sincere

Innovating for Forest Ecosystem Services

Spurring INnovations for forest eCosystem sERvices in Europe

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D5.4 Awareness raising and capacity building campaign

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Reference

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Executive summary

This deliverable provides the building blocks for awareness raising campaigns at local scale in each of the SINCERE Innovation Actions (IAs). The purpose of the campaigns is to raise awareness of forest ecosystem services and of the specific innovations being implemented in the IAs. The deliverable summarises outcomes of interviews with each IA in terms of the local context and their needs for support with awareness raising. Guidance is provided on structuring an awareness raising campaign and successfully communicating the importance of forest ecosystem services. A package of materials specific to each IA is provided, including suggested general messaging, examples and other forms of support, as requested during the interviews. A toolbox of tools, guidelines and recommendations for assessing forest ecosystem services, supporting stakeholder participation, and developing business cases, amongst other topics, is also provided. Next steps to further the awareness raising campaign include developing specific communications products, such as social media cards, and consolidating the materials into a format that can be provided online for public use.

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Figures and Tables

1. Introduction

Balancing the provision of a range of ecosystem services with a growing societal demand from forests is increasingly required in the protection and management of European forests. The SINCERE project aims to develop innovative business models and policies to connect profitable forest management with societal demands from forests. For such innovative mechanisms to achieve local acceptance and wider uptake, it is necessary to raise awareness amongst local stakeholders of the benefits that forests provide and of the contributions such mechanisms can make. It is also necessary to build the capacity to sustain the provision of those benefits and support the implementation of innovative mechanisms.

To reach this goal, the SINCERE awareness-raising campaign is targeted to key stakeholders at local scale in the SINCERE innovation actions (IAs, i.e. case studies) to meet several specific objectives:

1. Support SINCERE IA leads with communicating with stakeholders and engaging local media;
2. Raise awareness amongst different stakeholder groups of benefits of forest ecosystem services (through IA leads); and
3. Provide knowledge, best practices and tools (planning and management, business models, financing, policy, good practice examples) for different stakeholder groups to contribute to the protection and restoration of forest ecosystem services (through IA leads).

The awareness raising campaign uses the train the trainer concept and takes the form of a package of materials made available to IA leads (and local stakeholders) to put into place at local scale and translate to the local language if required. It is designed to meet the communications needs in each IA and is targeted to specific local stakeholder groups. The materials provided in the package therefore vary between IAs depending on their preferences and needs, although all can make use of the material as needed. The situation in the IAs is likely to be dynamic, and change as the project advances. Occasional updates to the awareness raising packages will be made to reflect changes in needs (in April 2019, December 2019 and August 2020).

The awareness raising campaign package will also be made available publicly on the SINCERE website for the benefit of external users.

This document describes how the analysis of stakeholders in each of the case studies underpins the targeted campaign and assesses their needs for knowledge and tools. Guidelines on establishing an awareness raising campaign, recommendations on communicating forest ecosystem services, SINCERE communication products, and sample messages and examples are provided. Overall guidance is offered in section 5. Subsequent sections are specific to each IA according to the support requested and their preferences for awareness raising.

2. Introducing the SINCERE IAs

The awareness raising campaign is specifically focused on raising awareness in each of the SINCERE IAs at local scale. The IAs test a range of different innovative mechanisms (i.e. innovative business models or policies) to promote a variety of different forest ecosystem services. For the awareness raising campaign to be effective, it is important to understand the local context and aims of the IAs, the knowledge and capacity needs of local partners, and how stakeholders can act in support of those aims (Table 1).

Table 1. Overview of SINCERE Innovation Actions/case studies. Further information about the IAs can be found on the SINCERE website.

SINCERE IA	Main aims for change and requirements for action from stakeholders
Paying for watershed services to cities, Peru	• An increment in the urban water tariff has already been approved by the National Water Regulating Body of Peru to reward provision of ecosystem services around Piuray Lake, near the city of Cusco. • The IA aims to develop the knowledge base needed for the reward mechanism. • It requires local communities, local authorities, NGOs, the city's water facility and the National Water Regulating Body to understand the contribution of ecosystem services to securing the urban water supply and the need for enhanced knowledge to establish the reward mechanism. It also requires their cooperation in knowledge co-production processes.
Forests for water in Catalonia, Spain	• The aim of this IA is to diversify financing sources for forest management by developing a payment for ecosystem services (PES) scheme for water services in the area, including identifying buyers (such as tourism companies, downstream farmers, municipalities (as water consumers) and local businesses for corporate social responsibility purposes) for services provided by foresters. • The IA requires all actors in the area to understand the links between forests and water, and specifically to be aware of the importance of water for businesses and wellbeing, and of how forests contribute. It is also important for them to understand the potential benefits of paying for water-related ecosystem services. The success of the scheme requires forest owners/managers to be willing to manage for ecosystem services at the price suggested.

SINCERE IA	Main aims for change and requirements for action from stakeholders
	• It also requires recognition of forestry as an economic activity for the area, to be promoted alongside tourism.
Reverse auctions pilots for forest ecosystem services, Belgium	• The aim of this IA is to implement pilots for payment of ecosystem services, namely restoration and improvement of habitats in hunting areas, and creation of wild boar buffer strips between forest and agricultural fields, using reverse auctions. • This requires understanding amongst service users of the need to support provision of ecosystem services and willingness to pay for them. It requires willingness of land managers to change management to ensure ecosystem service provision.
Reverse auctions pilot for biodiversity, Denmark	• The aim of this IA is to design coordinated and cost-effective public support schemes (reverse auctions) for biodiversity protection, such that it is equivalent to production of other services. • This requires interest from forest managers to bid in reverse auctions, commitment from decision makers to establish these schemes, and support from biodiversity conservationists, recreationalists and the public.
ECOPAY Connect, Italy	• The aim of this IA is to enhance use of FSC certification in local poplar farms and transform compliance into nature protection. It also aims to increase participation in the Lowland Forest Association to reduce certification and management costs and enhance the local market for poplar timber. • This requires cooperation of the Regional Park in managing habitat for biodiversity and interest of poplar farmers in becoming certified and in managing areas of the park.
Mushrooms of Borgotaro IGP, Italy	• This IA aims to use an online platform to commercialise recreational permits for collection of wild mushrooms and redistribute mushroom collectors through the forest. • It requires cooperation of recreational mushroom collectors with the redistribution strategies and the participation of all actors in the value chain in the online platform.
Club GREY HORSE, Russia	• The aim of this IA is to develop multi-purpose leases for forest renters to increase the economic efficiency of forestry and balance ecosystem service provision. This requires inclusion of ecosystem services in the

SINCERE IA	Main aims for change and requirements for action from stakeholders
	Forest Code and elimination of restrictions on forest leasing for multi-purpose use. • The IA requires forest renters to take part in ecosystem service assessment and regional and federal authorities to support a proposal to include several ecosystem services in the forest code. It requires local government to implement it.
Health functions of peri-urban forests, Croatia	• The aim of this IA is to evaluate scenarios for payment for ecosystem services focused on health benefits and to raise public awareness of the benefits of forests for health. • This requires the health sector to understand and value the contribution of forests to health, willingness of the natural park and forest managers to adjust management for health benefits, and the public to understand and value the benefits of forests for their health.
Landscape and recreation value trade, Finland	• This IA aims to pilot a payment for ecosystem services mechanism for forest owners to be compensated for enhancing the landscape and recreational values of their forests to expand nature-based tourism. • This requires forest owners to understand how they can manage landscape and recreational values as a service. It requires tourists and tourism companies to pay into the fund for the mechanism, which offers payments for the forests owners. All the stakeholders, not only forest owners and tourism companies, have to understand the value of different ecosystem services, their co-existence and interaction, to be able to maintain those services and benefit them.
New legal framework for forests in Bizkaia, Spain	• This IA aims to create a new legal framework that improves the provision, valuation and monitoring of forest ecosystem services to enhance the sustainability of decision making by private forest owners (75% of land is privately owned). • This requires engagement of forest owners and value chain industries (wood transformation) in valuing ecosystem services. It also requires willingness of decision makers to change the existing legal framework.
Spiritual forests and forest kindergartens, Switzerland	• This IA aims to explore the cultural ecosystem services associated with spiritual forests and forest kindergartens and their management needs, and to develop an overall business and management model for these forests.

SINCERE IA	Main aims for change and requirements for action from stakeholders
	• This requires willingness of current forest owners/managers to develop these forest uses (if not currently in existence) and change management practices accordingly. It also requires demand from the public to take advantage of these forest uses.

3. Defining stakeholder groups targeted in the campaign

The awareness campaign targets specific stakeholder groups at local level in each of the SINCERE IAs. This section describes those groups, their relation to forests and their interests, using results from the SINCERE stakeholder analysis and mapping carried out in Work Package 2 and consultation with coordinators of the SINCERE IAs undertaken for the development of this deliverable.

Potential stakeholders were identified across all case studies, with quotas assigned as to how many of each stakeholder type should be engaged in the case study work through its Multi-Actor Group (MAG). The principal categories and stakeholders were as follows:

- Societal influencers/opinion formers – political; traditional/social media; spiritual, religious, ethical
- Forest users – owners; developers and infrastructure; management, hunters, rangers; wood, water, produce; health; fire/emergency management; protective groups/NGOs; recreation, tourism; research and education
- State actors – law enforcement; regulating agencies; government
- Value chain actors – investors; suppliers; producers; customers (potential); competitors (potential), substitutors; complementors

Across the range of stakeholders selected, quotas were also set according to the gender, age, geography, scale, influence and position of individuals.

Each IA then conducted an analysis of their stakeholders to identify those who should participate in its MAG.

During interviews with the leads for each SINCERE IA, key stakeholder groups were identified (Table 2) for whom awareness of forest ecosystem services is important for either the success of the IA or its replication/upscaling at a later date. The current awareness level varied considerably amongst the stakeholder groups and between the IAs, therefore emphasising that the awareness raising campaign must be adapted to the needs of specific stakeholder groups in the various IAs (Table 2).

Table 2. Key stakeholder groups in case studies and their current levels of awareness.

Case study	**Stakeholders with high awareness of forest ecosystem services**	**Stakeholders with low awareness of forest ecosystem services**
Paying for watershed	For reasons outside our control, this information is not yet available. This section will be completed once it becomes available.	

Case study	Stakeholders with high awareness of forest ecosystem services	Stakeholders with low awareness of forest ecosystem services
services to cities, Peru		
Forests for water in Catalonia, Spain	NGOs, environmental organisations	Forest owners, farmers, land owners, tourism businesses, municipalities, general public
Reverse auctions pilots for forest ecosystem services, Belgium	Forest owners', hunters' and farmers' associations are mostly aware of the concept of ecosystem services, but not the terminology. Nature conservation organisations.	General public Forest owners, hunters and farmers not represented by the respective associations may be less aware.
Reverse auctions pilot for biodiversity, Denmark	Forest owners, environmental NGOs (local and national), researchers, recreational stakeholders, ministries, relevant authorities, forest education organisations	General public
ECOPAY Connect, Italy	Forest owners, regional park	General public
Mushrooms of Borgotaro IGP, Italy	For reasons outside our control, this information is not yet available. This section will be completed once it becomes available.	
Club GREY HORSE, Russia	Forest renters; federal, regional and local authorities; forestry departments; municipalities; nature conservation organisations; and the general public in the area all have a high awareness of provisioning ecosystem services	The same stakeholder groups have a low awareness of regulating ecosystem services
Health functions of peri-urban forests, Croatia	Croatian Forestry Enterprise, scientific stakeholders, health institutions.	Park visitors and recreationalists, sports clubs (except for awareness of health benefits), private forest owners.

Case study	Stakeholders with high awareness of forest ecosystem services	Stakeholders with low awareness of forest ecosystem services
Landscape and recreation value trade, Finland	Some parts of forestry, environmental NGOs and environmental departments of government have a moderate level of awareness	Tourism businesses and forestry businesses
New legal framework for forests in Bizkaia, Spain	For reasons outside our control, this information is not yet available. This section will be completed once it becomes available.	
Spiritual forests and forest kindergartens, Switzerland	Forestry, forest owner associations, municipalities, churches, ceremonial enterprises, clients	None

4. Awareness raising needs in SINCERE IAs

Given the varying levels of awareness amongst stakeholder groups and between IAs, and the varying stages of the innovative mechanisms being tested in the IAs, it is necessary to customise the awareness raising campaign materials for each IA. Therefore, as previously mentioned, IA coordinators were consulted in October and November 2018, after the first MAG meetings were held with stakeholders in each IA. The consultation identified the current challenges and needs in each IA, their desires for awareness raising, and their pre-existing activities and plans.

The IAs vary widely from innovative mechanisms being tested in the context of established relationships between the SINCERE partner and relevant stakeholders to new projects and new stakeholder relationships being developed. In addition, for some SINCERE IA partners, communication and awareness raising with the public and stakeholders is standard practice, whereas for others the SINCERE IA requires awareness raising beyond their existing relationships and practices. Therefore, the level of support required through this train the trainer package of materials varies widely.

With this in mind, the awareness raising campaign package provides support where needed, in the form of messaging, tools and guidelines, and examples. It is not intended to interfere in existing communications and awareness raising activities that are working well, and therefore there is no obligation for the IAs to use the materials in a common process, although guidance is provided on structuring the use of these materials into an awareness raising campaign.

The consultation identified the awareness raising needs in each IA in terms of stakeholder groups to be targeted by this campaign (those with low awareness identified in Table 2 with which assistance is needed), the topics for awareness raising, and the desired support in doing this. These are summarised in Table 3.

Table 3. Awareness raising needs in each IA.

Case study	Stakeholder groups to be targeted	Topics to be targeted	Formats requested
Paying for watershed services to cities, Peru	For reasons outside our control, this information is not yet available. This section will be completed once it becomes available.		
Forests for water in Catalonia, Spain	Farmers, land owners, forest owners, tourism businesses, municipalities (water suppliers),	• Relationships between forests and water (supply and quality)	• Simple messages (with data) on the relationships between forests and water and

Case study	Stakeholder groups to be targeted	Topics to be targeted	Formats requested
	other companies with interest in investing in environmental issues, general public	• Risks to forests from drought, pests, etc. worsened by climate change • Importance of forest management in the Mediterranean for reducing risks and sustaining ecosystem services, especially water provision • Concept of payment for ecosystem services	the need for forest management • Examples of similar payment for ecosystem services schemes, particularly where municipalities pay forest managers for water service provision • Specific (local) evidence on role of forest management for reducing risks and sustaining services
Reverse auctions pilots for forest ecosystem services, Belgium	Farmers', forest owners' and hunters' associations; general public	• Lessons learnt from implementing the pilot project and from SINCERE (to come later in the project) for stakeholder associations • Concept of forest ecosystem services (to come later in the project) for the general public	• Basic messages on forest ecosystem services
Reverse auctions pilot for biodiversity, Denmark	General public	• Concept of forest ecosystem services for the general public	• Basic messages on forest ecosystem services • Examples of forest ecosystem services
ECOPAY Connect, Italy	None needed	None needed	• Assistance with sharing best practice from the IA

Case study	Stakeholder groups to be targeted	Topics to be targeted	Formats requested
Mushrooms of Borgotaro IGP, Italy	For reasons outside our control, this information is not yet available. This section will be completed once it becomes available.		
Club GREY HORSE, Russia	Forest renters; federal, regional and local authorities; forestry departments; municipalities; nature conservation organisations; residents	• The value of regulating forest ecosystem services • Multi-purpose forest use • Perceptions of multi-purpose forest use	• Examples of valuations of regulating services • Videos, visuals and other digital materials showing examples of successful multi-purpose forest use • Support for stakeholder survey on perceptions of forest ecosystem services and barriers to multi-purpose forest use
Health functions of peri-urban forests, Croatia	Park visitors, sports clubs, private forest owners	• Concept of forest ecosystem services • Health-related forest ecosystem services • Importance of forest management	• Basic messages on forest ecosystem services • Basic messages on health benefits from forest ecosystem services • Basic messages on importance of forest management • Examples of parks near urban areas that engage visitors, particularly for health benefits
Landscape and recreation	Tourism businesses,	• Concept of forest ecosystem services (especially beyond	• Basic messages on forest ecosystem

Case study	Stakeholder groups to be targeted	Topics to be targeted	Formats requested
value trade, Finland	forestry businesses	those directly related to business interests) • Value of ecosystem service thinking for business	services (beyond timber provision) • Examples of how businesses combine corporate social responsibility and ecosystem services • Examples of successful application of ecosystem service concept
New legal framework for forests in Bizkaia, Spain	For reasons outside our control, this information is not yet available. This section will be completed once it becomes available.		
Spiritual forests and forest kindergartens, Switzerland	Forest actors, general public	• Concept of forest ecosystem services • Win-win solutions for different types of forest ecosystem services	• Examples from other Sincere IAs • Prototype Powerpoint explaining Sincere and the IAs • Good pictures

5. Creating an awareness raising campaign

The SINCERE IAs are planning a variety of awareness raising activities that are targeted to the specific context in their case study area. The information and materials provided will be used at local scale to support unique awareness raising campaigns. Therefore, there will not be one overall campaign, but rather 11 individualised campaigns that are designed and timed according to local needs.

The key components of successful awareness raising campaigns, and how they relate to the processes in SINCERE, are as follows:

1. Goal setting – define clear goals for raising awareness of forest ecosystem services and the specific innovations of the IA. These may vary between IAs but relate to the main aims for change identified in Table 1.

2. Identify target groups – these have been identified during the course of the IA stakeholder analysis and multi-actor group meetings, and collated in Table 2 (specifically those groups with currently low levels of awareness).

3. Define messages – these are identified, where necessary, for each IA in their specific section above, and can be further adapted following the guidelines defined below.

4. Identify communication channels – this will vary between IAs, depending on which are most locally appropriate, already established, etc. Specific channels could include local media (radio, TV, newspaper), social media, school and family activities, local events, art and photo contests, etc. Plan the use of the different channels according to a schedule, timed to coincide with key project and external events.

5. Collaborate across scales – the SINCERE project will help to give local IAs visibility at European and international scale, through the project website and social media, events and other communication activities.

6. Monitor and evaluate the impact of the awareness raising campaign. Monitoring the impact of the campaign helps to adjust the campaign to ensure it meets objectives,

Further recommendations and guidance on packaging these messages, examples and communications into a coherent campaign to raise awareness of forest ecosystem services are provided in Table 4. These can be consulted to further refine the campaign planning as necessary.

Table 4. Guidance on structuring awareness raising campaigns (including from other sectors).

Title	Author	Link
Tool 9.9 Awareness raising campaign checklist	UNODC	https://www.unodc.org/documents/human-

Title	Author	Link
		trafficking/...files/08-58296_tool_9-9.pdf
Awareness raising toolkit	ELINET	www.eli-net.eu/awareness-raising/toolkit/running-a-campaign/
Creating an awareness campaign guide	Carbon Trust	https://www.carbontrust.com/resources/guides/energy-efficiency/employee-awareness-and-office-energy-efficiency/
Awareness campaigns for behavioural change	Climate Adapt	https://climate-adapt.eea.europa.eu/metadata/adaptation-options/awareness-campaigns-for-behavioural-change
Building public awareness toolkit	City of Red Deer	http://www.reddeer.ca/about-red-deer/living-in-red-deer/neighbourhood-life/resources-for-community-groups/public-awareness-toolkit/
NatureForAll – Connecting with Nature – Recommendations for Decision Makers	IUCN	https://natureforall.global/why

The following sub-sections first provide guidance on elements of the awareness raising campaign that are relevant to all IAs. There is then a specific section for each IA that provides guidance, materials and support to ongoing or newly developed awareness raising activities.

5.1 Defining goals

The purpose of the awareness raising in each of the SINCERE IAs is to increase awareness and understanding of the concepts identified in Table 3.

5.2 Identifying target groups

The SINCERE IAs have already identified target groups in terms of which stakeholders currently have a low level of awareness of forest ecosystem services in general and the particular issues being tackled in the IA (Table 2 and Table 3).

5.3 Developing messages and using communication channels

Communicating about ecosystem services with various stakeholder groups can be a challenge due to the technical nature of the concept. However, much guidance already exists on how to do so in a way that can be clear and easily understand. These are compiled in Annex 1 as reference documents for SINCERE partners and others to refer to as needed.

Several key points can be taken from the more general existing guidance, compiled in Annex 1, in terms of messages, communication channels and engaging with the media. The key points on developing effective messaging that explains ecosystem services and makes the case for valuing them are as follows (numbers reference sources in Annex 1):

- The benefits that nature provides to people are generally easily recognised and understood, especially the benefits for public health and safety (2).
- Terminology equivalent to 'nature's benefits', 'nature's value' or 'nature's contributions' to people is more intuitively understood by non-specialists than 'ecosystem services' (2, 9).
- A common objective for communications should be defined, with different messages for different groups (13).
- The value of ecosystems for protecting against flooding and other natural disasters and for providing clean drinking water are seen as convincing arguments for the public, including that using nature is easier and cheaper than alternative technological solutions (especially for drinking water) (2).
- To reach the public, positive, inspiring messages that focus on people's love of forests and an idea of action they can take should be used. Love of forests can be related to childhood experiences, nature documentaries and instinctive fascination with nature. It can be supported with personal stories (10).
- Use stories to communicate messages – focus on a particular person (or group of people) to show how forest ecosystem services (or their lack) impact them or highlight what they have done to manage forests, and use picture and graphics to highlight key points (24).
- To reach policy makers, focus on how society relies on nature and the value of forests, again combined with a call to action (10).

- When making the case for taking action to ensure forests provide ecosystem services (new policy, etc.), focus on it being a cost-effective and resource-efficient way to achieve policy goals (9).
- Quantifying the economic benefit of ecosystem services can be helpful for reaching policy and decision makers. However, it can be risky if combined with messages on people's love of forests in a way that reduces people's positive view of forests to a financial value (2, 9, 10).
- Use plain language to describe innovative mechanisms, such as paying forest owners to manage forests in a way that benefits society, rather than using terminology such as payment for ecosystem services or referring to markets and credits (9).
- Use common local names of plants and animals, and familiar terms and phrases such as woods, woodlands, recreation, taking care of the land, and harvesting trees.
- Use stories of successful (relevant) projects, policies and business models from elsewhere to show that the concept works (9).

The key points in terms of communication channels are as follows:

- Use locally trusted messengers to persuade the public (2, 16).
- Engaging with schools can help to spread the messages to many parts of the general public. Children's natural curiosity can be engaged by running activities outside, conducting experiments, seeing animals and plants, and by storytelling. Activities that involve the whole family can be especially useful (16).
- Methods to communicate can include factsheets and brochures, news articles, workshops and training sessions, posters, press releases, social media, blogs, videos, field trips, radio interviews, contests (art, photos, etc.), plays and stories, and many others (6, 16).
- Multimedia formats can be packaged together to present research outcomes and other stories in a way that may be picked up by online media and that is accessible (18).
- Use diagrams and infographics to compare different policy choices for decision makers (9).

The key points in terms of engaging with the media are as follows:

- Media campaigns should use influential spokespersons that are credible, articulate, knowledgeable, compelling and available (16, 17).
- Campaigns should be coordinated with other local campaigns on similar issues. Different messages should be used to appeal to different people, and messages should be repeated (16).

- Options for engaging with local media include writing letters to the editor, writing opinion editorials and pitching local reporters (17, 19).
- News stories pitched to the media should be newsworthy, timely and relevant to the audience. Newsworthy means that stories are very recent developments about something previously unknown and that is surprising or unusual. Stories that address people's core values, have interesting characters and are relatable for the audience are also helpful (19, 20).
- When pitching journalists, it is helpful to have interesting speakers and good photo and filming opportunities available (20).
- When talking to journalists it helps to be enthusiastic and to use short and simple answers. Assume that all information given could be used in stories (20).

5.4 Communications products developed for the SINCERE project

Several SINCERE communications products support the awareness raising campaign at local level in the IAs:

- The SINCERE website provides an overview of the project, explanations of forest ecosystem services and innovative mechanisms, and facts related to forests.
- The SINCERE leaflet and SINCERE video introduce the project.
- Each IA has a specific webpage explaining, in English, the aims of the case study, main actions, and stakeholders involved (for example, the Russian IA webpage). Additionally, each IA has the option to produce a webpage for its multi-actor group on which it can post news, events and updates in local language.
- Blogs of the first MAG meetings in the IAs are available on the website, which can be shared amongst stakeholders at local level (for example, the Croatian IA blog).
- Several videos of local IAs that can be used as communication tools are collated on the SINCERE website.

The SINCERE website, leaflet and video should be used to give general introductions to the project, and in the context of the project, the concepts of forest ecosystem services and innovative mechanisms (i.e. new business models and/or policies) to value and implement them.

The IA-specific webpages and blogs provide a way of sharing information on the innovative mechanisms being implemented as part of the SINCERE project to a wider audience outside the case study area. They can also be used as a common repository for information needed by stakeholders in the local area.

5.5 Establishing monitoring and evaluation criteria

Defining criteria for monitoring and evaluation depends on the goals of the awareness raising campaign. The first step is to identify the changes that are needed to reach the goals of the campaign, such as greater understanding of forest ecosystem services amongst the general public. The next step is to create indicators to measure improvement towards the goal, such as number of mentions of forest ecosystem services on social media, number of respondents that understand the concept in surveys, etc. Indicators should be measurable, clearly defined and relevant to the goal. After a baseline assessment of the indicators before the awareness raising campaign is implemented, levels of success should be defined. The impacts of the campaign can then be monitored according to the indicators, and its strategy and content adjusted accordingly.

As identified in Table 3, the IAs are testing different innovative mechanisms and are at different stages of implementation with different degrees of stakeholder engagement. Therefore, the support offered for awareness raising varies between IAs. The following sections offer tailored messaging advice and examples to supplement the general products and guidelines provided in section 5.

6. Paying for watershed services to cities, Peru

At the time of writing, the participation of the relevant partner in the SINCERE project has not been formalised. This section will thus be updated once that process is completed.

7. Forests for water in Catalonia, Spain

In this IA, awareness raising is needed for several stakeholders – farmers, land owners, forest owners, tourism businesses, business companies, municipalities (water suppliers) and the general public. Awareness raising is specifically required on the relationships between forests and water to support the establishment of the proposed payment for ecosystem services scheme, in which water consumers, such as farmers, business companies, municipalities and tourism companies (using the local reservoir), pay for the ecosystem services provided by foresters. Similarly, the concept and functioning of the proposed payment for ecosystem services scheme must be understood by relevant stakeholders. Lastly, there is a need for the general public, in particular, to be aware of the need to proactively manage Mediterranean forests to reduce risks from droughts, fires, pests and others.

The relationships between forests and water are complex – forest cover and type affect water supplies and water quality, both of which are necessary for the farmers who irrigate their crops, for municipalities providing drinking water, for business companies, but also for the tourism businesses that offer water-based recreation in the IA area. Messaging to explain these relationships must be clear and simple and follow, where relevant, the general guidelines for communicating ecosystem services described in section 5.

Basic messages on the forest-water relationships are as follows:

- Forests have an important role in the global water cycle, absorbing water from the soil through tree roots and returning it to the atmosphere. They can also be helpful for reducing some small floods.
    - Forest management can help to increase the water in the rivers, lakes and reservoirs that are important for drinking water supplies, recreation and for the animals and plants that live in these environments.
    - Trees help to recharge underground water sources (groundwater) by helping rainwater soak into the soil, but trees also take up water, meaning that less water runs off the land into streams, rivers and lakes.
- By protecting Mediterranean forests from recurrent fires and other impacts of climate change, we protect the quality of the water and the landscape.
    - Tree roots and plants that cover the ground help to reduce soil erosion, meaning that less sediment enters water bodies.
    - They also slow down rainwater that runs across the ground, meaning that pollutants in the water are trapped and filtered.

- Managing forests for fire and risk prevention around water sources is needed to make sure that the forests and their soils stay healthy and can provide the benefit of clean water to people.
- Protecting and managing forests around drinking water sources helps to reduce the amount of pollutants in that water, meaning that costs of some types of water treatment are reduced.
- Protecting and managing forests around popular recreational locations – like rivers, lakes and reservoirs – helps ensure water and landscape quality.
- Understanding the value of these benefits helps decision makers compare options for provision of clean drinking water so that cost-effective options, including forest protection and management, can be identified.

Further resources for assistance with messaging on the relationships between forests and water are as follows:

- FAO Forestry Communication Toolkit's key messages on watershed management: http://www.fao.org/forestry/communication-toolkit/76377/en/
- Forest Research's page on forest hydrology – how much water do forests use? https://www.forestresearch.gov.uk/research/forest-hydrology/forest-hydrology-how-much-water-do-forests-use/
- IUCN's infographic on how forests impact water quality and quantity: https://www.iucn.org/content/infographic-how-forests-impact-water-quality-and-quantity
- FAO video on forests and water for 2016 International Day of Forests: https://www.youtube.com/watch?v=BMZQLVwf1Cs (also available in Castellano: https://www.youtube.com/watch?v=m2BRtYpY4J8)
- SIWI report on championing the forest-water nexus: http://www.siwi.org/wp-content/uploads/2018/03/Forest-Water-Nexus-14p-FINAL-14032018_lowres.pdf

The general public in the region appear to perceive forest management (such as removing trees) as detrimental to the forest. It is therefore vital to raise public awareness of the importance of sustainable forest management.

Basic messages on the importance of forest management are as follows:

- Fires, forest pests, droughts and other threats may happen naturally and be part of the natural ecological processes in forests.
    - For example, small and low intensity fires can help some plants and trees to release their seeds and reproduce.

- However, climate change and other human activities make these threats more likely and more severe, threatening the health of the forest and the benefits it can provide to people, such as filtering pollutants from water or reducing the water flow into the rivers.
- Unhealthy and poorly-managed forests are more at risk of these types of threats, including a decrease in water flow. Forest management is important to reduce the likelihood of the threat occurring and the damage it causes.
    - For example, cutting down some small trees and removing some dry wood and plants helps to reduce the risk of forest fires[1].

Further resources for assistance on the need for forest management are as follows:

- The Conversation article on forest management and wildfire risk: https://theconversation.com/better-forest-management-wont-end-wildfires-but-it-can-reduce-the-risks-heres-how-107245
- eFIRECOM's Forest Fires Risk Communication guidelines: efirecom.ctfc.cat/docs/RECOM%20ENGLISH_final.pdf

It is necessary for stakeholders to understand the purpose and effectiveness of the proposed payment for ecosystem services scheme if it is to be accepted. The basic messages that can be used are:

- Forests need to be actively managed to reduce the damage caused by droughts, fires and other risks, and to ensure that people can continue to enjoy the benefits that forests provide – that people can still walk in the woods, enjoy recreation on reservoirs, and breathe clean air.
- Forest management can be expensive and often doesn't provide forest owners with any income.
- People and companies who enjoy or profit from the benefits that forests provide can help to pay or reward forest owners for managing their forests in such a way that those benefits are maintained or enhanced.
    - For example, tourism companies that offer recreational opportunities on the reservoir could contribute to the forest management that helps to ensure the water is clean for their customers to enjoy.

Examples of how similar payment for ecosystem services schemes operate and demonstrate their success will also be useful (Table 5).

[1] https://eustafor.eu/active-forest-management-is-needed-to-prevent-devastating-forest-fires/

Table 5. Examples of payment for ecosystem services schemes and projects to manage forests for water relevant to the Catalonia IA.

Example	Key points	Reference
Woodland Grant Scheme, England, UK	• Key aim of the English Woodland Grant Scheme is to expand existing woodlands to foster their public benefits such as recreational uses, reduced flood risk and climate regulation. • The payment by UK government for ecosystem services contributes to the cost of woodland owners' management to improve and create new woodlands. • The Grant Scheme has a good rate of take-up but there has not yet been any evaluation of the scheme's impacts, particularly in relation to ecosystem changes.	The English Woodland Grant Scheme, UK
Lower Saxony, Germany	• In Lower Saxony, Germany, the Water Association of Oldenburg and East-Frisia paid forest owners to compensate for lower yields from implementing forestry activities that protect quality and increase recharge rates of groundwater sources of drinking water. • Compensated activities included underplanting conifers with broadleaves (mostly beech), changing from conifers to broadleaves, and avoiding clearcutting. • The payments were made on the basis of agreements between the district administration, the water association and forest land owners. Water users fund the scheme through a water abstraction charge. • The scheme was proven to be effective, as groundwater quality has improved since sufficient forest cover has been achieved. The water association evaluated the efficiency of payments and found them to be cost effective.	https://cmsdata.iucn.org/downloads/report_january_2009.pdf
Catskills, New York State, USA	• The Catskills watershed is one of the main drinking water sources for New York City. The New York City Department for Environmental Protection funds the Long-Term Watershed Protection Programme to manage the watershed in ways that protect the quality of the drinking water sources. • The Watershed Forestry Programme, as part of the watershed protection program, promotes good forest stewardship and encourages long-term forest management for both water quality and economic viability goals. It supports the development of forest management plans and implementation of best management practices that protect water quality, as well as training and education programmes. • Land and water management is incentivised by adopting cost-sharing measures rather than regulation, which achieved great participation and civil ownership.	Catskills, USA – long-term Watershed Protection Program

Example	Key points	Reference
Aalborg, Denmark	• The Drastrup Pilot Project in the City of Aalborg in Denmark aims to protect groundwater sources from pollution caused by dominantly agricultural purposes. • The approach consists of a publicly funded payment scheme to purchase agricultural land in the drinking water catchment area for conversion to broadleaved woodland. Farmers wishing to continue with conventional framing methods are offered land outside the catchment area. • Nitrate concentration in groundwater has decreased from 120 mg/l to less than 10 mg/l since land has been converted. • An estimated 440 000 EUR per year is saved due to reduced water treatment requirements.	https://www.forestresearch.gov.uk/documents/959/FRMG004_Woodland4Water.pdf
Vietnam	• To protect vital ecosystem services, in 2010 the Government of Vietnam instituted a nationwide policy on Payment for Forest Environmental Services (PFES) including user payments to suppliers of these services. • The vast majority of payments are from hydropower plants (98%), with the remainder from water companies (2%) and tourism (0.1%). Fixed payments are established for watershed protection – hydropower plants must pay a specific amount per kWh produced and water companies per cubic metre of clean water. Ecotourism companies pay a percentage of gross revenue. • Lessons learnt include the need to establish environmental and socioeconomic baselines and to monitor the impacts of the scheme.	http://www.cifor.org/publications/pdf_files/OccPapers/OP-93.pdf
China	• Beijing, China, is in an arid region and has experienced severe water stress. • 40% of the city's water supply is provided by one reservoir. Its watershed has been affected by deforestation and degradation. • Focus is now on restoring the forest landscape in the reservoir's watershed to secure water supply and improve its quality. Tree planting must be planned in a way that creates a forest ecosystem that is resilient in the long-term, provides ecosystem services, and generates income.	Trees for Water – China. Exploring forest landscape restoration for Beijing.
Rusenski Lom Nature Park, Bulgaria	• Previously, there was no link between ecosystem management and those who benefit from ecosystem services (tourism and agriculture), leaving a gap in funding for biodiversity. • Under this scheme, tourism operators make a voluntary payment to a fund used by the Friends' Club of the Nature Park for measures to enhance and maintain aesthetic values and biodiversity.	www.fao.org/3/a-bl928e.pdf

Example	Key points	Reference
	• The payment is made through selling information materials (postcards), an add-on charge of 1-5% for tourist services or packages or donations to the fund. • Lessons learnt from the scheme include the need to conduct cost-benefit analyses of the scheme for both buyers and sellers, use existing public funds for start-up costs and involve stakeholders from the beginning of the scheme design to build trust.	
Sao Paulo region, Brazil	• The Watershed Conservation Programme provides a market for a good that private business would not otherwise provide. • Farmers plant native trees along the banks of streams and rivers to control erosion and protect the water basin that supplies the Sao Paolo region with drinking water. • Landowners receive a payment for every hectare managed per year.	http://water.nature.org/waterblueprint/city/sao_paulo/#/c=8:-23.55770:-45.79583

8. Reverse auction pilots for forest ecosystem services, Belgium

In this IA, relationships with key stakeholder associations are already well established and the awareness of these stakeholders is already high. The communications to date have been focused on the innovative mechanism being tested. This IA will be supported later in the project with translating the outcomes of the innovative mechanism to different stakeholder groups.

The general public is not a particular target of the IA. Nevertheless, messaging and examples of forest ecosystem services may be helpful when communication broadens from its current focused approach. Basic messages for the general public on the importance of forest ecosystem services are:

- Healthy forests provide benefits to people and society, in terms of providing jobs and products, and contributing to their health, happiness and safety
    - Forests offer us many **goods**: foods, such as honey, nuts, fruits and mushrooms; timber; cork; wood biomass; aromatic and medicinal plants. These can be a source of income for people, though this is not always the case – most are freely available.
    - Forests can be the perfect place to relax, to enjoy nature and to practice recreational activities, for instance cycling, running, tree-climbing or walking. These activities can support **tourism** or simply support physical and mental **well-being.**
        - 90% of European forest and other woodland is available for recreation.
    - For some people, forests are important **culturally** and **spiritually**, either on a formal basis (e.g. through religion) or on a personal basis.
    - After oceans, forests are the world's largest **storehouses of carbon**. They contribute to climate change mitigation by absorbing carbon dioxide and storing it in wood, leaves and soil.
        - Between 2005 and 2015, European forests stored the equivalent of 9% of the region's net greenhouse gas emissions.
    - Trees **produce oxygen** for people to breathe and **filter pollutants** from the air so it's cleaner and healthier.
    - Forests have an important role in the global **water cycle**, absorbing water from the soil through tree roots and returning it to the atmosphere.
    - The diversity of trees and plants that make up forests can improve and maintain **soil quality.** They also help to **remove pollutants from water** that flows over the ground to streams, rivers and lakes.

- Diverse forests support a **wide range of wildlife** including birds, mammals, reptiles and amphibians, as well as other plant species.
- These benefits can be **valued** in different ways, including by calculating their monetary value. They can also be valued by calculating the number of people that receive the benefit (e.g. the number of visitors to a recreational forest) or the amount of the benefit produced (e.g. volume of clean water).
- **Monetary values** of forests' benefits can be the avoided cost of an alternative way of providing the same benefit, such as the cost of building a water treatment plant, or people's willingness to pay to access a forest for recreation.
- Managing forests well is often a more **cost-effective** way of creating these benefits for society than alternatives like technology. By managing forests appropriately, many benefits are often produced simultaneously – for example, providing recreational opportunities and enhancing soil quality.

- Forests can be managed to provide multiple benefits to society, such as combining timber production with provision of other environmental, social and economic benefits. Choices in forest management are made to protect nature and to ensure the benefits that we get from forests.
  - Forests often need to be **proactively managed** to protect them against risks, such as forest fires, and ensure they continue to provide benefits to people. Forest management means making decisions about planting, growing and cutting trees to meet particular goals.
    - Diverse forests with multiple tree species are less likely to be attacked by pests and diseases.
    - Using native species for reforestation helps to ensure that the trees are suitable for the local conditions and improve connections between habitats for wildlife.
    - Sometimes, removing or cutting trees is necessary to give enough space for others to grow.
    - These types of intervention, and others, are necessary for ensuring good quality and sustainable habitat for forest species.
  - Managing forests and other forest-related activities provide **jobs** for people and are an important source of **local income**.
    - In Europe, forest activities employ approximately 3.5 million people and generate a turnover of €500 billion.

- **Forest owners and managers** have important responsibilities to manage their forests in a way that protects nature and ensures that forests continue to provide benefits to people.
- There are various options for **compensating** forest owners and managers for managing forests in this way, including asking those who benefit to pay for that benefit.

Relevant examples that can be used to illustrate the concept of forest ecosystem services for the public are provided in Table 6.

Table 6. Examples of the application of the forest ecosystem services concept.

Example	Key points	Reference
Bassenthwaite upland ecosystem services pilot, UK	• The pilot aims to enhance ecosystem services within Bassenthwaite area through integrated work with farmers and land managers. • One of the main actions of the Plan is to increase the woodland cover to provide multiple benefits such as water provision, flood regulation, erosion control and many more. • Woodland is planted on the least agriculturally important areas, as well areas that connect existing woodlands and areas that could reduce downstream flood risk. • From 2013 until 2016, woodland was successfully planted through effectively working in partnerships and using several funding schemes, including agricultural support, the England Woodland Grant Scheme, the water utility's sustainable catchment management programme (ScaMP2) and a visitor payback scheme.	Bassenthwaite, Cumbria, Upland Ecosystem Services Pilot
Ecosystem services and forest management in the UK	• The UK Forestry Standard's legal requirements, good forestry practice requirements and general aspects cover several ecosystem services, including soil protection, water quality, biodiversity and health. • Public attitudes and demands for a focus on recreation and nature conservation led to a shift towards multi-purpose forestry in the mid-1980s. • Priority ecosystem services were identified as production of fibre and fuel, climate change mitigation, flood mitigation, water quality, recreation/health and biodiversity. On this basis ecosystem service indicators are being developed to support forest management.	https://www.forestry.gov.uk/PDF/FCRN020.pdf/$FILE/FCRN020.pdf
Erbrach State Forest Enterprise, Germany	• The State Forest Enterprise manages one of the most important beech forests in Germany for biodiversity. • The forest is managed using a 'protection despite use' approach to ensure both biodiversity conservation and timber production. It aims to have both structural diversity and a supply of living and deadwood. Deadwood is retained to ensure sustainable nutrient cycling and to enhance soil	http://integrateplus.org/uploads/images/Mediacenter/integrate_b

Example	Key points	Reference
	water content, which helps to reduce the impact of drought. • Areas of high ecological value are maintained as set aside in which no timber use or silvicultural activities take place. • Other stands are extensively managed to build up or maintain sufficient deadwood, and the remainder is managed according to legal requirements for nature and species conservation.	ook_2013.pdf

9. Reverse auctions pilots for biodiversity, Denmark

In this IA, relationships with key stakeholder associations are already well established and the awareness of these stakeholders is already high. Messaging and examples of forest ecosystem services for a general public audience may be helpful for raising understanding of the concept and the importance of forests.

Basic messages for the general public on the importance of forest ecosystem services are:

- Healthy forests provide benefits to people and society, in terms of providing jobs and products, and contributing to their health, happiness and safety
    - Forests offer us many **goods**: foods, such as honey, nuts, fruits and mushrooms; timber; cork; wood biomass; aromatic and medicinal plants. These can be a source of income for people, though this is not always the case – most are freely available.
    - Forests can be the perfect place to relax, to enjoy nature and to practice recreational activities, for instance cycling, running, tree-climbing or walking. These activities can support **tourism** or simply support physical and mental **well-being.**
        - 90% of European forest and other woodland is available for recreation.
    - For some people, forests are important **culturally** and **spiritually**, either on a formal basis (e.g. through religion) or on a personal basis.
    - After oceans, forests are the world's largest **storehouses of carbon**. They contribute to climate change mitigation by absorbing carbon dioxide and storing it in wood, leaves and soil.
        - Between 2005 and 2015, European forests stored the equivalent of 9% of the region's net greenhouse gas emissions.
    - Trees **produce oxygen** for people to breathe and **filter pollutants** from the air so it's cleaner and healthier.
    - Forests have an important role in the global **water cycle**, absorbing water from the soil through tree roots and returning it to the atmosphere.
    - The diversity of trees and plants that make up forests can improve and maintain **soil quality.** They also help to **remove pollutants from water** that flows over the ground to streams, rivers and lakes.
    - Diverse forests support a **wide range of wildlife** including birds, mammals, reptiles and amphibians, as well as other plant species.

- These benefits can be **valued** in different ways, including by calculating their monetary value. They can also be valued by calculating the number of people that receive the benefit (e.g. the number of visitors to a recreational forest) or the amount of the benefit produced (e.g. volume of clean water).
- **Monetary values** of forests' benefits can be the avoided cost of an alternative way of providing the same benefit, such as the cost of building a water treatment plant, or people's willingness to pay to access a forest for recreation.
- Managing forests well is often a more **cost-effective** way of creating these benefits for society than alternatives like technology. By managing forests appropriately, many benefits are often produced simultaneously – for example, providing recreational opportunities and enhancing soil quality.

- Forests can be managed to provide multiple benefits to society, such as combining timber production with provision of other environmental, social and economic benefits. Choices in forest management are made to protect nature and to ensure the benefits that we get from forests.
  - Forests often need to be **proactively managed** to protect them against risks, such as forest fires, and ensure they continue to provide benefits to people. Forest management means making decisions about planting, growing and cutting trees to meet particular goals.
    - Diverse forests with multiple tree species are less likely to be attacked by pests and diseases.
    - Using native species for reforestation helps to ensure that the trees are suitable for the local conditions and improve connections between habitats for wildlife.
    - Sometimes, removing or cutting trees is necessary to give enough space for others to grow.
    - These types of intervention, and others, are necessary for ensuring good quality and sustainable habitat for forest species.
  - Managing forests and other forest-related activities provide **jobs** for people and are an important source of **local income**.
    - In Europe, forest activities employ approximately 3.5 million people and generate a turnover of €500 billion.
  - **Forest owners and managers** have important responsibilities to manage their forests in a way that protects nature and ensures that forests continue to provide benefits to people.

- There are various options for **compensating** forest owners and managers for managing forests in this way, including asking those who benefit to pay for that benefit.

Relevant examples that can be used to illustrate the concept of forest ecosystem services for the public are provided in Table 7.

Table 7. Examples of the application of the forest ecosystem services concept.

Example	Key points	Reference
Bassenthwaite upland ecosystem services pilot, UK	• The pilot aims to enhance ecosystem services within Bassenthwaite area through integrated work with farmers and land managers. • One of the main actions of the Plan is to increase the woodland cover to provide multiple benefits such as water provision, flood regulation, erosion control and many more. • Woodland is planted on the least agriculturally important areas, as well areas that connect existing woodlands and areas that could reduce downstream flood risk. • From 2013 until 2016, woodland was successfully planted through effectively working in partnerships and using several funding schemes, including agricultural support, the England Woodland Grant Scheme, the water utility's sustainable catchment management programme (ScaMP2) and a visitor payback scheme.	Bassenthwaite, Cumbria, Upland Ecosystem Services Pilot
Ecosystem services and forest management in the UK	• The UK Forestry Standard's legal requirements, good forestry practice requirements and general aspects cover several ecosystem services, including soil protection, water quality, biodiversity and health. • Public attitudes and demands for a focus on recreation and nature conservation led to a shift towards multi-purpose forestry in the mid-1980s. • Priority ecosystem services were identified as production of fibre and fuel, climate change mitigation, flood mitigation, water quality, recreation/health and biodiversity. On this basis ecosystem service indicators are being developed to support forest management.	https://www.forestry.gov.uk/PDF/FCRN020.pdf/$FILE/FCRN020.pdf
Erbrach State Forest Enterprise, Germany	• The State Forest Enterprise manages one of the most important beech forests in Germany for biodiversity. • The forest is managed using a 'protection despite use' approach to ensure both biodiversity conservation and timber production. It aims to have both structural diversity and a supply of living and deadwood. Deadwood is retained to ensure sustainable nutrient cycling and to enhance soil water content, which helps to reduce the impact of drought. • Areas of high ecological value are maintained as set aside in which no timber use or silvicultural activities take place.	http://integrateplus.org/uploads/images/Mediacenter/integrate_book_2013.pdf

Example	Key points	Reference
	• Other stands are extensively managed to build up or maintain sufficient deadwood, and the remainder is managed according to legal requirements for nature and species conservation.	

10. ECOPAY Connect, Italy

This IA is already established, with stakeholders having high levels of awareness based on personal contacts. Therefore, no assistance with awareness raising is required at this stage. Later in the project, the outcomes of this IA will be communicated more widely in Europe and internationally.

11. Club GREY HORSE, Russia

This IA seeks to introduce multi-purpose use in rented forests. It addresses several stakeholder groups, including forest renters; federal, regional and local authorities; forestry departments; nature conservation organisations; and residents. Key topics that require awareness raising in this IA are the value of regulating services, examples of multi-purpose forest use, and support with assessing stakeholders' perceptions.

While other types of ecosystem services (especially provisioning services) are largely understood in the case study area, awareness of regulating services is low amongst all stakeholders except the science and education community. Therefore, messaging provided here focuses only on these services.

Basic messages on regulating ecosystem services are:

- As well as providing jobs and products, such as timber, healthy forests contribute to the health, happiness and safety of people and society
    - After oceans, forests are the world's largest **storehouses of carbon**. They contribute to climate change mitigation by absorbing carbon dioxide and storing it in wood, leaves and soil.
        - Between 2005 and 2015, European forests stored the equivalent of 9% of the region's net greenhouse gas emissions.
    - Trees produce **oxygen for people** to breathe **and filter pollutants from the air** so it's cleaner and healthier.
    - Forests have an important role in the **global water cycle**, absorbing water from the soil through tree roots and returning it to the atmosphere.
    - The diversity of trees and plants that make up forests can improve and **maintain soil quality**. They also help **to remove pollutants from water** that flows over the ground to streams, rivers and lakes.
    - Diverse forests support a **wide range of wildlife** including birds, mammals, reptiles and amphibians, as well as other plant species.
    - These benefits can be **valued** in different ways, including by calculating their monetary value. They can also be valued by calculating the number of people that receive the benefit (e.g. the number of visitors to a recreational forest) or the amount of the benefit produced (e.g. volume of clean water).
    - **Monetary values** of forests' benefits can be the avoided cost of an alternative way of providing the same benefit, such as the cost of building a water treatment plant, or people's willingness to pay to access a forest for restoration.

- Managing forests well is often a more **cost-effective way** of creating these benefits for society than alternatives like technology. By managing forests appropriately, many benefits are often produced simultaneously – for example, providing recreational opportunities and enhancing soil quality.

Examples of managing forests to support regulating ecosystem services and for multipurpose use are also helpful to explain the concept (Table 8).

Table 8. Examples of managing forests for regulating ecosystem services or for multi-purpose use.

Location	Key points	Reference
Pickering, UK	• As part of a project to reduce flood risk, 44 ha of woodland were planted and forest management was improved. Combined with other actions, including building a flood storage areas and improving farmland and moorland management, this has reduced flood risk in the town of Pickering from a 25% chance per year to a 4% chance. • The new woodland was planted in the floodplain and alongside streams, as well as in areas were the soil was at risk of erosion or rapid overland flow was generated. • Forest drains were redesigned to reduce the speed at which water flowed and reduce the risk of erosion and siltation.	https://www.forestresearch.gov.uk/research/slowing-the-flow-at-pickering/
Ecosystem services and forest management in the UK	• The UK Forestry Standard's legal requirements, good forestry practice requirements and general aspects cover several ecosystem services, including soil protection, water quality, biodiversity and health. • Public attitudes and demands for a focus on recreation and nature conservation led to a shift towards multi-purpose forestry in the mid-1980s. • Priority ecosystem services were identified as production of fibre and fuel, climate change mitigation, flood mitigation, water quality, recreation/health and biodiversity. On this basis ecosystem service indicators are being developed to support forest management.	https://www.forestry.gov.uk/PDF/FCRN020.pdf/$FILE/FCRN020.pdf
Erbrach State Forest Enterprise, Germany	• The State Forest Enterprise manages one of the most important beech forests in Germany for biodiversity. • The forest is managed using a 'protection despite use' approach to ensure both biodiversity conservation and timber production. It aims to have both structural diversity and a supply of living and deadwood. Deadwood is retained to ensure sustainable nutrient cycling and to enhance soil water content, which helps to reduce the impact of drought. • Areas of high ecological value are maintained as set aside in which no timber use or silvicultural activities take place. • Other stands are extensively managed to build up or maintain sufficient deadwood, and the remainder is managed according to legal requirements for nature and species conservation.	http://integrateplus.org/uploads/images/Mediacenter/integrate_book_2013.pdf

Location	Key points	Reference
Sustainable forest management, Latvia	• Sustainable forest management aims to achieve long-term economic sustainability rather than prioritising short-term gains. It maintains regular income while providing a range of economic benefits. • Four demonstration farms in Latvia were used to assess the impacts of selective cutting and thinning (including changing felling intensity and tree selection, retaining dead wood and creating forest openings). The results show that these practices create optimal light conditions for the growth of young trees and enhance resistance to strong winds. • Other lessons learnt from the trial include the need for effective cooperation between stakeholders, personal communications between private forest owners based on experiences, and the need for policy support.	http://www.greeninfranet.org/index.php?page=latvia-s-experience-with-sustainable-forest-management

Similarly, communications tools and products that show successful multi-purpose forest use are important for showing proof of concept – that this type of forest management is possible and successful. Useful resources include:

- FAO video on forests and water for 2016 International Day of Forests: https://www.youtube.com/watch?v=BMZQLVwf1Cs (also available in Russian: https://www.youtube.com/watch?v=OSC49gT48Ak)
- Sustainable Forest Management Canada video on how the concept is applied in Canada to balance ecological, social and economic requirements for forestry on publicly-owned land: https://www.youtube.com/watch?v=vsLE5uF6Bic
- EIP-Agri brochure on creating diverse forests with multiple benefits: https://ec.europa.eu/eip/agriculture/sites/agri-eip/files/eip-agri_brochure_forestry_2014_en_web_1.pdf
- EIP-Agri infographic on creating diverse forests with multiple benefits: https://ec.europa.eu/eip/agriculture/sites/agri-eip/files/eip-agri_infographic_forestry_2014_en.pdf
- IUCN video on trees for water, China – exploring forest landscape restoration for Beijing: https://www.youtube.com/watch?v=CVwn0GkJvjI
- FLEG II Educational guide for school teachers – Forests and Forestry (in Russian): http://www.enpi-fleg.org/news/fleg-2-releases-new-educational-guide-for-school-teachers/
- STARTREE project video on non-timber forest products: https://www.youtube.com/watch?v=hxP5cL_QXHs

- STARTREE project policy brief on non-timber forest products: https://star-tree.eu/images/publications/project/ST_policy_brief_2016_FINAL.pdf

Further guidance on multifunctional forestry in Russia is available from the FLEG project including the report on multipurpose use of forest resources: Challenges and opportunities at national and regional levels and the state-of-the-art of multipurpose use of forest resources at the regional level (in Russian): http://www.enpi-fleg.org/docs/report-bondarev/

Valuation of regulating services is challenging – several tools are available in the SINCERE toolbox to assist in this process (section 16).

Guidance on designing surveys of perceptions and opinions of forests and forest management is also included in the SINCERE toolbox (section 16).

12. Health functions of peri-urban forests, Croatia

This IA seeks to explore options for a payment for ecosystem services scheme to pay for health benefits of the forests in a peri-urban park. Some of the stakeholders for the case are already aware of forest ecosystem services and their health benefits, such as scientists and the health sector. However, others are less aware. The campaign targets these stakeholders, namely park visitors, sports clubs and the private forest owners who own land inside the park. The objective is to increase these groups' understanding of forest ecosystem services in general and the role of forest management, as well as the particular health benefits from forests. Examples of peri-urban parks that have implemented health-related programmes and projects are also provided.

Basic messages for the general public on the importance of forest ecosystem services are:

- Healthy forests provide benefits to people and society, in terms of providing jobs and products, and contributing to their health, happiness and safety
    - Forests offer us many **goods**: foods, such as honey, nuts, fruits and mushrooms; timber; cork; wood biomass; aromatic and medicinal plants. These can be a source of income for people, though this is not always the case – most are freely available.
    - Forests can be the perfect place to relax, to enjoy nature and to practice recreational activities, for instance cycling, running, tree-climbing or walking. These activities can support **tourism** or simply support physical and mental **well-being.**
        - 90% of European forest and other woodland is available for recreation.
    - For some people, forests are important **culturally** and **spiritually**, either on a formal basis (e.g. through religion) or on a personal basis.
    - After oceans, forests are the world's largest **storehouses of carbon**. They contribute to climate change mitigation by absorbing carbon dioxide and storing it in wood, leaves and soil.
        - Between 2005 and 2015, European forests stored the equivalent of 9% of the region's net greenhouse gas emissions.
    - Trees **produce oxygen** for people to breathe and **filter pollutants** from the air so it's cleaner and healthier.
    - Forests have an important role in the global **water cycle**, absorbing water from the soil through tree roots and returning it to the atmosphere.
    - The diversity of trees and plants that make up forests can improve and maintain **soil quality.** They also help to **remove pollutants from water** that flows over the ground to streams, rivers and lakes.

- Diverse forests support a **wide range of wildlife** including birds, mammals, reptiles and amphibians, as well as other plant species.
- These benefits can be **valued** in different ways, including by calculating their monetary value. They can also be valued by calculating the number of people that receive the benefit (e.g. the number of visitors to a recreational forest) or the amount of the benefit produced (e.g. volume of clean water).
- **Monetary values** of forests' benefits can be the avoided cost of an alternative way of providing the same benefit, such as the cost of building a water treatment plant, or people's willingness to pay to access a forest for recreation.
- Managing forests well is often a more **cost-effective** way of creating these benefits for society than alternatives like technology. By managing forests appropriately, many benefits are often produced simultaneously – for example, providing recreational opportunities and enhancing soil quality.

- Forests can be managed to provide multiple benefits to society, such as combining timber production with provision of other environmental, social and economic benefits. Choices in forest management are made to protect nature and to ensure the benefits that we get from forests.
  - Forests often need to be **proactively managed** to protect them against risks, such as forest fires, and ensure they continue to provide benefits to people. Forest management means making decisions about planting, growing and cutting trees to meet particular goals.
    - Diverse forests with multiple tree species are less likely to be attacked by pests and diseases.
    - Using native species for reforestation helps to ensure that the trees are suitable for the local conditions and improve connections between habitats for wildlife.
    - Sometimes, removing or cutting trees is necessary to give enough space for others to grow.
  - Managing forests and other forest-related activities provide **jobs** for people and are an important source of **local income**.
    - In Europe, forest activities employ approximately 3.5 million people and generate a turnover of €500 billion.
  - **Forest owners and managers** have important responsibilities to manage their forests in a way that protects nature and ensures that forests continue to provide benefits to people.

- There are various options for **compensating** forest owners and managers for managing forests in this way, including asking those who benefit to pay for that benefit.

Specific messages related to health benefits of forests are:

- Healthy forests contribute to healthy people.
  - Spending time in forests is good for **mental health** – it reduces stress and helps us to relax.
  - Forests provide good opportunities for **physical activity** in a pleasant environment, including walking, biking and running.
    - People are more likely to be physically active when they live close to green spaces, including parks and forests. Exercising in these types of places is also more pleasant for many people.
    - Being physically active helps to reduce the risk of several diseases and contributes to good mental health.
  - Trees and woodlands remove pollutants from the air, which helps to reduce numbers of people getting **lung diseases** and others caused or worsened by polluted air.
  - These health benefits from forests **reduce healthcare costs**.
    - Increased physical activity, improved air quality and enhanced mental health lead to reductions in the costs of providing healthcare.

Examples from elsewhere that can inspire initiatives to raise awareness of the health benefits of forests in peri-urban parks are provided in Table 9.

Table 9. Examples of projects and programmes that promote the health benefits of forests.

Example	Key points	Reference
Golden Gates National Recreational Area Healthy Parks Healthy People programme	• The Golden Gates National Recreational Area in San Francisco contains a range of marine, coastal and terrestrial habitats that support 1300 animal and plant species, including 36 threatened species, and is important for both nature's and people's health. • One of the projects aims to promote healthy and sustainable food choices in the park and to use the National Park Service's purchasing power to influence the food supply chain to address obesity, type 2 diabetes and other health issues. • It runs several programmes under the nationwide Healthy Parks Healthy People programme, including family fitness, family bootcamp, hiking and an 'ecotherapy' programme.	https://www.nps.gov/goga/index.htm

Example	Key points	Reference
Healthy Parks Healthy People Bay Area (links to above)	• The Healthy Parks Healthy People Program in the US connects people to parks through health promotion, enhanced understanding among the general public and raised awareness of the importance of parks for future generations. • The Bay Area Healthy Parks Healthy People collaborative began by launching a programme called First Saturdays, which provided free and accessible introductions to parks for new or infrequent users. Building on their success, a pilot Park Prescription programme was launched, in which health and social care providers can encourage their patients to attend First Saturdays or other projects. • Local parks agencies share best practices and tackle challenges collaboratively.	https://institute atgoldengate.org/projects/hphp-bay-area
Peri-urban park, Barcelona	• The Barcelona Provincial Council aims to promote territorial balance, sustainability and the contribution of ecosystem services for human well-being. • As part of this, the city's Green Infrastructure and Biodiversity Plan includes actions to connect urban green spaces to the peri-urban Collserola Park. The park sees 3.5 million visitors per year. • In 2014, the park's motto was 'healthy park, healthy people'. It is managed to protect biodiversity and the natural environment, while also being accessible for local residents to visit and exercise. The park provides educational resources and several activities and excursions.	https://oppla.eu/casestudy/117
Green Exercise Partnership Scotland	• The partnership is a joint venture between the Forestry Commission Scotland, Scottish Natural Heritage and Health Scotland (part of the Scottish National Health Service (NHS)). • It funds projects to show the health benefits that derive from investment and management of the NHS estate (e.g. hospital estates). For example, it funded tree planting, active woodland management, pathway improvement and other actions so that hospital staff and patients, and local residents, can benefit from exercise and time in nature. • A key element of success was the shift in healthcare approach towards a social model focused on prevention, rather than a bio-medical model focused on cure. The scheme was also used as a way to re-connect public health with the environment. Another key factor was the involvement of voluntary organisations that promoted short walking routes from communities to local green spaces.	https://scotland.forestry.gov.uk/supporting/strategy-policy-guidance/health-strategy https://scotland.forestry.gov.uk/images/corporate/pdf/gep-briefing-note.pdf

13. Landscape and recreation value trade, Finland

This IA seeks to explore a pilot for ecosystem services scheme to compensate forest owners for providing landscape and recreational values, using funds from visitors and/or tourism operators in the area. The main stakeholders targeted are tourism businesses and forestry businesses. There is a need to enhance general understanding of forest ecosystem services, show how the concept can be applied by businesses and provide examples of businesses combining corporate social responsibility with ecosystem services.

Basic messages on the importance of forest ecosystem services are:

- Healthy forests provide benefits to people and society, in terms of providing jobs and products, and contributing to their health, happiness and safety
    - Forests offer us many **goods**: foods, such as honey, nuts, fruits and mushrooms; timber; cork; wood biomass; aromatic and medicinal plants. These can be a source of income for people, though this is not always the case – most are freely available.
    - Forests can be the perfect place to relax, to enjoy nature and to practice recreational activities, for instance cycling, running, tree-climbing or walking. These activities can support **tourism** or simply support physical and mental **well-being.**
        - 90% of European forest and other woodland is available for recreation.
    - For some people, forests are important **culturally** and **spiritually**, either on a formal basis (e.g. through religion) or on a personal basis.
    - After oceans, forests are the world's largest **storehouses of carbon**. They contribute to climate change mitigation by absorbing carbon dioxide and storing it in wood, leaves and soil.
        - Between 2005 and 2015, European forests stored the equivalent of 9% of the region's net greenhouse gas emissions.
    - Trees **produce oxygen** for people to breathe and **filter pollutants** from the air so it's cleaner and healthier.
    - Forests have an important role in the global **water cycle**, absorbing water from the soil through tree roots and returning it to the atmosphere.
    - The diversity of trees and plants that make up forests can improve and maintain **soil quality.** They also help to **remove pollutants from water** that flows over the ground to streams, rivers and lakes.
    - Diverse forests support a **wide range of wildlife** including birds, mammals, reptiles and amphibians, as well as other plant species.

- These benefits can be **valued** in different ways, including by calculating their monetary value. They can also be valued by calculating the number of people that receive the benefit (e.g. the number of visitors to a recreational forest) or the amount of the benefit produced (e.g. volume of clean water).
- **Monetary values** of forests' benefits can be the avoided cost of an alternative way of providing the same benefit, such as the cost of building a water treatment plant, or people's willingness to pay to access a forest for recreation.
- Managing forests well is often a more **cost-effective** way of creating these benefits for society than alternatives like technology. By managing forests appropriately, many benefits are often produced simultaneously – for example, providing recreational opportunities and enhancing soil quality.

- Forests can be managed to provide multiple benefits to society, such as combining timber production with provision of other environmental, social and economic benefits. Choices in forest management are made to protect nature and to ensure the benefits that we get from forests.
  - Forests often need to be **proactively managed** to protect them against risks, such as forest fires, and ensure they continue to provide benefits to people. Forest management means making decisions about planting, growing and cutting trees to meet particular goals.
    - Diverse forests with multiple tree species are less likely to be attacked by pests and diseases.
    - Using native species for reforestation helps to ensure that the trees are suitable for the local conditions and improve connections between habitats for wildlife.
    - Sometimes, removing or cutting trees is necessary to give enough space for others to grow.
  - Managing forests and other forest-related activities provide **jobs** for people and are an important source of **local income**.
    - In Europe, forest activities employ approximately 3.5 million people and generate a turnover of €500 billion.
  - **Forest owners and managers** have important responsibilities to manage their forests in a way that protects nature and ensures that forests continue to provide benefits to people.
  - There are various options for **compensating** forest owners and managers for managing forests in this way, including asking those who benefit to pay for that benefit.

Basic messages on the relevance of forests and ecosystems services for businesses, including tourism, are:

- Businesses depend, directly or indirectly, on the benefits that healthy forests provide to society.
    - For example, forests provide goods, such as timber, recreational opportunities that attract visitors and tourists, and clean air and water
    - Businesses may be directly dependent on these benefits for the goods and/or services they sell. They may also be indirectly dependent on them, for example on reduced flood risk at sites of operations.
- Businesses also have impacts on the health of forests and their capacity to the benefits that business operations and wider society rely on.
    - Business impacts depend on their operations, including the type of forestry, the scale of tourism offers, etc.
- Understanding the full range of business dependencies and impacts on forests and the benefits they provide to society identifies risks and opportunities, including in relation to regulations, operations, reputation, markets and/or financing. For example, tourism in many places directly depends on healthy forests, including the recreational opportunities, clean air and water, and good views that they provide.
    - Using the ecosystem services approach allows a more complete picture of the risks to which a business is exposed to be developed, meaning that decision making can be better informed and business models can be more resilient.
    - Taking action to reduce business impacts on forests can open up new revenue streams and new markets, such as for certified products and services or for ecotourism.
    - Assessment of business dependencies and impacts on forests enhances sustainability communication and can have reputational benefits.

Examples of how ecosystem services concepts and assessments have been applied by various businesses are provided in Table 10.

Table 10. Examples of businesses that incorporate ecosystem services thinking and assessments.

Example	Key points	Reference
Corporate Social Responsibility Initiatives, Yamaha Group	• The Yamaha group promotes balanced use of raw materials such as timber, and environmental sustainability based on its commitments to preserving forests and biodiversity as included in their corporate social responsibility (CSR) policies.	https://www.yamaha.com/en/csr/environme

Example	Key points	Reference
	• Examples of actions taken include tree planting and pollution prevention. • In promoting CSR initiatives, the company not only tackles issues within the Yamaha Group but also responds to needs and expectations of society. • The CSR policies are also linked to the Sustainable Development Goals.	nt/biodiversity/
Corporate Social Responsibility Initiatives, Sony	• Sony has been building an owl-friendly environment at a forest in Japan since 2008 to conserve natural woodlands on the ground. • Over time, biodiversity and the quality of the ecosystem services provided by the forest has increased alongside social activities. • The forest has also contributed to the local community promoting outdoor activities and educational purposes raising awareness among different stakeholders.	https://www.sony.net/SonyInfo/csr_report/environment/site/biodiversity/koda.html
Rusenski Lom Nature Park, Bulgaria	• Previously, there was no link between ecosystem management and those who benefit from ecosystem services (tourism and agriculture), leaving a gap in funding for biodiversity. • Under this scheme, tourism operators make a voluntary payment to a fund used by the Friends' Club of the Nature Park for measures to enhance and maintain aesthetic values and biodiversity. • The payment is made through selling information materials (e.g. postcards), an add-on charge of 1-5% for tourist services or packages or donations to the fund. • Lessons learnt from the scheme include the need to conduct cost-benefit analyses of the scheme for both buyers and sellers, use existing public funds for start-up costs and involve stakeholders from the beginning of the scheme design to build trust.	www.fao.org/3/a-bl928e.pdf
Natural capital assessment by Skanska, a leading project development and construction group	• Skanska identified environmental risks and opportunities, through a qualitative, then quantitative, then monetary assessment. It assessed impacts throughout the value chain. • The assessment identified operations with room for improvement. • The process of assessing impacts and opportunities facilitated communication and engagement with different areas of the business, such as between the environment and finance business areas.	https://naturalcapitalcoalition.org/natural-capital-protocol-case-study-for-skanska/

Example	Key points	Reference
Natural capital assessment by Yorkshire Water, a UK water utility	• Yorkshire Water identified and valued their business impacts on ecosystem services, differentiated by their beneficiaries, the importance of each service to local communities, and the extent to which provision of those services can be managed on site. • Identified impacts included climate change, air quality, pollination and cultural/spiritual ecosystem services. • The assessment allowed options for upgrading a water treatment plant to be assessed. The monetary valuation of ecosystem service impacts allowed them to be directly compared with other costs and benefits. A less environmentally damaging option for the upgrade was identified using the input from the ecosystem services assessment.	https://naturalcapitalcoalition.org/natural-capital-protocol-case-study-for-yorkshire-water/

Further resources relevant to tourism, businesses and forests are provided in the SINCERE toolbox in section 16.

14. New legal framework for forests in Bizkaia, Spain

At the time of writing, this IA is in the process of holding its first multi-actor group meeting and therefore awareness raising needs are not yet known.

15. Spiritual forests and forest kindergartens, Switzerland

This IA focuses on a business and management model for spiritual forests and forest kindergartens in Switzerland. All relevant stakeholders already have a high level of awareness of forest ecosystem services, and are already being engaged through appropriate channels. This IA therefore requires continued use of the SINCERE communication products (section 5.4) and promotion of the SINCERE case studies as they progress.

This IA also requested good pictures and photos of forests to use in communications with stakeholders. The best photos to communicate about the forest and the ecosystem services are those taken of the local area. To facilitate this, a photo competition is recommended for local amateur photographers. All SINCERE IAs will be advised on setting up such a competition, if it is of interest.

16. Toolbox for optimising forest ecosystem services

To support SINCERE IAs in the implementation of new business models and policies for forest ecosystem services, this toolbox provides guidance on planning/protection and restoration tools, business models, financing options, policy mechanisms that help optimise forest ecosystem services. It also includes best practice examples from across Europe and the world (Table 11). This toolkit will be regularly updated as new material emerges, including from the SINCERE project.

Table 11. Toolbox for optimising forest ecosystem services.

Tool	Summary	Organisation	Link
ROAM – Restoration Assessment Methodology	Methodology for assessing forest restoration potential and identifying priorities at sub-national or national scale.	IUCN	https://www.iucn.org/theme/forests/our-work/forest-landscape-restoration/restoration-opportunities-assessment-methodology-roam
Forests and Water: Valuation and payment for forest ecosystem services	Assesses enabling environments for payment for forest ecosystem services schemes at different levels and provides recommendations for successful and cost-effective schemes.	UNECE and FAO	http://www.greengrowthknowledge.org/resource/forests-and-water-valuation-and-payments-forest-ecosystem-services
Payment for ecosystem services, Getting Started: A Primer	Defines a four-step approach to setting up a payment for ecosystem services scheme.	Forest Trends, the Katoomba Group and UNEP	http://www.greengrowthknowledge.org/resource/payments-ecosystem-services-getting-started-primer
Learning from 20 years of Payment for Ecosystem Services in Costa Rica	Defines lessons learnt from a long-term payment for ecosystem services scheme.	IIED	http://www.greengrowthknowledge.org/resource/learning-20-years-payments-ecosystem-services-costa-rica
Forest Products Sector Guide	Assesses dependencies and impacts on ecosystem services and natural capital for the forest products sector.	Natural Capital Coalition	https://naturalcapitalcoalition.org/natural-capital-protocol/forest-products /

Tool	Summary	Organisation	Link
Financing sustainable forest management	Focus on Latin America. Identifies and describes different possible mechanisms for financing forest management.	FAO	www.fao.org/forestry/16559-0325ac13168b9c3d84d0279e2f8adc798.pdf
Finance for Forests Initiative	Describes an initiative to finance forest protection, including several factsheets.	Conservation International	https://www.conservation.org/projects/Pages/Finance-for-Forests-Initiative.aspx
ARIES - mapping natural capital and ecosystem services	A programme for mapping and modelling ecosystem services.	ARIES	http://aries.integratedmodelling.org/
Rapid Benefit Indicators (RBI) Approach for ecological restoration	Process for assessing the restoration potential of sites, using non-monetary indicators.	US EPA	https://www.epa.gov/water-research/rapid-benefit-indicators-rbi-approach
A guide to support the selection, design and implementation of natural water retention measures in Europe	Provides guidance and examples on designing natural measures to retain water and reduce flood risk, including on forested land.	European Commission	http://nwrm.eu/implementing-nwrm/practical-guide
Operational guidelines on ecosystem-based approaches to adaptation	Provides a step-by-step approach to using ecosystem-based approaches (including forest management and restoration) for climate change adaptation.	GEF	https://www.thegef.org/council-meeting-documents/guidelines-ecosystem-based-adaptation
Valuing the Benefits, Costs and Impacts of Ecosystem-based	Guidance on valuing the benefits of ecosystem (including forest) management and restoration for climate change adaptation.	GIZ	https://www.adaptationcommunity.net/new-sourcebook-valuing-the-benefits-costs-and-impacts-of-

Tool	Summary	Organisation	Link
Adaptation Measures			ecosystem-based-adaptation-eba-measures-tools-for-enhancing-climate-adaptation-decision-making/
Biodiversa Stakeholder Engagement Handbook	Guidance on engaging stakeholders in biodiversity-related projects.	Biodiversa	https://www.oppla.eu/sites/default/files/uploads/download-2.pdf
Natural Capital Protocol Toolkit	Tool to measure and value natural capital.	Natural Capital Protocol	https://www.naturalcapitaltoolkit.org/
InVEST	Tool to value ecosystem services and address trade-offs.	Natural Capital Project	https://www.naturalcapitalproject.org/invest/
Ecosystem Services Assessment Support Tool	Provides guidance and assistance on assessing ecosystem services.	Wageningen and SYKE	http://www.guidetoes.eu
Natural Infrastructure: Investing in Forested Landscapes for Source Water Protection in the United States	Provides guidance on making the case for and designing projects to protect forests for improved drinking water quality.	WRI	http://www.wri.org/sites/default/files/wri13_report_4c_naturalinfrastructure_v2.pdf
Natural and nature-based flood management: A green guide	Provides guidance and tools for reducing flood risk using nature.	WWF and USAID	http://envirodm.org/flood-management
The business case for natural infrastructure	Describes the business case for companies to invest in natural	WBCSD	https://www.naturalinfrastructureforbusiness.org/business-case/

Tool	Summary	Organisation	Link
	infrastructure, including forest management and restoration.		
Values, beliefs and attitudes: Technical guide for forest service land and resource management, planning and decision making.	Provides guidance on designing assessing stakeholders' values, beliefs and attitudes in relation to land management. Includes guidance on using already published information and on conducting different types of surveys.	USDA Forest Service	https://www.fs.fed.us/pnw/pubs/pnw_gtr788.pdf
Guide to participatory tools for forest communities	Offers guidance and examples on enabling local communities in and around forests to participate in sustainable forest management.	CIFOR	www.cifor.org/publications/pdf_files/Books/BKristen0601.pdf
Practitioner's guide to perception surveys	Provides guidance and checklists on how to produce and run a survey of perceptions. Designed for the regulatory field but also useful in other contexts.	OECD	http://www.oecd.org/gov/regulatory-policy/perception-surveys.htm
National socioeconomic surveys in forestry	Provides guidance and survey modules to assess the role of forests in local welfare and livelihoods.	FAO	www.fao.org/3/a-i6206e.pdf
Development of the business model of the organisation of complex harvesting of wild-harvested non-timber forest products for use by business entities (in Russian)	Supports entrepreneurs interested in setting up a business for non-timber forest products. Provides recommendations on development of business plans.	FLEG II	http://www.enpi-fleg.org/docs/finalnyi-otchet-razrabotka-biznes-modeli-organizatcii-kompleksnoi-zagotovki-dikorastushchego-syria/

Tool	Summary	Organisation	Link
Improving forest renewal governance and law enforcement in Russia (in Russian)	Provides recommendations on how to improve the forest renewal regulatory framework, governance and law enforcement practice in Russia.	FLEG II	http://www.enpi-fleg.org/docs/improving-forest-renewal-governance-and-law-enforcement/
Integrating business skills into ecotourism operations	Provides guidance and recommendations for ecotourism businesses, including developing a sustainable business plan.	IUCN and Kuoni	https://portals.iucn.org/library/node/10165
Ecosystem Services Identification and Inventory Tool	The tool is an iPad app and web interface that helps businesses to collect ecological data and local ecosystem services, for use in reducing business impacts, exploring scenarios and several other purposes.	TNC, Dow, EcoMetrix Solutions Group	http://www.esiitool.com
Integrated Biodiversity Assessment Tool (IBAT)	The tool helps businesses address biodiversity considerations in decision making, including screening investments and operations, assessing risks, managing biodiversity impacts, and reporting on corporate performance. It provides a basic risk screening on biodiversity using an interactive mapping tool,	Birdlife, Conservation International, IUCN, UNEP, WCMC	https://www.ibatforbusiness.org/
Sustainable tourism and natural World Heritage: priorities for action	The report provides recommendations on effective tourism planning around protected areas, governance of tourism, participation and collaboration, and communication.	IUCN	https://portals.iucn.org/library/node/9789

17. Capacity building for IA stakeholders

A targeted set of capacity building activities will be developed. These will be aimed at stakeholders in SINCERE IAs and the broader forest and conservation community, and will address social, ethical, environmental and economic issues related to forest ecosystem services.

Three webinars will be held to communicate knowledge outcomes produced in other SINCERE work packages for both IA partners and other stakeholders. The webinars will be held in the first half of 2019, of 2020 and of 2021, timed to coincide with the production of key knowledge outcomes in other parts of the SINCERE work packages and coordinated with other activities conducted in the IAs to the extent possible.

At SINCERE consortium meetings, keynote speakers will be invited to engage in critical reflections regarding innovative mechanisms for ecosystem service provision.

The capacity building activities will be focused on the IA's needs and outcomes of the SINCERE project.

18. Next steps

The next steps in the development of the awareness raising campaign and capacity building activities are as follows:

- Further assess needs and expectations of the SINCERE IAs at the SINCERE co-design event and general assembly.
- Refine the materials provided in the awareness raising campaign package and provide to IAs for implementation in their local activities.
- Develop a series of social media cards and/or banners with key messages tailored to each IA, for use by IA partners to promote their case study and/or SINCERE events locally.
- Group together similar messages from the IAs into disseminable information for business and other stakeholders beyond the local stakeholder target groups so that the value of the work being done in the IAs is more readily understood.
- Consolidate the awareness raising campaign package into a format that can be provided online for public use.
- Provide guidelines on hosting a photo competition across the SINCERE IAs.
- Conduct periodic, but limited, updates of the awareness raising campaign package, including support with communicating the outcomes of SINCERE IAs as examples of the importance of forest ecosystem services.
- Implement capacity building activities as materials from the SINCERE project become available.

19. Annex 1. Guidelines for communicating about forest ecosystem services.

	Title	Author	Type	Link
1	Communicating ecosystem services	The Nature Conservancy	Short article outlining key points from a study on how the public understands the ecosystem services concept and terminology.	https://www.conservationgateway.org/ConservationPractices/EcosystemServices/CommunicatingEcosystemServices/Pages/communicating-ecosystem-s.aspx
2	Key findings from recent national opinion research on 'ecosystem services'	The Nature Conservancy	Full results of survey of American public and how they understand the ecosystem services concept and terminology. **Guidance** about most effective language and messaging to use.	https://www.conservationgateway.org/Files/Pages/key-findings-recent-natio.aspx
3	Nature's benefit messaging memo	The Nature Conservancy	'Message triangle' **tool** for developing effective messages, sample press release, speech and op-ed on ecosystem services.	https://www.conservationgateway.org/Files/Pages/natures-benefit-messaging.aspx
4	Forestry infographics	UNFAO	Set of **infographics** to explain sustainable forest management, forests and energy, forestry and food security, and others	http://www.fao.org/forestry/communication-toolkit/94322/en/
5	Marketing and communications toolkit	FSC	**Tools** for FSC partners seeking to communicate value of forests	https://marketingtoolkit.fsc.org/

	Title	Author	Type	Link
6	Be a better communicator: Tools and tips to help Natura 2000 managers	Europarc	Wide range of **tools, guidance** and **skills** to enhance communications. Specifically developed for Natura 2000 managers but adaptable for use by others.	https://www.europarc.org/tools-and-training/communication-skills/toolkit/
7	Strategic communication for sustainable development	GTZ	Step by step **guidance** on strategic communications for sustainable development in general, as well as best practice examples.	http://gsdrc.org/document-library/strategic-communication-for-sustainable-development-a-conceptual-overview/
8	Wood-based entrepreneurs' toolkit: Communicating effectively with your customers	Oregon State University	**Guidance** on communications and marketing for wood-based small companies	www.owic.oregonstate.edu/sites/default/files/pubs/communicating_with_customers.pdf
9	Ecosystem service messaging	Resource Media	**Messaging** for communicating ecosystem services and incentivising good land management. Developed for Oregon, US, but with wider relevance	http://www.resource-media.org/ecosystem-services-messaging/
10	Communicating forest values	IUCN CEC	Newsletter with **guidance** about sparking interest in forests, messaging and use of photos.	https://www.iucn.org/downloads/av42englishcolweb.pdf
11	Storymaps – a new approach to communicating about forests	USDA	**Description** of GIS storymaps as a tool to communicate forest values, services and threats	https://www.srs.fs.usda.gov/compass/2016/08/31/story-maps-a-new-approach-to-

	Title	Author	Type	Link
				communicating-about-forests/
12	Mangroves against the storm Shorthand story	IUCN	**Example** of visual way to present forest ecosystem services, using Shorthand Social	https://social.shorthand.com/IUCN_forests/nCec1jyqvn/mangroves-against-the-storm
13	Forest Fires Risk Communication	eFIRECOM	**Guidance** on effective communication of forest fire risk to different groups including communities, children/youth and journalists	efirecom.ctfc.cat/docs/RECOM%20ENGLISH_final.pdf
14	Discover the Forest	USDA Forest Service	**Example** of a campaign to encourage the public to visit forests	https://www.discovertheforest.org/
15	Teachers' guide to discovering the forest	USDA Forest Service	**Guide** for teachers to take school children to explore forests. Accompanies the Discover the Forest campaign	https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5201734.pdf
16	Inspiring support for protected areas through communication, education and public awareness programmes	CBD	**Guidance** on effective communications and awareness raising campaigns to effect change. Focused on protected areas but more broadly applicable.	https://www.cbd.int/cms/ui/forums/attachment.aspx?id=91
17	Media relations 101	Resource Media	**Guidance** on pitching stories to the media	http://www.resource-media.org/media-relations-101/
18	The power of the 'package' in	CIFOR	**Guidance** on developing and using packages of multimedia materials	https://onthinktanks.org/articles/

	Title	Author	Type	Link
	communicating forestry research		(videos, blogs, photo stories, infographics etc.)	the-power-of-the-package-in-communicating-forestry-research/
19	Communicating with the media	Ecological Society of America	**Guidance** on contributing to local media and developing effective messages on ecosystem services	https://www.esa.org/ecoservices/comm/body.comm.medi.html
20	Talking to the media	Europarc	**Guidance** on talking to the media, specifically in relation to protected areas but has broader relevance. Includes tips on overcoming key challenges, such as not knowing journalists.	https://www.europarc.org/communication-skills/pdf/Talking%20to%20the%20Media_Extract%20from%20Manual%20Effective%20Communication.pdf
21	Science communication	Belgian Biodiversity Platform	**Guidance** on talking to the media and policy makers, telling stories and designing visual communication materials.	http://www.biodiversity.be/4694/download
22	The #NatureForAll Playbook	Nature For All	**Guidance** and options for inspiring a love of nature, including amongst children. (Also available in Spanish, French and Chinese.)	https://natureforall.global/s/NatureForAll-Playbook-ENG.pdf
23	Talking about young forests: A communication handbook	Northeast Association of Fish and Wildlife Agencies	**Guidance** on communicating with the public, decision makers, land owners and the media, specifically in relation to young forests but many points are also broadly applicable.	https://youngforest.org/resource/talking-about-young-forests-communication-handbook
24	Communicating natural capital: Seven	Natural Capital Project	**Examples** of structuring information on the benefits of ecosystem services into a story.	https://naturalcapitalproject.stanford.edu/com

	Title	Author	Type	Link
	storytelling examples			municating-natural-capital-six-story-telling-examples/