

## **IPBES nexus assessment**

### **Chapter 5.2 – WATER, data management report 1**

#### **Methodology to cluster response options**

**Code:** IPBES\_NXS\_5.2.1

**Version:** v2.0.0

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#### **Description**

The project leaders generated a list of 18 clusters of response options linked to the water nexus element. Potential response options were identified from those listed in policy documents that correspond to international treaties and national regulations and international instruments such as conventions, European Union directives, Intergovernmental Panel on Climate Change (IPCC) reports on water and land and the documents within the International freshwater treaties database (<https://transboundarywaters.science.oregonstate.edu/content/international-freshwater-treaties-database>). Recommendations from two Indigenous and local knowledge dialogue workshops held in 2022 and 2023 in the context of the nexus assessment were also considered; these provided a different cosmovision and approach to the identification of response options.

#### **Process overview**

*[Note to reviewers: A process diagram may be included in the final draft of the report.]*

#### **Protocol**

The clustering process consisted of two steps.

##### **Step 1: Categorizing response options**

For each document, information was extracted that addressed 110 response option descriptions. These response options descriptions were then paraphrased and coded to water challenges (see chapter 5.2), number of nexus elements considered, and actor categories and roles. A summary was

generated describing how each response option addressed the water challenges and nexus elements.

## **Step 2: Clustering response options**

To define the response options that represent different types of potential solutions, a triangulation approach was used. Three to five chapter authors were asked to independently define a cluster for each of the 110 response options. Triangulation is a commonly used methodology to avoid observer biases and perceptions that influence categorization. It requires an odd number of observers to categorize a given set of text to avoid break-even situations. The independent categorizations are cross-tabulated to identify the final category. For response options defined by different clusters, the chapter authors reviewed the clusters together and applied a consistent cluster. Three chapter authors were assigned to review each of the clusters for consistency. Response options were reassessed to determine how many of the response options in each of the clusters contribute to the water challenges with an aim towards water security and considering the nexus elements. Water security was defined as “the capacity of a population to safeguard sustainable access to adequate quantities of acceptable quality water for sustaining livelihoods, human well-being, and socio-economic development, for ensuring protection against water-borne pollution and water-related disasters, and for preserving ecosystems in a climate of peace and political stability” (UN-Water Task Force on Water Security, 2013).

## **References**

UN-Water Task Force on Water Security. (2013). *Water Security & the Global Water Agenda: A UN-Water Analytical Brief*.  
[https://www.unwater.org/sites/default/files/app/uploads/2017/05/analytical\\_brief\\_oct2013\\_web.pdf](https://www.unwater.org/sites/default/files/app/uploads/2017/05/analytical_brief_oct2013_web.pdf)