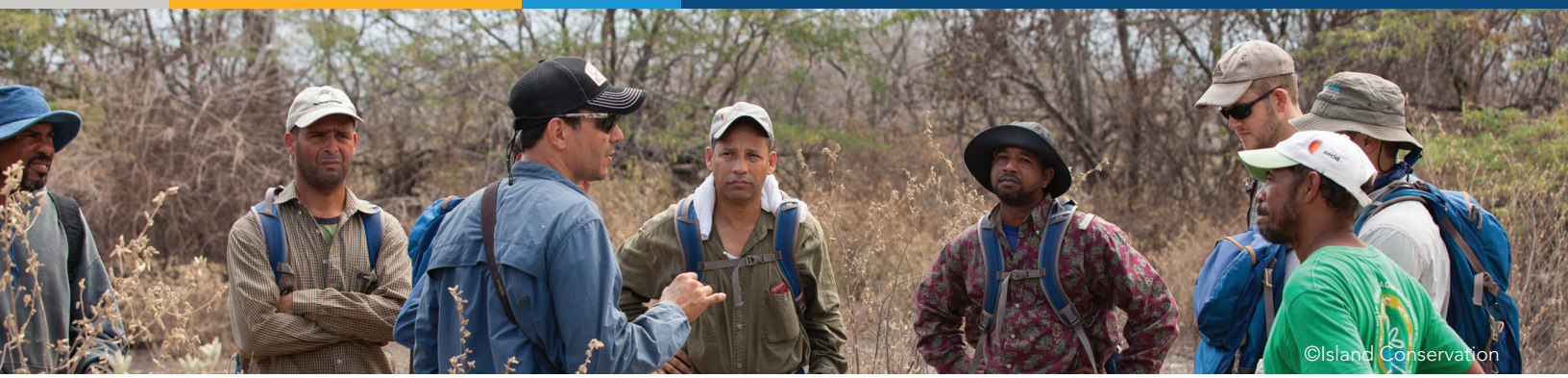
OUTREACH NETWORK FOR
GENE DRIVE RESEARCH

FACTS ABOUT GENE DRIVE

STAKEHOLDER ENGAGEMENT AND COMMUNITY ACCEPTANCE FOR GENE DRIVE RESEARCH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Stakeholder engagement is an essential component of gene drive research. Robust engagement is important not only because it is crucial for building and sustaining public confidence, but also because it can help define priorities and inform research design and pathways.


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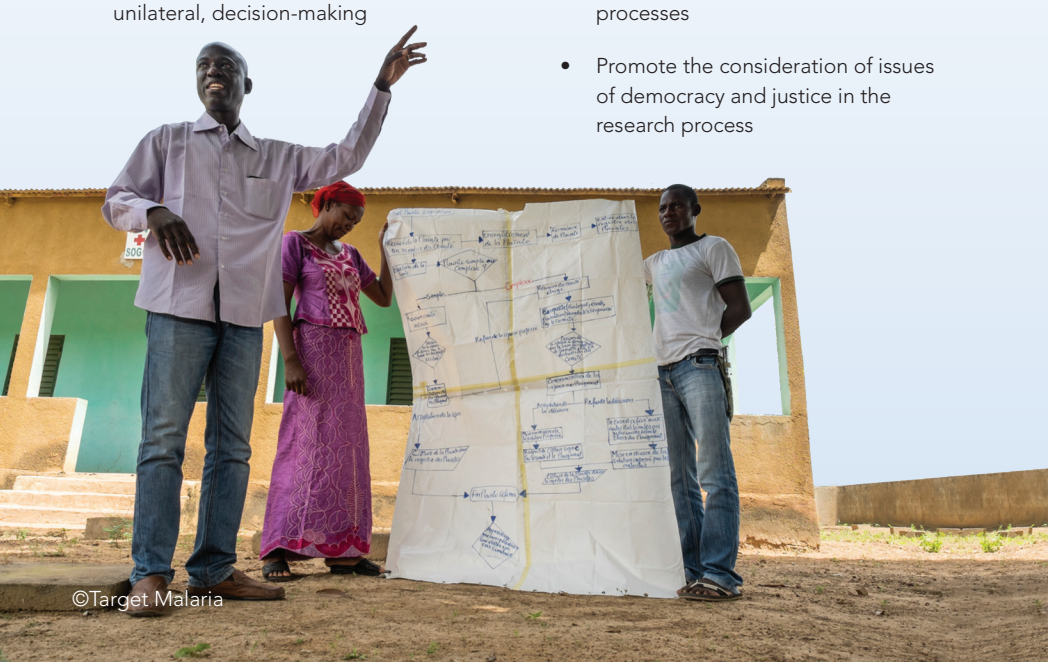
Through engagement activities, affected local communities and relevant stakeholders can actively shape the potential outcome of the current research by sharing their perspectives and concerns. This ensures that research activities and any resulting technologies respond to their expectations and more effectively meet the needs and preferences of eventual beneficiaries. Overall, engagement activities ensure transparency, generate mutual trust and enable informed decision-making.

Value of stakeholder engagement in gene drive research

- Support the identification and assessment of potential benefits and harms
- Facilitate mutual learning and exchange of knowledge
- Promote suitability and effectiveness of research through collaborative, rather than unilateral, decision-making
- Help the contextualisation of research
- Empower communities potentially affected by the outcome of the research
- Provide for a multiplicity of perspectives and opinions to inform research, enhancing design and development processes
- Promote the consideration of issues of democracy and justice in the research process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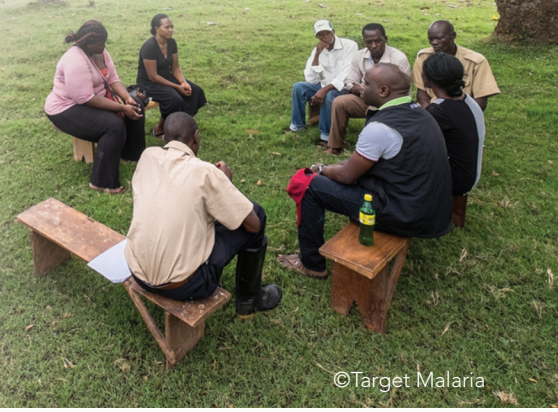
PROMOTING PUBLIC ENGAGEMENT IN GENE DRIVE RESEARCH

In July 2016, the United States National Academy of Sciences, Engineering and Medicine (NASEM) released recommendations for researchers, funders, and policy-makers to guide current gene drive research. A number of recommendations specifically address stakeholder engagement activities and highlight the need for an inclusive and context-specific approach to ensure that the perspectives of those most affected by the research are carefully considered, including their possible disagreement. The report recommends the allocation of adequate resources for engagement activities as part of the overall budget of the research projects. Engagement activities should follow specific engagement plans developed by multidisciplinary experts and covering the different phases of the research.

NASEM Report Recommendations

- Research projects on gene drive should include engagement plans.
- Engagement outcome should be used to frame and define the risks of gene drive applications.
- Funders of gene drive research should allocate part of the research budgets to engagement activities
- Engagement plans should be based on interdisciplinary expertise
- Researchers, funders, and policy makers should evaluate engagement activities and make the evaluation available
- Engagement plans should be relevant to the social, cultural, and political contexts in which gene drive research may be planned
- Engagement activities should be differentiated to include diverse voices at different times.
- Engagement activities should respect different points of view and not be aimed at convincing dissenters.

Stakeholder engagement related to gene drive research can also build on existing knowledge and practices in place in other fields and draw on the guidance provided by international frameworks, such as the Free Prior Informed Consent guidelines under the Convention on Biological Diversity (CBD).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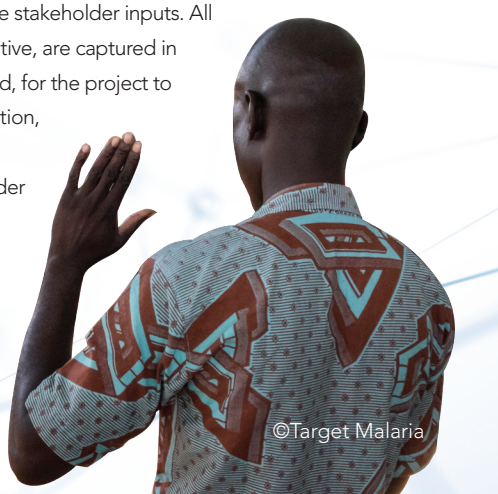
RESEARCH PROJECTS SPECIFIC ACTIVITIES ON ENGAGEMENT

Inspired by the NAS recommendations, many research projects on gene drive consider engagement one of their core activities and plan engagement activities throughout the different phases of the research and development process.

The Genetic Biocontrol of Invasive Rodents (GBIRd) program is a partnership of diverse experts from seven world-renowned universities, government, and not-for-profit organizations advancing gene drive research in the field of conservation. The program is investigating both the feasibility and suitability of the creation of a self-limiting gene-drive modified mouse that biases future generations to be male (or female) only, thereby achieving eradication by attrition. Consistent with leading gene drive guidelines, the program is committed to early and thorough social engagement. First of all, researchers of the engagement team conducted a landscape analysis of issues and stakeholders surrounding gene drives and conservation to understand the complexity of policy issues, ethical questions, expert perspectives, and values that surround this potential technology. Informed by this analysis, the engagement team will convene a workshop of stakeholders to design procedures and materials for broader community engagement. In a second phase based on the outcome of the landscape analysis and the workshop, the engagement team will partner with local organizations near islands where a gene drive mouse might someday be useful for managing invasive mice to protect biodiversity. Local and native community focus groups will be organized to create two-way exchange of information, perspectives, and concerns with local residents, project personnel, and scientists. These meetings will inform the ongoing scientific research and also offer insight into public perspectives on the potential deployment of gene drive mice on islands for conservation purposes.

Target Malaria is a not-for-profit research consortium that aims to develop and share technology for malaria control. The research is focusing on the use of gene drive technology to reduce the population of malaria-carrying mosquitoes to levels sufficiently low to interrupt transmission. Target Malaria is based on three equally important pillars: science, regulatory and stakeholder engagement. The project has a dedicated team for stakeholder engagement with a global team as well as experts from and based in the three countries of operation. Engagement is planned to take place throughout the research and development process so that stakeholders have the opportunity to co-develop the project approach. The teams are currently engaging stakeholders at all levels from the local villages where entomological collections are being done, to the international level. To do so, the project has developed a progressive engagement approach and a series of tools adapted to the local culture as well as levels of understanding. The dialogue established through engagement is key to helping the teams understand possible risks and risk perceptions and integrate this into its formal risk analysis. The engagement teams do a careful stakeholder mapping to ensure that they engage with different voices and takes into account critical groups as well as more vulnerable groups or individuals for whom it might be difficult to have access to the public debate. This mapping is revisited frequently to take any changes into account. Target Malaria has implemented project-wide tools to help capture stakeholder inputs. All opinions, both positive and negative, are captured in a stakeholder engagement record, for the project to reflect on and to address. In addition, a specific mechanism has been implemented to collect stakeholder complaints or grievances. This mechanism provides a clear tool for accountability and allows stakeholders to express their discontent or any issue in a safe and transparent way.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