

What do we know about how variability in water availability and access affects communities in the northern Murray-Darling Basin?



Research Team



Dr Natalie Jones



Jess Walker



Dr Vicki Martin



vicki.martin@mosaicinsights.com.au

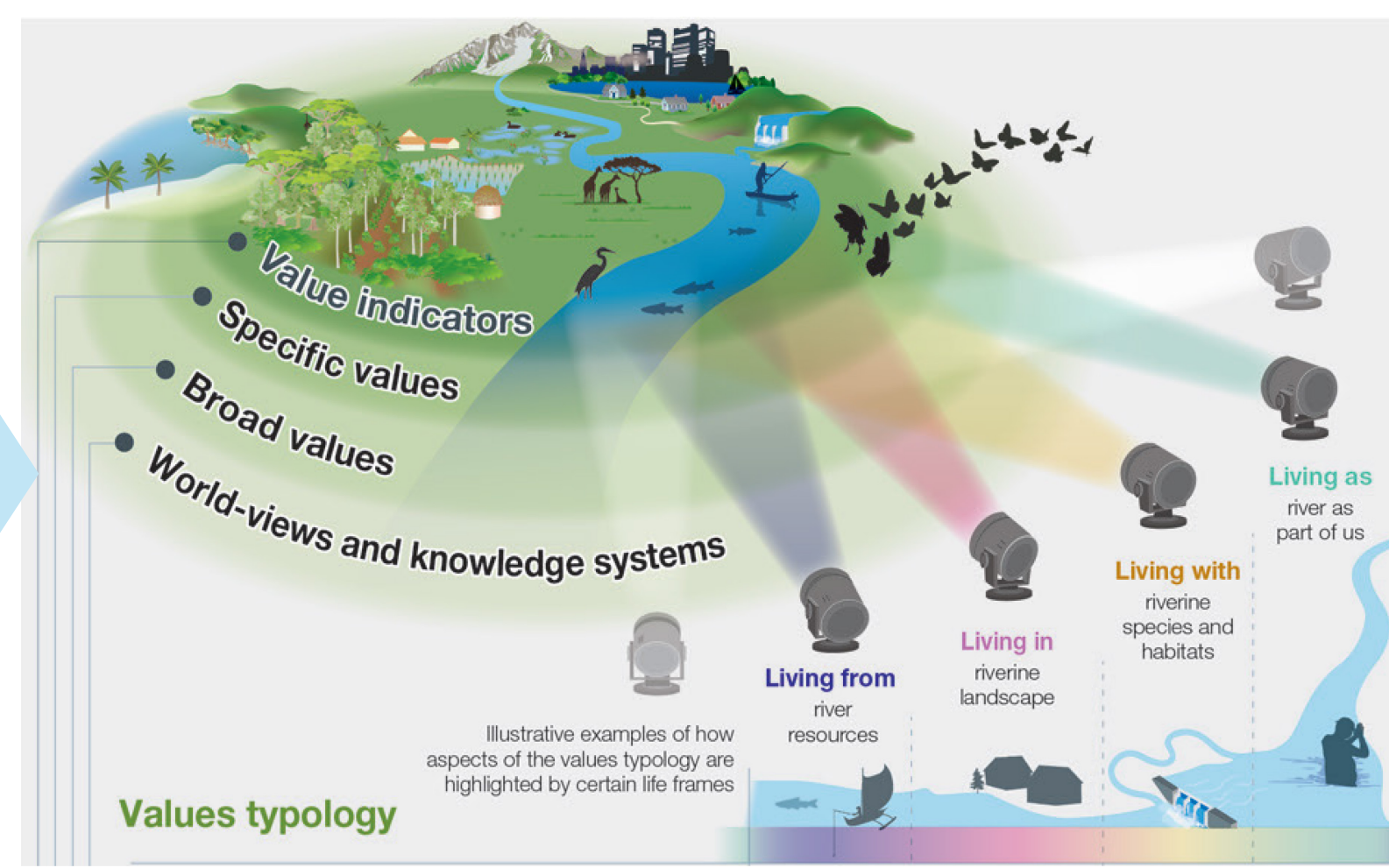


Image Source: MDBA (2024) (Northern Basin catchments highlighted in colour)

Literature Review Methods

Databases searched	Number of papers
Web of Science	1,041
Scopus	924
ProQuest	324
APA PsychInfo (EBSCOhost)	22
Grey literature	94
Sub total	2,405
Removed:	
Duplicates	461
Excluded (did not meet criteria)	1,850
TOTAL	94

Inclusion Criteria	Exclusion Criteria
Research conducted in the Murray-Darling Basin	Research conducted outside of the Murray-Darling Basin
Study is presented as a peer-reviewed journal article	The article is presented as a systematic review, discussion paper or book chapter
The research presents social effects relating to water flow variability	The research focuses on biophysical aspects of water flow variability, rather than social aspects
The research involves collection of primary data or uses existing data sets to describe social phenomena	The research uses models to make economic predictions and/or forecasts



IPBES Values Assessment Typology
Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Service (2022)

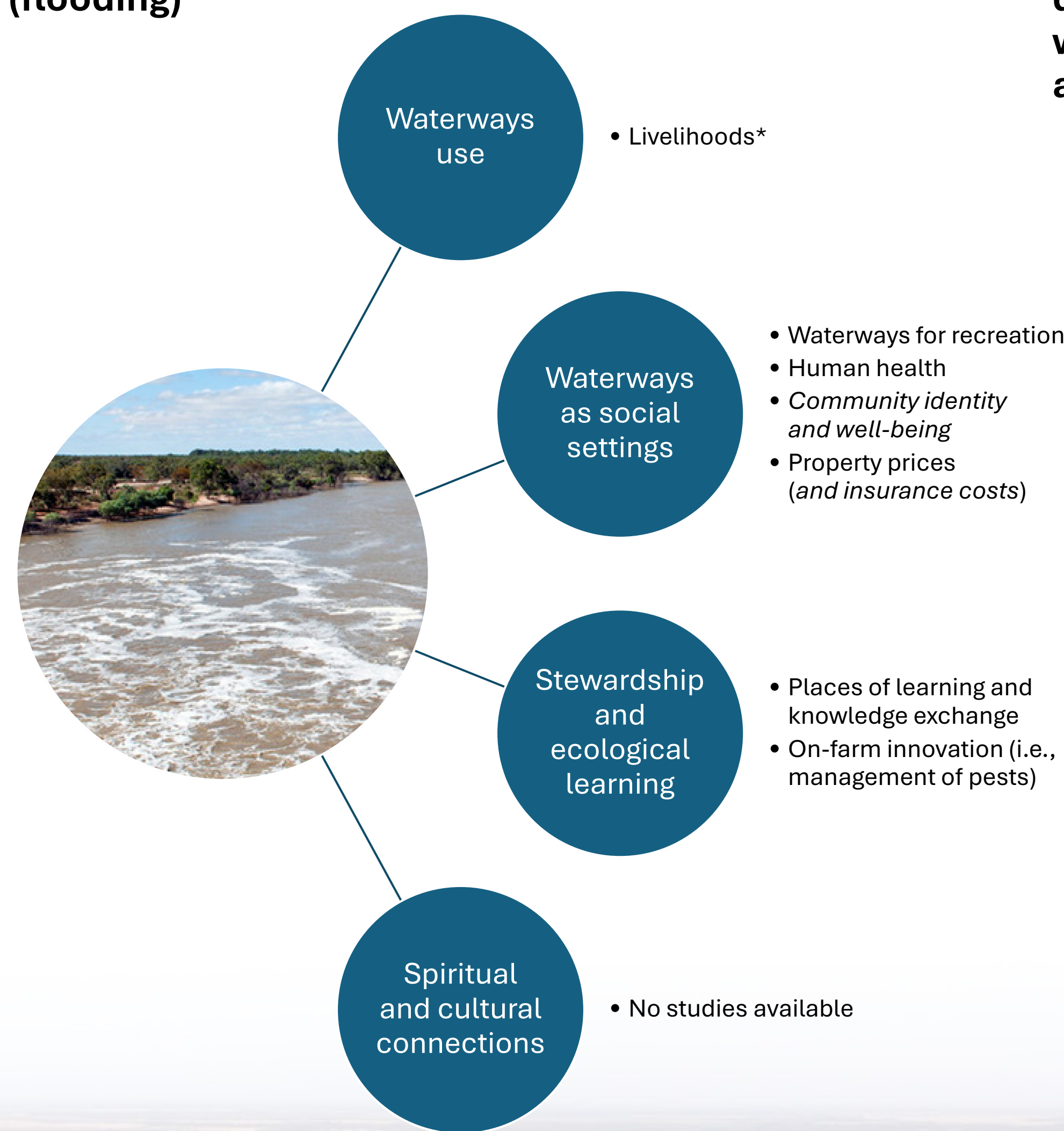
Values Assessments Typology Category	Definition	Term Adopted in this Study
Living from	Refers to the importance of 'using' natural resources, including water, to sustain people's livelihoods and needs, including food.	Waterway use
Living in	Refers to the values people attribute to using nature as social settings. This includes providing a place to live and carry out cultural practices and recreational activities	Waterways as social settings
Living with	Refers to valuing ecological processes that sustain all of life, including humanity. This includes learning how to live with and take care of environmental resources systems (i.e., stewardship).	Stewardship and ecological learning
Living as	Refers to the relationships people have with the environment when they see nature as part of themselves - physically, mentally and spiritually - and not separate.	Spiritual and cultural connections

Findings

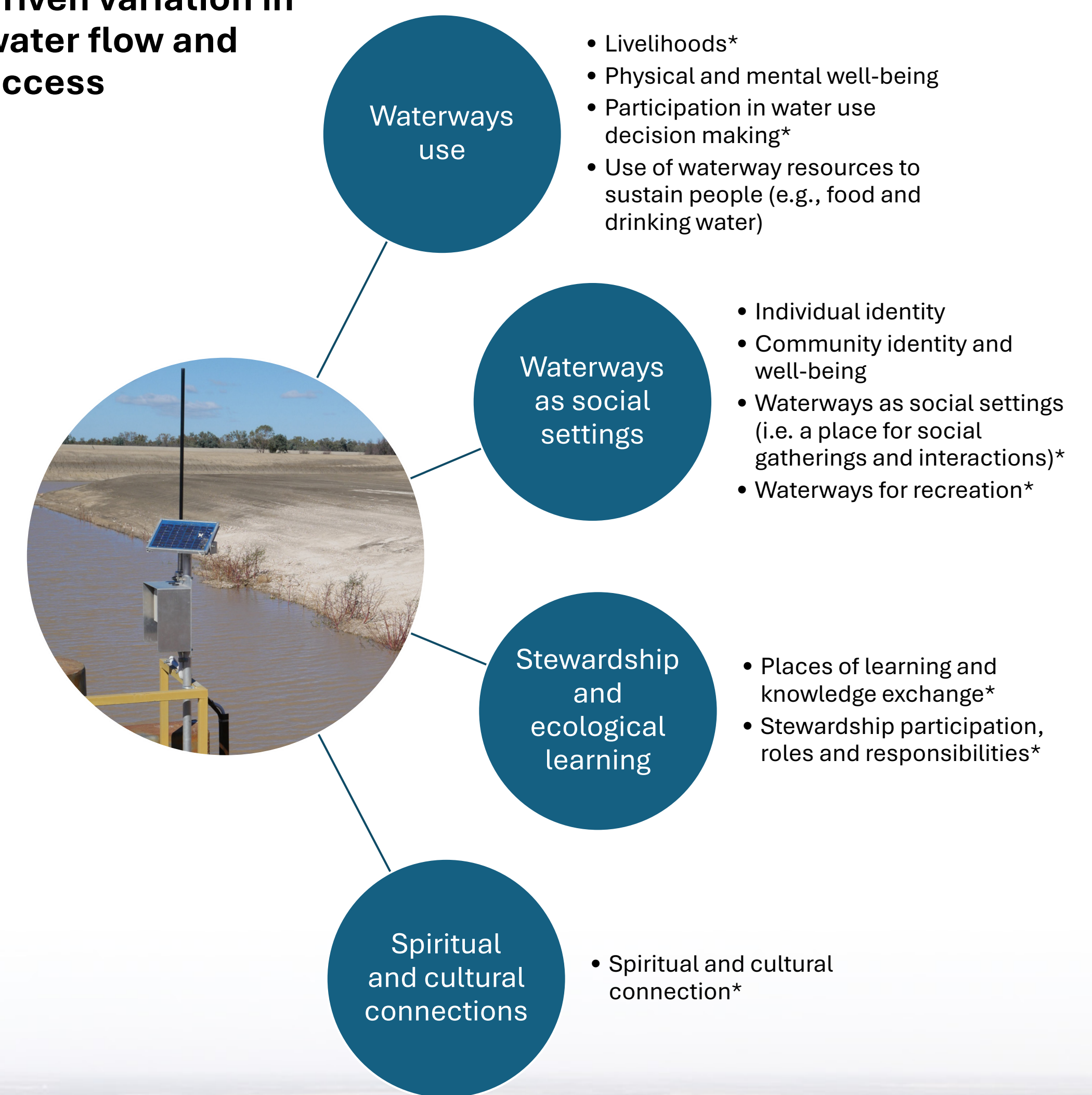
Low Water Effects



High Water Effects (flooding)



Effects of regulation driven variation in water flow and access



*Includes studies from the northern Basin. Effects in italics refer to knowledge gaps identified by stakeholders.

Gaps and areas for future northern Basin research

Low water

- Waterways as social settings
- Stewardship and ecological learning
- Spiritual and cultural connections

High water (flooding)

- All effect categories (especially *spiritual and cultural connections*)

Managed water

- Waterways as social settings
- Stewardship and ecological learning
- Spiritual and cultural connections

