

The top half of the image features a close-up, slightly blurred view of teal-colored water with gentle ripples and light reflections. The bottom half is a solid, dark teal background.

A Social Science Perspective on the Potential for Positive Behavioural Change

Loved To Death – Meaningful Places and Recreation Impact

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Galloway Recreation Research

The Next 19 Minutes...

- Bring together a “braided river of research” to provide *my* perspective on how sense of place provides a gateway to meaningful change
- Historical perspective – recreation ecology, social psychology
- Definition of affordance and behaviour settings
- Meaningful places and behaviour change
- New Zealand examples
- Some final thoughts

Loved to Death?

- Benefits of outdoor recreation (mental health, physical fitness, and social engagement) drive participation and engagement.
- Increased positive affect, happiness and subjective well-being, positive social interactions, cohesion, engagement, sense of meaning, and purpose in life
- Improved sleep and stress reduction which “may entail decreased risk for mental illness as sleep problems and stress are major risk factors for mental illness, especially depression.”
- “Evidence suggests that opportunities for some types of nature experience are decreasing in quantity and quality for many people around the globe,”
- Increasing use by residents and visitors
- Increasingly constrained maintenance budgets
- Evolving manifestation of the human drive to explore
 - Jet boating
 - Packrafting
 - The eMTB
- New Initiatives have great effect (cycle trails), but lack funds for maintenance
- Post-COVID boom?

Loved to Death?

- Outdoor recreation has no champion in NZ
 - Management is segmented
 - Historic and enduring recreation data gap = knowledge poverty = suboptimal management and conservation
- Dominant ontology in NZ: “Values are objective and can be revealed through observation and modelled to extrapolate to other communities and freshwater systems”
(Tadaki & Sinner, 2014)
- Existing valuation instruments tend toward the reductive and are methodologically biased and flawed (Tadaki & Sinner, 2014)
- Resource pressures and conflicts are high and growing (development, extraction, etc.)
- Sustainable tourism looks like ‘full steam ahead’ to me at the moment
- Longstanding maintenance backlog & uncleared windfall trail closures
- Climate change compresses affordance and ignores budgets, priorities, and operations that deny its effects in their planning.
- Recreation only just appeared in ‘new RMA’
 - Natural environment: maintained and enhanced

Some History...

- Recreation Ecology (circa 1960s)
 - Emerged to measure, monitor and mitigate effects *on* the environment *from* recreation behaviours
 - Focus on detailed impact (e.g., erosion, compaction, introduction of non-native species, damage, and litter) and site treatments.
 - Produced useful categorizations (e.g., ROS, LAC, etc.)
 - Broad influence on recreation resource management (but not as an ecology)

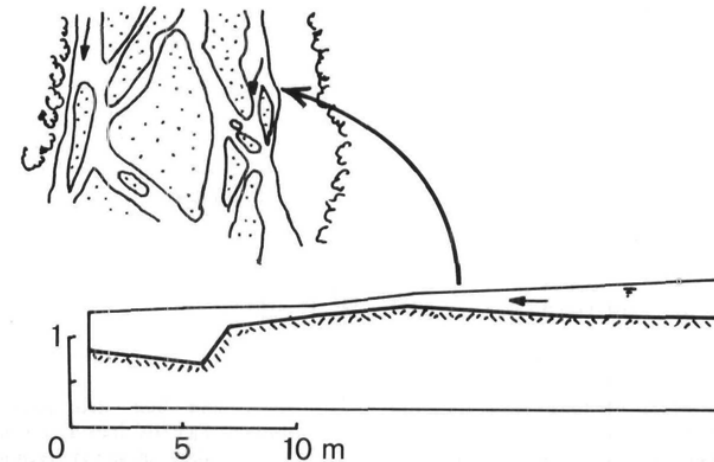
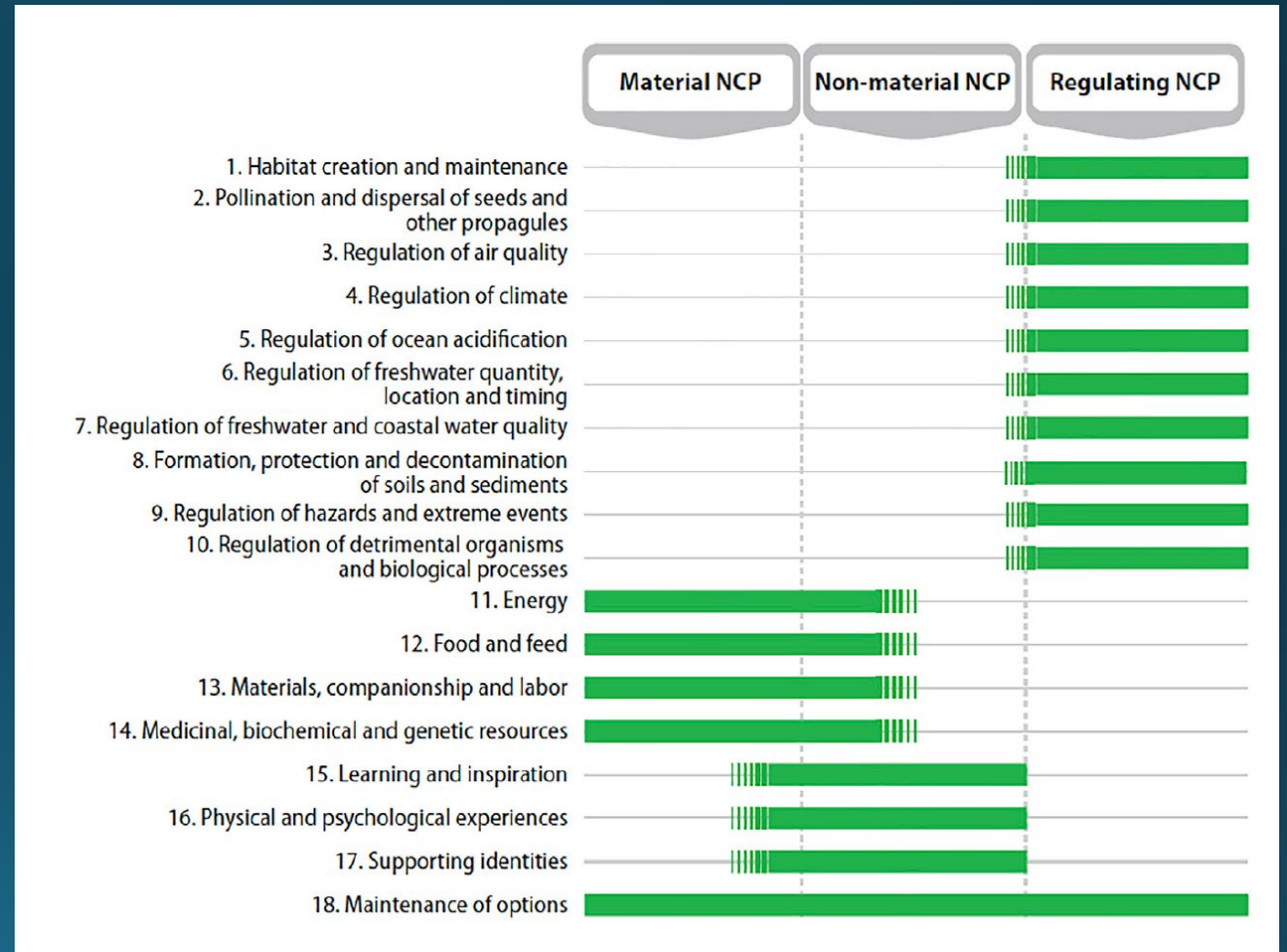


Fig. 7 Photograph and longitudinal profile of a riffle in the Rakaia River which was regarded by 2 experienced jet boat drivers as the shallowest section navigable in both upstream and downstream directions. Redrawn from MWD (Christchurch Residency) plan 6/762/1/1636, sheet 4, dated 12/9/79.

Nature's Contributions to People (NCP): The 'New and Improved' Ecosystem Services

- Defined as *all the benefits and detriments that people get from their relationships with the rest of the living world; and a good quality of life*
- Acknowledges multidimensionality across cultures and societies
- Recognizes material, non-material and regulation NCP in same frame

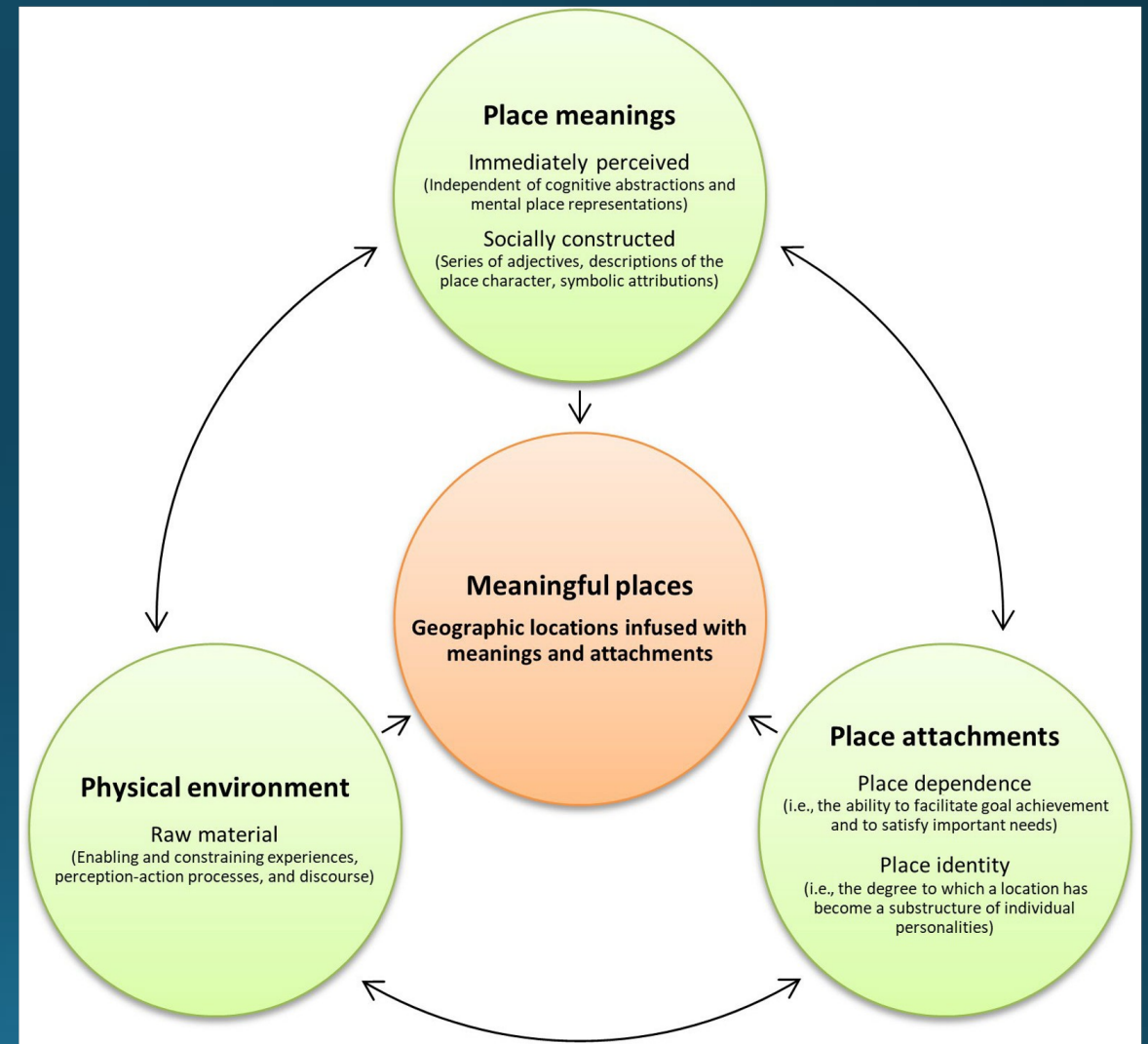


Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES).
<https://www.naturebasedsolutionsinitiative.org/publications/natures-contributionsA-to-people-weaving-plural-perspectives/>

General Model for MPI

“Meaningful places are **geographic locations** – in the physical world as well as in abstracted representations on maps – **to which immediately perceived as well as socially constructed meanings** (e.g., series of adjectives, descriptions of the place character, symbolic attributions) **are ascribed and evaluative attachments** (place dependence and place identity) **are tied.**”

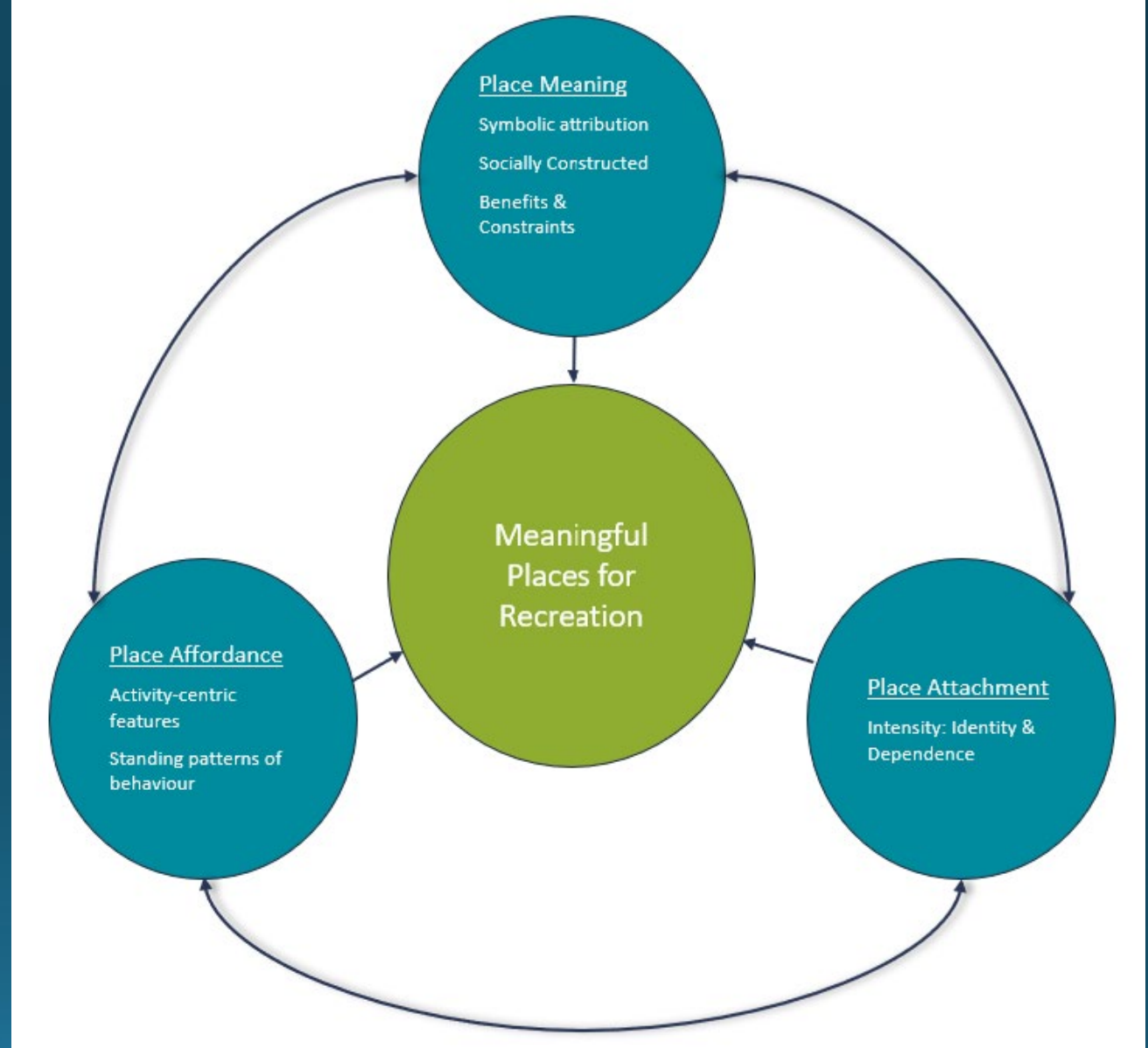
Fig. 1. Mutually influencing core dimensions (green) of meaningful places (orange), an indicator for sense of place.



Meaningful Place Indicator for Recreation (MPIr)

Meaningful places for recreation

- present recognizable affordances for an activity and
- within which participants engage in their chosen pursuit
- bounded by standing patterns of behaviour
- and to which individual and social meanings are ascribed
- and evaluative attachments are tied.



Ecological Psychology

- Focus on perception-action cycles: Individuals perceive their environment in terms of its affordances, or what it offers them in terms of action
- Affordance: “what [the environment] offers the [person], what it provides or furnishes, either for good or ill” (P. 119)
- “The “values” and “meanings” of things in the environment can be directly perceived’ – without the **need** for mental interpretations or inferences.”
- Affordances “have unity relative to the posture and behaviour of the [person] being considered”
- *“Nothing to do,” he said, and added – “unless we had a boat.”* – Joyce Hamilton
- Can appear in sets or niches - which reflect the person’s behaviour which “refers more to how a person lives than it does to where [they] live.”

Rivers provide niche for outdoor recreation through their affordance

Affordance for Recreation

“An important fact about the affordances of the environment is that they are in a sense objective, real, and physical, unlike values and meanings, which are supposed to be subjective, phenomenal, and mental.

But, actually, an affordance is **neither an objective property nor a subjective property**; or it is both if you like. **An affordance cuts across the dichotomy of subjective-objective and helps understand its inadequacy.**

It is equally a fact of the environment and a fact of behaviour. It is both physical and psychical, yet neither. An affordance points both ways, to the environment and to the observer” (p. 121).

*An angler, a jet boater
and a multisport
paddler are standing
next to a river...*

*...and up walks a
packrafter...*

Behaviour Settings

- Synomorphs – structural similarities between the physical environment and the social behaviours that takes place within it

(The things that go together to do the thing at the place)

- Key elements
 - Geographic Locus
 - Temporal locus, serial occurrence, duration
 - Population & occupancy time
 - Penetration-performance zones (power)
 - Action patterns & Behaviour mechanisms
 - Pressure, autonomy, & welfare

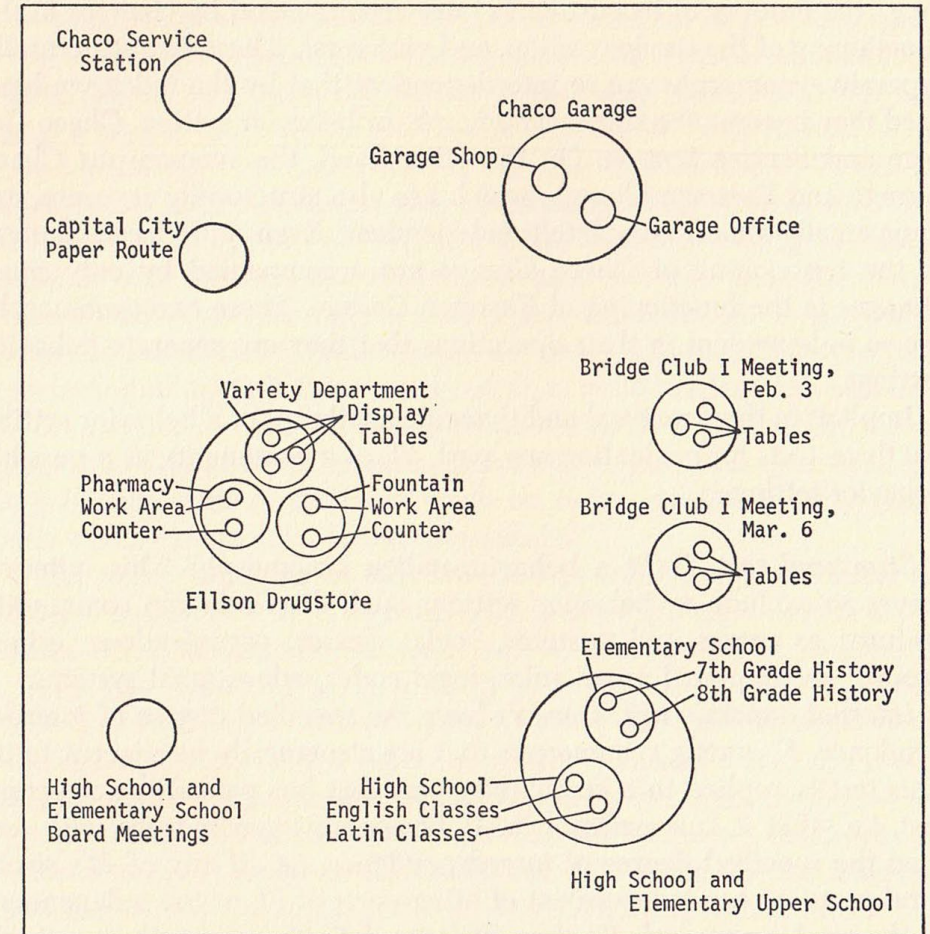
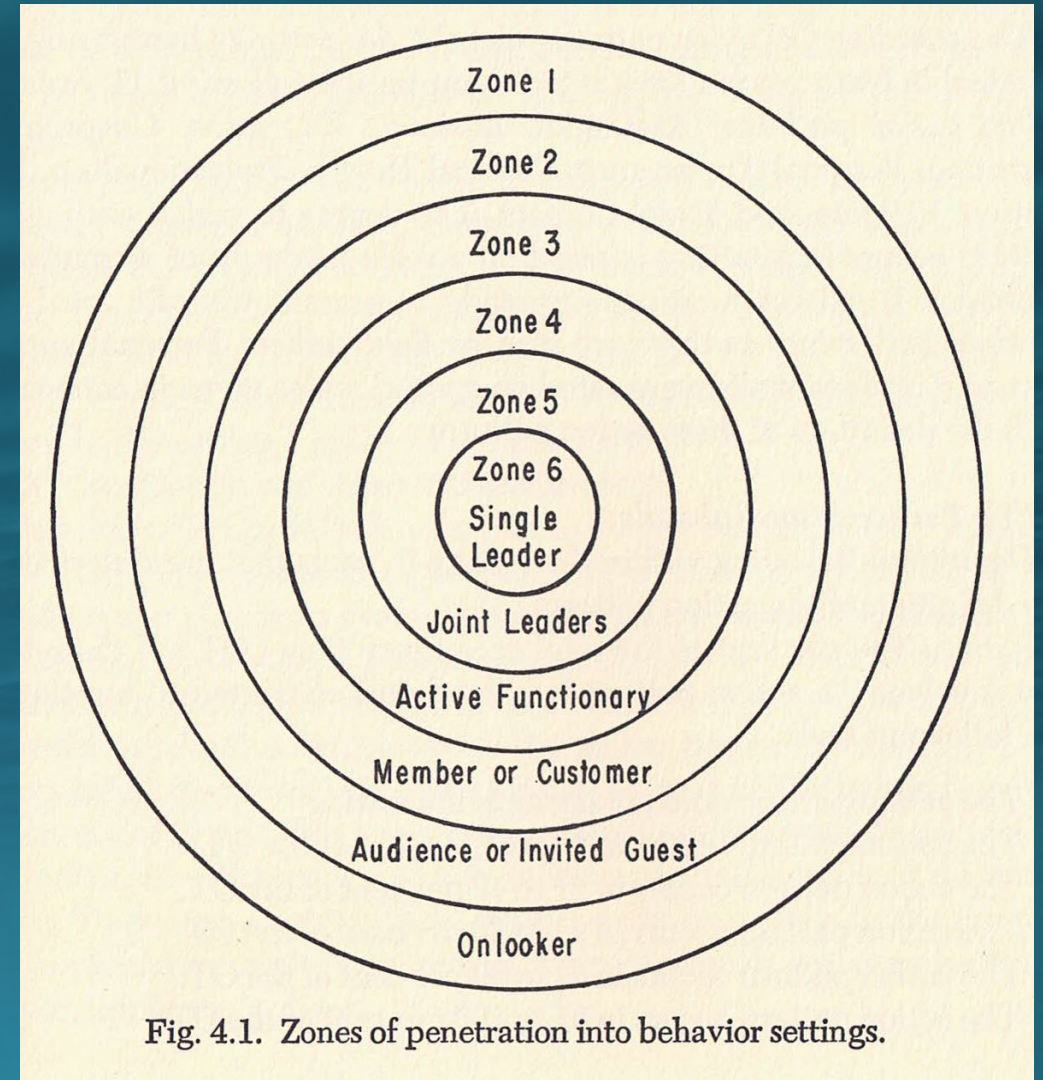


Fig. 3.2. Synomorphic structure of a part of Midwest.

Behaviour Settings

- Standing patterns of behaviour: "bounded by the behaviour of persons, en masse" (Schoggen, p.31)
- Structural - one or more standing patterns of behaviour-and-milieu with the milieu surrounding and synomorphic to the behaviour.
- Dynamic - the synomorphs have a degree of interdependence among themselves that is greater than their interdependence with parts of other behaviour settings" (Schoggen, P. 30).



Barker, p. 24

Place Attachment

- The emotional bond between an individual and a specific place or environment (Altman & Low, 1992)
- Encompasses affective, cognitive, and social dimensions, reflecting the *positive** feelings, memories, and social connections associated with a place (Hidalgo & Hernández, 2001)
- Place attachments are evaluative ties to a location that reflect the intensity of an emotional connection to a place ... (Stedman 2008)
- Identity
 - Psychological attachment – to identify with a place means to distinguish oneself from others by (amongst other things) references to a location (Peng et al. 2020)
- Dependence
 - Functional attachment – perception of specific location's ability to satisfy needs, goals, and preferences as better than alternative places (Stokols & Shumaker, 1981)
- Continued refinement *in recreational contexts* since 1989 has produced an Abbreviated Place Attachment Scale (six items) (Boley et al., 2021)

Place Meaning

- Cognitive and symbolic significance that individuals attribute to particular places

(Greider & Garkovich, 1994)

- Functional
- Symbolic
- Historic (Cultural)
- Aesthetic

“...descriptive reasons for attachment (Stedman 2008), which can range from **simple series of adjectives** (e.g., polluted, warm) to **complex descriptions of the place character and symbolic attributions** (e.g., place as home or escape; Masterson et al. 2017).” (Knaps et al., 2022)

- Sense of place in freshwater Planning: Ruamāhanga Whaitua Committee and Greater Wellington Regional Council (Newton & Sinner, 2017)

“...management decisions for place-attached, involved, or committed recreationists will require consideration of **what it is about their activity that arouses feelings of personal relevance** (i.e. the connection between the activity, site, or service provider and the self)...”

Building sense of place among children

Positive Behavioural Change

- Environmentally responsible behaviour in national parks (Ramkissoon et al., 2012)
- Integrating sense of place in planning and management of multifunctional river landscapes: experiences from five European case studies (Verbrugge et al., 2019)
- Integrating social values with GPS tracks through Denali National Park and Preserve (Cai et al., 2023)
- “Places do preserve their importance in times of intensive urbanization, migration, and economic development, but that the form of place attachment changes: **the active- and self-conscious attachment replaces the traditional attachment**” (Lewicka, 2011)
- Preserving ones meaningful place or not? Understanding environmental stewardship behaviour in river landscapes (Gottwald & Stedman, 2020)

Test Case 2: Outstanding Waterbodies in Otago

Key Methods

- Multiple Expert Panels
 - Verification of Context
 - Identification of Waters
- Online survey
 - Activity EUH & Involvement
 - Meaning Variables
 - Place Attachment
 - Open Comments

21 Water-based Activities

Data on 260/357 Waterbodies

- Alpine, High Country, Coastal
- Diverse Management Milieu
- Range of Source Flow and Control
- Diverse Activity Features
- Range of Experiences
- Reliable to Novel/Opportunistic
- Conflict Contextualized



Test Case 1: Waitaki Rivers & Jet Boating

Methods

- Validated Expert Panel
 - Survey
 - Video Conference
- Online survey
 - EUH & Involvement
 - Meaning Variables
 - Place Attachment
 - Open Comments
- 20 Rivers
 - Alpine, High Country, Coastal
 - Range of Uplift Status
 - Diverse Management Milieu
 - Range of Source Flow and Control
 - Diverse Gradient & Bottom-Type
 - Boring to Epic Experiences
 - Reliable to Novel/Opportunistic
 - Conflict Contextualized



Two Braided Rivers

Dobson

- Alpine, Class 3, ~20km, 6m/km, boulders, Uplifted
- An uncontrolled, unmolested, rain-fed high-country river. Fantastic, challenging boating, with the excitement of getting to a certain point, or further than last time. Amazing alpine scenery. A highly valued and much recommended boating experience. Exciting and challenging, but relatively safe. Launching into Lake Ōhau is reliable.

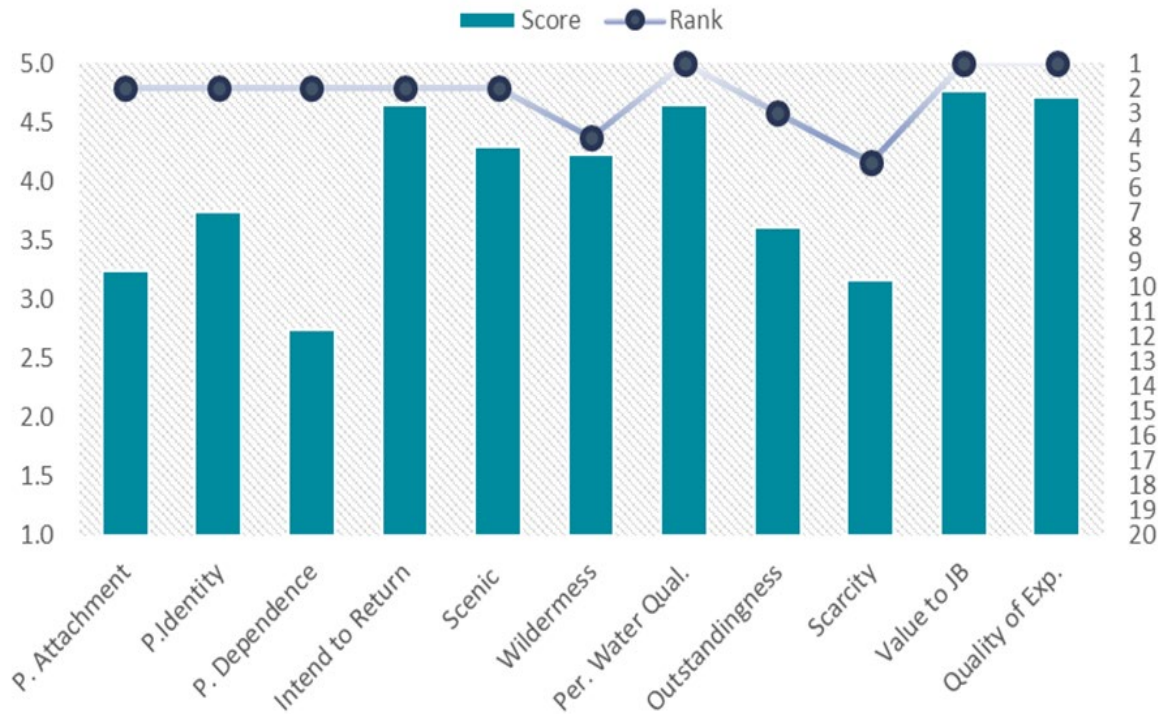
Ōpihi

- Coastal, Class 3, ~39km, 5.1m/km, Shingle/Rock/Willow, Limited uplift
- Both dam controlled (Opuha) and rain fed. Braided, generally with a main channel and side channels, and primarily a gravel bed. Rural aspect with multiple bridges. Trees, didymo, and railway irons present hazards. Easy access, reliable flow, enjoyed by locals. Possible conflicts with fishermen, but typically boating is done in higher flow/dirty water and fishing is done at lower flow/clear water.

Two Braided Rivers

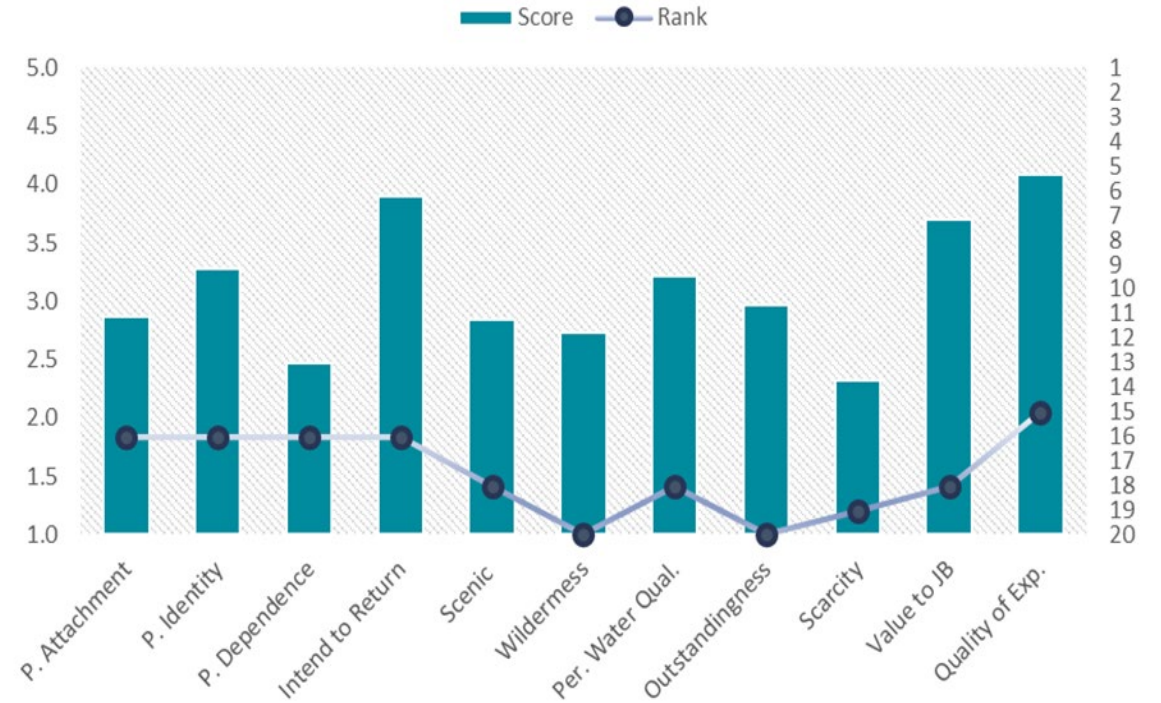
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Dobson River Attachment Scores and Rank



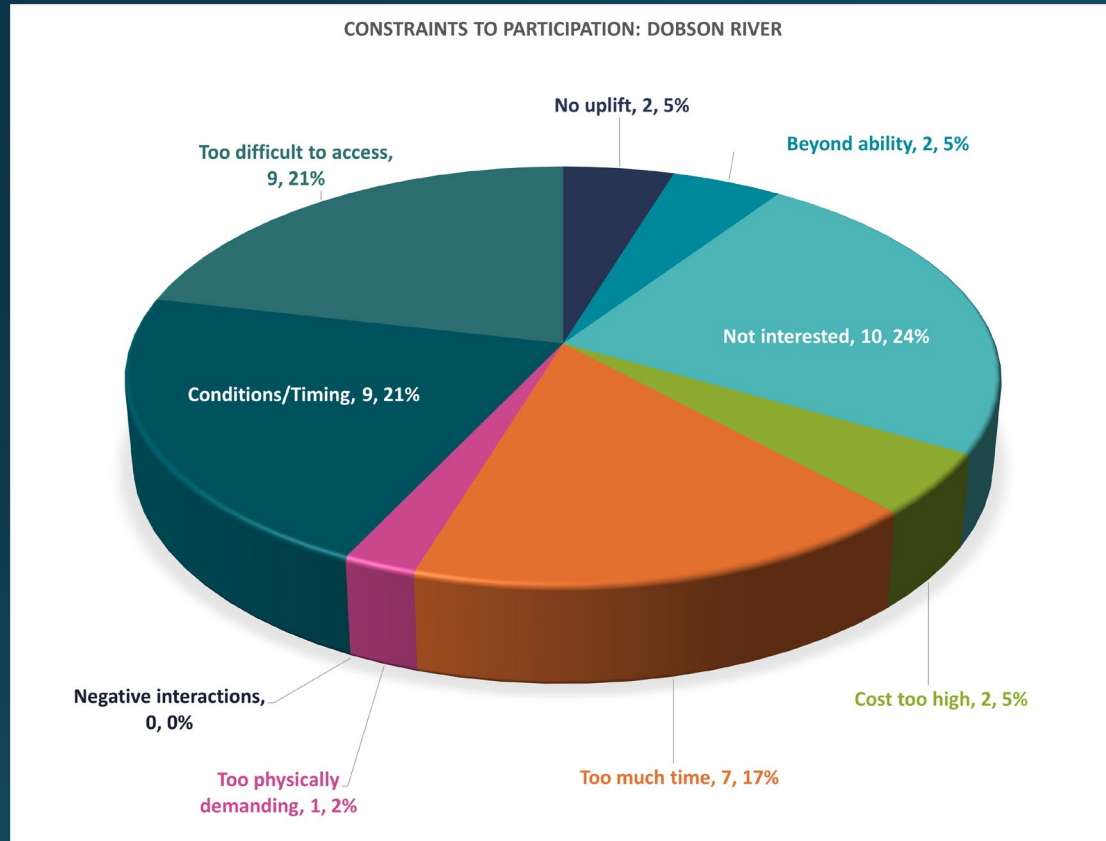
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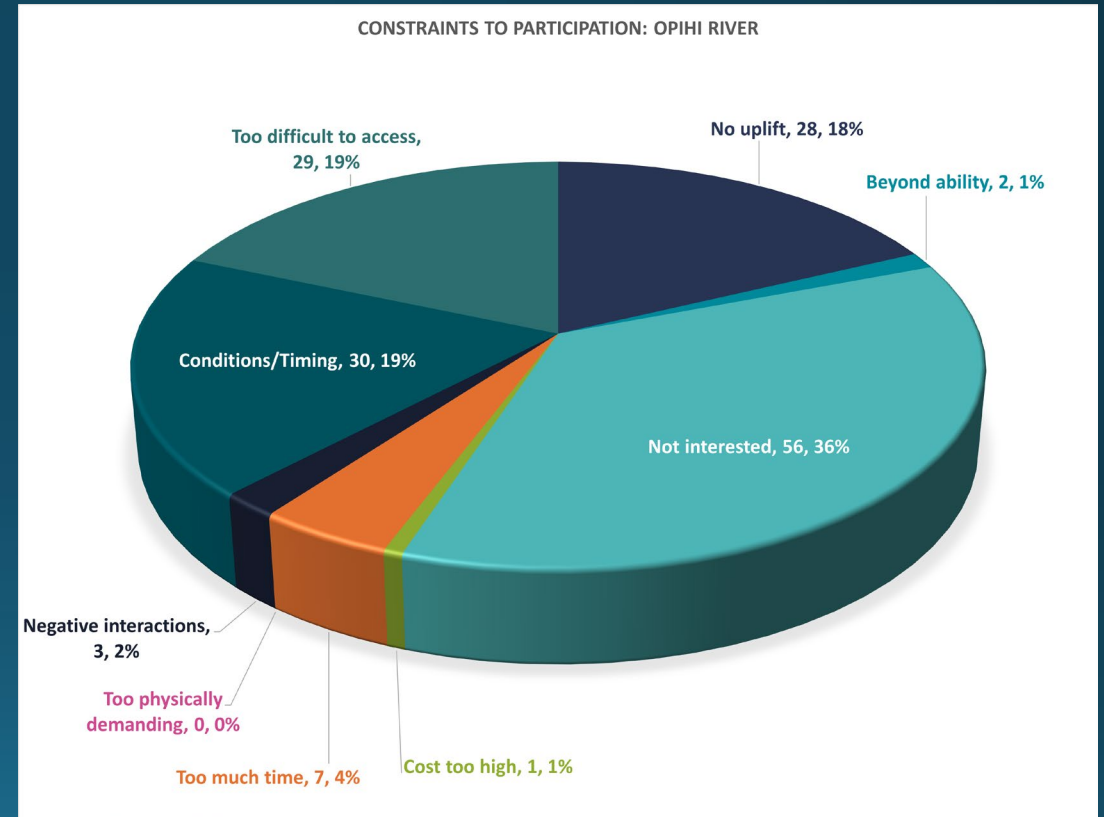


Two Braided Rivers

Dobson



Ōpihi



Two Braided Rivers

Dobson

“The landscape is outstanding”

“A river that **creates that escape** for people”

“It’s definitely an adventure, and expect the unexpected”

“Nationally scarce as well because of that high country unmolested feature”

“**Any preconceived idea is going to lead you wrong.** And that’s what I love about them”

“Add a couple of extra days, **you’re gonna be boating through the most epic boating I’ve come across**”

Ōpihi

“**No one doesn’t enjoy boating that river**”

“If it was uplifted, it would be a very popular river, yeah”

“You’re still in the populated developed space of Canterbury, but you’re away from the roads”

“**It’s a take-a-chainsaw river...**just the odd wee branch you’ve got to nick out of the way or jump over, **but that’s part of the appeal or challenge**”

Affordance for Recreation

- Rivers – as recreational niche – provide **corridors of affordance**
- Directly perceived from individual relevance and perspective
- NCP produces conditions which recreationists navigate to produce attachment and meaning
 - Range: Optimal Experience to Type II Fun

Transformational experience as individuals 'make the best of conditions on the day'

- The “flexible recreationist” (Parry & Gollob, 2018)

Waimakariri river

1945-2023



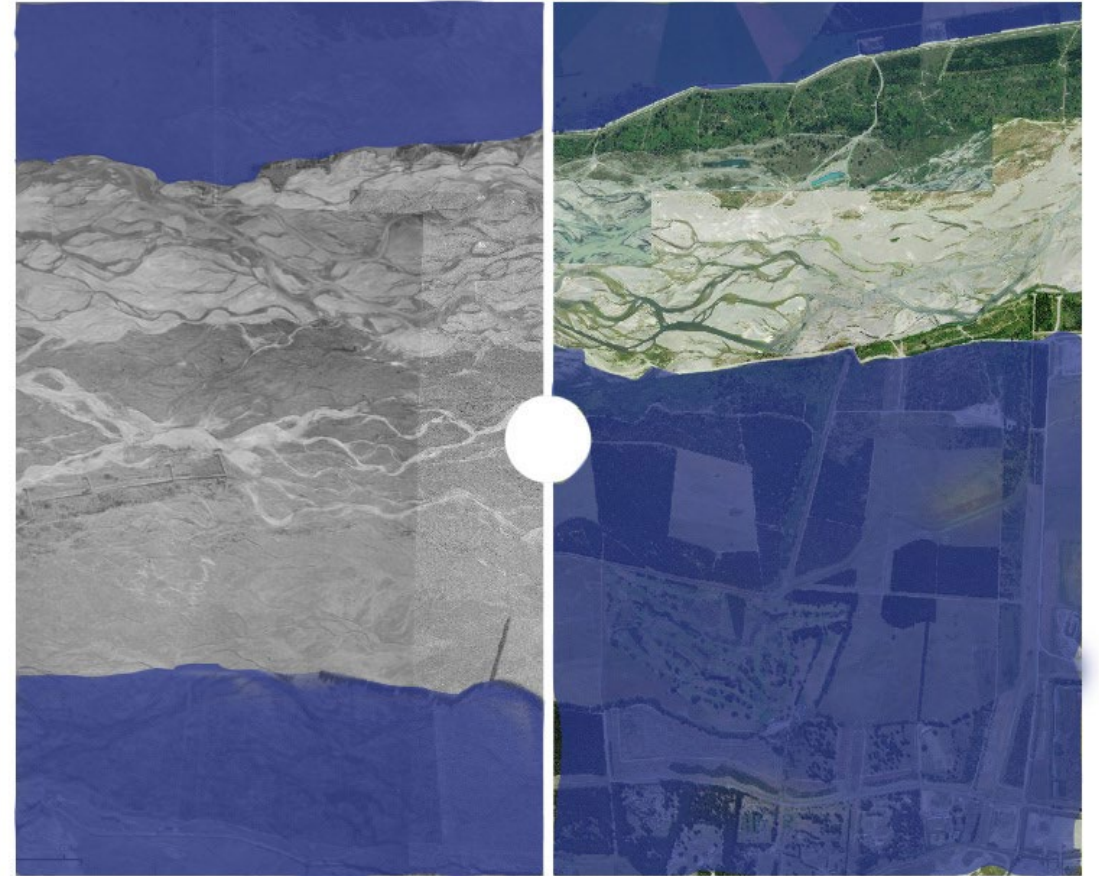
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Constrained Affordance

- Within living memory...and beyond
- Hassles, Coping and Substitution
- Increased overlap with sensitive areas
- Clayton's Uplift
- Perceived **conditionality of affordance** can attract/repel at once
- Increased awareness of affordance magnifies use
- Emergent activities create or extend corridors of affordance

Waimakariri river

1945-2023



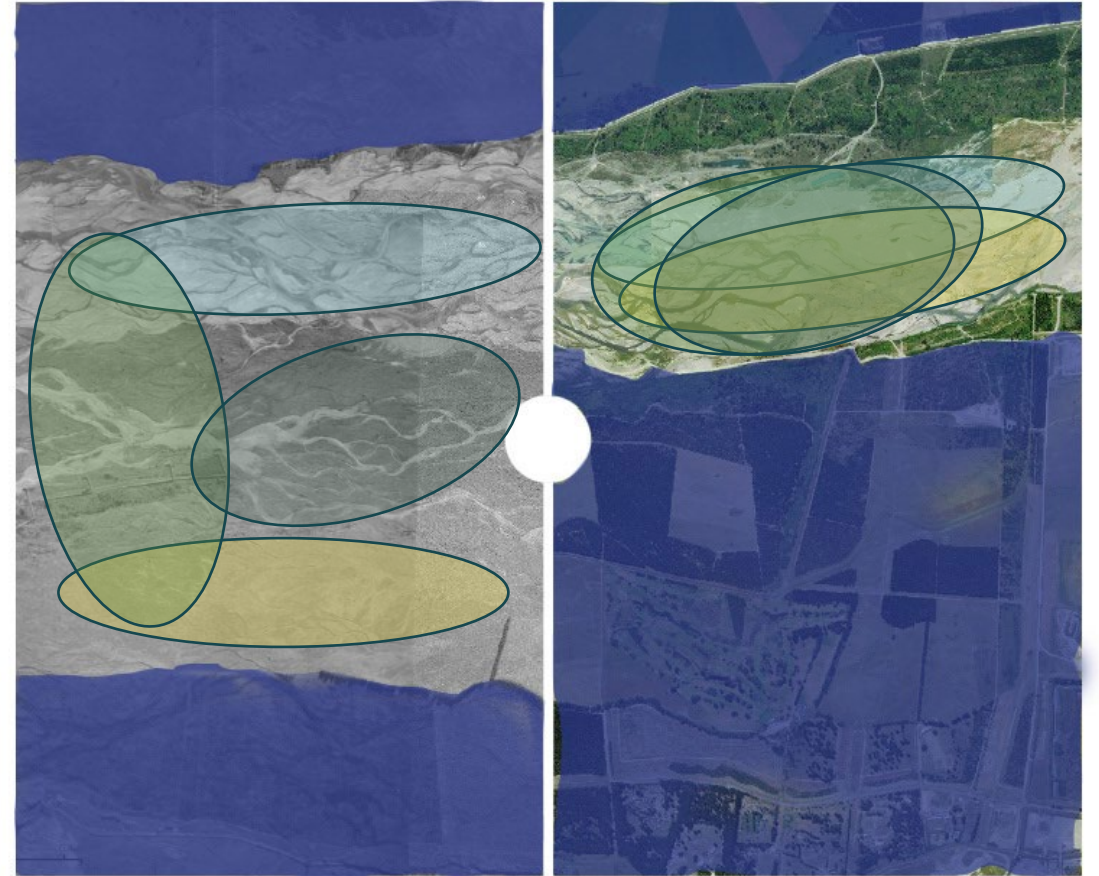
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Waimakariri river

1945-2023



Interactive content by Flourish

Meaningful places are geographic locations with associated sense of place.

Sense of Place is

- At the heart of NIMBY
- Inextricable from human experience
- Developmental *and* generational
- Expressed across cultures
- Layered and multifaceted
- Durable and malleable
- A virtual tourism driver
- A direct driver for recreation

Mapping Sense of Place

- Reveals depth and intensity of place attachment
- Correlates with attitudes and preferences toward resource use
- Predictive of conflict and resolution
- Indicates stability over time
- Valid at multiple scales
- Reveals shared values among diverse groups
- Builds Social Capital (Brown et al., 2020)

Key Benefits to Decision-makers

- Determine management and development priorities
- Engender and build pro-environmental behaviours
- Anticipate controversy and conflict
- Transferable and Comparable
- Defensible
- Engage with participants at a meaningful level
- Build place-based well being
- Comprehensive reflexive design
- Consistent and verifiable
- Parseable data complexity
- Enhance Transparency

Affordance: The end of 'amenity' and 'value' in outdoor recreation?

Thank you!

Time for
Questions?

