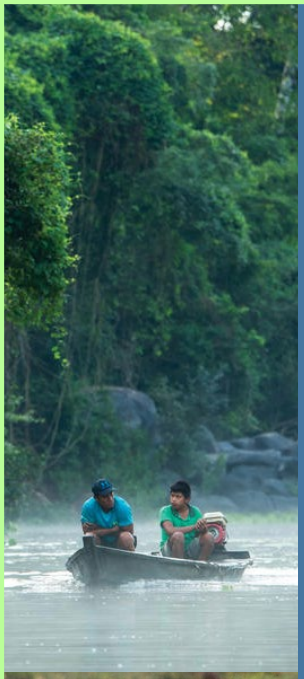

Thematic Joint Strategic Framework
2022-2026

Dignity in life, harmony with nature

Resilient social-ecological systems as the fundament for sustainable development and human well-being

February 2021

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SECORES
Network on Social-Ecological Resilience

BOS+ CEBioS WWF

Join For Water UNI4COOP VIA Don Bosco

Content

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Acronyms

5DC	Five Deltas Façade Atlantic Collective
ACODEV	Fédération des ONG francophones et germanophones actives dans la coopération au développement.
ARES	Académie de recherche et d'enseignement supérieur
AWAC	Walloon Air and Climate Agency
BBL	Bond Beter Leefmilieu
BD	Broederlijk Delen
BELSPO	Belgian Science Policy
BNNR	Belgian Network on National Resources
CAH	Coalition Against Hunger
CBD	Convention on Biological Diversity
CBFM	Community Based Forest Management
CBO	Community Based Organisation
CEBioS	Capacities for Biodiversity and Sustainable development
CHM	Clearing House Mechanism
COICA	Coordinadora de las Organizaciones Indígenas de la Cuenca Amazónica
CONFENIAE	Confederación de Nacionalidades Indígenas de la Amazonía Ecuatoriana
COP	Conference of the Parties
CSO	Civil Society Organisation
D4D	Digital for Development
DAC	OECD Development Assistance Committee
DGD	Directorate-general Development Cooperation and Humanitarian Aid
DRC	Democratic Republic of Congo
EC	European Commission
ECOWAS	Economic Community of West African States
ENABEL	Belgian Development Agency
ES	Ecosystem Services
EU	European Union
FABANDES	Foro de Actores Belgas de Países Andinos
FAO	Food and Agriculture Organization of the United Nations
FEE	Forum for Environmental Education
FIABEL	Federatie van Institutionele Actoren België
FRDO	Federale Raad voor Duurzame Ontwikkeling
FSC	Forest Stewardship Counsil
GCECE	Global Citizen Experience Centre for Expertise
GDP	Gross Domestic Product
GIS	Geographic Information System
GIZ	Gesellschaft für Internationale Zusammenarbeit
G-JSF	Geographic Joint Strategic Framework

GTI	Global Taxonomy Initiative
HE&SI	Higher Education and Science Institute
HES4SD	Higher Education and Science for Sustainable Development
IA	Institutional Actor
IDP	Iles de Paix
IIED	International Institute for Environment and Development
IPBES	Intergovernmental Platform on Biodiversity and Ecosystem Services
IPCC	Intergovernmental Panel on Climate Change
IPLC	Indigenous People and Local Communities
IUCN	International Union for Conservation of Nature
IWRM	Integrated Water Resources Management
JSF	Joint Strategic Framework
KAP	Knowledge, Attitude, and Practice
KLIMSEC	Research Platform on Climate Change and Human Security
L&A	Lobbying and Advocacy
LEAF	Learning about Forests
LMMA	Locally Managed Marine Area
LNOB	Leave no one Behind
MCR	Mutual Capacity Reinforcement
MEA	Millennium Ecosystem Assessment
MIHARI	Madagascar Locally Managed Marine Area Network
MOS	Milieuzorg op School
MRV	Measuring Reporting Verification
NGCA	Non-Governmental Cooperation actors
NGO	Non-Governmental Organisation
OECD	Organisation for Economic Co-operation and Development
PHE	Population Health Environment Network
PNALC	Plataforma Nacional América Latina y Caribe
PRCM	Regional Partnership for Conservation of the Coastal and Marine Zone in West Africa
R&KM	Research and Knowledge Management
RAMPAO	Network of Marine Protected Areas of West Africa
RBINS	Royal Belgian Institute of Natural Sciences
RMCA	Royal Museum for Central Africa
SBI	Subsidiary Body on Implementation
SBOA	Stichting ter Bevordering van het Biodiversiteitsonderzoek in Afrika
SBSTTA	Subsidiary Body for Scientific, Technical and Technological Advice
SDGs	Sustainable Development Goals
SG	Strategic Goal
SME	Small and Medium sized Enterprises
SPI	Science-Policy Interface
T-JSF	Thematic Joint Strategic Framework

TOC	Theory of Change
UAC	Université Abomey-Calavi
ULB-C	ULB Coopération
UN	United Nations
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
VIA DB	VIA Don Bosco
VLIR-UOS	Vlaamse Interuniversitaire Raad- Universitaire Ontwikkelingssamenwerking
VSF	Vétérinaires Sans Frontières
VVOB	Education for Development
WASH	Water, Sanitation and Hygiene
WWF	Worldwide Fund for Nature

Glossary

Ecosystem	A dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit. https://www.cbd.int/ecosystem/description.shtml Ecosystems can be "natural and undisturbed", such as wilderness areas or natural parks, but they can also include agricultural areas, or urban ecosystems or built environments. When we speak about ecosystems in this T-JSF, we are usually describing a natural complex.
Ecosystem service	The benefits people obtain from ecosystems. In the Millennium Ecosystem Assessment, ecosystem services can be 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 (https://www.ipbes.net/glossary).
Human Well Being	A perspective on a good life that comprises access to basic resources, freedom and choice, health and physical well-being, good social relationships, security, peace of mind and spiritual experience. Well-being is achieved when individuals and communities can act meaningfully to pursue their goals and can enjoy a good quality of life (https://www.ipbes.net/glossary).
Planetary boundaries	The planetary boundaries concept presents a set of nine planetary boundaries within which humanity can continue to develop and thrive for generations to come. Crossing these boundaries increases the risk of generating large-scale, abrupt or irreversible environmental changes. (https://www.stockholmresilience.org/research/planetary-boundaries.html)
Resilience	Definition of IPBES glossary (https://www.ipbes.net/glossary): the level of disturbance that an ecosystem or society can undergo without crossing a threshold to a situation with different structure or outputs. Resilience depends on factors such as ecological dynamics as well as the organizational and institutional capacity to understand, manage, and respond to these dynamics Definition from the Stockholm Resilience Centre (https://stockholmresilience.org/research/resilience-dictionary.html): the capacity to deal with change and continue to develop
Social-ecological resilience	The capacity to adapt or transform in the face of change in social-ecological systems, particularly unexpected change, in ways that continue to support human well-being (http://dx.doi.org/10.5751/ES-08748-210341)
Social-ecological system	Social-ecological systems are linked systems of people and nature. The term emphasizes that humans must be seen as a part of, not apart from, nature; that the delineation between social and ecological systems is artificial and arbitrary. (https://stockholmresilience.org/research/resilience-dictionary.html)

1. Introduction

In the wake of the opportunity to develop a framework around thematic issues, 4 NGOs with a history of collaboration came together and identified a common cause: to preserve, as much as possible, and increase the resilience of freshwater, forest, and other ecosystems in developing countries. A new thematic framework was born and centred around the four basic or 'bio-physical' Sustainable development Goals (6=water, 13=climate, 14= life on earth, 15= life under water). The concept note was approved by the Minister of Development Cooperation in June 2020.

Each of the four actors represents a certain area of intervention within the Belgian Development Cooperation, related to 'environment':

1. Join For Water is mainly concerned with the protection and conservation of water resources and the access to drinking water, hygiene, sanitation, and water for agriculture in the framework of integrated water resource management;
2. BOS+ is mainly concerned with the protection of forests and re-forestation for the benefit of these ecosystems as carbon sink, for their biodiversity and for the ecosystem services as benefits to local communities;
3. WWF-Belgium focuses on conserving, sustaining, and restoring biodiversity hotspots for the direct benefit of local livelihoods and also ensuring sustainable value chains;
4. CEBioS, a program at the Royal Belgian Institute for Natural Sciences (RBINS) carries out policy support and capacity building about biodiversity in the framework of the Rio Convention of Biological Diversity.

To remain focused, all organisations agreed from the onset to concentrate on the 'resilience of social-ecological systems' within the broader topic of environment.

On 31 August 2020, Join For Water was designated as editor-in-chief of the present document. A writing group of 2 persons per organization was formed for the development of the JSF, and a first general planning was made.

Each member institution delegated staff members to participate in the first physical meeting (22nd September 2020) in Ghent, with virtual participation from ENABEL. The team identified the general approach and the next steps in this discussion. All subsequent meetings were held by Teams or Zoom, making use of interactive tools, e.g., white board, as a result of the COVID-situation. To ensure smooth coordination and progress, a core group with 1 - 2 designated members from each organisation conducted weekly meetings. The reflection process and preparation of the TJSF began and ended in a participatory, consensus-oriented method (Figure 1).

Within the redaction team, working groups were set up for the Theory of Change (TOC), a general context analysis, and the identification of strategic goals and approaches.
Reading circles with other staff members had to guarantee the approval by the four organisations and the fitting-in of their programme-plans for 2022-2026. A second general meeting for designated staff was held on 22 October to obtain the necessary feed-back in this regard.

End-November, an intermediate version of the TOC (including changes in actors), strategic goals and approaches was created in English, French, and Spanish and shared with partners, observers, other JSFs (country and thematic) and ENABEL.

Owing to the high interest expressed by other organizations, on the 4th of December 2020, we updated them on the progress to date, and received their input, prioritising synergies and complementarities and possible insertion of parts of their programmes in this T-JSF. Seventeen organisations were present. For those organisations requesting more active involvement in this framework, we accorded them a "Strategic Observer" status, instead of "normal observer", for other institutions. Strategic Observers will be consulted regularly in much more detail about the set-up of the JSF. Their feedback is considered important and will be taken into account whenever possible.

Figure 1 – Redaction timeline

Synergies and complementarities among the members for the upcoming Belgian and non-Belgian programmes were also explored during several meetings in different groups, sometimes organised per geographical region. In parallel, all four organisations compiled feedback from their field partners (outside of Belgium; see table below), to be incorporated into the framework document. When possible, this was organised in the country, by the country offices of each organisation or, in some cases, during online sessions.

Consultations with ENABEL were organised and contact was sought with BIO. Occasional meetings with other JSFs took place. A survey was set up to identify links with the other thematic and country JSFs. This provided information for (a) the two-pager to be included in other JSFs; and (b) possible synergies and complementarities. In the meantime, representatives of the redaction team attended several information and learning moments organised by the NGO-Federation, FIABEL and ACODEV.

End of 2020, Uni4Coop, the consortium of 4 university related NGOs (Louvain Coopération, Eclosio, ULB cooperation, and FUCID) and VIA Don Bosco expressed their interest in joining as members because internal strategic reflections inside their organisations had led to the explicit choice of outcomes directly related to resilient ecosystems. They, therefore, found it important to link these outcomes to this T-JSF. They were welcomed as new members because they will be able to contribute to the realization of the JSF in the period 2022-2026 based on their experiences in the field: Uni4Coop with their program on mangroves and VIA DB through their work with young people as actors for change on environment and resilience.

In January 2021, consultations took place with organisations more active on a political level (e.g., 11.11.11 and CNCD), with the other thematic JSFs and the G-JSFs, to explore options for joint learning, identify synergies and complementarities, and discuss ways to continue the exchanges in the future. And finally, this document was checked for consistency and rationale by an external consultant (Prof. Jean Hugé) and proofread by a native English speaker.

The following table gives an overview of the meetings with South partners in preparation of the thematic JSF.

Date	Country	Partners involved in consultation
17/11/2020	Ecuador	Protos EC, NCI, MCF, Ecociencia, WWF Ecuador, Altrópico
20/11/2020	Bolivia	IBIF, PROBIOMA
25/11/2020	Peru	DRIS
09/12/2020	Benin	EcoBénin; Capebio; African Parks; Université d'Abomey Calavy, Université de Parakou; IRHOB, JSF Benin
09/12/2021	Burundi and DRC	UNILU; UOB; MEDD/DDD; OBPE; CSB/UNIKIS; SCRID AGRI; ISP Bukavu; UNIBU; SOCEARUCO; AVEDECBU; ISTou; AGRAD RDC ONGD, Belgian Ambassy, JSF RDC
08/01/2021	Cambodia	WWF Cambodia; FLO; CYN; BINCO
21/12/2020	Mali	URCA, commune Bafoulabé, AMCID, OPIB Baguindea,
28/12/2020	DRC-Ituri	COSAE, IRI-Ituri, RHA, FORED, CFI, CIDRI
20/01/2021	Uganda	JESE, NRDI, HEWASA, KFF
29/01/2021	Haïti	Odrino
Continuous	DRC	WWF DRC

Chapter 2 provides the context analysis of this T-JSF (2.1) and the logical link to the Theory of Change (TOC) (2.2). The narrative behind the TOC is in chapter 2.2.1, and the actors involved in desired changes in chapter 2.2.2. There is no specific risk analysis in this section because the context, TOC, and strategic goals are one coherent part of this T-JSF. All risks are presented together in chapter 4 to avoid overlap and repetition. However, a more transversal risk analysis related to the SDG principles can be found in annex 2.

Chapter 3 describes the 4 strategic goals (SGs) (3.1), the changes for the different groups of actors that we expect at the level of influence for each goal, (3.2) and the approaches (3.3). The approaches are not presented at the end of each SG (3.1.2 to 3.1.5), but together in one chapter (3.3). In this way, the logical flow between the 4 goals is more evident, while all approaches and types of actions are summarized in one clear overview. The introduction to the SGs (3.1.1) is also where we highlight key principles, such as LNOB, gender mainstreaming, etc. In this chapter we also give a short overview on how the SGs relate to the DGD strategy notes.

As said before, **chapter 4** summarizes the risk analysis with reference to the levels of the TOC and the relevant strategic goals.

Chapter 5 gives an overview of the relations between this thematic JSF and (a) all country JSFs where members will (or at least foresee) be active. This is coherent with the 2-pagers agreed to between this T-JSF and the country JSFs. A very short analysis of each country is summarized in annex 3 and an overview of possible partners can be found in annex 4. At the end of this chapter, the links with the other 3 thematic JSFs are explained (2-pagers found in annex 5).

Chapter 6 explains possible synergies and complementarities. Chapter 6.1 is about internal S&C between members of this T-JSF; 6.2 on S&C with ENABEL; 6.3 with the political NGO umbrellas and 6.4 with other organizations.

Chapter 7 describes the collective learning process distinguishing internal learning (between members) and external learning (with other actors).

The final text became rather long mainly due to the connections we established with 23 countries and 3 T-JSFs. However, to keep the text readable, factual information is located in several annexes.

2. General context and Theory of Change

2.1. Context

2.1.1. Introduction

In this context analysis, we first introduce some key concepts, such as 'resilient ecosystems', the 'planetary boundaries', 'alternative stable states', and the central concept of 'ecosystem services', followed by an overview of the drivers which provoke biodiversity loss and ecosystem changes. Next, we explain the temporal aspects and the links to human well-being. Finally, we frame this T-JSF in the global processes and institutions on ecosystem change and transversal themes.

2.1.2. Resilient ecosystems

The 21st century has been termed 'the Anthropocene', the geological era where the influence of humans is so pervasive that all ecosystems on earth are altered by this influence on a scale akin to the great forces of nature[1]. At the same time, social and economic development of humanity is bound by the physical and ecological limits of the biosphere[2], as described further down with the concept of planetary boundaries. During the past centuries, the human impact on ecosystems of local and global scale reduced its resilience, which is the capacity of a system to both withstand shocks and surprises and to rebuild itself if damaged, and therefore its ability to support human development[2,3]. While ecosystems and humans are often considered separately, we consider them jointly within social-ecological systems. Ecosystems and social systems, whether local or global, are intrinsically linked with each other and shape each other continuously in complex ways[4]. The term emphasizes that humans must be seen as part of, not apart from, nature – that the delineation between social and ecological systems is artificial and arbitrary. In a similar vein, the current Covid-19 pandemic demonstrates exactly how fragile our global social-ecological system is: although the exact zoonotic processes are still not clear, most probably a high human density combined with ecosystem degradation and consumption of wild animals (e.g., pangolins, bats) created the right confluence of circumstance for the virus to 'jump' to humans, with the catastrophic consequences we now experience. The DGD note on Covid-19 and the socio-economic aspects[5] also states that environment and the transition to a sustainable ecology is fundamental to avoid similar problems in the future with the need for a Joint Strategic Framework on "*Restoration capacity of waters, forests and other ecosystems as a precondition for social justice, economic development, a stable climate and sustainability*".

[1]Lewis, S. L., & Maslin, M. A. (2015). Defining the Anthropocene. Nature, 519(7542), 171–180. https://doi.org/10.1038/nature14258

[2]Steffen, W., Richardson, K., Rockström, J., Cornell, S. E., Fetzer, I., Bennett, E. M., Biggs, R., Carpenter, S. R., De Vries, W., De Wit, C. A., Folke, C., Gerten, D., Heinke, J., Mace, G. M., Persson, L. M., Ramanathan, V., Reyers, B., &Sörlin, S. (2015). Planetary boundaries: Guiding human development on a changing planet. Science, 347(6223). https://doi.org/10.1126/science.1259855

[3]Ungar, M. (2018). Systemic resilience: principles and processes for a science of change in contexts of adversity. Ecology and Society, 23(4). https://doi.org/10.5751/ES-10385-230434

[4]Liu, J., Dietz, T., Carpenter, S. R., Alberti, M., Folke, C., Moran, E., Pell, A. N., Deadman, P., Kratz, T., Lubchenco, J., Ostrom, E., Ouyang, Z., Provencher, W., Redman, C. L., Schneider, S. H., & Taylor, W. W. (2007). Complexity of coupled human and natural systems. Science, 317(5844), 1513–1516. https://doi.org/10.1126/science.1144004
Walker, B., Holling, C. S., Carpenter, S. R., &Kinzig, A. (2004). Resilience, Adaptability and Transformability in Social– ecological Systems. Ecology and Society, 9(2).

[5] DGD (2020) Responding to the challenges of the COVID-19 pandemic in partner countries and partner organisations of Belgian development cooperation and humanitarian aid - Socio-Economic aspect; https://diplomatie.belgium.be/sites/default/files/downloads/09.10.2020_antwoord_van_dgd_op_de_uitdagingen_van_de_covid19_sociaaleconomisch_aspect.pdf

2.1.3. Planetary boundaries

In the planetary boundary framework, nine services or processes have been identified, all of which have specific boundaries that we should not surpass[6] (Figure 2). In 2015, an international team of 18 scientists found that four of nine planetary boundaries have been crossed as a result of human activity. Two of these - climate, and biosphere integrity - are core boundaries providing the planetary- level overarching system in which all the other planetary boundaries operate. On their own, they would likely be able to push the Earth system out of the current stable state (idem).

The effects of climate change are already visible with extreme weather events impacting agricultural production and coastal settlements, amongst others. Scientists estimate that global warming above 1.5°C puts us at high risk of runaway global warming and ecosystem collapse[7].

Biosphere integrity, where the biosphere is defined as the totality of all ecosystems on Earth and their biota, regulates the earth's material and energy flows and its responses to abrupt or gradual change. Biodiversity is an important component of biosphere integrity since it provides resilience to ecosystems[5] via its function as the reservoir of genetic diversity, the capacity to adapt to new situations, and the attribute of redundancy that enables other species/genotypes to take over the function, if a certain species or genotype is removed from the system.

The planetary boundaries are constantly being evaluated scientifically and their estimations improved. For example, the water planetary boundary: Rockström et al. (2009)[5] describe that green water use in rain-fed irrigation may have to increase by 50% and consumptive blue water in irrigated agriculture by 25% -50% by 2050 to ensure food security. This indicates that the safe operating space for water may already be largely compromised to cover human needs in the near future[8].

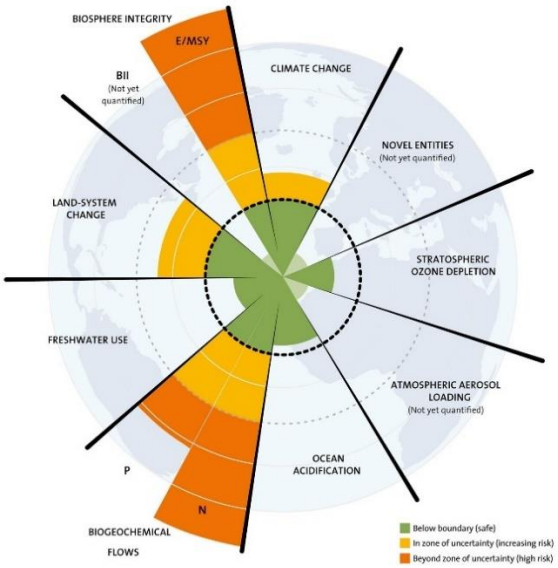


Figure 2 – Lokrantz/Azote based on Steffen et al.2015 (see footnote 2). In 2015, four of nine planetary boundaries have already been crossed as a result of human activity. More detailed and recent analyses of separate planetary boundaries are available e.g., the water planetary boundary by Gleeson et al (2020) (see footnote 8).

[6]Rockström, J. et al. (2009). Planetary boundaries: Exploring the safe operating space for humanity. Ecol.Soc. 14, 32 http://www.ecologyandsociety.org/vol14/iss2/art32/

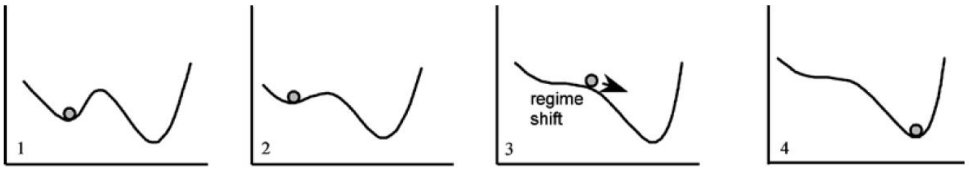
[7] IPCC, 2019: Summary for Policymakers. In: Climate Change and Land: an IPCC special report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems [P.R. Shukla, J. Skea, E. Calvo Buendia, V. Masson-Delmotte, H.- O. Pörtner, D. C. Roberts, P. Zhai, R. Slade, S. Connors, R. van Diemen, M. Ferrat, E. Haughey, S. Luz, S. Neogi, M. Pathak, J. Petzold, J. Portugal Pereira, P. Vyas, E. Huntley, K. Kissick, M. Belkacemi, J. Malley, (eds.)]. https://www.ipcc.ch/site/assets/uploads/sites/4/2020/02/SPM_Updated-Jan20.pdf

[8]Gleeson, T. et al. (2020). The Water Planetary Boundary: Interrogation and Revision. One Earth, 2(3), 223–234. https://doi.org/10.1016/j.oneear.2020.02.009

2.1.4. Ecosystem collapse and alternative stable states

Ecosystems with reduced resilience are more prone to tip towards another stable state. When planetary boundaries are surpassed, the resilience of ecosystems is reduced to the point that shifts become very likely. An abrupt shift in an ecosystem's state, with negative consequences on biodiversity and ecosystem services (ES), is termed "ecosystem collapse"[9]. After such collapse, ecosystems can re-invent themselves and re-organize into an (alternative) stable state (see examples in Figure 3). However, recovery towards the previous steady state potentially requires a huge effort and a restoration of environmental factors far beyond the previous state, due to non-linear behaviour of complex ecosystems[10]. Reorganization of ecosystems into a new stable state or restoration of ecosystems towards a previous stable state can happen with the assistance of human actions.

There is broad consensus that the global ecosystem should remain within the current stable state to guarantee long - term human survival. Ecological degradation inducing ecosystem collapse at a global scale would bring us to unknown terrain with all related risks (e.g., climate, diseases, food insecurity). This means humanity needs healthy ecosystems to benefit from all the services they provide.



clear-water lakes	phosphorous accumulation in agricultural soil and lake mud	flooding, warming, overexploitation of predators	turbid-water lakes
coral-dominated reefs	overfishing, coastal eutrophication	disease, bleaching hurricane	algae-dominated reefs
grassland	fire prevention	good rains, continuous heavy grazing	shrub-bushland
grassland	hunting of herbivores	disease	woodland
kelp forests	functional elimination of apex predators	thermal event, storm, disease,	sea urchin dominance
pine forest	microclimate and soil changes, loss of pine regeneration	decreased fire frequency, increased fire intensity	oak forest
seagrass beds	removal of grazers, lack of hurricanes, salinity moderation, spatial homogenization	thermal event	phytoplankton blooms
tropical lake with submerged vegetation	nutrient accumulation during dry spells	nutrient release with water table rise	floating-plant dominance

Figure 3 – Some examples of alternative states (Adapted from Folke et al. 2004.[11])

[9]Macdougall, A. S., McCann, K. S., Gellner, G., & Turkington, R. (2013). Diversity loss with persistent human disturbance increases vulnerability to ecosystem collapse. Nature, 494(7435), 86–89. https://doi.org/10.1038/nature11869
Scheffer, M., Carpenter, S., Foley, J. A., Folke, C., & Walker, B. (2001). Catastrophic shifts in ecosystems. Nature, 413(6856), 591–596. https://doi.org/10.1038/35098000

[10]Keith DA, Rodríguez JP, Rodríguez-Clark KM, Nicholson E, Aapala K, Alonso A, et al. (2013) Scientific Foundations for an IUCN Red List of Ecosystems. PLoS ONE 8(5): e62111. https://doi.org/10.1371/journal.pone.0062111

[11]Folke, C., Carpenter, S., Walker, B., Scheffer, M., Elmqvist, T., Gunderson, L., &Holling, C. S. (2004). Regime shifts, resilience, and biodiversity in ecosystem management. Annu. Rev. Ecol. Evol. Syst., 35, 557-581. https://doi.org/10.1146/annurev.ecolsys.35.021103.105711

Explanation of Figure 3

- Graph 1 and 4: two scenarios for a variety of ecosystems of a possible equilibrium state (small circle) and pathways of energy or difficulty to shift to an alternative state. In graph 1, the ecosystems are still in a healthy state, but may shift to the right (new state) by means of a large external event (small hyperbole between the two dips, representing the 'tipping point'). In graph 4, the alternative unhealthy state is difficult to be shifted back (steep lines or deep dip).
- Graph 2 provides some possible causes of decreased resilience (hyperbole between the two dips becomes flatter) for each of the ecosystems listed under graph 1. These causes will make it easier for the equilibrium state to pass the tipping point and fall in a new alternative undesired state. Note also that the alternative state is situated at a deeper level (Y-axis) than the original state, making it more difficult (demanding more energy) to return to the normal (or be restored).
- Graph 3 provides some triggers for these shifts to unhealthy or undesired states.

2.1.5. Ecosystem services

The Millennium Ecosystem Assessment, MEA[12] defines ecosystem services as the benefits people derive from ecosystems. These services are broadly classified in three or four categories: supporting, regulating (supporting and regulating services are occasionally combined to just "regulating"), provisioning (material, as described in Figure 4; next page), and cultural (non-material in Figure 4; next page). Since this original conceptualisation of ecosystem services, the IPBES has reinforced the message of their importance to human well-being. In their (IPBES) framework, they preserve the four original service types as identified by the MEA and take it a step further to discuss "Nature's Contribution to People". This progression places indigenous and local knowledge as well as cultural services at the centre of the links between people and nature. Figure 4 (next page) shows the relationship between ecosystem services and human well-being, as presented in the conceptual framework from the IPBES[13]. This relationship can differ depending on gender, age, socio-economic position etc., which is addressed under the chapter 3.1 (strategic goals) in this document

There is compelling evidence that human well-being is intrinsically linked to resilient ecosystems (functional ecosystems). Diaz et al. (2006)[14] discuss how biodiversity loss impacts human well-being; Naeem et al. (2016)[15] showcase a model that demonstrates how development actions leading to biodiversity rich ecosystems result in an overall net gain and stabilisation of ecosystem processes, which ultimately benefit humans via sustainable ecosystem service availability and quality. Also, the "One Health" approach conceptually takes a holistic and cross-sectorial view of disease, vector, humans, animals, and their environment. This explicit link between ecosystems and human health and the pathways linked to disease transmission is very pertinent, in view of the current pandemic crisis.

[12] See http://www.millenniumassessment.org/en/index.html

[13] Rochette, A.-J., Hugé, J., Janssens, I., Bocquet, E., Azadi, H., Vanderhaegen, K., Van Passel, S., Verbist, B., Jacobs, S., and Janssens de Bisthoven, L. 2021. Guidance for the assessment of ecosystem services in African Biosphere Reserves. A way forward to sustainable development. UNECSO, Paris. Not-yet-Published, Under Review.

[14] Diaz, S., Fargione, J., Chapin III, S., and Tilman, D. 2006. Biodiversity loss threatens human well-being. PLoS Biol 4(8):e277. DOI: 10.1371/journal.pbio.0040277

[15] Naeem S, Chazdon R, Duffy JE, Prager C, Worm B. 2016 Biodiversity and human well-being: an essential link for sustainable development. Proc. R. Soc. B 283:20162091. http://dx.doi.org/10.1098/rspb.2016.2091

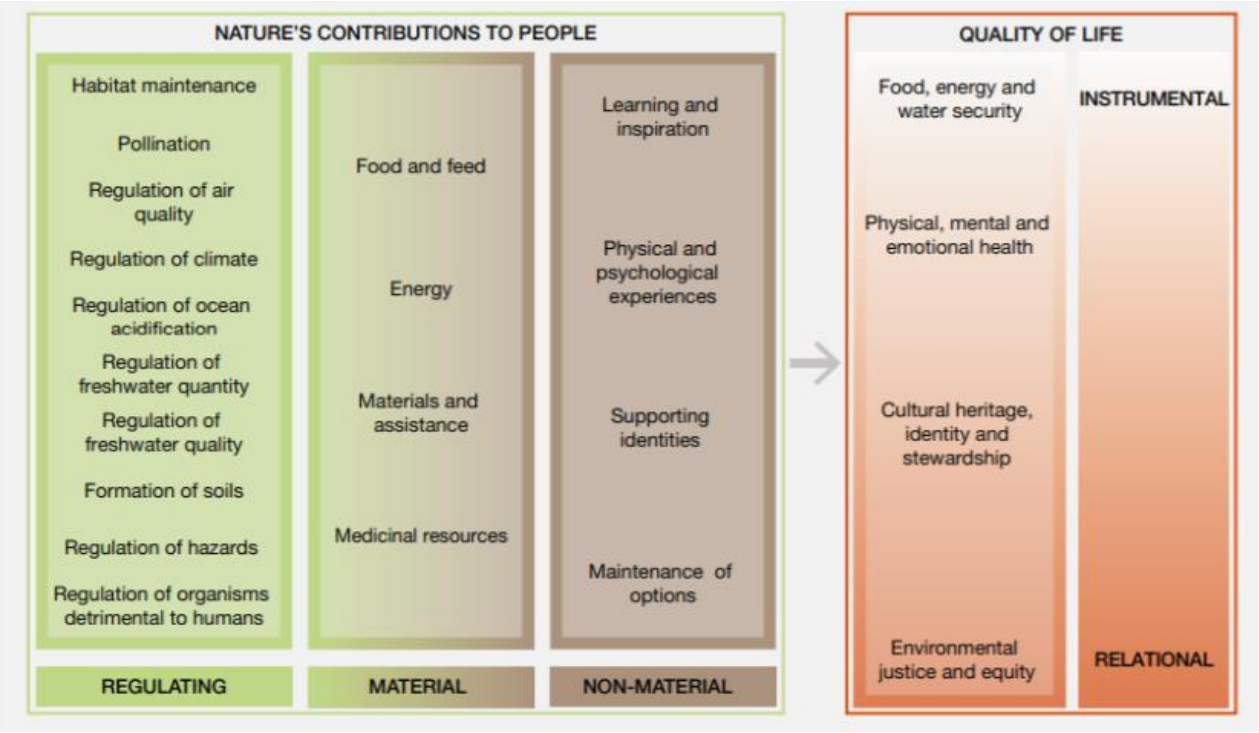


Figure 4 - IPBES framework describing Nature's Contribution to People and the link to Human Well Being with reference to regulating, material and non-material ecosystem services

One Health and resilient ecosystems

'One Health'[16] is an approach to designing and implementing programmes, policies, legislation, and research in which multiple sectors communicate and work together to achieve better public health outcomes. The areas of work in which One Health approach is particularly relevant include food safety, addressing pandemics caused by zoonoses (diseases that can spread between animals and humans, such as flu, rabies, and Rift Valley Fever, Covid-19), and combatting antibiotic resistance (when bacteria mutate after being exposed to antibiotics and become more difficult to treat).

In a comprehensive literature-based review, Sandifer et al. (2014)[17] provide persuasive arguments on the importance of nature (natural ecosystems and "green spaces") for human health. They describe 6 major pathways on how ecosystem services can support health and well-being: (1) psychological benefits, (2) physiological benefits, (3) decreased inflammatory and other non-infectious diseases, (4) regulation of transmission and prevalence of some infectious diseases, (5) aesthetic, cultural, recreational, socio-economic, and spiritual benefits, and (6) tangible materials and resiliency.

'One-Health' is also considered an important policy issue at Belgian level where the Belgian One-Health Network[18]takes up a leading role.

[16] See https://www.who.int/news-room/q-a-detail/one-health#

[17]Sandifer,P., Sutton-Grier, A., Ward, B. 2015. Exploring connections among nature, biodiversity, ecosystem services, and human health and well-being: Opportunities to enhance health and biodiversity conservation, Ecosystem Services. 12: 1-15. https://doi.org/10.1016/j.ecoser.2014.12.007.

[18]See https://www.biodiversity.be/4822/

2.1.6. Drivers of biodiversity and ecosystem change

Understanding the factors that cause changes in ecosystems and ecosystem services is essential to design interventions that capture positive impacts and minimize negative ones. The Intergovernmental Science Policy Platform on Biodiversity and Ecosystem Services (IPBES) provides very useful frameworks and detailed reports to understand the drivers of biodiversity and ecosystem change. They distinguish **direct** drivers, which have direct physical (e.g., mechanical, chemical, noise, light) impacts on nature and/or people from **indirect** drivers, which operate diffusely by altering and influencing direct drivers. See Figure 5 (next page) for a schematic overview of direct and indirect drivers. The five main direct drivers in descending order of importance are 1) land use change, 2) direct exploitation, 3) climate change, 4) pollution, 5) invasive species. Indirect drivers include institutions, economic, demographic, technological, governmental, regional conflicts, and wars, sociocultural and socio-psychological, and health related drivers. For a more detailed list of drivers, we refer to Salafsky et al. (2008)[19].

In Figure 5 (next page) the direct drivers (land-/sea-use change; direct exploitation of organisms; climate change; pollution; and invasive alien species) result from an array of underlying societal causes. These causes can be demographic (e.g., human population dynamics), sociocultural (e.g., consumption patterns), economic (e.g., trade), technological, or relating to institutions, governance, conflicts, and epidemics. They are called indirect drivers and are underpinned by societal values and behaviours. The colour bands represent the relative global impact of direct drivers, from top to bottom, on terrestrial, freshwater, and marine nature, as estimated from a global systematic review of studies published since 2005. Land- and sea-use change and direct exploitation account for more than 50 per cent of the global impact on land, in fresh water and in the sea, but each driver is dominant in certain contexts. The circles illustrate the magnitude of the negative human impacts on a diverse selection of aspects of nature over a range of different time scales based on a global synthesis of indicators.

Effective and long-lasting improvement of ecosystems and their services requires actions both on the domain of the direct drivers and the indirect drivers, the underlying causes that are more systemic and have complex links with the direct drivers. The future demographic and consumption patterns are very important indirect drivers. This is well described in the WWF report of Cantello et al. (2020)[20] 'The triple challenge: synergies, trade-offs and integrated responses to meet our climate, food, and biodiversity goals'.

[19]Salafsky, N., Salzer, D., Stattersfield, A. J., Hilton-taylor, C., Neugarten, R., Butchart, S. H. M., Collen, B. E. N., Cox, N., Master, L. L., Connor, S. O., &Wilkie, D. (2008). A Standard Lexicon for Biodiversity Conservation : Unified Classifications of Threats and Actions. 22(4), 897–911. https://doi.org/10.1111/j.1523-1739.2008.00937.x

[20]Baldwin-Cantello, W. et al, 2020, Triple Challenge: synergies, trade-offs and integrated responses to meet our food,climate and biodiversity goals, WWF-UK.https://www.wwf.org.uk/sites/default/files/publications/Oct20/WWF%20TRIPLE%20CHALLENGE%20REPORT.pdf

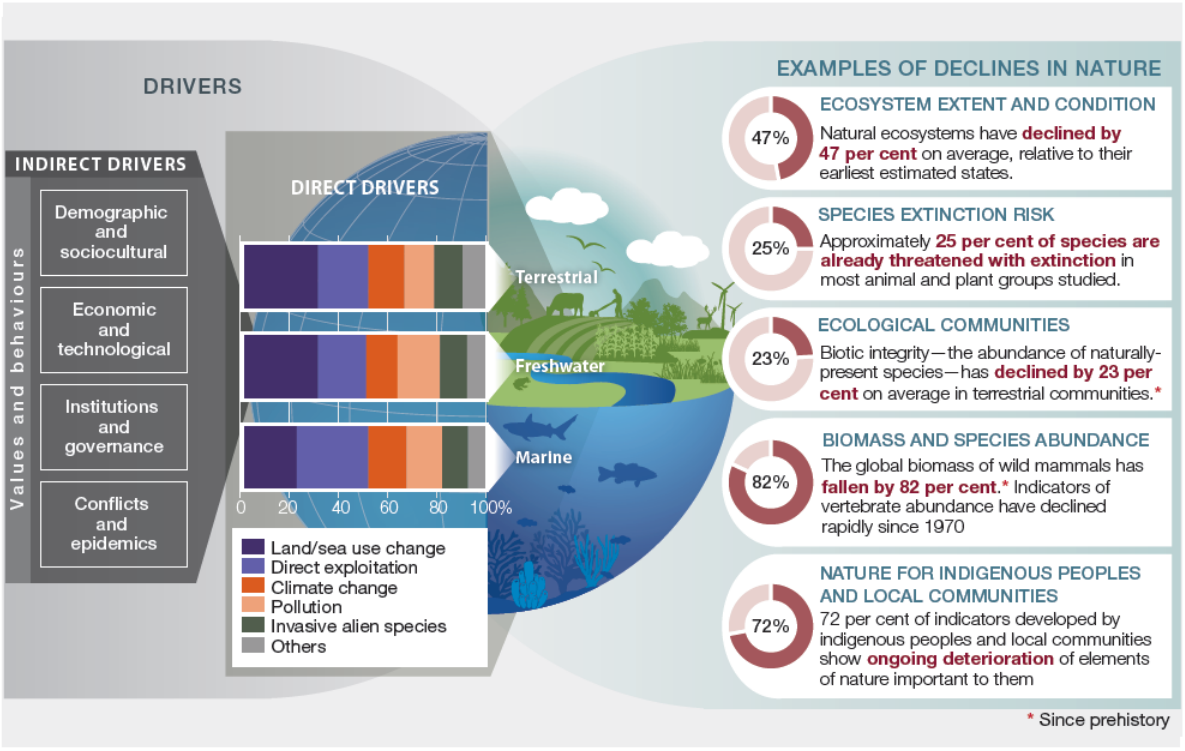


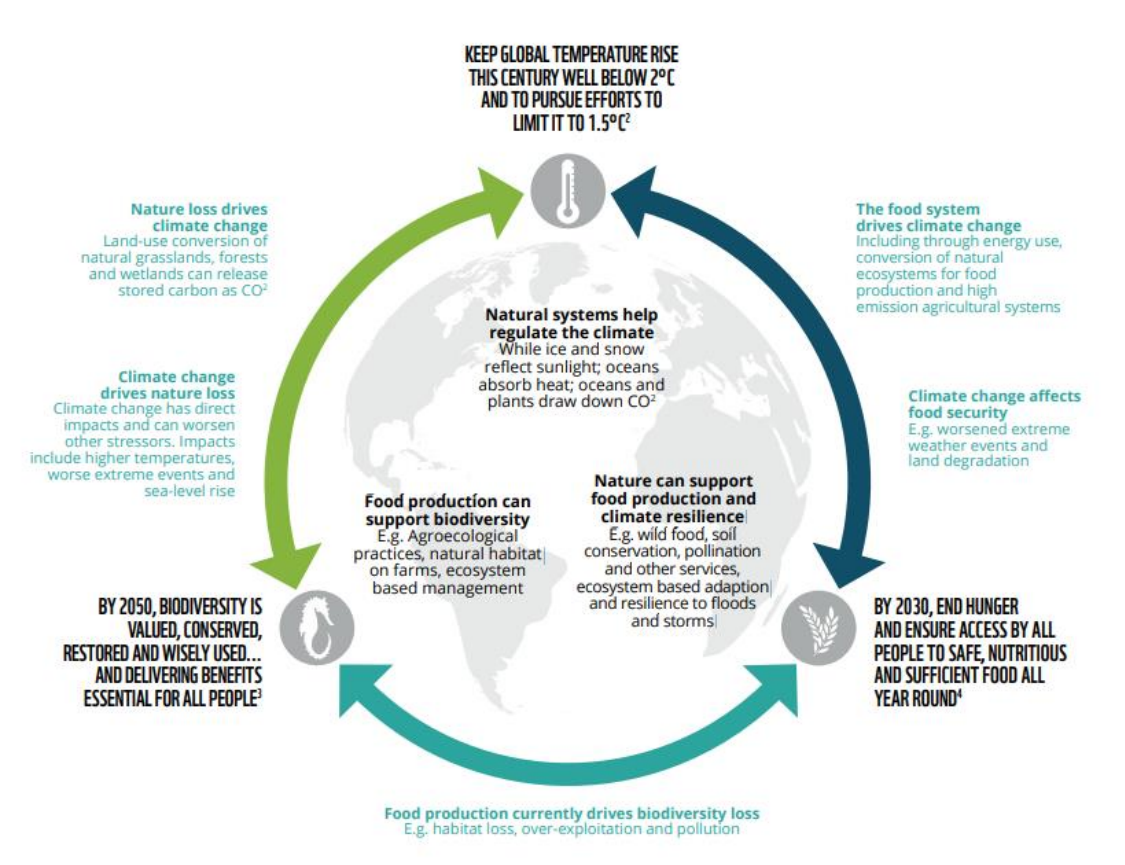
Figure 5 - Examples of global declines in nature, emphasizing declines in biodiversity, that have been and are being caused by direct and indirect drivers of change (source: Diaz, S. et al. (2019); see additional information on next page

Below, we illustrate one of the important direct drivers (agriculture), and one indirect driver (economic systems) that impact social-ecological resilience.

Agriculture as direct driver and resilient ecosystems

Why agriculture is a relevant concern for this T-JSF.

Land use change is the major driver of declines in nature, and agriculture is the main cause of land use change[21]. Crops and rangelands currently occupy over 25% of the Earth's land area, and they are expanding with population growth and changing consumption patterns. Projections show that feeding a world population of 9.1 billion people in 2050 would require raising overall food production by some 70 percent between 2005/07 and 2050. Production in the developing countries would need to almost double. [22]. Obviously, meeting food, climate and biodiversity goals simultaneously poses a huge challenge with possible trade-offs as also synergies[23].



From the EAT Lancet report[22,24] it is clear that feeding 10 billion people in a healthy way while remaining within the planetary boundaries will require transformation of eating habits, food production, and food waste.

This T-JSF cannot tackle the full agricultural system but there are many domains within the agricultural system that are of interest when working towards the goal of resilient social-ecological systems. These domains of overlap are, for example, the water requirements of agriculture, agro-forestry systems, farming systems that limit the impact of free grazing cattle in natural systems. Organisations working on sustainable agriculture are, therefore, important allies for this T-JSF (see synergies and complementarities section 6).

[21]Campbell, B. M., D. J. Beare, E. M. Bennett, J. M. Hall-Spencer, J. S. I. Ingram, F. Jaramillo, R. Ortiz, N. Ramankutty, J. A. Sayer, and D. Shindell. 2017. Agriculture production as a major driver of the Earth system exceeding planetary boundaries. Ecology and Society 22(4):8.https://doi.org/10.5751/ES-09595-220408

[22]Food & Agricultural Organisation. 2009. http://www.fao.org/fileadmin/templates/wsfs/docs/Issues_papers/HLEF2050_Global_Agriculture.pdf

[23]Willet, W., Rockstrom, J., Loken, B., Springman, M., Lang, T., Vermeulen, S., et al. 2019. Food in the Anthropocene: the EAT-Lancet Commission on healthy diets from sustainable food systems. The Lancet Commissions 393(10170): 447-492. https://doi.org/10.1016/S0140-6736(18)31788-4

[24]Baldwin-Cantello, W. et al, 2020, Triple Challenge: synergies, trade-offs and integrated responses to meet our food, climate and biodiversity goals, WWF-UK. https://www.wwf.org.uk/sites/default/files/publications/Oct20/WWF%20TRIPLE%20CHALLENGE%20REPORT.pdf

Economic systems as an indirect driver (and valuation as an assessment tool)

Unsustainable economic growth is a strong indirect driver for degradation of natural ecosystems. Some inherent features of the natural world are often invisible (under the earth, microscopic), silent or mobile (Figure 6). This is combined with the fact that natural capital (Figure 7) is perceived as belonging to everybody or nobody, hence nobody feels responsible for it (e.g., the air we breathe), also known as 'the tragedy of the commons'. The outcome is a possible degradation of natural assets and loss of ecosystem services, which are often seen as 'externalities' to land use or infrastructure works associated with economic development and growth.

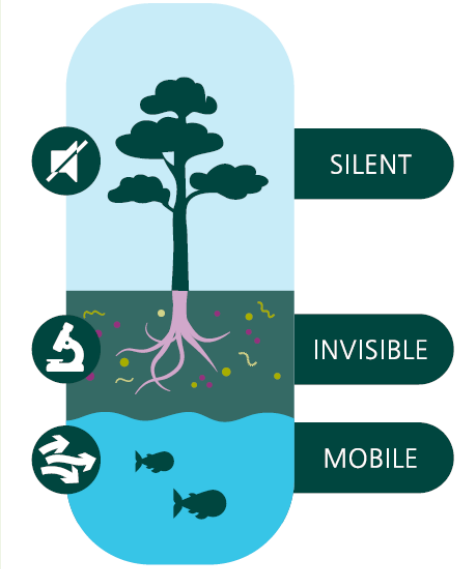


Figure 6 - Features of the natural world, rendering challenges to its economic valuation.

A recent assessment calculated the natural capital (describing the natural resource and ecosystem "wealth") in monetary terms and valued the ES for the entire biosphere at 125 trillion dollars per year[25]. However, its value is rarely acknowledged to the full extent in global or national indicators such as the GDP. ES are often not marketed goods and services, and are available for free, therefore there is lack of economic incentives to ensure continued provisioning of these ES (the tragedy of the commons). For public policy decisions to take such non-marketed goods and services into account, non-market valuation is needed. However, accounting for the environmental cost of production and consumption remains all too often in the voluntary domain (e.g., Voluntary carbon credits). The long-term goal is a just transition towards a sustainable economy.

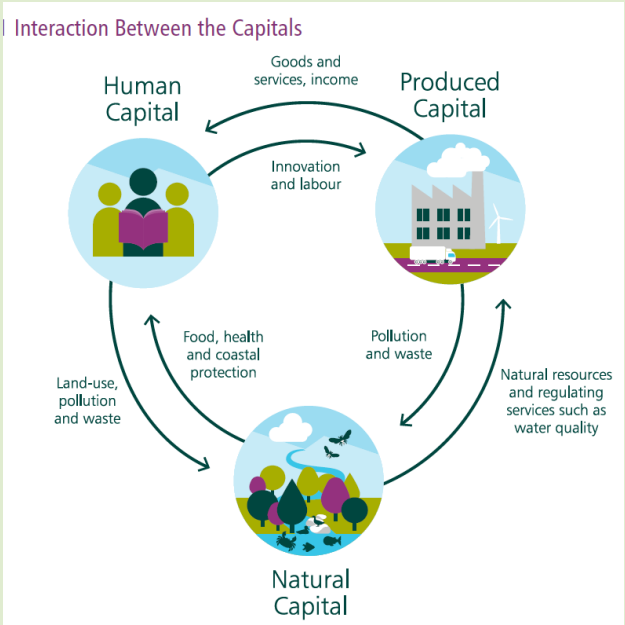


Figure 7 - Interactions between capital (resources)

This T-JSF interacts with the economic domain in different ways without the intention to enter too far in in it, since this is not our area of expertise. On the one hand we try to have an impact on indirect drivers of ecosystem change. Interventions could focus on policy work and encouragement or incentives to move companies, individual consumers, and policy makers towards a sustainable economy.

On the other hand, direct exploitation of ecosystems is the second biggest direct driver of ecosystem change and biodiversity loss. This T-JSF desires to influence exploitation of ecosystems (e.g., water, timber, non-timber forest products) towards higher sustainability. The interventions of this JSF often start from the management, harvesting or exploitation of the ecosystem itself to create a marketable product in a sustainable way. But often, aspects further along the value chain are barriers to sustainable use, and therefore, need to be addressed as well.

Collaborations with organisations whose expertise is in the domain of marketing of goods, economic aspects of development are in this sense very valuable to this T-JSF.

[25]Costanza, R., De Groot, R., Sutton, P., Van der Ploeg, S., Anderson, S. J., Kubiszewski, I., Farber, S., Turner, R. K. 2014. Changes in the global value of ecosystem services. Global environmental change, Vol. 26, pp. 152-158. https://community-wealth.org/sites/clone.community-wealth.org/files/downloads/article-costanza-et-al.pdf

2.1.7. Connection between global and local scales in the short and long term

In an increasingly interconnected world, global and local scales are interlinked in complex ways. Global phenomena have local repercussions, and events at local level can contribute to global phenomena. The frameworks on which this context analysis is based, do recognize this global-local interconnection[26]. It is important to understand that, while scientific knowledge dominates the considerations of global and long-term processes (such as climate change), local, traditional, and practitioner's knowledge often dominates the considerations of site-specific resource management issues, where detailed scientific studies may not exist[20]. We will work to bridge the gaps between the global and local scales. Also, as cooperation actors that implement actions within and outside Belgium, we will intentionally recognise the tele-coupling (in energy, material, information flows), hoping that changes in Belgium (European) systems will have a positive or at least a neutral impact elsewhere.

The temporal scale is also important to consider. Sometimes, the feedback or consequence of one action is not felt in the immediate term, or contrarily, there may be negative impacts in a shorter term that may still provide positive outcomes in the future. As an example, it is vital that people can harvest natural resources. However, in a context where the access and use are unchecked and the system is depleted, the short-term consequence of limiting or managing the resource harvest will provide resilience in the long-term, as the ecosystem is able to "bounce-back" to continue furnishing services in higher quality and quantity. The temporal scale therefore becomes critical – seeking social-ecological resilience is not just for the current generation, but for humanity to benefit in years to come. Trade-offs may be a mandatory consideration, but the actions we can implement now to decrease the impacts of direct and indirect drivers will be critical for the success of the framework.

2.1.8. Global processes and institutions to address ecosystem change

The importance of maintaining and restoring healthy ecosystems is widely recognized and is reflected in the existence of many platforms, institutions and agreements on a global and regional level that aim to put conservation of our global ecosystem at the highest priority level. A societal and economic transition is necessary to stay within the planetary boundaries. This is clear from the general inability to meet the political goals (though countries such as Denmark and Costa Rica prove otherwise) to keep warming well below 2°C (Paris agreement) or maintain biodiversity (Aichi Biodiversity Targets[27]). This reflects the need for the theme of this Joint strategic Framework – promoting the necessary transitions towards resilience.

The sustainable development goals clearly recognize climate action (SDG13), healthy ecosystems and their services (SDG6; clean water; SDG14, life below water; SDG 15, Life on land) as important

[26] Berkes, F., Reid, W. V., Wilbanks, T. J., and Capistrano,D. (2006). Bridging Scales and Knowledge Systems: Introduction. https://doi.org/10.7765/msi/9781526118592.01
Häyhä, T., Lucas, P. L., van Vuuren, D. P., Cornell, S. E., & Hoff, H. (2016). From Planetary Boundaries to national fair shares ofthe global safe operating space — How can the scales be bridged? Global Environmental Change, 40, 60–72. https://doi.org/10.1016/j.gloenvcha.2016.06.008
Kapsar, K. E., Hovis, C. L., Felipe, R., Buchholtz, E. K., Carlson, A. K., Dou, Y., Du, Y., &Furumo, P. R. (2019). Telecoupling Research : The First Five Years. 1–13. https://doi.org/10.3390/su11041033
Liu, J., Hull, V., Batistella, M., deFries, R., Dietz, T., Fu, F., Hertel, T. W., CesarIzaurralde, R., Lambin, E. F., Li, S., Martinelli, L. A., McConnell, W. J., Moran, E. F., Naylor, R., Ouyang, Z., Polenske, K. R., Reenberg, A., Rocha, G. de M., Simmons, C. S., … Zhu, C. (2013). Framing sustainability in a telecoupled world. Ecology and Society, 18(2). https://doi.org/10.5751/ES-05873-180226

[27] Diaz, S. et al. 2019 Summary for policymakers of the global assessment report on biodiversity and ecosystem services. IPBES https://cdn2.hubspot.net/hubfs/4783129/Summary%20for%20Policymakers%20IPBES%20Global%20Assessment.pdf?__hstc=&__hssc=&hsCtaTracking=91fd55c1-7918-40d1-a145-73e8dab568a9%7C67bf054a-fcc7-448e-9235-42416b2b6e88

elements for well-being and development[28]. In their representation of the SDG's, the Stockholm Resilience Centre visually represents how these SDG's form the basis of sustainable development (Figure 8). This representation of the SDG's reflects the planetary boundaries view, which is outlined higher up. **A healthy biosphere is a precondition for sustainable social and economic development**.

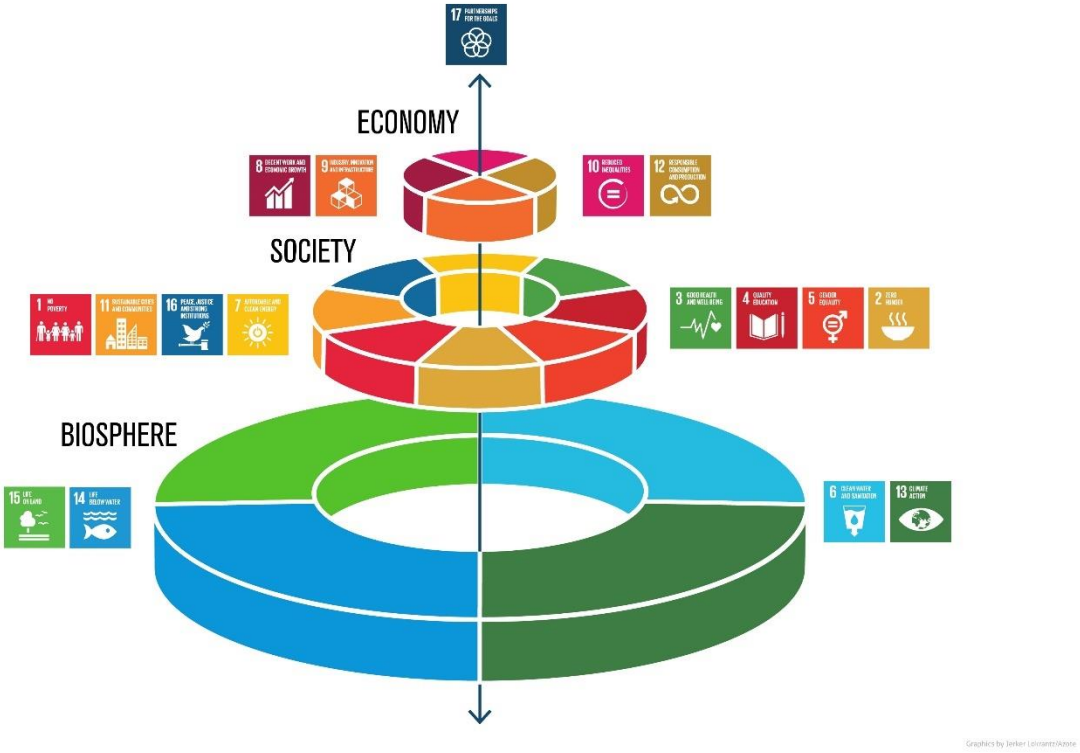


Figure 8 – SDG representation from the Stockholm Resilience Centre, placing four SDGs as the basis for societal and economic development/well-being

A global overview of the actual progress of these 4 SDGs is summarized in annex 1.

Several international conventions are at the basis of our interventions. Especially the Rio conventions on climate change (IPCC) and biological diversity (CBD) are essential in this respect. The IPCC generated the 2015 Paris agreement, which asks all parties to work on a zero-carbon economy and reducing carbon emissions to reach a maximum increase of 1.5 °C. The CBD articulates around its 2010-2020 strategy with the 20 Aichi targets. These targets will be updated in 2021 at the COP-15 for the next strategy. The IPBES is the equivalent intergovernmental platform like IPCC, but for biodiversity and ecosystem services. It provides scientific assessments and advice to the CBD.

[28]The Sustainable Development Goals Report 2019. 2019. United Nations, New York. https://un.am/up/library/SDG_Report_2019.pdf

2.1.9. Summary: conceptual framework

The conceptual framework in Figure 9 is based on the conceptual framework of the IPBES[29] and summarizes the context analysis. It is a simplified representation of the highly complex interaction between the natural world and the human societies within the social-ecological system. This conceptual framework also forms the basis of the Theory of Change (TOC).

We follow the vision of the IPBES that the ethical and ecologically sustainable utilisation of nature are key components of the concept of human well-being. The way in which a society adopts this vision will be directly reflected in institutions, governance systems, economic systems, and other indirect drivers (link 1). This could be the existence of rights to land and water use, pollution control, regulations on use of ecosystems (hunting, extraction). Indirect drivers affect the direct drivers of ecosystem change, for example, population size and lifestyle choices will influence the amount of land that is allocated to food crops, energy crops or cattle (link 2). Direct drivers affect the ecosystem and thus their ability to deliver ecosystem goods and services which contribute to human well-being (link 3, 4 and 5). Indirect drivers also modulate the link between nature and human well-being by regulating the access to and the use of ecosystem goods and services (link 6). Direct drivers also can impact human well-being directly, for example, pollutants or heat strokes not only impact ecosystems but can also impact human health. For the original conceptual framework with more detailed components and linkages we refer to Diaz et al. (2015)[23].

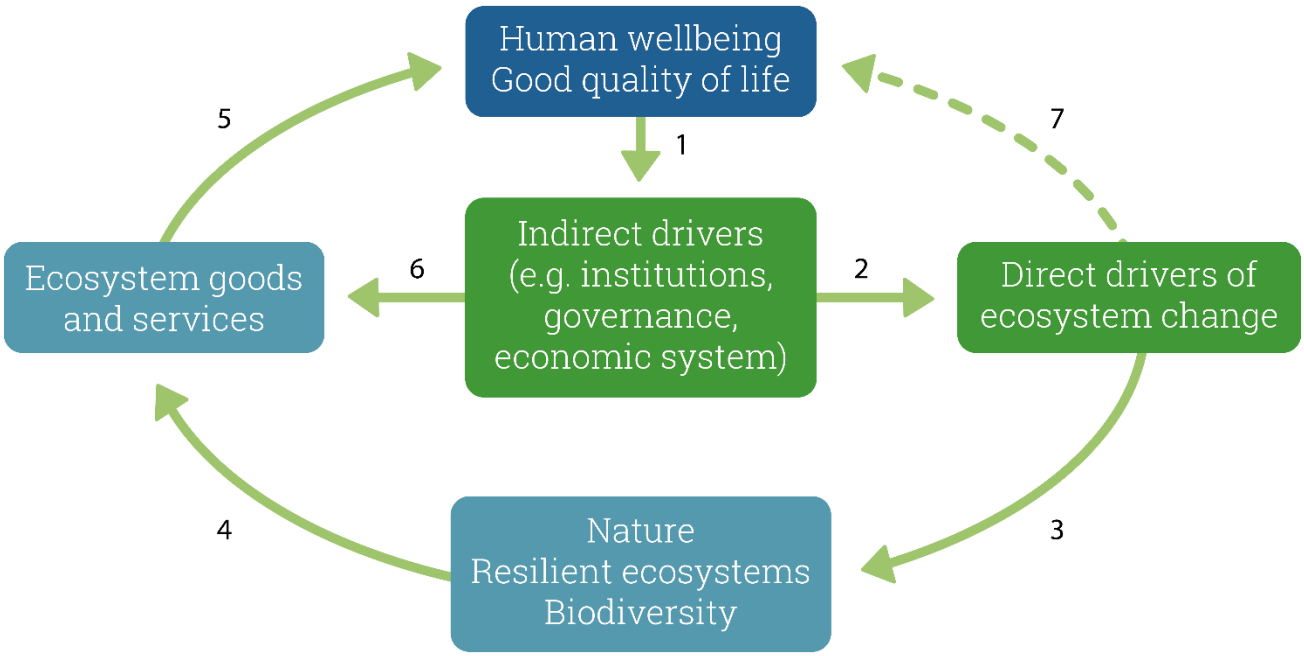


Figure 9 - Conceptual framework summarising interactions between the natural world and human societies

[29]Díaz, S., Demissew, S., Carabias, J., Joly, C., Lonsdale, M., Ash, N., Larigauderie, A., Adhikari, J. R., Arico, S., Báldi, A., Bartuska, A., Baste, I. A., Bilgin, A., Brondizio, E., Chan, K. M. A., Figueroa, V. E., Duraiappah, A., Fischer, M., Hill, R., … Zlatanova, D. (2015). The IPBES Conceptual Framework - connecting nature and people. Current Opinion in Environmental Sustainability, 14, 1–16. https://doi.org/10.1016/j.cosust.2014.11.002

2.2. Theory of Change

2.2.1. General scheme and narrative

Assumptions based on drivers of change

Our **first assumption** is that the main guarantee for human well-being is to act within the planetary boundaries – i.e., our rate of extraction/consumption/discharge should be in line with the rate at which the planet can replenish, regulate, and absorb.

The **second assumption** is that, to remain within the planetary boundaries, resilience of social-ecological systems is needed. As described in the context analysis, the natural/ecosystem integrity (biosphere properties) is a precondition for social and economic development, and human well-being, as reflected in Figure 8 of the Stockholm Resilience Centre.

The TOC builds on the **summarizing conceptual framework** that concludes the context analysis (see chapter 2.1.9 and Figure 9). Human behaviour has generated direct drivers (arrow 2 in Figure 9) that impact ecosystems (arrow 3), and ecosystems' ability to endow services in the necessary quality and quantity (arrows 4 and 6). This decrease in turn impacts humans (arrows 5 and 7), generally in a negative way. This relationship is described as a feedback loop. One negative action by humans negatively impacts the ecosystems, and boomerangs on humans.

However, as **third assumption**, the same feedback loop with negative repercussions can be reversed to reap benefits (i.e., in a positive direction). Human behaviours that are modified to limit/stop the drivers of ecosystem change (arrow 2), and simultaneously implement actions that directly conserve or enhance ecosystem functionality (arrows 3, 4 and 6) can tip the scales and foster a positive link between the social and ecological systems. This means that we must change (a) rights, policies and governance; (b) awareness, knowledge, and skills; (c) the way ecosystems are influenced; and (d) the way ecosystem services are accessible and managed.

Resilience of the social-ecological system is the key for sustainable development

As described in the context analysis (chapter 2.1), by definition, **resilience is the capacity to deal with change and continue to develop**. More **resilient social-ecological systems** are those that can keep functioning properly and weather the upcoming storm, because they are able to cope with those changes. Resilient social-ecological systems will show increased capacity to deliver ecosystem services and manage and use them in a sustainable way which, in their turn, will increase the integrity and stability of the system in the face of unfavourable changes.

The three spheres of influence within the TOC

We have followed the widely used template of Theory of Change (TOC), consisting of a sphere of control, a sphere of influence and a sphere of interest (Figure 10; next page).

The resilience of social-ecological systems and the consecutive well-being define our long-term vision or '**sphere of interest'**. This relies on contributions from "society-at-large". The **sphere of influence** of this framework is more geared to short-medium term, where we seek the desired changes in, of, and by actors as well as changes in bio-physical properties of ecosystems themselves. This requires actions at different scales by us and our partners (**sphere of control**).

Within the **sphere of control**, we situate ourselves, our direct partners, together with DGD. We adhere to a set of principles of engagement, which are described in detail in Chapter 3.

Further, we follow five strategic approaches which characterize our interventions: we will work in the domain of (1) outreach-awareness-empowerment, (2) lobby and advocacy, (3) research-knowledge management, (4) best practices and (5) capacity development. These are described in detail in section 3.3.

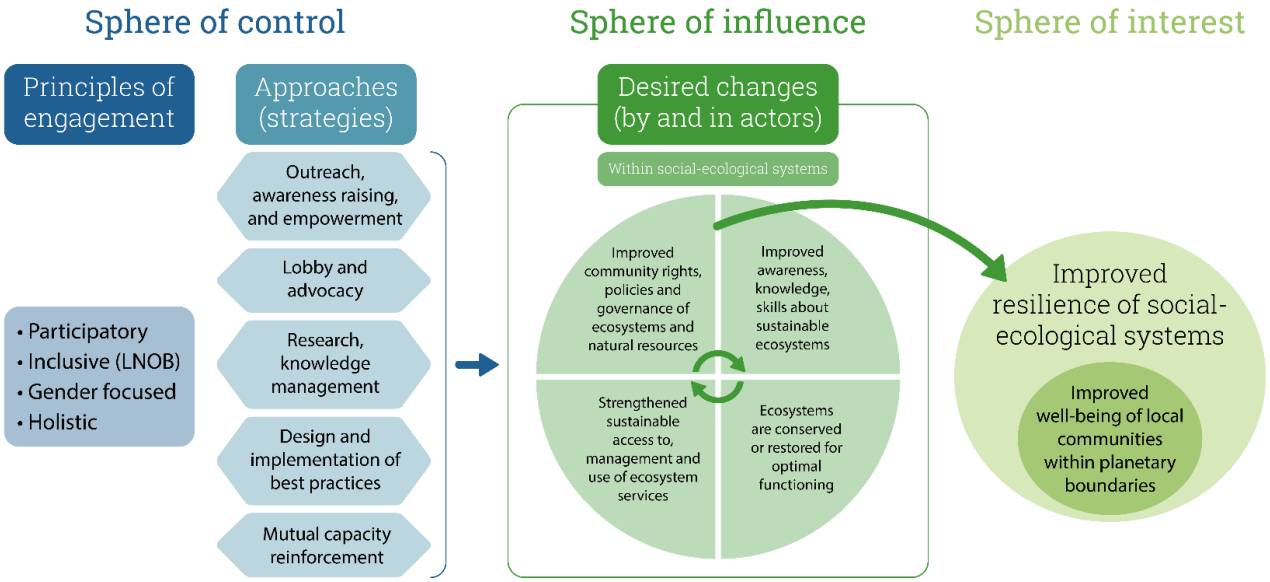


Figure 10 – Theory of Change for Social-Ecological Resilience

With our actions, we would like to generate the desired changes within social-ecological systems, which are expressed within the TOC in the **sphere of influence**. It is here that we define our four strategic goals (see quadrants in Figure 10), in other terms, what we want to achieve with the partners, and the ecosystems we work with, in terms of desired changes. These goals will permit the organisations involved in the T-JSF, to reach a more substantial scale and impact than what each could realise with their own program. The SGs, as defined, not only facilitate the search of synergies and complementarities among the organisations involved, as well as between those organisations and other actors, but together the organisations are covering a larger geographical area, than each of them by itself, providing options to choose for trans-boundary and international actions.

The strategic goals (SGs) in this T-JSF are mutually supportive and are intended to be implemented in parallel to contribute to the ultimate vision. Three SGs are specifically linked to the desired changes sought from actor-groups and key stakeholders. They are unanimously relevant for Belgian and non-Belgian actors, though the relative importance of each may vary, per SG. Similarly, key actors/stakeholders can be targeted in several approaches. The fourth SG is associated with the bio-physical aspects of ecosystems themselves. Most members of the T-JSF also have direct, concrete actions linked to restoring the degraded ecosystems, or maintaining or even enhancing them, via actions such as reforestation, flood-plain management, or designating or managing protected or community-conserved areas, in concertation with relevant actors. VIA DB focuses mainly on awareness raising and education and therefore will focus his action on the part education on the themes of resilience and environmental sustainability.

Finally, within the **sphere of interest**, the **ultimate change** this thematic JSF aspires to is improved well-being of local communities in their surrounding ecosystems which, we believe, is brought about by improving social-ecological resilience. It is our ultimate vision for society and ecosystems.

Specifically, this refers to communities (including vulnerable youth) living in landscapes or river catchments at district or provincial level, as well as more urban residents, who impact or interact with natural and agroecosystems in these landscapes, and whose well-being depends directly and indirectly on the services these ecosystems provide. “Local communities” takes on a broader meaning. As described in section 2.1.7, it is clear that local communities in Belgium will also benefit from sustainability measures by/for local communities elsewhere, and vice versa.

The interventions (approaches or strategies) described in the sphere of control are intended to address priority actor groups in and outside of Belgium (Europe), with detailed descriptions provided in the next section 2.2.2.

2.2.2. Actors involved in the Theory of Change

Changes do not happen automatically. They are linked to people. Diverse groups of people (= actors) contribute in a positive or negative way to social-ecological systems. If we want to achieve resilient social-ecological systems, we need changes by and in these actors. Sometimes we will work together with them; sometimes we will be at cross-purposes, with an objective to influence them. The member organisations of this T-JSF are also to be considered as actors in this respect.

We identified 10 types of actors. In the table below, we state what should be the **ideal change** in each actor group to achieve our joint ultimate goal, **improved resilience of social-ecological systems and improved well-being of local communities within planetary boundaries**. The expected changes in the sphere of influence are linked to the strategic goals and are described in chapter 3.2.

While we describe, in a broad way, 10 types of actors, we recognise that there can be overlap among actor groups. An individual consumer could also be targeted as a community member in some interventions, and IPLC can also be organised into civil society organisations or cooperatives, etc. This fluid nature of actor types, overlapping with each other, lends a layer of complexity in the interactions. The MSP (Multi-Stakeholder Partnership) principle will aim to positively reinforce favourably aligned relationships among actor types and find solutions or arrive at compromises among actor groups with competing objectives regarding social-ecological resilience.

Actor	Description	Desired ultimate changes
Indigenous people and local communities	Indigenous people are groups who are descendants of and identify with the original inhabitants of a given region. Local communities are made up of groups of people living together, including vulnerable youth (who may or may not originally be from that locality). For example, small scale farmers and producers.	Exercise their rights and privileges to access (or claim ownership of) ecosystems and their resources in a sustainable way.
Individual consumers	Both in Belgium and in partner countries	Change their behaviour to have a positive impact on resilience of social-ecological systems.
Civil society	All forms of organized citizens and their (international) networks: cooperatives, farmers associations, fisher associations, women associations, water user groups, trade unions, fair trade associations, etc. NGOs working on environment, human rights, art, education, etc.	Successfully defend the rights of nature, individuals, and groups to improve well-being related to resilient social-ecological systems.
Primary, secondary, technical, and vocational schools	Both in Belgium and in partner countries	Youth and educational community become ambassadors of social and environmental sustainability and change their behaviour accordingly.
Research, universities, higher education	Universities and higher education; Research institutes and their international networks withing and outside Belgium; students in Belgium and partner countries and their representative associations	Design and promote innovative science-based solutions for adoption and implementation by relevant actors.

Actor	Description	Desired ultimate changes
Cooperation & development actors	(1) Non-Governmental Actors in Belgium and other countries and their international networks (IUCN, WWF, …); (2) National cooperation agencies as ENABEL, GIZ; (3) UN organizations: UNDP, FAO, UNEP, and others	Systematically integrate principles and practices of social-ecological resilience within development processes at different levels.
Local authorities	All kinds of decentralised bodies: departments of local governments, traditional leaders, provincial ministries, and various governmental administrative units	Design and enforce relevant policies, linked to social-ecological resilience, and sustainable use of ecosystem resources/services to improve well-being of local communities.
National authorities	Ministries and their agencies; government (executive); national institutions; legislative bodies (parliament, etc); administrations in Belgium: DGD and their delegates in partner countries	Design and enforce relevant policies, linked to social-ecological resilience, and sustainable use of ecosystem resources/services to improve well-being of local communities.
Multilateral/ International organisations	(1) International thematic platforms/conventions: CBD, IPBES, IPCC, OECD, …; (2) regional bodies: EU, ECOWAS, regional entities on river basins etc.	(1) Share knowledge and influence national and international policy makers; (2) integrate principles of social-ecological resilience in all sectoral policies.
Private sector	For profit: transnational companies, SMEs, etc.; on a local level: farmers from the moment they employ/make loans/use vendors/etc.	Mainstream social and environmental standards and safeguards in their business.

3. Strategic goals, changes in actors linked to goals and approaches

3.1. Strategic goals

3.1.1. General overview and principles of engagement

We identified four strategic goals (SGs) within our sphere of influence in our TOC related to the four main changes to be obtained, to improve social-ecological resilience and improved well-being.

The 4 strategic goals are

1. ***Improved rights, policies, and governance of ecosystems and natural resources***
2. ***Improved awareness, knowledge, skills about sustainable ecosystems***
3. ***Strengthened sustainable access to, management and use of ecosystem services***
4. ***Ecosystems are conserved or restored for optimal functioning***

We aim to nurture the mutual link between social and ecological systems in a positive way. These SGs will permit the organisations involved in the JSF, to jointly come to a more substantial impact than what each of them could realise with their own program. The SGs, as defined, not only facilitate the search of synergies and complementarities among the organisations involved, as well as between those organisations and other actors, but together they also cover a larger geographical area than each of them by itself, providing options to choose for trans-boundary and international actions, and leverage impact at scale.

The strategic goals (SGs) in this T-JSF are mutually supportive and are intended to be implemented in parallel to contribute to the ultimate vision.

Three SGs are specifically linked to the desired changes we seek in actor-groups and key stakeholders. They are unanimously relevant for Belgian and non-Belgian actors, though the relative importance of each may vary, per SG. Similarly, key actors/stakeholders will be targeted in several approaches. The third goal also covers all concrete actions in the field of agroforestry, access to drinking water and improved sanitation, irrigation, and management of water for agriculture, etc.

The fourth SG is associated with the bio-physical aspects of ecosystems themselves. The organizations associated with this JSF also have direct, concrete actions linked to restoring degraded, or maintaining, or even enhancing ecosystems, via actions such as water and soil protection, reforestation, flood-plain management, sustainable agricultural practices or designating protected or community-conserved areas, in concertation with relevant actors.

T-JSF members recognize the critical need for the actions to be sustainable and impactful beyond the implementation period. **Sustainability and legacy of the interventions will be a cornerstone** to individual programmes' design and development strategies, with particular consideration for harnessing impact at scale. This includes piloting interventions which will be prioritised based on scalability and long-term impact, with an emphasis on (i) diversifying income sources and (ii) sustaining resilient livelihood opportunities, which can mitigate various types of shocks whilst being in harmony with the natural resources upon which they are so heavily reliant. Other interventions to be integrated here will tackle critical capacities of local stakeholders to sustain a pool of expertise and to secure ownership of these interventions for the long term.

The approaches described to achieve the strategic goals (SG) in our Thematic Joint Strategic Framework (T-JSF) rely on the underlying **principles of engagement**. These principles are fundamental elements that are embodied in our interventions, both within and outside of Belgium. All members agree to undertake ***participatory*** and ***inclusive*** approaches, explicitly considering ***gender mainstreaming and adhering to a holistic approach***. The success of the approaches leading to the achievement of our strategic goals and ultimate vision is inextricably linked to the integration of these principles in day-to-day implementation, both in and outside of Belgium.

The term '**holistic**' refers to the fact that we have a systemic approach (whole system), we are multi-disciplinary (social sciences, exact sciences, development and policy expertise, civil society, expertise on several ecosystems, education) and cross-sectoral. Integrative examples include integrated water management, agroforestry, trans-boundary approaches (ecosystems and impacts do not stop at borders), or other cross-sectorial interventions such as the 'One Health' approach. The composition of the T-JSF breaks up silos of expertise and links the different action niches in a more comprehensive or 'holistic' way. By doing so, we create an enabling environment where the global approach of the T-JSF is more than the sum of the individual approaches per organisation in terms of impact and area of intervention.

Leave no one behind (LNOB)[30] is the central, transformative promise of the 2030 Agenda for Sustainable Development and its Sustainable Development Goals (SDGs). It represents the unequivocal commitment of all UN Member States to eradicate poverty in all its forms, end discrimination and exclusion, and reduce the inequalities and vulnerabilities that leave people behind and undermine the potential of individuals and of humanity as a whole. The members of this thematic JSF commit to include the principle of LNOB in their actions and to consider possible risks linked to LNOB (see annex 2). The TOC explicitly included indigenous people and local communities (IPLC) as one of the key actors and considers the relations between IPLC and all other actors. Among IPLC, attention must be given to possible disenfranchised or "ignored" groups within each community (e.g., ethnic, or religious minorities, youth, groups living in remote areas etc.). This will be done by identifying who is being left behind and why; identifying effective measures to address root causes; monitoring and measuring progress; ensuring accountability for LNOB. Ensuring free, active, and meaningful participation of all stakeholders, particularly women, in the programmes developed under this JSF, will be the key component of all steps and phases of planning and programming.

Gender equality and empowerment of women is a way of looking at how social norms and power structures impact the lives and opportunities available to different groups of men and women. Understanding that men and women, boys and girls, experience poverty differently and face different barriers in accessing services, economic resources and political opportunities help to target interventions. This is certainly true in the often-delicate contexts of local communities, though clearly not limited to that.

Lessons from the field[31] have demonstrated compelling evidence on the importance, indeed the **need**, for mainstreaming gender concepts to address issues around social-ecological resilience. Especially in contexts where power-poverty interactions can influence management and access to natural resources, women (with consequent intersections when poor, ethnic minority, disabled, young) can be more vulnerable and most impacted. Women make up ~50% of the population, and their relationship with the environment can be different from men, especially in contexts when women play a role of principal carer for children or elderly. Failure to mainstream gender principles in day-to-day activities will affect social-ecological resilience. The most "obvious" impact (of this failure to mainstream) is non-inclusion of women's knowledge (and specific needs), that will affect

[30] https://unsdg.un.org/2030-agenda/universal-values/leave-no-one-behind

[31] Aregu, L., Darnhofer, I., Tegegne, A. et al. The impact of gender-blindness on social-ecological resilience: The case of a communal pasture in the highlands of Ethiopia. Ambio 45, 287–296 (2016). https://doi.org/10.1007/s13280-016-0846-x
Fortnam, M., Brown. K., Chaigneau, T., Crona. B., T.M. Daw, D. Gonçalves, C. Hicks, M. Revmatas, C. Sandbrook, B. Schulte-Herbruggen, The Gendered Nature of Ecosystem Services, Ecological Economics, Volume 159, 2019, Pages 312-325 https://doi.org/10.1016/j.ecolecon.2018.12.018.
Kawarazuka, N. et al. "Bringing Analysis of Gender and Social–ecological Resilience Together in Small-Scale Fisheries Research: Challenges and Opportunities." Ambio 46.2 (2017): 201–213. Web. https://link.springer.com/article/10.1007/s13280-016-0814-5
Zabaniotou, A.; Pritsa, A.; Kyriakou, E.-A. Observational Evidence of the Need for Gender-Sensitive Approaches to Wildfires Locally and Globally: Case Study of 2018 Wildfire in Mati, Greece. Sustainability 2021, 13, 1556. https://doi.org/10.3390/su13031556

future management of resources[32], but can also weaken governance. In essence, if groups are marginalised (women as one key group), they can question the legitimacy of governance structures and the rules for natural resource management. Excluding women, in any sector, and particularly linked to natural resource management, can reduce social learning, and in turn the adaptive capacity of the social-ecological system, i.e., its resilience[33].

In the programmes developed for this T-JSF, we will specifically pay attention to issues related to these themes by opting for an approach of **gender mainstreaming**, defined by the UN as "a strategy for making women's as well as men's concerns and experiences an integral dimension of the design, implementation, monitoring and evaluation of policies and programmes in all political, economic, and societal spheres so that inequality is not perpetrated, and women and men benefit equally. Both targeted interventions and integrated operations are valid forms of gender mainstreaming measures."[34] While applying this principle, we also refer to the goal and approaches of the Belgian strategy on gender[35] based on (a) the rights-based approach; (b) combination of mainstreaming and specific actions; and (c) contextualisation. Access to natural resources is part of the priorities and this T-JSF can therefore significantly contribute to this priority. Gender will not be specifically mentioned in each strategic goal, because each strategic goal will relate also to gender and empowerment: SG1 links to access to governance and gender balance in decision-making; SG2 relates to equal access to knowledge; SG3 needs a gender-based approach to ensure equal access to ecosystem services and effective involvement of women in management of services; and SG4 links to access to ecosystems and the fair part of women in decisions on how to conserve and restore ecosystems.

All partners in this JSF also commit to working with the different actors, our target groups, in a **participatory way.** We gained experience in this matter during the work with our partners and other organisations during our current programs and, more recently, during the compilation of the proposal for this JSF. For instance, a substantial know-how was gathered around the organisation of participatory stakeholder workshops in partner countries, geared towards the local needs and cultural context.

Where possible and relevant, this JSF will stimulate **D4D – Digital for Development**, by using digital technology to reach the 4 strategic goals by collecting and exchanging information and data (related to DGD's strategic priority n° 1 'better use of (big) data' with specific attention to 'open data'); connecting and empowering different actors, monitoring actions and sharing best practices, improving access to and management of services using digital technologies, etc. (related to DGD's strategic priority n° 2 'digital for inclusive societies'). The members will apply the principles of the strategic policy note[36]: (a) design with the user; (b) understand the existing system; (c) design for scale; (d) build for sustainability; (e) be data driven; (f) use open standards, open data, open source, and open innovation; (g) reuse and improve; (h) address privacy and security; and (i) be collaborative.

[32] Aregu, L., Darnhofer, I., Tegegne, A. et al. The impact of gender-blindness on social-ecological resilience: The case of a communal pasture in the highlands of Ethiopia. Ambio 45, 287–296 (2016). https://doi.org/10.1007/s13280-016-0846-x

[33] Scheffer, M., and F. R. Westley. 2007. The evolutionary basis of rigidity: locks in cells, minds, and society. Ecology and Society 12(2): 36. http://www.ecologyandsociety.org/vol12/iss2/art36/

[34] https://unsdg.un.org/2030-agenda/universal-values/gender-equality-and-womens-empowerment

[35] DGD (2016) Gender in the Belgian Development cooperation (Dutch); https://diplomatie.belgium.be/sites/default/files/downloads/Gender-in-de-Belgische-Ontwikkelingssamenwerking.pdf

[36] DGD (2016) Strategic Policy Note 'Digital for Development (D4D) for the Belgian Development Cooperation; https://diplomatie.belgium.be/sites/default/files/downloads/strategy_policy_note_d4d.pdf

Coherence with Belgian and European policies

- *As stated before, this T-JSF contributes to possible solutions mentioned in the note on socio-economic aspects of Covid-19, especially*
  - *chapter 2 on environment and the transition to a sustainable ecology, with specific attention to the risk of increased use of toxic chemicals in the fight against COVID-19, and the risk that environmental and climate achievements or decisions may be challenged;*
  - *chapter 7 on agriculture, food security, and nutrition with the need for a long-term transition to sustainable and resilient food systems based on agroecological principles;*
  - *chapter 8 on (among others) the need for good hygiene and access to drinking water and sanitation.*
- *This T-JSF is coherent with the DGD strategy note on environment[37]. It contributes to the global challenges described in this note.*
  - *The TOC of this T-JSF joins the DGD-statement that 'measures that are aimed at climate change adaptation and at the conservation or recovery of ecosystems increase the resilience of vulnerable population groups and effectively contribute to poverty reduction.' (§13, p.7) and 'it concerns fair access to, and fair distribution of natural resources, welfare, and well-being within the boundaries of Earth and across several generations.' (§17, p.8).*
  - *The 3-track approach of DGD is very similar with the strategic goals of this T-JSF (§32, p.10): (a) Thematic integration of 'conservation and protection of the environment (link with SG4); (b) sectoral environmental support (link with SG3 and SG4); and (c) policy coherence for development (link with SG1). Raisin awareness and knowledge transfer (§40, p.12) is linked to our SG2. Working on ecosystems is essential (§39, p.12).*
  - *At least 3 parts of the sectoral environment support are represented in this T-JSF: (a) sustainable water management (§50, p.14; see also the draft Belgian Water Strategy of 2020); (b) sustainable land and soil use ((51, p.14) and (c) sustainable forestry (§52).*
  - *The strategy note also mentions the need for changes in production and consumption patterns (§59-62) which is reflected in this JSF in SG1, 2 and 3 (see important deforestation, indirect water, cocoa chain).*
- *This T-JSF is not about agriculture but has a direct link with this sector as described in the context, and later in SG3. Therefore, it also frames partly in the DGD strategy note on agriculture[38]. It certainly does in the transversal themes on sustainable agriculture (SG3 and 4) and on gender and empowerment of women (all SGs); partly in the fields of action 'contribution to good governance' (link with SG1) and 'support of research and innovation' (link with SG2). Related to agriculture: through the membership of the Amsterdam Declarations Partnership, Belgium is committed to eliminate deforestation in relation to agricultural commodities by 2025[39]. By contributing to eliminating deforestation as well as the sustainable production of certain commodities, this JSF is coherent with this commitment.*
- *Finally, as described before, gender and D4D are also inspired by the DGD strategy notes.*
- *Regarding EU policy, this JSF is coherent with the [international dimension of the] European Green Deal[40], in particular with the 2030 Biodiversity Strategy[41], where the EU is viewed as a global leader to address climate change and biodiversity loss. The EU has made commitments to take measures to address its impact on biodiversity worldwide, including imported deforestation, and for support to the global transition to sustainable agri-food systems (in line with the Farm-to-Fork strategy).*

[37] DGD (2014) Strategy note 'Environment in the Belgian Development Cooperation'; https://diplomatie.belgium.be/sites/default/files/downloads/Strategy_note_Environment.pdf

[38] DGD (2017) Strategy Note 'Agriculture and Food Security for the Belgian Development cooperation – from survival to enterprise (language Dutch); https://diplomatie.belgium.be/sites/default/files/downloads/strategienota_landbouw_en_voedselzekerheid_2017.pdf

[39] https://www.health.belgium.be/nl/news/belgie-tekent-akkoord-tegen-de-invoer-van-ontbossing

[40] https://eur-lex.europa.eu/resource.html?uri=cellar:b828d165-1c22-11ea-8c1f-01aa75ed71a1.0002.02/DOC_1&format=PDF

[41] https://eur-lex.europa.eu/resource.html?uri=cellar:a3c806a6-9ab3-11ea-9d2d-01aa75ed71a1.0001.02/DOC_1&format=PDF

***Participation**, an example from Burundi*

CEBioS actively facilitated the implementation of the Access and Benefit Sharing principles of genetic resources as part of the Nagoya Protocol of the CBD. In 2016, its institutional partner, OBPE in Burundi, organised a participative process to reach a protocol of cooperation with the Ministry of Health and the organisation of traditional practitioners to valorise the use of traditional knowledge on medicinal plants. CEBioS participated in the meeting as technical adviser and facilitator and presented the process, together with OBPE in international conferences.

Source: CEBioS

3.1.2. SG1: Improved rights, policies and governance of ecosystems and natural resources

Description of the SG

The first SG is intended to work with relevant stakeholders to create an *enabling environment*, both within and outside of Belgium, to foster social-ecological resilience. SG 1 focuses on rights of people to use/benefit from ecosystems and natural resources; it is not linked to granting rights to non-human species or entities (such as rivers).

There is evidence that suggests that recognised rights, and a legal system permitting access and governance of resources and ES are critical for resilience. Barnes (2013)[42] presents an argument (while specifically relating to property rights[43]) that can be applied more broadly to notions of communities' rights to access, use, and govern resources. He indicates the need to consider the relationship between "the law" (which can include policies, legislation, or even more broadly, governance mechanisms) and [property] resilience, as the rules and regulations embedded in a legal system will necessarily influence resilience vis a vis community rights.

Working on the rights to access, policies and governance around resources must also be equitable in its outcome. Aichi target 11 of the strategic plan of the Convention of Biological Diversity includes the statement that protected areas should be "effectively and equitably managed" by 2020. This notion of equity is applicable not only to protected areas, but also relevant for all ecosystems including coastal areas, and is closely linked to social justice. Building on research on equity in payments for ecosystem services and environmental justice, IIED[44] developed a framework for understanding and assessing equity resource governance and management. Equity has three dimensions:

- Recognition, which is about acknowledging and respecting rights and the diversity of different actors' identities, knowledge systems, values, and institutions.
- Procedure, which is about actors' participation in decision making, transparency, accountability, and processes for conflict resolution.
- Distribution, which is about the allocation of benefits across the set of actors and avoiding or at least reducing negative impacts.

[42]Barnes, R. A. 2013. The capacity of property rights to accommodate social-ecological resilience. Ecology and Society 18(1): 6. http://dx.doi.org/10.5751/ES-05292-180106

[43]Property does not necessarily mean private property; it also includes community property.

[44]Franks, P., Booker, F., & Roe, D. 2018. Understanding and assessing equity in protected area conservation. Issue Paper. https://pubs.iied.org/pdfs/14671IIED.pdf

Plummer et al. (2018)[45] discuss the perceptions of various actor groups around ecosystem resilience, specifically linked to "wicked problems"[46], using examples on water resource management. The dilemmas presented can be applicable to other ecosystems and their social-ecological resilience. One of their findings, when answering a question on ecosystem perceptions and governance approaches linked to water resources, aligns with this T-JSF's strategic goal on access and governance of ecosystem resources. Concretely, they suggest that when actors consider aspects of social-ecological resilience, preferences towards more hybrid forms of governance or a more balanced proportion of state governance appear more prominent. This concept of hybrid or "polycentric" governance is also consistent with the principles for social-ecological resilience as described by the Stockholm Resilience Centre. Their specific definition for polycentric governance is "… a governance system in which multiple governing bodies interact to make and enforce rules within a specific policy arena or location is considered to be one of the best ways to achieve collective action in the face of disturbance and change. It represents flexible solutions for self-organisation where more formal procedures seem to fail." Applying notions of polycentric governance of course needs to be adapted to the local context, and scale, and remain "modular". This is also coherent with the paper 'Going beyond panaceas[47]' which stresses that one must think beyond universal solutions (panaceas) when managing complex social-ecological systems.

Relevance of the SG

In a comprehensive rights-study[48] conducted by the Rights and Resources Initiative, in countries (where the members of this JSF are active), the percentage of territory legally recognised for IPLC groups appears to be typically less than 10% in Asian and African countries (except Tanzania), and less than 30% in Latin American countries. However, other studies suggest that IPLC managed territories have historically higher rates of biodiversity, carbon sequestration, and resource provisioning (e.g., Mistry et al., 2016)[49]. These indicators are measurable variables that can be correlated with social-ecological resilience.

Here, among numerous choices, we share an example from Cambodia (WWF Cambodia), on the importance of developing this enabling environment, by promoting rights, policies, and governance mechanisms. Many communities living in the Mekong Flooded Forest landscape, Cambodia, are both poor and highly dependent upon natural resources, but do not have security or opportunities to access and sustainably manage those resources. Threats to these natural resources, and hence the livelihoods of these vulnerable (sometimes disenfranchised) communities, come from unsustainable and/or illegal natural resource extraction, as well as economic development and infrastructure, where local communities are neither consulted nor associated. In the context of short-term political strategies and in the absence of long-term natural capital valuation within land-use change and economic development decisions, fisheries overexploitation, water pollution and infrastructure including dams make local communities increasingly vulnerable to the consequences of their

[45]Plummer, R., Baird, J., Bullock, R., Dupont, D., and Renzetti, S. 2018. Probing the relationship between ecosystem perceptions and approaches to environmental governance: an exploratory content analysis of seven water dilemmas, Resilience, 6:1, 54-73, DOI: https://doi.org/10.1080/21693293.2016.1202903

[46]Wicked problems refer to, "Situations involving the biophysical world and humans where difficult choices are required among contested alternatives," copied from Plummer et al. 2018 (see above).

[47]Ostrom, Elinor; Janssen, Marco A; and Anderies, John M. (2007): Going beyond panaceas. In: Proceedings of the National Academy of Sciences of the united States of America; PNAS 104 (39) 15176-15178; https://www.pnas.org/content/104/39/15176

[48]Estimate of the area of land and territories of Indigenous Peoples, local communities, and Afro- descendants where their rights have not been recognized. 2020. RRI. https://rightsandresources.org/wp-content/uploads/2020/09/Area-Study-Final-1.pdf

[49]Mistry J., Bilbao B., and Berardi, A. 2016. Community owned solutions for fire management in tropical ecosystems: case studies from Indigenous communities of South America. Phil. Trans. R. Soc. B371: 20150174. http://dx.doi.org/10.1098/rstb.2015.0174

dwindling natural resources, mostly fisheries. Shrinking spaces are also limiting the territories available for cultural values of IP communities accustomed to accessing sacred areas.

The intention of improving the enabling environment to ensure opportunities for sustainable access to and use of ecosystems and natural resources, via governance mechanisms, is to reap the known benefits of IPLC-managed areas and the role of other actors in respecting and enforcing the same, to contribute to social-ecological resilience in the targeted landscapes.

International and trans-boundary features of this SG

At the Belgian level, there is a role for Belgian (possibly EU) policies to impact resource access and upgrade or design relevant legislation to decrease Belgium's footprint on ecosystems and natural resources. The EU is the largest importer of "embedded" deforestation through its use and consumption of commodities such as soy for animal feed, cocoa, timber, palm oil, and beef. Within the EU, Belgium has one of the highest per capita deforestation consumption footprints[50]. A study commissioned by WWF[51] estimates that Belgium has an overseas footprint of more than its own size in countries with high deforestation and associated social risks. According to another study, 75% of the average Belgian's water footprint (7,400 litres total per day) is imported[52]. In response to continued global deforestation and conversion of valuable natural ecosystems and the failure of voluntary measures, the European Commission is currently evaluating new binding measures on sustainable supply chains, to be presented by end 2021. Additionally, the European Commission and Member States are expected to put in place complementary demand-side and supply-side measures in the coming years to preserve and restore the world's forests. Such policies, if implemented and enforced adequately, will contribute enormously to ensuring people's rights to access and use resources for their livelihood. As explained above, many of the most vulnerable, natural-resource-dependent community members are most impacted by ecosystem loss and have most to gain from relevant policies. As such, addressing policies at the Belgian and EU level can play an important role in achieving this SG.

Through the networks of the T-JSF and especially CEBioS, the T-JSF keeps updated and participates in the global policies concerning biodiversity. Actions at EU, OECD, and UN-levels anchor CEBioS, which is associated to the National Focal Point for the CBD based at RBINS, within the global policy developments concerning biodiversity and links up to DGD at national level. This important information feeds our own interventions, provides a solid international policy context, and meets the CBD obligations of Belgium and the partner countries. This policy work also provides an entry point for the T-JSF to be present in international fora and side events of COPs and other events.

Types of actions: How can we intervene?

At the local level, key interventions will focus on capacity building using participatory approaches, so IPLC groups recognise their rights, and are able to defend them against potential threats to their ecosystems and resources. A similar level of engagement with relevant authorities at different scales is critical, so that appropriate governance methods can be defined and implemented, to ensure sustainable access. Law enforcement issues are also important to address, first and foremost ensuring that there are no human rights violations, as well as to support policy implementation.

[50]Pendrill et al. (2019) Agricultural and forestry trade drives large share of tropical deforestation emissions. Global Environmental Change 56, 1-10. https://www.sciencedirect.com/science/article/pii/S0959378018314365

[51]'Geïmporteerde ontbossing: tijd om ermee te kappen!' WWF-België, 2019. https://wwf.be/assets/IMAGES-2/CAMPAGNES/ELECTIONS2019/deforestation-report/WWF-GeimporteerdeOntbossing-NL-spread-final.pdf

[52]'België en zijn watervoetafdruk' WWF-België, 2011. https://stijnbruers.files.wordpress.com/2010/05/wwf_finaal_rapport_watervoetafdruk_belgie.pdf

CEBioS, and its institution, the Royal Belgian Institute of Natural Sciences (RBINS), participate in reviewing global policies, especially at the level of the Rio Convention of Biological Diversity (CBD) and IPBES. Within the CBD, CEBioS plays a prominent role in the development of capacity building at the global scale, the Global Taxonomy Initiative, and the Clearing House Mechanism. Policies from other global organisations or platforms are regularly screened or reviewed by Belgian experts, including from RBINS and CEBioS, for example, OECD, UNEP, and UNESCO. National focal points, based at CEBioS and RBINS play a pivotal role as pilots and co-pilots of agenda items for Belgium and Europe at the COP of the CBD and the preparatory meetings (SBSTTA, SBI and others).

***"Multi-stakeholder Principles to address rights to water"**, an example from the Democratic Republic of Congo*

In 2015, the water sector group was created in Ituri province, DRC, at the initiative of local NGO CIDRI and its partner Join For Water. Presided by the provincial governor, this sector group comprises representatives of provincial ministries, state services, drinking water management committees, and their umbrella organisation SAGE, civil society (NGO's, confessional organisations), plus international NGO's active in the WASH development sector in Ituri. This committee's role is to adopt a sector development plan and to coordinate its implementation. To do so, CIDRI executed a comprehensive diagnostic of all drinking water points in the province, collecting physical, topographical, and sociological data accompanied by photos. The results from the diagnostic were visualised with help of data analysis and GIS-tools and formed the basis of the water sector development plan, which was approved by the water sector group in early 2019. Every project in the drinking water sector should adhere to the sector plan and follow its priorities.

The creation of the water sector group was enabled by the adoption of the new water law in DRC in the same year. This law devolves some responsibilities in the water sector from the central state to local authorities and provided for communal management committees as legal entities in drinking water management.

The sector group brought together different actors, who previously often opposed one other. Especially, civil society organisations distrusted the authorities. The collaboration around a common cause has resulted in growing mutual respect and confidence. On several occasions, management committees and civil society organisations have called on the governor to interfere in matters on their behalf. He then did so, invoking the law.

Source: Join for Water

3.1.3. SG2: Improved awareness, knowledge, skills about sustainable ecosystems

Description of the SG

This SG is principally designed to fill gaps in awareness, knowledge, and skills in relevant actors, to implement better and more concrete actions supporting increased resilience and mitigating environmental damages. As the knowledge gaps vary between actors, the content will be adapted to specific needs and can range from strengthening academic research, building capacities of policymakers to design "resilience-friendly policies", outreach efforts to reiterate the importance of sustainability, all the way to educating the public in Belgium to consume sustainably. Via this SG, we would like to drive environmentally responsible behavioural changes in our target actor groups.

Relevance of the SG

The reference framework for this SG is derived from the Knowledge-Attitude-Practice (KAP; sometimes Practice is substituted for Action) model (or the Knowledge Value Chain), developed in the world of management developers[53].

[53] https://knowledgeagency.com/

This model supposes that if people were better informed, and better equipped, they would become more aware of the problems and consequently, would be motivated to behave in another manner, more responsible to the problem to be tackled. Many other models link knowledge to attitudes and attitudes to behaviour. Figure 11 refers to a traditional Behavioural change model as referred to by Hungerford and Volk[54].

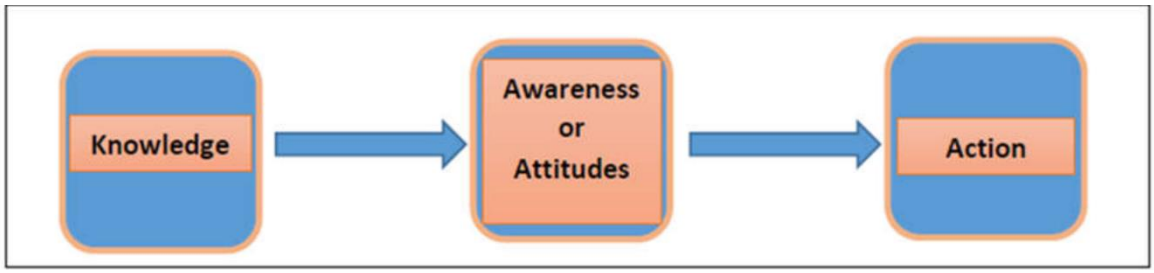


Figure 11 – Traditional Behavioural Change Model

This traditional model shown above is simple to understand, but its linearity and cause-effect relationships are not always reflecting the reality. Therefore, we are also gaining inspiration from a three-entry model, as a complement. The principal drawback in the KAP model is that the leap from 'awareness or attitudes' towards action does not necessarily stem from improved awareness in target audiences, but more via Experience, Understanding and Emotions (Figure 12). People are not rational actors. They relate to nature in different ways[55], which means their motivations (not) to act may be steered by the interplay of different values. Blending the best of two models should help induce the desired behavioural changes in our key actor groups. For a more comprehensive view of individual decision-making regarding nature/the environment: see Levine et al. 2015[56].

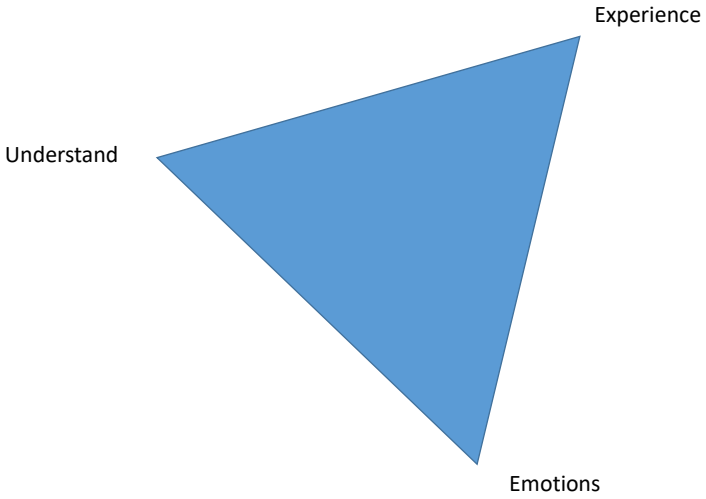


Figure 12 – Pillars of individual decision-making

Where **Experience** tackles the behavioural change, **Understanding** addresses the cognitive needs and **Emotions** appeals to the irrational side and intrinsic motivations.

[54]Hungerford HR, Volk TL. Changing learner behaviour through environmental education. 1990. The journal of environmental education 21: 8-21

[55]Chan, K., Balvanera, P., Benessaiah, K., Chapman, M., Diaz, S., et al. 2016. Why protect nature? Rethinking values and the environment. PNAS 113(6): 1462-1465. https://www.pnas.org/content/113/6/1462

[56]Levine, J., Chan, K., Satterfield, T. 2015. From rational actor to efficient complexity manager: Exorcising the ghost of Homo economicus with a unified synthesis of cognition research. Ecol. Econ. 114: 22-32. https://doi.org/10.1016/j.ecolecon.2015.03.010

By raising awareness, we expect that our actors **understand** what is at stake. We also raise awareness to help them grasp linkages between elements of the system, and how the system 'as a whole' is functioning. By simultaneously providing them with the necessary skills to tackle the social-ecological problems, they gain positive results from their targeted actions, and the accompanying **experience** for the future. This experience and the understanding that has been created will at the same time generate **emotions,** which in their turn will colour the experiences and the understanding of the events or the functioning of the system. These emotions often constitute the basis of intrinsic *motivation*, which help to realise the desired *environmentally responsible behavioural change*, fundamentally anchored in the actors themselves.

We aim at a combination of awareness campaigns, knowledge and information development and sharing, knowledge development, and empowerment by the integration of environmental and sustainable components in the education programmes, learning by doing, and positive local actions or pilot projects, followed by exchanges of best practices to enable the creation of this much needed intrinsic motivation. The attitudes and actions, specifically referring to the stakeholders with whom we work, are described in the actor table (see Chapter 3.2).

Although not always specifically mentioned, gender equality and inclusivity will have our attention with each action as we are convinced that we can achieve good results only if everyone at all levels can be part of what is happening.

International and trans-boundary features of this SG

CEBioS will regularly organise international workshops in specific action domains (CHM, MRV, GTI, collecting data, GIS, statistics, governance, awareness, and communication tools, etc.) which will be open for partners from other organisations. During those residential workshops, networking among the participants is stimulated, often leading to motivated groups of participants willing to take up projects jointly, which can be trans-boundary initiatives; for instance, in the Uganda-RDC boundary region or in the Ruzizi plains (RDC-Burundi). Sharing best practices is crucial in the ACARE-network[57] working on joint lake management approaches in the Rift valley, in which CEBioS and colleagues of the RBINS are actively involved. Sharing best practices to initiate sustainable behavioural changes in administrations and government bodies, ensuring the uptake of biodiversity aspects and attention for ecosystems in other government sectors, is also the key aspect in other international networks CEBioS is active in (CONNECT, CBFP, and so on). Sharing those experiences thus acquired with the other JSF members and their partners is obvious.

VIA DB frequently organises workshops with partners from the same continent (Latin America or Africa) to benefit from the impact of collective intelligence and peer-to-peer learning to improve the results of each of its programmes. Working on the integration of environment and sustainability is an approach that it wishes to engage with some of its partners as a reflection on a transnational rather than a national scale, like the Andean region.

UNI4COOP and Université Libre de Bruxelles will set up a mechanism to estimate and anticipate the long-term impacts of climate change, coastal erosion, and anthropogenic changes on mangrove ecosystems and marine protected areas. It will involve carrying out diachronic analysis of certain areas and modelling the probable impacts on topography, land use, environmental threats, and adaptation possibilities.

Types of actions: How can we intervene?

As can be derived from the descriptions in the actor table (see chapter 3.2), a multitude of complementary interventions will be undertaken, all of a different nature, according to the local context, the actors involved and the budgets available. Detailed descriptions will be available in the

[57] https://www.agl-acare.org/

member's programmes 2022-2026.One active member will provide details in the programmes for years 2022-2023, within the limitations of the granted budget and programme structure for that period. For 2024-2026, its programmes will be better aligned with the actions planned in this T-JSF.

How can citizen-science and participation in research help spark sustainability? *An example from Ecuador*

A unique opportunity to gather data on jaguar abundances and densities emerged, when our education and awareness team joined up with the research team in Zancudo-Cocha community (Cuyabeno Wildlife Reserve, Ecuador).

Who knows their territories better than the very people living there? As part of a tri-national data collection programme, interested members of this community participated in a citizen-science effort, deploying camera traps using standard data collection methods. Such an action led to multiple benefits: community members expressed pleasure in accessing areas in their territories that are less frequented; splendid images and videos were incorporated into school curricula to educate local children on their habitats, environments, biodiversity; and the data were shared as part of a tri-national effort with Colombia and Peru to estimate jaguar abundances and densities. A data gathering effort, when well designed, can provide more than its scientific contribution, by building awareness on the value and richness of IPLC territories and ecosystems, and install an urgency to protect and manage them for future generations.

Source: WWF-Ecuador

"Water counts!" Tips and tricks to decrease YOUR water footprint*, an example from Belgium*

With the 'Water Counts' campaign, Join For Water is raising awareness among the Belgian public and encouraging them to reduce their water footprint. The Belgian water footprint is particularly high, also in comparison with our neighbouring countries, and 75% of it consists of imported indirect water. This means that our consumption has a major impact on water availability and possible water scarcity in other parts of the world. This campaign determines the water footprint of the participants, provides general information about the water footprint, and also gives concrete tips to change behaviour.

Source: Join For Water

Environmental education*, examples from the Americas*

In the programmes of VIA Don Bosco, the environment has always been dealt with in a transversal way, but was mainly focused on raising awareness among young people and the educational community: setting up waste sorting areas, seminars, awareness days, reforestation, or waste collection days with students, etc. Interesting initiatives have been identified, for example, among their partners in Ecuador, where the planning and development office carried out internal diagnostics of their energy expenditure based on documents exchanged within the JSF by "environmental" NGCAs. This initial analysis will be used to make recommendations for concrete actions to reduce environmental impact, and for awareness-raising actions with a view to expand to other technical and professional centres. In Haiti, one of their partners created a radio programme combining environment and health: several radio programmes were broadcast to raise awareness on the consequences of poor environmental management on health in the short, medium, and long term, particularly targeting young people in Fort-Liberté and surroundings. An agronomist and a nurse hosted 13 programmes, each of which proposed specific themes in conjunction with guests: Ministry of the Environment, Ministry of Health, a representative from Fort-Liberté, young people from the city, etc. The themes were varied, ranging from the management of solid and harmful waste, the spread of certain diseases linked to poor environmental management, to the government's facilities for seedlings to help with reforestation. The project has had positive impacts (reduced waste in the city, the birth of several citizen initiatives to protect the environment) and the feedback has been very positive.

Source: VIA Don Bosco

3.1.4. SG3: Strengthened sustainable access to, management and use of ecosystem services

Description of the SG

This SG is a logical consequence of the previous two strategic goals. With an enabling environment under development in place, and behavioural changes that favour sustainable ecosystem use and management, this third SG is ensuring the long-term availability and sustainable use of the ecosystem services, provided by more resilient ecosystems. This serves the purpose of reducing the vulnerability of certain actors/stakeholders, whose livelihood depends on regular access to various ecosystem services and are vulnerable to climate change such as sea level rise in mangrove areas.

Specifically, this SG addresses actions linked to sustainable access to and management and use of natural resources and ecosystem services. These actions include, but are not limited to issues such as improved drinking water provision, sanitation, sustainable, and/or climate proof agricultural production, production, or harvest of timber, but also sustainable exploitation of non-timber forest products, or management of aquatic resources, hunting, etc. Ecosystem Services (ES) depend on healthy ecosystems, but appropriate, sustainable management of ecosystem services will also contribute positively to the state of the ecosystem. Actions proceed from planning, realization to management and use of ecosystem services and include both 'hardware' (infrastructure, as in the case of drinking water) and 'software' (e.g., local management, training of and support to farmers, cattle breeders, water users, etc., analysis and planning, etc.).

Besides the broader description of Nature's Contribution to People described in the IPBES framework, they still identify four types of ES:

1. **Provisioning** services: food, drinking water, timber, wood fuel, natural gas, oils, plants for making clothes and other materials, medicines, etc.
2. **Regulating** services: cleaning air, filtering water, decomposing waste, pollinating flowers, preventing erosion, etc.
3. **Cultural** services: non-material benefits that contribute to the development and cultural advancement of people
4. **Supporting** services: providing essential natural processes for life such as photosynthesis, nutrient cycling, the creation of soils, and the water cycle.

Strategic goal SG3 of this T-JSF covers all ecosystem services, but the provisioning services are the most obvious in terms of access and use. At the same time, the social and cultural components (3rd type) must receive sufficient attention because though they may be intangible. In many cases they are very important for local communities (especially in terms of ownership of sustainable processes, also linked to SGs 1 & 2), and therefore influence all other actions to be undertaken in an ecosystem to improve the other types of ES. The regulation and support services play obviously an important role in this SG but will be specifically considered in SG4 on conservation and enhancement of the resilience of ecosystems.

As such, improving the management and use of natural resources will enhance social-ecological resilience.

Relevance of the SG

This SG relies on a hypothesis that “local livelihoods can maintain or improve capacities and assets without destroying natural resources”, and ecological conservation can benefit livelihoods. But local residents are not the only actors impacting ecosystems, nor do they necessarily guarantee sustainable management[58].

[58]Bodin, O. 2017. Collaborative environmental governance: Achieving collective action in social-ecological systems. Science 357(6352). DOI: 10.1126/science.aan1114

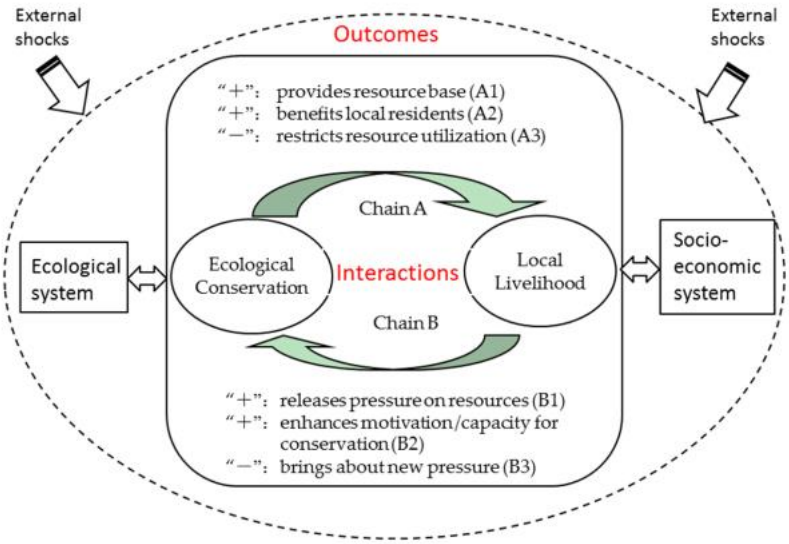


Figure 13 – Image describing interactions (feedback) between local communities and their environment, specifically relating to socio-economic systems that interact with ecological systems

Wu et al. (2019)[59] show feedbacks between livelihoods and ecosystems (Figure 13). A positive feedback loop from conservation can be obtained when [alternative] livelihoods can be developed via conservation actions. If IPLC can benefit from ecological conservation without destroying the resource base, the motivation, perceived ownership, and capacity for ecological conservation will continue to increase, and thus a desired feedback loop will be formed (linking to SG2, on knowledge and capacities). On the contrary, short-term economic benefits due to intensified (unsustainable) use of natural resources will destroy both the ecological base (i.e., ES), the local ownership and decrease opportunities for sustainable, local, economic development.

International and trans-boundary features of this SG

From the Belgian/European perspective (larger scale; Belgian/European footprint on natural ecosystems via certain commodities) management of ES also implies phasing out practices that destroy ecosystems and create little added value in terms of ES, and transition to production systems that bring greater benefits. Consumer countries can have a big leverage on making this transition happen, by shifting demand to sustainably produced goods (according to sustainability standards), and by tackling the value chains in their entirety, from farmers' fields to consumer plates. This footprint is an example of an "external shock" as described in the figure, and supports the tele-coupling described in the context (section 2.1.7).

Here, we discuss some priority ES, impacted by the Belgian footprint (with consequences for livelihoods of IPLCs), though there is multitude of equally important services for social-ecological resilience.

[59]Wu, J., Guo, Y., and Zhou, J. 2019. Article Nexus between Ecological Conservation and Socio-Economic Development and its Dynamics: Insights from a Case in China. Water 12: 663

Freshwater footprint impacts on quality of water provisioning service

According to the draft DGD water strategy, by 2030, over 40% of the world's population will be living in severely water-stressed river basins. Over 1.7 billion people are currently living in river basins where water use exceeds recharge. Population growth, socio-economic development, and evolving consumption patterns have indeed resulted in a 1% increase in water use per year since the 1980s, and it is predicted that demand will continue to rise at a similar rate.[60]

The water footprint of Belgium is very high (7,400 litres/person/day from which 75% is imported virtual water) and impacts the water availability in Belgium as well as in other countries from which Belgium imports goods. Figure 14 shows how Europe is an important importer of water[61] *from Argentina (meat), Brazil (soybean), US (wheat), Pakistan-India (cotton) and Indonesia (rice).*

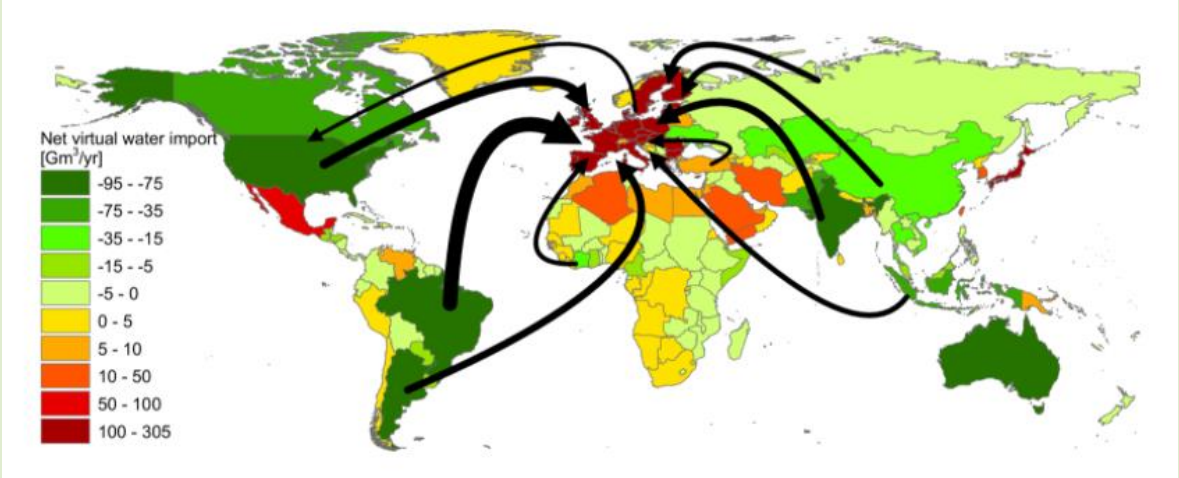


Figure 14 – Virtual water imports

While substantial progress has been made in increasing the access to clean drinking water and sanitation, billions of people – mostly in rural areas – still lack these basic services. Worldwide, one in three people does not have access to safe drinking water, two out of five people do not have a basic hand-washing facility with soap and water, and more than 673 million people still practice open defecation. The COVID-19 pandemic has demonstrated the critical importance of sanitation, hygiene, and adequate access to clean water for preventing and containing diseases (see also DGD note on Covid-19 and socio-economic aspects). Hand hygiene saves lives. According to the World Health Organization, hand washing is one of the most effective actions that can be taken to reduce the spread of pathogens and prevent infections, including the COVID-19 virus. Yet billions of people still lack safe water sanitation, and funding is inadequate.

Actions aimed at improving water usage, reducing wastage, such as integrated basin/watershed management are critical for ensuring water provisioning services for human well-being.

[60] DGD (2020) Water strategy (draft; unpublished)

[61] Mekonnen, M.M. and Hoekstra, A.Y. (2011); Water Research Report Series No.50, UNESCO-IHE, Delft, Netherlands. Figure copied from https://waterfootprint.org/en/water-footprint/national-water-footprint/virtual-water-trade/

Imported deforestation impacts on the quality of various ES

Tropical forests (dry, flooded and mangroves) host over two-thirds of the biodiversity worldwide; however, recent studies such as the Living Planet Report 2020[62], show a rapid decline due to habitat degradation and conversion into agricultural land. The EU is the largest importer of the commodities such as soy for animal feed, cocoa, timber, and palm oil that cause ecosystem conversion. Belgium has a commodity footprint larger than its own surface in areas with high risk of deforestation, which is systematically linked to poor governance, violation of people's rights, and poverty of smallholder producers[63].

Both governments and private sector stakeholders have made voluntary commitments to cut deforestation from their supply chains, but those targets have not been met. By moving governments, private sectors and consumers in Belgium, and producer countries towards sustainable and ethical supply chains, the footprint that Belgium has on ecosystems worldwide can be significantly reduced.

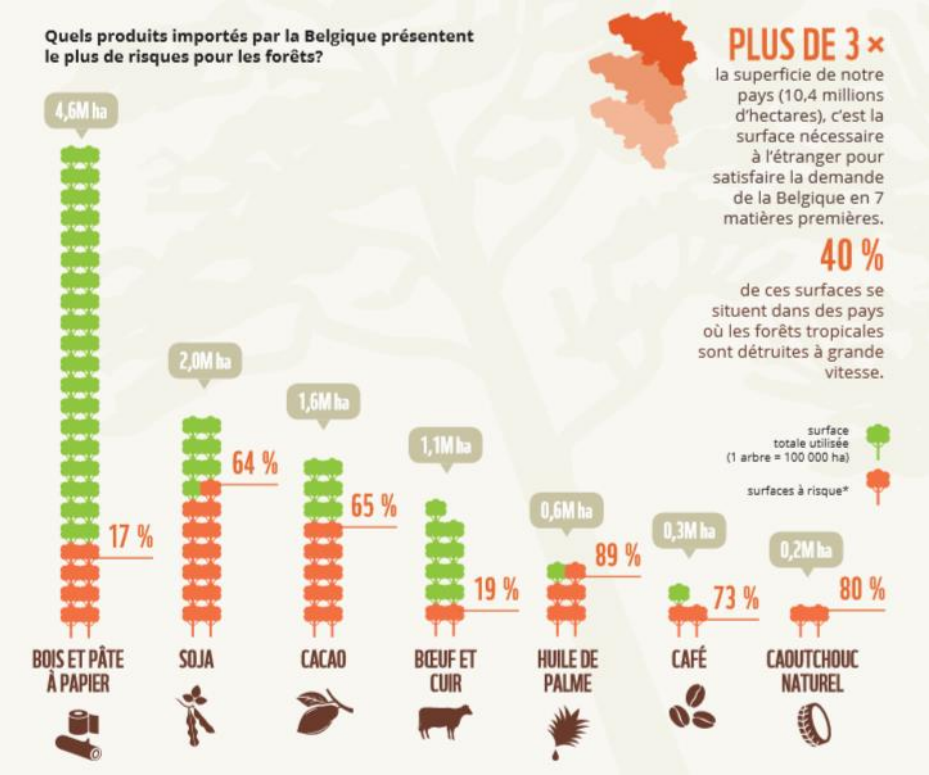


Figure 15 - In French. Footprint of different commodities driven by Belgian demand; Total footprint per commodity is depicted with trees, where orange trees show high deforestation risks. Countries with high deforestation risk have associated social risks (corruption and workers' rights)

Types of actions: How can we intervene?

There are two principal ways that this T-JSF can support SG3. One is to support sustainable management and access to resources by working along different parts of commodity value chains, especially relevant for addressing commodity footprints. The second is to support IPLC groups in resource management, for improved livelihoods.

[62]WWF (2020) Living Planet Report 2020 -Bending the curve of biodiversity loss. Almond, R.E.A., Grooten M. and Petersen, T. (Eds). WWF, Gland, Switzerland https://www.zsl.org/sites/default/files/LPR%202020%20Full%20report.pdf

[63]https://wwf.be/assets/IMAGES-2/CAMPAGNES/ELECTIONS2019/deforestation-report/WWF-GeimporteerdeOntbossing-NL-spread-final.pdf

Gender mainstreaming is critical in the approaches linked to this SG as well, especially at community levels. The unique roles men and women play in their communities lead to different perceptions and knowledge about the environment. Due to the role differences as regards access to resources like wood, water, forest products, and subsistence agriculture, women have a unique understanding of the natural resources around them. Traditionally, women oversee the education and general well-being of future generation in the communities. If women are not specifically included in the design of policies and programmes this knowledge can be lost and their active participation, compromised. Increasing women's participation regarding rights, governance, education, access, and management of resources will be necessary for the success of this SG. Mechanisms such as participatory land use planning, explicitly seeking women's input and decisions can be some concrete ways to ensure gender integration into the design and implementation of natural resource management.

With its many connections in the academic world, the T-JSF members and partners will especially encourage and facilitate research on ecosystem services with the potential to be developed in value chains for local communities. There is a plethora of examples that can be explored, including but not limited to: aquaculture of fish, molluscs, and crustaceans, with different types of waste as substrates, apiculture in diverse environments, mushroom cultures on different substrates, bamboo, raffia, and rattan production, to name but a few. A success story in this sense is discussed in the box below. The members of this JSF have the intention to actively pursue this type of activities.

***The culture of mushrooms: a value chain developed through long-term cooperation**, examples from Central Africa*

For many years, VLIR-UOS as well as CEBioS, in collaboration with the Botanic Garden Meise, facilitated research activities to identify wild mushroom varieties suitable for domestication in universities in the East and North-East of the DRC as well as in Burundi and Rwanda. With support from BELSPO, and in collaboration with ARES, a network of mycologists (https://mycorgl2016.jimdofree.com/r%C3%A9seau/) was created, working specifically on the development of commercial spin-off activities in Sud-Kivu. The acquired expertise is now introduced into Technical Secondary Schools in Bas-Congo, in cooperation with the School Inspection Services, by making use of the school network of VVOB. It is part of a curriculum exercise to develop business plans for small entrepreneurial activities and bring them into practice. At the same time, this work resulted in several highly praised volumes within the AbcTaxa series on mushroom identification, as well as several practical guides to culture mushrooms.

Source: CEBioS

***Multi-pronged approach to managing water**, an example from Haiti*

Located in the northwest of Haiti, the Moustiques Basin is among the driest in Haiti. The average annual rainfall varies from 400 to 1,100 mm; it is characterized by a very irregular distribution, sometimes with up to 9 months of drought in a year. The association of irrigators AIRM, supported by the local NGO Odrino and Join For Water, works on improving the irrigation system in three main areas along the river, since agriculture in the Moustiques basin plays a predominant role in the food self-sufficiency of the population, and represents the main source of household income. Irrigation infrastructure is a necessary and a very visible part of the work, but not the only one. New infrastructure must be studied and planned with possible conflicting interests between the three areas, which need a lot of consultation and negotiation. Furthermore, the alternating use of the water must be organized, combined with the search for methods to save water use and the whole infrastructure must be managed involving all users. Specific measures are put into place to protect the irrigation areas against erosion and to increase water infiltration, which is done in micro basins where soil is protected, and trees are planted to augment timber or fruit production. Also, the irrigation activities are linked to other challenges such as flooding and salt intrusion in the downstream part of the basin, the exploitation of slopes, etc. All this is done by connecting different users and actors (including local authorities) in the water catchment committee.

Source: Join For Water

***Maakbaar, sustainable wood design**, an example from Belgium*

In 2017 BOS+ together with Flanders DC and OVAM launches the learning trajectory about sustainable product design. The goal was to sensitize and activate the design sector around sustainability. 11 designers were selected from all the applications to join this trajectory around the question of sustainable design. After an introductory session about forest cycles, materials and biomimicry, the design process started. Drawing inspiration from nature and considering ecological, social, and economic aspects of design each designer developed his or her own interesting process with several feedback sessions in group.
The resulting products were showcased in an expo in Gent, Milano, and Peru to inspire and share the development process.

Source: BOS+

3.1.5. SG4: Ecosystems are conserved or restored for optimal functioning

Description of this SG

This SG describes the impact on the biophysical world to which we aspire; in other words, the changes in the ecological domain of the social-ecological system. The desired changes in the social domain are described in the first three strategic goals, which are changes within actors. Of course, by working on the first 3 SG's, we expect to achieve positive changes in the ecosystems themselves in the medium and long term.

We choose, however, to include this fourth strategic goal and to put ecosystem resilience, within our zone of influence because this framework has the ambition to achieve results in the ecosystems directly, not merely through the first three strategic goals.

When ecosystems are degraded or completely destroyed, the ambition is to prevent and mitigate further damage and/or restore a resilient ecosystem in order to have a functioning ES in the future. This will require specific actions during the restoration phase before entering a phase where there can be sustainable use of the ecosystem services from this ecosystem (the domain of SG3). Additionally, for healthy ecosystems, specific actions or management could be required to conserve the ecosystem and make them more resilient. For example, increasing connectivity between existing habitats and landscapes, devising alternative sources of income, food, or energy to combat poaching and deforestation effectively, combat sources of pollution that impact the service quality of the ecosystem or designate protected areas or community-conserved areas. Management actions favouring a landscape approach lend themselves to working across sectors and stakeholders – choices on issues such as land-sparing or land-sharing[64] (and understanding agriculture's influence on resilience) will be addressed in this SG (with a direct link to SG3), and via the synergies and complementarities that will be built with other NGOs.

Relevance of this SG

Interventions focused on conservation or restoration often have beneficial effects on well-being on a longer term through conservation or enhancement of ecosystem resilience and avoiding ecosystem collapse with disastrous consequences. However, this contribution to well-being in the long term sometimes comes at a cost in the short term for local communities. For example, if an area is reforested, and cattle grazing or firewood collection are temporarily forbidden, this threatens to reduce the well-being in the short term. Nevertheless, people in local communities often think long term when they have the welfare of the future generation in mind. We therefore deliberately take a

[64]Grass, I., Loos, J., Baensch, S., Batary, P., Libran-Embid, F., Ficiciyan, A., Klaus, F., Riechers, M., Rosa, J., Tiede, J., Udy, K., Westphal, C., Wurz, A., Tscharntke, T. 2019. Land-sharing/-sparing connectivity landscapes for ecosystem services and biodiversity conservation. People & Nature 1 (2): 262-272. https://doi.org/10.1002/pan3.21

community-centred approach, working simultaneously on the other 3 SG's that aim to guarantee that the future benefits are equitably shared within the community experiencing the short-term negative effects. Moreover, interventions always try to provide alternative benefits to compensate for the temporary negative effects of conservation or restoration actions (e.g., beekeeping, see example at the end of this chapter). In other cases, the conservation or restoration of ecosystems is immediately delivering benefits to the local community.

Another concrete example on the importance of maintaining the ecosystems itself is shown in Figure 16. Water resources are used for different uses such as drinking water, sanitation, food production - processing and preparation - energy, industry. These uses, in turn, have an impact on water resources through discharges into the water system. These different uses can be assured only if availability, stability, quantity, and access to the water resources are ascertained. This is only possible if the natural water cycle remains intact. The ecosystems play a crucial role in maintaining the natural water cycle, but these ecosystems are in turn affected by the various uses (food, industry, energy). The protection and conservation of natural water resources and ecosystems thus play a crucial role in ensuring these ecosystem services.

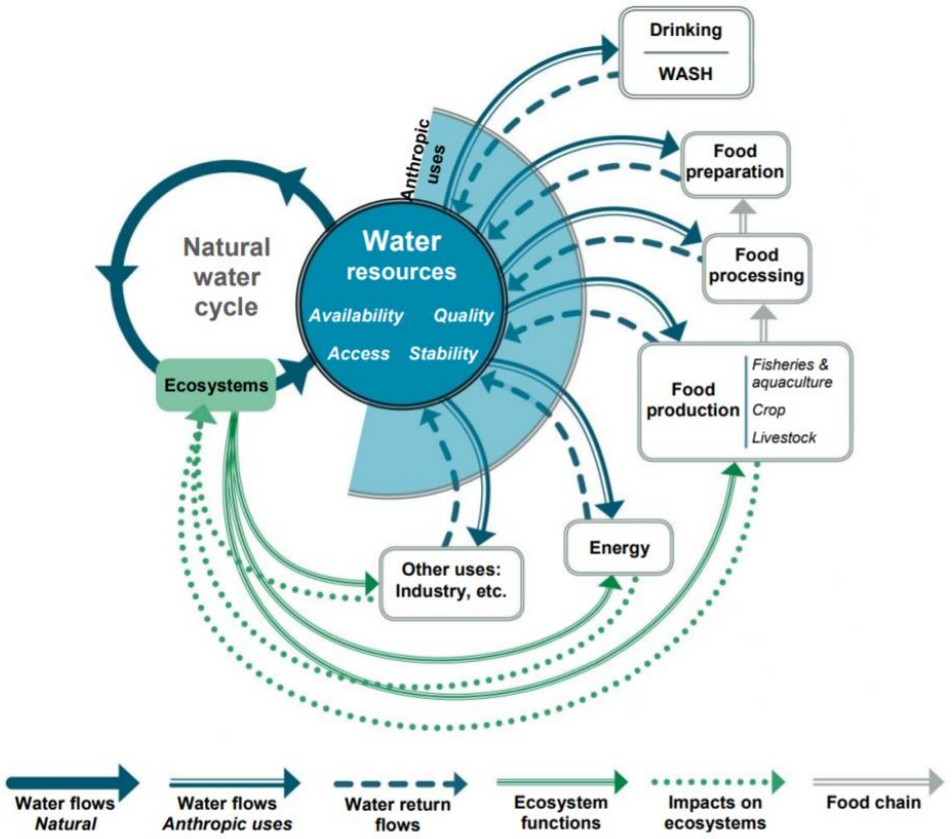


Figure 16 – Importance of aquatic ecosystem resilience to provide sufficient quality and quantity of water

In addition, climate change is already compromising the resilience of current ecosystems. To maintain ecosystem resilience in the future, current management should try to account for climate change, for example, by including more drought resilient tree species in forest restoration activities, adapting water systems to withstand more intense rainfalls and longer drought periods.

International and trans-boundary features of this SG

The focus of this strategic goal inherently invites a supranational approach. Ecosystems stretch over boundaries or are found in different countries, rivers flow through different countries and, together with some large lakes, connect these countries. The Congo Basin countries are regrouped for forest governance in policy dialogue organisations such as COMIFAC and the Congo Basin Forests Partnership. In the Great Lakes region in East-Africa, networks, and regional authorities (on lakes, river basins) exist, connecting communities and actors working on the different lakes in the region and enabling a flow of information and experience (ACARE). In Latin America, the indigenous communities of the Amazon from different countries are organized in a supranational organisation (COICA) to represent themselves more effectively in international and national fora. Wildfires spread through the Andes countries, crossing borders with ease. Fire squads try to cooperate across borders as well. West African mangroves extend along coastlines corresponding to ecosystem landscapes, different from borders.

Types of actions: How can we intervene?

Implementation of SG4 will rely on actions within the domain of the other strategic goals. Much will depend on the status of the ecosystem (healthy, degraded, destroyed), and the context. To avoid confusion and overlap, we only include under SG4 the actions directly aimed at conserving or restoring the biophysical state of the ecosystem.

For example, in the case of a BOS+ intervention with a small forest remnant on community ground in Tanzania with supportive national legislation, the goal is to conserve the existing forest and improve its resilience by increasing the renewal rate of trees. Using the existing legislation, the ownership of the forest is transferred to the community (SG1) and a village natural resource committee is created to manage the forest (SG1 and SG3). Village leaders and the natural resource committee are trained in the topic (SG2). A management and harvesting plan is made (SG2, SG3), and the number of tree saplings within the forest is increased by planting trees and patrolling to keep out cattle (SG4 and SG3)

An example of an intervention which is almost purely within SG4 is the restoration of pasture to forest in Peru by partners of BOS+. Private landowners agree to transform the unused and degraded pasture ground that was once forest, back to forest. Trees are planted because natural regeneration is not possible due to distance to the existing forest. During the first years, the growth of the trees is monitored and if needed, new trees are planted. The result is a new forest that functions as a steppingstone increasing connectivity between existing forests in the landscape and better water catchment which can benefit many communities. On the longer term (20 to 80 year), when trees are maturing, actions on the domain of SG3 (sustainable management) would be relevant (BOS+).

An example of complex large-scale interventions is the intervention on integrated water resource management. These interventions look at landscape scale, potentially across borders involving many different stakeholders trying to achieve goals in the domain of the 4 SG's simultaneously. There might be need for new laws, clear rights for different users, structures to govern water resources (SG1), certain actors will lack essential information and need to be trained (SG2), systems will need to be designed to manage water resources, ensure equitable access and sustainable use. And finally, efforts will be needed to restore or conserve ecosystems such as forests to ensure water infiltration and reduce run-off, conserve, or restore riverine ecosystems that can purify water and limit the inflow of nutrients, qualitative water by combating chemical pollution (SG4).

***To "bee" or not to "bee"**, an example from Burundi*

Installing beehives at the edges of natural forest area in Ruvubu National Park, Burundi, was originally intended as an alternative livelihood for the communities engaging in less sustainable activities. However, beekeeping proved to have multiple benefits, such as providing an income from honey, or pollination for agriculture. It also appeared that installing the beehives at the edge of the national park incited the local communities to nurture a more positive attitude towards the protected area and its flora and fauna. The tree savanna provides flowers for the honey. Destruction of this ecosystem by wild and unmanaged fires would annihilate the beehives. It has, thus, increased the fire management of the area and the willingness of the local communities to accept the national park as something more positive for their livelihoods.

Source: CEBioS

***Intervention in the mangrove ecosystem**, experiences from various coastlines*

In 2018 and 2019, Uni4Coop implemented the project "Expertise University - Mangroves (EU-M)", funded by the Walloon Air and Climate Agency-AWAC. This project was designed to capitalise and disseminate experiences, practices, and knowledge on the sustainable management of natural resources, particularly in the mangrove territories of West Africa and Madagascar.

This project stimulated a dynamic exchange on practices, experiences and knowledge on the theme of community management of mangrove ecosystems, between Belgian Universities, UNI4COOP university NGOs, and their partners outside Belgium, Universities and Research Institutes, NGOs, field associations and local authorities, in particular, the Five Deltas Façade Atlantic Collective-5DC (Gambia, Guinea, Guinea Bissau, Mauritania and Senegal), the Gulf of Benin deltas collective (Benin, Côte d'Ivoire, Ghana, Nigeria and Togo) and the MIHARI network of Locally Managed Marine Areas in Madagascar.

This project has generated a "toolbox" and a multi-stakeholder network presented on a dedicated website https://mangroves.network/ highlighting the best practices identified, the associated partners and the testimonies of the exchanges of experience carried out through study tours to Senegal (March 2018), Madagascar (September 2018) and Togo (February 2019). All this contributes to an ecosystem approach and a combination of activities in a holistic approach to natural resource management in a mangrove context

Source: Uni4Coop

3.2. Expected changes in actors for each strategic goal

Ten groups of actors have been identified in chapter 2.2.2 which gives an overview of the desired ultimate changes at the level of influence. Most actors are involved in the 4 strategic goals in various degrees. The changes described in the table below belong to the sphere of influence of our Theory of Change. We consider it possible to contribute to these changes in a positive way during the five-year programs that will be proposed under this T-JSF.

Actor	Sphere of influence - required changes to achieve strategic goals			
	SG1. Rights, policies, governance	SG2. Awareness, knowledge, skills	SG3. Ecosystem services	SG4. Conservation-restoration
Indigenous people and local communities	Participate in decision making at local, communal, and national levels. Have rights to access land/territories and resources. Are empowered to defend their rights to access and ownership toward the duty bearers. Participate in government planning processes at community level. Are beneficiaries of actions linked to Nagoya Protocol	Are aware of and have knowledge about the importance of resilient ecosystems. Are aware of threats about their local ecosystem and its value for local and global ecosystem services. Have the skills and knowledge to sustainably manage, monitor, and use ecosystems (services). Transfer (traditional) knowledge to academics and authorities, and to future generations. Change behaviour and attitudes, in favour of conservation and sustainability	Use and manage ecosystem services in a sustainable way. Apply good agricultural and animal husbandry practices. Benefit One Health approach	Protect natural resources and manage ecosystems in a sustainable way
Individual consumers	Take political actions and exert pressure on politicians. Demand low/zero footprint commodities (Belgium)	Are aware of and have knowledge about their ecological and water footprint; Belgian consumers are aware of and are informed about the worldwide environmental impact of their consumption and change behaviour accordingly	Change their behaviour on ecological and water footprint	Act as a change maker. Participate in actions to improve habitats and environments locally (e.g., beach cleaning, native species in gardens, participating in Water Counts!)
Civil society	Possess skills to defend the rights of individuals and groups and effectively defend these rights. Strengthen own and joint advocacy by learning and cooperation with other CSO in Belgium and abroad. Demand transparency and	Are aware of and have knowledge about the importance of resilient ecosystems and the sustainable use of ecosystem services. Have the skills to strengthen capacities of individuals and groups. Have the skills and expertise to implement local projects on resilient ecosystems and the sustainable use	Implement local projects on sustainable use of ecosystem service. Collectively manage ecosystem services; work with local authorities to reinstall sustainable traditional management systems, provide legal help with land tenure rights	Implement local projects on resilient ecosystems Demonstrate solutions e.g., through case studies of good practice

Actor	Sphere of influence - required changes to achieve strategic goals			
	SG1. Rights, policies, governance	SG2. Awareness, knowledge, skills	SG3. Ecosystem services	SG4. Conservation-restoration
	accountability on unsustainable practices.	of ecosystem services. Transfer knowledge to academics and authorities	etc. Demonstrate solutions e.g., through case studies of good practice	
Primary, secondary, technical, and vocational schools	Environmental and Educational ministries (co)design appropriate curricula, incorporating aspects of resilient ecosystems	Management, teachers, and students are aware of and have knowledge about the importance of resilient ecosystems, the threats, and the sustainable use of ecosystem services. Integrate 'resilient ecosystems and sustainable ecosystem services' in their curriculum and teach it. Develop institutional guidelines to formalise the integration of resilience, environment, and sustainability components at the level of curricula and all over in the school management	Change their behaviour and take action in the school environment, to cultivate behaviours favouring sustainability and environmental mindset in all activities. Involve parents and neighbourhood	Change their behaviour and give good examples in the school environment. Involve parents and neighbourhood. Are ambassadors of the new generation.
Research, universities, higher education	Share knowledge, experience, and best practices to promote community participation for change. Share scientific results with decision makers and policy makers. Are connected and participate in global policies such as SDGs, Aichi targets or African Union Agenda 2063. Are connected both with local knowledge and in professional and international academic networks	Develop and share knowledge on resilient ecosystems and sustainable use of ecosystem services. Train (potential) professionals and offer capacity sessions and research opportunities to IPLC and civil society organizations on ecosystems, their resilience, and the sustainable use of their services. Build a new generation of researchers and conservation practitioners. Develop outreach function and transfer scientific knowledge to local communities, indigenous people, local and national authorities, and vice versa, recognising and sharing local knowledge and expertise. Increase skills for analysis and sharing of data on ecosystems and their services	Give scientific assistance to projects/programs. Develop and test tools/guidelines for sustainable use of ecosystems/sustainable supply chains, e.g., for monitoring. Do research, collaborating when appropriate with local knowledge on biodiversity, taxonomy, biodiversity hotspots, conservation	Give scientific assistance to projects/programs

Actor	Sphere of influence - required changes to achieve strategic goals			
	SG1. Rights, policies, governance	SG2. Awareness, knowledge, skills	SG3. Ecosystem services	SG4. Conservation-restoration
Cooperation & development actors	Work together to put resilient ecosystems and sustainable use of ecosystem services higher on the political agenda (biodiversity and climate mainstreamed)	Mainstream the concept of resilient ecosystems and ecosystem services. Are open for collaboration and learning on resilient ecosystems and sustainable ecosystem services	Combine expertise in the implementation of projects/programmes on sustainably used ecosystem services	Combine expertise in the implementation of projects/programmes on resilient ecosystems
Local authorities	Act as a responsible duty bearer at local level. Develop local policies. Support acquisition of clear land titles and land use planning for IPLC. Respect and protect the right for water for IPLC. Maintain contacts with higher authorities and defend the rights of the local level to higher authorities. Approve local legislations for CBOs	Are aware of and have knowledge about the importance of resilient ecosystems and the sustainable use of ecosystem services. Share this knowledge among actors at the local level. Join forces with scientists to tackle biodiversity issues, resilience of ecosystems and sustainable use of ecosystem services (capable of developing science-based policy; co-produce policy briefs and other tools; open to support by scientists)	Integrate the sustainable use of ecosystem resources/services in their development plans. Carry out actions that are in line with their development plans, considering (the development) of ecosystem services. Sensitize, exchange, and collaborate with their population on sustainable use of ecosystems	Integrate the protection of ecosystems in their development plans. Carry out actions that are in line with their development plans
National authorities	Determine the policy; follow up and control implementation (including in Belgium). Transfer the needed means to the lower authorities and support them. Apply international agreements and add ambitious complementary measures where possible and relevant. Actively encourage enforcement of current legislation and monitor the sector. Include representative bodies of indigenous communities in an equitable and respectful way in the elaboration of policies. Show political leadership and increase ambition in international processes. Facilitate the uptake of ecosystem services and resilience of	Are aware of gaps in regulations. Inform key stakeholders (such as the private sector) on new legislation and how to apply it. Join forces with scientists to tackle biodiversity issues, resilience of ecosystems and sustainable use of ecosystem services (capable of developing science-based policy; co-produce policy briefs and other tools; open to support by scientists). Belgian authorities are aware of Belgian ecological and water footprint and viable solutions	Are leading forces in sustainability initiatives and commitments such as multi-stakeholder platforms. Support and implement national traceability and verification systems (for sustainable supply chains, for example). Promote and coordinate dialogue and partnership between producer and consumer countries to enhance information sharing and cooperation. Facilitate the uptake of ecosystem services and resilience of ecosystems in all sectors of their development plans	Idem SG3

Actor	Sphere of influence - required changes to achieve strategic goals			
	SG1. Rights, policies, governance	SG2. Awareness, knowledge, skills	SG3. Ecosystem services	SG4. Conservation-restoration
	ecosystems in all sectors of their development plans. Allocate funds for community empowerment actions			
Multilateral/ International organisations	Relevant international authorities are aware of and improve policies in favour of more resilient ecosystems and the use of ecosystem services. They ensure that ecosystem resilience stays on the international agenda. They ensure good representation of local communities, considering their perspectives. They encourage and facilitate participation of national authorities and regional structures. They identify and eliminate perverse policy effects. They link the actions of the T-JSF to the policies expressed in “Article 8J” on IPLC of the CBD	Relevant regional structures have knowledge about the importance of resilient ecosystems and the sustainable use of ecosystem services.	Relevant regional structures improve the collaboration between their members to improve the sustainable use of ecosystem services	Relevant regional structures improve the collaboration between their members to improve the resilience of ecosystems
Private sector	Is accountable to local authorities and civil society about use of ecosystems and natural resources. Respects territories and land use of local communities. Respects the right to natural resources of local communities. Supports policies and legislation which ensures a sustainable footprint. Commits to sustainable supply chains, and provide evidence of sustainability	Is aware of and has knowledge about the importance of resilient ecosystems, sustainable use of ecosystem services and ethical and sustainable sourcing practices. Has the skill to sustainably exploit/use natural resources or ensure that the producers/suppliers have adequate skills for sustainable use. Companies have the knowledge and skills to reduce the ecological impact of their production process and supply chain.	Commits and invests in sustainable use natural resources. Engages in implementation of local development plans (with local authorities and civil society), taking ecosystem services and social-ecological resilience into account. Reduce the negative social-ecological impact of their production process.	Implements and strengthens all current voluntary environmental commitments Participate in certification mechanisms. Uses its knowhow to support innovative solutions to ecosystem management

3.3. Approaches, type of actions and members involved

In this framework, we identified 5 main approaches that are transversal to all strategic goals.

A. Outreach, awareness raising and empowerment
B. Lobbying and advocacy
C. Research, knowledge management
D. Designing and implementing best practices
E. Mutual capacity reinforcement

The following table outlines the four strategic goals, their approaches, and possible types of actions. In SG3 and 4, it appeared that approach A and B were rather redundant with SG 1 and 2; they have therefore been omitted in SG3 and 4

Nr.	Main approaches and type of actions	Members
Strategic Goal 1: Improved rights, policies, and governance of ecosystems and natural resources		
Approach 1A – Outreach, awareness raising, and empowerment: *Awareness of all concerned actors of the/their rights and necessary policies to respect, protect and fulfil these rights*		
1A.1	At level of Belgian, European and UN institutions to participate in global biodiversity governance	CEBioS; Join For Water
1A.2	Working with relevant authorities and scientists on understanding and recognising rights and access	WWF; Join For Water; CEBioS; Uni4Coop
1A.3	Enhance awareness on policies linked to the relevant commodities designed to diminish impacts on ecosystem services, quality, and social issues.	BOS+; CEBioS; Join For Water
1A.4	Support and work with IPLC to recognise their rights to access territories and natural resources in a sustainable way	WWF; BOS+; Join For Water; Uni4Coop
Approach 1B – Lobby and Advocacy (L&A): *L&A on defining and respecting, protecting, and fulfilling the rights; on the creation of appropriate structures and measures for governance*		
1B.1	L&A for improved policies at Belgian/EU levels to decrease social impact and environmental footprint of key commodities	BOS+; WWF
1B.2	L&A to relevant authorities in countries to update or create policies recognising rights and access, and enforce them	WWF; CEBioS; Join For Water; Uni4Coop
1B.3	L&A for participatory methods to design governance mechanisms to support implementation of resource management plans	WWF; CEBioS; Join For Water; Uni4Coop
1B.4	L&A to Implement sustainable financing mechanisms to ensure long-term management, availability, and quality of ecosystem services	WWF; Uni4Coop
1B.5	L&A for appropriate policies on the role of (local) authorities in organising access to ecosystem services	WWF; CEBioS; Join For Water
1B.6	L&A for appropriate policies on structuring collaboration among diverse types of actors	WWF; CEBioS; Join For Water
1B.7	L&A via local actors, at national level to contribute for international (data) platforms or stimulate other solutions to make the countries stay involved in MRV mechanisms	CEBioS
1B.8	L&A for improved policies at the Belgian/EU levels to decrease wildlife trafficking	CEBioS
1B.9	L&A through national or regional authorities, via local scientists and NGOs, and based on scientific research, to obtain special status for an ecosystem/area outside of national parks and nature reserves to ensure its conservation.	CEBioS

Nr.	Main approaches and type of actions	Members
Approach 1C – Research and knowledge management: *R&KM on respecting, protecting, and fulfilling rights, on policies, on role of different actors as regards the/their rights and policies, …*		
1C.1	Motivate & support scientists for conducting research pertinent to policies, conservation and needs and enhance scientists' understanding on biodiversity and ecosystem governance	CEBioS; Uni4Coop
1C.2	Strengthen the understanding of the science-policy interface (SPI) by authorities and the scientific community, including knowledge of suitable tools and MRV techniques to exploit the possibilities of the SPI & strengthen their networks on SPI	CEBioS
Approach 1D – Designing and implementing: *Facilitate the set-up of appropriate structures and measures for governance*		
1D.1	Bringing actors together to explore governance options, adapted to each programme context, to manage community ecosystems and natural resources.	WWF; CEBioS; Join For Water; Uni4Coop
1D.2	Designing and implementing context-appropriate governance structures to manage community ecosystems and natural resources and ensure law enforcement.	WWF; BOS+; Join For Water; Uni4Coop
Approach 1E –Mutual capacity reinforcement: *MCR of right holders, duty bearers and scientists so that they (can) play their role; MCR of organisations so that they can train / coach ... right holders and duty bearers*		
1E.1	Mutual Capacity reinforcement of organisations so that they can train / coach right holders and duty bearers	BOS+; Join For Water
1E.2	Train scientists, preferably through South-South exchanges, for better communication, and reporting to authorities dealing with policies and governance	CEBioS; Uni4Coop
1E.3	Train scientists in scientific and project writing and to secure funding for their research	CEBioS
Strategic Goal 2: Improved awareness, knowledge, skills about sustainable ecosystems		
Approach 2A – Outreach, awareness raising, and empowerment: *Awareness about concepts, relationship between elements of the social-ecological system, influence of behaviour, …*		
2A.1	Awareness campaigns with policy and decision makers discussing ecosystem sustainability for livelihoods and social-ecological resilience	WWF; CEBioS; BOS+; Join For Water
2A.2	Raising consumer awareness on issues around footprint, dietary habits and how their choices impact ecosystems	CEBioS; BOS+, Join For Water
2A.3	Education for sustainable development in schools	BOS+; WWF; CEBioS; Join For Water; VIA DB; Uni4Coop
2A.4	Education & awareness campaigns with IPLC on why sustainable ecosystems are relevant for their well-being; Support participatory awareness actions with IPLC to help ascertain the sustainable use of natural resources, based on results from scientific research	BOS+; WWF; CEBioS; Join For Water; VIA DB
2A.5	Education & awareness campaigns on appropriate behaviour in conserving ecosystems and appropriate use of ecosystem services (including hygiene and sanitation)	WWF; CEBioS; Join For Water; BOS+, VIA DB; Uni4Coop
2A.6	At the Belgian and non-Belgian level: raise awareness on an appropriate gender approach in all actions and by all type of actors	BOS+; WWF; Join For Water; VIA DB; Uni4Coop
2A.7	Raising awareness on need for investing and implementing in actions to improve resilience, such as nature-based solutions	BOS+; WWF; CEBioS; Join For Water; VIA DB; Uni4Coop

Nr.	Main approaches and type of actions	Members
2A.8	Promote a qualitative, rational, and economic use of natural resources based on management of demand rather than on exploitation of resources	BOS+; WWF; CEBioS; Join For Water; VIA DB; Uni4Coop
2A.9	Support awareness actions with different target public via official channels such as the Clearing House Mechanism (CHM) or by targeted actions	CEBioS; Join For Water
2A.10	Inform the communities on the regulatory framework for community forests and on management systems	BOS+; WWF; Uni4Coop
2A.11	Seek to understand and strengthen the synergy between culture and sustainable management	BOS+; WWF, VIA DB; Uni4Coop
2A.12	Raising awareness of responsible persons in technical or vocational schools on the need to integrate an environmental mindset (or mainstreaming environmental issues) at every step of the educational cycle including in their actions, teachings, and pedagogical materials	VIA DB
Approach 2B – Lobby and Advocacy (L&A): *L&A to increase knowledge on social-ecological resilience and sustainability to improve capacities of stakeholders/actors*		
2B.1	Advocate with private sector to incorporate sustainability and best-practice clauses in their investments, policies, and in their supply chains	WWF; VIA DB
2B.2	Belgian: Companies of targeted commodity sectors are guided towards ethical sourcing practices	WWF
2B.3	L&A to relevant government authorities to design and implement spatial zoning plans at different scales, with IPLC participation and concerns prioritised	BOS+; WWF; Join For Water
2B.4	Mainstream biodiversity cross-sectoral	CEBioS; WWF
2B.5	Develop and enforce advocacy work through joint lobbying from producer and consumer countries	BOS+; WWF
Approach 2C – Research and knowledge management: *R&KM on concepts, relationship between elements, between actors, on influence of actor's behaviour, …*		
2C.1	Supporting academia to investigate biodiversity, stakeholder engagement, conservation, participative approaches, ecological systems, analysing the data, publishing them, and making them accessible to all relevant actors as decision makers for science-based policies, NGOs, private sector etc.	WWF; CEBioS; Join For Water; Uni4Coop
2C.2	Supporting local knowledge centres, platforms, networks to investigate and make them accessible to NGO's, local actors etc.	CEBioS; WWF; Join For Water; Uni4Coop
2C.3	Develop an early warning system to reduce natural disasters	WWF; Join For Water
2.C.4	Develop, and test tools and approaches for ethical sourcing and supply chain management and monitoring as decision support tools for businesses	WWF
Approach 2D – Designing and implementing: *Develop training methods for awareness, communication and KM and put them into practice for all types of actors*		
2D.1	Develop educational materials and methods for other actors (e.g., teachers, youth groups, managers, rangers)	BOS+; CEBioS; Join For Water; VIA DB
2D.2	Support scientists, preferably through South-South exchanges, to communicate & cooperate with IPLC and ONGs about their relevant research, in order to understand better their specific contexts and needs	CEBioS; Uni4Coop
2D.3	Train scientists, preferably through South-South exchanges, to develop relevant data-sets compatible with international data platforms and portals, as well as GIS and statistics to help exploit their data	CEBioS; Uni4Coop

Nr.	Main approaches and type of actions	Members
2D.4	Train scientists to understand the concept of biodiversity and ecosystem indicators, monitoring the social and economic aspects of ecosystems and the use of natural resources	CEBioS
2D.5	Train teachers in vocational schools to integrate the resilience aspect into the technical learning of students	VIA DB
Approach 2E –Mutual capacity reinforcement: *MCR of actors involved in awareness raising and building of knowledge and skills*		
2E.1	Improve skills and capacities of relevant authorities to enforce legislation supporting social-ecological resilience	BOS+; WWF; Join For Water; Uni4Coop
2E.2	Support relevant actors in the implementation of best practices (e.g., enforcing relevant laws; using best technology/methods and social considerations; respecting gender equality in resource management, using native species; participatory methods, etc.) and learn from each specific context	BOS+; WWF; CEBioS; Join For Water; VIA DB; Uni4Coop
2E.3	Improve skills and capacities of all relevant actors involved in the management, conservation and restoration of ecosystems and the exploitation, use and management of ecosystem services	BOS+; WWF; CEBioS; Join For Water; Uni4Coop
2E.4	Create an Andean network of professors and students to exchange on the themes of resilience and environmental sustainability	VIA DB
Strategic Goal 3: Strengthened sustainable access to, management and use of ecosystem services		
Approach 3C – Research and knowledge management: *R&KM on how to sustainably use and manage ecosystem services, and to train on value chain development of ecosystem services*		
3C.1	Develop resource management plans & technical manuals using participatory approaches;	BOS+; WWF; CEBioS; Join For Water; Uni4Coop
3C.2	Search for appropriate solutions adapted to local context based on problems and challenges identified in sync with local communities	BOS+; WWF; CEBioS; Join For Water; Uni4Coop
3C.3	Test tools and approaches for ethical sourcing and supply chain management and monitoring in consultation with business sectors and adapt them to the needs of the Belgian market	WWF
3C.4	Monitoring and evaluation of indicators linked to sustainable value chains	BOS+; WWF
3C.5	Monitoring and evaluation of indicators linked to ecosystem services (see also 2C)	CEBioS
3C.6	Investigate local/traditional knowledge on the use and management of ecosystems and their services, in combination with scientific knowledge	Join For Water; CEBioS
Approach 3D – Designing and implementing: *Put ecosystem services and their management into practice and develop business chains*		
3D.1	Coaching, accompanying the implementation process for resource management;	BOS+; WWF; Join For Water; Uni4Coop
3D.2	implementing jointly developed spatial and territorial management plans	BOS+; WWF; Join For Water; Uni4Coop
3D.3	Policies and implementation of zoning to conserve ecosystem functions	WWF; Join For Water; Uni4Coop
3D.4	Improving livelihood via sustainable subsistence and/or enterprise opportunities (e.g., agroforestry; sustainable fisheries; climate-proof agriculture, beekeeping, transforming water hyacinth)	BOS+; WWF; CEBioS; Join For Water; Uni4Coop
3D.5	Supporting actions with IPLC, schools etc based on scientific data, to develop ecoservice-based value chains (mushrooms, bamboo, beekeeping, …	CEBioS

Nr.	Main approaches and type of actions	Members
3D.6	Planning and construction of infrastructure adapted to local conditions, climate change, green energy, based on management of demand rather than on exploitation of resources (e.g., nature-based solutions, and green engineering).	WWF; Join For Water
3D.7	Developing and putting in place appropriate management mechanisms for different ecosystem services (including appropriate mechanisms for payment for ecosystem services if possible)	BOS+; WWF; Join For Water
3D.8	Providing universal access to ecosystem services taking social inclusion and gender equality into account	BOS+; WWF; Join For Water
3D.9	Putting in place an early warning system to reduce natural disasters	WWF; Join For Water
3D.10	Developing eco- and scientific tourism and other forms of non-resource consuming exploitation	BOS+; WWF; CEBioS; Join For Water; Uni4Coop
Approach 3E –Mutual capacity reinforcement: *MCR of actors involved in use and management of ecosystem services*		
3E.1	Joint capacity development on monitoring quality and availability of ecosystem services to ensure access *in-perpetuity*;	BOS+; WWF; CEBioS; Join For Water
3E.2	Joint capacity development in the elaboration, planning, realization, and management of ecosystem services	BOS+; WWF; CEBioS; Join For Water; Uni4Coop
Strategic Goal 4: Ecosystems are conserved or restored for optimal functioning		
Approach 4C – Research and knowledge management: *R&KM on how to correctly protect and enhance ecosystems (taking social, economic, environmental, … elements into account)*		
4C.1	Identifying science-based methods to maintain, enhance, or restore ecosystem resilience based on scientific research	BOS+; WWF; CEBioS; Join For Water; Uni4Coop
4C.2	Knowledge sharing on relevant practices to increase benefits on restoring, maintaining, or enhancing ecosystem resilience	BOS+; WWF; Join For Water; Uni4Coop
4C.3	Monitoring and evaluation of relevant indicators	BOS+; WWF; CEBioS; Join For Water; Uni4Coop
4C.4	Search for appropriate solutions/practices adapted to local context based on problems and challenges identified together with local communities	BOS+; WWF; Join For Water; Uni4Coop
Approach 4D – Designing and implementing: *Put adapted measures into practice to improve, protect and conserve ecosystems*		
4D.1	Design and implement appropriate measures adapted to local conditions to restore and/or conserve ecosystems and natural resources and improve their resilience towards human interventions and climate change. E.g. construction of infrastructure, assisted natural regeneration of trees, restorative agriculture.	BOS+; WWF; Join For Water
4D.2	Developing and putting in place appropriate management mechanisms for conservation or restoration of ecosystems and natural resources	BOS+; WWF; Join For Water; Uni4Coop
4D.3	Putting in place an early warning system to reduce natural disasters	WWF; Join For Water
Approach 4E –Mutual capacity reinforcement: *MCR of actors involved in protection, conservation, and enhancement of ecosystems*		
4E.1	Joint capacity development on monitoring the quality of ecosystems	BOS+; WWF; CEBioS; Join For Water; Uni4Coop
4E.2	Joint capacity development in the elaboration, planning, realization, and management of appropriate measures to improve or safeguard the resilience of ecosystems	BOS+; WWF; Join For Water; Uni4Coop

4. Risk analysis

As this T-JSF goes beyond national boundaries and addresses more global issues linked to social-ecological systems, the context analysis describes how we impact the social-ecological system, and the consequences of ecosystem collapse that presents the **risks to society** if these impacts are not addressed.

When the T-JSF is operationalised by both active and observer members, via programmes, and through synergies and complementarities, the general risks described in the national contexts in our partner countries will supersede the more global risks described above. As such, we move swiftly to a description of the risks associated with each strategic goal in the subsequent section.

There is no specific risk analysis in the chapter on context because context, TOC, and strategic goals are one coherent part of this T-JSF. All risks are presented together in this chapter to avoid overlap and repetition.

4.1. Risks linked to the strategic goals

We identified 24 risks, their probability and effect, and possible measures for mitigation, both of which are very context dependent and can change compared to what is presented in the table below.

Nr.	Description	Probability	Effect	Mitigation measures	Strategic Goal(s)	TOC Spheres impacted by risk
1	Incoherence between different policies at national and international level	Medium	Medium	Lobby and advocacy on national and international actors to obtain efficient and effective coordination	All SGs	Influence/ interest
2	Lack of reliable data and information	High	Medium	Improve access to data via D4D; connect to international networks; capacity building on MRV and data management	All SGs	Control/ influence
3	Limited or insufficient interest of certain actors	Medium	High	Increase awareness; provide positive examples to convince; explain all possible benefits, L&A	All SGs	Control/ influence
4	Inadequate policies and strategies	Medium	High	Lobby and advocacy for appropriate policies and strategies; create positive collaboration among all actors; provide good examples	All SGs	Influence
5	Insufficient financial resources to apply policies	High	High	Lobby and advocacy for sufficient resources	All SGs	Influence/ interest
6	Insufficient collaboration among actors	Medium	High	Search appropriate methods to increase connection between actors and across sectors and stimulate collaboration	All SGs	Influence

Nr.	Description	Probability	Effect	Mitigation measures	Strategic Goal(s)	TOC Spheres impacted by risk
7	Power discrepancies by (line) ministries that can precipitate degradation or quality of ecosystems (e.g., mining concession authorised within protected areas)	High	High	Implement multi-stakeholder principles targeting ministries beyond "usual suspect", such as energy, economy, etc.; cross-sectoral mainstreaming efforts	All SGs	Influence/ interest
8	Duty bearers are not ready to change policies (or their correct application) and to play their role	High	High	Reinforce local communities and indigenous people and other actors (development actors, scientists, …) to be able to make good proposals and increase influence.	SG1	Influence/ interest
9	Lack of vision and/or capacity of duty bearers	Medium	High	Increase exchange and capacity reinforcement	SG1	Influence
10	Instability on level of duty bearers and disruption of positive measures	High	High	In lobby and advocacy, put emphasis on continuity of policies and rights and good governance	SG1	Influence/ interest
11	Disagreement between (groups of) right holders on positions to defend	Medium	Medium	Reinforce organizational capacities of right holders; highlight what right holders have in common and what connects instead of what divides; gender approach; participative approach towards increased ownership	SG1	Influence
12	Lack of vision and/or capacity of right holders	Medium	High	Increase exchange and capacity reinforcement	SG1	Influence
13	Insufficient access of right holders to duty bearers	High	High	Search for adapted lobby mechanisms; create a positive dynamic based on constructive examples to increase possibility for access	SG1 and SG3	Influence/ interest
14	Turnover of staff of research institutions and brain drain	Medium	High	Increase positive working conditions and valorisation of researchers; lobby for sufficient financial resources; capacitate actors to find external funding	SG2	Influence/ interest
15	Weak or no relations between research institutions and local communities / authorities	Medium	High	Search adapted mechanisms for communication and implication of all relevant actors	SG2	Influence

Nr.	Description	Probability	Effect	Mitigation measures	Strategic Goal(s)	TOC Spheres impacted by risk
16	Limited or insufficient skills and capacities of certain actors	High	High	Increase exchange and capacity reinforcement	SGs 2 & 3	Control/ influence
17	Unrealistic ambitions in proposed programs	Medium	High	Ensure good implication of all actors; discuss profoundly ambitions versus available resources and make transparent and participatory choices	SG3 & 4	Control/ influence
18	Insufficient involvement of right holders	Medium	High	Apply methods of LNOB principle	SGs 1 & 3	Influence
19	Conflicts with other priorities	High	High	See annex 2 on risks linked to SDG interlinkages	SGs 3 & 4	Influence/ interest
20	Inappropriate technologies, infrastructure, etc.	Medium	High	Build on both local as well as scientific knowledge and capacity; ensure good implication of all actors; make transparent and participatory choices; support internet	SGs 3 & 4	Control/ interest
21	Insufficient learning from successes and failures	Medium	Medium	Create open mind to learn from failures; increase exchange and positive learning environment	SGs 3 & 4	Control/ interest
22	Presence of other development actors with opposing strategies or interests (on involvement of groups, realization, management, payment of services, etc.)	High	High	Ensure implication of all relevant actors around a common project; open discussion with actors with contradictory strategies and raise awareness on common strategies; stakeholder analysis	SGs 3 & 4	Influence
23	Conflicts between community groups and users of services	Medium	High	Search appropriate strategies to involve all groups; solve conflicts and search a common ground for collaboration	SGs 3 & 4	Influence
24	Negative effects on services from outside the intervention area (e.g., pollution)	Medium	Medium	Create appropriate communication and negotiation between groups living in and outside the ecosystem	SGs 3 & 4	Control/ influence

4.2. Risks linked to the 3 SDG principles

Based on the study 'SDGs as a compass, some risks can also be identified in relation to the 3 main principles of the SDGs: (a) Leave No One Behind; (b) interlinkages between SDGs; and (c) Multi-Stakeholder Partnerships. This is further developed in Annex 2.

5. Relationship with other JSFs

5.1. General overview of countries

As far as the preparation of programmes allows a clear view on foreseen partner countries, the members are expected to work in the following countries. For the four original members of the T-JSF, the countries in the table below show the full list of geographic commitment, and a distinction is not made between those countries with major engagements from those without. For VIA DB and Uni4Coop, the table only reflects the countries that will be presented under this T-JSF, for 2022-2026.

Region	Country	JSF	BOS+	CEBioS	Join For Water	WWF	VIA Don Bosco	Uni4Coop
Latin-America	Bolivia	Yes	X				X	
	Ecuador	Yes	X		X	X	X	
	Haiti	Yes			X			
	Peru	Yes	X		X		X	
Africa	Benin	Yes		X	X			X
	Burkina Faso	Yes		X				
	Burundi	Yes		X	X			
	DRC	Yes	?	X	X	X		?
	Ethiopia	No	X					
	Guinea	Yes		X				X
	Kenia	Yes		X				
	Madagascar	Yes						X
	Mali	Yes			X			
	Morocco	Yes		X				
	Mozambique	Yes		X				
	Niger	Yes		X				
	Rwanda	Yes		X				
	Senegal	Yes		X				X
	Tanzania	Yes	X	X				
	Togo	No		X				X
	Uganda	Yes	X	X	X			
Asia	Cambodia	Yes		X		X		
	Palestine	Yes		X				
	Vietnam	Yes		X				
Europe	Belgium	Yes	X	X	X	X		X

The following chapters describe the link with country JSFs and possible collaboration with members of these country JSFs. They are not in alphabetical order but grouped per continent and region. Annex 3 contains a short description of some challenges related to our JSF in each country. Annex 4 gives an overview of the (already known) partners of the members of this JSF in each country.

5.2. Link with country JSFs in Latin-America

Bolivia

Members of this T-JSF: BOS+, VIA Don Bosco

Strategic goals of JSF Bolivia	**SG of thematic JSF**			
	1	**2**	**3**	**4**
1. Exercise of human rights	X			
2. Sustainable and responsible management of natural resources and the environment	X	X	X	X
3. Sustainable family farming	X	X	X	X
4.Equitable redistributive processes with economic security, social and solidarity economy	X	X		
5.Reduction of gender inequality	X	X	X	

6. Inclusive, comprehensive, equitable and quality education		X		X
7. Recovery and reinforcement of the health system		X	X	X

- Goal 1: working with indigenous communities whose leaders advocate for collective and territorial rights, and with partners who fight at the national level for environmental rights.
- Goal 2: sustainable management of natural resources and the environment; promoting and conservation of biodiversity and maintenance of ecosystem services.
- Goal 3: diversifying food access and strengthening family farming.
- Goal 4: seeking alternative and sustainable ways for timber and non-timber products and promoting sustainable supply chains and responsible finance.
- Goal 5: focus on equity and equal opportunities, participation of women and children, traceability of supply and monitor of gender and intergenerational equity.
- Goal 6: increased awareness and knowledge about sustainable ecosystems for all, involving young people and thus contributing to the formation of the next environmental leaders.
- Goal 7: local knowledge and support of the collection of knowledge about local biodiversity that contributes to the health of the beneficiaries themselves.

Ecuador

Members of this T-JSF: BOS+, Join For Water, VIA Don Bosco, WWF

Strategic goals of JSF Ecuador	**SG of thematic JSF**			
	1	**2**	**3**	**4**
Goal 1: human rights and gender equality/equity	X			
Goal 2: natural assets and resources	X	X	X	X
Goal 3: sustainable and inclusive agri-food systems		X	X	X
Goal 4: economic justice and redistribution of wealth	X		X	
Goal 5: inclusive, accessible, quality education system ...		X		

- In general, we look for links with the different NGOs with whom we have good contacts (other Belgian NGOs, and also other relevant NGOs) to ensure that the concept of socio-ecological resilience becomes more deeply known and understood, and to look for strategies to integrate this holistic concept.
- Goal 1: possible links are very clear as there are approaches in both JSFs. This is applicable in different contexts between NGOs working with indigenous communities and organisations representing them to ensure that their environmental concerns are heard and considered, and resilience enhanced. Working on non-timber forest sector and water issues makes it easier to include women and work at the household level.
- Goal 2: here the links are very evident as it coincides completely with the Thematic JSF.
- Goal 3: to ensure sustainable use of natural resources, design diverse and resilient production systems and include natural elements. Strong links exist between the SCFs in different aspects.
- Goals 4: although not as evident, we see the focus on quality and access to "environmental systems" and access to resources as very important aspects of justice. On the other hand, the activities of NGOs functioning in JSF Ecuador, which focus on the commercialisation of agroforestry products are important, as a complement to the activities within JSF Resilience.
- Goal 5: education system: beyond formal education, we are looking for links to be able to introduce the concept of resilience in different types of interventions, such as the inclusion, in some form, in formal training curricula.

Peru

Members of this T-JSF: BOS+, Join For Water, VIA Don Bosco

Strategic goals of JSF Peru	SG of thematic JSF			
	1	2	3	4
1. Environment, climate change, land, and natural resources	X	X	X	X
2. Organic family farming and sustainable food systems	X	X	X	X
3. Social solidarity economy, inclusive sustainable businesses		X	X	
4. Civil and political, economic, social, cultural and environmental human rights	X		X	
5. Gender mainstreaming and practice	X			

The link between agroecology and ecosystem resilience is very strong. Thus, there is a common axis with NGAs working on this issue and JSF resilience. Some members of JSF Peru work in agroecology and with chains such as cocoa/chocolate (Rikolto). These links can be translated into the following axes: strengthening value chains in common: each NGA focusing more on specific links; improving awareness and capacity building: common advocacy and training on the link between the environment, the ecosystem and local/national policies; on the implementation of ecosystem services (use, management ...); practical ways to protect and improve ecosystems; awareness: exchange of tools; knowledge management: exchange of methods applied in the field, research results.

Haiti

Members of this T-JSF: Join For Water

Strategic goals of JSF Haiti	SG of thematic JSF			
	1	2	3	4
1. Contribute to the achievement of SDG 1. Eradicate poverty in all its forms, and throughout the world	X	X		
2. Contribute to the achievement of SDG 2: Eradicate hunger, ensure food security, improve nutrition, and promote sustainable agriculture.	X	X	X	X

Broederlijk Delen and Entraide et Fraternité work in agriculture with a focus on agroecology. The link between agroecology and ecosystem resilience is very strong. These links can be seen in the following areas.

- Advocacy: joint contribution to the notes of the grassroots movements towards public policies on the environmental component and climate change (complementarity).
- Capacity building: joint training courses on the evaluation of ecological systems in order to plan actions in river basins (diagnosis and development plan, etc.); on water management/irrigation; on agroecology, crop diversity, peasant agriculture; exchanges on natural resource management and land management (e.g., with the *Collectif Justice Mine*) (synergy through joint training; complementarity through exchanges).

5.3. Link with country JSFs in Africa

Preliminary note: Within its current five-year program (2018-2023) **CEBioS** has a limited collaboration with Senegal, Guinea, Niger, Burkina Faso, Kenya, Rwanda, Mozambique, and Morocco, mainly through its CHM, awareness, GTI and MRV calls. Although more S&C can be developed in the future depending on demands from partner countries, availability of time and means of CEBioS and the members of these country JSFs, the actual commitment is that, whenever an opportunity arises, CEBioS will inform the JSF members of publications relevant to the country, and of relevant courses, calls, exchanges, workshops, colloquia, or seminars. From 2024 onwards, new country priorities will be defined by CEBioS with appropriate allocation of means.

Benin

Members of this T-JSF: CEBioS, Join For Water, Uni4Coop (mangrove program)

Strategic goals of JSF Benin	SG of thematic JSF			
	1	2	3	4
3. Access to water and sanitation in relation to SDG 6	X	X	X	X
4. Sustainable family farming and food security in relation to SDG 2			X	X
5. Education and academic research related to SDG 4	X	X		
6. Productive activities, creation of decent jobs, entrepreneurship, especially of women, and innovation related to SDG 8 (target 8.3)		X	X	

Target 3 of JSF Benin is consistent with the role of Join For Water in this T-JSF. The Join For Water programme will focus on the protection and conservation of water resources through the restoration of ecosystem services directly or indirectly linked to water resources (reforestation, flood risk management, riverbank protection, ecological restoration of mangroves in collaboration with Uni4Coop, etc.), and to a lesser extent on the shared management of drinking water (citizen monitoring) and sanitation (JSF Benin's 3F approach). Uni4Coop will also contribute to the achievement of JSF Benin's target 3 through the preservation of natural resources and adaptation to the effects of climate change through an IWRM approach and through conservation and awareness raising on biodiversity for the benefit of users of mangrove banks, particularly market gardeners (JSF's 3F approach).

As for target 4 of JSF Benin, there is a direct link with water, which is an important factor in agricultural production. The emphasis in JSF Benin on sustainable agriculture, agroecology and strengthening the resilience of populations to climate change (approach 4G) opens an interesting link of exchange between JSF Benin and the thematic JSF. At this level, Join For Water will focus on the development of complementary irrigation to mitigate the constraints linked to climate variability. The same applies to Uni4Coop (4F and 4G approach).

Target 5 of JSF Benin also covers academic research, which is an actor of change in the thematic JSF. The approaches on advocacy (5A), improvement of research practices and the popularisation, valorisation, and dissemination of academic research results (5F) are entry points for exchanges on the role of academic research between JSF Benin and JSF-T Resilient Ecosystems, possibly also in connection with the JSF Thematic Academic Research and Science for Sustainable Development. Same for Uni4Coop.

Target 6 of JSF Benin is linked to the actions of Uni4Coop in the JSF Thematic through the promotion of alternatives to the abusive exploitation of wood energy resources, support for income-generating activities for users (associations of women fish merchants, salt extraction, manufacture of art objects, market gardening, etc.). The emphasis in JSF Benin will be on promoting production methods respecting natural resources and environment, to cope with climate change (approach 4F).

As far as practical collaboration is concerned, some initial thoughts have led to the following avenues.

- VSF-B meets research needs, which CEBioS could meet through its partnerships, with the University of Abomey-Calavi. A priority theme is transhumance, about which it is necessary to better understand the dynamics, mechanisms, social and economic impacts since the regulation decree to be able to orientate an advocacy in an appropriate way and enrich the related arguments. A workshop will be organised in Benin to specify the needs. This could also be done together with the JSFs of Niger, Burkina Faso, and Mali.
- Possible collaborations have been identified between Join For Water and (a) Uni4Coop/Louvain Coopération on operational and technical collaboration in support of the market gardening component in the Mono, including inputs in production, water management and marketing, based on an ecosystem services approach; (b) APEFE on entrepreneurship; and (d) Eclosio/LC on agroecological methods.

Guinea

Members of this T-JSF: CEBioS (limited program), Uni4Coop (mangrove program)

Strategic goals of JSF Guinea	SG of thematic JSF			
	1	2	3	4
1: Sustainable agriculture	X			
Entrepreneurship/ Employment & Self-Employment/ FPT/ Socio-Economic Inclusion			X	X
4: Gender & Inclusion		X	X	X

Whenever an opportunity arises, CEBioS will inform JSF members of publications relevant to the country and of relevant courses, calls, exchanges, or seminars.

Uni4COOP will contribute to JSF-Guinea SG1 through the preservation of livelihoods of mangrove communities while ensuring equitable and sustainable access to resources. Mangrove rice cultivation will be the family activity that will be most impacted by this JSF-Resilience. In addition, the preservation of mangroves, which have a high carbon sequestration capacity, will strengthen the overall resilience of coastal communities to the impacts of climate change (flooding, salinisation of water and rice fields, etc.).

The contribution to targets 2 and 4 of JSF Guinea will be made through the sustainable development of mangrove resources, particularly the development of green value chains for the benefit of women and young people. UNI4COOP will strive to develop an inclusive and sustainable market system for mangrove products and services exploited by women and youth. The target commodity chains are honey, salt, rice, smoked or dried fish, ecotourism ... The economic empowerment of women and youth through these value chains and the strengthening of CBOs' capacities in advocacy, leadership and gender will specifically contribute to the achievement of goal 4 Gender.

Senegal

Members of this T-JSF: CEBioS (limited program), Uni4Coop (mangrove program)

Strategic goals of JSF Senegal	SG of thematic JSF			
	1	2	3	4
1. Territories, governance, and human rights (SDG 11)	X	X	X	X
2. Promote sustainable food systems	X	X	X	X
3. Promote economic, social, inclusive, and entrepreneurial dynamics	X	X	X	X

Whenever an opportunity arises, CEBioS will inform JSF members of publications relevant to the country and of relevant courses, calls, exchanges, or seminars.

UNI4COOP will contribute to JSF Senegal SG1 through the preservation and conservation of this ecosystem and the implementation of models of participatory and concerted governance of mangroves on the coast of the *Petite Côte du Sénégal* and the *Sine Saloum Delta*. By developing awareness-raising and advocacy actions, UNI4COOP will also contribute to good local governance and the respect of human rights. Through the PFONGUE, we will also conduct thematic consultations on Natural Resource Management with a focus on mangroves (and therefore with all interested NGAs).

UNI4COOP will contribute to JSF Senegal SG2 through the improvement of knowledge and the sustainable exploitation of ecosystem services provided by mangroves, but also the development of ecological value chains of products from mangrove ecosystems and the improvement of women and youth incomes; thus, also contributing to the promotion of inclusive socio-economic dynamics of JSF Senegal SG3.

Togo (no country JSF)

Members of this T-JSF: CEBioS (limited program); Uni4Coop (mangrove program)

During the elaboration of the program, exchanges will be organised with other NGCAs working in Togo to establish possible collaboration.

Mali

Members of this T-JSF: Join For Water

Strategic goals of JSF Mali	SG of thematic JSF			
	1	2	3	4
1. Sustainable family farming and food security in relation to SDG 2	X	X	X	X
3. Education and academic research related to SDG 4		X		
5. Access to water and sanitation in relation to SDG 6	X	X	X	X

- As for the target on agriculture and food security, exchanges and collaborations in the field are possible with Rikolto, Oxfam, Solidagro, SOS Faim and the Belgian Red Cross on the effective and efficient use of water, development, smart-irrigation, IWRM, composting, farmer rainfall, riverbank protection and reforestation. In advocacy, joint actions are possible on, for example, the inclusion of agroecology in the National Agricultural Strategy by associating the importance of riverbank protection.
- Collaboration with Oxfam on gender issues could be continued.
- Exchange of expertise between VIA DB (training, entrepreneurship, and youth support) and Join For Water (water valuation and management). Some ideas: training on smart irrigation and protection of water resources; modules and courses on sustainable water management; moving from WASH-IN-SCHOOL to IWRM-IN-SCHOOL; feasibility study for the creation of a training programme on sustainable water management.
- VSF is interested in exchanging with the thematic JSF given the importance of pastoralism for the resilience of Sahelian ecosystems and biodiversity. Exchanges can focus on natural resource management and advocacy. This could also be done at the regional level together with Burkina Faso, Niger, and Northern Benin.

Niger

Members of this T-JSF: CEBioS (limited program)

Whenever an opportunity arises, CEBioS will inform JSF members of publications relevant to the country and of relevant courses, calls, exchanges, or seminars. JSF Niger members will be involved in environmental trainings. It remains to be seen whether these trainings will be cross-cutting over several countries, using videoconferencing or replicated specifically for Niger. CEBioS will be able to put JSF Niger in contact with the University of Maradi to share research and popularisation with civil society. South-south exchanges between Sahelian countries, such as Benin, are also possible, with the University of Abomey-Calavi (UAC). With VSF, the capitalisation of experiences and the production of guides for livestock farmers on their ecosystem (the savannah) could be envisaged. We will also base ourselves on experiences in Northern Benin (Pendjari and W) and if possible, make the link with JSF Burkina Faso.

Burkina Faso

Members of this T-JSF: CEBioS (limited program)

Whenever an opportunity arises, CEBioS will inform JSF members of publications relevant to the country and of relevant courses, calls, exchanges, or seminars. While remaining modest on other collaborations, more concrete avenues are being explored between CEBioS and the JSF: (a) with APEFE around the partnership with the Ministry of the Environment; (b) with ULB-C on nature conservation - with work in protected areas; and (c) with VSF on the capitalisation of experiences and the production of a guide for herders on their ecosystem (the savannah). Experiences in Northern Benin (Pendjari and Park W) and Niger will also be used as a basis.

Burundi

Members of this T-JSF: CEBioS, Join For Water

Goals JSF Burundi	Goals thematic JSF				Appr. (*)	Remarks (**)
	1	2	3	4		
1. Civil society		X	X		SI	Promotion of environmental friendliness within CS (S)
		X	X		LP	Strengthen CSOs' thematic expertise and advocacy capacities in relation to the environment (S)
		X			CM	Education and sensitisation of the population in terms of respect for the environment and good governance (S); Strengthen the capacity of the relevant actors (authorities, CS, local leaders ...) to sensitise and inform the communities (S)
		X			RMC	Exchange and learning based on expertise and experiences of CS in the sub-region (S)
2. Health	X	X			SI	Actions on determinants of impact on hygiene, community health, mental health, environment (one health, planetary health, climate change, pollution) (S)
			X	X	CM	Strengthen infrastructure, equipment, use and access to water in a sustainable and context-appropriate manner with particular attention to the latest advances in terms of new technologies, renewable energies, preventive maintenance, and respect for the environment.
3. Agriculture		X	X	X	SI, RGC	Popularisation and valorisation of academic research (concerning agroecology and soil conservation) (S) Exchange and learning on methods and approaches and their application in Burundi (use and management of systemic ecosystem services, conservation, and improvement of ecosystems) (C)
	X				LP	Advocacy with public authorities for the adoption of techniques for soil conservation/improvement of soil fertility and environmental preservation (agroecological transition) (S)
			X	X	CM	Collaboration in the field (e.g., Caritas and Join For Water) (C); Multidisciplinary collaboration on the problems of Lake Tanganyika (C); mutual reinforcement of actions in the field around protected areas and in agricultural areas (C)
		X			RMC	Improve rural and agricultural training, including the staff of decentralised services and ministries (technical, material, and human capacities) (S) Promote at all levels frameworks for exchanging and learning from experiences, particularly thematic ones (S)
4. Human rights	X	X			LP	Facilitate consultation mechanisms between actors involved in governance (S); Advocacy: joint drafting of advocacy notes, exchange on advocacy methods, joint advocacy in certain areas (C)
	X				RMC	Strengthen knowledge and capacity to apply international conventions (including CRC), national and local laws in the protection of rights by all duty bearers (judicial, penitentiary, security, state, decentralised authorities, moral and religious authorities, communities).
5. Gender and inclusion	X		X	X	LP, CM	Ensuring the right of women and marginalised groups to equitable access to ecosystem services (Twa); gender approach to ecosystem conservation

(*) Approaches: SI: awareness and information; LP: lobbying and advocacy; RGC: research, knowledge management; CM: design and implementation; RMC: mutual capacity building
(**) Type: (S): Synergy; (C): Complementarity

DRC

Members of this T-JSF: CEBioS, Join For Water, WWF (possibly BOS+ and Uni4Coop)

Goals JSF DRC	Goals thematic JSF				App. (*)	Type of actions of JSF DRC under each approach to which the thematic JSF can (partly) contribute
	1	2	3	4		
1. Gender	X				LP	Promote the full participation of women in decision-making bodies as development actors, particularly in political life, public and private institutions, civil society, resource management, conflict management and peace-building mechanisms.
2. Environ-ment		X			SI	Support and promote awareness raising and information activities related to natural resources (possible actions: research and training in support of environmental protection and sustainable management of natural resources.
	X	X			SI	Provide relevant, understandable, and usable information on natural resources to political leaders, state actors, the private sector, and the media.
	X	X			SI	Inform, raise awareness, support, and mobilise social movements and populations on the (positive and negative) economic, social, environmental, and human rights impact of the exploitation of natural resources.
	X		X	X	LP	Building and strengthening alliances on sustainable natural resource management
	X				LP	Influence political leaders, the competent administration at national level and decentralised entities (including traditional institutions) to promote governance and sound management of natural resources, the fight against: illegal exploitation of natural resources, corruption, human rights violations (including sexual violence) and environmental destruction.
			X		CM	Promote and support economic initiatives or channels that integrate the protection and management of natural resources and the sustainable use of ecosystem services.
			X	X	CM	Set up, together with the populations, appropriate systems for mitigating climate risks and natural disasters, through the adaptation of agricultural systems and the redeployment of forest ecosystems, with particular attention to the most vulnerable.
			X	X	CM	Set up and support projects to assist local communities: support for the process of identifying the potential, opportunities, risks, and constraints to the development of their land.
			X	X	RGC	Sharing lessons learned: in particular the link between environmental management/protection and income generation, the importance of protecting natural resource areas, the importance of taking an interest in endogenous and fruit species: sharing experiences and good practices.
			X	X	RGC	To share internally specific actions in favour of the prevention, mitigation, and resolution of conflicts related to natural resources and peace building; of the transversal integration of the environmental approach and in the Strategies and practices of the organisations.
			X	X	RGC	Strengthen the capacity of civil society to participate actively in the management of natural resources and respect for the environment
4. Health		X			SI RMC	Education and public awareness on health, social health justice, gender equity, and respect for the environment.
	X	X		X	CM	Actions on determinants that impact on health, particularly in relation to decent work, food safety, hygiene, veterinary health, and the environment ("one health", "planetary health", climate change and land, water, and air pollution).

Goals JSF DRC	Goals thematic JSF				App. (*)	Type of actions of JSF DRC under each approach to which the thematic JSF can (partly) contribute
	1	2	3	4		
5. Agriculture	X	X	X		SI LP	Promote awareness on environmental sustainability and agroecological, agroforestry and resilience approaches to stimulate professional and environmentally friendly agriculture for more resilient communities.
		X			RMC	To carry out joint actions on gender learning, environment, and organisational strengthening in the field of agriculture.
6. Human rights	X				LP	Advocate for a better application of the political, legal, and administrative frameworks (international, regional, national, and local) to improve the access of the Congolese people to quality public services and basic services.

(*) Approaches: SI: awareness-raising and information; LP: lobbying and advocacy; RGC: research, knowledge management; CM: design and implementation; RMC: mutual capacity building

Uganda

Members of this T-JSF: CEBioS, BOS+, Join For Water

Goals of JSF Uganda	Goals of thematic JSF				Remarks
	1	2	3	4	
3. Promote, respect, and protect human rights, access to justice, peaceful conflict resolution.	X				Within this goal, there is a focus on land rights defenders in the context of natural resource exploitation and support to communities in defending their rights and protecting natural resources.
4. Sustainable food systems respectful of the environment contributing to a more inclusive society.		X	X	X	Two approaches can be linked to several goals and approaches in the JSF Resilient ecosystems as they are about awareness raising, capacity strengthening, and management improvement.

On goal 3 of Uganda, there is a clear link with the following approaches of JSF Uganda: empower communities and vulnerable persons to understand their rights (related to natural resources); protection and promotion of land rights defenders in the context of natural resource exploitation; provide legal aid and strengthen protection to communities and individuals (victims of extractive industries); empower communities in their relationship and negotiations with private sector actors and local authorities (with a focus on the natural resources sector). On goal 4 of Uganda, links can be made with the following approaches of JSF Uganda: provide training and support to farmers and other food system actors to transition towards sustainable production methods, including agroecology, agroforestry, regenerative farming systems and sustainable management of natural resources for crops and livestock; promote an enabling environment for the emergence of sustainable family farming, agroecology and an inclusive agri-food sector through information-sharing and awareness raising among grassroots organisations that lobby & advocate at the local, national and regional levels. Moreover, there is a possible synergy between Join For Water, BOS+, BD, IDP and SOS-Faim on capacity building of shared local partner organisations on agroecological techniques and on M&E. These 5 actors will all work in the region. Based on the specific activity plans and thematical complementarity, they can easily identify practical synergies.

Tanzania

Members of this T-JSF: CEBioS (limited program), BOS+

Goals of the JSF Tanzania	SG of thematic JSF				Remarks
	1	2	3	4	
Sustainable food systems		x	X	x	Especially approach 1.A, 1B and 1F are linked to the thematic JSF
entrepreneurship			X		

education		x			
justice/governance	x				Specifically, the work on mining IPIS and Avocats sans Frontières seems to be in the domain of the thematic JSF.

The goal of sustainable food systems is in line with the thematic JSF and the work of BOS+ on Agroforestry and CBFM. BOS+ could be a partner in approach 1.A *Improve the business, social and institutional environment for all actors in favour of sustainable food systems at District, Regional and National levels*. Also, mention of sustainable management of natural resources for crops and livestock overlaps with the thematic JSF. For example, the work on agroforestry could be organised complementarily or synergistically to the work of IDP on conservation agriculture and Rikolto on Cacao farming. For the goal on entrepreneurship, we see a link with the third approach on green city development. In the implementation of the CBFM, there is a search for potential economic returns from the forest (timber or non-timber forest products, tourism). There is potential to consult TRIAS and Rikolto to reinforce this work. The work of CEBioS falls within the domain of education; however, the educational focus of members of JSF Tanzania is different from that of CEBioS (university vs high schools and vocational training). The work of VLIR-UOS who will be active in Tanzania under another thematic JSF might be more in line with the work of CEBioS. Finally, there is potential for cooperation on the goal of Justice and governance especially regarding the intended work on mining.

Ethiopia (no country JSF)

Members of this T-JSF: BOS+

In Ethiopia, BOS+ has potential for synergies and complementarities with other Belgian NGA's active within the country, such as Caritas who works on similar topics in other regions. The work on reforestation via exclosures in Tigray is closely connected to the research conducted in the region by Mekelle University and Belgian professors related to this university under VLIR-UOS projects. Similar potential to put research into practice is available in the VLIR-UOS funded collaboration with the University of Arba Minch.

Madagascar

Members of this T-JSF: Uni4Coop (mangrove program)

Strategic goals of JSF Madagascar	**SG of thematic JSF**			
	1	**2**	**3**	**4**
1. Strengthen food security and the economic conditions of rural populations, particularly the most vulnerable groups, in a spirit of inclusion and social equity.	X	X	X	X
2 Contribute to sustainable and equitable management and governance of ecosystems and natural resources by promoting the agroecological transition from small-scale agriculture and stimulating reforestation (mangroves and dry forests).	X	X	X	X

- JSF Madagascar's SG 1 is consistent with Uni4Coop's actions in favour of food and economic security in the mangroves: support for the setting up and running of the VOI Federation's cooperative) as well as support for VOIs and groups/associations for the creation and development of collective income-generating activities.
- JSF Madagascar's SG2 corresponds to Uni4Coop's intervention in reforestation, restoration, and preservation of natural resources in mangrove areas: production of seedlings, reforestation, and establishment of temporary fishing reserves.
- JSF Madagascar and this T-JSF will also exchange with the aim of increasing knowledge on (a) sustainable management and governance of natural resources (with a particular focus on mangrove reforestation; with Uni4Coop/Louvain Coopération as lead partner); and (b) protection, restoration of ecosystems and resilience to climate change. For JSF Resilience, these two aspects could be part of external collective learning with Uni4Coop/Louvain Coopération as a relay member with JSF Madagascar.

Kenya, Rwanda, Mozambique, Morocco

Members of this T-JSF: CEBioS (limited program)

Possible collaboration with the JSF of these countries: please refer also to preliminary note at the beginning of this chapter.

The actors of **JSF Kenya** see an important link with the JSF social-ecological ecosystems at the level of outreach and awareness raising with JSG 1 and possibly at the level of lobby and advocacy with JSG 2. The educational, cultural, and creative sector play a crucial role in improving awareness, knowledge, and skills on sustainable ecosystems in the context of Kenya where pressure on natural resources is enormous. Improved access to justice for defenders against natural resources exploitation is crucial for improved community rights, policies, and governance of ecosystems and natural resources. We believe that we can learn from the expertise of the thematic JSF social-ecological ecosystems in these fields. Some topics can be the object of training sessions targeted at specific actors. Such training sessions could treat subjects like agroecology, understanding of sustainable water usage, the governance of biodiversity and climate ... None of the members of the T-JSF has a representative in Kenya, though with the current experience with videoconferencing, this way of joint learning is certainly a possibility, if live participation cannot be organised due to budgetary limitations etc.

5.4. Link with country JSFs in Asia

Cambodia

Members of this T-JSF: CEBioS, WWF

Goal 1 of JSF Cambodia	Goals thematic JSF				Remarks
	1	2	3	4	
1E: Contribute to the conservation and restoration of the environment, ecosystems, and their biodiversity by giving priority to the most sensitive ecosystems, and to the reduction of human interference on the climate and the effects of climate change			X	X	Opportunities to improve agricultural practices, meeting needs of IPLC, without endangering natural ecosystems, or improving them when necessary
1B: Improve the efficiency of the use of natural resources, strengthen the resilience of family farming, and ensure accountability and social equity in rural areas	X		X		See above
1F: Process innovations, action-research, and mutual learning to energizes the overall context and creative environment to speed-up transitional processes at local, national, and regional levels		X			Opportunities for “resilience mindset” to be integrated across sectors

Vietnam

Members of this T-JSF: CEBioS (limited program)

Dealing with the risks resulting from climate change and environmental disasters as well as increasing the awareness on what triggers climate change and how individuals and institutions can avoid contributing to the accelerating climate crisis is transversal in all the geographical approaches. The expertise from the local partners and CEBioS on these issues and the link to biodiversity forms a good field for possible joint learning. This would also build on the successful joint learning within the 2017-2021 JSF Vietnam on green office and implementation of programmes.

Palestine

Members of this T-JSF: CEBioS (limited program)

There are obvious interfaces with SG4 Right to food and sustainable rural livelihoods of the JSF Palestine. Because of the direct and adverse impact of the Israeli occupation on Palestinian ecosystems, linking with SG 3 on International law, good governance, and the role of civil society in ensuring their respect, offers new opportunities. Giving more prominence to access to ecosystems and ecosystem services in some of the approaches in SG3 at the appropriate time, can raise awareness in previously uninterested policymakers and public and carries the potential for new collaborations. Whenever an opportunity arises, CEBioS will inform the members of the JSF Palestine of publications relevant to the country and of relevant courses, calls, exchanges, or seminars. In addition, the question of how to raise awareness and a sense of urgency around issues ostensibly of secondary importance in a situation of violent protracted conflict, and whether it is in fact desirable to do so, constitutes an interesting topic for a collective learning process.

5.5. Link with country JSF of Belgium

Members of this T-JSF: BOS+, CEBioS, Join For Water, WWF, Uni4Coop

Strategic goals of JSF Belgium	SG of thematic JSF			
	1	2	3	4
A. Education FR and NL - A1 primary-secondary; A2 higher education; A4 southern exchanges		X		
B. 1st and 2nd line - B1 general public; B2 volunteers; B3 intermediate actors		X		
B. 1st and 2nd line - Intermediary actors, i.e., private sector and public sector	X	X		
C. Policy work	X			
E. Environment - E1 - forming and guiding NGCA		X		
E. Environment - E3 - develop specific actions				X

Cross fertilisation

The members of the thematic JSF will actively participate in working groups/networks within the JSF Belgium, such as the platform Global Education. Experiences and knowledge will be actively exchanged between thematic JSF and JSF Belgium via existing knowledge platforms.

5.6. Link with thematic JSF on sustainable cities

The complete information on how the JSF on sustainable cities considers its relationship with this T-JSF is described in their contribution in annex 5. The possible relation of this T-JSF with JSF on sustainable cities and integrated in their JSF, has been discussed and is summarized Hereafter.

Priority challenges for thematic JSF regarding local authorities

Cities often depend on ecosystem services generated by natural and or protected areas and trees (drinking water, micro-climate, carbon sink). In that sense, it is advised that the T-JSF Cities remains in exchange with the T-JSF Resilience, to link up SDGs 6, 13, 14, 15 with SDG 11 and try to link up with UN Habitat, see https://unhabitat.org/about-us/sustainable-development-goals

The entry points of the thematic JFSs on resilience and sustainable cities are different, but they also have tangent places. The entry point of the JSF 'resilience' is the ecosystem, a physical/natural unity that can cover (parts) of several municipalities or cities. The entry point of the JSF 'sustainable cities' is an administrative delimitation of a municipality or city and its territory can belong to different ecosystems. In the JSF 'resilience', cities are not actors. However, local authorities (the local political and official level of these cities) and local communities living in these cities are also important actors regarding the fulfilment of the 4 strategic goals of this JSF.

The ultimate change we expect (level of impact) for local authorities is that they design and enforce relevant policies, linked to social-ecological resilience, and sustainable use of ecosystem resources/services to improve well-being of local communities. As for local communities, the ultimate change is described as follows: exercise their rights and privileges to access ecosystems and their resources in a sustainable way. Changes are also defined at the level of each strategic goal (see table with changes in actors in chapter 3.2). In a city, other actors are of course also active: individual consumers, schools, private sector, … They also have a role in the resilience of social-ecological systems. Changes at their level are described more in detail in the full text of the JSF resilience.

Relation between thematic JSF resilience and sustainable cities

The JSF 'sustainable cities' focusses on 2 SDGs: 11 (sustainable cities and communities) and 16 (related to strong public services at local level). Sustainable ecosystems and social-ecological systems cannot be separated from sustainable cities and communities. there is a mutual influence: communities and cities are part of ecosystems; they profit from ecosystems and ecosystem services. They also influence (in a positive or negative way) ecosystems and the use/management of their services. Local authorities and local communities are the main actors as described above. Their interaction is essential for a good functioning city and a good functioning ecosystem.

Both JSFs can exchange on how to link ecosystems and sustainable cities, on how to improve interaction between local authorities and local communities, and on how to improve the sustainable access, use and management of ecosystem services.

5.7. Link with thematic JSF on higher education and research

The complete information on how the JSF on HES4SD considers its relationship with this T-JSF is described in their contribution in annex 5. The possible relation of this T-JSF with JSF HES4SD and integrated in their JSF, has been discussed and is summarized hereafter.

Priority challenges for thematic JSF regarding HES4SD

'Research, universities and higher education' are one of the 10 types of actors defined by the JSF on resilience. The ultimate change we expect (level of impact) is that they design and promote innovative science-based solutions for adoption and implementation by relevant actors. See table with changes in actors in chapter 3.2.

Relation between thematic JSF resilience and JSF HES4SD

There is an overlap of 22 countries between both JSFs. This opens a broad range of possible collaborations, both in the field as on a more global (thematic) and transnational level (between countries). Higher Education and Science Institutes (HE&SIs) can provide scientific support and capacity building on topics that are relevant to the JSF on Resilience. This can enhance the valorisation of knowledge, the development of effective advocacy strategies and more evidence-based policies. By collaborating with universities and research institutions, the JSF on resilience aims at improving science-based solutions. While doing this, the JSF on resilience also aims at integrating (young) researchers in the domain of social-ecological resilience and enhance their interest on the different aspects and their capacities.

5.8. Link with thematic JSF on decent work

The complete information on how the JSF on Decent Work considers its relationship with this T-JSF is described in their contribution in annex 5. The possible relation of this T-JSF with JSF Decent Work and integrated in their JSF, has been discussed with them and is summarized hereafter.

Priority challenges for both thematic JSFs

Climate change has a significant negative impact on socio-ecological systems and hence on social progress and equity, which are in danger of being wiped out by climate change. Working towards resilient socio-ecological systems (thematically GSK resilient ecosystems) and working towards an equitable transition towards a climate neutral and socially sustainable society (thematically GSK dignified work) are complementary, even overlapping goals.

Social movements and trade unions not only stand up for sustainable jobs, labour rights, social protection, and social dialogue, but are also active in achieving this just transition and in eliminating the negative effects of climate change. Local communities, also through social movements, stand up for their rights to live in stable ecosystems and to continue relying on sustainable ecosystem services. In essence, they are standing up for the same end goal: a dignified existence.

Interface between both thematic JSFs

Goals of decent work	**Goals of resilient social-ecological systems**			
	Rights, policy, and governance	**Awareness, knowledge, and skills**	**Access to, use and management of ecosystem services**	**Conservation and restoration of ecosystems**
Creation of decent, sustainable jobs		(2)	(1)	(1)
Employment rights		(3)	(3)	
Social protection			(4)	
Social dialogue	(5)	(2)		

(1) 'Decent, sustainable jobs' also means having access to the services of an ecosystem in a sustainable way, e.g., engaging in agriculture or forestry whereby the ecosystem itself is also preserved (or, if necessary, restored), e.g., the nut raking sector in Bolivia. On the other hand, restoration measures should lead to (green) job creation and decent work.

(2) The creation of sustainable jobs in many cases presupposes appropriate training or retraining of workers. At the policy level, too, the social dialogue must be fed with additional knowledge about the promotion of resilient ecosystems.

(3) Sustainable access to ecosystem services goes hand in hand with ensuring better working conditions, with unsafe, unsustainable practices being identified and replaced or modified.

(4) Social protection describes all initiatives that transfer income or assets to those in need, protect the vulnerable against livelihood risks, such as the wide range of direct and indirect consequences of climate change. Social protection aims to prevent that people fall into poverty, provide essential social services like health care, and enhance the social status and rights of the marginalised.

Based on universal social and ecological rights, social protection systems need to consider climate change and sustainable ecosystems to effectively address the multiple risk and vulnerabilities faced by the poor and excluded. A healthy environment for example, is one of the key factors for good health. Conversely, effective social protection is also a lever for ecosystem conservation. For example, income security for households has a positive impact on more sustainable behaviour.

(5) Within the framework of decent work, social dialogue is the ideal forum for the defence and extension of labour rights. Therefore, especially regarding the informal economy, it is also the place to discuss and improve rights concerning ecosystems and (regulated) access to natural resources.

Through annual consultations, both T-JSFs want to exchange (a) how we can learn from each other about approaches to equitable transition in the context of decent work and resilient social-ecological systems; and (b) how both can concretely reinforce each other on the ground.

6. Synergy and complementarity

6.1. Synergy and complementarity between members of the thematic framework

6.1.1. S&C in Belgian and international platforms and networks

As for trans-boundary collaboration (i.e., linked to ecosystems distributed across different countries), already identified possibilities are described below. Each member is also active to some degree at the international level and/or in regional platforms and networks. Sometimes we can be official participants (e.g., CEBioS in CBD), observers (e.g., WWF international in COP), participants in workshops in the framework of an official event (e.g., Join For Water in the World Water Forum) etc.

There is a commitment between the members

- to pass information from international platforms to the field, and to use experiences from the field in exchanges and advocacy at international level, thus making a flow of information and experiences in both directions;
- to valorise expertise of other members in policy development.

This commitment is not limited to actions that will be financed by the DGD programmes. Where possible, collaboration will be searched with other relevant organizations (from partner countries, Europe). By linking local, regional, and international networks, we will try to integrate the vision and rights of indigenous people and local communities and to bring local experiences to a higher level.

CEBioS will promote exchanges and organize trainings to other members on how to deal with international frameworks, platforms, and conventions and how to contribute to lobby and advocacy towards governments within these frameworks. The link with DGD, the diplomatic posts and Foreign Affairs needs to be cared for as well. The link between Belgium and partner countries will be an important element, because what happens in Belgium affects partner countries and vice versa.

CEBioS may involve the T-JSF when dealing with some events organized by the EU Commission and/or Parliament or the FOD Environment, e.g., on trafficking, One Health, and others.

The following table summarizes Belgian and international platforms and networks in which actors of this T-JSF are member or participate, or to which they contribute. For more information, see annex 6 which gives with a short description of these platforms and networks.

Membership and affiliation of, or participation in Belgian and international platforms and fora	
CEBioS	Belgian Platform for Biodiversity (and thematic working groups), National Focal Point for CBD (+ GTI (GTI forum), CHM), Groupe Directeur CBD & Nature, EDUCAID, KLIMSEC, Leopold III Fund, Académie des Sciences d'Outre Mer, Stichting Ter Bevordering van het Biodiversiteitsonderzoek in Afrika (SBBOA), Congo Basin Forest Partnership, ACARE, FIABEL, NGO-Federatie, part of Belgian delegations to CBD-COP and preparatory meetings, OECD-Environet (punctual contributions), IPBES (punctual contributions), UNEP (punctual contributions, project, juries etc.), UNESCO Man and the Biosphere Reserves (creation of technical manual, project), KLIMOS, IUCN, TROPIMUNDO
BOS+	Federale Raad voor Duurzame ontwikkeling (FRDO), NGO-Federatie, 11.11.11, climate coalition, Belgian Network on Natural Resources, BBL, Foundation for environmental education (FEE), learning about forests (LEAF), COICA, World Forum on urban forestry, European forum on urban forestry, Beyond Chocolate, Global Landscapes Forum, Grupo REDD+ Peru, Plataforma ALC, FSC België, FSC international, The shift, Bosforum, Netwerk Natuur en Gezondheid, Biodiversity coalition, FABANDES

Join For Water	Belgian platform on water and development, NGO-Federatie, 11.11.11, Belgian Network on Natural Resources, Susana (sustainable sanitation alliance), Word Water Forum, World Water Week (Stockholm International Water Institute), MOS, BBL, The Shift, KLIMOS
Uni4Coop	ACODEV, AgriCongo, Belgian platform on water and development, Coalition Against Hunger (CAH); Gulf of Benin deltas collective (Uni4Coop (ULB-Coopération) as founding member); TROPIMUNDO; the International Union for the Conservation of Nature (IUCN); the Network of Marine Protected Areas of West Africa (RAMPAO); the Regional Partnership for Conservation of the Coastal and Marine Zone in West Africa (PRCM); 5DC (Uni4Coop – Eclosio as founding member). In Madagascar, Uni4Coop (Louvain Cooperation) is member of the Madagascar Locally Managed Marine Area Network (MIHARI) and the Population Health Environment (PHE)
VIA Don Bosco	ACODEV, NGO federatie, Educaid, Don Bosco Network, Don Bosco Green Alliance, MOS (Milieuzorg op school), VLOR (onderwijs en samenleving), Platform MoVo; FABANDES, PNALC, 11.11.11
WWF	ACODEV, NGO-Federatie, CBD, UNFCCC-COPs, Coalition Climat, FRDO GT biodiversité, civil society member of the Beyond Chocolate partnership, Enviro8, Belgian Network on Natural Resources, Biodiversity Coalition, Mekong NGO Forum, Mekong Region Land Governance, FSC Asia, AgriCongo, KLIMOS, FABANDES (Foro de actores belgas de los países andinos), PNALC (Plataforma Nacional América Latina y Caribe), COICA

Figure 17 - Illustration on how pieces of a puzzle come together around synergies and complementarities, in Belgium, in the field, addressing the cacao value chain. Such interventions are designed to contribute to all SGs, using multiple approaches.

6.1.2. S&C in Ecuador, Peru, trans-boundary between Peru and Ecuador and transnational at Andes level

S = synergy, C = complementarity

S/C	Description	Members	Link SG
S	To capture lessons learned from the current programs, and to include them to develop a "*Plataforma forestal*" that is intended to help integrated basin conservation, with lessons from the field. This should not only be limited to Ecuador, but also be open to an Andean scale when useful. This platform should support lobby and advocacy and will also make links with other actors in Ecuador from the country JSF	BOS+, WWF, Join For Water	All
C	To support the development and implementation of *Planes de Vida*, with Achuar, Awa, and Waorani; link will be made with common actions at CONFENAE and COICA on indigenous rights to access and sustainably managed ecosystems and natural resources. Linking with COICA will also permit work on a transnational level.	BOS+, WWF, Join For Water	1, 3
S	Joint training with local authorities on different topics related to ecosystems and their services; joint research on water resources, their management, pollution (e.g., by mercury), and climate change impact; advocacy to scale up to public policy level; pollution reduction, signing of bi-national (Peru-Ecuador) agreements on management of water catchments basins.	BOS+, WWF, Join For Water	All
S	BOS+ and Join For Water will collaborate in the bi-national catchment of Chinchipe between Peru and Ecuador. This will include field and policy work. Lessons will be brought into national and regional platforms to put more emphasis on the realization of plan on bi-national catchments. Links will be made with previous experiences of ENABEL in this catchment and collaboration with actors of the Ecuador JSF is also possible (e.g., Rikolto)	BOS+, Join For Water	All
S	Exchange between organisations on the development of educational content related to the resilience and sustainability of ecosystems, with each partner contributing to its area of expertise (education, ecosystem conservation, etc.).	BOS+, VIA DB	2
S	Methodological exchanges on awareness-raising methods	BOS+, Join for Water, VIA DB, WWF	All
S	Implementation of pilot curricula on resilience and sustainability of ecosystems in several technical schools	BOS+, VIA DB	2

6.1.3. S&C in Benin and transnational with Togo, Burkina Faso, and Niger

S = synergy, C = complementarity

S/C	Description	Members	Link SG
C	Join For Water will work in the Ouémé and/or Mono basin (choice still to be confirmed). Collaboration with CEBioS partners is possible on nutrient load, modelling of nutrient cycle, mapping of canals linked to the blocking of canals by water hyacinth,	CEBioS, Join For Water,	All

	harvesting and transforming techniques of water hyacinth, creating awareness on coastal systems etc. CEBioS works on lake Nokoué (part of Ouémé delta) on shrimp life cycles, modelling tides etc. (with IRHOB, students); and on mangrove (possible collaboration with Uni4Coop). In the Mono basin, focus would rather be on the coastal area with attention to mangrove restoration, which links to the work on mangrove ecosystems by Uni4Coop. On Mono basin cross border exchange can be established with Togo and experiences in the Benin part of the Mono basin can be presented in trans-boundary exchanges. Join For Water and CEBioS will connect with the National Water Institute. BOS+ is not active in Benin, but exchange with CEBioS and Join For Water is foreseen on similar problems in Lake Abayo and Chamo in Ethiopia.	Uni4Coop, (BOS+)	
C	CEBioS supports research in Pendjari and Park W in North Benin on habitat monitoring, fire, and transhumance. Join For Water will no longer have a programme in this region (Atacora). However, Join For Water has a long experience in this region and internal exchanges of experiences will continue. Connection will be searched with the JSFs in Niger and Burkina Faso on trans-boundary aspects of these parks (e.g., transhumance), but will depend on the evolution of the security in the region.	CEBioS, Join For Water + link with JSF Niger and Burkina if possible	2, 4
C	CEBioS will keep other members (+ members of JSF Benin) informed about the 'Clearing House Mechanism'. CEBioS will put other members in contact with interesting Beninese actors on biostatisticians (UAC); on traditional knowledge on medicinal plants, conservation (of plants and knowledge) and how climate change affects these plants (UAC); on monitoring of variations in national forest canopy cover.	CEBioS, Join For Water, Uni4Coop	All
C	Uni4coop will work in Mono (commune of Grand Popo) in Benin (choice still to be confirmed). Collaboration can be developed with Join for Water for the ecological restoration of mangroves involving the local communities concerned and including the realization of related activities for these populations (particularly: the management of water for market gardening on the sites of mangroves). Capitalization, exchanges on practices, tools and methods, support for networks / platforms (*PRO-Environnement*)	Join For Water Uni4Coop	All
C	Uni4Coop plans to extend its experience in participatory mapping of mangrove areas, which would be of interest to CEBioS as part of the development of its Remote-Sensing activity in Benin	CEBioS Uni4Coop	All

6.1.4. S&C in Burundi and trans-boundary with DRC

S = synergy, C = complementarity

S/C	Description	Members	Link SG
S	Collaboration on protection of water sources and biodiversity (reforestation with indigenous species), involving private sector and local NGOs. In 2020-2021, a pilot action has been going on	CEBioS, Join For	3, 4

	with CEBioS and Join For Water; both are interested in scaling up. BOS+ (not active in Burundi at this moment) is interested to complement the work with own input	Water, BOS+ (tbc)	
S/C	Joint protection of Kibera fringe/Ruzizi wetlands with different approaches/projects CEBioS: Kibera national park area (lexicon) and Ruzizi (rather Congolese side on inventories and sensibilisation), advise for embassy on pesticide use etc. This concerns impact assessments with local expertise Join For Water is investigating connection with Rikolto on partially irrigated rice production on the RDC side and linking this in Burundi with biodiversity protection through more efficient agricultural practices leading to increased productivity, thus avoiding encroachment in protected areas (improving soil and water conservation at fringes of Kibera forest to avoid intrusion in the forest). The Ruzizi wetlands open interesting possibilities to work on a trans-boundary level. Other complementarity can be found with WWF in DRC on lake Tanganyika (not part of DGD programme).	CEBioS, Join For Water, (WWF in DRC outside DGD program)	All
C	CEBioS and Join For Water will exchange experiences on ecosystem services, biodiversity monitoring and inventory of water resources while collaborating with Université du Burundi.	CEBioS, Join For Water	2, 3, 4
C	CEBioS will keep other members (+ members of JSF Burundi) informed about the 'Clearing House Mechanism'.	CEBioS, Join For Water	2

6.1.5. S&C in Uganda and trans-boundary with DRC

S = synergy, C = complementarity

S/C	Description	Members	Link SG
S	BOS+ and Join For Water already have concrete collaboration in the Mpanga catchment. This collaboration is to be extended to other districts of the Rwenzori region with specific attention to the Semliki river, which offers interesting possibilities for trans-boundary work: preserving wetlands, working on conflicts between user groups on both sides of the river etc. BOS+ and Join For Water will collaborate with specific attention to forest management (BOS+) and conservation and protection of water resources (Join For Water). However, actual insecurity will probably limit the start of a real trans-boundary action and will first be focused on the Ugandan side of the river.	BOS+, Join For Water	All
C	CEBioS is a member of the advisory board of 'CONNECT', a UNEP project with (among others) the Ugandan government. CONNECT aims at mainstreaming biodiversity into government decision making. In Uganda, focus is on biodiversity and agriculture. CEBioS will link with BOS+ and Join For Water. Pilot actions in Rwenzori by partners of BOS+ and Join For Water can serve as input in Connect.	CEBioS, BOS+, Join For Water	All
C	Join For Water is a member of UWASNET and involved in exchanges with Ugandan government on IWRM. CEBioS has some connections with universities and frequently organizes	CEBioS, BOS+, Join For Water	1, 2

	international workshops in Entebbe. BOS+ and Join For Water will be invited to these workshops and CEBioS will transfer interesting contacts with universities to BOS+ and Join For Water.		
C	CEBioS will keep other members (+ members of JSF Uganda) informed about the 'Clearing House Mechanism'.	CEBioS, BOS+, Join For Water, JSF Uganda	2
C	CEBioS, BOS+ and Join For Water will exchange information on security issues in the border area between Uganda and DRC. Other actors of the Ugandan JSF active in the region will also be involved.	CEBioS, BOS+, Join For Water, JSF Uganda	1

6.1.6. S&C in DRC and trans-boundary with Burundi, Rwanda, and Uganda

S = synergy, C = complementarity

S/C	Description	Members	Link SG
S	BOS+ is not active yet in DRC but already supports the Join For Water program in Ituri: the Join For Water program is shifting from a sectoral approach in drinking water with links to IWRM to a more comprehensive approach, starting from protection and conservation of water resources. Support of BOS+ on protection of water sources and reforestation can be extended and intensified.	BOS+, Join For Water	4
C	CEBioS is active in several platforms and has many relations with different universities. This network will be used to intensify collaboration and exchange between members of this JSF, even if field actions are in different regions (training, workshops, sharing lessons learned and results of field actions, research results …). Some possible topics: reforestation, sustainable charcoal production, remote sensing, databases, GIS, communication techniques, awareness raising, ecotourism, mushrooms …	BOS+, Join For Water, CEBioS, WWF	2
C	CEBioS has relations with well-trained Congolese scientists for collecting and exploring data; these scientists can be put in contact with WWF, Join For Water, BOS+ and their partners.	BOS+, Join For Water, CEBioS, WWF	2
C	WWF's program on improving agricultural production and settling farmers, introduction of biogas, improvement of cook stoves and charcoal production is to be extended with input from research (link CEBioS) and learning from other experiences on forests (link BOS+).	BOS+, WWF, CEBioS	2, 3, 4
C	CEBioS will keep other members (+ members of JSF DRC) informed about the 'Clearing House Mechanism'.	CEBioS, BOS+, Join For Water, WWF, JSF DRC	2
C	Both WWF and CEBioS have actions in or around Virunga NP in RDC. This is a trans-border park with Rwanda and Uganda. Information exchange and mutual involvement will be stimulated.	WWF, CEBioS	
C	Joint approaches when dealing with Congo Basin Forest Partnership governance	CEBioS, Bos+, WWF	1

6.1.7. S&C in Tanzania

S = synergy, C = complementarity

S/C	Description	Members	Link SG
C	BOS+ plans a programme around Lake Manyara. CEBioS conducted a stakeholder consultation on an integrated water management plan for Lake Manyara. The intervention of BOS+ can rely on this research.	CEBioS, BOS+	2, 3, 4
C	Both BOS+ and CEBioS have contacts in Northern Tanzania, which can be shared and can strengthen each other.	CEBioS, BOS+	2, 3, 4
C	CEBioS will keep BOS+ (and members of JSF Tanzania) informed about the 'Clearing House Mechanism'.	CEBioS, BOS+, JSF Tanzania	2

6.1.8. S&C in Cambodia and trans-boundary Cambodia-Vietnam

In the upcoming phase, only one active member (CEBioS) is present in Vietnam. However, the development of this framework document fostered discussions between CEBioS and WWF to consider opportunities to collaborate, beyond the confines of a DGD programme, to consider a trans-boundary approach. The Mekong Flood Forest ecosystem is impacted by unsustainable activities on the Vietnamese coast (for example, poor mangrove management lets seawater flood deeper inland, and sand mining in the riverbeds in Cambodia affects coastal ecosystems in turn). Such an initiative requires active participation of many stakeholders and may not necessarily be reflected in the DGD programmes but will be very much aligned with the principles and approaches described here.

S = synergy, C = complementarity

S/C	Description	Members	Link SG
S	Opportunities to implement biodiversity inventories on multiple taxa in key zones within the MFF landscape, to improve management of Wildlife Sanctuaries and increase capacities of local university partners. Possible involvement of parataxonomists from BINCO association.	CEBioS, WWF-Cambodia	2, 3
S	Capitalise on CEBioS' expertise to develop policy briefs to build capacities of local, and national authorities in relation to Cambodia's CBD commitments, and to inform relevant policies for better management and protection of ecosystems for communities.	CEBioS, WWF-Cambodia	1, 2, 3
C	CEBioS invites WWF and partners to engage on potential opportunities for trans-boundary work, between Cambodia and Vietnam, when possible/relevant (eventually beyond the scope of the DGD programme).	CEBioS, WWF	All

6.1.9. S&C in Belgium

S = synergy, C = complementarity

S/C	Description	Members	Link SG
S	Joint participation in specialized forums (e.g., global landscape forum) around the theme of ecosystem resilience and sustainable development. Invitation to engage in each other's knowledge exchange events (e.g., colloquia of CEBioS on specific topics related	CEBioS, Bos+, Join For Water,	1 & 2

	to biodiversity). Mutual capacity reinforcement and learning trajectories around advocacy and coalition building.	WWF, Uni4Coop	
C/S	Joint approaches in lobby work through coalition building. Members of the T-JSF work together through different coalitions: Biodiversiteitscoalitie (BOS+, WWF) on biodiversity advocacy; the Belgian Platform for Water and Development (Join For Water, CEBioS).	BOS+, Join For Water, WWF, CEBioS	1
C/S	BOS+ and Join for Water will collaborate on behavioural change of the Belgian consumer. This will be complementary to the existing project of Eat4Change of the WWF Network on meat consumption.	BOS+, Join For Water, WWF	2
S	Uni4Coop is a member of the Coalition Against Hunger (CAH) and will thus ensure the synergy between JSF-T and this platform, particularly in terms of sustainable consumption and production (SDG12).	Uni4Coop and all	1 & 2

6.2. Synergy and complementarity with ENABEL

Introduction

The expertise strategy of ENABEL gives several attractive elements that open interesting possibilities for S&C. Examples presented below are based on suggestions forwarded by ENABEL, for mutual consideration to include in our respective programmes.

- The strategy includes a long-term perspective and learning processes.
- Accreditation for the Green Climate Fund opens interesting opportunities.
- On expertise 2 (climate change), the strategy aims at reducing the causes and increasing resilience. Topics such as climate resilient, smart agriculture, forest and land management and integrated and sustainable water management have a direct link with this JSF.
- Expertise 5 (urbanization) refers also to sanitation.
- Global citizenship opens possibilities to collaborate with this JSF on awareness raising.

Possible synergies

- To organize **joint seminars or workshops and if relevant develop working papers** on different topics
  - policies and governance related to forest ecosystems (RDC FONAREDD/Rwanda etc.) (≈ SG1)
  - specific tools together on governance mechanisms to support implementation of resource management plans (≈ SG3)
  - development of education and awareness campaigns (≈ SG2)
  - access of JSF members to specific training modules of ENABEL on gender stereotypes at school (global citizenship) (e.g., North-South teachers exchange on gender –Uganda) (≈ SG2)
  - reflexions to support local knowledge centres and in development of early warning tools (≈ SG2)
  - how to use participatory approaches in the project design (≈ SG3)
  - on approaches on social-ecological resilience (≈ SG2, 3, 4)
  - on decolonialisation aspects, together with specific research groups (HIVA etc.) (SG2)
- To work together on **concrete projects**
  - on governance strategy on managing community ecosystems and natural resources (≈ SG1)
  - associating members of the JSF in design and implementation of ENABEL projects, especially focusing on priority SDGs from this T-JSF (SDG 6, 13, 14, 15) (≈ SG3, 4)

- To work together on **monitoring & evaluation**
  - To develop common monitoring system (≈ SG2)
  - To develop common capitalisation tools (≈ SG2)
  - To develop joint evaluation mission (≈ SG3, 4)
  - To develop joint monitoring missions in context of common geographical areas and themes (≈ SG3, 4)
- To work together on **awareness raising** (≈ SG2)
  - Raising consumer awareness on issues around footprint and how their choices impact ecosystems: teacher training, provision of the network and pedagogical tools; collaboration with www.annoncerlacouleur.be/repertoire
  - Anchor global citizenship and SDGs in training (innovative pilot project, training module, GCECE - global citizen experience centre for expertise)

Possible complementarity

- **Exchange and mutual reinforcement** on different topic e.g.
  - working with relevant authorities on recognising rights and access (≈ SG1)
  - commodities management of ENABEL (≈ SG1)
  - improved policies on decreasing social and environmental footprint of key commodities (e.g.: issue of labelling and regulation of organic/agro-ecological products and short food chains on the political agenda in Benin) (≈ SG1)
  - policies recognising rights and access, and how to enforce them; policies on the role of (local) authorities in organising access to ecosystem services; policies on structuring collaboration between diverse types of actors (≈ SG1)
  - governance mechanisms to support implementation of resource management plans; policies on the role of (local) authorities in organising access to ecosystem services; policies on structuring collaboration between diverse types of actors (≈ SG1)
  - modular governance options to manage community ecosystems and natural resources (≈ SG1)
  - global citizenship education in Belgian education (community-based but identical approach in Flanders) (≈ SG2)
  - project design on the IPLC questions (≈ SG2)
  - making gender, sustainable development, ecology, and climate change transversal in all training materials (≈ SG2)
  - good practices in tenders document about incorporating sustainability (≈ SG2)
  - relevant tools, methodologies, models, participatory approaches, and good practices (≈ SG2, 3, 4)
  - existing lessons learnt (≈ SG2)
- **Complementary actions in the field** (≈ SG3, 4)
  - aligning interventions in common geographical area and themes (to avoid overlap)
  - seeking common geographical areas to develop early warning systems
  - aligning monitoring system in context of common geographical area
  - referring to other actors' activities (to reinforce messages)
- Improve together **relations with research institutions** (≈ SG2, 3, 4)
  - by strengthening collaboration with universities;
  - by incorporating research and knowledge management components in projects
  - by involving academia at different stages of the project (design and implementation)
- To develop together a **political dialogue with common messages** (≈ SG1)
  - on policies recognising rights and access, and how to enforce them;

- on policies regarding the role of (local) authorities in organising access to ecosystem services;
- on policies about structuring collaboration between diverse types of actors.

How to make these possibilities concrete

Contact has been made with the ENABEL in DRC, Burundi, Benin, Mali, and Tanzania. For some field offices it is difficult to pronounce how S&C ideas can be put into practice because they are preparing a new program. In Benin exchanges can be found in the rice sector on transition to agroecology, the environmental impact, the resilience towards climate change, the use and management of water, etc. Collaboration is possible with UCL and Universities of Cotonou and of Parakou on how to improve the application of interesting solutions in the field. Links can also be sought with scientist of the university of Abomey Calavi (on insects and on conservation of endogenous seeds e.g.). Similar actions can be set up in Burundi in e.g., the Imbo zone on water management and agroecology. Regarding synergies and complementarities with ENABEL Mali, the formulation of a Climate Change Portfolio will take place in 2021. This will be the opportunity to concretise S&C between this T-JSF and the future ENABEL portfolio in relation to the targeted ecosystems.

Contacts with field offices of ENABEL will be intensified during the coming months to describe concrete collaboration in the program of each member.

6.3. Synergy and complementarity with 11.11.11, CNCD and Justice et Paix

In Belgium, two platforms have an important link with this T-JSF: (a) the climate coalition, and (b) the platform on national resources. This T-JSF does not aim at creating additional platforms, but to be complementary to the existing ones.

Climate

11.11.11 and CNCD, with a focus on climate justice, are steering the political working group of the climate coalition. They bring the international context into the coalition and link it with the Belgian policies. They do advocacy work on the development of the Belgian position in climate negotiations.

Climate change affects resilience of ecosystems, but resilient ecosystems can contribute to adaptation and mitigation. It is therefore important to bring the concept of ecosystem resilience in the debates on climate and climate change. This will be done by the members of this thematic JSF as part of the collective learning process.

Moreover, members of the JSF are represented in other fora, such as the Convention on Biological Diversity – CBD (CEBioS and WWF), or participate in debates and exchanges in national and international fora (e.g., WWF in CBD, Join For Water in Belgian Water Platform and World Water Forum, CEBioS in KLIMSEC, EDUCAID). Experiences and lessons from these fora will be brought in the political working group of the climate coalition. Since members of the JSF participate as observers in the country JSF, they will also make the link between field experiences of local organizations in these countries, the networks in which these organizations participate and the Belgian policy level.

When members of the JSF develop policy initiatives, 11.11.11 and CNCD will support communication; co-organizing of these initiatives will depend on the concrete objective and the financial possibilities of each organization.

Natural resources

The Belgian Network on Natural Resources Platform (BNNR) coordinated by Justice et Paix focuses on natural resources governance, with a focus on extractive industries and mining. 11.11.11 is an active member in this platform. Actions organized within the BNNR include advocacy on national, European and international level on topics and legislation concerning natural resources exploitation, as well as events and courses for a wider audience on the topic.

As for the climate coalition, members of this JSF will bring the concept of ecosystems in the vision on natural resources and contribute to subjects such as water, consumption patterns (e.g., related to imported deforestation or indirect water), etc.

When members of the JSF develop policy initiatives, Justice et Paix, 11.11.11 and CNCD will support communication and event organization; co-organizing of these initiatives will depend on the concrete objective and the financial possibilities of each organization.

6.4. Synergy and complementarity with other observers of this JSF and with external actors

S&C with observers of this T-JSF (see list in annex 8) will be (a) at the level of collective learning (see chapter 7); and (b) at the level of field actions. In chapter 5 (describing the link with country JSFs), the links with strategic goals of these country JSFs are already clarified. In some countries concrete possibilities for collaboration are also identified.

Miel Maya Honing and APEFE expressed their specific interest in collaborating with this T-JSF. **Miel Maya Honing**, besides exploring S&C in the field in Bolivia and DRC, highlights the central role of beekeeping (and pollinators in general) in the preservation of biodiversity and resilience of ecosystems combined with an interesting economic alternative for some populations. Links with agroecology, reforestation, and protection of nature reserves are obvious. VIA DB has a partnership with MMH for their programs in Haiti and Cameroun. Experiences from this partnership can also be valorised in this T-JSF.

APEFE continues its support to the 'Great Green Wall Initiative' in Burkina Faso which can be integrated in learning on sustainable land management, the promotion of enterprises based on Non-Timber Forest Products, and on governance. Just like VIA DB will work on education of the youth on resilience/environment in the framework of this JSF in the Andes region, APEFE will support youth leadership for climate action in Burkina Faso, which will give opportunities for exchange and learning.

The **Royal Museum for Central Africa** (RMCA) has programs in DRC, Burundi, Rwanda, Uganda, Tanzania, Mozambique, and Belgium and limited actions in Benin and Senegal. There is a natural link with most of their strategic objectives on biodiversity (1), reduction of the incidence of natural hazards (3), sustainable food production (4), natural resources (5) and knowledge and skills (6). This last goal also includes global citizenship in Belgium. With the RMCA exchanges are possible on strategies and methods and in the coming months more collaboration in the field can be explored in Belgium and certain partner countries. Joint policy support letters or policy documents can be made and collaboration on scholarships can be organized with CEBioS. Exchanges with WWF are also ongoing on collaboration in DRC.

Finally, JSF-members will continue to seek collaboration with other organisations, both in Belgium (e.g., Antwerp Zoo, BINCO, universities in or outside the framework of the T-JSF on HES4SD etc.) and from other countries.

7. Collective learning process

Collective learning processes will be on 2 levels: (a) between members of the thematic JSF (including partners and field staff), (b) between this thematic JSF and other organizations (in Belgium, especially with the observers, and in partner countries). There will be a link between the two levels: new internal insights will be shared with external actors, and interesting ideas and experiences of other actors will inspire internal reflexions. Learning with other organizations depends on their interest. However, the high number of observers and the lively interactions we had with them until now, show already a real interest and a key factor for successful collective learning.

Although this thematic JSF is new, members participated in collective learning processes in country JSFs in 2017-2021 and will integrate relevant experiences from this period in the upcoming collective learning in 2022-2026.

7.1. Internal collective learning

Participants	Members of the thematic JSF (including field staff) and their partners
Objectives	• To increase the internal coherence of the JSF • To reinforce the link between JSF and individual programmes • To improve the quality of individual programmes related to social-ecological resilience
Content	The development of the JSF has led to an in-depth discussion on all components of the strategic framework such as the appreciation of the context, underlying concepts for analysis and remedial action, Theory of Change, goals, approaches and contextualised applications. The internal collective learning will allow deeper understanding of these components and their place within the framework. We expect this to lead to more coherence and effectiveness in the programmes of the respective members. Therefore, some possible topics are: • how to improve stakeholder participation in ecosystem protection; • how to work on advocacy; • how to work on a rights-based approach; • Use of Environmental Integration Tools-EIT approach (EIT-Program and EIT-Producer).
Strategy and methods	• At the start of the programs, an in-depth exchange will be organized to explain how each program has been set up in the outlines of the JSF and how each program has translated concepts, TOC, goals and approaches into concrete actions. This exchange will already lead to some specific learning questions on how to monitor (and possibly improve) the quality of each program and the link with the JSF. This more global analysis and monitoring at the level of the overall programs will be done each year. • Each member will identify at least one similar action in the field, preferably one in which several members are involved or are at least present. The actions cover as many different approaches and goals as possible (e.g., a lobby action in Belgium and another in a partner country, an awareness action, a field action with ecosystem restoration activities, …). They must also have several common elements; approaches, themes, … to allow mutual learning. • These actions are reviewed annually by different members to assess how concepts, goals and approaches evolve in practice. In year 3 a joint appreciation (preferably peer-to-peer) will lead to observations that will help to adjust in the ongoing programs and that will serve as input in the in the

	next JSF and programs. A final assessment is foreseen in year 5 as input for the next programs and JSF. • These annual review leads to lessons learned to improve approaches, programs, and the T-JSF itself etc. This exchange will be at 2 levels: (a) country (or region), and (b) Belgium. Cross-continental and cross-regional exchanges will be organized (live or digital).
Indicators	• It is clear for each member how the concepts, strategic goals and approaches of the thematic framework have been translated in the different programmes. • The lessons learned from the field actions in year 3 are used to improve the quality of the individual programs and the link with the JSF. • The lessons learned from the actions in year 5 are used to define how the internal coherence of the JSF can be improved. • Annual exchange on approaches and on approval of programmes and the JSF is held both at country and sub-country level.

7.2. External collective learning

Actors involved	Members of the thematic JSF (including field staff) and their partners; ENABEL (HQ and field staff), DGD (including attachés), other NGCA (especially the observers and members of other thematic JSF), other organisations
Objectives	• To improve among all interested actors the understanding of social-ecological resilience and how to put it into practice • To inspire other organizations working directly or indirectly on environment
Content	Although this JSF does not bear on 'environment' explicitly, it has a clear link and is a component of it. All actors include 'environment' as a transversal theme, and some have an even more direct link to environment and ecosystem resilience, especially those working on, for example, agriculture. As a thematic JSF we can both learn from them and vice-versa and share insights and experiences. Some topics (non-exhaustive) already mentioned in different fora[65] are • link between beekeeping and environment and resilient ecosystems • youth leadership in climate action, environment, and resilience of ecosystems • sustainable land management and great green wall • sustainable and climate smart agriculture • land sharing vs land sparing; link between territories and ecosystems in a human rights approach; problem of land grabbing • link with other concepts as one health and environmental health, ecological justice, agroecology, sustainable food systems • methods on working with authorities, improving policies and governance • tools, methodologies, models, participatory approaches, good practices on e.g., awareness raising, lobby and advocacy, … • lessons learnt, monitoring of resilience • collaboration with and among actors; role of research • integration of transversal aspects as gender and D4D • link between gender inequalities and environment

[65]Exchange with observers on 4/12/2020; individual input observers, January 2020; input ENABEL, see chapter 6.2; possible relation with country JSF, see chapter 5.

	• link between sustainable cities and sustainable ecosystems, and the roles of local authorities and local communities (including citizens) • training on biodiversity governance processes by CEBioS to interested organisations of the ODA, DGD, Foreign Affairs & others • information and explanation on use of Environmental Integration Tools-EIT approach (EIT-Program and EIT-Producer)
Strategy and methods	• While exchanging with country JSFs on possible relations, it became clear that there is much interest to learn on experiences from this T-JSF. The challenge will be to keep expectations and engagements manageable. • Beginning of 2022, an exchange program will be elaborated after consultation of actors in Belgium and in partner countries. Each year one topic will be deepened in a seminar, if possible (partly) digital to allow country JSFs to join. • Exchange in partner countries will depend on availability of members and their partners to prepare debates and inputs.
Indicators	• Participants' (non-members) testimony that elements of the collective learning are useful in their own programme. • Members' testimony that experiences from non-members help to improve the quality of their program, reinforce the link with the thematic JSF and increase the internal coherence of the thematic JSF.

8. Annexes

8.1. Annex 1 – Actual situation of SDG6, 13, 14 and 15[66]

8.1.1. SDG 6 – Clean water and sanitation

Billions of people throughout the world still lack access to safely managed water and sanitation services and basic hand washing facilities at home, which are critical in preventing spreading the spread of COVID-19. Immediate action to improve Water, Sanitation and Hygiene for All (WASH) is critical in preventing infection and containing its spread.

In 2017, only 71 per cent of the global population used safely managed drinking water and just 45 per cent used safely managed sanitation services, leaving 2.2 billion persons without safely managed drinking water, including 785 million without even basic drinking water, and 4.2 billion without safely managed sanitation. Of those, 673 million persons were still practising open defecation.

In 2016, one in four health-care facilities throughout the world lacked basic water services, and one in five had no sanitation services.

In 2017, 3 billion persons lacked soap and water at home. In 2016, 47 per cent of schools worldwide lacked hand washing facilities with available soap and water, and 40 per cent of health-care facilities were not equipped to practise hand hygiene at points of care.

Preliminary estimates from 79 mostly high- and higher-middle income countries in 2019 suggest that, in about one quarter of the countries, less than half of all household wastewater flows were treated safely.

In 2017, Central and Southern Asia and Northern Africa registered very high water stress – defined as the ratio of fresh water withdrawn to total renewable freshwater resources – of more than 70 per cent, followed by Western Asia and Eastern Asia, with high water stress of 54 per cent and 46 per cent, respectively.

In 2018, 60 per cent of 172 countries reported very low, low, and medium-low levels of implementation of integrated water resources management and were unlikely to meet the implementation target by 2030.

According to data from 67 countries, the average percentage of national trans-boundary basins covered by an operational arrangement was 59 per cent in the period 2017–2018. Only 17 countries reported that all of their trans-boundary basins were covered by such arrangements. ·

Globally, in 2018, slightly more than 2.1 per cent of land was covered by freshwater bodies, although unevenly distributed, ranging from 3.5 per cent in developed countries to only 1.4 per cent in developing countries and 1.2 per cent and 1 per cent in least developed countries and small island developing States, respectively. The adverse effects of climate change can decrease the extent of freshwater bodies, thereby worsening the ecosystems and livelihoods.

ODA disbursements to the water sector increased to $9 billion, or 6 per cent, in 2018, following a decrease in such disbursements in 2017. However, ODA commitments fell by 9 per cent in 2018. Because countries have signalled a funding gap of 61 per cent between what is needed to achieve national drinking water and sanitation targets and available funding, increase in donor commitments to the water sector will remain crucial to make progress towards Goal 6.

8.1.2. SDG 13 – Climate action

The year 2019 was the second warmest on record and the end of the warmest decade, 2010 to 2019. In addition, with a global average temperature of 1.1°C above estimated pre-industrial levels, the global community is far off track to meet either the 1.5 or 2°C targets called for in the Paris

[66] United Nations; Department of Economic and Social Affairs; https://sdgs.un.org/

Agreement. Although greenhouse gas emissions are projected to drop by 6 per cent in 2020, and air quality has improved as a result of travel bans and the economic slowdown resulting from the pandemic, such improvement is only temporary. Governments and businesses should utilize the lessons learned to accelerate the transitions needed to achieve the Paris Agreement, redefine the relationship with the environment and make systemic shifts and transformational changes to lower greenhouse gas emissions and climate-resilient economies and societies.

A total of 85 countries have reported having a national disaster risk reduction strategy aligned with the Sendai Framework for Disaster Risk Reduction 2015–2030 to some extent, since its adoption in 2015. In 2018, 55 countries reported that at least some of their local governments had a local disaster risk reduction strategy aimed at contributing to sustainable development and strengthening socio-economic health and environmental resilience by focusing on poverty eradication, urban resilience, and climate change adaptation.

As of 31st March 2020, 186 parties (185 countries plus the European Union) had communicated their first nationally determined contribution, and several parties had communicated their second or updated nationally determined contribution to the United Nations Framework Convention on Climate Change. Parties have been requested to update existing nationally determined contributions or communicate new ones by 2020, providing a valuable opportunity for parties to increase their level of ambition in climate action.

In 2019, at least 120 of 153 developing countries had undertaken activities to formulate and implement national adaptation plans, an increase of 29 countries, compared with 2018. The plans will help countries achieve the global goal on adaptation under the Paris Agreement.

With regard to global climate finance, there was an increase of $584 billion, or 17 per cent, from 2013 to 2014 and of $681 billion from 2015 to 2016. High levels of new private investment in renewable energy account for the spurt in growth and represent the largest segment of the global total. While these financial flows are considerable, they are relatively small in relation to the scale of annual investment needed for a low-carbon, climate-resilient transition. Moreover, investments in climate activities tracked across sectors were still surpassed by those related to fossil fuels in the energy sector alone ($781 billion in 2016).

8.1.3. SDG 14 – Life below water

Oceans and fisheries continued to support the economic, social, and environmental needs of the global population, while suffering unsustainable depletion, environmental deterioration and carbon dioxide saturation and acidification. Current efforts to protect key marine environments and small-scale fishers and invest in ocean science are not yet meeting the urgent need to protect this vast, fragile resource.

The ocean absorbs around 23 per cent of the annual emissions of anthropogenic carbon dioxide to the atmosphere, helping to alleviate the impacts of climate change on the planet, but resulting in a decreasing pH and acidification of the ocean. A new ocean acidification data portal shows an increase in variability in pH and the acidity of the oceans by 10 to 30 per cent in the period 2015–2019.

The sustainability of global fishery resources continues to decline, though at a reduced rate, with the proportion of fish stocks within biologically sustainable levels at 65.8 per cent in 2017, down from 90 per cent in 1974 and 0.8 percentage point lower than 2015 levels.

As of December 2019, more than 24 million km2, or 17 per cent, of waters under national jurisdiction (up to 200 nautical miles from shore) were covered by protected areas, more than doubling in extent since 2010. Much of the coverage is concentrated in Oceania and Latin America and the Caribbean.

As of February 2020, the number of parties to the Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing – the first binding international agreement that specifically targets illegal, unreported and unregulated fishing – increased to 66

(including the European Union) from 58 in the previous year, and nearly 70 per cent of countries reported scoring high on the implementation thereof.

The contribution of sustainable marine capture fisheries remained stable at the global level, with regional variation, representing the largest contribution to the GDP in the Pacific small island developing States and least developed countries, averaging 1.55 and 1.15 per cent, respectively, in 2011 to 2017.

8.1.4. SDG 15 – Life on land

Forest areas continued to decline, protected areas were not concentrated in areas of key biodiversity and species remained threatened with extinction. However, efforts were gaining traction and showing positive effects that could help reverse those outcomes; effects such as increased progress towards sustainable forest management; gains in protected area coverage for terrestrial, freshwater and mountain areas; and progress in implementing programmes, legislation, and accounting principles to protect biodiversity and ecosystems.

The proportion of forest area fell, from 31.9 per cent of total land area in 2000 to 31.2 per cent in 2020, representing a net loss of nearly 100 million ha of the world's forests. From 2000 to 2020, forest area increased in Asia, Europe, and Northern America, while significantly decreasing in Latin America, sub-Saharan Africa, and South-Eastern Asia, driven by land conversion to agriculture. Notwithstanding the overall loss, 2017 data showed that the proportion of forests in protected areas and under long-term management plans, as well as certified forest area, increased or remained stable at the global level and in most regions of the world.

In 2020, the average proportion of each key biodiversity area for terrestrial, freshwater and mountain biodiversity within protected areas was 44, 41 and 41 per cent, respectively, an increase of around 12 to 13 percentage points since 2000. However, most key biodiversity areas still have incomplete or no coverage by protected areas.

As of 2019, 123 countries had committed themselves to setting their voluntary targets for achieving land degradation neutrality, and in 60 countries, governments had already officially endorsed those targets.

Species extinction, which threatens sustainable development and compromises global heritage, is driven primarily through habitat loss from unsustainable agriculture, harvest and trade; deforestation, and invasive alien species. Globally, the species extinction risk has worsened by about 10 per cent over the past three decades, with the Red List Index (which measures the risk of extinction, whereby a value of 1 indicates no threat of extinction and a value of 0 indicates that all species are extinct) declining, from 0.82 in 1990 to 0.75 in 2015 to 0.73 in 2020.

As of 1 February 2020, 122 countries and the European Union had ratified the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity (an increase of 53 from 2019), and 63 countries and the European Union had shared information on their access and benefit-sharing frameworks. Regarding the International Treaty on Plant Genetic Resources for Food and Agriculture, there are now 146 contracting parties thereto, and 56 countries have provided information about their access and benefit-sharing measures.

Only about a third of reporting parties are on track to achieve their national biodiversity targets as reported in national reports under the Convention on Biological Diversity. As at January 2020,129 parties, including the European Union, had reported their sixth national report, and 113 parties had assessed progress towards their national targets related to Aichi Biodiversity Target 2. About half the parties had made progress towards their targets, but not at a rate that will allow them to meet their goals.

8.2. Annex 2 – Possible risks linked to SGDs

8.2.1. Risks linked to 'Leave No One Behind' principle

- **Description:** the risk of 'leaving people or groups behind' concerns (a) that the poorest and the marginalized are not included in analysis (and thus not taking their rights and needs) nor participating in the development and implementation of programs, (b) that programs are not inclusive and do not respond in a correct way to their rights and needs.
- **Probability and effect:** probability is low because they are defined as a specific group in the actors of the TOC and measures will be taken in the programs to include them in analysis and realization. Effect, however, would be very high because programs would not respond to the needs of people or groups left behind.
- **Mitigation measures:** LNOB is an explicit principle in the TOC (see chapter 3.1.1). Local communities, women, youth, and indigenous people are defined as a specific group in the TOC, which implies that they are involved as actors of change. However, programs will have to foresee methods to ensure that specific groups with risk of exclusion are explicitly integrated in all stadia. Applying a rights-based approach helps to identify all types of rights holders and their relationship with duty bearers. There is a logical structure in the SGs to respect the LNOB principle. SG1 aims to ensure that everyone can express and exercise their rights. SG2 aims to raise awareness and a better understanding of the problems and possible solutions. SG3 aims for inclusive access to ecosystem services and SG4 seeks to protect those ecosystems on which ILPCs are highly dependent for their well-being.

8.2.2. Risk linked to the interlinkages between SDGs

Reinforce existing or induce possible synergies

- **Description:** a lot of positive interlinkages between SDGs are possible. However, an effective positive correlation cannot be taken for granted. Actively work on improving or maintaining these correlations will be necessary.
- **Probability and effect:** the figure 8 (see chapter 2.1.8) elaborated by the Stockholm Resilience Centre on the relation between SDG 6-13-14-15 and the other SDGs shows that the probability of losing positive interlinkages is rather limited, but the effect would be important.
- **Mitigation measures:** it will be important to follow-up positive interlinkages and anticipate possible problems.
  - Considering the LNOB principle, there are positive interlinkages with SDG16 (Peace, justice, and strong institutions), SDG5 (gender), SDG8 (decent work), SDG10 (reduced inequalities) covered especially by strategic goal 1; and with SDG4 (quality education) with a strong link to strategic goal 2.
  - This JSF aims to contribute to improved well-being, which includes a direct link with SDG1 (no poverty), SDG2 (zero hunger), SDG3 (good health and well-being) and SDG12 (responsible consumption and production). There is a possible positive effect on SDG7 (affordable and clean energy; e.g., via sustainable use of wood or water for energy) and SDG11 (sustainable cities and communities; e.g., via improved environment and public spaces, basic services from ecosystems, better air quality and waste management).

Reduce possible negative effects

See table on next page.

SDGs	Relation with SDGs 6, 13, 14 and 15 on which this JSF is based and possible trade-offs
1 No poverty	• Description: policies to eradicate poverty (target 1.1), to reduce poverty (1.2) and to ensure access to resources and services (1.4) can increase pressure on ecosystems and affect the sustainable use and management of ecosystem services. • Probability and effect: both high • Mitigation measures: work on adequate rights and governance, include all relevant actors and stimulate collaboration, communication, and common understanding of possibly negative effects of SDG1-policies on ecosystems and ecosystem services; more efficient and sustainable use of natural resources.
2. Zero hunger	• Description: inadequate policies to double agricultural productivity and income (target 2.3) can seriously affect ecosystems and their services destroying natural habitats, deforestation, increasing use of water and negative effect on water resources, etc. • Probability and effect: both very high • Mitigation measures: idem as SDG1 combined with lobby and advocacy, education, research, and knowledge management on the necessity to explicitly combine target 2.3 with targets 2.4 (sustainable food production systems) and 2.5 (genetic diversity)
3. Good Health and well-being	• Description: combating certain diseases (target 3.3) could lead to increased use of pesticides, draining wetlands, etc. affecting ecosystems and their services. • Probability and effect: probability medium, effect high • Mitigation measures: idem as SDG1 combined with lobby and advocacy, education, research, and knowledge management on the necessity to explicitly combine target 3.3 with targets 3.9 (reduce deaths and illnesses due to chemicals and air, water and soil pollution and contamination) in a one-health perspective
4. education	• Description: unilateral focus on skills, jobs, and entrepreneurship without taking resilience and environment into account in curricula and lessons can increase pressure on ecosystems and ecosystem services • Probability and effect: probability medium, effect high • Mitigation measures: give enough attention to target 4.7; make youth and educational community leading actors in sustainable development, resilience, and environment
7. Affordable and clean energy	• Description: improving access to energy (target 7.1) and increasing renewable energy (target 7.2) could lead to increased deforestation and inappropriate use of water resources. • Probability and effect: both high • Mitigation measures: idem SDG1
8. Decent work and economic growth	• Description: sustaining economic growth (target 8.1), achieving higher economic productivity (8.2) and promoting development-oriented policies (8.3) could be in conflict with the sustainable use of ecosystem services and the protection of ecosystems. • Probability and effect: both high • Mitigation measures: idem as SDG1 combined with lobby and advocacy, education, research, and knowledge management on the necessity to explicitly combine target 8.4 (endeavour to decouple economic growth from environmental degradation)
9. Industry, innovation, and infrastructure	• Description: if all targets are considered as written, there should not be major trade-offs. However, it all depends on if the word sustainable is effectively put into practice in target 9.1 (develop quality, reliable, sustainable, and resilient infrastructure) and target 9.2 (promote inclusive and sustainable industrialization) • Probability and effect: both medium • Mitigation measures: idem as SDG1; put specific emphasis on the concepts of inclusivity and sustainability in targets 9.1 and 9.2
11. Sustainable cities and communities	• Description: targets 11.2 (transport) and 11.3 (urbanization) include the principle of sustainability. If this is put into practice, there should not be major trade-offs. Target 5.5 (protection to water-related and other disasters) could lead to short-term vision with measures affecting ecosystems and their services (e.g., construct dikes to protect

SDGs	Relation with SDGs 6, 13, 14 and 15 on which this JSF is based and possible trade-offs
	against flooding with negative effects on salinisation, crop production, availability of fish, balance between species, …) • Probability and effect: probability medium, effect high • Mitigation measures: idem as SDG1; put specific emphasis on the concepts of inclusivity and sustainability in targets 11.2 and 11.3
12. Responsible consumption and production	• Description: there are no trade-offs to be expected if targets are achieved as described with specific attention to the concepts of sustainability. There is a direct link between target 12.2 (achieve the sustainable management and efficient use of natural resources) and this JSF. • Probability and effect: both low • Mitigation measures: specific attention is to be given to the sustainability of consumption and production.
17. Partnerships for the goals	• Description: target 17.11 (increase exports of developing countries) could lead to policies and choices that negatively affect ecosystems (e.g., promote export-oriented crops, excessive use of pesticides and water, deforestation, …) • Probability and effect: both high • Mitigation measures: idem as SDG1; put specific emphasis on the need to have a holistic approach in which SDG17 should be coherent with all other SDGs; work on value chains.

8.2.3. Risks related to (lack of) Multi-Stakeholder Partnership

- **Description:** the TOC is based on a profound analysis of all relevant actors, the (final) changes that should be obtained in the sphere of interest and that are expected in the sphere of influence. The ideal situation is that all actors work together to improve the resilience of social-ecological systems. However, risks exist between actors, inside each group of actors, and inside each actor itself. The programs under this JSF will have to deal with this variety of risks.
  - Between actors: groups of actors often have conflicting interests. The most obvious are authorities that do not want to consider the legitimate rights of local communities, private sector that prioritizes profit to sustainable exploitation of natural resources, etc. However, other less known conflicting interests can exist: local communities that do not want to collaborate with local authorities; research institutions that have no interest in subjects related to natural resources or local communities; NGOs or umbrella organizations that do not consider the demands of local communities etc.
  - Inside each group of actors: not all members of a group have the same interests: districts involved in a shared forest, national park or river basin can have different (and sometimes conflicting) policies; different groups in communities of an area can have other priorities: farmers, cattle breeders, charcoal producers, fishers, …
  - And even in one group or organization, there will not always be unanimity. In a local authority, it is possible for the mayor, the council, and the technical services to have different views; in a local community, conflicts are possible between the traditional leader, the official representative, the youth etc.
- **Probability and effect:** both high, but very related to context
- **Mitigation measures:** make a profound analysis of actors involved in each context describing the internal and external positions, the interest and influence (high or low), and the way in which these actors are in line with the objectives of the program (allies or not). Based on this analysis, specific actions must be foreseen to maximum include allies with high influence, to enhance the influence of allies with limited influence, and to convince or neutralize influential actors that play a negative role. It is important to strengthen the relations between the different actors. This is done by joint analysis and proposal of solutions, joint learning and clarification of roles and responsibilities of all actors, joint implementation with respect to the different roles and responsibilities. All approaches of this JSF contribute to this mitigation.

8.3. Annex 3 –Short overview of some challenges in partner countries

Note: this is also mentioned in the 2-pagers sent to the country JSFs.

8.3.1. Latin-Amerika

Bolivia

Members of this T-JSF: BOS+, VIA Don Bosco

One of the characteristics of Bolivia is that it is a country with a high forestry potential. 48%[67] of its total surface area is covered by 6 different types of forests. The richness of such biodiversity is significant for the socio-cultural, economic, environmental services and livelihoods of its population. But there is a lot of pressure on Bolivian ecosystems. The Bolivian Amazon is among the areas with the highest rates of deforestation[68] and is rapidly losing its biodiversity. In Bolivia, cattle ranching, large-scale agriculture, small-scale agriculture, transport infrastructure and fires are the biggest threats to this biodiversity. In 2019, more than 6.4 million[69] hectares of vegetation were burned, mainly in the dry forest of the Chiquitanía. 31 percent of the affected area was forest, waterways were damaged, and it is estimated that more than 2,300,000 animals disappeared. Many depend on forests and their ecosystems, so increasing the resilience of socio-ecological systems is essential to the well-being of the people and the living beings that inhabit them. Indigenous communities are fighting against mega-projects that destroy ecosystems and threaten family farming and resilience against climate change. National policies favour deforestation and an economy based on extractives. If we want to change the precarious situation of forests, we have to focus on resilient social-ecological systems.

Ecuador

Members of this T-JSF: BOS+, Join For Water, VIA Don Bosco, WWF

Ecuador's natural capital is enormous, and this is demonstrated, among other things, by the fact that some 20% of the country's territory is legally protected. However, these and other natural systems are deteriorating, affecting their resilience to change, the hydrological cycle and thus the provision of environmental services. Causes include the expansion of the agricultural frontier, logging, mining, oil extraction and infrastructure construction. These developments threaten the country's biodiversity and increase vulnerability to climate change.
Ecuador is home to 15 different recognised indigenous nationalities, together with Afro-Ecuadorian communities that control 80% of Ecuador's natural areas. Therefore, cooperation with these groups is crucial to safeguard Ecuador's natural capital for the benefit of local and global communities. Unfortunately, the current situation is such that their participation in land use decisions is not considered, affecting at the same time the quality of ecosystems and the quality of life of the population in a negative way.
Indigenous communities in different regions are fighting against extractive projects that destroy ecosystems and threaten family farming and resilience against climate change. National policies on the other hand favour deforestation, and an economy based on extractives despite laws in favour of the rights of nature in Ecuador. If we want to change the precarious situation of Ecuador's natural forests and their inhabitants, we must focus on resilient social-ecological systems.

[67] https://www.cfb.org.bo/bolivia-forestal/bosques-en-bolivia
[68] https://www.wwf.es/?55920/Informe-Frentes-de-Deforestacion
[69] https://cedib.org/publicaciones/dossier-1-los-incendios-en-la-chiquitania-2019-politicas-devastadoras-acciones-irresponsables-y-negligencia-gubernamental/

Peru

Members of this T-JSF: BOS+, Join For Water, VIA Don Bosco

Peru is a country vulnerable to climate change: it has low-lying coastal areas, arid and semi-arid areas, areas of high atmospheric pollution, fragile mountain ecosystems, areas exposed to floods, droughts and desertification, areas prone to natural disasters and areas with forest cover exposed to deterioration. The effects of climate change are already clearly visible in the country: the increased frequency and intensity of the El Niño phenomenon, the loss and retreat of glaciers, and longer and more prolonged droughts, frosts, and floods. The consequences directly affect some 1.4 million Peruvians who make their living from agricultural and livestock work, which occupies 30.1% of the national territory that is sensitive to changes in climate and water availability. Increasing the resilience of socio-ecological systems is therefore essential to contribute to the well-being of the population and, more generally, of the living beings that inhabit them.

Haiti

Members of this T-JSF: Join For Water

Haiti is in a very vulnerable situation, not only because of natural phenomena (hurricanes, earthquakes), but also because of high population density, extensive deforestation, extreme soil erosion and high income-inequality. The effects of climate change further increase this vulnerability through reduced average rainfall, rising average temperatures, rising sea levels, increased intensity of tropical storms, depletion of coral reefs and desertification. Agricultural practices contribute to the destruction of ecosystems by burning land and cutting wood for charcoal. Increasing the resilience of socio-ecological systems is therefore essential to contribute to the well-being of the population.

8.3.2. Africa

Benin

Members of this T-JSF: CEBioS, Join For Water, Uni4Coop (mangrove program)

Benin is feeling the effects of climate change through greater rainfall and temperature variability with risks of disasters and changes in the quantity and quality of water resources: more runoff, less infiltration, changes in flow rates. In addition, water pollution and the degradation of ecosystems and their ecosystem services are increasing. The consequences are an increase in the vulnerability of populations, conflicts between users, health risks and more difficult access to water resources.

One ecosystem is particularly representative of environmental challenges: mangroves. They are highly productive, rich in biodiversity and made up of a diversity of fauna and flora species. They also provide important resources that are under great pressure from local populations. In addition to anthropogenic pressures, climatic variations are also causing a rainfall deficit, a reduction in the length of the rainy season and the extent and duration of flooding, leading to a drastic reduction in mangroves, with the consequent disappearance of certain species of flora and fauna, and increasing the vulnerability and food insecurity of the populations dependent on them.

Togo (no country JSF)

Members of this T-JSF: Uni4Coop (mangrove program), CEBioS (limited program)

Togo is not spared by climate problems. The main climatic hazards include floods, drought, high temperatures, seasonal shifts, strong winds, poor rainfall distribution and coastal erosion, with enormous consequences for ecosystems and livelihoods. Climate change is already affecting several development sectors in the country. The sectors identified as most vulnerable are energy, water resources, agriculture/forestry/land use, human settlements and health, and coastal zone ecosystems. (FAO and ECOWAS Commission, 2018)

Guinea

Members of this T-JSF: CEBioS (limited program), Uni4Coop (mangrove program)

Genetic, ecosystem, animal or plant biodiversity is the basis for many activities of Guinean society[70] and is the foundation of a large part of the national cultural diversity based on ecosystem services. The traditional knowledge of our populations is linked to the large number of activities and benefits derived from biodiversity. In 2010, it was noted that biodiversity has declined sharply, particularly in coastal ecosystems and mangroves. The phenomenon was the result of multiple pressures induced by exploitations that overwhelmed the capacities of ecosystems and biological resources, pollution, fragmentation, disturbances, etc., all accentuated by climate change. A strategy has been set up with the aim of i) promoting the reduction of direct and indirect impacts on biodiversity and the fair distribution of the benefits it provides; ii) contributing to integrated land-use planning and sustainable development by integrating biodiversity as a priority in all public policies to improve the well-being of present and future generations; iii) involving all stakeholders (State, local authorities, economic stakeholders, civil society, researchers, education, etc.) in the action of the strategy; iv) mobilising elected representatives and citizens through information, awareness-raising and communication, strengthening their capacity for action for a responsible and successful contribution.

Senegal

Members of this T-JSF: CEBioS (limited program), Uni4Coop (mangrove program)

The main natural causes[71] of biodiversity loss and ecosystem degradation are: drought and its corollaries, water, and soil degradation and salinisation, water and wind erosion. The major anthropogenic causes are: bush fires, overexploitation of biological resources, land clearing, the impact of hydro-agricultural developments, habitat fragmentation and destruction, poaching and pollution. In addition, on the coast: coastal infrastructures, urbanisation, coastal erosion, sea level rise and the development of extractive industries (oil, gas, zircon ...) and the extraction of firewood from mangroves. At the legal and regulatory level, the main causes of biodiversity loss are: inappropriate specific regulations concerning areas and activities that affect biodiversity, the non-application and/or poor application of regulations concerning access to certain biological resources, inconsistencies and inadequacies in codes and laws governing the exploitation of biological resources, the rigidity of the status of protected areas and insufficient harmonisation in the regulation of resources shared with neighbouring countries. At the institutional and scientific level, the main causes of biodiversity loss are: inadequate poverty alleviation programmes, gaps in the qualitative and quantitative knowledge of available biological resources, poor use of research findings and insufficient consideration of traditional knowledge concerning the use of biological resources, inadequate impact studies of development projects likely to affect biodiversity, inadequate distribution of the benefits derived from the conservation and exploitation of biological resources and, finally, the gradual disappearance of the rites and beliefs that justify the existence of forests and sacred groves.

[70] Source: https://www.cbd.int/doc/world/gn/gn-nbsap-v2-fr.pdf
[71] Source: https://www.cbd.int/doc/world/sn/sn-nbsap-01-fr.pdf

Mali

Members of this T-JSF: Join For Water

Mali is a Sahelian and desert area with a continuously growing population and therefore a high demand for agricultural land and natural resources. Underground water resources are mobilised for basic services, surface and underground water resources for agricultural production and industrial activities. These resources are limited by drought and are impacted by the disruption of the water cycle due to climate change. Increasing use of pesticides and poor access to sanitation facilities and systems negatively affect water quality. Natural resources are overexploited for productive purposes. This is compounded by the country's institutional, economic, social, environmental and security fragility. The consequences are an increase in natural disasters (droughts, floods), conflicts, population migration, the disappearance of ecosystems, the depletion of water sources, and finally an increase in food insecurity, poverty, and the degradation of the quality of life.

Niger

Members of this T-JSF: CEBioS (limited program)

Niger[72] has significant potential for biological diversity, including the different ecosystems, the specific diversity and genetic diversity of flora and fauna, which ensures the well-being of the people of Niger through the provision of goods and services, and forms the basis of the rural economy. Population growth combined with increased consumption of natural resources is leading to a deterioration of ecosystems and a reduction in the number of species and their genetic diversity. Anthropogenic threats include poor agricultural practices, poaching, degradation and/or destruction of wildlife habitat, overexploitation of wildlife resources and pollution. Natural threats are mainly linked to climatic contingencies, which are themselves the result of a drop in rainfall, recurrent droughts, and poor distribution of rainfall in time and space, and extreme temperatures.

Burkina Faso

Members of this T-JSF: CEBioS (limited program)

Burkina Faso is one of the poorest countries in the world[73]. Its economy is essentially based on agriculture and livestock farming, practised by more than 85% of the population. The populations of the Sahelian part of the country (the North) practice animal husbandry, while those in the rest of the country are farmers. However, these two activities are increasingly practiced throughout the country. Anthropogenic activities that destroy natural resources, aggravated by drastic climatic conditions, have led to the impoverishment of agricultural land and grazing areas in the more populated and/or dryer zones, hence the need for farmers and stockbreeders to migrate from one area to another to areas that are more favourable to their activities, particularly in the East, Centre-South, South and West. In addition to these migrations, there is a rural exodus towards urban centres and neighbouring countries where labour is in demand.

[72]Source: http://ne.chm-cbd.net/implementation/documents-produits-par-le-niger/rapports-nationaux/5-eme-rapport-national-sur-la-diversite-biologique/5eme-rapport-national_db-final.pdf/download/en/1/5%C3%A8me%20Rapport%20national_DB-final.pdf?action=view

[73]http://bch-cbd.naturalsciences.be/burkina/bf-fra/contribution/plannationalenvir/cdb_all3.pdf

Burundi

Members of this T-JSF: CEBioS, Join For Water

In Burundi[74], the degradation of biodiversity continues to increase. Several ecosystems are in a state of degradation and several species are lost each year due to human influences. This is damaging not only to the life of communities but also to the national economy. Six threats are at the origin of biodiversity degradation and their hierarchy shows that deforestation is the most worrying problem. These threats are listed in order of importance as follows: deforestation; overexploitation of animals; pollution; proliferation of exotic species; rapid replacement of agricultural breeds and varieties in use; and climate change. The main threats to biodiversity and their direct causes are those related to human actions. Five root causes of biodiversity degradation have been identified, namely: poverty of local and indigenous communities; poor governance in biodiversity management; weak consultation in development planning; insufficient capacity to reduce pressures and conserve as many ecosystems, species, and genes as possible; lack of awareness of the value of biodiversity and its role in national economic growth and survival. In addition, there are causes related to the inappropriate political and institutional framework and population growth. Regarding water resources, the effects of climate change[75] will be manifested through changes in the seasons, drying up of lakes and other watercourses and disappearance of aquatic vegetation; but also, the risk of more frequent and large-scale flooding in lowlands; land degradation and loss of soil fertility; scarcity of groundwater resources; extreme weather events (hail, heavy rainfall, strong winds, etc.); changes in plant growth cycles; and unpredictable phytosanitary phenomena. In addition, water pollution and use, inefficient water management and overfishing.

DRC

Members of this T-JSF: CEBioS, Join For Water, WWF (possibly BOS+ and Uni4Coop)

The DRC[76] is endowed with varied ecosystems and rich biological diversity. The main threats are deforestation; degradation of natural habitats; poaching of wildlife species; unplanned and extensive fishing; inadequate management of Protected Areas and ex-situ conservation areas; discontinuity of taxonomic inventories; introduction of invasive non-native species; limited control of agrobiodiversity; repeated armed conflicts; global warming; and mining. As for water resources, the major challenges are the pollution of resources, the deregulation of the water cycle due to climate change with greater variations in rainfall, increasing demographic pressure, deforestation, lack of collaboration between different actors, and inefficient water use and management.

Uganda

Members of this T-JSF: CEBioS, BOS+, Join For Water

Drivers of ecosystem destruction in Uganda are[77]: population growth, urbanization, and economic activity; expansion of agricultural land into forests, wetlands, and rangelands; 90% of energy is biomass energy (charcoal and wood fuel); construction industry (high demand for timber); urban sprawl and industrial expansion (conversion of wetlands, urban forests); mining activities (sand and

[74] https://bi.chm-cbd.net/sites/test-bi/files/2020-02/doc-snpa-db-bi.pdf
[75] https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Burundi%20First/CPDN%20BURUNDI.pdf
[76] Source: https://www.cbd.int/doc/world/cd/cd-nbsap-v3-fr.pdf
[77]Source: https://www.espa.ac.uk/files/espa/Presentation_on_Uganda_Twinomuhangi_Final.pdf

clay, quarrying, gold); nature-based tourism[78]; emerging oil and gas sector; impacts of climate change. Regarding water resources, the effects of climate change will be manifested through changes in seasons, flooding of wetlands and lowlands; land degradation and loss of soil fertility; scarcity of groundwater resources; extreme weather events; changes in the vegetative cycles of crops and other woodland plants; unpredictable phytosanitary phenomena. In addition, there will also be increased water pollution, population growth, inefficient use, and management of water.

The country has diverse sets of qualitative policies and laws in place to protect ecosystems. However, on the ground the enforcement is very weak.

Tanzania

Members of this T-JSF: CEBioS (limited program), BOS+

Tanzania[79] is one of the twelve mega-diverse countries of the world endowed with different natural ecosystems that harbour a massive wealth of biodiversity. The Biodiversity wealth contributes significantly to the socio-cultural, economic, and environmental goods and services to the country and peoples` livelihood. It is estimated that Tanzania has lost at least one-third of its important ecosystems and biodiversity hosted within from forests and wooded areas over the past few decades due to agriculture expansion and urban growth. Along the coast, 18% of the mangrove forest cover has been lost over a period of 25 years (1980–2005). Similarly, more than half of inland water ecosystems (rivers, lakes, and dams) have been degraded and 90% of the wetlands are under increasing pressure, losing many of their important functions. In addition to agricultural expansion and urban growth, biodiversity is threatened by several issues including: overexploitation; pollution; invasive alien species; exploration and extraction of oil and gas; climate change; genetic erosion; poverty; lack of proper economic growth; political and social instability in neighbouring countries; culture and beliefs; inadequate awareness and knowledge; and inadequate policy, legal and institutional response.

Ethiopia (no country JSF)

Members of this T-JSF: BOS+

Land degradation and rural poverty in Ethiopia obstruct sustainable development.
Ethiopia is one of the countries in Sub-Saharan Africa most seriously affected by land degradation, hence this is a significant problem. Land degradation is a major cause of the country's low and declining agricultural productivity, persistent food insecurity and rural poverty, and it has associated adverse economic and social consequences. Without accounting for downstream and offsite effects such as flooding and damage to infrastructure resulting from erosion, the minimum estimated annual costs of land degradation in Ethiopia range from 2 to 3 percent of agricultural GDP. This is a significant loss for a country where agriculture accounts for nearly 50% of GDP (90% of the export revenue) and where agriculture is a source of livelihood for more than 85% of the country's 90 million people[80]

[78]Nature-based tourism can however also be a driver for protection. The disconnection between the Ministry of Tourism and the Ministry of Water and Environment can be a driver for ecological destruction.
[79]http://tz.chm-cbd.net/implementation/nbsap/nbsap-final-october-2015.pdf
[80]https://knowledge.unccd.int/sites/default/files/ldn_targets/2021-02/ethiopia-ldn-country-report-final.pdf.

Madagascar

Members of this T-JSF: Uni4Coop (mangrove program)

The main challenges of CSC-Resilience in Madagascar are:

- Increasing people's resilience to climate change, which increases their vulnerability.
- Help to slow down the loss of biodiversity by helping to preserve plant cover (reforestation of dry forests and mangroves), soil and water.
- To participate in limiting and reducing coastal degradation (coastal erosion, degradation of marine and coastal resources.), including that caused by human action.
- Contributing to good local governance for a better management of natural resources

Kenya

Members of this T-JSF: CEBioS (limited program)

According to the National Environments Management Authority's Strategic Plan 2019-2014,[81] the focus is on the following result areas: 1) Environmental Quality, Protection and Conservation; 2) Ecological Integrity of Ecosystems; 3) Climate Change; 4) Environmental Governance and Coordination; 5) Green economy for Sustainable Development; 6) Institutional Capacity
The T-JSF's goals fit in with those key result areas.

Rwanda

Members of this T-JSF: CEBioS (limited program)

In Rwanda[82], the root causes of biodiversity loss range from natural processes to human actions. Recent research results have shown that threats to biodiversity come from habitat loss due to encroachment for agricultural activities, overexploitation of resources through poaching and deforestation, as well as from increased socio-economic activities such as mining, urban development, etc. The underlying causes are mainly related to land tenure issues and poor natural resource management. In addition, the long-standing emphasis on increasing agricultural production at the expense of natural resource conservation is also a key factor leading to intensive loss of biodiversity and thus to ecosystem degradation.

Mozambique

Members of this T-JSF: CEBioS (limited program)

Mozambique[83] is characterized by a considerable abundance of natural resources and biodiversity. Like other developing countries, Mozambique's population, mainly rural, depends on natural resources for their survival. Since the end of Civil War in 1992, Mozambique has witnessed a rapid degradation of its natural resources, which derives from greater access to resources by the population, coupled with weak implementation of national legislation. The rapid economic

[81]National Environment Management Authority, Kenya (NEMA) © National Environment Management Authority, 2019 First published 2019 https://www.nema.go.ke/images/Docs/Awarness%20Materials/NEMA%20Strategic%20Plan%202019-2024%20Final-min.pdf

[82]National Biodiversity Action Plan, Government of Rwanda. 2016. https://www.cbd.int/doc/world/rw/rw-nbsap-v2-en.pdf

[83]https://www.cbd.int/doc/world/mz/mz-nbsap-v3-en.pdf

development of the country in the last five years has dictated a strong pressure on biodiversity. In fact, the investment in the infrastructure sectors, mining (coal and minerals), agriculture (mainly commercial large-scale), forests (forest plantations of exotic species and selective logging of native species) and fisheries has resulted in considerable changes of natural ecosystems and biodiversity, which are still little known and reported. Furthermore, the illegal exploitation of forest and wildlife and mineral resources is a major threat to biodiversity conservation in Mozambique.

Morocco

Members of this T-JSF: CEBioS (limited program)

A first source of vulnerability of the natural environment[84] is represented by the low quality of the soils of the national territory. Morocco, located in a transition zone between the two major general climates, is likely to be highly vulnerable to climate change. National biodiversity is of particular ecological importance and of vital socio-economic interest for the country. Exploited biological resources form an important part of the national wealth in different sectors of the economy such as agriculture, livestock, forestry, and fisheries. It follows that biological diversity contributes not only to the material well-being and livelihoods of Moroccans, but also to security, resilience, social relations, health and freedom of choice and action. Morocco's demographic transition will mean increasing social demand, pressure on the country's natural resources and a considerable labour force in the future. The main causes of biodiversity loss are the fragmentation, degradation and loss of habitats, pollution, poor water management, invasive species, overexploitation, and climate change. Numerous actions have been implemented to reverse the trend: demarcation of protected areas, species action plans, strategies to combat invasive species, dissemination of practices favourable to biodiversity, awareness-raising, etc.

8.3.3. Asia

Cambodia

Members of this T-JSF: CEBioS (limited program), WWF

For the active members of the T-JSF, the key challenges impacting social-ecological resilience include: overexploitation of natural resources, expropriation of IPLC territories (sensitive information, not to be distributed), flooding – changes in extent and duration (linked to climate change), loss of forest cover (illegal logging), lack of spatial planning, among others. In a non-finalised draft of the country JSF, climate change and its impacts have been prioritised for the upcoming phase, in relevant sectors (agriculture, rural development), which are in-line with the T-JSF objectives in general, and members' priorities specifically.

Vietnam

Members of this T-JSF: CEBioS

Vietnam[85] is a developing country and transitioning to a middle-income country. People's lives have improved but the pressure on biodiversity resources is intense; Unsustainable consumption patterns and conservation planning problems have emerged as new challenges to biodiversity and ecosystems. In addition, there are biodiversity conservation issues that need to be resolved, and

[84] http://ma.chm-cbd.net/implementation/snb_ma/strategie-et-plan-d-action-national-de-la-biodiversite-du-maroc-2016-2020

[85] https://asean.chm-cbd.net/sites/test-acb/files/2020-04/vn-nbsap-v3-en.pdf

mechanisms that need to be developed, to share the benefits from biodiversity and ecosystem services in a fair and equitable way that promotes community participation and allows community-based management, conservation and thrive of biodiversity. Methodology and approaches for conservation and restoration of biodiversity in response and adaptation to climate change also need be considered. Vietnam's population increased from less than 73 million in 1995, to over 90 million in 2014, making Vietnam one of the most populous countries in Asia and creating a large demand for resource consumption and land use. The demographic pressure and the increasing severity of climate change are having an increasingly negative impact on biodiversity.

Palestine

Members of this T-JSF: CEBioS (limited program)

The geographical situation of Palestine at the crossroads of the African, Asian, and European continents has endowed it with rich biodiversity. Decades of Israeli occupation have led to environmental degradation and poses lots of challenges which adversely impact its management of natural resources. The continued Israeli occupation has left the state with many social, political, economic, and environmental challenges. Living under occupation, without control over its lands and resources, has created more pressure on available limited resources for subsistence and survival. In addition, the already fragmented agricultural lands that its farmers are cultivating are getting degraded every day by pollution and toxic wastes dumped on Palestinian lands by illegal Israeli settlements.

8.3.4. Belgium

Members of this T-JSF: BOS+, CEBioS, Join For Water, WWF

The priority challenges for this T-JSF linked to the JSF of Belgium are:

- Striving for sustainable consumption and production (increasing the involvement of all actors in society; reducing the impact on local communities and their ecosystems in producing countries by strengthening the private sector regarding sustainable supply chains, and promoting sustainable consumption; developing legislation and monitoring at European, federal, and regional levels)
- Protecting natural resources (through legislation, behavioural change...)

This will happen through world citizenship education and public awareness; informing and training the private sector about sustainable supply chains; lobbying and advocacy with Belgian policymakers at European, federal, and regional levels

8.4. Annex 4 – Partners/type of partners of JSF-members

Note: this is also mentioned in the 2-pagers sent to the country JSFs.

8.4.1. Latin-America

Bolivia

Member	Partners / type of partners	Target groups / actors involved
BOS+	PROBIOMA, IBIF, others to be defined	Indigenous communities living close to the forest and working within the forest and in the buffer zone
VIA Don Bosco	Salesian planning and development offices and training centres	Vulnerable youth and their families; centre staff; inspectorate

Ecuador

Member	Partners / type of partners	Target groups / actors involved
WWF Ecuador	National NGOs, Indigenous Organisations, Producers' Associations, Public Institutions, Universities; Federations; confederations; ministries	Indigenous and peasant communities; Protected area managers
Join For Water	National NGOs, Producer Associations, Indigenous Organisations, International NGOs; Authorities	Local and indigenous communities, their umbrella organisations, and producers' associations
BOS+	National NGOs, Producer Associations, Indigenous Organisations, International NGOs; Authorities	Local and indigenous communities, their umbrella organisations, and producers' associations
VIA Don Bosco	Salesian Planning and Development Offices and Training Centres	Vulnerable youth and their families; staff of the centres; inspectorate

Peru

Member	Partners / type of partners	Target groups / actors involved
BOS+	Desarrollo Rural Sustentable – DRIS; Asociación para la Investigación y el Desarrollo Integral - AIDER	Indigenous communities; peasant communities; representative organisations; certified timber producers and the processing cooperative
Join For Water	The identification of partners is underway	Watershed users and stakeholders; local/national authorities; universities
VIA Don Bosco	Salesian planning and development offices and training centres.	Vulnerable youth and their families; centre staff; inspectorate

Haiti

Member	Partners / type of partners	Target groups / actors involved
Join For Water	Odrino, River Basin Committee of Moustiques; others can be added	The various users and stakeholders in the catchment areas of Moustiques, Denisse, Catinette and Trois Rivières; local, regional, and national authorities; universities

8.4.2. Africa

Benin

Member	Partners / type of partners	Target groups / actors involved
Join For Water	Environmental organisations	Users and stakeholders in the Mono and Ouémé basins; local/national authorities; universities
CEBioS	University Abomey-Calavi and Parakou, Ministry of environment, environmental NGOS	Researchers, local coastal and Pendjari communities, park managers, schoolchildren
Uni4Coop	Local environmental NGOs	Users and actors of mangrove sites: local populations and communities of the mangrove area; traditional and central authorities, state technical services; republican police; platforms/networks, universities, etc.

Togo (no country JSF)

Member	Partners / type of partners	Target groups / actors involved
Uni4Coop	Local environmental NGOs	Users and actors of mangrove sites: local populations and communities of the mangrove area; traditional and central authorities, state technical services; republican police; platforms/networks, universities, etc.
CEBioS	Ministry	Related to Clearing House Mechanism

Guinea

Member	Partners / type of partners	Target groups / actors involved
CEBioS	Ministry of the Environment	Target actors of the ministry; academics; local communities
Uni4Coop	CSOs active in the preservation of mangroves including Guinea Ecology, Carbon Guinea, National Directorate of Water and Forests, Guinean Office of Parks and Reserves OGPR, National Centre of Fishery Sciences of Boussoura (CNSHB)	Coastal grassroots community organisation, local, national authorities. National Civil Society Network for Environment and Sustainable Development (RENASCEDD), Landing Development Committees, AMP Management Committee, Village and Neighbourhood Committees, Gamal University and University of Kindia, extractive industries

Senegal

Member	Partners / type of partners	Target groups / actors involved
CEBioS	Ministry of Environment	Target actors of the ministry; academics; local communities
Uni4Coop	CSO-partners (Neebaday and APIL) universities (Universités de Dakar et du Sine Saloum) and research centres, transnational networks (RAMPAO[86], PRCM[87]), Collectif 5Deltas	Civil society (including the platform of European NGOs in Senegal-PFONGUE), researchers, students, local authorities, national authorities, family farmers and economic interest groups.

[86] Réseau des Aires Marines Protégées d'Afrique de l'Ouest – www.rampao.org
[87] Partenariat Régional pour la Conservation de la zone côtière et marine de l'Afrique de l'Ouest - http://www.prcmarine.org

Mali

Member	Partners / type of partners	Target groups / actors involved
Join For Water	Malian CSOs (NGOs & Associations); agricultural cooperatives and their unions; universities and Research Centres; other international NGOs	Women producers and producers of vegetables and rice; community leaders in the intervention zones; primary and secondary school pupils; local elected representatives and local authorities; national elected representatives and the government.

Niger

Member	Partners / type of partners	Target groups / actors involved
CEBioS	Ministry of environment; university of Maradi	Target actors of the ministry; academics; local communities

Burkina Faso

Member	Partners / type of partners	Target groups / actors involved
CEBioS	Ministry of Environment; academics	Civil servants and their target groups; researchers

Burundi

Member	Partners / type of partners	Target groups / actors involved
Join For Water	AVEDEC; other NGOs might add	Users of water resources; authorities; municipal water authorities
CEBioS	OBPE, University Burundi, ASREEBU, PROCUBU and others	Authorities and decision-makers, local populations

DRC

Member	Partners / type of partners	Target groups / actors involved
Join For Water	CIDRI; other NGOs may join; SAGE - Structure d'Appui à la Gestion de l'Eau (Support Structure for Water Management)	Water resource users; authorities; management structures
CEBioS	MEDD, ICCN, Centre de Surveillance de la Biodiversité, universities and public research centres, individual researchers, local NGOs, as well as other NGOs, local or indigenous populations, etc. through direct partners	Decision-makers, authorities, researchers, NGOs and through them other NGOs, local populations, or indigenous groups
WWF	WWF DRC; other local NGOs; Research institutes (e.g., bonobo research, forestry/community conservation research)	Local communities (small-scale burrow owners (tree planters), users of wood fuel energy, subsistence farmers, beekeepers, communities linked to a community forest concession, users of alternative energy sources, schoolchildren ...); local associations; cooperatives; private sector; provincial and local authorities; customary chiefs.
BOS+ is still considering whether DRC will be added as a partner country. Uni4Coop is also studying whether DRC will be included in the outcome on mangroves that will be covered by this thematic JSF.		

Uganda

Member	Partners / type of partners	Target groups / actors involved
Join For Water	JESE, NRDI, HEWASA + UWASNET	Water users, habitants of catchments, authorities, universities
BOS+	KFF, HODFA	Farmer groups, local communities near forests
CEBioS	Ministry of Environment	Target actors of the ministry; academics; local communities

Tanzania

Member	Partners / type of partners	Target groups / actors involved
BOS+	MCDI, Mviwata, UCRT	Communities, farmers, and farmer groups
CEBioS	Research institutes and Universities Ministry of Environment	Decision makers and authorities, local populations, and NGO's

Ethiopia (no country JSF)

Member	Partners / type of partners	Target groups / actors involved
BOS+	Given the current context of conflict in Northern Ethiopia, identification of partners is still underway	Farmer communities around exclosures

Madagascar

Member	Partners / type of partners	Target groups / actors involved
Uni4Coop	Organisme Public de Coopération Intercommunale-OPCI Alokaina, Fédération des Communautés de Base-FIVOI, Coopérative FIAME and WWF Moyen Ouest	Populations of the Menabe coastline including fishing communities, village committees, MIHARI network, PES-Health, Population and Environment network, Blue Ventures NGO, Institut Halieutique et des Sciences Marines-IHSM, Institut Supérieur de Technologie d'Antananarivo-ISTM, Université technique du Menabe, Direction Régionale du Développement Durable-DREDD, Direction Régionale Agriculture, Elevage et Pêche-DRAEP ...

Kenya

Member	Partners / type of partners	Target groups / actors involved
CEBioS	Ministry of Environment	Target actors of the ministry; academics; local communities

Rwanda

Member	Partners / type of partners	Target groups / actors involved
CEBioS	Ministry of Environment	Target actors of the ministry; academics; local communities

Mozambique

Member	Partners / type of partners	Target groups / actors involved
CEBioS	Ministry of Environment	Target actors of the ministry; academics; local communities

Morocco

Member	Partners / type of partners	Target groups / actors involved
CEBioS	Ministry of environment	All target groups of the ministry and universities

8.4.3. Asia

Cambodia

Member	Partners / type of partners	Target groups / actors involved
WWF (Belgium & Cambodia)	FLO: Forest Livelihood Organisation CYN: Cambodian Youth Network	ICLTs; youth and youth groups in all CBOs; CFs & CFIs; local, provincial, national authorities
CEBioS	RUPP: Royal University of Phnom Penh	Academics and students; relevant authorities

Vietnam

Member	Partners / type of partners	Target groups / actors involved
CEBioS	Ministry of Environment, IEBR, VNMN, IMER	Target actors of the ministry; academics; local communities

Palestine

Member	Partners / type of partners	Target groups / actors involved
CEBioS	Palestinian Environment Quality Authority	Target actors of the Authority; academics; local communities

8.5. Annex 5 – Information on other thematic JSFs

8.5.1. JSF on Sustainable Cities

Link between the JSF Resilient Ecosystems theme and the JSF Sustainable Cities theme

1. Vision on Sustainable Cities

The thematic JSF Sustainable Cities connects actors of non-governmental cooperation working on the processes of urbanisation, decentralisation and good (local) governance. Rapid urbanisation is one of the most important trends of the 21st century, involving continuous administrative transformations, transfer of competences and resources between levels of government, and changing relationships between the public sector, the private sector and civil society. International frameworks like the Agenda 2030 (SDGs), the New Urban Agenda and the Paris Climate Agreement emphasise the role and opportunities that the local level offers in the transition to a sustainable society.

What is a Sustainable City?

Sustainable Cities are cities, towns and villages that are democratically governed by elected and accountable politicians, transparent governance institutions, constructive communities and citizens, and a private sector that takes responsibility. They can strengthen relationships between urban and rural regions in an environmentally responsible manner, meeting the comprehensive and socially determined needs of all inhabitants, including disadvantaged and vulnerable groups, without compromising the needs of future generations. Sustainable cities are financially sound and create space for hybrid, multi-faceted and corruption-free decision-making bodies at various levels, make various types of citizenship and forms of self-determination accessible, and cooperate with overarching authorities at national and regional levels, as well as with surrounding regions.

2. The common goal of the JSF Sustainable Cities

Through their DGD programmes, the JSF Sustainable Cities actors contribute to one common goal: *to promote Sustainable Cities worldwide, i.e., cities, towns, or defined territories within which the Sustainable Development Goals (SDGs) have been achieved. The Sustainable City stays within the ecological limits of the planet, while guaranteeing the minimum social conditions necessary for the well-being of its inhabitants.*

3. Actors of the JSF Sustainable Cities with a functioning in line with JSF resilient ecosystems

Belgian actors	Partner organisation of the Belgian ANGS	Target group	Focus/theme operation
VVSG	Local governments (through town twinning); Umbrella organisations for local authorities	Politicians, civil servants, and civil society of the relevant local authorities	Good local governance for sustainable and coherent policies
Rikolto	Local authorities, private sector, civil society organisations, producer organisations, academic institutions	Consumers, farmers, small and medium-sized food businesses, distributors, business development services, local authorities	Sustainable, resilient, and inclusive territorial food systems

4. Priority challenges for Sustainable Cities in alignment with resilient ecosystems as identified by NGCA and their local partners

With 55% of the world's population currently living in cities, a number expected to rise to 70% by 2050, rapid urbanisation has become one of the most important trends of the 21st century. As cities generate 80% of the global economy, rapid urbanisation is creating more wealth, but also a multitude of development issues. Sustainable cities therefore offer both opportunities and challenges for the preservation, further development, and sustainable use of resilient ecosystems on their territory, in constructive relationship with surrounding semi-urban and rural areas. For example, by setting up sustainable (food) production chains and sustainable use of raw materials and water whereby the protection of ecosystems is balanced with the needs of the population.

Urban consumption, for example, has an impact on greenhouse gas emissions and ecosystems when consumption-related emissions are considered. Urban measures can significantly reduce emissions from major consumption categories such as buildings and infrastructure (26% by 2030), food (36% by 2030) and clothing and textiles (39% by 2030). Better management of municipal waste offers an opportunity to better protect ecosystems. For example, food and green waste often comprises more than 50% of all municipal waste (Silpa et al. 2018[88]). However, less than 2% of organic waste is recovered towards local agricultural economies (Ellen MacArthur Foundation, 2019). Local policies that reduce food loss and waste could reduce the need for land conversion for additional food production.

Meeting these challenges is complex because of the many factors that may be involved. At the socio-economic level, persistent differences in wealth between urban and rural areas, between generations, in terms of gender and between different population groups complicate the implementation of measures. In addition, there are cultural customs and social interests that can lead to resistance to reconciling sustainable consumption and the care of resilient ecosystems. In organisational terms, the large number of parties involved within the city or municipality and between municipalities is a challenge for setting up participatory (policymaking) processes. Moreover, interests between actors and short-term or long-term interests are not always easy to combine. Short-term economic interests are often opposed to longer-term social and ecological interests. On the other hand, there are examples of successful private-public cooperation. At the administrative level, intermunicipal cooperation and/or coordination with other policy levels is often necessary to achieve protection and sustainable exploitation of ecosystems and to respond to the above challenges. (Inter)national crises (such as Covid-19 as a health crisis but also with an economic impact), intensify the challenges because of the pressure on available resources at the local level and from other authorities. The many actors within the sustainable city do not always have the necessary capacities to deal constructively with rapid urbanisation, the pressure of human presence within the ecosystems surrounding these cities, and climate change that reinforces both movements.

For the purposes of the JSF sustainable cities, 'local actors' refers to all the actors that are active locally and can contribute to the realisation of sustainable cities. We divide these local actors into two groups: the local government (the local political and administrative level) and other local actors (all local actors except the local government). The other local actors include civil society, the private sector, schools, associations, citizens, etc.

5. Strategic goals and key approaches for Sustainable Cities in relation to resilient ecosystems

The global transition towards sustainable cities goes hand in hand with the well-considered protection and exploitation of resilient ecosystems. A Sustainable City is committed to a healthy and resilient ecosystem in relation to sustainable local development. It is not possible to see a Sustainable City as a given in itself: by definition it is related to the direct and indirect environment (ecosystems) and the care for it. In a Sustainable City, man, the environment, and the wider

[88] Please consult T-JSF Sustainable Cities for complete citations

surroundings are strongly connected. The JSF Sustainable Cities work towards the following strategic objectives, each in relation to healthy and resilient ecosystems:

1. Local governments co-create and implement together with other actors a local policy for sustainable development
2. Local authorities and actors strengthen their capacities to contribute to a sustainable city
3. Local economic actors, including local governments, adopt inclusive sourcing practices that stimulate sustainable consumption and production.

The following approaches contribute to the realisation of the strategic goals: development and implementation of supportive instruments, dialogue, lobbying, different capacity building approaches, support and professionalisation of all stakeholders in a (food) production chain, facilitation of inclusive and sustainable business models and engaging and sensitising citizens to sustainable consumption. These approaches and strategic objectives for the JSF sustainable cities apply to policy areas that are directly related to resilient ecosystems on the one hand (e.g., environmental care, water policy, etc.) and that are transversal to an integrated approach to sustainability on the other. Both the transversal approach and specific policy areas have common ground between the two JSFs.

Geographically, the following countries are involved in the JSF sustainable cities: Belgium, Benin, Brazil, Burkina Faso, Ecuador, Guatemala, Honduras, India, Indonesia, Madagascar, Morocco, Nicaragua, Uganda, Peru, DRC, Rwanda, Salvador, Senegal, Tanzania, Vietnam, and South Africa.

6. <u>Opportunities for complementarity & synergy with JSF resilient ecosystem actors</u>

Both JSFs see an opportunity in exchanging views on how to link ecosystems and sustainable cities, on how to improve the interaction between local government and local communities, and on how to improve the sustainable access to, use and management of ecosystems.

8.5.2. JSF on Higher Education and Science for Sustainable Development

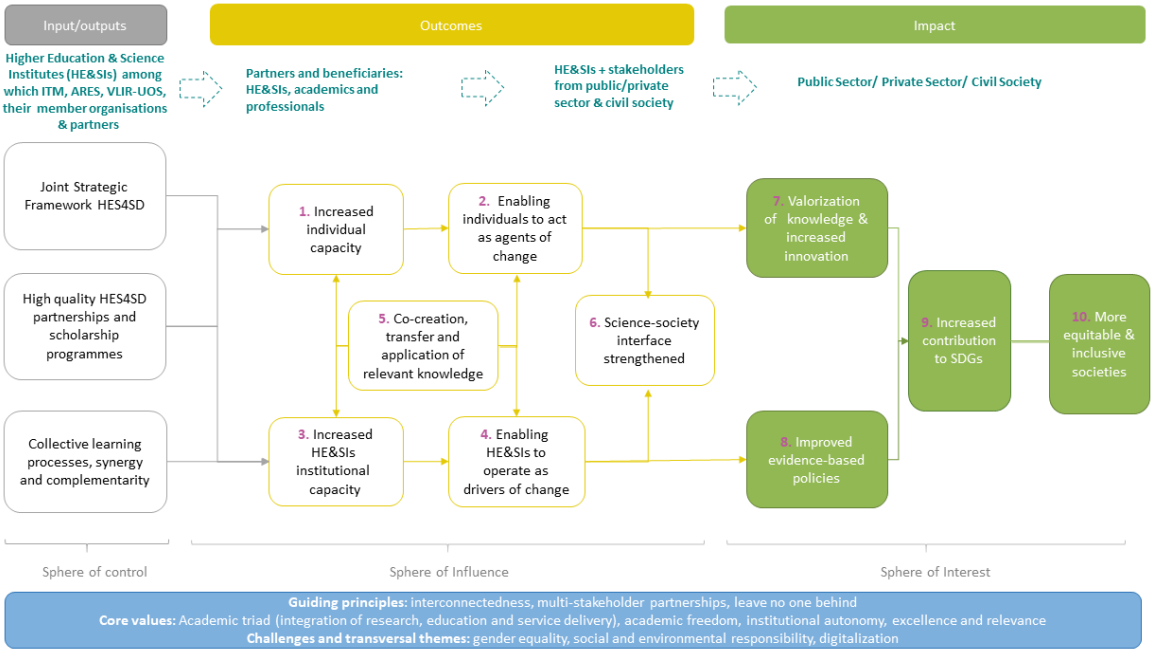
1. Higher Education and Science for Sustainable Development and actors

Making use of their autonomy and right to initiate and innovate, two umbrella organisations (ARES and VLIR-UOS) and the Institute of Tropical Medicine (ITM) put forward the thematic JSF Higher Education and Science for Sustainable Development (JSF HES4SD). Drawing upon their longstanding common history, the JSF initiators aim to further unlock the huge developmental potential of higher education and science cooperation for sustainable development and make it accessible to other Belgian, local and international partners, in different ways: as partner in a multi-actor partnership, as scientific advisor to other partners' projects, partners or policy bodies, as a platform for sharing state of the art scientific results, information, expertise and experience and for exploration of possibilities for synergy and complementarity.

Together, the three JSF initiators represent 60 Belgian higher education institutions (HEIs), being 11 universities, 32 university colleges, 16 school of arts, and ITM. The partners they collaborate with in the selected 30 countries (see annex) are mainly universities, university colleges, school of arts, polytechnics, research and reference laboratories, scientific centres (including e.g., disease control programmes and public health institutes). All these institutions, including the three initiators, will be referred to as Higher Education and Science Institutes (HE&SIs). Through cooperation with civil society, private and public sector, HE&SIs contribute to the development of many sectors in society.

ARES and VLIR-UOS as umbrella organizations with a wide variety of member institutions cover all academic and scientific fields. As they make use of competitive calls for several types of interventions they contribute to the full spectrum of SDGs. ITM is a key actor in Tropical Medicine and Public Health and will directly, but not only, contribute to SDG 3 (Good Health and Well-being: Ensure healthy lives and promote well-being for all at all ages).

2. Visualisation of Theory of Change (TOC)



3. The common Strategic Goals of the JSF HES4SD

The long-term general objective of the JSF HES4SD is to significantly contribute to the achievement of the 17 SDGs and ultimately "increasingly equitable and inclusive societies". To achieve this objective and starting from the specific expertise of the partners, the following six strategic objectives have been identified and will guide the specific interventions.

Strategic Goal 1: Increased individual capacity. The increased individual capacity should be considered as the result of education or research activities of/by individuals mainly through scholarship programmes. It includes training on transversal competencies such as global citizenship, critical thinking, leadership skills, enabling scholars to become critical world citizens capacitated and motivated to actively engage in global society.

Strategic Goal 2: Enabling individuals to act as change agents. This strategic goal expands on the knowledge that individuals embedded in organizations (private sector or public sector or civil society) have increased their potential to be change agents.

Strategic Goal 3: Increased capacity at Higher Education and Science Institutions. Strengthening capacities of the HE&SIs in the following fields:

1. Increased research, education, and service delivery capacity
2. Increased information, infrastructural and technological structures
3. Increased management capacity (governance, administration, finance)
4. Increased collaborative and networking capacity.

Strategic Goal 4: Enabling Higher Education and Science Institutions to operate as drivers of change. The HE&SIs activate their improved performance allowing them to operate as drivers of change aiming at a meaningful impact in society. This can be realized via both the co-creation, transfer and application of relevant knowledge (SG5), and/or via the science-society interface (SG6).

Strategic Goal 5: Co-creation, transfer and application of relevant knowledge. The first four strategic goals significantly contribute to this key strategic goal. By putting strengths together and operating in synergy, the JSF enhances the creation and dissemination of relevant and state of the art knowledge across the HE&SIs worldwide, their local communities and international networks.

Strategic Goal 6: Science-society interface strengthened. Information sharing and concerted actions amongst HE&SIs aim at cross-fertilisation between science and society. This can be facilitated through networks and platforms as connecting hub of knowledge, expertise and experience, and demand & supply interactions in view of applied solutions and evidence-based policies. Society is understood in its broader sense, namely all public, private and civil society actors beyond HE&SIs (e.g., enterprises, public decision makers, NGOs, the community at large).

4. Key approaches

1. **Joint strategic framework HES4SD.** The framework focuses on joining forces among Belgian academic actors and partners to contribute to academic inspired and science driven societal change linking HE&SIs with the broader society. This framework will gradually develop and remain dynamic to be responsive to opportunities and policy priorities.
2. **High quality HES4SD partnerships and scholarship programmes.** The respective actor programmes will include interventions such as: individual scholarship programmes; building research, teaching & training, and service delivery capacity; strengthening information, infrastructural and technological structures; building management capacity; strengthening national and international academic and science-society interfaces and networking; policy

support ... The country list in annex shows an indicative list of the countries where the three initiators envision to develop scholarship programmes only, or broader institutional programmes/projects.

3. **Collective learning processes and synergy and complementarity.** The JSF initiators will build and strengthen synergies and complementarities beyond the HE&SI partnerships and will define operational mechanisms to that purpose. The JSF initiators anticipate that the process of collective learning, synergy and complementary will be instrumental in achieving the outcomes and impact as defined in the TOC, in a more efficient and innovative way.

5. Opportunities for complementarity and synergy

Firstly, complementarity and synergy will be explored and realized among the initiators and their members organisations and partners. They might cooperate and reinforce each other in the fields of joint research, teaching and management topics. Synergy might be created by the collaboration of several HE&SIs in specific project and programmes, as it happens in many current programmes. Secondly, the JSF HES4SD will explicitly seek for complementarities and synergies, beyond HE&SIs, with other governmental and non-governmental actors, both nationally and internationally. Active participation of these actors will be sought in specific projects and programmes to reinforce common objectives (complementarity) or to stimulate collaboration between academics/scientists and actors in the broader society (synergy). In the selection of possible partners for future projects and collaboration, synergy and complementarity will be considered.

6. Interaction with other JSF (geographical and thematic)

The JSF initiators envisage to jointly organise at least three strategic dialogues in a partner country in consultation with the local partner HE&SIs, embassy and DGD. The initiators will consider hybrid modalities allowing global participation with minimal environmental impact. On this occasion an event open to Belgian and local development actors can be organized, focusing on the exchange of project results, networking among alumni and scholarship holders, identification of potential synergies and complementarities. The JSF initiators will further develop mechanisms to systematically share information on ongoing projects and the launch and results of calls for scholarships and project proposals. We invite the actors of other JSFs to actively participate, make use of the platforms made available and come forward with specific requests for scientific advice, capacity building and collaboration with academic actors. We will also build on existing relations between the actors of the HES4SD thematic JSF and individual NGCAs. Representatives and partners of the JSF HES4SD will participate in the strategic dialogues of other thematic and geographic JSFs according to requirements. The JSF initiators will actively support stakeholder and partner identification and engagement by facilitating contacts between HE&SIs and the Belgian, local and international development actors (incl. ENABEL, BIO, …) working in the country or region. The HES4SD JSF also puts forward primary point(s) of contact (see annex 2) to facilitate continued communication on the suggested approaches to synergy and complementarity in the future.

Annex: Indicative country list

No	Country	VLIR-UOS	ARES	ITM	Geographic JSFs	Decent work	Sustainable Cities	Resilience
1	Belgium							
2	Benin							
3	Bolivia							
4	Burkina Faso							
5	Burundi							
6	Cambodia							
7	Cameroon							
8	Cuba							
9	DR Congo							
10	Ecuador							
11	Ethiopia							
12	Guinea							
13	Haiti							
14	Indonesia							
15	Kenya							
16	Madagascar							
17	Morocco							
18	Mozambique							
19	Nepal							
20	Niger							
21	Peru							
22	Philippines							
23	Rwanda							
24	Senegal							
25	South Africa							
26	Tanzania							
27	Tunisia							
28	Uganda							
29	Vietnam							
30	Zimbabwe							
Total		28	30	30	23	20	14	22

Indicative list (2022-2026)

- Scholarship + project country
- Scholarship (+ potential future project country)
- Scholarship country
- Actor not active in this country
- JSF in this country

8.5.3. JSF on Decent Work

1. Definition of decent work

The thematical reference framework for the Decent Work JSF is the Decent Work Agenda of the International Labour Organisation (ILO). Decent Work can be summed up as follows:

Decent Work:

Productive and freely chosen employment;
Which provides an income sufficient to cover family needs;
Which includes social protection;
Which respects fundamental rights at work, including freedom of association and the right to participate in collective bargaining agreements (CBAs);
Which includes equal treatment of all workers without making any distinctions based on sex, age, origin, political or religious beliefs;
Which includes health and safety provisions in the workplace.

The Decent Work Agenda is based on four pillars, some of which overlap, with gender and environment being cross-cutting themes:

1. Creating decent and productive jobs,
2. Guaranteeing rights at work,
3. Extending social protection,
4. Promoting social dialogue.

2. The common strategic goal of the Decent Work JSF

The actors of the Decent Work JSF will – via their DGD-programmes – contribute to one common goal: **Promoting decent work for a sustainable, fair, solidarity-based, and inclusive development: creating jobs, guaranteeing labour rights, expanding social protection and promoting social dialogue for all.**

3. Approaches of the Belgian CSOs of the Decent Work JSF

1. Supporting and strengthening capacities of partners CSOs in Africa, Asia, Latin America, and the Caribbean on different domains: technical, political, strategic, thematic and financial.
2. Articulate and create multi actor networks, promoting cooperation and organizing joint actions between CSOs on the local, national, continental, and international level.
3. Design and carry out policy and advocacy actions– from problem analysis to implementation monitoring – regarding decent work on the national level, on the continental level and on the international level.
4. Promoting social dialogue and structured dialogue of/with civil society organizations.
5. Sharing knowledge and committing to mutually learning about the programs and themes of decent work
6. Promoting gender mainstreaming and specific actions in favour of equality between men and women.
7. Promoting just transition within a regulatory framework

4. Priority challenges for both thematic JSFs

Climate change has a significant negative impact on socio-ecological systems and hence on social progress and equity, which are in danger of being wiped out by climate change. Working towards resilient socio-ecological systems (thematically GSK resilient ecosystems) and working towards an equitable transition towards a climate neutral and socially sustainable society (thematically GSK dignified work) are complementary, even overlapping goals.

Social movements and trade unions not only stand up for sustainable jobs, labour rights, social protection, and social dialogue, but are also active in achieving this just transition and in eliminating the negative effects of climate change. Local communities, also through social movements, stand up for their rights to live in stable ecosystems and to continue relying on sustainable ecosystem services. In essence, they are standing up for the same end goal: a dignified existence.

5. <u>Interface between both thematic JSFs</u>

Goals of decent work	Goals of resilient social-ecological systems			
	Rights, policy, and governance	Awareness, knowledge, and skills	Access to, use and management of ecosystem services	Conservation and restoration of ecosystems
Creation of decent, sustainable jobs		(2)	(1)	(1)
Employment rights		(3)	(3)	
Social protection			(4)	
Social dialogue	(5)	(2)		

(1) 'Decent, sustainable jobs' also means having access to the services of an ecosystem in a sustainable way, e.g., engaging in agriculture or forestry whereby the ecosystem itself is also preserved (or, if necessary, restored), e.g., the nut raking sector in Bolivia. On the other hand, restoration measures should lead to (green) job[89] creation and decent work.

(2) The creation of sustainable jobs in many cases presupposes appropriate training or retraining of workers. At the policy level, too, the social dialogue must be fed with additional knowledge about the promotion of resilient ecosystems.

(3) Sustainable access to ecosystem services goes hand in hand with ensuring better working conditions, with unsafe, unsustainable practices being identified and replaced or modified.

(4) Social protection describes all initiatives that transfer income or assets to those in need, protect the vulnerable against livelihood risks, such as the wide range of direct and indirect consequences of climate change. Social protection aims to prevent that people fall into poverty, provide essential social services like health care, and enhance the social status and rights of the marginalised.

Based on universal social and ecological rights, social protection systems need to consider climate change and sustainable ecosystems to effectively address the multiple risk and vulnerabilities faced by the poor and excluded. A healthy environment for example, is one of the key factors for good health. Conversely, effective social protection is also a lever for ecosystem conservation. For example, income security for households has a positive impact on more sustainable behaviour.

(5) Within the framework of decent work, social dialogue is the ideal forum for the defence and extension of labour rights. Therefore, especially regarding the informal economy, it is also the place to discuss and improve rights concerning ecosystems and (regulated) access to natural resources.

Through annual consultations, both JSFs want to exchange (a) how we can learn from each other about approaches to equitable transition in the context of decent work and resilient social-ecological systems; and (b) how both can concretely reinforce each other on the ground.

[89] Green job creation through (re-)skilling. Green jobs are decent jobs that contribute to preserve or restore the environment, be they in traditional sectors such as manufacturing and construction, or in new, emerging green sectors such as renewable energy and energy efficiency.
Green jobs contribute to protecting and restoring ecosystems, improving energy and raw materials efficiency, limiting greenhouse gas emissions, minimizing waste and pollution, adapting to the effects of climate change. (ILO definition 2016)

8.6. Annex 6 – Short overview of national and regional networks and platforms

The information provided in the following table lists the networks, conventions, and platforms where the organisations of the T-JSF are active, either as formal members, observers, or as participating in their events or document revisions in one way or another ("members" in the large sense).

Network/platform	Information	Members
11.11.11	11.11.11 fight against injustice. We do not do this alone. As the umbrella organisation of the Flemish North-South Movement, we combine the forces of dozens of organisations, tens of thousands of volunteers and partners worldwide. Together we fight for sustainable change. Because everyone deserves the same basic rights. See https://11.be/	BOS+, Join For Water, VIA DB
5DC	5DC (with Uni4Coop (Eclosio) as founding member) is a voluntary grouping of field actors from Senegal, Gambia, Guinea, Guinea Bissau, and Mauritania, anchored in territories and in contact with local communities, in the deltas of Senegal, Saloum, Gambia, Casamance and Rio Cacheu rivers. It was initiated in 2014; it is now made up of 15 field operators (NGOs, grassroots community associations, social entrepreneurs) who have 50 years of experience in coastal areas, an intervention zone of more than 500,000 hectares of mangroves, and about 230,000 people benefiting from their actions.	Uni4Coop
Académie des Sciences d'Outre-Mer	The Academy holds sessions on the first and third Friday of each month during which its members or outside personalities present papers on subjects within its competence. These papers are published in the Academy's journal, Mondes et Cultures. This publication has been an important source of information on overseas countries since its inception. It maintains links with many foreign institutions and universities. The Academy also publishes a biographical dictionary, *Hommes et destins*, devoted to French and foreign personalities who have worked overseas and contributed to the country's reputation. It organises colloquia with the assistance of other academies. See https://www.academieoutremer.fr/	CEBioS
ACARE - The African Centre for Aquatic Research and Education	The aim of the ACARE is to collaborate with freshwater experts around the world to address the challenges on the African Great Lakes, especially Lake Kivu, Tanganyika, Nyasa, Edward, Albert, Victoria and Turkana; see https://www.agl-acare.org/	CEBioS
ACODEV	ACODEV brings together and represents 74 French-speaking, bilingual and German-speaking civil society organisations active in development cooperation. The federation promotes quality cooperation in which its members contribute together to development issues and strengthen their professional skills. See https://www.acodev.be/	Uni4Coop, WWF, VIA DB
AgriCongo	The AgriCongo Alliance is a platform of 17 support NGOs aiming to promote the peasant movement in the DRC. Our ambition: support the creation of a well-structured farmers' movement, capable of participating in the elaboration and implementation of an agricultural policy that supports family farming as a sustainable rural development option. See https://www.agricongo.net/	WWF, Uni4Coop
BBL	Bond Beter Leefmilieu (Alliance for a Better Environment) unites nature and environmental organisations and strengthens the voice of sustainable leaders in Flanders. Together, we initiate and stimulate the transition to a society with a fully renewable, circular economy. We	BOS+, Join For Water

Network/platform	Information	Members
	make this concrete by working with citizens, social organisations, businesses, and governments on feasible and innovative solutions. In this way, we want to realise the day when everyone in Flanders lives well without weighing down the environment, nature, and our health. See https://www.bondbeterleefmilieu.be/	
Belgian Network on Natural Resources	The Belgian Natural Resources Network (BNRN) is a place for exchange and consultation for Belgian associations working to improve the management of natural resources in the South. The Belgian Network has a specific thematic approach on natural resources and studies the impact of their exploitation in various geographical areas (countries in Africa, Latin America, and Asia). It works on the theme of natural resources in relation to the issues of peace, sustainable development, and preservation of the environment. See https://www.cncd.be/+-Reseau-belge-des-ressources-+	BOS+, Join For Water, WWF
Belgian Platform for Biodiversity	The Belgian Biodiversity Platform provides services to the Belgian scientific community engaged in biodiversity research and to policymakers as well as to practitioners. As a science-policy interface on biodiversity, our work is based around 3 main areas: knowledge brokerage, topical knowledge incubation and open access to data. See https://www.biodiversity.be/	CEBioS
Belgian platform on water and development	The Belgian platform is still an informal meeting place for Belgian organisations active in water and development. See https://waternexusbelgium.wixsite.com/waterwithoutborders	Join For Water, Uni4Coop
Beyond Chocolate	Beyond Chocolate is the Partnership for a sustainable Belgian chocolate industry. Partners in the initiative are working to end deforestation, stimulate education for future generations and provide a living income for cocoa growers. See https://www.idhsustainabletrade.com/initiative/beyondchocolate/	BOS+, WWF
Biodiversity Coalition	A coalition of Belgian environmental NGOs for joint advocacy work on addressing the biodiversity crisis	WWF, BOS+
Bosforum	The Forest Forum brings together experts from the forestry sector and strives for an ambitious multifunctional forestry policy, supported by a balanced vision of the future. Forestry policy must move from the margins to the centre of decision-making. See https://www.bosforum.be/	BOS+
CBD, including GTI-forum, and preparatory meetings to the COP	The Convention on Biological Diversity (CBD) entered into force on 29 December 1993. It has 3 main objectives: (a) the conservation of biological diversity; (b) the sustainable use of the components of biological diversity; and (c) the fair and equitable sharing of the benefits arising out of the utilization of genetic resources. See https://www.cbd.int/	CEBioS, WWF
CHM – Clearing House Mechanism	The Clearing-House Mechanism (CHM) provides the information exchange platform of the Convention on Biological Diversity. Created in accordance with Article 18(3), it has evolved into a global network of websites with the CBD website (www.cbd.int) as its central node, and national Clearing-House Mechanisms as national nodes of the network. See https://www.biodiv.be/about/objectives	CEBioS
Climate Coalition	The Climate Coalition is a national non-profit organisation that unites more than 70 organisations from Belgian civil society (environmental movement, North-South organisations, trade unions, youth organisations and citizens' movements) around the theme of climate justice. We put pressure on policy makers to take strong measures and	BOS+, WWF

Network/platform	Information	Members
	we mobilise a broad public for a climate friendly and fair society. See http://www.klimaatcoalitie.be/	
Coalition Against Hunger (CAH)	CAH Is the formalisation, since 2002, of a group of NGOs active on food security issues, which oversees the implementation of the "Awareness-raising" component of the Belgian Fund for Food Security (current Belgian Survival Fund). Today, the Coalition against Hunger is made up of around twenty NGOs (French and Dutch speaking) who work together on Belgian policies against hunger and more specifically on cooperation policies relating to agriculture and food security. See http://www.coalitioncontrelafaim.be/home-page/	Uni4Coop
COICA	The Coordinating Body of Indigenous Organisations of the Amazon Basin (COICA) is an indigenous organisation of international convergence that focuses its efforts on the promotion, protection and security of indigenous peoples and territories through the defence of their ways of life, principles, and social, spiritual, and cultural values. Our pre-existence is framed in the defence of life and the Amazon to continue as a seed in the earth and to conserve the forests for a living planet that ensures the continuity of our present and future generations. See https://coica.org.ec/	BOS+, WWF
Congo Basin Forest Partnership	The Congo Basin Forest Partnership (CBFP) was launched by former US Secretary of State Colin Powell at the World Summit on Sustainable Development in Johannesburg in 2002 as a non-binding partnership registered with the United Nations Commission on Sustainable Development. It brings together about 97 partners, including African countries, donor countries and donors, international organizations, NGOs, representatives of research institutions and the private sector. See https://pfbc-cbfp.org/home.html	CEBioS
Don Bosco Green Alliance	Don Bosco Green Alliance is an international collective of young people from the Salesian Family institutions, who contribute to global environmental action, thought and policy. Our Mission: to create an environment that is safe and caring for all life on the planet, while building up a new generation of environmentally committed citizens and leaders. See https://donboscogreen.org/	VIA DB
Don Bosco Network	We are a worldwide federation of Salesian development NGOs, formally registered in 2010 in Italy, whose vision, mission, and actions are inspired by the values and principles expressed by the Gospel, the Teaching of the Catholic Church under the guidance of the Salesian congregation. Our vision is to empower youth and families to become the protagonists of their own development and that of their society. See http://donbosconetwork.org/	VIA DB
EDUCAID	Educaid.be is a Belgian national platform that unites institutions, organisations and individuals working in the education and/or training sector within the framework of Belgian development cooperation. The platform wants to strengthen the capacity and expertise of its members, develop sensibilisation and policy activities and support the Belgian policy on education and training in development cooperation. Educaid.be also emphasizes an integral approach to education and training. See https://www.educaid.be/nl	CEBioS, VIA DB
Enviro8	The group of 8 important Belgian environmental organizations: BBL, BRAL, WWF, Natuurpunt, Natagora, IEW, Greeenpeace and IEB. See also https://www.grootoudersvoorhetklimaat.be/webinar8/	WWF
European forum on urban forestry	The European Forum on Urban Forestry (EFUF) is a unique meeting place for practitioners, policymakers, managers, educators, and	BOS+

Network/platform	Information	Members
	scientists who are active in urban forestry, urban greening and green infrastructure. Since 1998, the EFUF has met annually to discuss new developments, to exchange experiences, and to visit examples of good practices on planning, design, and management of urban forests (from woodland to urban parks and street trees). See https://efuforg.wordpress.com/	
FABANDES (Foro de actores belgas de los países andinos),	https://m.facebook.com/EmbajadadeBelgicaenLima/posts/954661334648255 FABANDES (like the respective FABs at country level) is a forum for informal information exchanges at regional level of the Andes, on contextual topics relevant for the relationship between Belgium and the Embassy and the Andes countries t	WWF, BOS+, VIA DB
Federale Raad voor Duurzame ontwikkeling (FRDO)	The Federal Council for Sustainable Development (FRDO-CFDD) advises the Belgian federal government on federal policy on sustainable development. In the work of the Council, special attention is paid to the implementation of Belgium's international commitments, such as Agenda 21, the Climate Convention, the Convention on Biological Diversity. These commitments are the result of the United Nations Conference on Environment and Development which took place in Rio de Janeiro in June 1992 (known as UNCED, United Nations Conference on Environment and Development). They were completed by the commitments in the context of the 2030 Agenda that Belgium signed in 2015, which includes the 17 sustainable development goals (SDGs) that should be achieved by 2030. See https://www.frdo-cfdd.be/en	BOS+, WWF
FIABEL	FIABEL stands for the Federation of Belgian Institutional Actors. These are 9 major players working towards a just and sustainable world. FIABEL supports its members and defends their interests towards the Belgian government. See https://www.fiabel.be/nl	CEBioS
Foundation for environmental education (FEE)	FEE is the world's largest environmental education organisation, with members in 77 countries. Through our five ground-breaking programmes, we empower people to take meaningful and purposeful action to help create a more sustainable world. See https://www.fee.global/	BOS+
FSC – Forest Stewardship Council	As the original pioneers of forest certification, we have 25 years of experience in sustainable forest management. We use our expertise to promote the responsible management of the world's forests, bringing together experts from the environmental, economic, and social spheres. See https://fsc.org/en; https://www.fsc.be/nl-be and https://blogapac.fsc.org/	BOS+, WWF
Global Landscapes Forum	We are the world's largest knowledge-led platform on sustainable land use, dedicated to achieving the Sustainable Development Goals and Paris Climate Agreement. We have connected 7,416 organizations and 190,000 participants at our gatherings and reached 770 million from 185 countries. We are greening Africa through the AFR100 and Latin America through Initiative 20×20. We are fighting to save the world's peatlands through the Global Peatlands Initiative and its coastal communities through the Blue Carbon Partnership. We are developing innovative finance mechanisms to invest in sustainable farming and supply chains with the Land Degradation Neutrality (LDN) and the Tropical Landscapes Finance Facility, among others. See https://www.globallandscapesforum.org/	BOS+
Grupo REDD+ Peru	The objectives of the REDD+ Peru Group are: (a) strengthening capacities and knowledge on REDD+ issues. Generate a platform for the	BOS+

Network/platform	Information	Members
	identification and exchange of key information on processes, initiatives, projects, research, etc.; (b) gathering and analysis of information and inputs (processes, pilot projects, applied methodologies, etc.) to discuss approaches, strategies, standards, etc.; (c) construction of the national policy and agenda on REDD+ issues. Generate a space for discussion of macro issues. Collaborate with the development of approaches, strategies and institutional framework, standards, etc. Be the reference point for this. See http://www.gruporeddperu.com/	
Gulf of Benin deltas collective	Uni4Coop (ULB-Coopération) is founding member of the Gulf of Benin deltas collective (Benin, Côte d'Ivoire, Ghana, Nigeria, and Togo), a voluntary platform of field actors, anchored in territories and in contact with local communities in estuary and mangrove areas and in fluviomarine systems in West Africa and mainly in the Gulf of Benin. It is currently made up of 10 members working on 250,000 ha of mangrove. See https://mangroves.network/qui-sommes-nous/le-collectif-des-deltas-du-golfe-du-benin/	Uni4Coop
International Union for the Conservation of Nature (IUCN)	IUCN Is a membership Union uniquely composed of both governments and civil society organisations. Founded in 1948, IUCN has evolved into the world's largest and most diverse environmental network.	Uni4Coop, CEBioS[90]
IPBES	The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) is an independent intergovernmental body established by States to strengthen the science-policy interface for biodiversity and ecosystem services for the conservation and sustainable use of biodiversity, long-term human well-being, and sustainable development. It was established in Panama City, on 21 April 2012 by 94 Governments. It is not a United Nations body. However, at the request of the IPBES Plenary and with the authorization of the UNEP Governing Council in 2013, the United Nations Environment Programme (UNEP) provides secretariat services to IPBES. See here for more information on the history of IPBES. See https://www.ipbes.net/	CEBioS
KLIMOS (closed)	KLIMOS is an interdisciplinary and interuniversity research platform working on following four research themes: (a) Sustainable Natural Resource Management; (b) Sustainable Energy & Infrastructure; (c) Governance for Environment & Sustainable Development; and (d) Environmental/Sustainability Monitoring & Evaluation. See https://ees.kuleuven.be/klimos/	WWF, CEBioS, Join for Water
KLIMSEC	KLIMSEC is an interdisciplinary and interuniversity research platform that works on the themes of Climate Change and Human Security. It builds further on the earlier work of the platforms KLIMOS and Governance for Development. See https://ees.kuleuven.be/klimsec/	CEBioS
Learning about forests (LEAF)	Learning about Forests advocates outdoor learning and hands-on experiences which result in the pupils getting a deeper and more involved understanding of the natural world. While the focus of the LEAF programme is on tree-based ecosystems, the skills and knowledge acquired can be applied to any natural environment. See https://www.leaf.global/	BOS+
Leopold III Fund	The Leopold III Fund aims to promote the study and conservation of nature. In practice, this means that the Leopold III Fund helps to finance expeditions outside Europe. These explorations aim to study current	CEBioS

[90] CEBioS as a program of RBINS, which is governed by BELSPO, member of IUCN, + CEBioS staff members of IUCN commissions

Network/platform	Information	Members
	biodiversity as well as peoples intensely connected with nature. See http://www.naturalsciences.be/LIII/	
Madagascar Locally Managed Marine Area Network (MIHARI)	MIHARI is a network created in 2012 at the initiative of community associations involved in the local management of marine and coastal resources in Madagascar, in close collaboration with the organisations that support them. Today, it is estimated that MIHARI's members are made up of more than 80 LMMAs ("Locally Managed Marine Areas": these are marine and/or coastal areas managed by one or more communities with the aim of contributing to the protection of fisheries resources and marine biodiversity) and around twenty organisations involved in marine conservation. See https://mihari-network.org/	Uni4Coop
Mekong NGO Forum	NGO Forum on Cambodia works to improve life for poor and vulnerable people in Cambodia. It is a membership organisation that builds NGO cooperation and capacity, supporting NGO networks and other civil society organizations to engage in policy dialogue, debate, and advocacy. The goal of NGO Forum is that the rights of the poor and vulnerable are recognized and supported by the policies and practices of Cambodia's government and development partners, and the wider community. https://www.ngoforum.org.kh/	WWF
Mekong Region Land Governance	Our project aims to improve land tenure security of smallholder farmers in the Mekong Region through contributing to the design and implementation of appropriate land policies and practices. See https://www.mrlg.org/	WWF
MOS (Milieuzorg op school)	A sustainable future for our planet starts with making conscious choices. MOS helps your school to become an environmentally friendly and sustainable learning and living environment, together with the pupils, the school team, and the school network. MOS focuses on primary and secondary schools. A school that joins forces with MOS can count on: tailor-made guidance, information, and inspiration about the range of environmental education and sustainable initiatives in Flanders and Brussels via newsletters, website and Facebook, training, and networking opportunities. See https://www.mosvlaanderen.be/	VIA DB, Join For Water
Netwerk Natuur en Gezondheid	The Nature and Health Network consists of organisations and authorities from various sectors that want to bridge the gap between nature and health. Both scientific knowledge and practical experience about nature and health have increased in recent years. The Network wants to combine all initiatives (research, information days, good practices, etc.), develop them further and make them more widely known. We also urge that the policy principles of "health in all policies" and "nature nearby" be better realised in as many policy areas as possible (nature, health, spatial planning, architecture, sport, education, agriculture, etc.), and that the link between nature and health be better integrated in training courses/education (medicine, spatial planning, architecture, etc.) and in practice (landscaping, health care, spatial planning, etc.), for example by combining budgets and harmonising objectives. See https://www.biodiversity.be/4734	BOS+
ngo-federatie	ngo-federatie is the Flemish federation of development NGOs. We represent the sector with the federal and other governments, support the members in their consultations with those governments, promote cooperation within the sector and strengthen the quality of NGOs' work. See https://www.ngo-federatie.be/nl	CEBioS (observer), BOS+, Join For Water, WWF, VIA DB

Network/platform	Information	Members
OECD Environet	We promote and facilitate the integration of environment and climate change into all aspects of development co-operation. See http://www.oecd.org/dac/environment-development/	CEBioS
PNALC (Plataforma Nacional América Latina y Caribe)	A national platform of Belgian Non-Governmental Actors involved in Latin-American and the Caribbean, for joint advocacy work on relevant themes for the region, with a particular focus on human rights	WWF, BOS+, VIA DB
RAMPAO - Network of Marine Protected Areas of West Africa	RAMPAO aims to ensure the maintenance of a coherent set of critical habitats necessary for the dynamic functioning of environmental processes essential for the regeneration of marine natural resources; the conservation of biodiversity for the well-being of local communities, through a functional regional network of protected marine areas. See www.rampao.org	Uni4Coop
Regional Partnership for Conservation of the Coastal and Marine Zone in West Africa (PRCM)	PRCM is a coalition of actors working on West African coastal issues covering seven countries (Mauritania, Cape Verde, Senegal, Gambia, Guinea Bissau, Guinea, Sierra Leone). See http://prcmarine.org/en/propos-du-prcm	Uni4Coop
Stichting ter bevordering van het biodiversiteit onderzoek in Afrika (SBBOA)	The Foundation for the Advancement of Biodiversity Research in Africa (SBBOA) aims to promote scientific research in Africa. Research into the biodiversity of plants, animals and fungi, as well as research related to nature conservation, are central to this. See https://www.sbboa.be/	CEBioS
SuSanA (sustainable sanitation alliance)	SuSanA is an informal network of people and organisations who share a common vision on sustainable sanitation and who want to contribute to achieving the Sustainable Development Goals, particularly SDG6. SuSanA came into existence in early 2007. Since then, it has been providing a platform for coordination and collaborative work. SuSanA connects members to a community of people with diverse expertise and opinions. SuSanA also serves as sounding board for innovative ideas. Finally, SuSanA contributes to policy dialogue through joint publications, meetings, and initiatives. See https://www.susana.org/en/	Join For Water
The Population Health Environment (PHE) Network	The PHE Network is a holistic approach to sustainable development, integrating family planning and other health services with community-based natural resource management and biodiversity conservation efforts. PHE Network is composed of more than forty members and active in fifteen marine and terrestrial biodiversity hotspots in Madagascar. See https://phemadagascar.org/	Uni4Coop
The shift	The Shift is the Belgian meeting point for sustainability. Together with our members and partners we want to realise the transition to a more sustainable society and economy. See https://theshift.be/en	BOS+, Join For Water
TROPIMUNDO	Is an EC-funded and excellence-labelled Erasmus Mundus Joint master's degree in Tropical Biodiversity and Ecosystems. TROPIMUNDO aims to bring expert Higher Education Institutes, with long-standing worldwide expertise in tropical rainforests and woodlands and in tropical coastal ecosystems. TROPIMUNDO students can concentrate on botany, zoology, and integrative ecosystem approaches in institutions with and beyond Europe in 2 Master years, of which an entire semester is spent in the tropics. See https://www.tropimundo.eu/	Uni4Coop, CEBioS
UNEP	The United Nations Environment Programme (UNEP) is the leading global environmental authority that sets the global environmental agenda, promotes the coherent implementation of the environmental dimension of sustainable development within the United Nations	CEBioS

Network/platform	Information	Members
	system, and serves as an authoritative advocate for the global environment. Our mission is to provide leadership and encourage partnership in caring for the environment by inspiring, informing, and enabling nations and peoples to improve their quality of life without compromising that of future generations. See https://www.unep.org/	
UNESCO Man and the Biosphere Reserves	The MAB programme is an intergovernmental scientific programme that aims to establish a scientific basis for enhancing the relationship between people and their environments. It combines the natural and social sciences with a view to improving human livelihoods and safeguarding natural and managed ecosystems, thus promoting innovative approaches to economic development that are socially and culturally appropriate and environmentally sustainable. See https://en.unesco.org/mab	CEBioS
UNFCCC-COPs	The COP is the supreme decision-making body of the Convention. All States that are Parties to the Convention are represented at the COP, at which they review the implementation of the Convention and any other legal instruments that the COP adopts and take decisions necessary to promote the effective implementation of the Convention, including institutional and administrative arrangements. See https://unfccc.int/process/bodies/supreme-bodies/conference-of-the-parties-cop	WWF
VLOR (onderwijs en samenleving),	The Flemish Education Council, in Dutch: de 'Vlaamse Onderwijsraad' (VLOR), is the official advisory body on the education and training policy of the Flemish Community. Representatives of all the different stakeholders in education and training meet in the VLOR. Together they look for ways to further improve education and training in Flanders. See https://www.vlor.be/vlor-in-english	VIA DB
Word Water Forum	The World Water Council catalyses collective action during and in between each World Water Forum – the world's largest event on water. Organized every three years with a host country, the Forum provides a unique platform where the water community and key decision makers can collaborate and make long-term progress on global water challenges. The Forum brings together participants from all levels and areas, including politics, multilateral institutions, academia, civil society and the private sector, among others. Over the years, the number of people participating in the Forum has grown from a few hundred to tens of thousands, from both the international community and host countries. See https://www.worldwatercouncil.org/en/world-water-forum	Join For Water
World Forum on urban forestry	https://www.un.org/esa/forests/events/world-forum-on-urban-forests/index.html	BOS+
World Water Week (Stockholm International Water Institute)	World Water Week is the leading annual event on global water issues, organized by Stockholm International Water Institute since 1991. Together with organizations from all sectors and all regions of the world, we find solutions to the world's greatest water-related challenges. See https://www.worldwaterweek.org/	Join For Water

8.7. Annex 7 – Bibliography

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8.8. Annex 8 – Members and observers of the thematic JSF

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