



**Overall communication strategy, including
an outline of the SHOWCASE narrative**

Deliverable D26 (D4.1)

26 October 2021

Elena Velado-Alonso¹, Ignasi Bartomeus¹, Kira Keini², Suresh Chithathur², Anna Sapundzhieva³, Alexandra Korcheva³, David Kleijn⁴

¹*Estación Biológica de Doñana (EBD-CSIC)*

²*Scienseed*

³*Pensoft Publishers*

⁴*Wageningen University*

SHOWCASE

**SHOWCASing synergies between agriculture, biodiversity and
Ecosystem services to help farmers capitalising on native
biodiversity**



Prepared under contract from the European Commission

Grant agreement No. 862480
EU Horizon 2020 Research and Innovation action

Project acronym: **SHOWCASE**
Project full title: **SHOWCASing synergies between agriculture, biodiversity and Ecosystem services to help farmers capitalising on native biodiversity**

Start of the project: November 2020
Duration: 60 months
Project coordinator: Prof. David Kleijn
Wageningen University

Deliverable title: Overall communication strategy, including an outline of the SHOWCASE narrative

Deliverable n°: D4.1
Nature of the deliverable: Other
Dissemination level: Public

WP responsible: WP4
Lead beneficiary: 7-CSIC

Citation: Velado-Alonso, E., Bartomeus, I., Keini, K., Chithathur, S., Sapundzhieva, A. Korcheva, A. & Kleijn, D. (2021). *Overall communication strategy, including an outline of the SHOWCASE narrative*. Deliverable D26 (D4.1), EU Horizon 2020 SHOWCASE Project, Grant agreement No 862480.

Due date of deliverable: Month n°12
Actual submission date: Month n°12

Deliverable status:

Version	Status	Date	Author(s)
1.0	Draft	17.10.2021	CSIC, Scienseed, Pensoft, WU
2.0	Final	26.10.2021	CSIC, Scienseed, Pensoft, WU
3.0			

The content of this deliverable does not necessarily reflect the official opinions of the European Commission or other institutions of the European Union.

Table of contents

Preface	4
Summary	4
1 Current narratives around biodiversity and farming	5
1.1 Introduction	5
1.2 Scaffolding the public perceptions on biodiversity and nature conservation: a historical perspective	5
1.3 Farming as a political ground: the importance of wording.....	7
2 SHOWCASE Narrative.....	8
2.1 SHOWCASE core concept.....	8
2.2 Best practices to talk about SHOWCASE project, biodiversity and farming.....	9
2.3 Narrative	9
2.3.1 Approach towards narrative presentation to target audience.....	9
2.3.2 Potential Pitfalls	11
2.3.3 Wording	11
3 Overall Communication Strategy for SHOWCASE Narrative.....	12
3.1 SWOT analysis	12
3.2 Farmers and digital communication	14
3.3 SHOWCASE communication and dissemination channels.....	14
3.4 Vision, mission and goals for farmer communication.....	16
3.4.1 Guidelines for farmer communication.....	16
4 References	17

Preface

Communication and dissemination are key elements to maximise SHOWCASE project impact and ensure long-term effects. For that, an effective communication strategy is essential to convey the principles and best practices for biodiversity conservation in farming. Current discourses around biodiversity, nature conservation and farming are contradictory with each other and not always engaging for SHOWCASE stakeholders. Thus, an inspirational narrative has been developed in the first months of the project by WP4 “Communicating the benefits of agrobiodiversity through multistakeholder knowledge exchange”, task 4.1. SHOWCASE narrative explains in an effective manner 1) why people care about biodiversity; 2) what we can do, and; 3) how we can do it better.

Summary

SHOWCASE communication strategy aim is to raise awareness amongst stakeholders on the principles and best practices of biodiversity conservation in farming. To achieve this objective, we have developed an inspirational narrative to reconcile biodiversity with productive agriculture. We have identified current gaps in the effectiveness of currently existing narratives on biodiversity conservation and farming, to appropriately convey a clear and engaging message on the benefits of agrobiodiversity to different stakeholders, farmers being the key one.

Biodiversity is a complex concept associated with multiple values and perceptions. There are many definitions to describe what biodiversity is. The scientific definition acknowledges three main dimensions of biological diversity: natural beings, variation through scales, and connectedness. However, people’s perception of biodiversity includes a range of different values like aesthetics, sense of place, balance, harmony, food chains, biodiversity loss, and the role of humans in nature that vary according to social groups. Nevertheless, biodiversity is still an unfamiliar concept for many people. In the case of farmers, factors, such as the type of agriculture performed, gender or education level, also influence attitude towards biodiversity and nature conservation.

Contrasting narratives exist on nature conservation where farming has been framed differently. Within these existing narratives diverse actors have been defined and contrasting culpability and prescriptions have been assigned regarding biodiversity and farming. In that sense, the farmer figure encompasses opposing roles, for example farmers are depicted as “lords”, “stewards”, or “harmful”. As a result, farmers take sides regarding conservation narratives and build counter-discourses.

SHOWCASE narrative uses innovative tools to explain its goals in an effective manner. The three key messages are presented as followed:

1) **why SHOWCASE cares about biodiversity**; biodiversity is both functional (e.g. ecosystem service regulator and provider) and non-functional (e.g. a good or a wonder). Both concepts are emphasized in the narrative. As biodiversity is a complex term, we proposed different metaphors to spread its understanding.

2) **what we can do**; different slogans are proposed to directly express the SHOWCASE proposals. For example: “**Caring for the future of farming. And biodiversity is our ally**”. This slogan places SHOWCASE close to farmer interests and worries and proposes a solution. Another example can be “**We promote biodiversity inclusive farming**”.

3) **how we can do it better**. SHOWCASE does not have a simple solution to the complex problems of biodiversity conservation and farming. The key message from SHOWCASE is that achieving this goal is by collaborating among different partners. Complex problems need multifaceted solutions. The best way to communicate this is not with abstract ideas but by using success stories.

1 Current narratives around biodiversity and farming.

1.1 Introduction

Narratives, in the commercial application of the term, are tools used to engage and connect with target audiences in an emotional way. The objective of the SHOWCASE communication strategy is to raise awareness amongst stakeholders on the principles and best practices of biodiversity conservation in farming. To achieve this objective, we have developed an inspirational narrative to reconcile biodiversity with productive agriculture. There are already narratives about biodiversity, nature conservation, and farming put forward by different stakeholders and sectors. Most of these narratives are polarised and even contradictory with each other. Thus, we have identified current gaps in the effectiveness of currently existing narratives, to appropriately convey a clear and engaging message on the benefits of agrobiodiversity to different stakeholders, farmers being the key one.

In this task, we first aim to identify which are the current dominant narratives regarding biodiversity and farming. Next, we summarise the philosophical ideas behind the roots of contemporary agriculture and its relationship with conservation and biodiversity. Finally, we present the SHOWCASE communication strategy and a communication best practices guide which will be distributed among all SHOWCASE partners. The guide uses the strengths of existing narratives along with the core ideas of the SHOWCASE project to convey powerfully and attractively messages tailored to different stakeholders.

1.2 Scaffolding the public perceptions on biodiversity and nature conservation: a historical perspective

Biodiversity is the SHOWCASE project's central concept. Biodiversity is a complex concept associated with multiple values and perceptions. There are many definitions to describe what biodiversity is. A commonly used definition in academia is the one adopted by the Parties to the Convention on Biological Diversity (Mace et al., 2012). This definition acknowledges three main dimensions of biological diversity: natural beings, variation through scales, and connectedness. Other common definition sources, such as the Cambridge Dictionary or Wikipedia, include different meanings, such as "the problem of protecting" or "a measure" of this life variability respectively. Thus, biodiversity is a polysemic term for the general public (Levé et al., 2019).

Biodiversity is a neologism, i.e. a newly conceived term. The concept emerged in the early 1980s linked to the development of the conservation biology discipline (Väliverronen & Hellsten, 2002). The appearance of this concept happened in a context of concern about species loss and an increasing interest in the social dimensions of biological problems (Soulé, 1985). Biodiversity also attracted attention from the industry sector thanks to the financial value of genetic resources and new developments in the biotechnology field (Mannion, 1992). At that moment, the political agenda started to connect economic problems and conservation, and as a result, "sustainable development" was proposed as a priority option (Brundtland et al., 1987). In 1992, biodiversity fully jumped to the political agenda within the Earth Summit held in Rio de Janeiro, where the Convention of Biological Diversity was born.

Because of that, the general public associated the biodiversity concept with the destruction of rainforests, climate change and species extinction (Meine et al., 2006). Afterwards, biodiversity attracted more mass media attention and the term started to be part of school curricula too (Novacek, 2008). Nowadays, people's perception of biodiversity has broadened. It includes a range of different values like aesthetics, sense of place, balance, harmony, food chains, biodiversity loss, and the role of humans in nature (Fischer & Young, 2007), that vary according to social groups. Nevertheless, biodiversity is still an unfamiliar concept for many people.

Since its conception, biodiversity has been used in scientific and mass media discourses mainly from two opposite perspectives: the catastrophic loss versus the wealth of nature (Välvirronen & Hellsten, 2002). Thus, biodiversity appears in a range of metaphors that emphasise biodiversity loss —such as "library" (Ehrlich, 1992), or "museum" (Wilson, 2010) "on fire"—, the economic opportunity —as the case of "green medicine"—, or stress the idea of complex relationships — as in "the web of life" (Muir, 1994). In addition, public attention on biodiversity has often been mediated by iconic species, usually by those appealing and emblematic ones (Ballouard et al., 2011; Fink et al., 2020; Gustafsson et al., 2015). More recently, biodiversity has been associated with the framework of the function of ecosystems (Cardinale et al., 2012) by the general public too.

In the case of farmers, it is important to remark that those represent a heterogeneous group with different perceptions and values. Factors, such as the type of agriculture performed, gender or education level, also influence farmers' attitude towards biodiversity and nature conservation (Hevia et al., 2021; Kelemen et al., 2013; Maas et al., 2021). Current existing narratives define diverse actors, assign culpability, and prescribe action regarding these topics. In that sense, the farmer figure encompasses contrasting roles. For example, farmers are often depicted as merely "economic agents", especially by policymakers, but also as old-fashioned rural inhabitants under the sight of the general public. Thus, depending on the adopted narrative, farmers are considered as "lords", "stewards", or "harmful" (Sanford, 2011; van der Ploeg, 2003). As a result, farmers take sides regarding conservation narratives (Louder & Wyborn, 2020) and build counter-discourses.

Different communication approaches have been fostered to engage decision-making stakeholders and broad audiences with biodiversity conservation issues (Wright et al., 2015; Young et al., 2014). Nature conservation tries to resolve a wicked problem, whose consequences go beyond the environmental dimension (Rose, 2018), and are open to interpretation and debate. Because of that, conservation discourses have evolved through the decades from "nature for itself", "nature despite people", to "nature for people" and recently "nature and people" (Mace, 2014). Consequently,

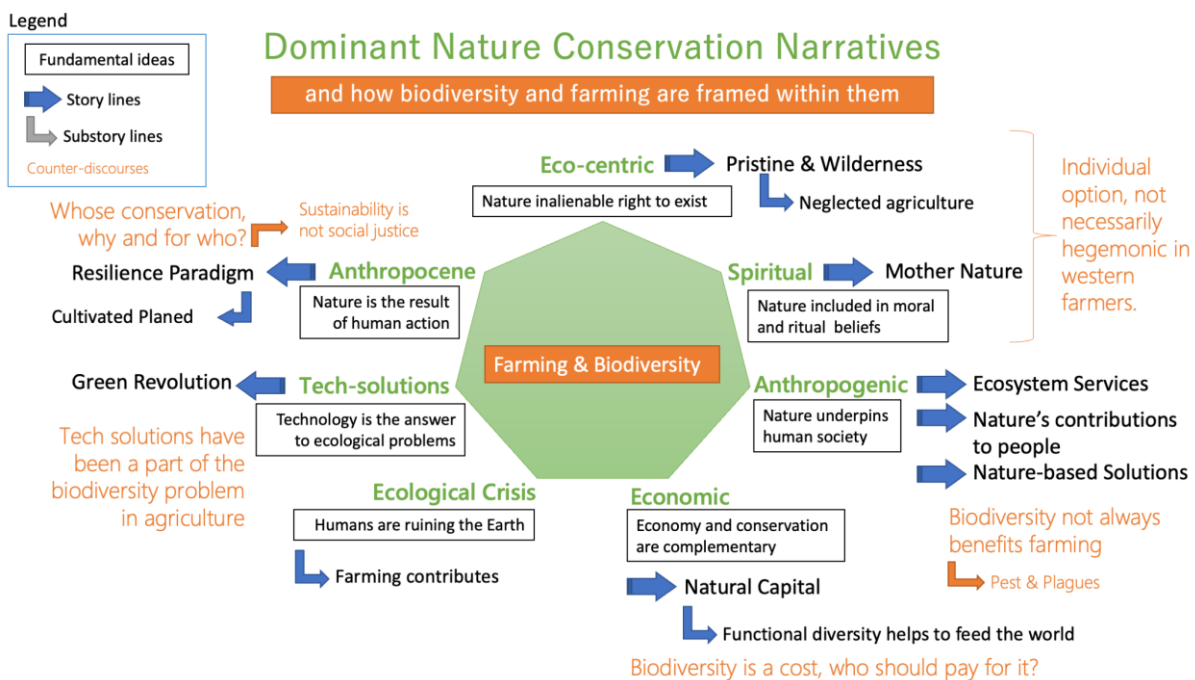


Figure 1: Conceptual summary of the dominant nature conservation narratives (in green). Fundamental ideas of each narrative are presented within black boxes, main story lines are preceded by a blue arrow, substory lines are preceded by a flux arrow (in blue when corresponding to narrative ideas, in orange for counter-discourses) and con counter-discourses from the farming sector.

discourses have shifted from preservationist and utilitarian perspectives to critical discourses that point out to whom and for what to conserve (Jeanrenaud, 2002). In addition, different conservation discourses have been tailored to engage different audiences and stakeholders whose action in conservation significantly differs (Wright et al., 2015). Thereby, contrasting narratives exist on nature conservation (Louder & Wyborn, 2020) where farming has been framed differently (see Figure 1 for a conceptual summary).

For example, eco-centric narratives (Kopnina et al., 2018; Piccolo et al., 2018) have neglected agriculture in favour of "pristine" and "wildness" (Sanford, 2011), whereas ecological crisis narratives (Ceballos et al., 2015; Ceballos & Ehrlich, 2018) have framed farmers as part of the problem (Delclaux & Fleury, 2021). Furthermore, religious and spiritual beliefs on nature (Negi, 2005) are not necessarily predominant in conventional western farmers' discourses — but are more commonly described in organic or alternative farming practices (Kelemen et al., 2013)—. Biodiversity is frequently seen as a constraint interfering with agricultural practices (Fischer & Young, 2007), especially in conventional agriculture. Thus, Nature's contributions to people and other anthropogenic perspectives (Díaz et al., 2015, 2018) are not always appealing to western farmers, as biodiversity does not necessarily benefit their operations. Notwithstanding, anthropogenic narratives dominate European research projects on biodiversity within agricultural landscapes (Müller & Maes, 2015).

Furthermore, biodiversity is often seen as a factor positively affecting production (Tschardt et al., 2012), but its maintenance often increases production costs (Kelemen et al., 2013; Pascual & Perrings, 2007), and because of that the economic narrative is not always trusted by farmers or appealing to them. Moreover, technical solutions as those proposed by Rockström et al. (2017) have been claimed as part of the environmental problem in agriculture (Altieri, 1998; Altieri & Toledo, 2011). In that sense, it is important to remark that still there is scarce evidence of agronomic and economic benefits from ecological intensification and how to foster biodiversity benefits in practices (Klaus et al., 2020; Kleijn et al., 2019; Pywell et al., 2015). Lastly, new Anthropocene (Crutzen, 2002; Rockström et al., 2009) and Resilience (Folke et al., 2010) discourses have been criticised due to their limitation in integrating social science concepts such as agency, conflict, knowledge or power (Olsson et al., 2015). That has led to controversial issues like equalling sustainability to justice concept in development agenda, also to consensus and dissensions on whose conservation, why and for whom (Kaika, 2017; Mace, 2014). These are often controversial aspects in agricultural social context too.

1.3 Farming as a political ground: the importance of wording

Farming practices and biodiversity conservation are currently intertwined (Kleijn et al., 2011; Kremen, 2015). Agricultural industrialization (and associated abandonment of marginal areas) has accelerated over the last decades in Europe (Stoate et al., 2009). These changes are compromising the conservation of habitats and species (Garibaldi et al., 2021; Henle et al., 2008), which has generated a lively debate regarding land use (see, e.g. Chaplin-Kramer et al., 2015; Chappell & LaValle, 2011; Foley et al., 2011; Green et al., 2005; Law et al., 2015; Machovina et al., 2015; Smith et al., 2019). As a result, most European countries have increased their awareness of the environmental impacts of agricultural production, and European policy (e.g. European Agricultural Policy, Green Deal and Biodiversity Strategy) has targeted farming sustainability and environmental objectives as a shared priority, however with relative laxity in implementing specific measures (Pe'er et al., 2020).

Agricultural land-use changes in Europe have been fostered by shifts in land management regimes, mainly driven by political, institutional, economic and technological factors (Plieninger et al., 2016). Within these land management regimes, western agriculture (i.e. industrial agriculture, characterized by mechanization, intensification, specialization processes and increasing scale of farming, together with a leading role of science and technology) has spread and tend to dominate all of Europe (Jepsen et al., 2015; Van der Ploeg, 2018). This industrial framework on agricultural conceptions and practices comes with

the ideology of economic efficiency among social and environmental dimensions (Hardeman & Jochemsen, 2012). Nevertheless, these land management changes have occurred in different moments and places across Europe (Jepsen et al., 2015). And, as a result, narratives around agriculture in Europe present some differences depending on the considered country (Jepsen et al., 2015).

Summarising the philosophical ideas behind industrial agriculture is a rather complex task. The construction of this intellectual framework derived from historical, economic, and political contexts and has evolved through time. Here we present some historical ideas that we believe are (or have been) central in the intellectual foundation of industrial agriculture.

Pre-1900 narratives conceived nature at the services of humans, developing the idea of humans as masters over nature (Adler, 2006). Additionally, during the Enlightenment, there was an ontological construction of nature and humanity as separate categories. Following this intellectual tradition nature was also considered as a passive object, separated from 'man', that could be understood under rational laws, but also treated as a resource that can be exploited to extract the most from it (Tulloch, 2015). Industrial agriculture was framed on the idea of progress and control over nature, characterized by mechanistic relationships (Sanford, 2011). This view implies neglecting biodiversity emergence properties, i.e. those arising from the interactions between species and processes in agroecosystems. Moreover, the capitalist conception of economic relationships expanded to industrial agriculture as well (Hardeman & Jochemsen, 2012; Van der Ploeg, 2018). Thus, current dominant agro-economic discourses are often hegemonic (e.g. green revolution, market prices, lowering production cost, etc.) in the European farming sector. Apart from that, organic and alternative farming practices usually are framed under the "healing and health" perspective (Sanford, 2011). However, this type of farming still represents a minority in European countries. Other perceptions stemming from ecology and ecologism paradigms deepen on living organisms' rights, future generations' rights, and other concepts such as interdependence and resilience. Nevertheless, these narratives are usually confronted with the Malthusian problem of "how to feed an overpopulated world", arguing industrial agriculture as the only possible answer (Sanford, 2011).

2 SHOWCASE Narrative

2.1 SHOWCASE core concept

Biodiversity is the right boundary concept to use in the SHOWCASE narrative. However, it presents some advantages and disadvantages. On the one hand, biodiversity is a clear biological entity, able to integrate goods, values and processes (Mace et al., 2012). Thus, it is flexible enough to become a boundary concept —i.e. a concept situated between distinct social realities, that represent a common reference point from which to communicate and collaborate (Gustafsson et al., 2015)—, able to easily adapt to farmer's contrasting ideologies, values and beliefs. Moreover, it could help to overcome human-nature dichotomic frameworks (Welden et al., 2021), where probably "nature" will lose the game in the context of agriculture. Besides, biodiversity has not yet a common distinctive symbol, and its popular image remains mostly neutral in controversial issues (Fischer & Young, 2007; Väliverronen & Hellsten, 2002). On the other hand, biodiversity is a polysemic and complex concept, so it has the risk of being a fuzzy word. In addition, biodiversity itself still lacks a communicative agenda: coverage in the mass media is driven by other environmental issues (like Climate Change) and specific political events (e.g. Río +20 Conference or United Nations' Conferences of the Parties) (Delclaux & Fleury, 2021).

Below, we provide an instructional synthesis of the SHOWCASE narrative aiming to explain "best practices", including what to communicate, how, and with which wording. This document will be shared and explained to all SHOWCASE partners in the upcoming AGM.

2.2 Best practices to talk about SHOWCASE project, biodiversity and farming

There is a necessity for an honest conversation to spread biodiversity-friendly practices in European farming. To contribute to the achievement of this task, SHOWCASE relies on joining forces. It is essential to engage farmers, policymakers, enterprises, NGOs, and society with SHOWCASE goals and ensure their active participation and commitment. SHOWCASE Narrative aims to raise their attention, help them connect with key messages, and foster their understanding and deeds.

Here we report a series of tools to help structure the thousands of conversations we, as SHOWCASE partners, will have along the following years with multiple stakeholders. These tools include key messages and terminology on how to engage people in this conversation by explaining 1) “why” we care for biodiversity, 2) clearly defining “what” we can do, and 3) tips on “how” to improve biodiversity opportunities in farming. Besides, we raise some risks of being misunderstood and how to prevent them. Finally, we provide some vocabulary to adapt our key messages and terminology to different stakeholders.

The development and implementation of a narrative is a task that is strongly dependent on the communication tools that are being used. Thus, depending on the different stakeholders approached, the discourse should be recast, also depending on the context (e.g., the tone is different in a press release than in a farmer’s meeting or an informal talk).

2.3 Narrative

An effective narrative presents a message that is concise but comprehensive. Tools such as metaphors and storytelling help to connect with people and to explain SHOWCASE’s objectives. As the SHOWCASE narrative is strongly dependent on user perceptions, the initial narrative is going to be adapted accordingly after the first period of implementation and evaluation has finished.

2.3.1 Approach towards narrative presentation to target audience

- Step 0: Engage the audience: know your audience, ask them question when needed, inquire about their perceptions, listen to them, and then proceed to Step 2.
- Step 1: Explaining the reasons **why SHOWCASE cares about biodiversity and farming**. Only if the interlocutor understands why we are doing this, will he/she empathise with the SHOWCASE project. Some actors may already value biodiversity, and this task may be easier, but others need to get motivated first about conserving biodiversity before getting into the details. For SHOWCASE, biodiversity is both functional (e.g. ecosystem service regulator and provider) and non-functional (e.g. a good or a wonder). Both concepts can be emphasized, but none should be forgotten. Biodiversity is a complex term, so using metaphors may help. Here we present some examples that reinforce different aspects of biodiversity considering a variety of context and stakeholders:

Interconnectedness is often a missing aspect of biodiversity for non-technical or scientific audiences. This aspect is usually related to organic farming and holistic perspectives. Thus, it could be difficult to present for conventional farmers. In this case, the tractor metaphor can be useful: **“Biodiversity is like a tractor. You would never use a tractor with missing gears. It needs its proper gears to fully work”** This metaphor uses a familiar element for farmers to boost connectivity and equilibrium. To express similar ideas to a more general audience you can use an analogous example using a **soccer team** (or any other sport team) instead of a tractor. Emphasize concepts like redundancy with sentences such as **“Despite only 11 players playing at any time, substitutes are key as a backup when needed.”** In a more formal

context, the interconnectedness can be presented through the “**Web of Life**” metaphor, i.e., the idea of nature as a rich web of relations.

Another key aspect that can broaden farmers' perspectives is to strengthen biodiversity's different functions and redundancy effects. In this case, a **Swiss army knife** represents an example for usefulness and adaptability. These knives are a multi-tool, presenting not only a main blade, but other tools such as screwdrivers, a can opener, a saw blade, a pair of scissors, among many others. Not all of them are useful in every situation, but the value of the knife is to preserve all of them for the required occasion. Other everyday life objects can be also used as metaphoric examples.

- Step 2: Conveying **what we do in SHOWCASE**. Here a straightforward answer in fundamental, as it allows to verbalize in one sort, and direct sentence the aims of SHOWCASE. Other details can be added later in the conversation. Some slogans are presented below:

“**Caring for the future of farming. And biodiversity is our ally**”. This slogan places SHOWCASE close to farmer interests and worries and proposes a solution. Another example can be “**We promote biodiversity inclusive farming**”. This slogan could overcome organic vs conventional dichotomy, as biodiversity inclusive can be any type of farming. For much wider audiences replacing “inclusive” by “friendly” may make it easier to understand. Other sectors may require more assertive explanations such as “**Life fits everywhere: we want to help to farm with biodiversity (not against)**” or “**there is room for biodiversity in all agricultural systems**”. SHOWCASE pretends to be inclusive, moving beyond communication clichés about farming.

- Step 3: Exemplifying **how SHOWCASE achieves its goals**.

It is important to emphasize that SHOWCASE does not have a simple solution that works in all situations to the complex problems of biodiversity conservation and farming. Thus, there is not an exclusively set of measures that SHOWCASE suggest following. For this reason, **the key message from SHOWCASE is that achieving this goal is by collaborating among different partners**. Complex problems need multifaceted solutions, and by partnering farmers, scientists, NGO's, policymakers, and others, we can propose, validate and apply tailored solutions. This is the core of the EBAs spread across Europe. The best way to communicate this is not with abstract ideas but by using success stories. The best story is the local one, how each EBA was organized, which barriers has faced, and how they solved those. As many EBAs are still in development, here we propose a few success stories for the meanwhile:

- **A conservation success story**: The valley of the Geul is a unique diverse area in the Netherlands. There, many rare species of bees inhabit. Despite the uniqueness of the bees located there, the rarest bumblebee, the shrill carder bee, is extinct in the area. Thus, different local agents decided to join forces to bring back the shrill carder bee, and eventually help the other rare bees. After a first diagnosis, they realised it would be easy to implement measures if they consider a landscape perspective. For example, field margins, roadside verges, water retention sites, or hedgerows were an opportunity, if they improved the presence of flowers there. Before long, they are getting the first results: more flowers = more bees! You can read more about: <https://boshommellandschap-geuldal.nl/en/>
- **A farmers income success story**: In central England, some farmers were worried about the biodiversity loss in the area due to the big station of their arable croplands. They realised that if they continued with a business-as-usual management, the situation could worsen. They found a smart solution: letting the

less productive areas of the farms for wildlife habitat. The result of this experiment was that creating this patch improved yields in the cropped areas. In the middle term, the wildlife friendly edges had no negative effects on farmer's income. You can read more about this experience: <https://royalsocietypublishing.org/doi/full/10.1098/rspb.2015.1740>

- **A farm health success story:** Olive groves occupy a large area of Spanish landscapes, but years of intensive management put its soils into jeopardy. EU life project "Olivares vivos" promoted the use of green covers to reduce soil loss, increase its fertility, and as a side effect, help the conservation of wild bees, and birds. This project highlighted that the long-term health of the cropping systems must be taken into account now. You can read more about: <https://olivaresvivos.com/en/olivares-vivos-recalls-the-importance-of-the-herbaceous-cover-to-serve-the-soil-of-the-olive-grove/>

2.3.2 Potential Pitfalls

Communication is an art, despite all rules and recommendations, it implies free creation. Often, when we try to communicate something goes astray. Words can have different meanings for different people, and messages can be partially heard, leading easily to misunderstandings. It's important to ensure SHOWCASE narrative is interpreted correctly. Here we list important aspects to get right in the SHOWCASE project:

- How biodiversity conservation is framed. Questions such as to whom and for what are to conserve matter in current society. It should be avoided overly utilitarian perspectives. In addition, complex, dynamic, and bidirectional relationships between people and nature must be recognised.
- Inclusivity. SHOWCASE's main actors are all kinds of farmers supported by a broad community of stakeholders, forming a biodiversity farming community. Farmers' agency, ideology, values and beliefs should be recognised. Different people can bring different solutions to our table.
- Balanced conversations. Common agreements are based in active listening and effective communication. SHOWCASE wants farmers to move beyond their comfort zone but understands their requirements and needs.
- Avoiding fairy tales. SHOWCASE should not oversell biodiversity as a magical solution. SHOWCASE narrative acknowledges the trade-offs between dimensions.
- Farming political aspects are controversial. For example, Common Agricultural Policy is often criticised in a different manner by different stakeholders. Also, changes in land management regimes imply lively debates where farmers could feel ignored.

2.3.3 Wording

Showcase Thesaurus is a synonym dictionary for the main project keywords based on definitions provided by official, public and institutional sources (see Milestone 4.1 for more detail).

SHOWCASE main keywords are:

- **Biodiversity,**
- **Farming,**
- **Nature Conservation,**
- **Ecosystem Services,**

➤ **Land Management**

Additionally, **Incentives, Benefits, Attitude** and **Perception** can be considered secondary keywords of the SHOWCASE project.

It should be considered that SHOWCASE keywords are polysemic, i.e. the same keyword can refer to several concepts. In addition, different sources usually employ rich lexicons to refer to these concepts (see table 1 for a summary of different words used for defining SHOWCASE keywords).

Table 1: Summary of different words employed for defining SHOWCASE keywords.

Biodiversity and Biological Diversity	Animal, Ecosystem, Genetics, Life, Organism, Plant, Species Interaction, Number, Type, Variability, Variety
Ecosystem Services	Benefits, Contributions, Functions, Processes, Values Ecosystems, Environment, Nature Humans, Individuals, People, Society
Agriculture and Farming	Breeding, Cultivating, Fisheries, Forestry, Growing, Husbandry, Raising Farm, Land, Rivers, Rural, Water Development, Management, Production Conventional, Holistic, Organic, Regenerative, Sustainable Animal Welfare, Biodiversity, Cycles, Ecosystem Health, Interactions, Natural Resources, Preservation, Process, Production standards, Soil Activity
Nature Conservation	Animal, Biological Diversity, Ecosystem Services, Habitat, Nature, Natural Areas, Natural Resources, Natural Substances, Plant, Species, Status, Wildlife Conserve, Enhance, Maintain, Manage, Protect, Restore, Safeguard, Secure, Use
Land Management	Good, Land, Natural Resources, Rural, Urban, Services Institutions, Human activities, Operations, Partnership, Plan, Policies, Skills Control, Development, Manage, Prepare, Progress, Protect, Sustain, Use

3 Overall Communication Strategy for SHOWCASE Narrative

In the following section, we will outline how the above explained narrative integrates within the general communication strategy. The general communication plan of SHOWCASE can be found in D4.10 Plan for the Exploitation and Dissemination of SHOWCASE results.

3.1 SWOT analysis

SHOWCASE have conducted a SWOT (table 2) analysis to understand better the initial settings that affect our communication actions in the project. In summary, the project entails a lot of potential for communication, and both the expertise within the consortium as well as the external networks of the partners are excellent sources of support for project communication. The project offers an excellent possibility of framing agricultural practices in a more positive and future-oriented light in the public sphere. Most of the identified threats are related to the main stakeholder and target group of the project: farmers.

Table 2. SWOT analysis of communication efforts in SHOWCASE Project.

Strengths	Weaknesses
<ul style="list-style-type: none"> • Consortium partners have strong established connections to key stakeholder groups • There's a variety of stakeholders who can take the SHOWCASE messages further • Being aware of stereotypes related to farmers can help avoiding them • Initial literature reviews on the framing of biodiversity provide a good starting point for research-based communication 	<ul style="list-style-type: none"> • EBA communication guidelines will be based on experiences in certain countries and might not apply to others • Language barriers in communication • The definition of the project's communication actions in practice is fairly complicated given the complex nature of the project
Opportunities	Threats
<ul style="list-style-type: none"> • The tools developed in SHOWCASE (e.g. citizen science app, online platform) can be extremely useful for stakeholders • Possibility to frame the relationship between farming and biodiversity in a more positive light • SHOWCASE goals are aligned with international frameworks, such as some SDGs (12 & 15) and the Convention on Biological Diversity's Strategic Goal D • Possibility to do interesting experiments and try out new forms of communication as there are two comms partners 	<ul style="list-style-type: none"> • Farmers can in some cases be a more conservative stakeholder/target group than the general public, for example → need to pay close attention to tone-of-voice & core messages • Farmers (in some countries) don't necessarily have access to internet • We might reach only farmers of certain demographics (e.g. young, highly educated females) and miss the big picture • Farmers might prefer using closed communication channels (e.g. WhatsApp, closed Facebook groups) • Communication with farmers might be one-sided (because of e.g. previous bullet) • Not enough participants in EBAs

3.2 Farmers and digital communication

Farmers are one of the main target groups of the SHOWCASE project. From the point of view of the communication strategy, farmers can be difficult to reach, as they are a very heterogeneous group of people, who do not necessarily use digital communication channels as often as the general audience. In this sense, it is important to remark that the use of social media by farmers is increasing. However, the use of social media depends largely on farmers' access to the internet. Gender, age and education level are defining factors regarding farmers' willingness to use social media. Highly educated, up to 30-years-old female farmers have the highest degree of innovativeness and are most prone to engaging in social media use. In general, farmers use social media and the internet mostly to search information about farming, followed by to reach potential and existing customers. According to a study conducted by Ćirić et al. (2018) the most used social media channels among surveyed farmers were YouTube (used by 68% of the participants of the study) and Facebook (used by 50,4% of participants). Twitter and Instagram were also used, but to a lesser extent (Twitter by 9,6% and Instagram by 24%). Additionally, based on task 4.2 preliminary analysis, when farming is discussed in the media, scientists and policymakers are usually interviewed, but not farmers themselves. Farmers are presented as opposing change and reluctant to engage with strategies or innovations that enhance biodiversity. Farming is presented, more often than not, as a threat to biodiversity.

3.3 SHOWCASE communication and dissemination channels

The main communication channels and dissemination methods that SHOWCASE uses for reaching out to farmers and communicating the SHOWCASE narrative are as follows:

- 1 Project website: The project website (www.showcase-project.eu) is the central communication and dissemination tool, and the main channel through which SHOWCASE delivers its messages. In terms of communicating the SHOWCASE narrative, all narrative related news, materials, and public documents are going to be made available through the SHOWCASE website, which will act as a knowledge hub for the communication of the narrative.
- 2 Communication of the SHOWCASE narrative through in-person talks within the EBA network: The project's network of experimental biodiversity areas (EBAs) is going to be used to implement and communicate the SHOWCASE narrative between farmers. All participants are going to be related to the messages, and the communication efficiency is going to be measured and analysed.
- 3 Project social media channels and content sharing platforms: For the purpose of communicating the SHOWCASE narrative, a corporate identity on three social media channels is created and facilitated from the beginning of the project. The social media accounts of the SHOWCASE project are as follows:
 - Facebook - @SHOWCASE.H2020.project
 - Twitter - @SHOWCASE_H2020
 - YouTube - to be developed

A brief analysis of the advantages and limitations of the social media accounts of the project used for communicating the SHOWCASE narrative is presented below (Table 3).

Table 3. Social media analyses and recommendations for use within SHOWCASE.

	Functionalities and features – pros and cons	In the context of SHOWCASE narrative
Twitter	<p>Pros: Short, fast, easy communication; popular and with high number of users; Twitter lists easy way to follow news and interact; Event back-channelling</p> <p>Cons: Rather limited in space and media sharing; Tweets have a short searchability lifetime; farmers at the local level are not too familiar with the platform.</p>	<p>Generate interest and share on-going news and activities through posts/tweets</p> <p>Build community around the narrative</p> <p>Incorporate the SHOWCASE narrative into the overall communication trends in the field</p>
Facebook	<p>Pros: Useful for sharing media (pictures, videos); Large number of users; Create events and invite users; Community-like feel; wide reach of target audiences, including local farmers</p> <p>Cons: Less professional and used mainly for personal social activities</p>	<p>Use Facebook groups of farmers for strengthening the sense of community around the narrative</p> <p>Use Facebook groups as a main platform for fast bi-lateral communication with farmers</p> <p>Insights – provide useful analytics for the development of the page</p>
YouTube	<p>Pros: Useful for sharing video content to a large audience; strong visual representation of the project; personalised content sharing channel; largest audience video sharing platform</p> <p>Cons: Dependent on other social media channels for popularisation of the videoclip itself</p>	<p>Generate interest and share on-going narrative news and activities through interesting video content</p> <p>Communication of ideas and results to both specialised and general public; favoring environment for both educational and promotional videos</p> <p>Strengthening the sense of community around the project and sharing recordings of narrative-related meetings</p> <p>Insights – provide useful analytics for the development of the page</p>

- 4 Event and conference participation: The organisation and participation in project relevant events and conferences is a key method for networking, and communication of the SHOWCASE narrative.

3.4 Vision, mission and goals for farmer communication

Vision: *European farmers who are interested and engaged in taking care of biodiversity in their farming practices.*

Mission: *To raise awareness amongst the stakeholders of the project (particularly farmers) on the principles and best practices of biodiversity protection in farming.*

Communication goals:

- 1 To increase the uptake of biodiversity-based solutions by farmers.
- 2 To facilitate knowledge exchange within and between EBA communities.
- 3 To raise public awareness on the importance and best practices for reconciling food production and biodiversity conservation.

3.4.1 Guidelines for farmer communication

SHOWCASE communication strategy will pursue guidelines for efficient communication with farmers along the following rules:

- 1 **Positive affirmation:** The focus should be put on solutions instead of problems. Emphasise the positive impact farming can have in taking care of the environment. Encouragement and involvement are advised rather than prohibitions.
Recommended: *"Farmers, you are key players in taking care of the environment."*
Not recommended: *"Farmers, don't use pesticides on your lands! It harms the environment."*
- 2 **Practicality:** Usage of understandable concepts, avoid scientific or technical lingo. Speak about concrete actions, such as pollination, instead of vague concepts like ecosystem services.
Recommended: *"Pollination is key for healthy landscapes. Take care of your land by following these steps!"*
Not recommended: *"It's your responsibility to integrate measures that protect biodiversity in your farming practices."*
- 3 **Clarity:** Usage of straight-to-the-point messages, concise and simple sentences. Cut long sentences into shorter ones, including clear call-to-actions.
Recommended: *"Interested in sustainable farming? Take a look at what other farmers are doing!"*
Not recommended: *"Whether or not you think you can do much to conserve the environment you farm in, you should take a look at what other farmers have to say about the matter."*
- 4 **Enticement:** Underline cooperation, the fact that change is in everyone's hands. Avoid educating and top-down type of communication. Invite the stakeholders to share their views and participate in the conversation.
Recommended: *"Share your experiences! How do you take care of your land in the winter?"*
Not recommended: *"Here are our project researchers' tips on taking care of farm lands in the winter."*

4 References

- Abrams, K. M., & Sackmann, A. (2014). Are Alternative Farmers Yielding Success with Online Marketing and Communication Tools for Their Social Capital and Business Viability? *Journal of Applied Communications*, 98(3). <https://doi.org/10.4148/1051-0834.1085>
- Adler, J. (2006). Cultivating Wilderness: Environmentalism and Legacies of Early Christian Asceticism. *Comparative Studies in Society and History*, 48(1), 4–37. <https://doi.org/10.1017/S0010417506000028>
- Altieri, M. A. (1998). Ecological Impacts of Industrial Agriculture and the Possibilities for Truly Sustainable Farming. *Monthly Review*, 50(3), 60. https://doi.org/10.14452/MR-050-03-1998-07_5
- Altieri, M. A., & Toledo, V. M. (2011). The agroecological revolution in Latin America: rescuing nature, ensuring food sovereignty and empowering peasants. *Journal of Peasant Studies*, 38(3), 587–612. <https://doi.org/10.1080/03066150.2011.582947>
- Ballouard, J.-M., Brischoux, F., & Bonnet, X. (2011). Children Prioritize Virtual Exotic Biodiversity over Local Biodiversity. *PLoS ONE*, 6(8), e23152. <https://doi.org/10.1371/journal.pone.0023152>
- Brundtland, G. H., Khalid, M., Agnelli, S., Al-Athel, S., & Chidzero, B. J. N. Y. (1987). *Our common future*.
- Cardinale, B. J., Duffy, J. E., Gonzalez, A., Hooper, D. U., Perrings, C., Venail, P., Narwani, A., Mace, G. M., Tilman, D., Wardle, D. A., Kinzig, A. P., Daily, G. C., Loreau, M., Grace, J. B., Larigauderie, A., Srivastava, D. S., & Naeem, S. (2012). Biodiversity loss and its impact on humanity. *Nature*, 486(7401), 59–67. <https://doi.org/10.1038/nature11148>
- Ceballos, G., & Ehrlich, P. R. (2018). The misunderstood sixth mass extinction. *Science*, 360(6393), 1080.2-1081. <https://doi.org/10.1126/science.aau0191>
- Ceballos, G., Ehrlich, P. R., Barnosky, A. D., García, A., Pringle, R. M., & Palmer, T. M. (2015). Accelerated modern human-induced species losses: Entering the sixth mass extinction. *Science Advances*, 1(5), e1400253. <https://doi.org/10.1126/sciadv.1400253>
- Chaplin-Kramer, R., Sharp, R. P., Mandle, L., Sim, S., Johnson, J., Butnar, I., Milà i Canals, L., Eichelberger, B. A., Ramler, I., Mueller, C., McLachlan, N., Yousefi, A., King, H., & Kareiva, P. M. (2015). Spatial patterns of agricultural expansion determine impacts on biodiversity and carbon storage. *Proceedings of the National Academy of Sciences*, 112(24), 7402–7407. <https://doi.org/10.1073/pnas.1406485112>
- Chappell, M. J., & LaValle, L. A. (2011). Food security and biodiversity: Can we have both? An agroecological analysis. *Agriculture and Human Values*, 28(1), 3–26. <https://doi.org/10.1007/s10460-009-9251-4>
- Ćirić, M., Carić, M., Kuzman, B., & Zekavica, A. (2018). Farmer innovativeness and its impact on Internet and social media adoption. *Ekonomika Poljoprivrede*, 65(1), 243–256. <https://doi.org/10.5937/ekoPolj1801243C>
- Crutzen, P. J. (2002). Geology of mankind. *Nature*, 415(6867), 23–23. <https://doi.org/10.1038/415023a>
- Delclaux, J., & Fleury, P. (2021). Medium-term evolution in French national newspaper coverage of the interrelations between biodiversity and agriculture. *Conservation Science and Practice*, 3(3), 1–13. <https://doi.org/10.1111/csp2.140>

- Díaz, S., Demissew, S., Carabias, J., Joly, C., Lonsdale, M., Ash, N., Larigauderie, A., Adhikari, J. R., Arico, S., Báldi, A., Bartuska, A., Baste, I. A., Bilgin, A., Brondizio, E., Chan, K. M., Figueroa, V. E., Duraiappah, A., Fischer, M., Hill, R., ... Zlatanova, D. (2015). The IPBES Conceptual Framework — connecting nature and people. *Current Opinion in Environmental Sustainability*, 14, 1–16. <https://doi.org/10.1016/j.cosust.2014.11.002>
- Díaz, S., Pascual, U., Stenseke, M., Martín-López, B., Watson, R. T., Molnár, Z., Hill, R., Chan, K. M. A., Baste, I. A., Brauman, K. A., Polasky, S., Church, A., Lonsdale, M., Larigauderie, A., Leadley, P. W., van Oudenhoven, A. P. E., van der Plaats, F., Schröter, M., Lavorel, S., ... Shirayama, Y. (2018). Assessing nature's contributions to people. *Science (New York, N. Y.)*, 359(6373), 270–272. <https://doi.org/10.1126/science.aap8826>
- Ehrlich, P. (1992). Environmental deterioration, biodiversity and the preservation of civilisation. *The Environmentalist*, 12(1), 9–14. <https://doi.org/10.1007/BF01267591>
- Fink, C., Hausmann, A., & Di Minin, E. (2020). Online sentiment towards iconic species. *Biological Conservation*, 241(October 2019). <https://doi.org/10.1016/j.biocon.2019.108289>
- Fischer, A., & Young, J. C. (2007). Understanding mental constructs of biodiversity: Implications for biodiversity management and conservation. *Biological Conservation*, 136(2), 271–282. <https://doi.org/10.1016/j.biocon.2006.11.024>
- Foley, J. A., Ramankutty, N., Brauman, K. A., Cassidy, E. S., Gerber, J. S., Johnston, M., Mueller, N. D., O'Connell, C., Ray, D. K., West, P. C., Balzer, C., Bennett, E. M., Carpenter, S. R., Hill, J., Monfreda, C., Polasky, S., Rockström, J., Sheehan, J., Siebert, S., ... Zaks, D. P. M. (2011). Solutions for a cultivated planet. *Nature*, 478(7369), 337–342. <https://doi.org/10.1038/nature10452>
- Folke, C., Carpenter, S. R., Walker, B., Scheffer, M., Chapin, T., & Rockström, J. (2010). Resilience thinking: Integrating resilience, adaptability and transformability. *Ecology and Society*, 15(4). <https://doi.org/10.5751/ES-03610-150420>
- Garibaldi, L. A., Oddi, F. J., Miguez, F. E., Bartomeus, I., Orr, M. C., Jobbágy, E. G., Kremen, C., Schulte, L. A., Hughes, A. C., Bagnato, C., Abramson, G., Bridgewater, P., Carella, D. G., Díaz, S., Dicks, L. V., Ellis, E. C., Goldenberg, M., Huaylla, C. A., Kuperman, M., ... Zhu, C. D. (2021). Working landscapes need at least 20% native habitat. *Conservation Letters*, 14(2), 1–10. <https://doi.org/10.1111/conl.12773>
- Green, R. E., Cornell, S. J., Scharlemann, J. P. W., & Balmford, A. (2005). Farming and the fate of wild nature. *Science*, 307(5709), 550–555. <https://doi.org/10.1126/science.1106049>
- Gustafsson, K. M., Agrawal, A. A., Lewenstein, B. V., & Wolf, S. A. (2015). The monarch butterfly through time and space: The social construction of an icon. *BioScience*, 65(6), 612–622. <https://doi.org/10.1093/biosci/biv045>
- Hardeman, E., & Jochemsen, H. (2012). Are There Ideological Aspects to the Modernization of Agriculture? *Journal of Agricultural and Environmental Ethics*, 25(5), 657–674. <https://doi.org/10.1007/s10806-011-9331-5>
- Henle, K., Alard, D., Clitherow, J., Cobb, P., Firbank, L., Kull, T., McCracken, D., Moritz, R. F. A., Niemelä, J., Rebane, M., Wascher, D., Watt, A., & Young, J. (2008). Identifying and managing the conflicts between agriculture and biodiversity conservation in Europe-A review. *Agriculture, Ecosystems and Environment*, 124(1–2), 60–71. <https://doi.org/10.1016/j.agee.2007.09.005>

- Hevia, V., García-Llorente, M., Martínez-Sastre, R., Palomo, S., García, D., Miñarro, M., Pérez-Marcos, M., Sanchez, J. A., & González, J. A. (2021). Do farmers care about pollinators? A cross-site comparison of farmers' perceptions, knowledge, and management practices for pollinator-dependent crops. *International Journal of Agricultural Sustainability*, 19(1), 1–15. <https://doi.org/10.1080/14735903.2020.1807892>
- Jeanrenaud, S. (2002). Changing People/Nature Representations in International Conservation Discourses. *IDS Bulletin*, 33(1), 111–122. <https://doi.org/10.1111/j.1759-5436.2002.tb00013.x>
- Jepsen, M. R., Kuemmerle, T., Müller, D., Erb, K., Verburg, P. H., Haberl, H., Vesterager, J. P., Andrič, M., Antrop, M., Austrheim, G., Björn, I., Bondeau, A., Bürgi, M., Bryson, J., Caspar, G., Cassar, L. F., Conrad, E., Chromý, P., Daugirdas, V., ... Reenberg, A. (2015). Transitions in European land-management regimes between 1800 and 2010. *Land Use Policy*, 49, 53–64. <https://doi.org/10.1016/j.landusepol.2015.07.003>
- Kaika, M. (2017). 'Don't call me resilient again!': the New Urban Agenda as immunology ... or ... what happens when communities refuse to be vaccinated with 'smart cities' and indicators. *Environment and Urbanization*, 29(1), 89–102. <https://doi.org/10.1177/0956247816684763>
- Kelemen, E., Nguyen, G., Gomiero, T., Kovács, E., Choisis, J. P., Choisis, N., Paoletti, M. G., Podmaniczky, L., Ryschawy, J., Sarthou, J. P., Herzog, F., Dennis, P., & Balázs, K. (2013). Farmers' perceptions of biodiversity: Lessons from a discourse-based deliberative valuation study. *Land Use Policy*, 35, 318–328. <https://doi.org/10.1016/j.landusepol.2013.06.005>
- Klaus, V. H., Whittingham, M. J., Báldi, A., Eggers, S., Francksen, R. M., Hiron, M., Lellei-Kovács, E., Rhymer, C. M., & Buchmann, N. (2020). Do biodiversity-ecosystem functioning experiments inform stakeholders how to simultaneously conserve biodiversity and increase ecosystem service provisioning in grasslands? *Biological Conservation*, 245(February). <https://doi.org/10.1016/j.biocon.2020.108552>
- Kleijn, D., Bommarco, R., Fijen, T. P. M., Garibaldi, L. A., Potts, S. G., & van der Putten, W. H. (2019). Ecological Intensification: Bridging the Gap between Science and Practice. *Trends in Ecology and Evolution*, 34(2), 154–166. <https://doi.org/10.1016/j.tree.2018.11.002>
- Kleijn, D., Rundlöf, M., Scheper, J., Smith, H. G., & Tscharntke, T. (2011). Does conservation on farmland contribute to halting the biodiversity decline? *Trends in Ecology and Evolution*, 26(9), 474–481. <https://doi.org/10.1016/j.tree.2011.05.009>
- Kopnina, H., Washington, H., Gray, J., & Taylor, B. (2018). "The 'future of conservation' debate: Defending ecocentrism and the Nature Needs Half movement." *Biological Conservation*, 217, 140–148. <https://doi.org/10.1016/j.biocon.2017.10.016>
- Kremen, C. (2015). Reframing the land-sparing/land-sharing debate for biodiversity conservation. *Annals of the New York Academy of Sciences*, 1355(1), 52–76. <https://doi.org/10.1111/nyas.12845>
- Law, E. A., Meijaard, E., Bryan, B. A., Mallawaarachchi, T., Koh, L. P., & Wilson, K. A. (2015). Better land-use allocation outperforms land sparing and land sharing approaches to conservation in Central Kalimantan, Indonesia. *Biological Conservation*, 186, 276–286. <https://doi.org/10.1016/j.biocon.2015.03.004>
- Levé, M., Colléony, A., Conversy, P., Torres, A.-C., Truong, M.-X., Vuillot, C., & Prévot, A.-C. (2019). Convergences and divergences in understanding the word biodiversity among

-
- citizens: A French case study. *Biological Conservation*, 236, 332–339. <https://doi.org/10.1016/j.biocon.2019.05.021>
- Louder, E., & Wyborn, C. (2020). Biodiversity narratives: Stories of the evolving conservation landscape. *Environmental Conservation*, 47(4), 351–359. <https://doi.org/10.1017/S0376892920000387>
- Maas, B., Fabian, Y., Kross, S. M., & Richter, A. (2021). Divergent farmer and scientist perceptions of agricultural biodiversity, ecosystem services and decision-making. *Biological Conservation*, 256(March). <https://doi.org/10.1016/j.biocon.2021.109065>
- Mace, G. M. (2014). Whose conservation? *Science*, 345(6204), 1558–1560. <https://doi.org/10.1126/science.1254704>
- Mace, G. M., Norris, K., & Fitter, A. H. (2012). Biodiversity and ecosystem services: A multilayered relationship. *Trends in Ecology and Evolution*, 27(1), 19–26. <https://doi.org/10.1016/j.tree.2011.08.006>
- Machovina, B., Feeley, K. J., & Ripple, W. J. (2015). Biodiversity conservation: The key is reducing meat consumption. *Science of The Total Environment*, 536, 419–431. <https://doi.org/10.1016/j.scitotenv.2015.07.022>
- Mannion, A. M. (1992). Sustainable Development and Biotechnology. *Environmental Conservation*, 19(4), 297–306. <https://doi.org/10.1017/S0376892900031416>
- Meine, C., Soulé, M., & Noss, R. F. (2006). “A mission-driven discipline”: The growth of conservation biology. *Conservation Biology*, 20(3), 631–651. <https://doi.org/10.1111/j.1523-1739.2006.00449.x>
- Muir, S. A. (1994). The web and the spaceship: Metaphors of the environment. In *ETC: A Review of General Semantics* (Vol. 51, Issue 2, pp. 145–153).
- Müller, A., & Maes, J. (2015). Arguments for biodiversity conservation in Natura 2000 sites: An analysis based on LIFE projects. *Nature Conservation*, 12, 1–26. <https://doi.org/10.3897/natureconservation.12.4848>
- Negi, C. S. (2005). Religion and biodiversity conservation: not a mere analogy. *International Journal of Biodiversity Science & Management*, 1(2), 85–96. <https://doi.org/10.1080/17451590509618083>
- Novacek, M. J. (2008). Engaging the public in biodiversity issues. *Proceedings of the National Academy of Sciences*, 105(Supplement 1), 11571–11578. <https://doi.org/10.1073/pnas.0802599105>
- Olsson, L., Jerneck, A., Thoren, H., Persson, J., & O’Byrne, D. (2015). Why resilience is unappealing to social science: Theoretical and empirical investigations of the scientific use of resilience. *Science Advances*, 1(4), 1–12. <https://doi.org/10.1126/sciadv.1400217>
- Pascual, U., & Perrings, C. (2007). Developing incentives and economic mechanisms for in situ biodiversity conservation in agricultural landscapes. *Agriculture, Ecosystems & Environment*, 121(3), 256–268. <https://doi.org/10.1016/j.agee.2006.12.025>
- Pe’er, G., Bonn, A., Bruelheide, H., Dieker, P., Eisenhauer, N., Feindt, P. H., Hagedorn, G., Hansjürgens, B., Herzog, I., Lomba, Á., Marquard, E., Moreira, F., Nitsch, H., Oppermann, R., Perino, A., Röder, N., Schleyer, C., Schindler, S., Wolf, C., ... Lakner, S. (2020). Action needed for the EU Common Agricultural Policy to address sustainability challenges. *People and Nature*, 2(2), 305–316. <https://doi.org/10.1002/pan3.10080>

- Piccolo, J. J., Washington, H., Kopnina, H., & Taylor, B. (2018). Why conservation scientists should re-embrace their ecocentric roots. *Conservation Biology*, 32(4), 959–961. <https://doi.org/10.1111/cobi.13067>
- Plieninger, T., Draux, H., Fagerholm, N., Bieling, C., Bürgi, M., Kizos, T., Kuemmerle, T., Primdahl, J., & Verburg, P. H. (2016). The driving forces of landscape change in Europe: A systematic review of the evidence. *Land Use Policy*, 57, 204–214. <https://doi.org/10.1016/j.landusepol.2016.04.040>
- Pywell, R. F., Heard, M. S., Woodcock, B. A., Hinsley, S., Ridding, L., Nowakowski, M., & Bullock, J. M. (2015). Wildlife-friendly farming increases crop yield: Evidence for ecological intensification. *Proceedings of the Royal Society B: Biological Sciences*, 282(1816). <https://doi.org/10.1098/rspb.2015.1740>
- Rockström, J., Steffen, W., Noone, K., Persson, Å., Chapin, F. S., Lambin, E. F., Lenton, T. M., Scheffer, M., Folke, C., Schellnhuber, H. J., Nykvist, B., de Wit, C. A., Hughes, T., van der Leeuw, S., Rodhe, H., Sörlin, S., Snyder, P. K., Costanza, R., Svedin, U., ... Foley, J. A. (2009). A safe operating space for humanity. *Nature*, 461(7263), 472–475. <https://doi.org/10.1038/461472a>
- Rockström, J., Williams, J., Daily, G., Noble, A., Matthews, N., Gordon, L., Wetterstrand, H., DeClerck, F., Shah, M., Steduto, P., de Fraiture, C., Hatibu, N., Unver, O., Bird, J., Sibanda, L., & Smith, J. (2017). Sustainable intensification of agriculture for human prosperity and global sustainability. *Ambio*, 46(1), 4–17. <https://doi.org/10.1007/s13280-016-0793-6>
- Rose, D. C. (2018). Avoiding a Post-truth World: Embracing Post-normal Conservation. *Conservation and Society*, 16(4), 518–524.
- Sanford, A. W. (2011). Ethics, Narrative, and Agriculture: Transforming Agricultural Practice through Ecological Imagination. *Journal of Agricultural and Environmental Ethics*, 24(3), 283–303. <https://doi.org/10.1007/s10806-010-9246-6>
- Smith, L. G., Kirk, G. J. D., Jones, P. J., & Williams, A. G. (2019). The greenhouse gas impacts of converting food production in England and Wales to organic methods. *Nature Communications*, 10(1), 4641. <https://doi.org/10.1038/s41467-019-12622-7>
- Soulé, M. E. (1985). What Is Conservation Biology? *BioScience*, 35(11), 727–734. <https://doi.org/10.2307/1310054>
- Stoate, C., Báldi, A., Beja, P., Boatman, N. D., Herzon, I., van Doorn, A., de Snoo, G. R., Rakosy, L., & Ramwell, C. (2009). Ecological impacts of early 21st century agricultural change in Europe - A review. *Journal of Environmental Management*, 91(1), 22–46. <https://doi.org/10.1016/j.jenvman.2009.07.005>
- Tscharntke, T., Clough, Y., Wanger, T. C., Jackson, L., Motzke, I., Perfecto, I., Vandermeer, J., & Whitbread, A. (2012). Global food security, biodiversity conservation and the future of agricultural intensification. *Biological Conservation*, 151(1), 53–59. <https://doi.org/10.1016/j.biocon.2012.01.068>
- Tulloch, L. (2015). Is Emile in the Garden of Eden? Western ideologies of nature. *Policy Futures in Education*, 13(1), 20–41. <https://doi.org/10.1177/1478210314566729>
- Väliveronnen, E., & Hellsten, I. (2002). From “burning library” to “green medicine”: The role of metaphors in communicating biodiversity. *Science Communication*, 24(2), 229–245. <https://doi.org/10.1177/107554702237848>

- van der Ploeg, J. D. (2003). The virtual farmer. Past, present and future of the Dutch peasantry. *European Perspectives on Rural Development*, 432.
- Van der Ploeg, J. D. (2018). *The New Peasantries Rural Development in Times of Globalization*. Routledge.
- Welden, E. A., Chausson, A., & Melanidis, M. S. (2021). Leveraging Nature-based Solutions for transformation: Reconnecting people and nature. *People and Nature*, November 2020, 1–12. <https://doi.org/10.1002/pan3.10212>
- Wilson, E. O. (2010). *The Diversity of Life*.
- Wright, A. J., Veríssimo, D., Pilfold, K., Parsons, E. C. M., Ventre, K., Cousins, J., Jefferson, R., Koldewey, H., Llewellyn, F., & McKinley, E. (2015). Competitive outreach in the 21st century: Why we need conservation marketing. *Ocean and Coastal Management*, 115, 41–48. <https://doi.org/10.1016/j.ocecoaman.2015.06.029>
- Young, J. C., Waylen, K. A., Sarkki, S., Albon, S., Bainbridge, I., Balian, E., Davidson, J., Edwards, D., Fairley, R., Margerison, C., McCracken, D., Owen, R., Quine, C. P., Stewart-Roper, C., Thompson, D., Tinch, R., Van den Hove, S., & Watt, A. (2014). Improving the science-policy dialogue to meet the challenges of biodiversity conservation: having conversations rather than talking at one-another. *Biodiversity and Conservation*, 23(2), 387–404. <https://doi.org/10.1007/s10531-013-0607-0>