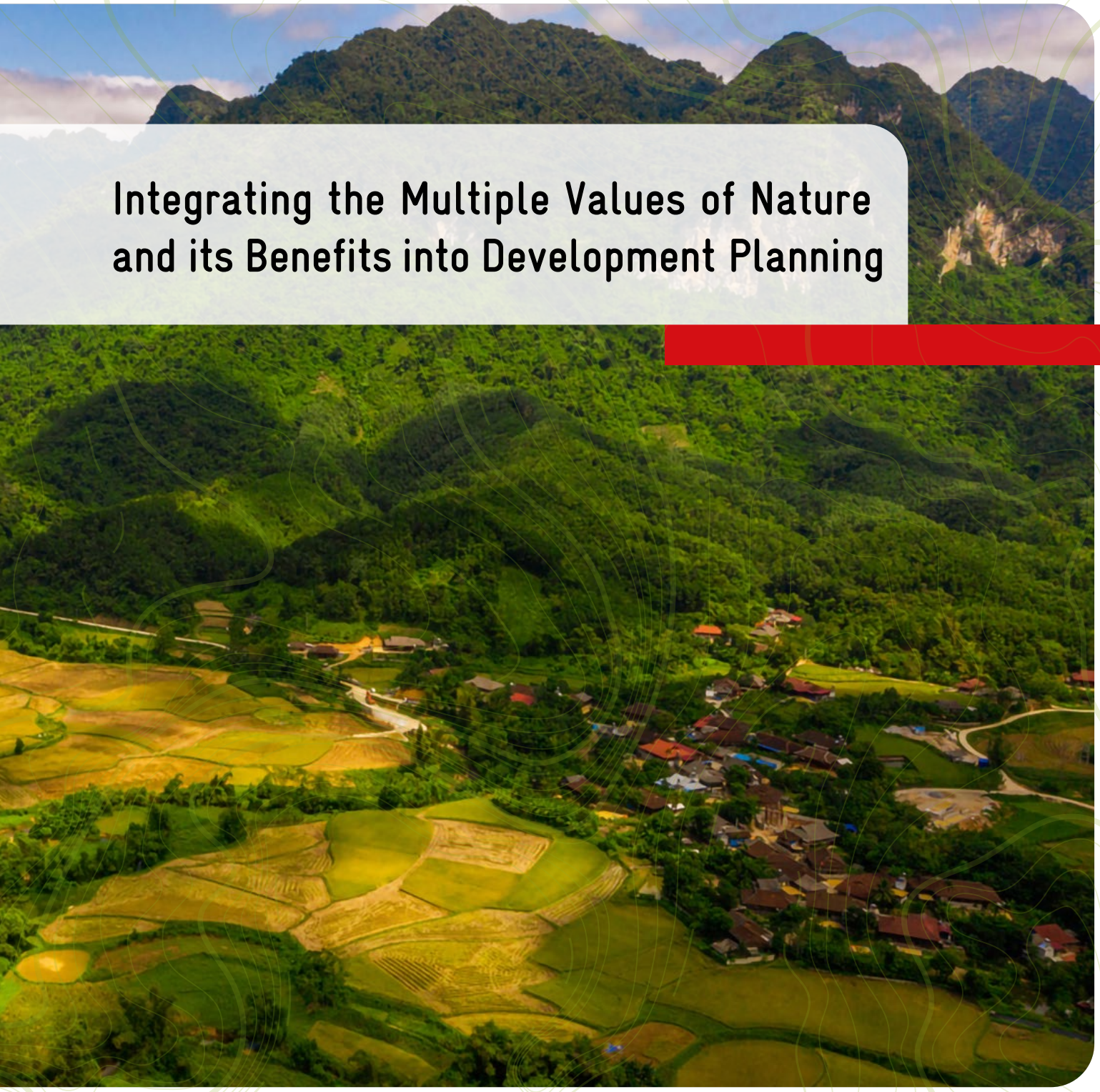
Integrating the Multiple Values of Nature and its Benefits into Development Planning



A guide for practitioners

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On behalf of

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ABBREVIATIONS AND ACRONYMS

CBD	Convention on Biological Diversity
EIA	Environmental impact assessment
GBF	Kunming-Montreal Global Biodiversity Framework
GDP	Gross domestic product
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
ICCA	Indigenous and community-conserved area
IPBES	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
NAP	National Adaptation Plan
NDC	Nationally-Determined Contributions
OECM	Other effective area-based conservation measure
PES	Payments for ecosystem services
SDG	Sustainable Development Goal
SEA	Strategic environmental assessment
UNFCCC	United Nations Framework Convention on Climate Change

OVERVIEW:

integrating multiple values into development planning

WHAT ARE MULTIPLE VALUES?

The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) released the Methodological Assessment Regarding the Diverse Conceptualisation of Multiple Values of Nature and its Benefits, Including Biodiversity and Ecosystem Functions and Services in late 2022. This **represents a major shift in the paradigms and discourse that surround biodiversity and ecosystem valuation**. It proposes a novel and more comprehensive typology that better recognises the multiple values and benefits arising from nature's contributions to people, and explicitly integrates different worldviews and knowledge systems.

The concept of **multiple values** recognises that there is no single way of viewing nature, or valuing its benefits. People's **diverse conceptualisations** reflect their widely differing worldviews, circumstances, needs and aspirations, and are shaped by the varying cultural, social and institutional contexts in which they operate. Values also tend to shift over time and space, as people's circumstances and experiences change, and it is normal for one person to hold multiple perceptions of value.

WHY DO MULTIPLE VALUES MATTER TO DEVELOPMENT PLANNING?

These concepts and approaches have great relevance to development planning (see ↳ chapter 2). Almost all **development processes depend in some way on the natural environment, and many also impact on it**. Without adequate information about the multiple values of nature, it simply is not possible to weigh up the costs and benefits of different development alternatives, make informed choices about the most desirable option, balance the needs and preferences of different groups, or ensure that certain people's interests or values are not harmed. Considering multiple values translates into better outcomes for people and nature, because it:

- Facilitates **more environmentally and socially sustainable** long-term development.
- Allows for additional **nature-based development opportunities** to be recognised and captured.
- Enables **costs, losses, damages and risks to nature and people** to be better identified, avoided and tracked.
- Encourages policies and plans to be **more inclusive and representative** of the many different groups that value nature, and of their diverse worldviews.

- Promotes **stakeholder engagement and participation** in the development process.
- Permits **power asymmetries relating to use, access and control over nature's benefits** to be recognised, addressed and balanced.
- Safeguards the **rights and interests of more vulnerable groups to benefit from nature**, especially those that are traditionally excluded from decision-making.
- Leads to improved **understanding and collaboration** between groups, helps to avoid conflicts over nature.
- Makes it easier to **tailor development approaches and interventions** to the local context and socio-ecological system.
- Improves the likelihood of **political, social and economic acceptance, buy-in and uptake** from different value-holders of nature and in the light of their varying needs and diverse worldviews.

WHAT IS THE PURPOSE OF THE GUIDE?

The guide seeks to assist in operationalising the concepts and principles laid out in the IPBES Values Assessment (↳ chapter 3), with a view to better mainstreaming these in decision-making. **It presents a practical framework that can be used to integrate the multiple values of nature and its benefits into development planning.**

The intention is to expose development planners to new concepts and thinking on multiple values, that they can then factor into their work as relevant, in ways that are appropriate to their own needs and situation. The ultimate aim is to help to catalyse transformative change, and build more sustainable and just futures for people and nature. This demands **integrated solutions, which in turn recognise and build on the vast diversity of relationships between humans and nature, and the many different contexts and forces** that shape these.

It is up to the reader to **determine how, why and to what extent efforts should be made to integrate multiple values**. This may range from simply adopting a fresh perspective and additional set of considerations which will broaden out "business as usual" ways of conducting development planning, through introducing new procedures, protocols and requirements into the planning process, to radically rethinking how (and by whom) development is planned.

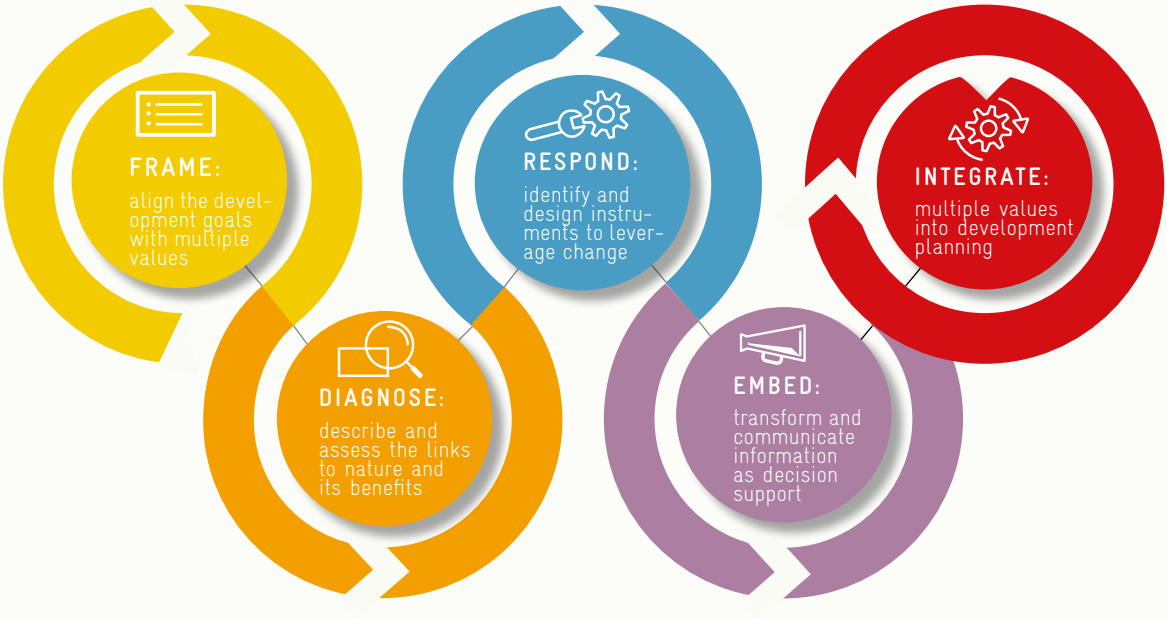
HOW CAN MULTIPLE VALUES BE INTEGRATED INTO DEVELOPMENT PLANNING?

The integration framework has **four main elements or stages** (↳ chapter 4):

- **FRAME:** screening and aligning the development goals with diverse conceptualisations and multiple values, and the plurality of institutional and cultural contexts that give rise to these (↳ chapter 5);
- **DIAGNOSE:** describing and assessing the ways in which development challenges and needs depend, impact and are shaped by the multiple values of nature and its benefits (↳ chapter 6);
- **RESPOND:** identifying and designing practical and policy instruments with which to motivate the behavioural changes and set in place the enabling conditions that are required to integrate multiple values and leverage transformative change (↳ chapter 7); and
- **EMBED:** transforming data and recommendations into clear and compelling information, evidence and advice to support decision-making, communicating this effectively to decision-makers and other stakeholders in the development process, and building their engagement and capacities to deliver change (↳ chapter 8).

Each stage is informed by a series of guiding questions, which seek to steer the process of integrating multiple values. The guide works through these **questions**, and also suggests **approaches and tools** that can be used to investigate key issues, process and operationalise the resulting information, and modify development planning to better recognise, acknowledge and respond to multiple values. A variety of real-world case studies are used to illustrate these principles and methods.

The framework for integration **can easily be incorporated into the development planning cycle**, or run alongside it. It is primarily intended to be applied in its entirety, with each stage building iteratively on the ones before. Specific elements, approaches or topics may however be of particular relevance and usefulness in different situations or development contexts, or for particular sectors and planning processes. In this case, the user may wish to focus on the parts of the guide that are of most interest and applicability to their needs.



FRAME

- Do the development **goals and vision for the future** consider nature's contributions to people?
- **Which** values of nature are targeted?
- **Whose** values of nature are prioritised?
- Are particular values and value-holders **underemphasised or omitted**?
- Can the development goals be **better aligned** with the multiplicity of nature's values and diversity of value-holders?

DIAGNOSE

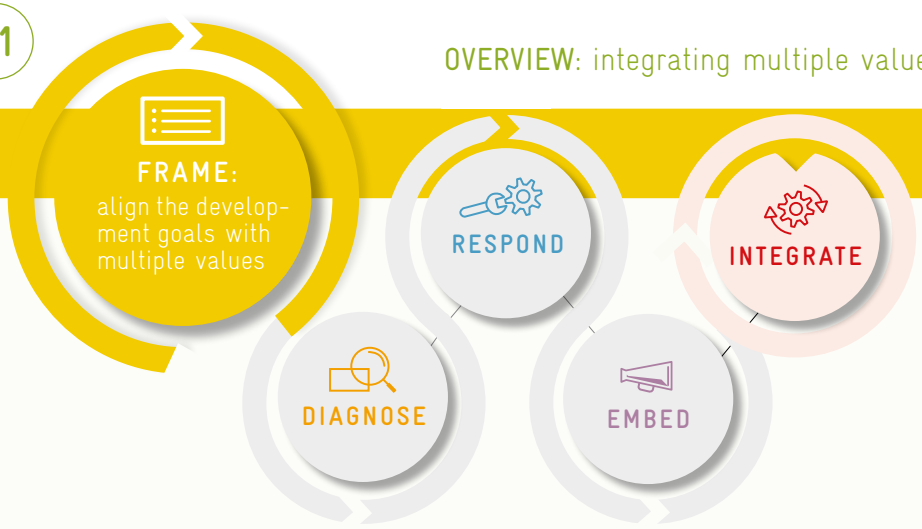
- How do the development goals **depend and impact** on the multiple values of nature and its benefits?
- How are these linkages **manifested** for different groups, and in different contexts?
- Who stands to **gain or lose out** under future development scenarios?
- Which nature-related **risks, opportunities, trade-offs and divergence of interest** might arise, and need to be addressed in the development plan?

RESPOND

- Are there possibilities to more effectively **capture nature-related oppotunities or reduce nature-related risks** for particular groups?
- Can efforts be made to **manage, balance or share more equitably the costs and benefits** that arise in relation to the value of nature?
- What can be done to address and resolve potential **conflicts or divergence of interests** between different stakeholder groups?
- Is there a need to better **represent, safe-guard or empower** particular values, value-holders or worldviews?

EMBED

- How, and with whom, is it **necessary to engage** to ensure that diverse worldviews and multiple values are adequately represented and considered in the development process?
- **What kinds of evidence and information do different groups need and want** to factor in multiple values, and how can these messages be best formulated and delivered?
- What kinds of approaches and indicators are required **to monitor development progress and impact** taking into account diverse worldviews and multiple values?

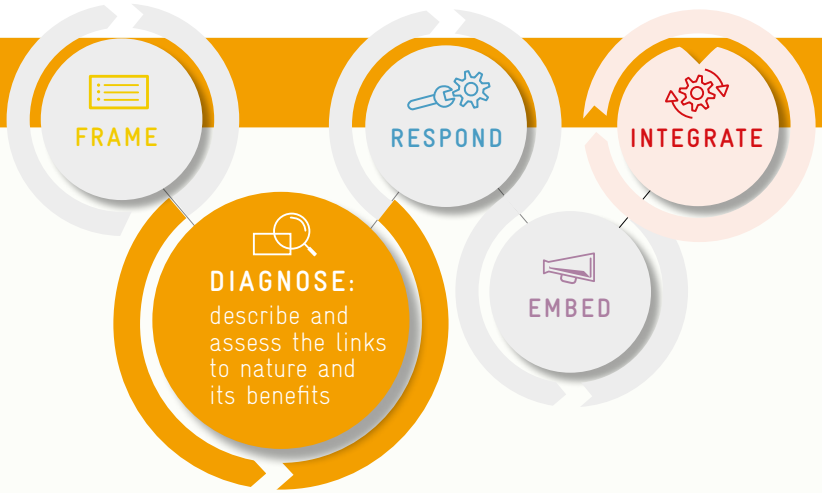


The framing stage (described in ↳ chapter 5) involves screening the development goals, thinking about what these seek to achieve and for whom, and determining whether there are needs or opportunities to better incorporate diverse conceptualisations and multiple values. It should take place at the beginning of the planning process, when the development priorities and objectives are first being set. It addresses the following questions:

- Do the development goals and vision for the future consider nature's contributions to people?
- Which values of nature are targeted?
- Whose values of nature are prioritised?
- Are particular values and value-holders underemphasised or omitted?
- Can the development goals be better aligned with the multiplicity of nature's values and diversity of value-holders?

The key aim is to ensure that as broad as possible a range of values and stakeholder interests relating to nature's contributions to people is taken into account in the development plan. Not only should this result in better-targeted and more effective projects and activities, but it can also play a vital role in fostering people's support and commitment to the development process. It increases the likelihood that stakeholders will perceive the development plan to be meaningful, beneficial, and that their needs and interests have been taken into account.

By the end of this stage, the development goals and priorities should be better aligned with multiplicity of nature's values and value-holders. In other words, the development objectives should take nature's contributions to people into account, and ensure that key values and value-holders are considered. In addition, a working list of the key values and value-holders of nature should have been prepared. This will be further expanded and elaborated during the course of the integration process. It serves as a reference point to ensure that all affected stakeholders are adequately considered as the integration process advances, and to guide how these groups should be engaged and participate in it.

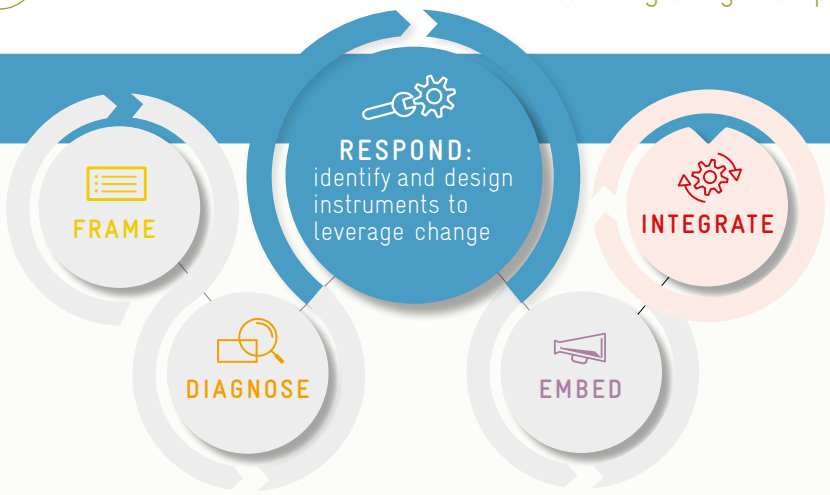


The diagnosis stage (described in ↳ chapter 6) looks in more detail at the ways in which the development goals are linked to nature's contributions to people. It describes and assesses how the development plan depends, impacts and is shaped by the multiple values of nature and its benefits, and the diversity of worldviews and plurality of institutional and cultural contexts that give rise to these. It addresses the following questions:

- How are the development goals shaped by, and how do these depend or impact on, the multiple values of nature and its benefits?
- How are these linkages manifested for different groups, and in different contexts?
- Who stands to gain or lose out under future development scenarios?
- Which nature-related risks, opportunities, trade-offs and divergence of interest might arise, and need to be addressed in the development plan?

The key aim is to make sure that the full range of nature-related dependencies and impacts are addressed. This includes considering how different values and value-holders may be affected under future development scenarios. It highlights risks and opportunities, as well as gainers, losers, trade-offs and conflicts of interest that might not otherwise have been considered. All of these have the potential to either strengthen or undermine development outcomes, depending on how they are addressed and managed.

By the end of this stage, there should be a clear idea of the various risks and opportunities that the development plan poses for the multiple values of nature (and vice versa), as well as the trade-offs and divergence of interest that may arise between different values and value-holders. This information will have been incorporated into the working list of key values and value-holders of nature that was started in the framing stage. Unmet needs, gaps and issues that need to be addressed in the development plan will be highlighted for each value and value-holder, for further follow-up in the response stage.

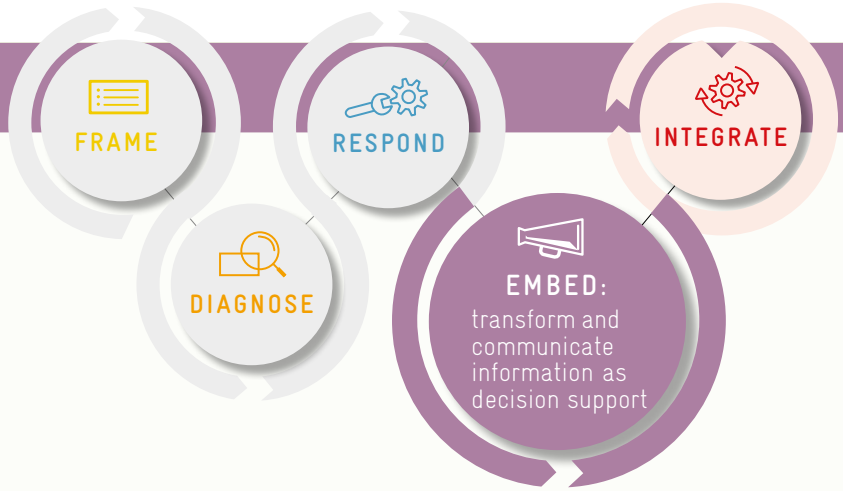


The response stage (described in ↳ chapter 7) looks at how the risks, opportunities, trade-offs and divergence of interest associated with the multiple values of nature and its benefits can be managed and addressed in the development plan. It involves identifying policy and practical instruments that can be used to influence people's behaviour, create enabling conditions, and leverage transformative change towards more sustainable and just futures. It addresses the following questions:

- Are there possibilities to more effectively capture nature-related opportunities or reduce nature-related risks for particular groups?
- Can efforts be made to manage, balance or share more equitably the costs and benefits that arise in relation to the value of nature?
- What can be done to address and resolve potential conflicts or divergence of interests between different stakeholder groups?
- Is there a need to better represent, safeguard or empower particular values, value-holders or worldviews?

The key aim is to ensure that all relevant nature values and value-holders are factored into decision-making, and that no group's quality of life or wellbeing is negatively impacted – and wherever possible is enhanced. The emphasis is therefore on instruments that will encourage people to maintain the multiple values of nature, respect different worldviews and value systems, and avoid damaging or harming the interests of other value-holders in nature. As well as boosting stakeholder buy-in and support for the development plan, this will also improve its effectiveness, impact and sustainability.

By the end of this stage, a series of policy and practical instruments should have been identified which can be used to encourage, enable and require stakeholders to act in support of multiple values. A list of measures will be compiled which outlines the rationale and purpose of each, states its intended outcome, specifies who and what it seeks to influence or change, explains how it will operate, and indicates key considerations and needs for follow-up. This will provide information that can be directly incorporated into the development plan, and serve as the basis for more detailed planning and design as required.



Having identified why and where there is a need to integrate multiple values and diverse worldviews into the development plan, and identified concrete instruments that can be used to motivate and enable the changes that are necessary for this to take place, the **embedding stage** (described in ↳ chapter 8) is concerned with making this happen. It seeks to transform these conclusions and recommendations into clear and compelling decision support information, communicate this effectively to decision-makers and other key stakeholders as the development process advances, and build their engagement and capacities to deliver change. It addresses the following questions:

- How, and with whom, is it necessary to engage to ensure that diverse worldviews and multiple values are adequately represented and considered in the development process?
- What kinds of evidence and information do different groups need and want to factor in multiple values, and how can these messages be best formulated and delivered?
- What kinds of approaches and indicators are required to monitor development progress and impact taking into account diverse worldviews and multiple values?

A variety of support tools can assist in guiding decision-making across the development planning cycle, including those that convey information and advice as well build the systems, capacities, engagement and learning that are required to recognise and deal with multiple values and value-holders. **The aim** is to ensure that a holistic and balanced perspective is maintained throughout the process of finalising, adopting, implementing, monitoring and evaluating the development plan. These tools should serve to promote more inclusive and participatory approaches, which allow for a plurality of worldviews, knowledge systems and interests to be reflected in the development plan.

By the end of this stage, key engagement, information, communication, engagement and capacity needs relating to multiple values should have been clearly identified, and strategies formulated to use these tools to support decision-making during the approval, implementation and monitoring of the development plan.

A number of guiding principles and best practices should drive efforts to apply the four-stage integration framework, and to operationalise multiple values in development planning (↳ chapter 9):

- **Paradigm shift**: rethink and expand conventional, market-based models of "development", which may not be universally valid, appropriate or beneficial in all situations or for all stakeholders, and often serve to undermine the multiple values of nature.
- **Inclusivity**: incorporate as broad as possible a range of perspectives, interests and inputs in development plans, and in the processes that are undertaken to develop and implement these, especially the more marginalised and vulnerable groups who are traditionally left out of the development planning process, such as Indigenous Peoples and local communities.
- **Engagement**: consult, communicate and work collaboratively with all stakeholder groups that stand to be affected by the dependence and impact of the development plan on nature and its benefits.
- **Participation**: actively empower key value-holders to determine decision-making outcomes, and be involved as partners or leaders in the processes that are used to define priorities, generate and apply information, choose between development alternatives, plan and implement development activities.
- **Plural valuation**: consider and make visible a wide diversity of world views, balance of methods and metrics relating to nature's benefits, that together recognise and represent as fully as possible the multiplicity of values and diversity of conceptualisations that exist in any given context.
- **Knowledge weaving and co-creation**: follow a collaborative process that respects and brings together diverse perspectives and worldviews, brokers and crosses the boundaries between different knowledge systems, and includes all relevant stakeholders and value-holders in the process of conceptualising, gathering and sharing information.
- **Strategic communication**: the information and messages about multiple values and value-holders that are shared with decision-makers and other stakeholders need to be credible, relevant and legitimate to those actors, as well as being communicated in an appropriate and meaningful form.

Incorporating these additional layers of investigation, analysis and stakeholder engagement often requires extra time, budget and material support. However, making efforts to integrate multiple values **need not (and should not) be an expensive or difficult exercise.** The time and cost required to apply the integration framework will of course vary, depending on the topics and issues addressed, the development process in which it is embedded, and the size, breadth and complexity of the socio-cultural and biophysical dimensions involved. There is however no "one size fits all' approach. It should however always be tailored to the resources and capacities available to the user, and to the broader development process being followed.

1.

INTRODUCTION: about the guide

1.1 BACKGROUND AND RATIONALE

Established in 2012, the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) is an independent intergovernmental body mandated to strengthen the science-policy interface on biodiversity and ecosystem services for the conservation and sustainable use of biodiversity, long-term human well-being and sustainable development. It currently has almost 140 Member States.

In late 2022, IPBES released the *Methodological Assessment Methodological Assessment Regarding the Diverse Conceptualisation of Multiple Values of Nature and its Benefits, Including Biodiversity and Ecosystem Functions and Services.* The document seeks to support decision-makers in understanding and accounting for the wide range of nature's values in policy decisions to address the current biodiversity crisis, and to promote more sustainable development pathways. As such, it expects to contribute to local, national and global efforts towards achieving the goals and targets laid out in the 2030 Agenda for Sustainable Development and the Kunming-Montreal Global Biodiversity Framework, among others.

The IPBES Values Assessment represents a major shift in the paradigms and discourse that surround biodiversity and ecosystems. It proposes a novel and more comprehensive typology that better recognises the multiple values and benefits arising from nature's contributions to people, and explicitly integrates different worldviews and knowledge systems. As such, the concepts and frameworks it describes have great relevance to development planning across the many different sectors that depend and impact on biodiversity.

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1.2

WHAT DOES THE GUIDE SEEK TO DELIVER?

The guide seeks to assist in operationalising the concepts and principles laid out in the IPBES Values Assessment, with a view to better mainstreaming these in decision-making. It presents a practical framework that can be used to address and integrate the multiple values of nature and its benefits in development planning. The emphasis is on assisting development planners to support, advise and influence real-world decision-making processes. The ultimate aim is in line with that of the IPBES Values Assessment – to help to catalyse transformative change, and build more sustainable and just futures for people and nature. This demands integrated solutions, which in turn recognise and build on the vast diversity of relationships between humans and nature, and the many different contexts and forces that shape these.

It is important to emphasise that the guide is not prescriptive, in the sense of providing a detailed methodology, or specifying fixed formats and tools to be used to collect, record and analyse data. Rather, the intention is to expose development planners to new concepts and thinking on multiple values, that they can then factor into their work as relevant, in ways that are appropriate to their own needs and situation. The aim is to help the reader to think about development planning differently.

For this reason, the guide is structured around describing the questions, tools and approaches to address the multiple values of nature and its benefits, and the diverse worldviews and perceptions that create and inform these values. The questions guide the reader in working through some of the main issues and concerns in integrating multiple values. The tools and approaches can be used to generate information and set in place measures that will respond to these issues and concerns.

It is up to the reader to determine how, why and to what extent efforts should be made to integrate multiple values into development planning, including whether (and how) there is a need to factor in specific studies, technical expertise, consultation and engagement processes. This may range from simply adopting a fresh perspective and additional set of considerations which will broaden out "business as usual" ways of conducting development planning, through introducing new procedures, protocols and requirements into the planning process, to radically rethinking how (and by whom) development is planned.

The guide builds on a number of earlier GIZ publications. In particular, it extends the ecosystem services assessment approaches laid out in *Integrating Ecosystem Services into Development Planning: A Stepwise Approach for Practitioners* (Kosmus et al. 2012, Renner et al. 2018), *Principles of Ecosystem Services Assessments for Policy Impacts: Elements, Methods, Tools and Tips* (Kosmus et al. 2018) and *Economic Valuation of Ecosystem Services: Elements, Methods, Tools and Tips* (Emerton et al. 2019).

1.3 HOW AND BY WHOM IS THE GUIDE INTENDED TO BE USED?

The framework relates to all stages of the development planning cycle. This encompasses work to prioritise development needs and opportunities, assess and value nature's benefits, inform the selection of practical and policy instruments, as well as engage with and communicate the resulting information and recommendations to decision-makers and other stakeholders. The integrative framework that is described follows a logical process, in parallel to the development planning cycle. It is primarily intended to be applied in its entirety, with each stage building iteratively on the ones before. It should however be emphasised that specific elements, approaches or topics may be of particular relevance and usefulness in different situations or development contexts, or for particular sectors and planning processes. In this case, the user may wish to focus on the parts of the guide that are of most interest and applicability to their needs.

The target audience is development planners, including those who are responsible for designing projects and programmes, planning interventions, formulating policies and strategies, implementing on-the-ground activities, and monitoring impacts. This includes technical staff in the government agencies, non-government organisations and research institutes that advise political and sectoral decision-makers about development policies, programmes, projects and investments, as well as those in development cooperation agencies and international organisations.

"Development" is understood to include any process that is designed to improve human wellbeing, including those that seek to stimulate economic growth, extend people's access to services and facilities, and advance social and equity goals, as well as conserve and sustainably manage the natural environment. This includes actions and investments that seek to directly change on-the-ground conditions and opportunities,

as well as work carried out to strengthen institutions, policies, laws, governance, capacity, empowerment and other enabling conditions.

The guide can be applied to a wide range of sectors, activities and levels of scale. While the framework for integration is concerned specifically with the multiple values of nature and its benefits, it is not intended to be used only in environmental or nature-related planning. To the contrary, the intention is to ensure that development planning across the board takes due account of people's diverse conceptualisations of nature and its benefits. This includes people working in agriculture, water, energy, infrastructure, urban planning, financial services, climate adaptation and mitigation, and all of the other the many different development sectors that depend or impact in some way on nature. The framework can be applied from small, site-level interventions, through larger projects, sectoral planning, to national and even multi-country programmes. While the concepts and questions are applicable across different levels of scale, and similar approaches and tools can be applied, the level of detail as well as the scope of stakeholder engagement will of course vary.

1.4 WHAT IS THE CONTENT OF THE GUIDE?

The guide focuses on the concepts, approaches and methods presented in the IPBES Values Assessment. It does not however simply seek to summarise the IPBES Values Assessment on a chapter-by-chapter basis. The emphasis is on translating its findings and recommendations into a series of practical tools and approaches that can easily be applied by development practitioners in the course of their work, adapted to their own situation, needs and available resources.

To these ends, the guide has ten chapters, organised into three sections (↳ Figure 1). These are designed to be read and applied in sequence. It first of all explains the background to the multiple values concept, defines key terminology, and looks at the rationale for applying it (↳ chapters 2 – 3), then goes on to describe concrete questions, tools and approaches for integrating multiple values in development planning processes (↳ chapters 4 – 8), and finishes by reviewing the guiding principles, best practices and challenges associated with operationalising multiple values (↳ chapters 9 – 10).

FIGURE 1: Content of the guide

2.

RATIONALE: why integrate multiple values?

2.1

WHAT DO "DIVERSE CONCEPTUALISATION" AND "MULTIPLE VALUES" REFER TO?

Although the concept of multiple values is explained in detail below in ↳ chapter 3, it is useful to summarise the key concepts. Put simply, the concept of **multiple values** recognises that there is no single way of viewing nature, or valuing its benefits. People's **diverse conceptualisations** of the value of nature reflect their widely differing world-views, circumstances, needs and aspirations, and are shaped by the varying cultural, social and institutional contexts in which they operate. Values also tend to shift over time and space, as people's circumstances and experiences change, and it is normal for one person to hold multiple perceptions of value.

2.2

HOW MULTIPLE VALUES MATTER TO DEVELOPMENT PLANNING

Almost all development processes depend in some way on the natural environment – for example through relying on biological resources, clean water supplies or fertile soils as primary inputs, because of natural processes such as pollination, water purification, nutrient cycling or carbon sequestration, or due to the protective functions of ecosystems in guarding against floods, droughts and other natural disasters. Many also impact on biodiversity and ecosystem services – for example by clearing or converting habitats to other uses, diverting or polluting streams and rivers, or overharvesting natural resources. It is now generally accepted that there is a need to consider biodiversity and ecosystem services in development planning, and a wide range of guidance is available on how to do this (see, for example, Kosmus et al. 2012, 2018, Renner et al. 2018, Emerton et al. 2019).

There is however another essential dimension to understanding and acting on the links between nature and development. People cause, experience and are affected by these dependencies and impacts in widely differing ways, even in relation to the same set

of development goals and actions. Furthermore, how (and why) people interact with nature and consider it to be important varies greatly – between cultures, for different individuals and groups within the same culture, across time and space, and in different situations and settings.

It might therefore seem obvious that there is a need to recognise, respect and reflect the multiple values of nature (and the diverse worldviews that underpin these) in development planning. However, this is rarely the case. Decision-makers have tended to prioritise only a narrow set of values. The dominant development imperative has long been one that seeks to maximise short-term gains and market returns, often favouring large-scale, extractive land and resource uses. Not only has this resulted in widescale ecosystem degradation and biodiversity loss, but it has tended to prioritise and favour particular people's needs and interests. This often comes at the expense of other groups, who have been excluded from participating in or benefiting from development opportunities. In the worst case, significant costs and damages have been incurred because development processes have led to the destruction or loss of important natural and/or social values.

In all too many cases, it is already-marginalised and vulnerable groups such as Indigenous Peoples, local communities and women that have been excluded and disproportionately affected by this limited and often biased understanding of the values of nature. For example, the case study described in **Box 1** illustrates how failing to adequately account for multiple values in development planning has negatively impacted on the socio-ecological system of the Guna people in Panama.

BOX 1

Development impacts on the socio-ecological system of the Guna people in Panama

Nature holds many different values for the Guna people of north-eastern Panama. It is a source of food and materials, security and wellbeing, is linked to practices such as traditional medicine and cultural ceremonies, and there is a strong sense of relational value associated with the concept of homeland (Gunayala) and sacred space (Galu).

Current development processes revolve around the expansion of tourism, and the establishment of government-supported schools and clinics. These have undoubtedly provided new opportunities for income and employment, as well as access to better education and healthcare. However, overall, the outcomes of development have been rather poor. The Guna continue to register among the highest levels of multi-dimensional poverty and lowest human development index in the country.

One reason for this is the still weak integration of Guna worldviews and values into development planning. As a result, development poses a number of challenges to the local social-ecological system. In particular, the shift from a subsistence-based economy characterised by strong community cohesion to a "modern" lifestyle based on capital accumulation and market integration has undermined the beliefs, knowledge and practices that position the Guna as caretakers of nature. There has been a gradual breakdown of customary laws for managing and using nature, leading to resource overexploitation and scarcity, coral reef and forest degradation, and the loss of important ecosystem services. This has had unexpected knock-on effects. For example, ecological degradation, combined with the lifestyle and dietary changes associated with moving away from subsistence farming and fishing, has impacted negatively on local food production and nutrition. In turn, local food production is reliant on, and plays an important role in, the preservation of traditional knowledge and cultural traditions.

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The experience of the Guna shows the importance of understanding and acknowledging different nature-related worldviews and value systems in development planning. These are not always visible to external actors, meaning that potential development-related costs, damages and trade-offs can be easily and unintentionally be overlooked. It is important for development planners to recognise the multiple values and needs of the Guna people, and understand that seemingly desirable "development" goals (e.g. access to imported foods, cash income, paid employment and infrastructure development) are not necessarily the main aspiration for the Guna. More often than not, these are seen as a means of achieving more important and long-term outcomes such as territorial autonomy, self-determination and preservation of cultural identity.

From Lam and Gasparatos 2023

There are many ways in which a more inclusive, balanced and holistic understanding of the values of nature can improve the design, implementation and outcomes of development policies and plans, and translate into better outcomes for people and nature (**Figure 2**). Most basically, development planning can be better informed when what is at stake, and for whom, is known. Making efforts to engage with the diversity of nature's values and value-holders offers a way of making development plans more effective, inclusive and sustainable. Without adequate information about the multiple values of nature, it simply is not possible to weigh up the costs and benefits of different development alternatives, make informed choices about the most desirable option, balance the needs and preferences of different groups, or ensure that certain people's interests or values are not harmed. It is also vital to the uptake, acceptance and ultimate success of development efforts.

Figure 2: Key reasons for integrating multiple values into development planning

Reason	Advantages and gains from integrating the multiple values of nature and its benefits
1. Facilitates more environmentally and socially sustainable, long-term development	Promotes environmental and ecological sustainability, by ensuring that nature's contributions to people are maintained and wherever possible improved. *E.g., that road infrastructure development plans do not harm or disrupt habitats, species and landscapes that are particularly valuable in conservation terms, have cultural or spiritual significance, are the source of key livelihood support, and/or are considered to have intrinsic rights to exist undisturbed.* Favours development options that are likely to be more durable into the future. *E.g., locally-led, nature-based disaster risk reduction measures that are more cost-effective to develop than artificially-engineered alternatives, can easily be maintained at the local level without expensive or complex technology and expertise, and are acceptable and appropriate to the local population's needs.*
2. Allows for additional development opportunities to be recognised and captured	Suggests nature-based approaches, goods and services that can deliver key development goals (often more cheaply and equitably than other options), or can be used in combination with other approaches. *E.g., biodiversity-based products and markets that can serve to generate rural income and employment, such as organic agriculture, ecotourism, natural medicines, sustainably wild-harvested and certified foods.*
3. Enables costs, losses, damages and risks to be better identified, avoided and tracked	Suggests nature-based approaches, goods and services that can deliver key development goals (often more cheaply and equitably than other options), or can be used in combination with other approaches. *E.g., biodiversity-based products and markets that can serve to generate rural income and employment, such as organic agriculture, ecotourism, natural medicines, sustainably wild-harvested and certified foods.*

4. Encourages policies and plans to be more inclusive and representative	Articulates and represents a much greater range of values and value-holders, many of whom would not traditionally be consulted or considered in decision-making. *E.g., ensures that the views and needs of Indigenous Peoples and local communities are captured when forest conservation is planned and implemented, and seeks to respect and incorporate customary forest rights and management practices.*
5. Promotes stakeholder engagement and participation	In process terms, allows for a diverse range of value-holders to be included in, contribute to and benefit from the development process, from planning and design through to implementation and monitoring. *E.g., Encourages a farmer-led approach to planning and designing sustainable land management initiatives, and hands over implementation responsibility to local institutions and community-based organisations* In methodological terms, explicitly advocates for participatory approaches that actively involve key stakeholders, and enable and empower them to take control of and benefit from development processes. *E.g., favours the legal handover of forest management authority and implementation responsibility to local communities, through the formation of indigenous and community-controlled areas, village forests or co-managed areas.*
6. Permits power asymmetries to be recognised, addressed and balanced	Has an in-built focus on distribution, equity and justice, and on understanding how different groups value nature and are affected by future development scenarios. *E.g., recognises that certain income-generating options may serve to take income away from women and increase their workload, while increasing the control of elite groups over natural resources and marketing chains.*
7. Safeguards the rights and interests of more vulnerable groups	Pays explicit attention to groups and perspectives that are traditionally excluded from decision-making, and incorporates concepts of justice, equity and rights-based approaches. *E.g., expands road infrastructure planning to include local landholders and resource users, and factors their needs, interests and wishes into the routing and design of new road corridors.*
8. Leads to improved understanding and collaboration between groups, and helps to avoid conflicts	Seeks to identify and address trade-offs between different values and value-holders, and to develop collaborative approaches that bridge and mediate different people's interests and worldviews. *E.g., recognises that groups other than arable farmers, such as pastoralists and hunter-gatherers, also need to be included in and benefited by sustainable land management efforts, as their livelihoods will be affected by any changes in land use and land management patterns.*
9. Makes it easier to tailor development approaches and interventions to the local context	Focuses on assessing and responding to people's varying needs and circumstances, diverse worldviews and multiple values. *E.g., recognising that the likelihood and impact of natural disaster hazards are perceived and experienced differently across stakeholder groups, and that nature-based coping strategies and management responses may already be in place at the local level.*
10. Improves the likelihood of political, social and economic acceptance, buy-in and uptake	Follows a process, and identifies interventions and activities, that have been formulated in the light of multiple values, value-holders and their diverse worldviews, and are thus more likely to be considered legitimate and beneficial by key stakeholders, and to engage their support and buy-in. *E.g., locally-led or collaborative approaches to forest conservation which actively engage and benefit Indigenous Peoples and local communities.*

2.3 THE ROLE OF MULTIPLE VALUES IN GLOBAL POLICY PROCESSES

The concept of multiple values is key at the global policy level. It is essential for delivering on international conservation and development goals and targets, and is increasingly being integrated into the discussions, approaches and commitments that surround these. While IPBES lays particular emphasis on the 2030 Agenda for Sustainable Development and the Kunming-Montral Global Biodiversity Framework (GBF), multiple values are also highly relevant to multilateral treaties and instruments relating to climate change, such as the Paris Agreement of the United Nations Framework Convention on Climate Change (UNFCCC) (see **Box 2**). These three sets of goals and targets exert a strong influence over national and local-level conservation and development planning, and also shape international development cooperation priorities – and, increasingly, private investment and business practices. All have a focus on nature, and seek to promote more inclusive, participatory and sustainable approaches to conservation and development. As noted in the IPBES Values Assessment, it will be difficult to achieve any of these goals and targets without explicitly considering and addressing multiple values.

BOX 2

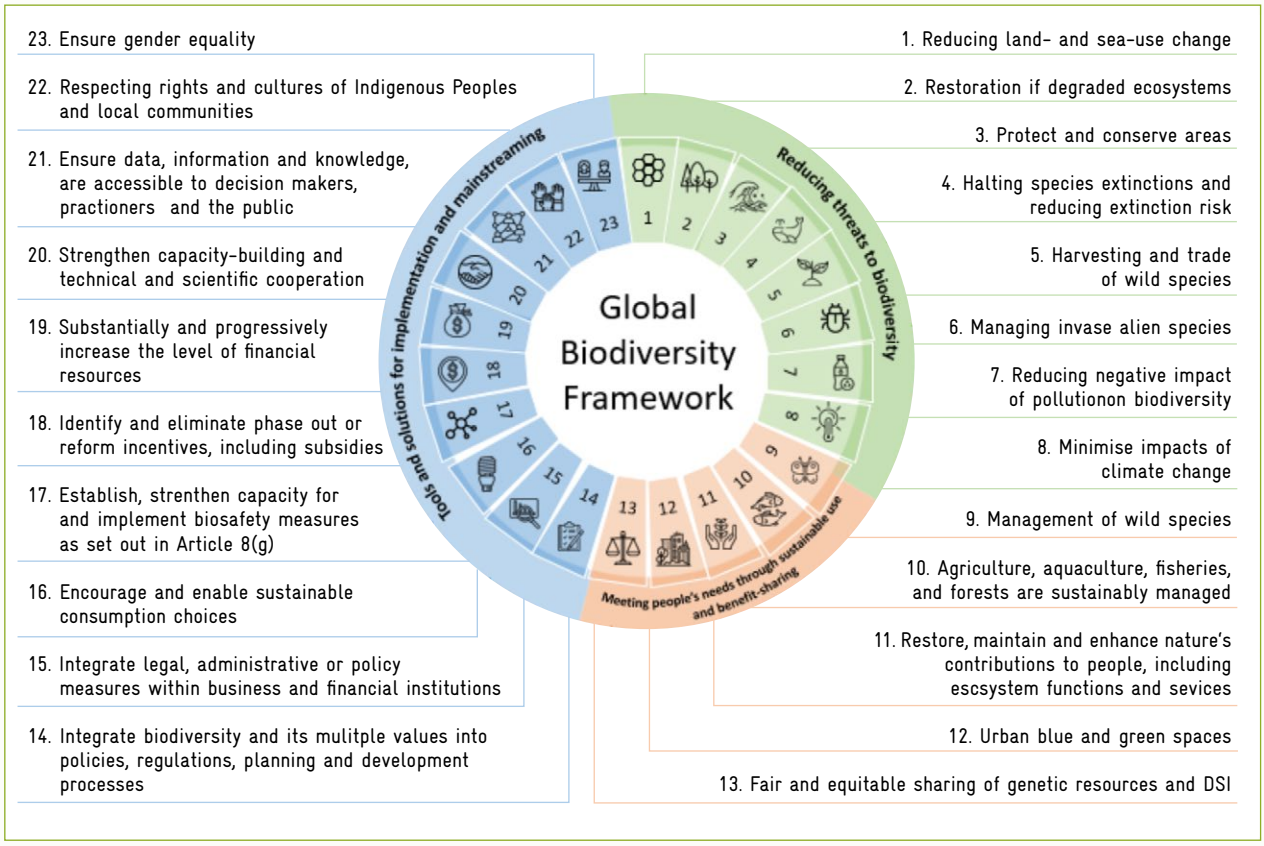
The 2030 Agenda for Sustainable Development, Paris Agreement and Kunming-Montreal Global Biodiversity Framework (GBF)

The 2030 Agenda for Sustainable Development and its 17 Sustainable Development Goals (SDGs) were adopted by all United Nations members in 2015. The SDGs articulate a vision that emphasises the strong interlinkages between people and nature, and introduce a plan of action and set of targets "for people, planet and prosperity". Target 15.9 is "by 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts." Two of the SDGs refer specifically to nature: Goal 14 (conserve and sustainably use the oceans, seas and marine resources for sustainable development) and Goal 15 (protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation and halt biodiversity loss). Target 13 is to take urgent action to combat climate change and its impacts.

The Convention on Biological Diversity (CBD) was opened for signing in 1992 at the United Nations Conference on Environment and Development or "Earth Summit", and came into force a year later. It has so far been ratified by 196 nations. The CBD has three main goals: the conservation of biological diversity; the sustainable use of its components; and the fair and

equitable sharing of benefits arising from genetic resources. The Kunming-Montreal Global Biodiversity Framework was adopted in December 2022, and outlines four goals and 23 action targets for achieving a 2050 Vision for Biodiversity. These explicitly support the achievement of the SDGs, and directly seek to recognise, respect and secure the multiple values of nature. Target 14 explicitly refers to the need to integrate biodiversity and its multiple values into policies, regulations, planning and development processes.

Like the CBD, the United Nations Framework Convention on Climate Change (UNFCCC) was agreed in 1992 at the Earth Summit. The Paris Agreement was then adopted in 2015, with the aim of strengthening the global response to the threat of climate change, in the context of sustainable development and efforts to eradicate poverty. It sets a target limiting global temperature rise this century to 2° C above pre-industrial levels and as close as possible to 1.5 degrees, while building countries' resilience to the adverse effects of climate change. As such, the agreement both signals commitments to take action for the climate and sustainable development, and sets in motion the economic, societal and environmental transformation needed to realise this. It explicitly notes the importance of ensuring the integrity of all ecosystems and the protection of biodiversity, as well as the concept of "climate justice", when taking action to address climate change.



From ECCC 2023

Several of the Sustainable Development Goals (SDGs), are directly concerned with conserving biodiversity and ecosystems, and target 15.9 explicitly calls for efforts to integrate ecosystems and biodiversity values into national and local planning, development processes and poverty reduction strategies, and accounts. Meanwhile, a focus on nature is also integral to the SDGs relating to human well-being, poverty eradication and equality, and is also at the centre of most of the other sectoral goals and targets, including agriculture, forestry, fisheries, health, water, energy, infrastructure, settlements, sustainable consumption and production and climate. At an implementation level, many countries are now incorporating "nature-positive" investments, nature-based solutions and ecosystem-based approaches into their portfolios of actions to meet the SDGs.

The IPBES Values Assessment has been recognised by all of the Parties to the Convention on Biological Diversity (CBD). The CBD lays great emphasis on the importance of recognising a wide range of biodiversity values, with the initial paragraph specifically mentioning "the intrinsic and… ecological, genetic, social, economic, scientific, educational, cultural, recreational and aesthetic values of biological diversity and its components". The fair and equitable sharing of benefits is one of its three core goals, alongside biodiversity conservation and sustainable use. Over the last 30 years, considerable efforts have been made in CBD processes to articulate the full range of biodiversity values and to ensure that these are factored into planning processes, as well as to ensure that the needs and perspectives of Indigenous Peoples and local communities are adequately addressed. This sets a strong foundation, and provides direct support, for integrating multiple values.

Following on from this, the GBF explicitly seeks to respond to IPBES' Global Assessment Report. As such, it reflects many of the principles underlying the multiple values concept, including envisaging a world of living in harmony with nature, where biodiversity is valued, conserved, restored and wisely used, delivering benefits essential for all people. Calls to recognise and address different people's interactions with nature, and ensure their participation in conservation efforts, are accorded a prominent role throughout the GBF document. In the introduction, different concepts and value systems are highlighted as a key consideration, and recognition of the rights of nature and rights of Mother Earth are posed as an integral part of the successful implementation of the GBF. Its action targets repeatedly mention the need to recognise and respect the rights of Indigenous Peoples and local communities, protect and encourage customary sustainable use, and maintain nature's contributions to people. Target 14 specifically mentions the integration of multiple values into development policies, strategies and plans.

There has been repeated discussion of the synergies between biodiversity and climate change in the global and national processes surrounding the SDGs, CBD and UNFCC. It is now widely recognised that nature, climate and sustainable development agendas are closely entwined. On the one hand, efforts to harness the power of nature to assist in climate mitigation and adaptation form a key part of most country-level strategies and actions to operationalise the Paris Agreement, including national climate action plans or

Nationally-Determined Contributions (NDCs) and National Adaptation Plans (NAPs). Approaches such as ecosystem-based adaptation and mitigation, nature-based solutions and natural climate solutions, are increasingly being used to reduce greenhouse gas emissions and build resilience to adapt to the impacts of climate change.

The Paris Agreement also emphasises the need to engage with all sectors of society, including Indigenous Peoples, to recognise traditional knowledge, and to pursue climate justice. The preamble acknowledges that parties should respect, promote and consider the rights of Indigenous Peoples and local communities and human rights obligations when taking action to address climate change. In Article 7 it provides for local inclusion, the involvement of vulnerable communities, and use of traditional and local knowledge in adaptation.

To these ends, one of the key decisions taken at the UNFCCC's COP21 in 2015 was the establishment of a platform to allow the exchange of experiences and sharing of best practices on mitigation and adaptation between local communities, Indigenous Peoples, countries and all other relevant stakeholders.

3.

THEORY: multiple values terminology and definitions

3.1 THE IPBES CONCEPTUAL FRAMEWORK AND PRELIMINARY GUIDE

The term **"multiple values"** first started to come into common use in the IPBES context just under a decade ago, soon after the establishment of IPBES (**Box 3**). One of the earliest concerns was to find ways of accounting for different knowledge systems in IPBES' conceptual framework itself, in the biodiversity-related assessments it sought to carry out, as well as associated policy decisions. To these ends, IPBES' very first work programme for 2014 – 18 prioritised the development of a series of policy support tools and methodologies, including the Preliminary Guide Regarding Diverse Conceptualisation of Multiple Values of Nature and Its Benefits, Including Biodiversity and Ecosystem Functions and Services (IPBES 2015).

The IPBES Preliminary Guide was subsequently adopted in 2016. It provided a structure for understanding and applying the twin concepts of "diverse conceptualisation" and "multiple values" – in simple terms, the immense variation in the way that different people perceive, value and relate to nature and its benefits. Since then, multiple values theory and terminology have evolved and advanced considerably (see, for example, Hill et al. 2021, IPBES undated, Pascual et al. 2021). There have been increasing calls for a much broader uptake and application, outside of academic and research arenas, and beyond the work of IPBES alone. Multiple values concepts are now gradually beginning to enter into mainstream development thinking and discourse (see, for example, González-Jiménez et al. 2018, Kaphengst and Gersetetter 2015, Wittmer et al. 2021). As yet, there has however been very little uptake of the concepts at a practical level, in the context of on-the-ground development policy, planning and practice.

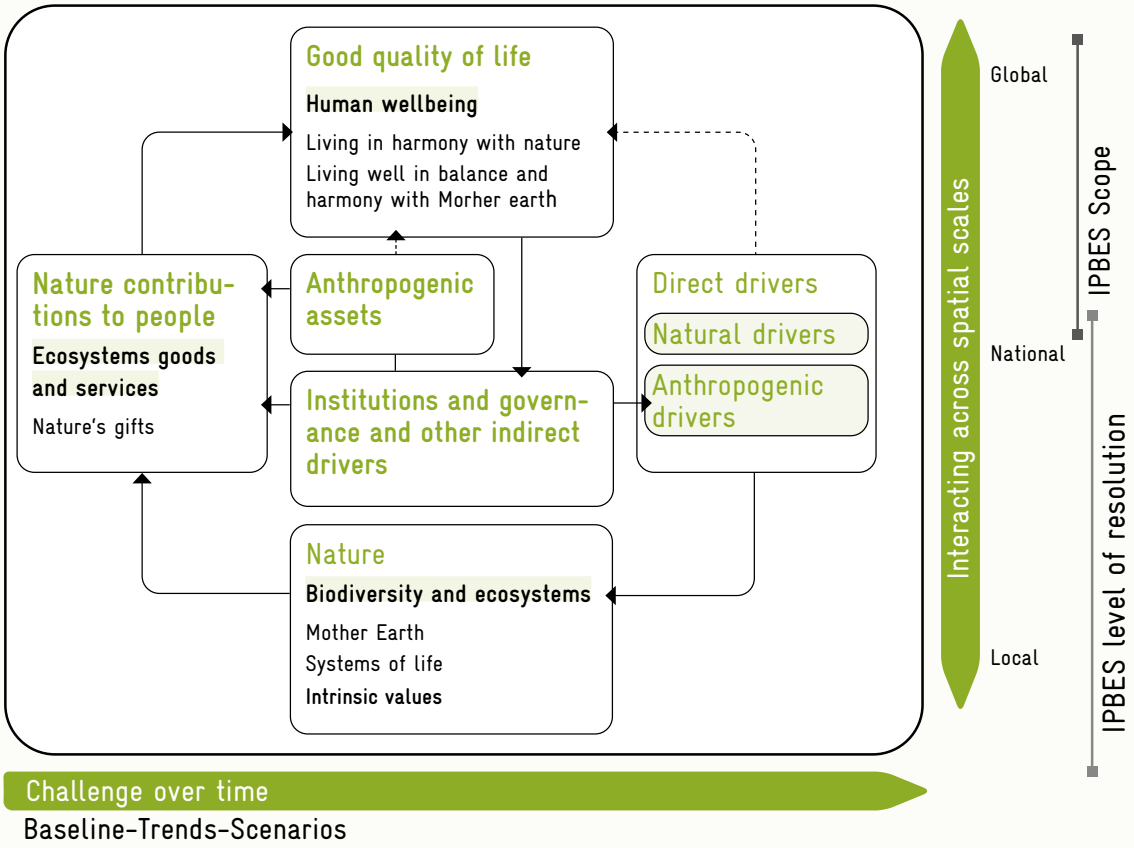
BOX 3

The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES)

IPBES was established in 2012 as an independent intergovernmental body mandated to strengthen the science-policy interface on biodiversity and ecosystem services for the conservation and sustainable use of biodiversity, long-term human well-being and sustainable development. The main focus is on multilateral environmental agreements related to biodiversity and ecosystem services, especially the Convention on Biological Diversity. IPBES currently has almost 140 Member States, and is hosted by a Secretariat headquartered in Bonn, Germany.

An underlying conceptual framework was adopted in 2013 to support and guide the work of IPBES. It presents a simplified model of the complex interactions between the natural world and human societies.

The conceptual framework identifies six interlinked elements that together constitute a social-ecological system that operates at various scales across time and space: nature, nature's contributions to people, anthropogenic assets, institutions and governance systems and other indirect drivers of change, direct drivers of change, and good quality of life. Together, these constitute the main elements and relationships for the conservation and sustainable use of biodiversity and ecosystem services, human well-being and sustainable development.



From ↳ https://www.ipbes.net/conceptual-framework; Díaz et al. 2015

3.2
NATURE'S CONTRIBUTIONS TO PEOPLE

According to the IPBES conceptual framework, **"nature"** refers to the natural world, with an emphasis on biodiversity. In the scientific context, it includes categories such as biodiversity, ecosystems, ecosystem functioning, evolution, the biosphere, humankind's shared evolutionary heritage, and biocultural diversity. Within other knowledge systems, it includes categories such as Mother Earth and Systems of Life.

One early, and important, advance in thinking was the introduction of the expression "nature's benefits to people", now rephrased as **"nature's contributions to people"** (Díaz et al. 2015). It was formally adopted by IPBES in 2017, since when it has continued to evolve and be refined. The concept represents something of a break with earlier formulations such as "environmental values", "biodiversity benefits" and "ecosystem services", which were argued to be overly-dominated by knowledge from the natural sciences and economics, as well as disproportionately favouring anthropogenic worldviews. In contrast, nature's contributions to people offers a much more inclusive and pluralistic perspective, reflecting "all the contributions, both positive and negative, of living nature… to the quality of life for people" so as to "embrace a fuller and more symmetric consideration of diverse stakeholders and world views" (IPBES 2019).

The shift in terminology is closely intertwined with the multiple values concept. Nature's contributions to people is formulated to include values like responsibility, reciprocity and respect for nature, and to incorporate "other knowledge systems that conceive people as part of nature, such as those of Indigenous Peoples and local communities" (IPBES 2022). It also allows for the fact that many of nature's contributions to people "may be perceived as benefits or detriments depending on the cultural, temporal or spatial context" (Díaz et al. 2018). These concepts and expressions are much wider than those allowed for in typologies such as ecosystem services. **Box 4** presents a case study example of the local population's wide-ranging perceptions of nature's contribution to people in a mountain region of rural France, and shows how these are tied to the idea that benefits and services are co-produced through human interactions with nature.

BOX 4

Perceptions of nature's contributions to people in a mountain region of rural France

Pays de la Meije is a remote valley, located in the French Alps. The economy revolves around traditional livestock farming systems based on fodder self-sufficiency and summer transhumance, and there is a thriving tourism sector founded on mountain sports, and the local

culture, food and landscape. Against this backdrop, people identify many different links between nature, quality of life and the socio-ecological system. Three particular dimensions were emphasised. One is 'rurality', and the maintenance of traditional ways of life and agricultural practices such as mowing and grazing. The second is 'habitability', encompassing people's attachment to the wild landscape and natural and cultural heritage through activities such as agriculture and mountain outdoor activities. 'Attractiveness' is linked to the importance of tourism, requiring the area to be appealing and interesting to visitors.opment. The main focus is on multilateral environmental agreements related to biodiversity and ecosystem services, especially the Convention on Biological Diversity. IPBES currently has almost 140 Member States, and is hosted by a Secretariat headquartered in Bonn, Germany.

In turn, villagers perceive that nature makes multiple contributions to their daily life, economic activities and wellbeing. Non-material contributions include experiences of nature through tourism and leisure activities, and the strong sense of place and social cohesion that is closely linked to the heritage of mountain culture. Material contributions are centred around fodder, pasture, crops, and the foods obtained from meat, dairy products, honey and gardening. Interestingly, villagers assign a much lesser priority to services such as disaster risk reduction of floods, rock falls, avalanches, landslides and erosion, and to air and water quality.

People also recognise the many different ways in which human-nature interactions serve to co-produce benefits and services. One area of interaction is landscape and ecosystem management practices in forests, pastures and other areas. Another concerns actions to access and receive the benefits of nature, such as by harvesting natural products, mowing pastures, visiting a scenic place, or building infrastructure to abstract and transport water. Co-production is also recognised to result from people's appreciation and experiences of nature. Examples include enjoying a beautiful landscape, buying dairy products, or being grateful for the ways in which nature protects against risk.

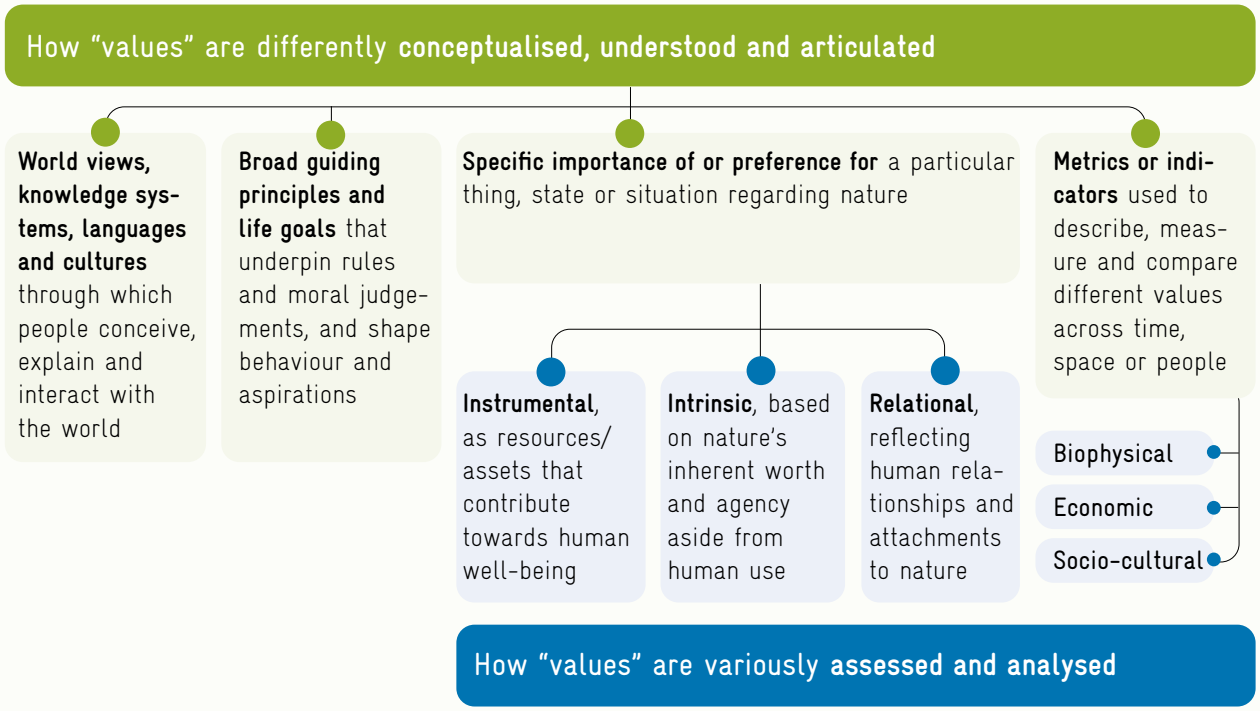
From Bruley et al. 2021

3.3
VARYING EXPRESSIONS OF VALUE

The 2022 IPBES Values Assessment systematises these efforts to understand the ways in which the value of nature's contributions to people are variously understood and measured by different people, in different places, times and contexts. It introduces a typology that seeks to explain and categorise the multiple dimensions of people's relationships with nature that reflect their different worldviews (↳ Figure 3). A fundamen-

tal feature of the typology is the recognition that the word **"value" has many different meanings**, depending on context. It may refer to a person's worldview or knowledge system, their broad principles and beliefs, specific needs and preferences, or to the metrics or indicators used to describe, measure and compare values. Any or all of these expressions of value may apply for a particular person, or in a given context.

FIGURE 3: Typology of nature's values



Adapted from IPBES 2015, 2022.

Specific values reflect different people's opinions or judgements of the importance or preference attached to nature in a given context or situation. These span three main categories: instrumental, intrinsic and relational (↳ Box 5). These are not mutually exclusive, and often overlap. For example, even for the same person or within one community, trees may simultaneously be imbued with instrumental value (for food, firewood or construction materials), relational value (having a place in the village landscape, totemic significance or being the focus of collective ritual and protection activities) and intrinsic value (having a character and right to exist).

BOX 5

Categorising the specific values that people attach to nature

Instrumental values refer to the use of nature and its components as a means to an end, usually in support of economic goals or other aspects of human wellbeing ("living from nature"). Examples include the nutritional, medicinal or income-earning properties of natural products, or the regulation of waterflow and quality for downstream users.

Intrinsic values ascribe an inherent worth and right to exist for nature as an end in itself, regardless of human uses and interests ("living with nature").

Relational values are associated with people's links to and interactions with nature, and the relationships they form within themselves and with others through nature ("living in nature" and "living as nature"). Examples include a personal or social attachment or bond to a particular landscape, plant or animal species, or the mobilisation of collective actions to honour, manage or protect culturally or spiritually significant sites.

From https://www.ipbes.net/conceptual-framework; Díaz et al. 2015

These varying interpretations of nature's contributions to people are also associated with widely-differing relationships and approaches to the way in which people govern, manage and use the socio-ecological systems within which they operate. The IPBES value assessment suggests four general **life frames** that can be used by decision-makers to understand and organise the various ways in which nature matters to people, and how different sets of broad and specific values are prioritised: living from, with, in and as nature (**Box 6**).

BOX 6

Life frames to understand and organise the various ways in which nature matters to people

Living from nature sees nature as a resource that contributes to, and provides conditions for, human sustenance and prosperity.

Living with nature sees nature as non-human, with its own interests, ecological processes or wild spaces, emphasizing stewardship and responsibility towards nature.

Living in nature considers nature as land and landscapes, emphasizing belonging and place identity.

Living as nature poses no separation between humans and nature – people are understood to be connected to nature physically, mentally or spiritually, and there is an emphasis on interdependence and reciprocity.

From IPBES 2022

3.4

PROMOTING A PLURALISTIC APPROACH TO VALUING NATURE'S BENEFITS

The diverse conceptualisations and multiple values of nature and its benefits **always need to be acknowledged**, as does the inevitable divergence – and even conflict – that may sometimes arise between different people's worldviews and values. On the one hand, this kind of understanding is required to make fully-informed decisions that are in the best public interest. At the same time, it is essential in order to ensure that development processes and other interactions are fair, equitable and inclusive, and that nobody's needs or interests are left out.

There has long been a tendency to concentrate on only a narrow set of values, and thus interests. Neither development planners nor the scientific community have traditionally adopted a **pluralistic approach to valuing nature's benefits** (one that considers and makes visible a wide diversity of world views). For the most part, the focus has been on utilitarian and market-based approaches that favour instrumental values and "living from nature" life frames. For example, the dominant development paradigm remains one that emphasises economic growth, industrialisation, commercialisation and privatisation. It has underrepresented (or ignored altogether) non-economic values, cultural and spiritual benefits, and the intrinsic or inherent significance of nature – and, as a result, has sidelined or even undermined the needs, interests and quality of life of the groups that prioritise or depend on these values the most.

In many cases this narrow perspective of the value of nature has served to perpetuate, or even exacerbate, **social and economic power asymmetries** between different stakeholders. How values are expressed and prioritised reflects the governance frameworks that are in place in a particular place or situation. These are often neither representative nor inclusive of broader social norms and preferences. It remains a particular concern that the values, worldviews and needs of already-marginalised or vulnerable groups, especially Indigenous Peoples and local communities, have persistently been underemphasised (or even ignored altogether) in mainstream conservation and development decision-making. Making efforts to better articulate these values can provide a powerful tool for tackling such imbalances, and promoting more inclusive approaches to development. ↳ Box 7 provides a case study example of how plural valuation was used to advocate and negotiate for more equitable and sustainable outcomes in a large-scale land acquisition project in Tanzania.

BOX 7

Plural valuation to advocate for community needs in a land acquisition project in Tanzania

A long-term lease for more than 20,000 hectares of land in Tanzania's Bagamoyo District has been granted to a company to produce sugar, ethanol and bioenergy. This occupies a former cattle ranch now used by smallholder farmers, charcoal producers, and pastoralists, and also includes surrounding villagers' land. Almost 1,500 people are affected, either by being resettled elsewhere or by losing access to land and resources that are vital to their livelihoods.

Sociocultural valuation approaches were applied to assess the diverse values of the land for affected communities. This underlined the wide range ways in which nature holds local value, and contribute to people's wellbeing. As well as instrumental values such as food, firewood, pasture and water, these include other life-sustaining values such as identity and something to pass on to future generations. In addition, access to land and nature catalyse wellbeing, social inclusion and safety. For example, relaxing and telling stories by the riverside is seen as a way to reduce stress and build a sense of community, weeding and cleaning the riverbanks brings villagers together and promotes a sense of community, and women feel safe when they work together on farms and support each other.

A wide range of educational values are also linked to people's direct contact and experience with nature. Examples include knowledge sharing about protecting plants and animals, natural control of pests and diseases, and the use of grain stalks and small weirs for water conservation and flood control. Land and nature also support many different cultural values, such as heritage and history, spiritual and religious significance, place-based and aesthetic aspects. For example, shrine visits and animal sacrifices offer peace and wisdom, performing rites of passage and initiation rituals binds people together and reinforces the idea of community, while special dresses, ornamentation, and music are symbolic elements defining and sustaining village identity and origin. In turn, traditional ecological knowledge and practices have emerged which serve to safeguard these values and maintain the all-important identify and sense of place of the local community. These include taboos, customs and rituals, protected sites and species, and techniques for the active management and conservation of land, nature and natural resources.

Local values had not been considered when the large-scale land acquisition project was planned. Instead, the focus was on maximising market returns and instrumental values. Investors' perception of land as a commodity for market production is contrary to the local community's worldview and the concept of multiple values. The plural approach to valuation provided important information to put local people's needs and interests onto the decision-making agenda, and highlight the possible costs and trade-offs resulting from the land acquisition project. It also offered a negotiation tool to foster dialogue between different groups to bridge communication gaps, reconcile land conflicts and safeguard important local values and livelihood needs.

From Nkansah-Dwamena 2021

3.5
KNOWLEDGE WEAVING AND CO-CREATION

The concepts of knowledge co-creation and weaving are a fundamental part of multiple values approaches, and of the IPBES Values Assessment. These replace more traditional, top-down research and data generation techniques. The key principle is that, in order to adequately represent and articulate diverse worldviews and multiple values, **all relevant stakeholders and value-holders should be identified, and included in the process of conceptualising, gathering and sharing knowledge**. It is also necessary to recognise that many different knowledge systems exist, which give rise to different conceptualisations of the value of nature and its benefits.

Knowledge co-creation (sometimes also termed knowledge co-production) involves a collaborative process between actors, which aims to increase mutual trust, foster inclusivity and diversity, integrate different knowledge and norms, and create insights and solutions that would not otherwise have been reached (Šucha and Sienkiewicz 2020, Utter et al. 2021, Wyborn et al. 2019). Building on this, knowledge weaving refers to efforts to bring together multiple ways of knowing in a respectful way, that maintains the integrity of each knowledge system (Korhonen-Kurki et al. 2022, Tengö et al. 2017). The focus is on **respecting and connecting diverse perspectives and worldviews**, rather than on reconciling or merging them, emphasising the interaction between different knowledge claims rather than their deep integration.

As such, knowledge co-creation and weaving are more **social and political processes** than academic ones. The emphasis is on brokering different knowledge systems and crossing the boundaries that traditionally exist between different groups and disciplines (see Rodela et al. 2015, Reinecke 2015). This can range from closing the "science-policy" gap, promoting interdisciplinary collaboration, through to establishing inter-sectoral, multi-institutional or cross-cultural learning processes. In the contract of multiple values there is a particular concern with bringing indigenous and local knowledge systems together with scientific knowledge systems, and establishing collective processes of joint learning and information exchange.

3.6

LEVERAGING TRANSFORMATIVE CHANGE TO MORE SUSTAINABLE AND JUST FUTURES

The 2022 IPBES Values Assessment lays great emphasis on the role of pluralistic valuation, knowledge co-creation and weaving in **leveraging transformative change** towards more sustainable and just futures. Transformative change is defined as "a fundamental, system-wide reorganization across technological, economic and social factors, including paradigms, goals and values, needed for the conservation and sustainable use of biodiversity, good quality of life and sustainable development" (IPBES 2019). In other words, it refers to the need to address the values, goals, decisions, practices and institutions that create the conditions for nature to be used, managed and affected in particular ways.

The target of transformative change is to achieve "more sustainable and just futures". Just as people's visions and scenarios of the future and their understandings of **sustainability** are diverse, and rooted in different cultural contexts, so there is a need to consider various dimensions of what is **just**. The concept of **justice** refers to the fair treatment of people – as well as duties or responsibilities to other components of nature. Three types of justice and equity are distinguished in the IPBES Values Assessment. Distributional justice relates to the equitable distribution of benefits derived from nature. Procedural justice concerns the fair inclusion of all stakeholders in decision-making processes. Recognitional justice relating to the diverse ways of knowing and valuing nature involves acknowledging and respecting different people's values, their rights to their traditions and cultural diversity, including the different ways they relate to nature. Transformative change requires that all of these dimensions are recognised and addressed.

Leading on from this, four sets of **complementary strategies or leverage points** relating to multiple values are suggested as being required to stimulate the type of transformative change needed to move towards more just and sustainable futures. The first is to **adequately recognise the values of nature**, by undertaking valuation and making its results explicit in policy decisions. The second is to **meaningfully include the diverse values of nature in decisions**, by embedding valuation into inclusive decision-making processes. The third strategy requires institutional change based on **reformulating policy and regulations to consider nature's diverse values**. The fourth involves **shifting the personal and societal goals and norms that underpin how people relate to nature** and to each other in more just and sustainable ways.

These four strategies form the basis of the integration framework that is described in this guide. The aim is to facilitate a development planning process that will activate these leverage points, and help to leverage transformative change.

4.

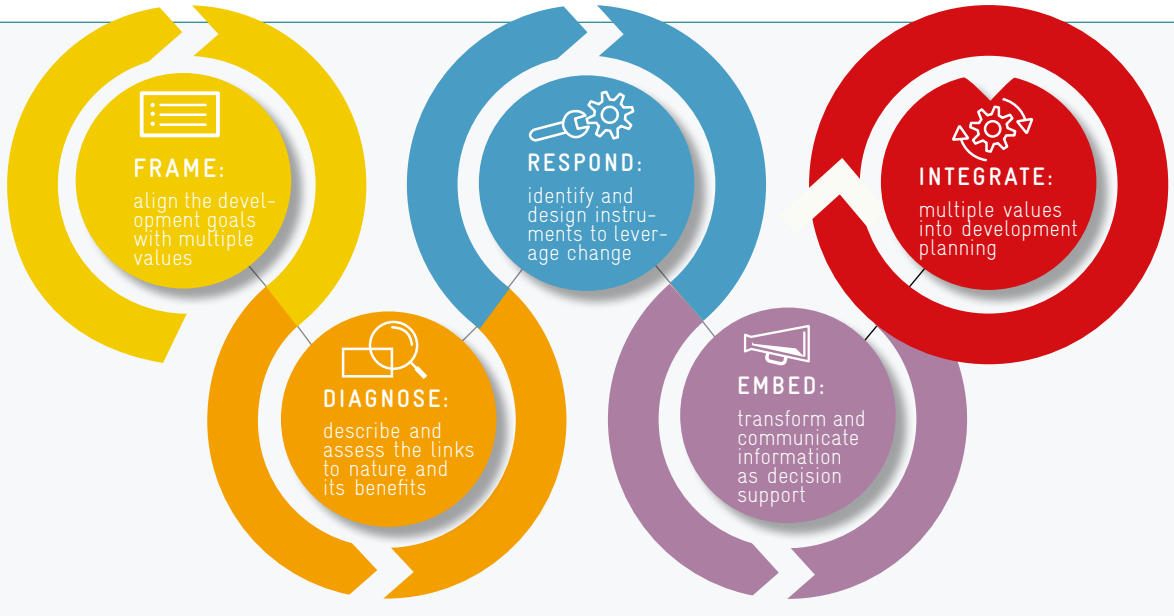
THE INTEGRATION PROCESS: key stages, principles and practical considerations

4.1 OVERVIEW OF THE FRAMEWORK FOR INTEGRATION

A strategic and systematic approach is required to operationalise the multiple values concept in development planning (Figure 4). This involves four key elements or stages:

- **FRAME:** screening and aligning the development goals with diverse conceptualisations and multiple values, and the plurality of institutional and cultural contexts that give rise to these (↳ chapter 5);
- **DIAGNOSE:** describing and assessing the ways in which development challenges and needs depend, impact and are shaped by the multiple values of nature and its benefits (↳ chapter 6);
- **RESPOND:** identifying and designing practical and policy instruments with which to motivate the behavioural changes and set in place the enabling conditions that are required to integrate multiple values and leverage transformative change (↳ chapter 7); and
- **EMBED:** transforming data and recommendations into clear and compelling information, evidence and advice to support decision-making, communicating this effectively to decision-makers and other stakeholders in the development process, and building their engagement and capacities to deliver change (т chapter 8).

Figure 4: The framework for integrating multiple values into development planning

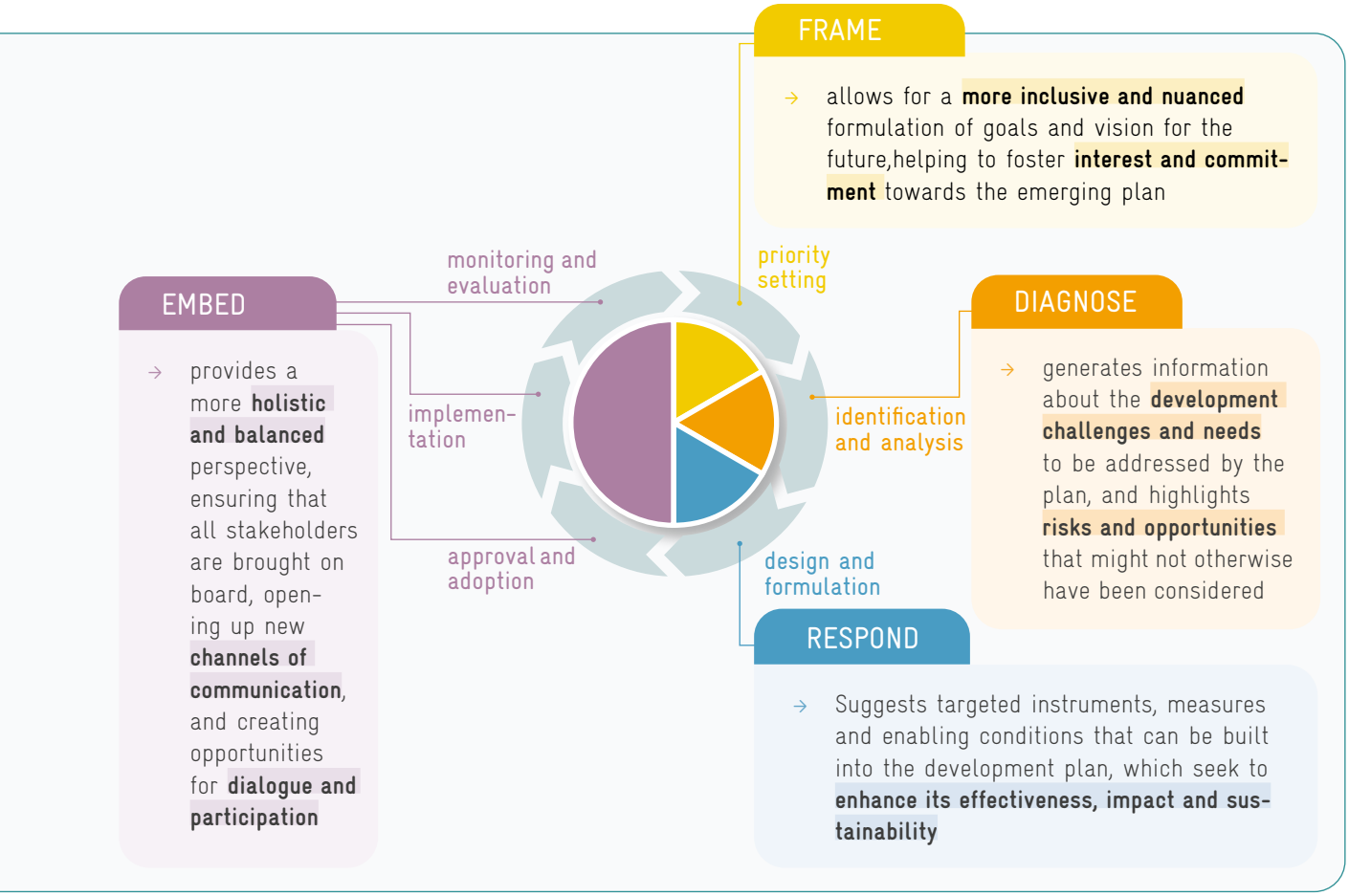


4.2

INTEGRATING MULTIPLE VALUES INTO THE DEVELOPMENT PLANNING CYCLE

The concept of multiple values is relevant to all stages of development planning – from the initial priority setting, through identification and analysis of the development challenges and needs, design and formulation of the development plan itself, its approval and adoption, implementation, to efforts to monitor and evaluate its performance and impacts (**Figure 5**). It follows that the integration framework can be introduced and used at any point in the development planning cycle. As mentioned above, one or more of its component elements may have particular relevance or usefulness to a particular development planning context, sector, or situation. However, it will yield the most comprehensive and consistent results if applied iteratively and in its entirety, as each stage of the planning cycle is carried out.

Figure 5: Integrating multiple values into the development planning cycle



At the beginning of the development planning process, the **framing stage** of the integration framework provides direct input into priority setting, and helps to define the development goals and vision of the future. A key aim is to ensure that as broad a range of values and stakeholder interests are taken into account, and that the diversity of nature's contributions to people is considered – and wherever possible is explicitly included as a development priority. Ensuring that the development planning process is properly framed regarding diverse conceptualisations and multiple values can also help to foster interest and commitment from a much broader range of stakeholders. It increases the likelihood that the development goals and vision for the future are "co-owned" by all participants, that the plan will be perceived to be meaningful, and that people believe that their needs and interests have been taken into account.

The **diagnosis stage** then generates information to feed into the identification and analysis of the development challenges and needs that are to be addressed, as well as the means by which this will be done. This typically involves describing and assessing the diversity of nature's benefits, and providing information on the institutional and sociocultural contexts within which different stakeholders form these values. As well as making sure that nature-related dependencies and impacts are considered when development interventions and investments are planned, this stage of the integration framework identifies how different values and value-holders stand to be affected out under future development scenarios. It highlights nature-related risks and opportunities, as well as gainers, losers, potential trade-offs and conflicts of interest that might not otherwise have been considered.

Following on from this, the **response stage** suggests a variety of targeted instruments that can be built into the development plan, which seek to enhance its effectiveness, impact and sustainability by ensuring that multiple values are addressed. These aim to stimulate the behavioural change and set in place the enabling conditions with which to reduce the risks and capture the opportunities associated with nature's benefits, and with multiple values. The intention is to ensure that all relevant values and value-holders are considered and wherever possible benefited by the development process, and that no group's quality of life or wellbeing is negatively impacted.

Finally, the **embedding stage** feeds into the approval, adoption, implementation, monitoring and evaluation of the development plan. By managing relevant information, communications, engagement and capacities relating to multiple values, it seeks to ensure that a holistic and balanced perspective is maintained. As well as informing and guiding decision-making, it ensures that all stakeholders are brought on board and engaged in the development process, and that their diverse worldviews and multiple values are adequately represented. It serves to open up new channels of communication and opportunities for dialogue and participation, especially by including groups that have not traditionally been included or had a voice in development planning and implementation.

4.3

APPLYING THE FRAMEWORK AT AN OPERATIONAL LEVEL

The framework for integration can easily **be incorporated into the development planning cycle, or run alongside it**. However, as the emphasis is on integration, it is always preferable to consider multiple values together with other elements of development planning, rather than deal with the topic separately. Integrating multiple values is not a standalone undertaking and should not demand a parallel planning process, but rather introduces a new perspective and dimension to what is already being considered in the development plan.

Incorporating these additional layers of investigation, analysis and stakeholder engagement often requires extra time, budget and material support. However, making efforts to integrate multiple values **need not (and should not) be an expensive or difficult exercise**. The time and cost required to apply the integration framework will of course vary, depending on the topics and issues addressed, the development process in which it is embedded, and the size, breadth and complexity of the socio-cultural and biophysical dimensions involved. The integration framework applied should always be tailored to the resources and capacities available to the development planning agency, and to the broader process being followed.

While no specific training is required to integrate multiple values into development planning, it is **necessary to ensure that the planning team has the requisite skills and experience** to understand and apply the concepts involved. This does not necessarily mean engaging additional team members, but rather thinking carefully about what the composition of the team should be. Integrating multiple values often involves bringing in skill-sets that would not traditionally be used in development planning – for example anthropologists, ethnobotanists, ecosystem valuation experts, or people with specific language and fieldwork experience. It may also involve other members of the team making efforts to inform themselves about multiple values concepts and approaches.

The importance of **participation and inclusivity** cannot be overemphasised. Taking multiple values on board does not just involve accessing new information and adding new perspectives. It also means managing and carrying out development planning in a way that better respects and reflects people's diverse worldviews and multiple values. This always broadens considerably the requirement for direct stakeholder engagement and participation in planning, knowledge generation, analysis and reporting. The need for inclusivity and active engagement often broadens considerably the range of people that need to be involved and participate in the development planning process. The aim is to ensure that efforts to represent and articulate diverse worldviews and multiple

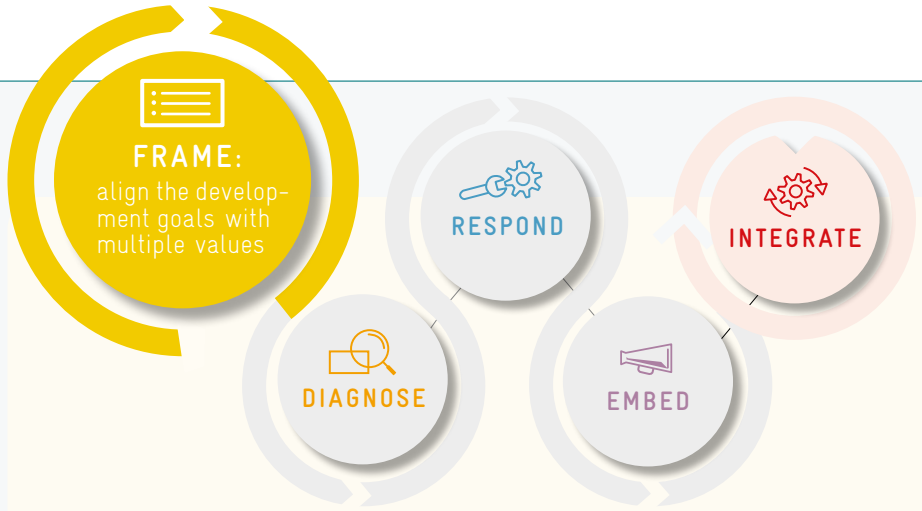
values do not remain at a purely theoretical level, but is carried through into how the development planning process itself is carried out.

It is important to underline that incorporating these information needs and process elements into the development planning process does not automatically mean that there is a need to employ a large number of additional staff or consultants. To the contrary, it often means **supplementing or replacing external 'experts' with local participants and knowledge-holders** who have specialist knowledge and lived experience in managing, using and valuing nature, and/or will be directly impacted or involved in the development plan. It is worth noting that this is often a far cheaper and more cost-effective way to carry out development planning than the traditional reliance on external experts and consultants – as well as providing more accurate information and insights.

The integration framework is generally **much more straightforward to operationalise at the smaller-scale, or in contexts where there is a specific spatial or thematic focus** for the development plan. A slightly different approach may be required at the larger-scale, in national or regional planning processes. Here, it is important to consider carefully how to balance the need for representation and inclusion with practical considerations such as time and resource availability. There are also obvious practical constraints to involving each and every stakeholder directly in a large-scale process that spans many different sectors, areas and issues. Dealing with very large, diverse or dispersed stakeholder groups may, for example, demand using tools that can easily and cheaply mobilise mass participation, such as online meetings, web-based surveys and questionnaires, or social media. Alternatively, it may be necessary to prioritise certain groups for direct engagement in the planning process, for example those that are most immediately or greatly impacted by the development process, have the greatest potential to influence it, are particularly vulnerable in social, economic or political terms, or who would otherwise run the risk of being excluded.

5.

FRAME: aligning development goals with diverse conceptualisations and multiple values



- Do the development **goals and vision for the future** consider nature's contributions to people?
- **Which** values of nature are targeted?
- **Whose** values of nature are prioritised?
- Are particular values and value-holders **underemphasised or omitted**?
- Can the development goals be **better aligned** with the multiplicity of nature's values and diversity of value-holders?

Figure 6: Guiding questions to be addressed during the framing stage

5.1

HOW DO MULTIPLE VALUES LINK TO THIS STAGE OF DEVELOPMENT PLANNING?

The framing stage involves screening the development goals, thinking about what these seek to achieve and for whom, and determining whether there are needs or opportunities to better incorporate diverse conceptualisations and multiple values. It should take place at the beginning of the planning process, when the development priorities and objectives are first being set.

The key aim is to ensure that as broad as possible a range of values and stakeholder interests relating to nature's contributions to people is taken into account in the development plan. Not only should this result in better-targeted and more effective projects and activities, but it can also play a vital role in fostering people's support and commitment to the development process. It increases the likelihood that stakeholders will

perceive the development plan to be meaningful, beneficial, and that their needs and interests have been taken into account.

By the end of this stage, the development goals and priorities should be better aligned with multiplicity of nature's values and value-holders. In other words, the development objectives should take nature's contributions to people into account, and ensure that key values and value-holders are considered. In addition, a working list of the key values and value-holders of nature should have been prepared. This will be further expanded and elaborated during the course of the integration process. It serves as a reference point to ensure that all affected stakeholders are adequately considered as the integration process advances, and to guide how these groups should be engaged and participate in it.

The questions outlined in **section 5.2** below are designed to guide the process of screening the development goals in relation to multiple values and value-holders. The ways in which the information required to answer these questions can be generated are then described in ↳ section 5.3.

5.2 WHICH QUESTIONS NEED TO BE ASKED WHEN SCREENING THE DEVELOPMENT GOALS?

DO THE DEVELOPMENT GOALS AND VISION FOR THE FUTURE CONSIDER NATURE'S CONTRIBUTIONS TO PEOPLE?

It is first of all necessary to establish whether the priorities and vision for the future that are articulated in the development plan explicitly consider nature's contributions to people.

Nature-related values will often already be a central part of the development goals, or of the project alternatives that are under consideration. For example, forest conservation or sustainable land management projects are likely to prioritise nature, and seek to develop or secure certain values as a key goal. In other cases, there may be no

direct mention of nature, for example when planning for road infrastructure expansion, climate adaptation, disaster risk reduction, or rural income diversification.

It should be noted that, just because the development goals do not mention nature, does not mean that it has no bearing on the development plan. This will be investigated in the subsequent questions. The point is to establish whether or not the value of nature has already been recognised and factored into the core development goals.

Asking this question should result in a simple "yes" or "no".

WHICH VALUES OF NATURE ARE TARGETED?

If the answer is "yes", then the nature-related development goals should be clearly identified, and linked to the underlying values. For example, sustainable land management efforts may be directly concerned with increasing crop yields, restoring soil fertility, or protecting key watersheds, so as to safeguard downstream waterflow and water quality. The main goal of forest conservation activities may be climate mitigation and the preservation of rare and endangered habitats and species.

If the answer is "no", then the development goals should be screened in order to identify whether there are in fact any links to nature and multiple values. This can be accomplished through answering the question below: "are particular values and value-holders underemphasised or omitted?".

WHOSE VALUES OF NATURE ARE PRIORITISED?

It is important to understand whose values of nature are being prioritised in relation to the development goals. Even at this early stage of priority-setting, there will almost always be a very clear idea of the intended beneficiaries and main participants in the development process. For instance, sustainable land management activities may seek to improve farm output, income and employment, increase farmers' ability to adapt to climate change, at the same time as leveraging benefits for downstream water users. The forest conservation project might, in contrast, be primarily concerned with securing global conservation and climate values, and working to build the capacity of government authorities to strengthen protected area management effectiveness and law enforcement.

ARE PARTICULAR VALUES AND VALUE-HOLDERS UNDEREMPHASISED OR OMITTED?

The question of whether particular values or value-holders have been under-emphasised, or even left out altogether, is an important one. This is relevant whether or not the development plan is directly concerned with nature's contributions to people.

As described above in ↳ chapters 2 and ↳ 3, instrumental benefits and market values are often over-emphasised, at the cost of relational, intrinsic and other non-material values. It is also frequently the case that the perspective of more marginalised groups such as local communities and Indigenous Peoples may have been left out. Particular attention should be paid to these values and value-holders. For example, it may become clear that sustainable land management planning has omitted to factor in key non-market agricultural values that are important to farmers and to climate adaptation (such as household nutrition, seasonal risk reduction, or the interface between cultivated and wild foods). It may also have paid insufficient attention to land users other than settled farmers that also depend on the same landscape (such as pastoralists, hunters and gatherers). By prioritising global benefits, forest conservation planning may have omitted to consider the cultural and spiritual values of the forest for the Indigenous Peoples who live in or around it, as well as their subsistence needs, land rights and customary (forest) management practices.

It is equally important to consider whether any values and value-holders have been left out in cases where the development plan is not directly concerned with nature's contributions to people. It may be the case that certain values of nature will be impacted by the goals and priorities articulated in the development plan, or could potentially play a role in supporting it. For example, efforts to develop and extend the road network might have overlooked local communities' relationship and attachment to the natural landscape, and the non-material values attached to this. Meanwhile, efforts to reduce disaster risk and build climate resilience through built infrastructure and technologies may disregard the key role that ecosystem services play in protecting against the effects of extreme weather events such as droughts, floods and storms – especially for poorer households that lack access to formal services and infrastructure.

CAN THE DEVELOPMENT GOALS BE BETTER ALIGNED WITH THE MULTIPLICITY OF NATURE'S VALUES AND DIVERSITY OF VALUE-HOLDERS?

It should now be possible to determine whether – and how – the development plan might be better aligned with multiple values. Very often, this just involves reformulat-

ing or reprioritising the goals to better reflect nature's contributions to people and to be more inclusive in terms of which values and value-holders are considered. For example, it may be possible to incorporate disaster risk reduction and climate adaptation efforts based on green, nature-based and hybrid technologies that are accessible and affordable to local communities. It some cases it may however be necessary to introduce new development goals and beneficiaries. For example, forest conservation goals might need to be broadened out beyond just strengthening protected areas to secure climate mitigation benefits and preserve globally-important species and habitats, to also incorporate landscape conservation for multiple uses and benefits, in direct support of local livelihoods and cultural practices.

Sometimes a much broader shift in paradigm is however required, which involves a major reorientation of the development plan. Many (if not most) development plans have traditionally been founded on market-based models, which may not be universally valid or appropriate in all situations and for all stakeholders – and, in most cases, are ill-equipped to deal with the multiple values of nature. Bringing in multiple values and value-holders may reveal a need to adopt an alternative development model, and to rethink the basic assumptions upon which the development plan is founded. For example, neo-liberal market-based approaches might be adapted to incorporate concepts such as bioeconomy, green growth, circular economy, doughnut economy, earth stewardship and even degrowth. It may also be necessary to incorporate or reflect indigenous and local knowledge-based systems and philosophies of good living that also recognise non-human entities and elements of nature as subjects with rights and duties – as reflected, for example, in concepts such as *Buen Vivir* in South America or *Ubuntu* in sub-Saharan Africa.

5.3 WHAT KINDS OF APPROACHES AND TOOLS CAN BE USED TO SCREEN AND ALIGN THE DEVELOPMENT GOALS?

Coming at the start of the development planning process, the framing stage **should retain a fairly broad focus**. It is concerned with screening the overall development goals and priorities. These may still be in the process of being formulated. It is necessary to identify and list the (potential) key values and value-holders that stand to be positively or negatively affected, signpost any gaps, and indicate how the objectives might be adapted or modified to better reflect the multiple values of nature. The next stage of

the integration process (diagnosis) will look in much more detail at the ways in which development activities depend and impact on specific values and stakeholders. It is that point that the more general information generated during the framing stage will be expanded and elaborated.

The framing stage is very often **carried out largely as a desk exercise**, based on literature reviews and internal meetings between staff in the agency that is putting together the development plan. However, even at this early stage, efforts should be made to incorporate as broad as possible a range of views and inputs. This may, for example, require including anthropologists, ethno-ecologists and/or experts with local field experience in the core planning team or as external advisers, who can introduce multiple values information and perspectives.

Of course it is always preferable to include value-holders in nature and other key stakeholders as key participants. As well as improving the quality and relevance of information, this helps to foster a sense of buy-in or co-ownership over the development process and its intended outcomes. While **broader stakeholder dialogue or input is highly desirable** (as is the case at every stage of the integration process), it is not always a core part of priority-setting. In most cases, the overarching development goals are set by the lead organisation, donor, or at a political level. It is usually only later, during the design and formulation stage, that more detailed consultations, studies and information-gathering exercises are carried out. While this is not always helpful, since the overarching development goals then do not always reflect needs on the ground, this remains a reality in most development planning processes.

It should however be possible, and is certainly advisable, to incorporate some kind of expert meetings, stakeholder discussions or roundtables into the framing stage. Even a fairly limited consultation process allows for a significantly broader perspective and wider buy-in to the development plan than would otherwise have been the case. For example, **Box 8** describes how a process of stakeholder engagement and knowledge co-creation was used to align spatial plans for green infrastructure with ecosystem services in the Basque Country.

BOX 8

Knowledge co-production to align spatial plans with ecosystem services in the Basque Country

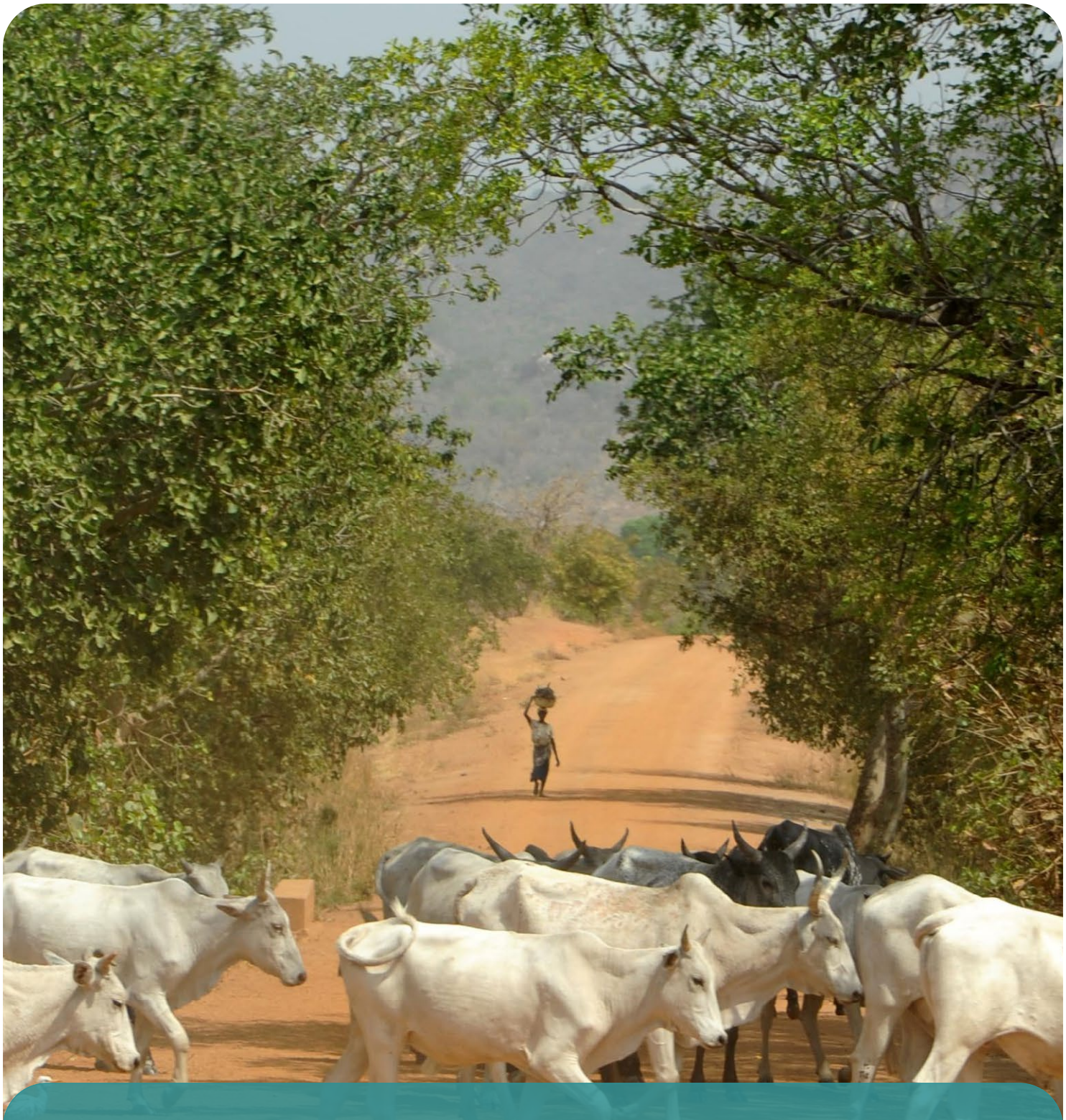
Recognising that sustainable development planning requires a combination of scientific knowledge, social agreements, and political decisions, deliberate efforts were made to integrate nature and natural processes into spatial planning for green infrastructure in the Basque Country. The aim of the spatial planning was to establish a network of natural and semi-natural areas across rural and urban regions, in order to maintain and enhance the delivery of ecosystem services and therefore of ecological, sociological, and psychological benefits to the population.

Transdisciplinary co-production of knowledge was a key tool for achieving this integration. Collaboration and constructive dialogue between different stakeholders and interest groups was achieved through the creation of a community of practice. This was made up of researchers, technical and political staff from the public administrations (Regional Basque Government, provincial councils and local councils), as well as representatives of civil society organisations, associations and businesses.

A series of workshops and meetings were held. Different stakeholders' knowledge about the role of ecosystem services in the Basque Country for human well-being was shared, and the multi-functional areas in the landscape that provide key ecosystem services were mapped. This allowed for the components of the green infrastructure network to be identified and selected, and for different management plans to be proposed and analysed. The resulting information fed into spatial planning actions at various different levels, for example a management plan for Urdaibai Biosphere Reserve and a territorial plan for the Bilbao Metropolitan Area. It was also used to include green infrastructure and ecosystem services in the Renewed Spatial Planning Guidelines of the Basque Country, approved in 2019.

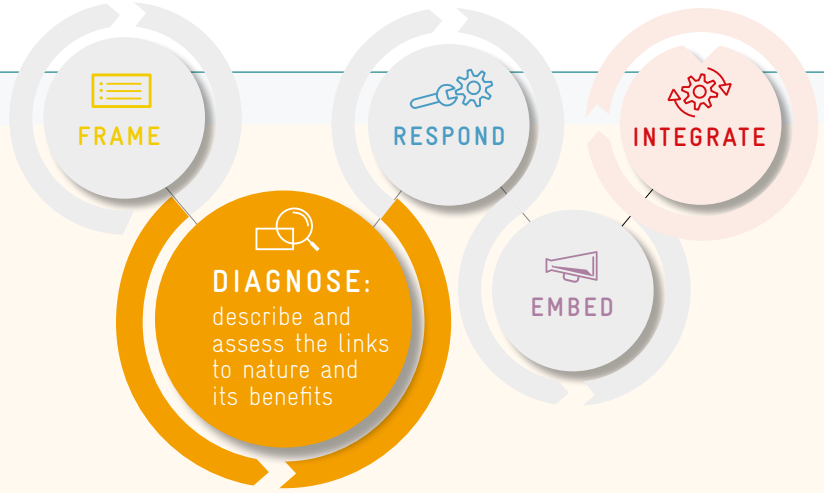
These experiences underline the importance of establishing a constructive and mutually comprehensible dialogue between politicians, the general public, technical experts and scientists. Knowledge co-creation and transdisciplinarity were key, enabling different perspectives to be analysed in relation to a shared goal. Important lessons learned include that, for such efforts to be part of spatial planning, the benefit of nature for human wellbeing has to be taken into account at the beginning of the planning process. In addition, nature and ecosystem services have to already be a priority on the political agenda, and funds must be earmarked in the budget for knowledge co-creation processes as well as for the analysis and communication of the resulting information. There were however some challenges. It was often difficult for landscape managers, politicians and the civil society to understand the language and terms used by scientists and researchers. It was necessary to actively take steps to bridge these communication gaps. Likewise, the adoption of policies and management objectives based on ecosystem services approaches and concepts required not only stakeholder engagement and policy-relevant information, but also a vision and a strong commitment from decision-makers, especially politicians and economic authorities.

From Nkansah-Dwamena 2021



6.

DIAGNOSE: assessing how the plan depends and impacts on multiple values



- How do the development goals **depend and impact** on the multiple values of nature and its benefits?
- How are these linkages **manifested** for different groups, and in different contexts?
- Who stands to **gain or lose out** under future development scenarios?
- Which nature-related **risks, opportunities, trade-offs and divergence of interest** might arise, and need to be addressed in the development plan?

Figure 7: Guiding questions to be addressed during the diagnosis stage

6.1

HOW DO MULTIPLE VALUES LINK TO THIS STAGE OF DEVELOPMENT PLANNING?

The framing stage worked on better aligning the development goals with nature's contributions to people, taking account of stakeholders' different perspectives, needs and interests. **The diagnosis stage** now looks at these linkages in more detail. It describes and assesses how the development plan depends, impacts and is shaped by the multiple values of nature and its benefits, and the diversity of worldviews and plurality of institutional and cultural contexts that give rise to these.

The key aim is to make sure that the full range of nature-related dependencies and impacts are addressed. This includes considering how different values and value-holders may be affected under future development scenarios. It highlights risks and opportunities, as well as gainers, losers, trade-offs and conflicts of interest that might

not otherwise have been considered. All of these have the potential to either strengthen or undermine development outcomes, depending on how they are addressed and managed.

By the end of this stage, there should be a clear idea of the various risks and opportunities that the development plan poses for the multiple values of nature (and vice versa), as well as the trade-offs and divergence of interest that may arise between different values and value-holders. This information will have been incorporated into the working list of key values and value-holders of nature that was started in the framing stage. Unmet needs, gaps and issues that need to be addressed in the development plan will be highlighted for each value and value-holder, for further follow-up in the response stage.

The questions outlined below in **section 6.2** are designed to identify the key information that needs to be generated, in order to analyse the linkages between the development plan and multiple values (and to point to additional issues or challenges that it may need to address). The kinds of methods and techniques that can be applied to assess multiple values and value-holders are then described in ↳ section 6.3.

6.2 WHICH QUESTIONS NEED TO BE ASKED WHEN ANALYSING THE LINKAGES?

HOW DO THE DEVELOPMENT GOALS DEPEND AND IMPACT ON THE MULTIPLE VALUES OF NATURE AND ITS BENEFITS?

Having determined (and in some cases realigned) the main development goals and priorities, it is next necessary to understand in more detail how these link to multiple values.

On the one hand, the development plan may depend heavily on nature and its benefits. Rural income diversification opportunities may, for example, be closely linked to the ways in which people value nature – such as ecotourism, natural products,

wildlife-friendly commodities or payments for ecosystem services. Successful, sustainable and accessible disaster risk reduction and climate adaptation might depend on ecosystem-based approaches that harness nature's capacity to provide physical protection against storms and floods, and offer livelihood alternatives in times of stress and shock. The relational values inherent in community-led actions to manage natural sites and services may be a key factor in efforts to conserve forest habitats and species, and generate climate mitigation benefits.

The opposite also holds. Development goals may have the potential to impact on particular values or value-holders – positively, negatively, or in different ways at different times and for different groups. By destroying forest, road infrastructure development might run the risk of blocking local access to key resources, disrupting trade routes, and encroaching on traditional transhumance grazing patterns. In contrast, efforts to conserve forests for climate mitigation and species protection may have been realigned to also support and enhance local-level resource access and rights, non-material and cultural values, as well the broader sense of place of forest-dwelling communities. However, securing these values for local communities may in turn preclude other forest uses, such as commercial timber production, mass tourism, or livestock grazing. Equally, some of the envisaged development activities may not be appropriate to the local context, or consistent with the way in which people value nature. For example, rural income generation based on developing tourism in sacred sites or landscapes may be in direct conflict to local belief systems and cultural norms.

All of these potential areas of dependence and impact should be clearly identified and described.

HOW ARE THESE LINKAGES MANIFESTED FOR DIFFERENT GROUPS, AND IN DIFFERENT CONTEXTS?

It is also necessary to identify how these dependencies and impacts variously affect and are experienced by different stakeholders, and across space and time. This involves looking at how (and for whom) the value of nature might change as a result of the development plan.

Both quantitative and qualitative information are usually required. For example, sustainable land management activities may have measurable and sometimes monetizable positive impacts on soil fertility, crop yields and cash income for farmers, which can be modelled under different climate change scenarios. Better regulation of waterflow and quality may also lead to quantifiable reductions in siltation, sedimentation and flood-related damages and losses for downstream water users. However, at the same time, shifts in land management practices may not have an unambiguously positive

impact on all land and resource users. Farm households may incur opportunity costs because they lose access to certain products and services. For example, crop residues must be dug back into the land rather than being used as domestic fuel or livestock fodder, land that was formerly cropped might now set aside as fallow or allocated to terraces and other soil and water conservation measures. Different crop mixes and harvesting patterns may also exacerbate seasonal shortages in the supply of food or income, increase requirements for labour, or lead to changes who controls and has access to cash earnings. In many cases, these impacts cannot be quantified, but need to be described in qualitative terms. For example, women may become less (or more) empowered as they lose or gain access to income, or face additional responsibilities to work on-farm which impinge on their other duties and roles.

These impacts may disproportionately affect particular groups. If so, this needs to be recorded and flagged, as it may well give rise to issues that need to be addressed in the development plan. For example, women and children may have to deal with the consequence of reduced food supplies, increased demands for labour, loss of cash earnings, or needs to find alternative sources of fuel and fodder. While sustainable land management practices may overall enhance nature's benefits for crop farmers, changes in land use patterns may have knock-on effects on the values received by other groups. For example, pastoralists who traditionally brought their livestock to graze on riverbanks and cleared fields during the dry season may now lose access to this seasonal pasture. Physical changes in the landscape and the ways in which it is used and managed may also impact on the intrinsic values that lie at the heart of local communities' belief systems, identity or sense of place.

As well as assessing "what" or "how much" are the linkages between multiple values and the development plan, it is also important to ask 'why' natural values arise, and are valued in particular ways by particular groups, at different times, places or situations. The institutional and sociocultural contexts in which people form the values they ascribe to nature and its benefits should be documented and understood. For example, the importance of maintaining local access to forest lands and resources may be tied intimately to people's daily subsistence needs, as well as to much more fundamental cultural practices, belief systems and identities. Maximising crop output or income may not be farmers' primary goal – or the motivating factor for all members of the farming community. Rather, women may have preferences for reducing seasonal risk and fluctuations in food supplies or with maintaining an easily and safely accessible source of fuelwood, reflecting their role and responsibilities in the household. In contrast, men may be more concerned with ensuring that sufficient cash is available at the right time to meet periodic expenditure needs such as school fees or purchase of farm inputs.

WHO STANDS TO GAIN OR LOSE OUT UNDER FUTURE DEVELOPMENT SCENARIOS?

It should now be possible to tease out the nature-related implications of the development plan for different groups.

Using the list of values, value-holders and other affected stakeholders that has been compiled, and referring to the information about development dependencies and impacts, the gainers and losers should be enumerated. Remember that it is rarely the case that any one group unambiguously gains or loses from a particular development scenario. In reality, there are a mixture of positive and negative impacts, advantages and disadvantages that affect even the same group at different times, places or under different circumstances.

WHICH NATURE-RELATED RISKS, OPPORTUNITIES, TRADE-OFFS AND DIVERGENCE OF INTEREST MIGHT ARISE, AND NEED TO BE ADDRESSED IN THE DEVELOPMENT PLAN?

The information and understanding on multiple values that has been built up during the diagnosis stage can now be brought together, so as to identify which nature-related issues need to be further addressed in the development plan. Four areas, in particular, should be investigated: risks, opportunities, trade-offs and divergence of interest.

First of all, it is necessary to see whether the development plan poses a risk to particular values and value-holders. For example, it may have become clear that sustainable land management activities could compromise women's and children's responsibilities and wellbeing. There may also be threats to the livelihoods of livestock herders, especially during the dry season and in times of drought.

Equally, failing to consider particular nature-related values and value-holders may pose a risk to achieving the development goals. For example, unless sustainable land management plans factor in the values of women, children and pastoralists, then there is a danger that any positive income and livelihood gains to crop farmers may be negated or undermined. If some community members are forced to seek alternative sources of fuel, food, income, pasture or earnings, then this might well just serve to increase pressure on scarce resources or fragile lands elsewhere, and counterbalance the soil fertility and watershed protection gains resulting from improved cropland management. As long as certain groups are harmed or displaced by sustainable land management activities, there is also a huge risk that they will not support the development plan, and may even come out in direct conflict or opposition to it.

Next is to consider whether paying greater attention to the multiple values of nature offers opportunities to better achieve the intended development goals that have not so far been considered. For example, the high market demand and price premiums associated with people's preferences for organic food, natural medicines, ecotourism, or other nature-friendly products and ecosystem services may offer new sources of rural income generation. Very often, taking advantage of nature-related opportunities also generates co-benefits, beyond the direct development goal or intended outcome. For example, as well as providing income and employment, supporting nature-based income streams could serve to further respect and safeguard local land and resource rights, management practices and knowledge systems, at the same time as helping to ensure that important relational and intrinsic values are maintained.

The identified risks and opportunities might give rise to trade-offs and divergence of interest between different nature values and value-holders (or, alternatively, synergies and complementarities of interest). These should be identified. For example, sustainable land management efforts that focus only on expanding crop cultivation may preclude other land uses, and lead to conflicts between crop farmers, pastoralists and hunter gatherers. There may also be trade-offs and divergences of value within the farm household – for example between women's and men's needs, values and measures of wellbeing. In other cases there may be the potential to develop synergies between different values and value-holders that can lead to improved development outcomes for a broader set of beneficiaries than was originally intended. For example, developing payments for forest watershed services might bring together the need to increase rural income with local value systems that favour protecting the landscape from being used extractively or converted to other uses.

The information generated during the diagnosis stage should feed into the design of development interventions and investments. For example, it may be necessary to focus on a different set of sustainable land management techniques, adopt a more participatory approach to forest conservation, or relocate the planned road network. This will make sense if the nature-related opportunities and potential synergies of doing so are very great, or if the identified risks, trade-offs and potential conflicts of interest are too high to be acceptable.

In rare cases, it may be possible to modify the development activities so as to completely avoid or overcome any negative impacts on the multiple values of nature, and to fully capture additional nature-related opportunities. However, in most instances, further efforts will still be needed. Unmet risks, opportunities, trade-offs and divergence of interest should be flagged, as these should be addressed by the policy and practical instruments to be developed in the next stage of the integration process.

6.3

WHAT KINDS OF APPROACHES AND TOOLS CAN BE USED TO ASSESS THE MULTIPLE VALUES OF NATURE?

The diagnosis stage **involves collecting and analysing information about the ways in which different people value nature**. This must be planned carefully. First of all it is necessary to determine which values and value-holders need to be investigated, and then to choose the most appropriate methods to do.

There is no standard approach, format or timeframe for collecting information about multiple values. The assessment process varies greatly, depending on the scope and scale of the development plan, the values and value-holders it affects, and the time and resources available to the development planning team. Multiple values assessments range from rapid valuation exercises based on secondary data or expert opinion through to detailed studies that involve the collection of large amounts of new primary data, and engage a wide range of stakeholders. The most important considerations are that the approach should be tailored to fit the purpose of the development plan, appropriate and acceptable to involved stakeholders, and feasible to carry out in budgetary and logistical terms.

Similarly, there are many different methods for describing, measuring, valuing or otherwise assessing the importance that humans attach to nature. The choice between these is not neutral. Each technique reflects a certain worldview and set of priorities, highlights particular values and value-holders, and determines who participates in the study process and in what role. This means that there is no such thing as the "best" method to assess the links between multiple values and the development plan, and that no single indicator of value will be adequate to reflect the needs, perspectives and worldviews of all stakeholders. When assessing multiple values, a pluralistic and inclusive approach is required, that offers opportunities for stakeholder engagement and knowledge co-production. **The key is to ensure that a balance of methods and metrics is used**, that together recognise and represent as fully as possible the multiplicity of values and diversity of conceptualisations that exist in any given situation – at the same time as being fit for purpose in relation to the development planning goals, participants and context.

The sections below describe a **variety of techniques for assessing and valuing nature's benefits**. As valuation methods are continuously evolving and being added to, it is impossible to mention each and every one. The focus is on those that are the most widely-accepted and commonly-used. These can be ranged on a spectrum. At one

pole are methods that are widely used to value biodiversity and ecosystem services, but are not specifically oriented towards assessing multiple values. These are described in the section on "conventional biodiversity and ecosystem service assessment methods". In the middle are those that explicitly seek to engage and incorporate key value-holders and reflect their perceptions and worldviews. These are described in the section on "participatory and stakeholder-based valuation techniques". At the other pole are approaches that are conceptualised and carried out by value-holders themselves, based on their own beliefs, practices and knowledge systems. These are described in the section on "valuation by and for Indigenous Peoples and local communities".

It should be noted that methods that are explicitly geared towards assessing multiple values are still in their infancy. Multiple values assessment is particularly challenging, because it requires a much more integrated approach and broader set of methods than those which are usually applied to biodiversity and ecosystem services. There is a heavy reliance on participatory approaches, methods that are based on participants' own perceptions, measures and indicators of value, and those that are led by local stakeholders. **Box 9** provides a case study example of the methods used by an Indigenous Community in the Philippines to assess the values of nature in their territory. While this drew on already-established biodiversity valuation techniques, these were adapted to the local situation, and the valuation exercise was carried out entirely by members of the local community.

BOX 9

Community self-assessment of the value of nature in Pangasananan Territory of Life, Philippines

Several Indigenous Communities across Southeast Asia have recently initiated studies to assess the value of nature, with the aim of protecting and conserving their Territories of Life. One of the first community valuation exercises was carried out by the Manobo people, who live on the island of Mindanao in the southern Philippines. It aimed to create a record of their territory which could be used to engage other stakeholders, as well as provide a planning tool to be used by the community during its regular assemblies. The Manobo's territory is known as "Pangasananan", named from the root word "pangasan", the act of obtaining food and other need, with the suffix "anan" denoting a place.

For the Manobo people, the Pangasananan is everything they need, providing them with food, shelter, medicines, water, ritual materials and household items, as well as identity. Its destruction is also their downfall. Hence, it is considered to be of paramount importance to protect, conserve and manage Pangasananan to ensure their survival. Since the mid-1950s, the region has faced many threats and incursions from loggers, road developers and immigrants searching for land to cultivate. In 2018, a new threat emerged when 45 % of the territory was declared a Protected Area without the consent of the Manobo – the Tinuy-an Falls Protected Landscape.

Established participatory methods were adapted by the Manobo to assess the multiple values of nature in Pangasananan. These included sketch mapping, participatory 3D models, eco-cultural mapping and participatory GIS. This kind of intelligent combination of participatory techniques and modern technology was seen as a good way of consolidating and recording information, identifying conflicts, and assisting in landscape planning. It also offered an opportunity to engage both indigenous community members and the local government authorities in an ongoing political dialogue that is mutually beneficial.

Mapping enabled the community to define the traditional governance boundaries of their territory. This clarified the responsibilities and jurisdictions of each clan, and also served to improve and strengthened the relationship between the various clans. It also assisted them to work together to more effectively implement their forest management policies and plans. The mapping exercise also helped the Manobo to prove their occupation of the land since time immemorial, and to secure a Certificate of Ancestral Domain Title. Now that the tribe has legal title to the land, many of the conflicts that had arisen with outside groups have ceased. The information is also proving invaluable in guiding locally-led natural resource planning. Because the physical features of the 3D model are immediately recognisable and have been depicted by community members themselves, all members – including elders and those who cannot read – are able to participate in resource planning. It has also been used in resolving community conflicts over resources, most notably water, and in pointing out problem areas and potential solutions to government planners. Finally, the process of documenting the Pangasananan was seen by the Manobo as a way of passing on traditional knowledge and history on nature and culture, as well as communicating this to the outside world.

From Conlu et al. 2022

CONVENTIONAL BIODIVERSITY AND ECOSYSTEM SERVICE ASSESSMENT METHODS

A large body of methods has been built up over the last four decades to describe, assess and measure the value of nature. The IPBES Value Assessment itself devotes more than a hundred pages to this, identifying a list of 50 valuation methods. Techniques for valuing biodiversity and ecosystem services are conventionally classified into five, complementary perspectives: economic, biophysical, socio-cultural, health, and indigenous and local knowledge/holistic (IPBES 2015). The first four of these are described below, while the last – indigenous and local knowledge/holistic methods – are dealt with in the later sections on participatory and stakeholder-based valuation techniques, and valuation by and for Indigenous Peoples and local communities.

- A broad range of methods are used to measure the **economic value** of biodiversity and ecosystem services, including both market and non-market techniques (see, for example, Brander 2013, CBD 2007, Defra 2007, Kumar et al 2010, TEEB

2010). Here, the main emphasis is on looking at people's individual preferences and willingness to pay for goods and services, on the ways in which biodiversity and ecosystem services contribute to other production and consumption processes, and on the value-added (or costs, losses and damages incurred) as a result of changes in the natural environment.

- **Biophysical approaches** assess value by quantifying and measuring underlying physical parameters, looking at the importance of different species, habitats and land cover for nature's condition and functioning. While a number of standards and frameworks to define and categorise nature's services are now widely accepted (see, for example, Carpenter et al. 2009, de Groot et al. 2002, Fisher et al. 2009, Haines-Young and Potschin 2009, Maes et al. 2014), there is a great deal of variation in the methods used to assess biophysical aspects. Ecological, biological, hydrological and other biophysical valuation models and techniques are as numerous and diverse as the goods and services that nature provides, and the underlying features, processes and relationships upon which these depend (Vihervaara et al. 2017).
- **Socio-cultural** methods aim is to value nature and its contributions to people by investigating psychological, historical, cultural, social, ecological and political contexts and conditions, as well as the worldviews and social perceptions that shape people's values. Particular attention is usually paid to non-material values and to the relations and interactions that mediate human interactions with nature (see, for example, Cáceres et al. 2015, Chan et al. 2012, Velasco-Muñoz et al. 2022). Methods span a broad range of disciplines (e.g., anthropology, sociology, philosophy, political and institutional science), some of which have evolved to deal specifically with the ways in which people understand, value and use nature. For example, as ethnobotany and cultural ecology have long sought to incorporate different cultural perspectives, knowledge systems and frames of value. A wide variety of socio-cultural methods are available and used to assess specific values of nature (Santos-Martin et al. 2017), including many of the participatory methods described in the next section. Stakeholder mapping and assessment is widely used to examine how different individuals and groups value and relate to nature, and to analyse their relative interests and influence over decision-making (see Golder and Gawler 2005, Mayers and Vermeulen 2005). At a bigger-picture or whole system level, social network analysis generates an understanding of social and institutional structures, actors and linkages, as well as the relationships and flows of information between people, groups and organisations (Salpeteur et al. 2017, Sterling et al. 2017, Vogler et al. 2017). Institutional and context analysis also provides a useful way of tracing political and institutional factors, as well as changes in power, interests and decision-making structures (UNDP 2012).
- **Health** valuation methods aim to value the links between nature and human health. The primary use is to assess how changes in nature affect the quality of life through health metrics describing physical and mental health at the core of human

well-being. While many health assessment methods and studies are carried out in the context of broader, or integrated, valuation efforts, there are a number of frameworks and approaches which have been developed specifically to investigate the links between nature and human health (see, for example, Sandifer et al. 2014, Ulrich et al. 2022, WHO and SCBD 2015).

PARTICIPATORY AND STAKEHOLDER-BASED VALUATION TECHNIQUES

Over recent years stakeholder participation has become a more and more prominent feature of biodiversity and ecosystem valuation. Increasingly, conventional methods are being refined and adapted to directly engage value-holders, and to understand and where possible reflect their worldviews and value categories in the metrics that are used to assess and measure nature's benefits. It should be noted that participatory methods are not necessarily the same as indigenous valuation approaches (discussed below). Indigenous valuation approaches imply that the very process of value definition and information generation, as well its interpretation and analysis, is determined and led by the participants themselves. In contrast, participatory valuation techniques usually involve modifying conventional, externally-administered techniques (such as those mentioned in the previous section) to incorporate stakeholder perceptions and categories of value, and/or to be administered directly by the local community or affected group (as is the case in the example given in ↳ Box 9). These commonly include:

- **Visual approaches** such as participatory mapping, participatory video and participatory art explicitly seek to hand over the research process to stakeholders themselves (see, for example, Mistry and Shaw 2021, Swanson and Ardoin 2021, Tremblay and Jayme 2015). These types of engagements are often used to encourage marginalised groups to contribute, or to document the knowledge and interests of those that are otherwise unrepresented in decision-making spaces.
- Similarly, **oral engagement methods** also help bring in diverse conceptualisations and multiple values, and deliberately utilise knowledge-sharing techniques that resonate more closely with those used at the community level. For example, narrative research involves a conversation between participants/narrators and listeners/researchers, using stories to determine people's values, such as their sense of place (Cheng et al. 2019, Louder and Wyborn 2020, Relva and Jung 2021, Wyborn et al 2020). Discourse-based methods have also been put forward as a way of integrating social equity concerns into valuation, and specifically of ensuring fair treatment of competing social groups that may have different perceptions and needs regarding nature and its benefits (Wilson and Howarth 2002).

VALUATION BY AND FOR INDIGENOUS PEOPLES AND LOCAL COMMUNITIES

While participatory methods are key to identifying and assessing multiple values, there is a growing recognition of the need to decrease the current dominance of Western "science" and "market" based models and techniques – especially those that focus primarily on assessing instrumental values. Even those approaches that pay attention to diverse values and worldviews, or somehow incorporate local categories and indicators of value, are for the most part rooted very firmly in western science, based around research questions and methodologies that are defined outside the peoples or places that are being studied, and are carried out by outside "experts". This seriously restricts the degree to which Indigenous and local values are recognised and considered in decision-making.

In contrast, combining indigenous knowledge and valuation processes with scientific approaches can make a major contribution towards overcoming the current biases, and help to dismantle the power asymmetries that exist in most nature valuation and assessments (Urzedo and Robinson 2023). It is difficult, if not impossible, to strictly define or characterise indigenous and local valuation as a homogenous category of methods. The term describes processes and knowledge systems that are locally-conceived and led, and as such as are highly specific to the cultures and places in which they are being used and applied. It does not refer to a particular set of techniques or approaches for valuing the benefits of nature.

For the most part, indigenous and local knowledge studies consider nature's values as context-specific or place-based, rather than being based on generalised (and usually highly anthropocentric) models. In addition, valuation is rarely viewed as a distinct and separate process from that of valuing and acting on those values. It is usually undertaken alongside other cultural processes, is often aimed at fulfilling multiple goals, and in many cases is carried out as a communal exercise, and guided by principles such as belonging, stewardship, responsibility, oneness with nature or other indigenous and local knowledge and long-held traditions (Pascual et al. 2023). For example, valuation traditions may be used to enhance wellbeing, generate and transmit cultural knowledge, or reinforce a group's cultural identity with land and waters.

THE CHALLENGES OF BRINGING TOGETHER DIFFERENT EXPRESSIONS, METRICS OR INDICATORS OF VALUE

There is a need to bring together the results of different valuation exercises, and incorporate their various measurements, indicators and results into the same development planning process. For instance, a development decision might need to weigh up information about economic costs and benefits, socio-cultural significance, the generation

of specified quantities and qualities of goods and services, and the benefits and gains generated in relation to particular development priorities or strategic targets. It may also need to consider the diverse conceptualisations of different stakeholder groups, who have widely varying perceptions and ways of expressing these values.

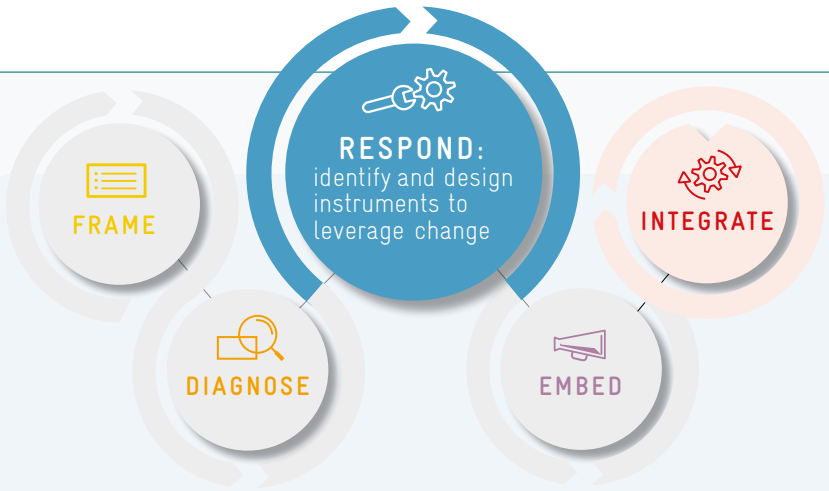
Consolidating the results of different valuation measures and perspectives can be challenging in relation to development planning, where there is a need to reach clear conclusions and identify harmonised priorities for action. While some values of nature can be directly compared or aggregated, all too often different methods (and worldviews) will express values according to quite distinct – and often incomparable or incompatible – metrics. In many cases what is being valued, or the decision that valuation is being used to inform, will be highly complex, and may even be contested.

The project appraisal and analysis tools that are conventionally used to assess development impacts and linkages (or to weigh up different development alternatives) tend to be ill-equipped to deal with multiple values. Most are based on a unitary perspective, and have only very limited scope to compare or aggregate different kinds of indicators. For example, cost-benefit analysis relies on monetary measures, while cost effectiveness analysis typically compares the quantitative measures of impact (e.g., number of people, kilometres of road, units of output) that will be generated by a given investment. Even those techniques that are explicitly geared towards comparing effects, impacts, and trade-offs between different objectives and stakeholder groups (such as multi-criteria analysis) are rarely able to fully incorporate the full breadth of perspectives and indicators that arise when multiple values are assessed.

While these challenges should not be seen as insurmountable It would be a mistake to think that it is always easy, or even possible, to aggregate or compare different measures of value in an unbiased way that gives equal weight to every type of value, perspective and stakeholder interest or need. It is sometimes more constructive to recognise that, in many cases, it is simply not necessary (or even possible) to directly compare or aggregate diverse conceptualisations of multiple values. Rather, in a development planning context, the primary need is to ensure that different values and value-holders are brought to the table, and given equal space and consideration when decisions are made.

7.

RESPOND: identifying instruments to enable, influence and leverage change



- Are there possibilities to more effectively **capture nature-related opportunities or reduce nature-related risks** for particular groups?
- Can efforts be made to **manage, balance or share more equitably the costs and benefits** that arise in relation to the value of nature?
- What can be done to address and resolve potential **conflicts or divergence of interests** between different stakeholder groups?
- Is there a need to better **represent, safeguard or empower** particular values, value-holders or worldviews?

Figure 8: Guiding questions to be addressed during the response stage

7.1

HOW DO MULTIPLE VALUES LINK TO THIS STAGE OF DEVELOPMENT PLANNING?

Having assessed the multiple values of nature and its benefits, and identified the risks, opportunities, trade-offs and divergence of interest that may arise, **the response stage** now looks at how these issues and challenges can be managed and addressed in the development plan. It involves identifying policy and practical instruments that can be used to influence people's behaviour, create enabling conditions, and leverage transformative change towards more sustainable and just futures.

The key aim is to ensure that all relevant nature values and value-holders are factored into decision-making, and that no group's quality of life or wellbeing is negatively impacted – and wherever possible is enhanced. The emphasis is therefore on instruments

that will encourage people to maintain the multiple values of nature, respect different worldviews and value systems, and avoid damaging or harming the interests of other value-holders in nature. As well as boosting stakeholder buy-in and support for the development plan, this will also improve its effectiveness, impact and sustainability.

By the end of this stage, a series of policy and practical instruments should have been identified which can be used to encourage, enable and require stakeholders to act in support of multiple values. A list of measures will be compiled which outlines the rationale and purpose of each, states its intended outcome, specifies who and what it seeks to influence or change, explains how it will operate, and indicates key considerations and needs for follow-up. This will provide information that can be directly incorporated into the development plan, and serve as the basis for more detailed planning and design as required.

The questions outlined in **section 7.2** below guide the process of identifying where there is a need to foster additional enabling conditions or (dis)incentives to motivate behaviour change in support and recognition of multiple values and value holders. The different kinds of policy and practical instruments that can be used to effect these changes are then described in ↳ section 7.3.

7.2

WHICH QUESTIONS NEED TO BE ASKED WHEN IDENTIFYING NEEDS FOR CHANGE?

ARE THERE POSSIBILITIES TO MORE EFFECTIVELY REDUCE NATURE-RELATED RISKS OR CAPTURE NATURE-RELATED OPPORTUNITIES FOR PARTICULAR GROUPS?

The diagnosis stage will have identified where the development plan, through its interactions with nature, may pose risks or offer opportunities for particular stakeholders. It is now possible to think about ways of minimising any possible negative effects of the development plan on multiple values and value-holders, and increasing the likelihood of it generating positive impacts.

One way to do this is to identify measures that will directly offset the identified risks and threats or capture nature-related opportunities. For example, sustainable land

management approaches may be expanded to include crop mixes and land conservation practices that even out production, income, production and labour demands over the course of the year, and put food and income directly into the hands of women. Nature-positive businesses and markets may be included as core rural income generation activities, or locally-led nature-based solutions promoted as a core part of disaster risk reduction and climate adaptation efforts.

In most cases it will also be necessary to address the underlying structural conditions and incentive systems that allow, encourage, or even force people to behave in ways that act against nature in the first place – or fail to promote or safeguard particular values and value-holders. For example, this may involve establishing legal rights (or acknowledging and safeguarding customary rights) for pastoralists to access and occupy seasonal grazing lands in forests or agricultural landscapes, dismantling subsidies to extractive industries, or offering agricultural credit and loans on preferential terms to women farmers.

CAN EFFORTS BE MADE TO MANAGE, BALANCE OR SHARE MORE EQUITABLY THE COSTS AND BENEFITS THAT ARISE IN RELATION TO THE VALUE OF NATURE?

Following on from the topic of risks and opportunities, and to some extent overlapping with it, is the need to investigate where there are gaps or imbalances in the distribution of nature-related benefits and costs. Distributional justice is a core element of the 'sustainable and just futures' that the multiple values approach seeks to create. The distribution of costs and benefits is also important in practical terms, as it determines whether people are willing and able to support the development plan, and whether it can be judged successful. There is a particular concern with ensuring that vulnerable or excluded groups and their values are not further marginalised or disadvantaged.

One aspect of this is to make sure that particular values or value-holders in nature do not suffer costs or losses as a result of the development plan. For example, this may occur if sustainable land management efforts interfere with pastoralists' access to important grazing areas, even when the gains to crop farmers are unambiguously positive. As well as suffering livelihood losses, pastoralists may as a result oppose or block the development plan, or be unable to afford to support or participate in it. There may be a need to identify instruments that will reduce the direct or indirect costs incurred to these groups, enhance their benefits, or allow for certain values of nature that are important to them to be maintained and improved as the development plan proceeds.

The equity, fairness, effectiveness and feasibility of the development plan can also be compromised when certain value-holders gain disproportionately – especially if these groups are already privileged or advantaged as compared to other stakeholders. There

may be a need to make direct interventions or implement structural changes to redistribute or more equitably share nature-related benefits. In many cases, these will seek to reallocate or increase the flow of benefits to the groups that shoulder the costs of managing or conserving nature, or who suffer losses in value. For example, if the main beneficiaries of sustainable land management activities are downstream commercial water users, it may be possible to set up a payment for ecosystem services scheme that will reward upstream farmers for protecting key watersheds, and compensate them for any costs, losses or reductions in the value of nature that they incur in doing so. Along similar lines, the development plan may need to incorporate measures to allocate legal rights or protection for local communities to own, use and manage their natural resources, which limit entry to large-scale commercial interests and developers.

WHAT CAN BE DONE TO ADDRESS AND RESOLVE POTENTIAL CONFLICTS OR DIVERGENCE OF INTERESTS BETWEEN DIFFERENT STAKEHOLDER GROUPS?

Development planning almost always requires making choices between different values and/or value-holders in nature. This has unavoidable implications for distribution and equity, as it automatically favours one group's needs and interests over another's. These divergences of interest can lead to disagreement and conflict between the affected parties. Sometimes the instruments that are deployed to address nature-related risks and opportunities or to balance costs and benefits are enough to bring about a convergence of interests, and to avert any disagreement, misunderstanding or opposition to the development plan.

In some cases, conflicts may however still arise. The identified policy and practical instruments may not be sufficient to fully resolve the situation, or to address stakeholders' concerns about the impacts of the development plan on their values of nature. For example, forest conservation efforts may continue to be hampered by different stakeholders' competing – and in many cases mutually incompatible – values. Global conservation organisations, protected area authorities, Indigenous Peoples, loggers and tour operators may come into direct conflict over the proposed forest governance, access and use arrangements.

If this is the case, then it will usually be necessary to set in place additional measures to avoid, mediate or resolve potential nature-related conflicts. The main focus is usually on addressing and managing the relationships, interactions and engagement between different value-holders. For example, forest conservation efforts may need to create multistakeholder dialogue platforms that bring different groups together around a table to discuss and negotiate forest access and management. It may also be necessary to formalise Indigenous rights over their resources and tenure over lands, and to allow for co-management approaches to operate alongside, or instead of, government-run protected areas.

IS THERE A NEED TO BETTER REPRESENT, SAFEGUARD OR EMPOWER PARTICULAR VALUES, VALUE-HOLDERS OR WORLDVIEWS?

It is always important to consider whether there is a need to make extra efforts to represent, safeguard or empower particular values, value-holders or worldviews – and, by implication, to more effectively recognise and represent their needs, interests, knowledge or practices regarding the values of nature. The earlier efforts to frame and align the development goals (↳ chapter 5), and to describe and assess the multiple values of nature (↳ chapter 6) should have paid specific attention to marginalised or excluded groups and values. These insights need to be reflected in the instruments that are being proposed to reduce risks, capture opportunities, redistribute or rebalance costs and benefits, and mitigate or resolve conflicts. Additional measures may also be required, such as social and environmental safeguards, free, prior and informed consent, intellectual property rights, right to information, or protocols for research ethics and inclusivity.

It is perhaps obvious that this question is most relevant for groups and values that are already marginalised or excluded from mainstream decision-making, or are somehow accorded a lesser voice or representation than others. For example, the design and planning of sustainable land management efforts may be dominated by a concern with the interests of settled cultivators and men farmers, without allowing space for the needs, interests and knowledge of women, pastoralists, hunters and gatherers to be brought to the table. Similarly, little attention may be paid, or respect accorded to, the values and rights of Indigenous Peoples or to their knowledge, rules and institutions for land and resource management, when choices are being made between different options for conservation.

7.3 WHAT KINDS OF POLICY AND PRACTICAL INSTRUMENTS CAN BE USED TO LEVERAGE TRANSFORMATIVE CHANGE?

Identifying and designing policy and practical instruments **requires careful thought, discussion and planning**. However, just as in the diagnosis stage, there is no standard method or length of time for undertaking this process. Instruments vary considerably

in terms of their scope, scale and complexity, as well as data requirements, approval procedures, and needs for consultation and stakeholder engagement.

In some cases, the planning and design process demands detailed technical data and modelling. This is, for example, the case in the design, validation and accreditation of payments for ecosystem services or carbon offsets. Other instruments may require high-level political support. For example, the introduction of new taxes, subsidies and legal reforms all typically require ministerial or even parliamentary approval. Many measures can only work if they are founded on extensive stakeholder consultation and negotiation, or even led by value-holders themselves. This is for example the case for benefit-sharing regimes, co-management and local governance arrangements. Of course it is highly desirable – and often essential – to build in as much consultation and participation as possible, whatever type of instrument is being considered. This may involve technical and political experts, development decision-makers, as well as the direct stakeholders who will participate in or be affected by the proposed instruments.

However, this is not always the case. The policy and practical instruments to be included in the development plan can sometimes be planned and designed far more quickly and simply. There is not always a need to formulate a strict blueprint for how each instrument will operate. The main priority is often to initiate or pilot particular measures or reforms. It is only once the plan is implemented that detailed planning and design will be carried out, and the instrument will actually be tested, refined and further rolled out, with much broader stakeholder engagement and participation.

A **wide array of instruments can be used to influence people's behaviour and interactions, and to create enabling conditions** to support multiple values and value-holders in the development process. These operate at various levels of scale, under many different implementation arrangements. For example, instruments may act through global policy agreements and trade regimes, national laws and institutions, sectoral or industry-level standards and practices, local markets and value-chains, community organisations and norms, corporate cultures, or even family dynamics and relationships within the household. They may be self-imposed, initiated collectively, or introduced by outside actors such as governments, donors, development agencies, international organisations, NGOs or projects.

Whereas policy instruments are usually taken to refer to interventions made by higher-level government, corporate or community decision-makers towards specified goals, practical instruments refer more to on-the-ground measures and actions aimed at catalysing particular changes or outcomes. These are usually **clustered into four categories: economic and financial, legal and regulatory, social and cultural, and rights-based and customary**. All can potentially play a key role in operationalising multiple values – although, it should be noted, require proper design and implementation to do so. The

last two categories are however particularly well-suited to ensuring that a diversity of values, value-holders and worldviews are incorporated into the development process. **Box 10** describes a case study example of payment for ecosystem services in northern Australia which attempts to build Indigenous Peoples' knowledge, practices and worldviews into a market-based reward scheme for climate mitigation.

BOX 10

Building Indigenous Peoples' knowledge, practices and worldviews into payment for ecosystem services schemes in northern Australia

"Caring for country" refers to a range of land and sea management practices, ancestral connections, obligations to country and culture-based enterprises that sustain landscape and community values important to Aboriginal people. It is driven by the notion of reciprocal relationships between people and country, and amounts to far more than just the physical management of geographical areas. Caring for country involves looking after all of the values, places, resources, stories and cultural obligations associated with that area, as well as associated processes of food provision, spiritual revival, connecting with ancestors and maintaining kin relations.

A number of programmes for greenhouse gas abatement through fire management operate over very large areas of northern Australia, and involve multiple clans collectively managing an activity (fire use) that is integral to Aboriginal culture. Systematically and purposefully using fire to manage the landscape is a key part of caring for country. Aboriginal communities and their organisations have taken up opportunities to earn carbon credits with some enthusiasm. By the end of 2015, ten projects working over several million hectares of mostly Indigenous land had been developed.

Efforts were made to consult with local communities about how Indigenous values can inform the design and evaluation of the fire carbon offset projects. Discussions revealed that Aboriginal land managers understand well that fire projects may produce tradeable emissions reductions, biodiversity and other biophysical outcomes which are of value to the global community. However, their principal aim is to improve the well-being of local Indigenous Peoples. A variety of benefits are sought from PES that go well beyond cash income, including the maintenance of bio-cultural diversity associated with people-country interactions, improved health and impacts on wildlife species that are important for food, biodiversity and culture, aesthetic landscape, protection of sacred sites, and access to hunting and fishing sites, and taking care of the rights of nature. In addition, there is an emphasis on promoting partnerships and cohesion, maintaining a sense of place and belonging, support to ceremony and other obligations to ancestors, inspiration and motivation, knowledge sharing, and concern for the next generations of humans, wildlife and nature.

While offset agreements that enable Indigenous Peoples to engage in caring for country activities offer an effective mechanism for achieving climate mitigation goals, these schemes must also reflect the local context of social, economic and cultural landscape burning practices, relationships,

interests and aspirations. Indigenous ownership and control over PES is key. The most effective schemes are those where these linkages and co-benefits were made explicit during project design. Framing Indigenous PES negotiations around these benefits can open up pathways to successful climate mitigation strategies that also offer opportunities for Aboriginal land managers to provide (and be paid for) environmental services aligned with Indigenous customary and contemporary obligations to their traditional estates.

From Robinson et al. 2016

ECONOMIC AND FINANCIAL INSTRUMENTS

Economic and financial instruments work on the monetary and non-monetary forces that influence people's behaviour, with a focus on promoting or discouraging specific activities by providing or withdrawing economic and financial resources and opportunities. They primarily serve as a means of better integrating the instrumental values of nature into decision-making. Examples include:

- A variety of **alternative economic models and measures of wellbeing** have begun to enter into development discourse, replacing more traditional market-oriented approaches such as national income or gross domestic product (GDP). Examples of more socially inclusive and environmentally sustainable economic models include Buen Vivir, Gemeinwohl Ökonomie, degrowth, the doughnut economy, and the social and solidarity economy. Several alternative measures of human well-being have also emerged over recent years, including Green GDP, the Human Development Index, Thriving Places Index, Better Life Index, Genuine Progress Indicator and the Gross National Happiness Index.
- The application of **direct cash transfers and universal income principles** to nature conservation has begun to attract a great deal of attention – especially in relation to channelling funding to the local or community level. There have recently been calls to establish a "global conservation basic income" to safeguard biodiversity. This would constitute an unconditional cash transfer to individuals, households and/or communities living in and around important biodiversity conservation areas.
- Fiscal instruments such as **taxes and subsidies** work by manipulating consumer and producer prices to better align with the value of nature, and with social goals. Examples include higher taxes on polluting activities or products, tax relief or relatively lower rates on nature-friendly production, subsidies to clean technologies or sustainably-sourced materials, the provision of green credit and loans at below-market interest rates, as well as efforts to dismantle or reform of subsidies that are harmful to nature or discriminate against particular values and value-holders.

- **Ecological fiscal transfers** mainly work by including nature-related indicators in the formulae used to determine how much public budget is transferred to the sub-national level. For example, coverage of protected and conserved areas, rate of forest loss or environmental quality standards may be specified alongside conventional measures such as the GDP, population density, poverty rate or revenue base of the sub-national unit that is receiving the budget allocation.
- Direct support to **nature-friendly products and markets** can take a wide variety of forms, with the aim of promoting more sustainable production and livelihoods, and making these more profitable and economically attractive to producers and consumers. This often involves targeting fiscal and market-based instruments to nature-friendly products and markets. Examples include eco-labelling and certification for sectors such as organic agriculture or ecotourism, green credit and loans, or relatively lower taxes and fees for sustainable supply and value chains.
- Recent years have seen many efforts to **develop markets for ecosystem services**. These aiming to open up new income-earning opportunities or to generate other benefits flows for land and resource managers that generate valuable ecosystem services for others, but are not materially rewarded or compensated for their actions. These mainly seek to support non-extractive land and resource management regimes. Examples include payments for watershed services, carbon offsets and credits (including Reducing Emissions from Deforestation and Forest Degradation, REDD+), biodiversity offsets and wetland, habitat and species banking schemes. Most recently, biodiversity credits have now begun to attract a great deal of attention at the global policy level, and are explicitly prioritised in the GBF. The idea is to create tradable 'units' that are generated by biodiversity-enhancing actions such as the conservation or restoration of natural habitats and species, which can then be sold, exchanged or otherwise transferred to individuals or companies seeking to make claims on these outcomes.
- A wide range of **nature-themed financial products** have appeared (mainly over the last 5 – 10 years) that seek to make a positive contribution towards biodiversity conservation. There has, especially, been an exponential growth in the number of biodiversity-themed funds, finance facilities and financial instruments designed to attract investment and mobilise and/or administer capital for nature-oriented enterprises and ventures. Many banks and financial institutions also now offer nature-themed financial products and services to their customers, and are actively developing nature-based project pipelines. This includes efforts to develop credit and loan facilities, incubators and accelerators for small-scale, locally-based business, often administered through local financial institutions.
- **Green, blue and climate bonds** are a particular category of debt-based financial instrument that are used by governments and companies to raise capital for nature-related investments and outcomes. Bond-financed **debt-for-nature swaps** have also emerged as a niche segment of the sovereign sustainable debt market, where debt is refinanced through private capital markets. Over the last 5 years or so, blue bonds,

in particular, have generated (and/or freed up) substantial funds for governments to invest in marine conservation, including locally-managed marine and fisheries areas.

LEGAL AND REGULATORY INSTRUMENTS

Legal and regulatory instruments work on the formal rules and regulations that sanction, prohibit, or otherwise govern people's choices and activities. They can be used to better integrate the instrumental, intrinsic or relational values of nature into decision-making. In the context of multiple values, laws and regulations are a particularly important means of safeguarding people's rights to access and utilise nature and its benefits, as well as setting the terms and conditions under which (and by whom) land and resources are owned, governed, managed and used. Examples include:

- The **rights of nature approach** entails legally recognising that nature, wholly or in part, has inherent rights that should be acknowledged and protected. Often building on Indigenous Peoples' worldviews, rights of nature have now been established in several countries through constitutional, legislative and/or judicial enactments (for example Ecuador, India and New Zealand). The Universal Declaration of the Rights of Mother Earth was proclaimed at the World People's Conference on Climate Change and the Rights of Mother Earth in 2010, and has been adopted and incorporated as law in Bolivia.
- There is now a wide array of global and regional **multilateral agreements** that bind parties to undertake specified actions or meet certain targets in support of nature and its values. Examples include biodiversity-related conventions such as the CBD, the Ramsar Convention on Wetlands, the Bonn Convention on Migratory Species, the Convention on International Trade in Endangered Species as well as regional agreements such as the African Convention on the Conservation of Nature and Natural Resources or the Bern Convention on the Conservation of European Wildlife and Natural Habitats. The Arhus Convention and the Escazú Agreement on Access to Information, Public Participation and Justice in Environmental Matters in Latin America and the Caribbean are examples of agreements that specifically seek to safeguard the rights of nature or to foster environmental and social justice.
- **Environmental legislation and by-laws** exist in all countries of the world, operating at national and sub-national levels. These serve to regulate many different aspects of environment quality, access to and rights over nature, as well as the governance, management and use of land and natural resources. The extent to which multiple values, value-holders, worldviews, knowledge systems and governance systems are recognised and respected however differs widely. In particular, there is a great deal of variation in the extent to which land title and tenure favours state control,

formalises communal or private ownership, or allows for and support customary rights and institutions. In many countries, particular planning frameworks and procedures are also legally mandated and gazetted, such as national biodiversity strategies and action plans (NBSAPs), protected area system plans, spatial plans, or requirements for strategic environmental assessment (SEA) and environmental impact assessment (EIA). It should however be emphasised that enforcement and implementation of these planning frameworks and procedures often remains weak.

- **Non-environmental sectoral legislation** often governs how umbrella environmental legislation is actually interpreted, operationalised, implemented and enforced on the ground. Examples include SEA and EIA rules, environmental quality standards, land and resource management restrictions, commodity chain legislation, or bans on certain products, technologies or processes. Financial and economic regulations are often particularly important. As well as laying out public financial management procedures and requirements, these also stipulate the market, investment, financial and trade conditions under which the sectors that positively or negatively depend and impact on the multiple values of nature operate.
- **Legally protected and conserved areas** incorporate many different management and governance arrangements. These range from more traditional government-run national parks and nature reserves, through multiple use (and often multistakeholder-governed) biosphere reserves, private protected areas, locally-managed marine and terrestrial conservation areas, collaboratively managed or co-managed areas, indigenous and community-conserved areas and territories (ICCAs) and other effective area-based conservation measures (OECMs).

SOCIAL AND CULTURAL INSTRUMENTS

Social and cultural instruments work to provide information and education, as well as stimulate voluntary and collective actions, that encourage or discourage particular views and behaviour. They can be used to better integrate the instrumental, intrinsic or relational values of nature into decision-making, and offer a particularly powerful means of enhancing stakeholders' voice and involvement in decision-making processes, helping multiple values and diverse worldviews to be better recognised and prioritised. Examples include:

- **Environmental education** is specifically designed to increase people's understanding of and interest in environmental issues, as well as their ability and motivation to participate in environment-related actions. Making efforts to explicitly include multiple values and involve diverse value-holders can thus serve as a means of promoting learning, understanding and empowerment. Environmental education and awareness can take many forms, including formal training and extension, informal learning, peer-to-peer exchange, shared experience, story-telling, sensory

approaches, as well as utilising the many different knowledge and learning systems that exist across different cultures and societies, including those of Indigenous Peoples.

- There are also many ways of improving public awareness, including advocacy, media campaigns and **public-awareness** drives, as well as through mechanisms such as advertising, sponsorship and cause-related marketing. Awareness-raising typically serves a range of purposes, from changing people's attitudes and perceptions, through influencing their goals and aspirations, to promoting (or restricting) particular types of behaviour, viewpoints and ideologies. The aim is to encourage people to take account of multiple values, or to better understand and accept the interests and worldviews of other value-holders.
- Participation in **voluntary mobilisation and actions** may involve individuals, groups, institutions or companies. Examples include membership of environmental movements, civil society organisations or industry associations, as well as behavioural choices such as deciding to donate to environmental causes, engage in socially-responsible investment, conform to voluntary standards or principles, or to run corporate environmental and social responsibility programmes.
- **Rights to information and disclosure** all serve to increase people's understanding and enhance accountability, and can therefore enable and empower them to make choices which will better benefit and advantage (or avoid harm to) multiple values and value-holders. For example, labelling of foods and other products allows consumers to choose environmentally sustainable or fair trade options. Corporate reporting and disclosure increases companies' transparency and accountability to their shareholders and customers, while allowing the general public to make more informed decisions about what and with whom they choose to invest, consume or associate with.
- **Participation and engagement** offer a particularly powerful and effective means of integrating multiple values and value-holders into decision-making. It can take many forms, ranging from stakeholder engagement in development planning processes and studies, through direct participation in development activities, to the devolution of authority to Indigenous Peoples and local communities through arrangements such as co-management, collaborative management and handover of rights. These tools and instruments are investigated further in the embedding stage of the integration framework (↳ chapter 8 below).

RIGHTS-BASED AND CUSTOMARY INSTRUMENTS

- Rights-based and customary instruments work to strengthen the collective rights and customary institutions of Indigenous Peoples and local communities. They primarily serve to better integrate the intrinsic or relational values of nature into

decision-making. It is worth noting that some of the economic and financial, legal and regulatory, and social and cultural and instruments described above may also be oriented towards rights-based approaches, or work to strengthen collective rights and customary institutions, if carefully designed with this in mind. Additional examples include:

- **ICCAs and OECMs** have already been mentioned above, under legal and regulatory instruments. It is however important to remember that ICCAs and OECMs may also exist outside the formal protected area network. These can take many different forms, not all of which are legally designated, for example land stewardships, private and community conservancies, cultural land and seascapes, ancestral domains, sacred natural sites or species, migration routes of nomadic herders or mobile Indigenous Peoples, bio-cultural heritage territories and sustainable resource reserves.
- **Indigenous local knowledge revitalisation** policies contribute towards recognising and restoring customary institutions of Indigenous Peoples and local communities for the management of nature. These can take many different forms, for example ensuring that local languages and traditional practices are embedded in the school curriculum, promoting film, literature and art forms that record and share indigenous local knowledge and worldviews, adapting land and resource management systems to fit within local governance structures and utilise traditional techniques, and establishing digital and physical libraries and repositories of cultural, linguistic and material artefacts relating to nature. It is self-evident that these kinds of measures are most effective when controlled and managed by the involved communities themselves.
- **Indigenous Peoples and local communities-led codes of ethical conduct** set up inclusive, participatory mechanisms that both enable and demand the interaction of different knowledge systems. Examples include the Principles of Ethical Métis Research, San Code of Research Ethics, Te Ara Tika: Guidelines for Māori Research Ethics, Akwé: Kon Voluntary Guidelines for the Conduct of Cultural, Environmental and Social Impact Assessment regarding Developments Proposed to take place on, or which are Likely to Impact on, Sacred Sites and on Lands and Waters Traditionally Occupied or Used by Indigenous and local communities, and the Tkarihwaié:ri Code of Ethical Conduct to Ensure Respect for the Cultural and Intellectual Heritage of Indigenous and local communities. The last two of these have been adopted by the CBD.
- **Free, prior and informed consent** is a specific right granted to Indigenous Peoples recognised in the UN Declaration on the Rights of Indigenous Peoples, which aligns with their universal right to self-determination as well as to develop priorities and strategies for exercising their right to development. It allows Indigenous Peoples to give or withhold consent to any project, activity, administrative or legislative measure that may impact on their life and territories, and creates a platform from which to negotiate the conditions under which it is designed, implemented, monitored and evaluated. Consultation and participation are crucial components of the consent process.

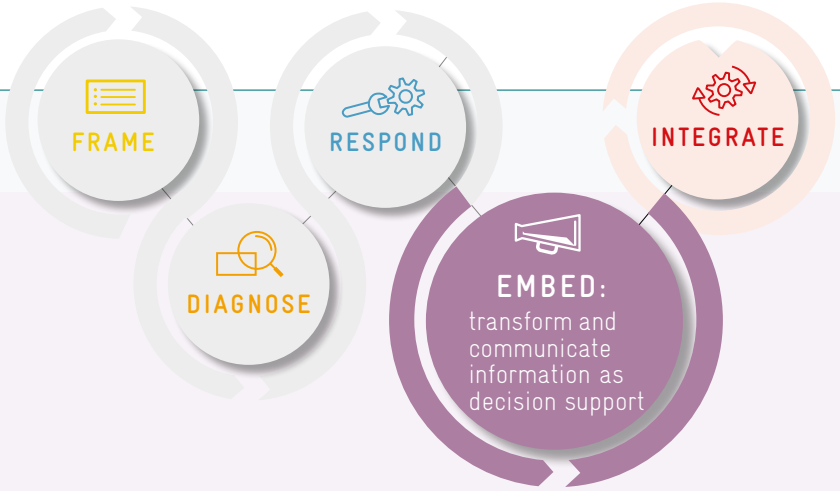
MIXING AND TARGETING INSTRUMENTS

Finding the **most effective mix of instruments** is never straightforward, and becomes a particular challenge when the aim is to better integrate multiple values into decision-making. There are usually three main concerns. The first is to come up with a portfolio of instruments that is specifically designed to address the nature-related impacts, opportunities and risks identified in the diagnosis stage, while still acting in support of the identified development goals. The second is to ensure that the selected instruments act in favour of those values and value-holders that would otherwise run the risk of being excluded from or harmed by the development plan, and at the same time take account of the many other factors and groups that have the potential to affect it. The third is to tailor the instruments to the political, economic, cultural and institutional context (or contexts) in which the development plan will be implemented.

This almost always requires a combination of several different policy and practical measures. Instruments rarely operate in isolation, but rather form part of portfolios and "policy mixes" (Barton et al. 2017). On the one hand, different instruments are often required to target specific challenges, groups, values, levels of scale or outcomes. These would ideally be complementary and mutually reinforcing, leading to a "whole that is greater than the sum of the parts". For example, one instrument may empower Indigenous Peoples and local communities, another improve information and awareness about multiple values, yet another may provide economic incentives for a particular group to conserve nature, and finally one may strengthen law enforcement and compliance. At a practical level, a portfolio approach is usually a much more cost-effective, coordinated and consistent response than working on different instruments in isolation. It is however also important to ensure that individual elements in the instrument mix do not contradict or serve to undermine each other, or to crowd out existing measures and efforts.

8.

EMBED: transforming and communicating information as decision-making support



- How, and with whom, is it **necessary to engage** to ensure that diverse worldviews and multiple values are adequately represented and considered in the development process?
- **What kinds of evidence and information** do different groups need and want to factor in multiple values, and how can these messages be best formulated and delivered?
- What kinds of approaches and indicators are required **to monitor development progress and impact** taking into account diverse worldviews and multiple values?

Figure 9: Guiding questions to be addressed during the embedding stage

8.1 HOW DO MULTIPLE VALUES LINK TO THIS STAGE OF DEVELOPMENT PLANNING

The framing, diagnosis and response stages will have generated essential insights about why and where to integrate multiple values and diverse worldviews into the development plan, as well as identifying concrete instruments that can be used to motivate and enable the changes that are necessary for this to take place. The **embedding stage** seeks to transform these conclusions and recommendations into clear and compelling decision support information, communicate this effectively to decision-makers and other key stakeholders as the development process advances, and build their engagement and capacities to deliver change.

A variety of support tools can assist in guiding decision-making across the development planning cycle, including those that convey information and advice as well build

the systems, capacities, engagement and learning that are required to recognise and deal with multiple values and value-holders. **The aim** is to ensure that a holistic and balanced perspective is maintained throughout the process of finalising, adopting, implementing, monitoring and evaluating the development plan. These tools should serve to promote more inclusive and participatory approaches, which allow for a plurality of worldviews, knowledge systems and interests to be reflected in the development plan.

By the end of this stage, key engagement, information, communication, engagement and capacity needs relating to multiple values should have been clearly identified, and strategies formulated to use these tools to support decision-making during the approval, implementation and monitoring of the development plan.

The questions outlined in **section 8.2** below guide the process of thinking through the kinds of information, capacities and procedures that are required to inform and influence decision-makers. The different kinds of tools that can be used to formulate, communicate and deliver this support are then described in ↳ section 8.3.

8.2 WHICH QUESTIONS NEED TO BE ASKED WHEN DETERMINING DECISION SUPPORT NEEDS?

HOW, AND WITH WHOM, IS IT NECESSARY TO ENGAGE TO ENSURE THAT DIVERSE WORLDVIEWS AND MULTIPLE VALUES ARE ADEQUATELY REPRESENTED AND CONSIDERED IN THE DEVELOPMENT PROCESS?

Stakeholder engagement is an essential tool for integrating multiple values into the development process. It is also a continuing need. As describe in ↳ chapters 5, ↳ 6 and ↳ 7, engagement should have already been factored in as a major concern as early as the framing stage, and through the diagnosis and response stages. It is not enough just to identify the key values and value-holders that stand to influence or be impacted by the development plan. Efforts also need to be made to think about how these groups

are placed in relation to it as stakeholders. The needs, levels and means of engagement will vary for different people at different times, and at different stages of the development process.

It is important to have a clear idea of who needs to be engaged in working through the integration framework, and in the development process more generally. The IPBES Values Assessment characterises three main categories of stakeholder groups, each of which plays a different role in decision-making. Influencers are the people and organisations that directly guide decision-making processes, including by advising and informing those who make and implement the decisions. Affected actors are directly involved in (and dependent on) the implementation of decisions, and have their own stakes and interests in these. Key players can both influence and be affected by decisions, while at the same time being involved in actual decision-making. As such, influencers and key players can be considered as the main actors shaping decisions about nature, and can also serve as bridging forces that enable interaction and negotiation across multiple stakeholder preferences and priorities.

For example, the Council of Elders is likely to be a major influencer within the community regarding planned forest conservation efforts. Many of the members of the council will be both affected actors and key players in the sense that they will be directly involved in, and influenced by, decisions about how the forest is managed and used. In contrast, a multidisciplinary technical committee on nature preservation that has been formed to advise the Provincial Protected Area Director can be seen as an important influencer, but is neither an affected actor nor a key player. Pastoralists from neighbouring provinces may be affected actors, in the sense that they have a strong interest in maintaining access to seasonal pastures, and will be affected by any decision about how the forest is managed and used, but do not have any opportunity to directly influence these decisions.

WHAT KINDS OF EVIDENCE AND INFORMATION DO DIFFERENT GROUPS NEED AND WANT IN RELATION TO MULTIPLE VALUES, AND HOW CAN THESE MESSAGES BE BEST FORMULATED AND DELIVERED?

Unless information, evidence and advice about multiple values is communicated strategically, it is unlikely that that decision-makers and other stakeholders will be willing to take it up, or accept the instruments that are being proposed. Information and messages need to be credible, relevant and legitimate, as well as communicated in a form that is appropriate and meaningful form to the target audience. Three main issues need to be thought through and clarified: the purpose and intended outcome of the communication, the information or evidence that is required to influence the

decision, and the most compelling way to convey this information.

It is first of all necessary to be sure of the purpose and intended outcome of communicating with different stakeholders. Without this, it is difficult to communicate effectively. For example, the immediate aim may be to make the case to climate adaptation and disaster risk reduction planners that locally-led, nature-based approaches are the most desirable and viable option to pursue. The broader purpose is to ensure that the investment and development plan prioritises these approaches alongside (or instead of) grey and hybrid engineering measures.

Following on from this, it is important to understand what the target audience needs or wants to know, in order to reach a particular decision, take on board a certain perspective or viewpoint, or be persuaded to carry out a specific course of action in favour of multiple values. This determines the information and messages that should be presented to them. For example, the key factors when choosing between different climate adaptation and disaster risk reduction options may be cost-effectiveness and value for money, the area and number of people protected, and the extent to which each measure is able to deal with extreme weather events. Additional arguments, such as targeting the poorest, generating co-benefits for the local population, or contributing to other sectoral goals may help to influence decision-making in a certain direction, but not be the main factors.

Last but not least, the delivery and timing of the communication is critical. Not only does this relate to how, by whom and in what form information is presented and delivered, but also when and under what circumstances. For example, conferences, campaigns, or the launch of new policies, laws and programmes may provide ideal opportunities to also talk about the multiple values of nature. Multiple values can then be integrated into a pre-arranged event, which convenes a broad range of stakeholders around a particular issue or topic. While it is sometimes possible to plan for communications events well in advance, this is not always the case. Particular entry points or windows of opportunity may arise (and pass) very quickly. For example, nature-based, locally-led climate adaptation and disaster risk reduction investments may stand a particularly high chance of being accepted and leading to change in the immediate aftermath of a major flood, drought or landslide, when such issues are at the forefront of decision-makers' minds, as well as being high on the political agenda, and in the eye of the general public.

WHAT KINDS OF APPROACHES AND INDICATORS ARE REQUIRED TO MONITOR DEVELOPMENT PROGRESS AND IMPACT TAKING INTO ACCOUNT DIVERSE WORLD-VIEWS AND MULTIPLE VALUES?

Development planning almost always involves developing a monitoring framework. This should include appropriate indicators and targets with which to measure changes in nature's contributions to people, across different values and value-holders. For example, the success of the forest conservation project might not just be measured in terms of improvements in habitat area and quality, species diversity and wildlife numbers, but also judged in terms of changes in access to and benefits from harvested resources, perceptions of cultural and spiritual values, community involvement in forest governance and management, competition and conflict over forest land and resources between different groups, and a variety of other indicators of nature's benefits and human wellbeing that have meaning at the local level.

At the same time, monitoring of multiple values progress and impacts usually requires inclusive and participatory approaches to data collection, analysis and reporting. For example ecologists, biologists, economists and other scientific or technical "experts" may have only a minor role to play in setting targets, choosing indicators or collecting monitoring information about forest status or conservation impacts. Instead, there may be a need to work with anthropologists, community-based organisations and value-holders themselves to design and deliver the monitoring plan, and to interpret and act on the information it yields.

8.3 WHAT KINDS OF TOOLS CAN BE USED TO DELIVER DECISION SUPPORT?

Decision support tools can be grouped into four main categories: those dealing **with information, communication, engagement, and capacity**. While developing these tools rarely demands new technical data and research, it does require strategic planning. As the main aim is to influence and equip stakeholders to make more informed decisions, there is a need to understand what kind of support the target audience needs and wants in order to better take account of the multiple values of nature.

Detailed information will already have been generated in the framing, diagnosis and response stages about the values of nature, key value-holders, other affected stakeholders, and the way in which different groups and interests may be affected by the development plan. This information now needs to be reviewed and possibly expanded, but rarely needs to be repeated. For example, it may be necessary to undertake a capacity needs assessment, or to formulate a communications strategy, stakeholder engagement plan and monitoring framework. These will be used to guide and support the delivery of the development plan and its component activities. Each becomes a "living" document that is continuously modified and updated as development implementation proceeds.

In order to do this, it is necessary to think carefully – and strategically – about how to position, target and deliver the decision support that is required to ensure that multiple values are considered in the development process. Multiple values-related support tools must be tailored to the intended audience, the decision-making processes that are to be influenced or guided, and to the development context. Methods such as stakeholder mapping and assessment, social network analysis, institutional and context analysis (all described above in ↳ section 6.3) are often particularly useful in understanding these process aspects, and identifying information, communication, engagement and capacity needs for different groups.

It should also be noted that designing and providing effective decision support on multiple values typically requires a fundamental shift in the processes and rules of engagement that govern how information is conceptualised, generated and communicated between groups. The principles of multi-stakeholder participation, dialogue and knowledge co-production are key to this. **Box 11** presents a case study example of efforts to rethink the ways in which stakeholders and decision-makers in the Circumpolar North engage, communicate and work together to address the impacts of climate change and development processes on local socio-economic systems and the values of nature.

BOX 11

Enhancing communication and engagement between Indigenous Peoples, researchers and decision-makers in the Circumpolar North

The Circumpolar North has been changing rapidly over recent decades. This is due to a combination of anthropogenic drivers such as migration and industrialisation, and climate-induced changes such as permafrost thawing and increased frequency of extreme events. Understanding and adapting to both types of changes is important to Indigenous Peoples, as well as the global community. It requires a collaborative response, where people work together in a way that incorporates their differing needs, values, interests, knowledge systems and practices. This, in turn, demands a meaningful and equal dialogue, effective communication and full engagement between key stakeholders.

As local communities, decision-makers and scientists perceive changes and impacts differently, a meeting of the three groups was convened in Salekhard, Siberia. It was attended by representatives of different Siberian Indigenous Peoples living on the territory of the Yamal-Nenets and Khanty- Mansiysk Autonomous districts, Yakutia, Chukotka, Murmansk and the Arkhangelsk Region in Russia, as well as from Norway, Finland and Sweden.

Indigenous Peoples voiced their opinions about how scientists could contribute useful information and data. While recognising their own success in adapting to change, they underlined that in some cases local knowledge and traditional practices are no longer adequate or relevant to deal with the impacts of development and climate change. Input from scientists was seen as essential. Local people made various recommendations about how to improve engagement and communication between scientists and Arctic communities. A "translation" of scientific information is required to make it clear and understandable at the local level. This is not just to do with language, but also requires building local technical capacity, so as to enable the appearance of a new generation of Indigenous scientists.

Another point was that researchers often depend on accessing lands occupied by local peoples, and receive a great deal of help from the indigenous community. However, far too often, this is not a two-way exchange. Researchers do not leave behind knowledge, and make little effort to request advice on technical matters from local specialists. There is a need to shift the perception and role of Indigenous Peoples from being the "objects" of research to being direct participants and knowledgeable experts. A deeper form of partnership should be promoted where questions and hypotheses are formulated jointly, to make research relevant to local peoples and more realistic to the local situation.

Indigenous participants felt that decision-makers should be much more actively engaged in translating the findings of research into policy and action, and take an intermediary position between scientists and local stakeholders. Organisational infrastructure should be developed to enable this process of consultation and communication, and to formalise a greater role for local peoples in decision-making processes. However, it was emphasised that communication and engagement have little meaning unless there are also material changes in the way that land, resources and the proceeds of "development" are shared with the local community. There was a strong opinion that decision-makers should strive to overturn current inequalities in the distribution of development benefits, subsidies and other resources, to ensure that Northern Indigenous Peoples' way of life can be protected and their wellbeing enhanced in a changing climate.

From Callaghan et al. 2020

TRANSFORMING DATA INTO DECISION SUPPORT INFORMATION

The approaches and methods for generating information and acting on its results described in ↳ chapters 5, ↳ 6, ↳ 7 involve a much more inclusive process than has

traditionally been applied in development planning. It is necessary to integrate different perspectives, worldviews and knowledge systems. The evidence, results and recommendations it generates needs to be transformed into decision-support information. Exactly what type and form of information is required will, of course, depend on both the decision-maker and the decision-making process that is to be informed, guided or influenced. As described above, it is necessary to think carefully about what the target audience wants or needs to know in order to make a particular decision, or choose a particular course of action.

The transformation process tends to be particularly critical when seeking to influence decision-making processes in formal institutions and organisations such as governments, development agencies, financial institutions or companies. Most follow fairly rigid and standardised appraisal and evaluation procedures that demand particular inputs and information, and must demonstrate certain results if development processes are to be approved.

Public investment programmes and donor-funded development projects, for example, are almost always required to undergo a cost-benefit analysis or similar economic appraisal process prior to approval, so as to demonstrate that they generate an acceptable rate of return or value for money. The focus is usually on generating social and economic benefits, or securing broader public interest goals. Most companies use similar forms of investment appraisal and analysis, although tend to focus more on market returns and private profits. In some cases, non-monetary (although usually still numerical) methods are used in combination with, or as an alternative to, financial and economic appraisal and analysis. For example, information may be required on the number of beneficiaries, area of impact, changes in output, consumption, health, nutrition, or other physical indicators. Some form of environmental impact assessment or other screening exercise (such as social, health or safety impact assessments) are also often required.

Transforming information into these kinds of metrics can pose something of a challenge. The indicators that are used to represent multiple values often do not fit easily into formal decision-making frameworks, which tend to focus almost exclusively on economic and numerical measures of value, and are concerned primarily with instrumental values. Sometimes the methodologies and frameworks that are used to weigh up information and guide decision-making can be modified. For example, it may be possible to incorporate non-market values and non-monetary numéraires into cost-benefit analyses, to include additional indicators and expressions of nature's benefits in environmental impact assessments, or to use decision tools that are based on qualitative measures or allow for multiple value-holders and expressions of value such as multi-criteria analysis. In many cases this is not however possible, especially in the more rigid and structured appraisal and evaluation procedures that tend to be used by governments and larger companies. For these reasons, it is almost

always necessary to find additional or alternative ways of strategically communicating multiple values to decision-makers in a convincing manner, which will resonate with and have an influence on the target audience. These are considered in the following section.

COMMUNICATION

Communicating multiple values involves far more than just disseminating the findings and recommendations of studies. It is about fostering awareness and dialogue between different stakeholders. As such, it should be seen as a social and political process that conveys information from one group to another in terms and messages that resonate with the intended audience. In many, if not most, cases the frames of reference of the target audience differ widely from those in which the knowledge has been generated, and the values and worldviews it describes.

There is no "one size fits all" solution to communicating interesting, appropriate and useful information on multiple values. Just as the groups that influence decision-making and make decisions are not homogenous and may have contrasting (and even conflicting) needs, interests, mandates and power, so the information that is required to influence them varies. Good communication does not occur automatically, and will not happen just because the information collection process has been well-designed and inclusive, or has generated practical, policy-relevant and technically-robust findings. There is also a need to tailor both the messages that are shared and the means by which these are communicated to the specific needs and interests of the target audience, and the cultural, social, institutional and decision-making milieu in which they are embedded.

Decision-makers are not always ready to accept or act on multiple values information. However good the study that generated the information was in technical terms, and however convincing the case it makes for integrating multiple values and value-holders, this does not necessarily mean that it will be effective in influencing decision-making. It is now widely accepted that communication efforts are much more likely to be successful when they manage information generation and dissemination in ways that simultaneously enhance its relevance, credibility and legitimacy. Relevance refers to the applicability of the information to the needs of the target audience. Credibility deals with the technical adequacy and believability of the evidence and arguments presented on multiple values. Legitimacy reflects the perceived validity and trustworthiness of both the information generation process and its results as being fair, unbiased, and respectful of stakeholders' divergent values and beliefs.

ENGAGEMENT

Stakeholder engagement is central to every stage of the process of integrating multiple values into development planning. It provides a particularly important source of support to decision-making. Ensuring that key value-holders are brought into the development planning process and given the opportunity to represent their values increases local support, provides valuable momentum and backing to push for decision-making change, and also ensures that the development process is inclusive and representative. Engaging with a broad range of stakeholders and value-holders is also a critical means of promoting dialogue, long-term collaboration and co-creation of solutions, as the development process advances.

Various tools and instruments for stakeholder engagement have already been described in the diagnosis and response stage of the integration framework (↳ chapters 6 and ↳ 7). A particularly key concern is to understand, early on, the relative power and interests of different development stakeholders that have the potential to impact on multiple values. Power interest grids, for example, provide a simple way of identifying and prioritising different levels of stakeholder engagement and strategies for fostering participation during the integration process (Kosmus et al. 2018, Vogler et al. 2017).

The most appropriate and effective means of engaging with different groups and individuals will of course vary, depending on the purpose of the development plan, as well as the stake that they have in it, and their power to influence its outcomes in relation to the values of nature. There are many different types and levels of stakeholder engagement. These range from the active handover of full leadership and authority, through collaboration and shared responsibility, direct participation in key activities, interactive dialogue, two-way communication and consultation, to more passive approaches such as information sharing and occasional contact.

CAPACITY

Capacity is a key decision support tool, as well as an important enabling condition for integrating multiple values. There is a need to develop stakeholders' capacities to represent and give space to multiple values at every stage of development planning and implementation. This requires taking a much broader view of capacity than is usually the case in development projects. Traditionally, the main focus has been on building the technical capabilities and skills of development "targets" or "beneficiaries" to benefit from development activities (for example in tree planting, climate-smart agriculture or business planning). Integrating multiple values also requires ensuring that development planners, decision-makers, influencers and key players also have the capacities to understand, respond to and address multiple values and diverse worldviews.

Capacity needs therefore include building an understanding of the need for and usefulness of integrating multiple values in the first place, and then creating the expertise that is required to do this. As well as technical and analytical knowhow, this also requires 'soft skills' such as facilitation, coordination, negotiation and communication. For example sustainable land management efforts might involve providing training to farmers in new techniques for crop cultivation, processing and marketing. Integrating a multiple values perspective may well also require that local government authorities and agricultural extension workers are equipped with new skills such as negotiation, facilitation and communication.

The IPBES Values Assessment distinguishes six capacity dimensions to integrating nature's values into decisions. This provides a useful checklist for determining which capacities are required in order to support the integration of multiple values into the development plan, and include:

- Capacities that allow the diverse **values of nature to be recognised and understood** by all relevant actors taking part in decision-making:
  - **Motivational** capacities ensure that there is awareness of, and desire to, consider diverse values in decisions. These enhance the likelihood of actors developing positive attitudes and behaviour towards nature.
  - **Analytical** capacities enable selecting and using suitable tools to acquire and synthesise all necessary information on values and valuation.
  - **Bridging** capacities entail facilitation, learning and reflection skills, and provide a pluralistic value perspective to problem-oriented decision-making by bringing together different ways of knowing and fostering social learning processes.
- Capacities to effectively guarantee that nature's diverse **values are mainstreamed into decision making**:
  - **Negotiation** capacities entail being able to represent one's own interests, to make compromises, and to accept the views of others. By enhancing such capacities, more robust uptake of valuation results is likely to occur, especially when broadening the process of negotiation towards building relations and cooperation.
  - **Social networking** capacities include coordinating across scales and different social groups, managing expectations and risks, adapting, and acting. They can also offer social mechanisms to complement, or in certain cases even replace, some formal rules and standardisation in governance decisions.
  - **Governance** capacities refer to the ability to make accountable, encompassing, transparent, participatory, and law-abiding decisions. These capacities are important to ensure that fair institutions can be created to incorporate more diverse values of nature in an explicit and legitimate way.

9.

REVIEW & SUMMARY: operationalising multiple values

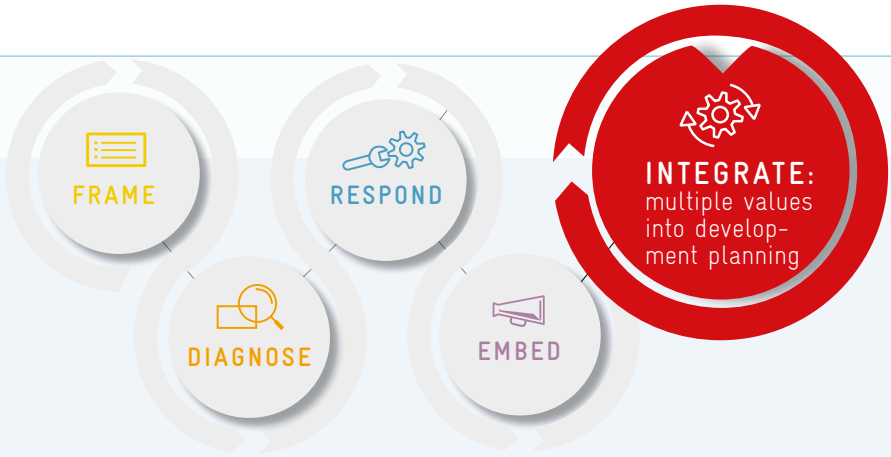


Figure 10: Integration of multiple values as a result of preceding stages

MULTIPLE VALUES AND THE DEVELOPMENT PROCESS

There is **no single way of viewing nature, or valuing its benefits.** How (and why) people interact with nature and consider it to be important varies greatly – between cultures, for different individuals and groups within the same culture, across time and space, and in different situations and settings.

Almost all development processes depend in some way on the natural environment, and many also impact on it. People experience and are affected by these dependencies and impacts in widely differing ways. There is a need to recognise, respect and reflect these multiple values of nature (and the diverse worldviews that underpin these) in development planning. **Development planning can be better informed, more effective, inclusive and sustainable when what is at stake, and for whom, is known.**

REASONS FOR INTEGRATING MULTIPLE VALUES INTO DEVELOPMENT PLANNING

- Facilitates **more environmentally and socially sustainable** long-term development.
- Allows for additional **nature-based development opportunities** to be recognised and captured.
- Enables **costs, losses, damages and risks to nature and people** to be better identified, avoided and tracked.
- Encourages policies and plans to be **more inclusive and representative** of the many different groups that value nature, and of their diverse worldviews.

- Promotes **stakeholder engagement and participation** in the development process.
- Permits **power asymmetries relating to use, access and control over nature's benefits** to be recognised, addressed and balanced.
- Safeguards the **rights and interests of more vulnerable groups to benefit from nature**, especially those that are traditionally excluded from decision-making.
- Leads to improved **understanding and collaboration** between groups, helps to avoid conflicts over nature.
- Makes it easier to **tailor development approaches and interventions** to the local context and socio-ecological system.
- Improves the likelihood of **political, social and economic acceptance, buy-in and uptake** from different value-holders of nature and in the light of their varying needs and diverse worldviews.

Figure 11: Checklist of key stages, aims, questions and tools in the integration framework

Stages	Aim	Questions to address	Key approaches and tools	Input to development plan/project
Frame: align the development goals with multiple values	Take as broad as possible a range of values and stakeholder interests relating to nature's contributions to people into account in the development plan	• Do the development goals and vision for the future consider nature's contributions to people? • Which values of nature are targeted? • Whose values of nature are prioritised? • Are particular values and value-holders underemphasised or omitted? • Can the development goals be better aligned with the multiplicity of nature's values and diversity of value-holders?	• Incorporate as broad as possible a range of views and inputs • Include anthropologists or ethno-ecologists in the core planning team • Involve value-holders in nature as key participants	The development goals and priorities should be better aligned with multiplicity of nature's values and value-holders
Diagnose: describe and assess the links to nature and its benefits	Consider the full range of nature-related dependencies and impacts, including how different values and value-holders may be affected under future development scenarios	• How are the development goals shaped by, and how do these depend or impact on, the multiple values of nature and its benefits? • How are these linkages manifested for different groups, and in different contexts? • Who stands to gain or lose out under future development scenarios? • Which nature-related risks, opportunities, trade-offs and divergence of interest might arise, and need to be addressed in the development plan?	• A pluralistic approach, incorporating a balance of method and metrics • Conventional biodiversity and ecosystem service assessment methods (economic and financial, biophysical, socio-cultural, health) • Participatory and stakeholder-based valuation techniques • Valuation by and for Indigenous Peoples and local communities	There should be a clear idea of the various risks and opportunities that the development plan or project poses for multiple values (and vice versa), as well as the trade-offs and divergence of interest that may arise between different value-holders

Respond: identify and design instruments to leverage change	Factor all relevant nature values and value-holders into the development process, ensure that no group's quality of life or wellbeing is negatively impacted – and, wherever possible, is enhanced	• Are there possibilities to more effectively reduce nature-related risks or capture nature-related opportunities for particular groups? • Can efforts be made to manage, balance or share more equitably the costs and benefits that arise in relation to the value of nature? • What can be done to address and resolve potential conflicts or divergence of interests between different stakeholder groups? • Is there a need to better represent, safeguard or empower particular values, value-holders or worldviews?	• Economic and financial instruments • Legal and regulatory instruments • Social and cultural instruments • Rights-based and customary instruments	A series of instruments should have been identified which can be used in the development plan or project to encourage, enable and require stakeholders to act in support of multiple values
Embed: transform and communicate information as decision support	Maintain a holistic and balanced perspective is throughout the process of finalising, adopting, implementing, monitoring and evaluating the development plan	• How, and with whom, is it necessary to engage to ensure that diverse worldviews and multiple values are adequately represented and considered in the development process? • What kinds of evidence and information do decision-makers need and want to factor in multiple values, and how can these messages be best formulated and delivered? • What kinds of approaches and indicators are required to monitor development progress and impact taking into account diverse worldviews and multiple values?	• Transforming data into decision support information • Communication • Engagement • Capacity	Key engagement, information, communication and capacity needs to integrate multiple values should have been clearly identified, and strategies formulated to use these tools to support decision-making during the approval, implementation, monitoring and evaluation of the development plan or project

GUIDING PRINCIPLES AND BEST PRACTICES

- **Paradigm shift**: rethink and expand conventional, market-based models of "development", which may not be universally valid, appropriate or beneficial in all situations or for all stakeholders, and often serve to undermine the multiple values of nature.
- **Inclusivity**: incorporate as broad as possible a range of perspectives, interests and inputs in development plans, and in the processes that are undertaken to develop and implement these, especially the more marginalised and vulnerable groups who are traditionally left out of the development planning process, such as Indigenous Peoples and local communities.
- **Engagement**: consult, communicate and work collaboratively with all stakeholder groups that stand to be affected by the dependence and impact of the development plan on nature and its benefits.
- **Participation**: actively empower key value-holders to determine decision-making outcomes, and be involved as partners or leaders in the processes that are used to define priorities, generate and apply information, choose between development alternatives, and plan and implement development activities.
- **Plural valuation**: consider and make visible a wide diversity of world views, balance of methods and metrics relating to nature's benefits, that together recognise and represent as fully as possible the multiplicity of values and diversity of conceptualisations that exist in any given context.
- **Knowledge weaving and co-creation**: follow a collaborative process that respects and brings together diverse perspectives and worldviews, brokers and crosses the boundaries between different knowledge systems, and includes all relevant stakeholders and value-holders in the process of conceptualising, gathering and sharing information.
- **Strategic communication**: the information and messages about multiple values and value-holders that are shared with decision-makers and other stakeholders need to be credible, relevant and legitimate to those actors, as well as being communicated in an appropriate and meaningful form.

CHALLENGES AND RISKS

- Integrating multiple values can be **complex – although does not necessarily have to be more costly and time consuming**. However, in many cases, extra thought and capacities will need to be invested in the development planning process, and traditional ways of putting together development planning teams and of generating and communicating information will need to be rethought.

- Multiple values approaches frequently **challenge the status quo and "business as usual"** ways of planning development. Decision-makers and other stakeholders in the development process may be unwilling to take up multiple values findings and recommendations, for political reasons, because of entrenched interests, and due to power imbalances between value-holders and decision-makers.
- **Broader governance systems** at the global level, within and between countries, governments, donors and other institutions and organisations do not always support or allow for a more inclusive approach to development that integrates multiple values and value-holders. While a multiple values approach involves identifying instruments which will help to modify people's behaviour and create more enabling conditions, it is unlikely to be able to change the overall political and economic system.
- While it is relatively straightforward to operationalise principles of participation, engagement, inclusivity, knowledge co-creation and weaving at the project or site-level, **managing the process of integrating multiple values at the large scale** can be considerably more difficult. There is typically a much greater number and diversity of participants, topics, challenges and influences to deal with in national, or even sectoral, development plans. It is rarely feasible to investigate all values and value-holders in detail, or to engage directly with each and every stakeholder. Inevitably, some level of compromise is required.
- There are considerable **practical and methodological challenges** in undertaking the work and facilitating the processes that are required to integrate multiple values and value-holders into development planning. It is also often difficult to bring together different values and knowledge systems within the appraisal frameworks and metrics that are used to justify and choose between development alternatives.

FURTHER GUIDANCE IN THE IPBES VALUES ASSESSMENT

Chapter 1 provides an overview of why the values of nature matter, and how valuation can help to address the biodiversity crisis and navigate towards more just and sustainable futures. This is particularly relevant to understanding the rationale to integrating multiple values into development planning, covered in ↳ chapter 2 of these guidelines.

Chapter 2 introduces and explains the typology of values, and the different life frames that relate to these. It also reviews ways of understanding the factors and contexts that underpin how different people conceptualise the value of nature. This elaborates much of the background theory and concepts summarised in ↳ chapter 3 of these guidelines.

Chapter 3 enumerates the different types of methods that can be used to value nature, describes key considerations and best practices for improving the relevance, robustness

and effectiveness of valuation efforts, and proposes a three-step approach to carrying out valuation studies. This provides more detailed explanations and examples of the valuation approaches and methods used for the framing and diagnosis stages of the integration framework, covered in ↳ chapters 5 and ↳ 6 of these guidelines.

Chapter 4 investigates how values can be expressed in decision-making. It provides more detailed explanations and examples of the policy and practical instruments that are described in the response stage of the integration framework, covered in ↳ chapter 7 of these guidelines.

Chapter 5 deals with approaches and methods for developing visions of "just and sustainable futures" and enabling transformative change. It touches on concepts and tools that can be used to align development goals with multiple values in the framing stage of the integration framework (covered in ↳ chapter 3 of these guidelines). These also have relevance for identifying and addressing links between development plan and multiple values during the diagnosis and response stages of the integration framework (↳ chapters 6 and ↳ 7 of these guidelines).

Chapter 6 considers different policy options for integrating multiple values and leveraging transformative change, providing detailed explanations and case studies that relate directly to the instruments described in the response stage of the integration framework, covered in ↳ chapter 7 of these guidelines. It also identifies gaps that still need to be addressed in order to operationalise the diverse values of nature, with a particular emphasis on capacity development. This relates closely to the embedding stage of the integration framework, covered in ↳ chapter 8 of these guidelines. A stepwise process is proposed to guide the operationalisation of nature's diverse values in different decision-making contexts, which overlaps closely with the integration framework presented in this guide.

At the end of the IPBES Values Assessment, in Annex I, there is a glossary, which elaborates and explains many of the terms and definitions used in these guidelines.

The IPBES Values Assessment chapters, annexes and supplementary materials can be obtained from https://www.ipbes.net/the-values-assessment

10.
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