**Updated June 21, 2023**

**Contact person -** *Aidin Niamir* [aidin.niamir@senckenberg.de](mailto:aidin.niamir@senckenberg.de)

**Strategy for inventorying *options* for transformative change (TC) for sustainability based on multiple sources of information.**

This guideline provides guidance to create a strategy for inventorying different options (e.g., policies, actions, strategies) that have been proposed to realize TC for sustainability. The inventory will include options that have been proposed but never tested, as well as options already implemented by different actors and in different settings (and potentially a measure of change). This inventory will help us assess

* Trends in the number of options/documents proposing options over time
* Share of options proposed/applied
* Way in which options have been applied (e.g., alone/combined, inclusiveness, etc.)
* Identify specific options for the pathways/scenarios section

***Sources of information***

The inventory will be based on information coming from three sources: **1)** the scientific literature; **2)** Global environmental regulatory instruments (Global environmental outlook, Millennium Ecosystem assessment, CBD, NBSAP (previous and revised), UNEP, GEF –-adopted texts), **3)** International platforms (IPBES, IUCN, IPCC), and **4)** ILK (IPBES reports, Local environmental outlook).

Due to the different logics and organization of scientific literature vs. reports, we propose to run one search on the academic peer-reviewed corpus and another on reports listed above from 2-4.

**Academic literature search**

**R1: Select papers in academic literature**

Search criteria:

* Abstracts, title, keywords
* Abstracts in English
* Only full papers (exclude conference proceedings, books and book chapters, editorials)
* Search terms:

**[About Transformative change] Transformative change synonyms**

*("transformative change" or "deliberate transformation\*" or "transformative turn\*" or “transition\*” or “social-ecological change\*” or “deep change” or “fundamental alteration” or “profound change” or “profound transformation” or “radical transformation” or “transformational change” or “complete change or “complete transformation” or “drastic change” or “in-depth transformation” or “progressive change” or “radical alteration” or “radical change” or “revolutionary change” or “significant modification” or “total transformation” or “transformational shift” or “radical shift”*

**AND (nature synonyms)**[use dictionary suggested by Aidin]

*("sustainab\*" or "environ\*" or "resilien\*" or "conserv\*" or "biodivers\*" or “ecosystem\*” or “nature\*”)*

**AND (options/policy instruments)**

*("act\*" or "option\*" or "polic\*" or “policies” or "measure\*"* or *"agenda\*"* or *"gov\*"* or *"right"* or *"val\*"* or *"power"* or *“business approach\*”* or *“legal instrument\*”* or *“regulatory instrument\*” or “regulat\*” or “enforcement\*”* or *“standard\*”* or *“governance framework\*”* or “*method*\*” or “*decision-making*\*” or “*plan*\*” or “*strateg*\*” or “*evaluation*\*” or “*assessment*\*” or “*programm*\*” or “*connect*\*” or “*offset*\*” or “*permit*\*” or “*ban*\*” or “*restrict*\*” or “*control*\*” or *“education system\*” or ”education” or “awareness\*” or “learning\*” or “knowledge system\*”* or *“conservation approach\*”* or *“restoration approach\*” or “monitoring” or “inventor\*”* or “*coordination\*” or “civic action\*” or “collective action\*”*or *“political action\*”* or *“community action\*” or “capacity building\*”* or *“pathway\*”* or *“scenario\*” or “model\*”* or *“solution\*”* or “*innovation*\*” or “*incentive*\*” or “*subsid*\*” or “*tax*\*” or “*payment*\*” or “*debt*\*” or “*aid*\*” or “*fiscal transfer*\*” or “*investment*\*” or “*financ*\*” or “*product*\*” or “*market*\*” or “*account*\*” or “*register*\*” or “*funding*\*” or “*consump*\*” or “*chain*\*” or *“certification\*” or “participatory process\**” or “*deliberate process*\*” or “*pluralism*” or “*agreement*\*” or “*cooperation*” or “*demand*\*” or “*policy context\**” *or “scheme\*” or “protect\*” or “conserv\*”or “cultural arrangement\*” or “practice\*” or “technique\*” or “infrastructure\*” or “access” or “trade-off\*” or “NBSAP\*” or “legislative control” or “legal restriction” or “derivative trading” or “commodity futures” or “social responsibility” or “marine areas” or “multilateral agreements” or”transparency” or “litigation” or “labelling” or “OEAM” or “co-management” or "co-production" or "co-creation" or "recognition" or "system\*" or "access rights" or "legislative arrangements" or "treaties" or "rules" or "culturally specific" or "place-based" or " mechanism" or "method" or "index" or "indicators" or "approach\*" or "perspective\*" or "valu\*")*

Words have been extracted from <https://www.ipbes.net/policy-instruments>, from Chap 6, Global Assessment, and from the Values Assessment.

***Expected output:*** a list of papers that relate broadly to transformative change **AND** nature **AND** options

**R2: Screen for papers with concrete examples (e.g., case-studies, “implementation”, “example\*”)**

* In abstracts, title, keywords
* Search criteria: (“case stud\*” or “case” or “study area\*” or “example\*” or “evaluation” or “solutions” or “implementation”or “concrete” or “empirical”, or “practical”)
* Output: two corpus:
  + **Corpus A**: academic articles with specific examples
  + **Corpus B**: academic articles that relate to transformative change, nature and options but do not provide information from a specific case (e.g., general recommendations, overviews).

**R3: Extract options [from the papers that contain case-studies – Corpus A]**

* Based on corpus A
* In full text
* Look only in results, discussion and conclusion
* Give us paragraphs
* **[full text]- from the papers/book chapters that contain case-studies look only in results and discussion and conclusion for search term [option/policy instruments] - give us paragraphs**
* R3 look again at options [list of options listed in R1] and extract them [to look for whether one or more policy instruments]
* R3a – differentiate between options implemented and those that are recommendations or future propositions
  + R3a.1: Search for [words linked to implementation from dictionary] = actual implemented/assessed options
  + R3a.2: Search for words linked to future “should” or “would” etc] = future ideal propositions
* R3b Search also for these search terms: *[BIG PICTURE context] “lever\*” or “enabling condition\*” or “context\*” or “scal\*” or “coalition\*”* [looking at leverage points]
* R3c- cluster options found from R3c.1 and R3c.2 into four policy instrument groups from IPBES (Economic and financial; Legal and regulatory; Rights-based instruments and customary norms; Social and cultural instruments).
* R3d [outcomes] search terms found in R3c.1 and R3c.2 for outcomes [synonyms] [look for action verbs: improved, gained, lost, changed, enhance in combination with nature or wellbeing indicators]

**R4: Extract options [from the papers without case studies – corpus B general]**

* Based on corpus B
* In full text
* Look only in results, discussion and conclusion (for academic papers)
* Give us paragraphs
* R4 look again at options [list of options listed in R1] and extract them [to look for whether one or more policy instruments]
* R4a – differentiate between options implemented and those that are recommendations or future propositions
  + R4a.1: [Nature terms] AND [policy instrument terms] AND [words linked to implementation] = actual implemented/assessed options
  + R4c2: [Nature terms] AND [policy instrument terms] AND [words linked to future “should” etc] = future ideal propositions
* R4b Search also for these search terms: *[BIG PICTURE context] “lever\*” or “enabling condition\*” or “context\*” or “scal\*” or “coalition\*” [looking at leverage points]*
* R4c- cluster options found from R3c.1 and R3c.2 into governance [search terms]; economic [search terms]; values [search terms] OR proposal based on four policy instrument groups from IPBES (Economic and financial; Legal and regulatory; Rights-based instruments and customary norms; Social and cultural instruments).
* R4d [outcomes] search terms found in R3c.1 and R3c.2 for outcomes [synonyms] [look for action verbs: improved, gained, lost, changed, enhance in combination with nature or wellbeing indicators]

**II. Reports**

Option 1- include reports in R2 and follow the flow outline above

Option 2 – run the search steps outlined in R2 and R4 above but only on reports without academic papers because of their different structure.

R1: Select papers in academic literature [abstracts, title, keywords]

R2: Screen for case-studies

[abstracts, title, keywords]

R3: Extract options

[Full-text]

R3a 1 and R3a2 separate between options implemented & options recommended

R3b: identify "enabling context" or "levers"

R3c: Cluster options based on IPBES instrument categories (both implemented & recommended separately)

R3d: Identify outcomes linked to the options (based on implemented vs. recommended separetedly)

*Figure 1 Flowchart of search process – we need to decide whether to run the same search for reports separately or include in R3 (combined with academic articles)*

***OLD figure***

