

IPBES assessment of the diverse values and valuation of nature¹.

Glossary

Actor: Actors may be understood as individuals operating certain roles or functions in society. Hence, the same individual may for instance (i) serve as a political actor, (ii) operate as an economic actor, and (iii) act as a community member/citizen. They may therefore emphasise different goals and values when dealing with particular issues. For this reason, the values assessment uses a typology that includes these actors recognizing the fuzzy relationships that exist among them (*see Chapter 6*).

- **Affected actors:** People and organizations who are directly involved in (and dependent on) the implementation of biodiversity related decisions and have their own stakes and interests.
- **Key players:** People and organizations who both can influence and become affected by decisions - that is, in certain contexts, they serve as influencers, while at the same time are involved in actual decision making (Grimble & Wellard, 1997; Miles, 2017).
- **Influencer:** People and organizations who influence decision-making processes related to biodiversity and therefore have an impact on those who implement the decisions.

Behaviour change: interventions can close or ‘bridge’ the gap between values and behaviour by ensuring that the various conditions are met that together enable people to act consistently with sustainability-aligned values. These conditions can be categorized as providing (i) capability, (ii) opportunity and (iii) motivation to act. *Source: Chapter 5.*

Biocultural diversity: Biocultural diversity is considered as biological and cultural diversity and the links between them (CBD, 2019). *Source. IPBES Global Assessment glossary*

Capacity development: Process through which individuals, organizations and society obtain, strengthen and maintain their capability to set and achieve their own development objectives over time. *Source: Chapter 6.*

Capacity dimensions: Capacity development can be described across six broad capacity dimensions. Motivational capacity builds awareness and desire to consider multiple values. Analytical capacity provides knowledge and tools to analyse multiple values. Bridging capacity

¹ This is the final text version of the Glossary. A laid-out version of the full assessment report will be made available in the coming months.

brings together different ways of knowing and doing, often creating new knowledge in the process. Negotiation capacity navigates trade-offs and mainstreams into policy and practice. Social network capacity is the capacity to learn together, act and adapt or transform. Governance capacity creates formal and informal mechanisms for a socially just governance environment. These dimensions embody many concepts and principles for capacity development and recognition in decision making. *Source: Chapter 6.*

Communication: “A two-way process aimed at mutual understanding, sharing of values and action.” (Hesselink et al., 2007) *Source: Chapter 5.*

Conflict: Refers to a situation where opposing attitudes, beliefs, identities, interests, norms or values coexist. This can lead to an active disagreement between people. Conflicts are likely to arise when individuals or groups in a given decision-making process feel their values are being ignored; or when they cannot agree on the underlying value rationality, or the way in which values will be integrated, traded-off or reconciled to inform a given decision. When different values collide in a decision-making situation, the conflict can be described as a value conflict. *Source: Chapter 2 & Chapter 4.*

Conventions: They refer to practical rules about how to undertake certain actions. They simplify interaction and facilitate coordination. Examples are the language, measurement scales (e.g., money, weight., length) and directions in the sky. Management systems, professional codes and dressing codes are other forms. *Source: Chapter 2*

Crowding out: It has been hypothesized that the rise of economic incentive approaches (so-called ‘market-based’ approaches) in environmental policy making, could lead to a change in values towards a commercialization of nature (i.e., people putting more weight on instrumental values and less on intrinsic values of nature in decision-making). This risks undermining intrinsic motivation or pro-nature values and mindsets. *Source: Chapters 4 & 5.*

Decision-making: The process of making decisions can happen at the individual level or amongst groups and entails the prioritisation of certain values. This prioritization greatly influences which issues are found worthy of consideration, do and do not become part of the agenda, as well as determine which decision-makers are considered socially legitimate to participate in the process. *Source: Chapter 1.*

Ecosystem services: The benefits people obtain from ecosystems. In the Millennium Ecosystem Assessment, ecosystem services were divided into supporting, regulating, provisioning and cultural. This classification, however, is superseded in IPBES assessments by the system used under “nature’s contributions to people”. This is because IPBES recognises that many services fit into more than one of the four categories. For example, food is both a provisioning service and also, emphatically, a cultural service, in many cultures. *Source: IPBES Glossary.*

Epistemology: Epistemology is the theory of knowledge. It is concerned with how we know what we know; in other words, it relates to methods for producing knowledge (their assumptions, methods, scope). *Source: Chapter 1.*

Governance: A comprehensive and inclusive concept of the full range of means for deciding, managing, implementing and monitoring policies and measures. Whereas government is defined strictly in terms of the nation-state, the more inclusive concept of governance recognizes the contributions of various levels of government (global, international, regional, sub-national and local) and the contributing roles of the private sector, of nongovernmental actors, and of civil society to addressing the many types of issues facing the global community (IPCC, 2018). *Source: IPBES Global Assessment Glossary*

Governance framework: Taken together, the institutional framing of specific economic, political decision-making and socio-cultural processes of relevance to the governance of human-human and human-nature relationships are termed governance frameworks. *Source: Chapter 2.*

Human rights: The inalienable fundamental rights of each and every human being as acknowledged in the United Nations Declaration of Human Rights (United Nations, 1948). Arguments of intragenerational justice basically refer to human rights. *Source: Chapter 5.*

Human-nature relations: The ways in which people relate to and engage with the natural environment, which are diverse and linked to worldviews, values and attitudes embedded in daily life (Flint et al., 2013; Macnaghten & Urry, 1998; Schultz et al., 2005). *Source: Chapter 2.*

Incommensurability: Absence of a common unit along which values can be measured and compared. *Source: Chapter 2.*

Indigenous and Local Knowledge (ILK) systems: Indigenous and local knowledge systems are social and ecological knowledge practices and beliefs pertaining to the relationship of living beings, including people, with one another and with their environments. Such knowledge can provide information, methods, theory and practice for sustainable ecosystem management. *Source: IPBES Glossary.*

Indigenous and Local Knowledge holders, Indigenous and Local Knowledge Experts: Indigenous and local knowledge holders are understood to be persons situated in the collective knowledge systems of indigenous peoples and local communities with knowledge from their own indigenous peoples and local communities; indigenous and local knowledge experts are understood to be persons from indigenous peoples and local communities who have knowledge about indigenous and local knowledge and associated issues (they may also be indigenous and

local knowledge holders); and experts on indigenous and local knowledge are understood to be persons who have knowledge about indigenous and local knowledge and associated issues, not necessarily from indigenous peoples and local communities. *Source: IPBES (IPBES/5/15 2017).*

Indigenous People and Local communities (IPLC): Indigenous peoples and local communities (IPLCs) are, typically, ethnic groups who are descended from and identify with the original inhabitants of a given region, in contrast to groups that have settled, occupied or colonized the area more recently. *Source: IPBES Glossary.*

Individual behaviour: Individual behaviour is usually understood as anything an animal or a person does in response to a particular situation or stimulus. Actions may be overt (motor or verbal) and directly measurable, or covert (activities not viewable but involving voluntary muscles) and indirectly measurable.

Institutions: Institutions are the (informal) conventions and norms, and (formal) legal rules which influence choices at all levels of society. The concept also encompasses the notions of habits and practices, referencing to the habituation of conventions and norms. Institutions structure both formal and informal interactions among people and organizations and influence human-nature relationships. As social structures, they shape how decisions are made and implemented and how responsibilities are distributed. Institutions are power-carriers as they shape people's identities and behaviour regarding particular values and interests.

- **Value-articulating institution:** Methods for valuation of nature and NCPs may be termed value articulating institutions since they are based on a set of rules concerning the valuing process:
 - Participation: who participates; in what capacity; and how.
 - What counts as data and what form it should take (prices, weights, arguments, physical measures etc.).
 - The kind of data handling procedures involved: how data is produced; and how data are compared, weighed or aggregated (Vatn, 2005).

Justice: Justice traditionally refers to the fair treatment of people, or ‘what we owe to each other’, but its scope may also be extended to include duties to other units of nature such as animals, rivers or Pachamama. *Source Chapter 1.*

- **Distributive justice:** Focuses on the allocation among stakeholders of costs and benefits, include intergenerational and intragenerational justice. *Source: Chapter 3.*
- **Ecological justice:** Non-human entities as subjects of justice (rights-holders). Rights of nature vs. rights to nature. *Source: Chapter 5.*
- **Environmental justice:** Fair treatment and meaningful involvement of all people regardless of race, colour, national origin, or income with respect to the development,

implementation, and enforcement of environmental laws, regulations, and policies (EPA, 1998). Fair treatment means that no single group of people should bear a disproportionate share of the negative environmental consequences arising from industrial, governmental, or commercial operations or policies. Meaningful involvement means that: (i) people must have the opportunity to participate in decisions about activities that may affect their environment and/or health; (ii) the public's contribution can influence the regulatory agency's decision; (iii) the public's concerns will be considered in the decision-making process; and (iv) the decision makers must seek out and facilitate the involvement of those potentially affected (Beretta, 2012). *Source: Chapter 2.*

- **Epistemic justice:** Universal participation in terms of equality of all inquirers in access to information and knowledge (Anderson, 2012). Disputes over meaning and importance, among powerful and powerless social groups, on what knowledge counts as true, valid and important in decision-making (Fricker, 2013; Medina, 2013). The idea of epistemic injustice also relates to distributive unfairness in the distribution of epistemic or knowledge goods and services such as information or education (Coady, 2010). *Source: Chapter 2.*
- **Procedural justice:** refers to fairness in the political processes that allocate resources and resolve disputes. It involves recognition, inclusion, representation and participation in decision-making" (McDermott et al., 2013). *Source: Chapter 3.*
- **Recognition:** In social-environmental justice, recognition is about the respect for (community) ways of life, local knowledge, and cultural difference (Schlosberg, 2004). *Source: Chapter 3.*
- **Retributive justice:** Polluter pays principle, "Responsibility [...] falls more to those in a position of power to effect change, and those who have the privilege of benefiting from conservation whilst not being exposed to the corresponding costs." (Martin et al., 2016). *Source: Chapter 5.*

Kinship-centric principle (other humans): Actions of mutual support between humans such as sharing, gender equity, social equity, honesty, humility, modesty. Some of these elements can be revealed as relevant through valuation methods and approaches, as well as by practices associated with them. *Source: Chapter 3.*

Kinship-centric principle (non-humans): e.g., animals, plants and spirits, and such approach forms part of an indigenous cultural identity. Maintaining reciprocal and healthy relationships through a continuum with animals, plants and the lands where they reside involve the giving and taking of resources in appropriate ways, at appropriate times. In some cases, animals and plants are seen and treated as equals to humans and shape and reshape human relations with nature. Often, the values embedded in these relationships drive human behaviour and are elicited through certain valuation methods. Appreciation (no disregard) for spiritual entities (e.g., sacred mountains, rivers, among others) residing on ancestral lands, can be an example of a Kinship-central approach (focused on non-humans). *Source: Chapter 3.*

Knowledge (systems): Indigenous and local knowledge systems are understood to be dynamic bodies of integrated, holistic, social and ecological understandings, know-hows, practices and beliefs pertaining to the relationship of living beings, including people, with one another and with their environment. Indigenous and local knowledge is grounded in territory, is highly diverse and is continuously evolving through the interaction of experiences, skills, innovations and different types of wisdom expressed in multiple ways (written, oral, visual, tacit, practical and scientific). Such knowledge can provide information, methods, theory and practice for sustainable ecosystem management. Indigenous and local knowledge systems have been, and continue to be, empirically tested, applied, contested and validated through different means in different contexts. Western Academic knowledge systems relate to often explicit knowledge that has been derived from applying formal methods in academic or technical institutions. *Source: Chapter 2.*

Life frames of nature's values (LFs or life frames): Frames that illustrate the in which people conceptualise how nature matters. Life frames mediate between ways of being/living and the prioritization of different sets of broad and specific values. The four archetypes of *living from*, *living in*, *living with* and *living as* nature are not mutually exclusive. They offer a range of sources-of-concern for nature that can overlap or be emphasized in diverse contexts (section 2.2.6). *Source: Chapter 2.*

Motivation: One's general willingness to do something. It is the set of psychological forces that compel you to take action. Motivation can be extrinsic – based on changes in external conditions, e.g., external rewards. Intrinsic motivation refers to an inherent drive to seek out challenges and new possibilities. *Source: Chapter 2.*

Motivation crowding: Providing extrinsic incentives for certain kinds of behaviour – such as promising monetary rewards for accomplishing more of intrinsically/ normatively motivated action – can undermine that motivation for performing the behaviour, diminished motivation to act. *Source: Chapter 2.*

Norms: Norms are rules about what is accepted behaviour (Lapinski & Rimal, 2005). They are supporting underlying values as defined by a society. They are therefore ‘ought to’ statements defining what one may or may not do (Hitlin & Piliavin, 2004). Examples are rules about care for nature and what is just treatment of others.

Pathways: In the context of the IPBES global assessment, trajectories toward the achievement of goals and targets for biodiversity conservation, the management of nature and nature's contributions to people, and, more broadly, the UN 2030 Sustainable Development Goals (DOI: 10.5281/zenodo.5657079)

Policy: A definite course or method of action selected from among alternatives and in light of given conditions to guide and determine present and future decisions. *Source: IPBES Glossary.*

Policy instrument: Policy instruments are understood as the different interventions (formal rules, laws, social norms and processes etc.) made by decision-makers (governments and public authorities, intergovernmental organizations, companies etc.) to ensure that (public) policy objectives are supported and achieved by influencing the behaviour of other stakeholders (Bemelmans-Videc et al., 2011; Persson, 2006). The IPBES Catalogue differentiates among four different types of policy instruments: i) economic and financial instruments (financial incentives handling out or taking away economic resources), ii) legal and regulatory instruments (formal rules, laws and regulations), iii) rights-based instruments and customary norms (incl. human and collective rights as well as customary norms and institutions of indigenous people), and iv) social and cultural instruments (information-based instruments and voluntary or collective actions with an emphasis on the intertwined relationships between ecosystems and sociocultural dynamics). *Source: Chapter 6.*

Policy-cycle: Policies are often cyclical in that emerging problems are addressed with the formulation of policies, followed by their implementation and subsequent evaluation. These stages in the policy cycle can be formalized with assigned roles and processes, and consist of many other sub-stages. For example, the policy formulation stage can include problem definition, identification of alternatives, consultations and public hearings, and finally, a decision on the chosen policy. Implementation can include allocating budgetary, assigning implementation roles to different actors, setting specific targets, and possibly developing guidelines. The evaluation and redefinition of the problem can be conducted with the help of formal monitoring systems as a periodic exercise, or it can be an ad-hoc process or a mere societal discussion of the impacts and consequences of existing policies. *Source: IPBES Glossary.*

Policy-support tools and methodologies: Approaches and techniques based on science and other knowledge systems, including indigenous and local knowledge, that can inform, assist and enhance relevant decisions, policy making and implementation at local, national, regional and global levels to protect nature, thereby promoting nature's contributions to people and a good quality of life (IPBES_4_INF_14, n.d.). *Source: IPBES Glossary.*

Power: Power is the capacity of actors to mobilize agency, resources, and discourses, as well as to utilize or shape institutions to achieve a goal. Power can be both constraining and enabling, and the capacity of one actor can inhibit the capacity of another actor. Power in the context of human-nature relationships can be manifested in multiple and non-exclusive ways through discourses and social structures. Discursive power is the power to use discourses or knowledge production to shape worldviews, identities, and values. Related to discursive power is the power to frame how issues are understood, communicated, and discussed (framing power). Structural power is the

result of historically-specific socio-cultural, political, and economic systems that reproduce social positions and/or hierarchies among social groups. Structural power relations determine, for example, who has the power to make rules regarding access, use, and responsibilities about nature/NCP, and who is excluded from this process (rule-making power); as well who has the formal or informal rights regarding nature/NCP which in turn determines the use of these assets and whose values are emphasized (operational power).

Practice: A customary action, habit, or behaviour; a manner or routine. *Source: Chapter 3.*

Preferences: They denote *stated* or *revealed choices* of one or more alternatives over others and can be expressed in economic or sociocultural terms. Despite being considering synonyms for value in some disciplines (e.g., economics), preferences should be understood as rankings of possible outcomes in terms of their specific value to people (e.g., preferences related to health and good quality of life) (section 2.2.4.4). *Source: Chapter 2.*

Quality of life (Good quality of life): Within the context of the IPBES Conceptual Framework – good quality of life refers to the achievement of a fulfilled life, a notion which may vary significantly across societies and cultures. There is a common understanding that quality of life is composed of both shared common aspects across cultures (e.g., food security) and contextual aspects (e.g., self-determination), which can be assessed objectively (e.g., caloric intake) or subjectively (e.g., life satisfaction) applying quantitative and qualitative indicators. Good quality of life is generally portrayed through material conditions (e.g., level of food availability) as well as through individual aspirations (e.g., personal; professional; spiritual) and capabilities (e.g., education) for people to live in accordance to what they themselves consider to be “a good life”, which can differ across cultures, contexts and individuals. The role of nature in achieving a good quality of life is complex and heterogeneous, and depends on the social-ecological context, and on the way people portray themselves in relation to nature. *Source: Chapter 1 building on IPBES definition.*

Respect (towards nature): This respect is expressed in/identified through ceremonies, rituals, actions in sacred sites whose purpose is to renew a sense of thankfulness and reverence/deep respect to the land or the sea (terrestrial or marine landscape) or to their components. *Source: Chapter 3.*

Responsibility/care for the land: This is about integrity of ancestral territory leadership in caring for nature. Actions and behaviours that minimize or prohibit exploitative use of materials, no waste resources philosophies, awareness about sustainability for the future generations; and preservation of cultural knowledge (ancestor heritage). IPLCs and cultural identities are strongly connected to their lands (and seascapes). Their values often emerge in relation to their context and can become visible through issues related to the integrity of ancestral territory, leadership in caring for nature,

actions and behaviours that minimize or prohibit exploitative use of materials within their lands or in other geographical terrains. A philosophy of zero waste of resources is enacted while thinking about the health and the future of the land (and sea), awareness about sustainability of the land (and sea) for the future generations; and preservation of cultural knowledge (ancestral heritage). *Source: Chapter 3.*

Rightholder: A group of people (a community and its individual members), with a common identity and a shared set of rules, who rightfully has title over their territory and the natural resources belonging to it. Being a right holder implies that the group's wellbeing is promoted by the right, and that the group (and its individual members) have the capacity to exercise their self-determination related to the given territory. From an Indigenous perspective, Right holder refers to the collective rights and entitlements of Indigenous peoples, a group of people, and a community including all individual members, with a shared cosmovision/worldview, identity, beliefs, values, and ethics. They have inherent collective rights over their territories and natural resources. Implicit in having a "right holder" status implies that the holder of it promotes the group's well-being and can exercise their self-determination related to the given territory.

Scenarios: Scenarios are representations of different possible futures from a defined starting point (IPBES, 2016; Mahmoud et al., 2009). They are focused on highlighting or exploring drivers of change and the impacts of changes in these over a specified time frame. In doing so they enable decision-makers to anticipate potential changes and develop timely responses to these (Mahmoud et al., 2009). *Source: Chapter 5.*

Shared values: Shared values are the broad and specific values that people express collectively, in groups, communities, and across society as a whole. They can be formed through long-term processes of socialisation and shorter-term processes such as group deliberations.

Social values: Social values refer to value indicators at a social scale, such as social willingness to pay in economics. They can be established by aggregation from individual values through analytical procedures, or through social processes, such as deliberative valuation, that lead to shared social values.

Social behaviour: defined as interactions among individuals, normally within the same species, that are usually beneficial to one or more of the individuals. It is believed that social behaviour evolved because it was beneficial to those who engaged in it, which means that these individuals were more likely to survive and reproduce. Social behaviour serves many purposes and is exhibited by an extraordinary wide variety of animals, including invertebrates, fish, birds, and mammals. Thus, social behaviour is not only displayed by animals possessing well-developed brains and nervous systems.

Social construction: Emphasizes that social/cultural processes behind the creation of artefacts, values and institutions. To the extent that these constructs influence people's identity and personality, one talks of social construction of the human. *Source: Chapter 2.*

Social learning: Social learning is both the cooperation of partners and the outcome of this cooperation that occurs most efficiently through joint problem solving and reflection within learning networks (Berkes, 2009) can be reinforced by experiences (Bandura, 1971). *Source: Chapter 6.*

Social values: Social values refer to value indicators at a social scale, such as social willingness to pay in economics. They can be established by aggregation from individual values through analytical procedures, or through social processes, such as deliberative valuation, that lead to shared social values.

Stakeholder: Actors that are involved in decision making processes and implementation, either as influencing the decision-making process, or as being dependent on, and therefore facing the consequences of, the decisions (incl. Public, private and civil society actors). For the values assessment, 13 stakeholder groups have been identified that can be categorised in three categories: Influencers, affected actors and key players (See section 6.1.2.2).

Sustainability: Understandings of sustainability are diverse and deeply rooted in different cultural contexts. For some, sustainability emphasizes the need for maintaining biodiversity and life support functions on the planet. For others, sustainability refers to maintaining nature's contributions to people that enhance people's livelihoods and quality of life. Sustainability can also entail maintaining or managing landscapes as well as relations of connectedness and reciprocity with nature. In the context of the globally agreed sustainable development goals, sustainability refers to an emergent outcome or property of such sustainable development, whereby trajectories of change stay within critical social-ecological thresholds, and in which current and future generations everywhere have the ability to meet their human needs, rights and aspirations.

Trade-offs: A trade-off is a situation where an improvement in the status of one aspect of the environment or of human well-being is necessarily associated with a decline in or loss of a different aspect. Trade-offs characterize most complex systems and are important to consider when making decisions that aim to improve environmental and/or socio-economic outcomes. Trade-offs are distinct from synergies (the latter are also referred to as "win-win" scenarios): synergies arise when the enhancement of one desirable outcome leads to enhancement of another. Adapted from (Raudsepp-Hearne et al., 2010) and (Daw et al., 2015). *Source: IPBES Glossary.*

Transformative change: The IPBES Global Assessment defines transformative change as 'a fundamental, system-wide reorganisation across technological, economic and social factors,

including paradigms, goals and values. We build on this definition through reference to the depth, breadth and dynamics of system reorganisation. Depth refers to change that goes beyond addressing the symptoms of environmental change or their proximate drivers, such as new technologies, incentive systems or protected areas, to include changes to underlying drivers, including consumption preferences, beliefs, ideologies and social inequalities (IPBES, 2019; Patterson et al., 2017; Scoones et al., 2015). Breadth refers to change across multiple spheres, with emerging consensus that transformation requires co-evolutionary change across different spheres of society, including personal, economic, political, institutional and technological ones (Harvey, 2010; O'Brien & Sygna, 2013; Pelling et al., 2015; Temper et al., 2018; Westley et al., 2011). Dynamics and processes refer to the emergent patterns of change across 'depths', 'breadths' and time that unfold as non-linear pathways. These may be characterised by 'punctuated equilibrium' in which more stable periods of incremental change are punctuated by bursts of change in which underlying structures are reorganised into new states (Patterson et al., 2017; Westley et al., 2011).

Source: Chapter 5 FOD based on IPBES Global Assessment.

Pathways: "Pathways" consist of descriptions of different strategies for moving from the current situation towards a desired future vision or set of specified targets. They are descriptions of purposive courses of actions that build on each other, from short-term to long-term actions into broader transformation. They are closely related to normative or policy or target-seeking scenarios.

Source: ECA assessment, proposed by Chapter 5.

Valuation: It is the process of documenting the existence of values, identifying when and where and by whom they are expressed, that in turn allows characterizing values. Valuation of nature can inform decision-making about numerous human-nature relationships; it can support decision processes about alternative projects or policies, inform the design of policy tools and instruments, for conservation and sustainable management of nature or to improve justice. Outside the formal policy space, valuation is also undertaken by academia, the private sector, non-governmental organizations and by indigenous and local communities (IPLC). IPLC undertake valuation not only to make decisions about nature, but also to assess their relationships with nature, to plan collectively, resolve conflicts, defend their territories, and as a means for strengthening and reciprocating their connections with nature. *Source: Chapter 3.*

Valuation approach: Valuation approaches are higher level assumptions, ideas or beliefs that underpin methods. They translate key decisions on how a method is to be applied or how the information generated by methods is to be interpreted. For each approach there are often multiple accepted methods that adhere to the basic assumptions and ideas of the given approach. Valuation approaches can also be manifested as "traditions" or widely accepted and expected protocols for undertaking valuation. Valuation traditions are heavily informed and influenced by the cultural context and/or epistemological worldviews. *Source: Chapter 3.*

Valuation methods: Are the specific techniques and accepted formal procedures that are applied to gather and analyse information from nature and society in order to understand or make explicit the state of nature and its importance to people a) quantity, quality and status of nature including its spatial and temporal variations; b) the relevance or importance of nature to people and societies; and c) the nature of human-nature and nature-human relations in terms of how people and societies embed and live out their values of nature (as actions, principles, worldviews or philosophies). *Source: Chapter 3.*

Values: Values reflect life goals, beliefs and general guiding principles. They also reflect the opinions or judgements of the importance of specific things in particular situations and contexts. When considering the values of nature, values can refer to nature itself, how nature contributes to people's quality of life, in addition to the way people express the value of life-supporting processes, functions, and systems – interrelating biophysical, spiritual, or symbolic aspects. Within the assessment we refer to broad, specific values and value indicators; as well as to instrumental, intrinsic and relational values. *Source: Chapters 1 and 2.*

- **Broad values:** They refer to life goals, general guiding principles and orientations towards the world that are informed by people's beliefs and worldviews (Dietz et al., 2005). Broad values include moral principles, such as justice, belonging, freedom, but also life goals, like enjoyment, health, prosperity. Broad values influence specific values and provide them with a general context and meaning. *Source: Chapter 1*
- **Specific values:** Specific values of nature are opinions or judgments regarding the importance of nature in a particular situation or context. Specific values can be grouped into three types: instrumental, intrinsic and relational values. *Source: Chapter 2.*
- **Value indicators:** Indicators of value are quantitative and qualitative measures of the importance of nature to people. Indicators used to express the value of nature can be biophysical, economic and socio-cultural. *Source: Chapter 2.*
- **Instrumental value:** Instrumental values, which relate to things that are a means to a desired or valued end or satisfy people's preferences, are the most commonly reported value type in environmental policy documents. They are generally associated with nature as an asset, capital or resource and are strongly related to the concept of ecosystem services. *Source: Chapter 2.*
- **Intrinsic value:** Intrinsic values relate to the values of nature expressed independently of any reference to humans as valuers and include entities such as a habitat or species that are worth protecting as ends in-and-of themselves. They are consistent with biocentric worldviews and with the understanding of values as existing objectively in nature. *Source: Chapter 2.*
- **Relational value:** Relational values refer to the importance of desirable, meaningful, and often reciprocal relationships – beyond means to an end – between humans and nature, and among humans (including across generations) through nature (e.g., sense of place, spirituality, responsibility, care, reciprocity, stewardship) {2.2.4.3}. *Source: Chapter 2.*

- **Diverse values:** Diverse values arise from the different lenses through which people interpret human-nature relationships (i.e., worldviews), and as a result, diverse values have had different meanings across disciplines, knowledge systems, cultures, languages and social-ecological contexts. This assessment focuses on the diverse values of nature which emerge from the different ways in which people perceive nature and build their relations with it. *Source: Chapter 1*
- **Value formation:** 'Value formation' refers to how values develop in the first place. It can occur in individual-focused processes, through socially-oriented processes or in social-ecological processes that do not separate humans and nature. *Source: Chapter 2*
- **Value expression:** Values can be expressed explicitly through language and implicitly through actions like choices, decisions made, everyday practices or rituals. Valuation methods are used to undertake explicit valuation. Methods and approaches to integrate and bridge values, provide knowledge about nature's values as input to decision-making. *Source: Chapter 2*
- **Value change:** Value change refers to the modification of people's values or of the prioritization of their values in particular contexts. Value change processes occur at different social scales, from large-scale cultural shifts (e.g., intergenerational shifts due to changing demography or changes to shared values) to small-scale personal shifts (e.g., values formation and change over an individual's lifetime). Individual, social and social-ecological experiences and interactions influence value change; examples include formal and informal education, social practices, group conformation processes, personal experiences and shocks, and social-ecological events (e.g., natural disasters, pandemics). *Source: Chapter 5.*
- **Value monism:** Derives from a utilitarian perspective on human-nature relationships which privileges some values of nature over others (usually monetary values). *Source: Chapter 2.*
- **Values of nature:** The values of nature encompass the different layers of the values typology, including worldviews (and underpinning knowledge systems, languages and cultures), broad values, specific values, indicators and preferences. In addition to instrumental values, the values of nature include reciprocal values and perspectives of nature where nature and people are not seen as separate, and where intrinsic values are acknowledged on a par with values of nature's benefits to people. *Source: Chapter 1.*
- **Value pluralism:** Value pluralism is the idea that there are several values which may be equally correct and fundamental, and yet in conflict with each other. It is the opposite of value monism. More broadly speaking, value pluralism may also refer to different people having different worldviews and hence different values. In addition, these plural values may be incommensurable (i.e., they do not share a single unit of measurement, a single metric, and that there is no objective way of comparing them or weighting them against each other) *Source: Chapter 3.*

Values of nature: When referring to values of ‘nature’, we expand on the concept proposed by Díaz et al. (2015) by recognizing that individual and group understandings of nature are socially constructed, and that different social groups have different conceptualizations of the relationship between the human and non-human world. For IPBES, nature refers loosely to the non-human living world including the scientific categories of biodiversity, ecosystem structure and functioning, evolution, the biosphere, humankind’s shared evolutionary heritage and biocultural diversity. In addition, IPBES recognises other worldviews, including those from IPLCs, in which people recognize the diverse entities and elements of nature such as rivers, mountains, plants, animal species, existing within the planet denoted by categories like Mother Earth and systems of life (Coscieme et al., 2020). Among many IPLCs, nature is often viewed as inextricably linked to humans, not as a separate entity. By recognizing this wide understanding of the concept ‘nature’, we are then able to recognize the diversity of values that emerges within these different ways of seeing the world. *Source: Chapter 1.*

Valuing: Is the more implicit act of assigning a value to something, which, in contrast to valuation, does not necessarily follow an explicit and formal process. Thus, while we all go through the process of ‘valuing’ on a daily basis for our day-to-day decisions, valuation is most often an exercise that is undertaken by ‘experts’ or a specifically designed team systematically applying a specific method. *Source: Chapter 1.*

Visions (of the future): “Visions” are descriptions of a desirable future (an endpoint in time), which society or parts of society want to achieve. They usually consist of statements depicting orienting goals, and the assumptions, beliefs and paradigms that underlie the desired future. Visions can take the form of policy targets, but can also be formulated by a range of actors, e.g., from the private sector to address business targets or civil society to address social targets. *Source: ECA assessment, proposed by Chapter 5.*

Worldviews: Mental lenses through which humans social groups perceive, think about, interpret, inhabit and modify the world. Rooted in *cultural traditions*, they shape and are shaped by *knowledge systems, languages and values*. *Epistemic* worldviews pertain to diverse knowledge systems that hold often implicit philosophical assumptions about how nature and values can be known, while *human-nature* worldviews guide perspectives on our conceptualization of and relationship with nature based on underlying value systems. *Source: Chapter 2.*

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