

# Invasive Species Research and **STAKEHOLDER ENGAGEMENT**

Collaborative engagement holds the key to enhancing the flow of knowledge between researchers and relevant stakeholders.

Invasive alien species are a major driver of global environmental change, requiring a range of management interventions to ameliorate their impacts on biodiversity, ecosystems, human well-being, and local livelihoods. Researchers in invasion science commonly engage stakeholders in order to integrate diverse knowledge and perspectives in the management of invasive species. However, stakeholders are often not treated as active participants in the research; therefore, the two-way flow of knowledge can become restricted.

A [study](#) carried out by the DSI-NRF Centre of Excellence for Invasion Biology at Stellenbosch University, in conjunction with several local and international research institutions, looked at ways in which to make stakeholder engagement more integrative and collaborative.

Stakeholder engagement in the context of invasive species research can be defined as the process of involving stakeholders in decision-making, management actions, and knowledge creation. The involvement of stakeholders in research and management is important as successes can depend as much on the perceptions, behaviour, and

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attitudes of stakeholders as it does on the ecology of invasive species themselves. For example, there can be conflicts of interest between different stakeholders with regards to the management of invasive species which is often caused by trade-offs between the economic benefits and costs of some invasive species or the intrinsic values of others. A lack of knowledge and awareness on the part of stakeholders regarding invasive species is another challenge as are poor cooperation between different stakeholders, and the ethics of some management approaches.

The study reviewed a range of research relating to stakeholder engagement in invasion science. Various reasons for engagement were found, ranging from understanding people's specific knowledge of the invasive species; gathering information to improve scientific understanding and informing policy and management planning; to enhancing data collection or implementing management actions; and building cohesion among stakeholders to address conflicts of interest.

The most common method of engagement (61%) is the use of questionnaires:



a passive form of engagement distinguished by its one-way knowledge flow from stakeholder to researcher. Integrative approaches were applied far less often (approximately 3%). The study also found that most research (63%) targeted only one specific stakeholder group and that 47% of engaged stakeholders opposed the management of invasive species and that they are less likely to support the management of invasive animal species than plant species.

The study makes suggestions regarding the future of stakeholder engagement in invasive species research and management, including to:

- Improve, co-design, co-create and co-implement research and management actions;
- Promote social learning and provide feedback to stakeholders;
- Enhance collaboration and partnerships beyond the natural sciences and academia (interdisciplinary and transdisciplinary collaboration); and

- Discuss some practical and policy suggestions for improving stakeholder engagement in invasion science research and management.

The study also suggests that it is essential that researchers seeking stakeholder engagement in invasive alien species management should:

- Investigate the local context in which engagement is sought to ensure that the most appropriate type of engagement (in terms of its mode, e.g. communicative versus co-productive, and agency, e.g. top-down versus bottom-up, is implemented.
- Systematically represent the needs and priorities of as many affected parties as possible, using approaches such as stakeholder analysis to ensure legitimate representation early in the process; and
- Pay attention to power dynamics to ensure the knowledge and other inputs of all participants are valued and that all stakeholder groups are given opportunities to contribute. 