

What are the barriers to public engagement with biodiversity conservation?

In brief

Government, research and non-profit conservation organisations are increasingly working to encourage pro-biodiversity attitudes and behaviours, using behaviour change and public engagement approaches such as environmental education and media campaigns. Despite these efforts, there remains an intention-action gap, where even people who say they care about the environment still do not act for nature. To design effective interventions, we must understand our target audiences and the barriers that may prevent their engagement with biodiversity conservation.

We aimed to identify the primary barriers to public and stakeholder engagement with biodiversity conservation. We wanted to be able to inform greater understanding of audiences, and more effective behavioural interventions and message planning and design.

We determined there were five broad categories of potential barriers preventing individuals from engaging with biodiversity conservation that are most relevant to conservation professionals

working in public and stakeholder engagement.

These were:

- Do they know about the issue? (Unaligned knowledge and experiences)
- Do they see the issue as an issue? (Unaligned values and expectations)
- Do they feel the issue is relevant to them and/or their community? (Low personal and social relevance)

- Do they feel they can do something about it? (Low self-efficacy)
- Is engagement feasible given their context? (Limiting context)

We provide examples of intervention and messaging strategies that may assist in overcoming these barriers. We recommend conservation professionals consider these barriers when planning engagement programs and behaviour interventions.

Gardens can be designed to attract native wildlife. This planted 'Robyn Gordon' Grevillea attracted a New Holland honeyeater. Image: Jean and Fred, CC BY 2.0, Flickr





Background

Successful biodiversity conservation often depends on public support in the form of individual changes in behaviour (such as what people buy), financial support (such as donations) to research or conservation groups, or advocacy.

In order to secure public support, government, research and non-profit conservation organisations are increasingly working to encourage pro-biodiversity attitudes and behaviours, using behaviour change and public engagement approaches such as environmental education and media campaigns.

Despite these efforts, there remains an intention-action gap, where even people who say they care about the environment still do not act for nature. Closing this 'intention-action gap' is one strategy for successful behavioural interventions. This means that understanding the barriers to engagement is a key part of building behaviour change programs and communications for biodiversity conservation. To design effective interventions, we must understand our target audiences and the barriers that may prevent their engagement with biodiversity conservation.

Main aim of the research

We aimed to identify the primary barriers to public and stakeholder engagement with biodiversity conservation. We wanted to be able to inform greater understanding of audiences, and more effective behavioural interventions and message planning and design.

What we did

We reviewed literature around public engagement with the environment to identify and discuss key categories of barriers relevant for biodiversity conservation. We surveyed a wide range of literature from disciplines such as conservation psychology, behaviour change, social marketing, and strategic communications.

We grouped barriers together in a way that provided a simple, accessible and useful summary for conservation professionals, without oversimplifying key psychological and behavioural concepts.

We then drew from behaviour change, social marketing, and strategic communications theory to discuss these barriers in the context of biodiversity conservation, and suggest potential behavioural interventions for future investigation, with a focus on conservation messaging strategies.



Encounters with native wildlife may help overcome some barriers to engaging with conservation. Image: E. Lindsay



What we found

While there are many potential barriers preventing individuals from engaging with biodiversity conservation, we identified five key categories that are relevant to conservation professionals working in public and stakeholder engagement:

1. **Unaligned knowledge and experiences:** Do they know about the issue?

2. **Unaligned values and expectations:** Do they see the issue as an issue?

3. **Low personal and social relevance:** Do they feel the issue is relevant to them and/or their community?

4. **Low self-efficacy:** Do they feel they can do something about it?

5. **Limiting context:** Is engagement feasible given their context?

In Table 1 we outline these different kinds of barriers in more detail, and provide examples of intervention and messaging strategies that may assist in overcoming these barriers. Some barriers are relevant to multiple categories. For example, social norms can influence the values and expectations individuals bring to an issue, as well as the level of personal and social relevance the issue holds for them.

Table 1: Summary of the five categories of potential barriers preventing individuals from engaging with biodiversity conservation, including examples of potential intervention strategies.

Barrier category	Barriers	Potential intervention strategies
1. Unaligned knowledge and experiences	<p>Extent of knowledge <i>e.g., education, awareness</i></p> <p>Differences in understanding or knowledge frameworks <i>e.g., western ecological knowledge, Indigenous knowledge, experiential knowledge, practical knowledge</i></p> <p>Uncertainty and scepticism <i>e.g., of climate predictions</i></p> <p>Shifting baselines Where perceptions about what is true or acceptable changes over time. <i>e.g., the slow degradation of ecosystems is hard for an individual to see for themselves, and so they are likely to assume even a degraded environment is normal</i></p> <p>Complexity of an issue Complex or nuanced debates may further complicate individuals properly understanding an issue <i>e.g., dingo vs wild dog</i></p> <p>Confirmation bias and cognitive dissonance Individuals are more likely to accept information that aligns with their pre-existing views (confirmation bias), and more likely to dismiss information that does not align with their views due to the discomfort of trying to make sense of conflicting information (cognitive dissonance)</p>	<p>Avoid 'lecturing' or producing material that focuses on presenting facts or statistics without clear on-ground implications or examples Even where knowledge is a primary barrier, audiences are unlikely to listen to or take on board information if it is not presented in an engaging way or related to their own experiences or understanding</p> <p>Consider interventions where knowledge is not a necessity <i>e.g., providing bins specifically designed to contain fishing line at popular fishing sites in place of open bins</i></p> <p>Education programs or awareness campaigns <i>e.g. Zoos Victoria community conservation campaigns</i></p> <p>Experience-based learning <i>e.g., reserve tours (e.g. Arid Recovery), animal encounters (e.g. Zoos Victoria), Birdlife Australia's Birds in Backyards program</i></p> <p>Connect what the audience already knows to new information or use a messenger or source trusted by the audience Consider having a familiar source present information. This makes the information more credible.</p> <p>Present accessible opportunities to engage with information and ask questions <i>e.g., information booths at local markets</i></p>

What we found (continued)

Barrier category	Barriers	Potential intervention strategies
2. Unaligned values and expectations	<p>Values e.g., family values, environmental, community values</p> <p>Worldviews e.g., egoistic, focused on self-interest in terms of resources, power, or achievement, versus altruistic, focused on contributing to wellbeing of others or broader society</p> <p>Priority differences i.e., biodiversity may be valued by the individual but not a priority in their day-to-day</p> <p>Self-interest, costs, and benefits Individuals may be primarily focused on the costs and benefits to themselves. e.g., they may be concerned that if they contribute to a common good (such as donating to a conservation organisation), and others do not, they may lose out (e.g., fear of free-rider effect)</p> <p>Social norms and status quo Individuals are likely to agree with the values and expectations held by their social circle (friends, family, co-workers), or established in the current status quo e.g., "this is the way things are"</p>	<p>Make the intervention attractive and desirable e.g., appeal to self-interest, appeal to known values of target audience, provide compensation where appropriate</p> <p>Connect pre-existing values to issue e.g., focus on community or place-based actions and message framing rather than environmental actions and frames e.g., Zoos Victoria's Safe Cat, Safe Wildlife campaign reframes the issue to focus on keeping domestic cats safe inside, rather than framing cats as the enemy (i.e., feral cats destroying wildlife)</p> <p>Use a values-based social norms approach e.g., Harvard Alcohol Project used this approach to create social acceptability of the 'designated driver' concept</p> <p>Find allies within target communities and support or elevate their work</p> <p>Identify trusted messengers who may be able to engage different audiences e.g., Who will your target audience listen to? Scientists, doctors, firefighters, celebrities, parents?</p>
3. Low personal and social relevance	<p>Physical or geographic distance Individuals further away from natural areas or the ecosystems and species being concerned may be less likely to engage</p> <p>Psychological distance Issues such as biodiversity loss may feel far away to individuals, not just geographically but also across time or because of its abstract nature e.g., "this is an issue for future generations"</p> <p>Extinction of experience A decline in individuals spending time in nature means that these people may feel less connected to nature or find it difficult to understand or be concerned about biodiversity decline</p> <p>Level of interest If an individual is simply not highly interested in biodiversity, it can be difficult to engage them in conservation</p> <p>Social norms If an individual's social circle (friends, family, co-workers) do not care or act for biodiversity, it is more likely that individuals will find it difficult to act themselves</p>	<p>Talk about the 'here and now' Emphasising when an issue is relevant locally and immediately (rather than in the future) makes it easier for audiences to see it as relevant to them</p> <p>Make the action relevant to them and their social group e.g., relevant to their locality or situation. For example, engaging parents with actions they can feasibly engage their family in, or using message appeals focused on "preserving nature and wildlife for future generations"</p> <p>Use social norming language Language that emphasises social norms can be highly effective at increasing conservation behaviour intentions. For more information see this collection of blog posts e.g., <i>Descriptive norms</i> = perceptions of how common a behaviour is (e.g., "We all care about nature") <i>Injunctive/Subjective norms</i> = perceptions of whether other important people (e.g., respected figure, friends, family) think a behaviour should be performed (e.g., David Attenborough says we all should be taking better care of nature...) <i>Personal norms</i> = individual behaviour standards flowing from personal values and identity (e.g., "Are you someone who cares about nature? If so, sign up for our mailing list.")</p> <p>Use messengers trusted by the specific audiences e.g., local community members, scientists, firemen, farmers</p>

What we found (continued)

Barrier category	Barriers	Potential intervention strategies
4. Low self-efficacy	<p>No knowledge of what actions they can take</p> <p>Actual or perceived difficulty of action <i>e.g., risk, cost, habits</i></p> <p>Insufficient positive feedback to continue ongoing action Individuals already engaging in pro-biodiversity behaviours may find maintaining motivation difficult if they do not receive positive feedback in the form of direct results or encouragement from peers or organisations.</p>	<p>Make the action feel clear, easy and achievable and provide support where possible <i>e.g. Gardens for Wildlife provides information and support in the form of garden visits and expert advice, Zoos Victoria's Safe Cat, Safe Wildlife website provides cat hacks and expert advice to assist individuals in containing their cats</i></p> <p>Provide positive feedback and support, especially for ongoing actions <i>e.g., online community forums to connect and share advice, community groups (e.g., 'Friends of' groups)</i></p> <p>Reinforce identity If an individual identifies as the kind of person who cares or acts for nature, reinforcing this identity can help trigger actions (see personal norms above) <i>e.g., "As someone who cares about nature, I focus on planting native plants in my garden"</i> <i>"I love the outdoors, so I want to help protect it"</i></p>
5. Limiting context	<p>Socio-economic circumstances <i>e.g., not having excess income to donate</i></p> <p>Political, cultural, and social context <i>e.g., engaging in political or advocacy-based actions may be difficult or impossible in certain political or social contexts</i></p> <p>Laws and regulations</p> <p>Infrastructure and technology limitations</p>	<p>Targeting audiences that can feasibly engage in the desired action</p> <p>Ensure resources and infrastructure are available so the action is possible <i>e.g., appropriate bins available for disposal of plastic waste</i></p> <p>Present opportunities to engage alongside pre-existing behaviours or locations</p>



Cats in an enclosure.
Image: Lisa, CC BY-NC 2.0, Flickr

Implications and recommendations

Identifying likely barriers to engagement for key audiences is only one aspect of behaviour intervention and effective communication, but it is a key step towards greater understanding of our audiences. Future research is required to explore these barriers in practice and investigate the effectiveness of different interventions. We recommend conservation professionals consider these barriers when planning engagement programs and behaviour interventions, designing new conservation messaging, and engaging with the public and stakeholders in the field. Understanding these likely barriers should lead to improved audience targeting, more appropriate behaviour interventions and more effective messaging for engagement with biodiversity conservation.

*RIGHT: Fishing line recycle tube.
Image: C.C. Chapman, CC BY-NC-ND 2.0, Flickr*



Cited material

Gregg, EA., Garrard, GE., Bekessy, SA., Kusmanoff, AM., Martin, JK., Selinske, MJ and Robinson, JA. (In prep.) What are the psychological barriers preventing stakeholder engagement with biodiversity conservation?

Further Information

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