS (<http://naiad2020.eu/about-the-e-guide/tools/>)

A variety of tools was created during the NAIAD lifetime to help and support the decision-making process when implementing or planning to implement NBS. We have divided again the tools into physical and socio-economic tools. With the tools, we aim at providing a diversity of assessment possibilities to be considered in the socio-ecological system when implementing NBS. The NAIAD tools contribute to increasing the understanding of "what would happen if I implement NBS..."

CAPACITY DEVELOPMENT (<http://naiad2020.eu/about-the-e-guide/capacity-building/>)

NAIAD has also implemented a MOOC and two additional capacity development tools that will help users get a better understanding of how to use NBS in their decision life cycle.

There is a large demand for knowledge on the contribution of NBS in risk reduction to water related hazards from different stakeholders. Sharing of knowledge from different disciplines and points of interests is a prerequisite in the design and implementation of NBS. Capacity building



is therefore a fundamental component of successful NBS implementation for risk reduction. The MOOC provides conceptual knowledge on NBS, risk reduction potential, a toolbox to support assessment and NBS design, practical application experience from DEMOS and best practices, and operational approaches to implement NBS in different contexts.

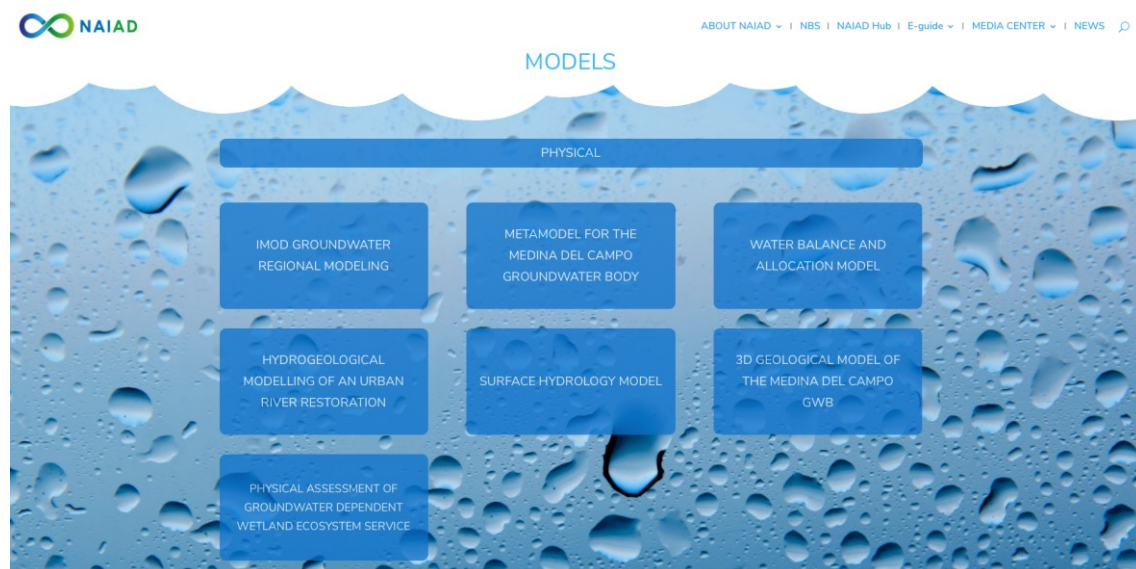
PAPERS (<http://naiad2020.eu/about-the-e-guide/papers/>)

NAIAD has produced an extensive amount of papers that are published and can be accessed through the provided links.

AN EXAMPLE ON USING THE E-GUIDE

Taking as an example the election of Models (see Figure 3), we show the possibilities for users to explore the contents of NAIAD.

Figure 3: Subdivision - Models



Once a decision is made on the model, which users would like to learn about (for example « Water balance and allocation model »), a new webpage will open up with the following information (see Figure 4):

- A short description of the modelling approach will be presented, including (if available) pictures and/or videos
- A contact address, in case the person wants to get support to implement this particular modelling approach, or needs additional information
- Potential users



- d) Potential applications for decision making (including the insurance sector) and
- e) Additional links, including links to reports of NAIAD and other interesting publications of webpages with information about this particular modelling approach.

Figure 4: Model description

NAIAD

ABOUT NAIAD | NBS | NAIAD Hub | E-guide | MEDIA CENTER | NEWS

WATER BALANCE AND ALLOCATION MODEL

Medina del Campo water allocation model is a comprehensive and flexible tool developed with Deltares' RIBASIM package which links the hydrological water inputs at various locations with the specific water-users in the basin. It also assesses the impact of groundwater extraction wells on the sustainability of the aquifers and allows a comparison between scenarios where different cropping strategies could be assessed. The results are represented spatially as maps provided at two different scales: making changes on the whole Medina del Campo basin or just taking action on sub-basin areas.

Use of groundwater resources

Use of surface and ground water resources

Contact Person
Laura Basco

Potential Categories of Users
(Regional) water agencies
For this RIBASIM model, Hydro-geologist in Confederación Hidrográfica del Duero

Additional Links
Deltares RIBASIM: River Basin Planning and Management

Applications to decision making in the insurance sector:
RIBASIM enables the user to evaluate a variety of measures related to projects and to analyze the results in terms of water quantity. This will be the basis of the calculation of finance-related indicators.

Figure 5: Capacity building page

NAIAD

ABOUT NAIAD | NBS | NAIAD Hub | E-guide | MEDIA CENTER | NEWS

CAPACITY BUILDING

MOOC

ECO-ACTUARY POLICY SUPPORT SYSTEM - TRAINING AND GUIDELINES
to introduce and provide training in the Eco-Actuary tools for risk assessment, mitigation planning and natural flood management.

FREESTATION AND //SMART: SELF PACED TRAINING
Build your own DIY, IoT-linked environmental monitoring stations (FreeStations) and use the //Smart, software linked to the FreeStation outputs to assess the effectiveness of interventions to mitigate flooding.

The same rationale has been used for all other components of the e-guide.



If users decide to see the contents on capacity building, they will reach the following screen, where they can decide which information to choose (see Figure 5).

DISSEMINATION OF THE E-GUIDE

The dissemination of the e-guide will be done using existing platforms for NBS and adaptation at the European level. The plan is also to reach a wider audience by linking the e-guide to the climateadapt webpage of the European Environmental Agency (<https://climateadapt.eea.europa.eu>). The networks created in OPPLA (<https://oppla.eu>) and think-nature (<https://www.think-nature.eu>) will also be used. Additionally, links to international platforms such as the ones in IUCN (<https://www.iucn.org/theme/nature-based-solutions>) and WWF (https://www.panda.org/our_work/our_focus/climate_and_energy_practice/what_we_do/nature_based_solutions_for_climate/) will be informed and linked to the contents.

Our key audience is anyone interested in the implementation of NBS for reducing risks and considering the insurance value of nature. These will be decision makers and people interested in looking for examples of such implementation as in our DEMOS. Extensive information on the DEMOS will be also accessible through the e-guide entry-point.