Engagement as Governance

Making the Living World Engineerable: Science, Practice & Policy
Session 4: Policy Levers: A Strategy for Moving Forward

National Academies of Science, Engineering, and Medicine
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Gene Drives on the Horizon
Advancing Science, Navigating Uncertainty, and Aligning Research with Public Values

The National Academies of
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Released June 2016
nas-sites.org/gene-drives

- PDF of the full report
- Report in Brief
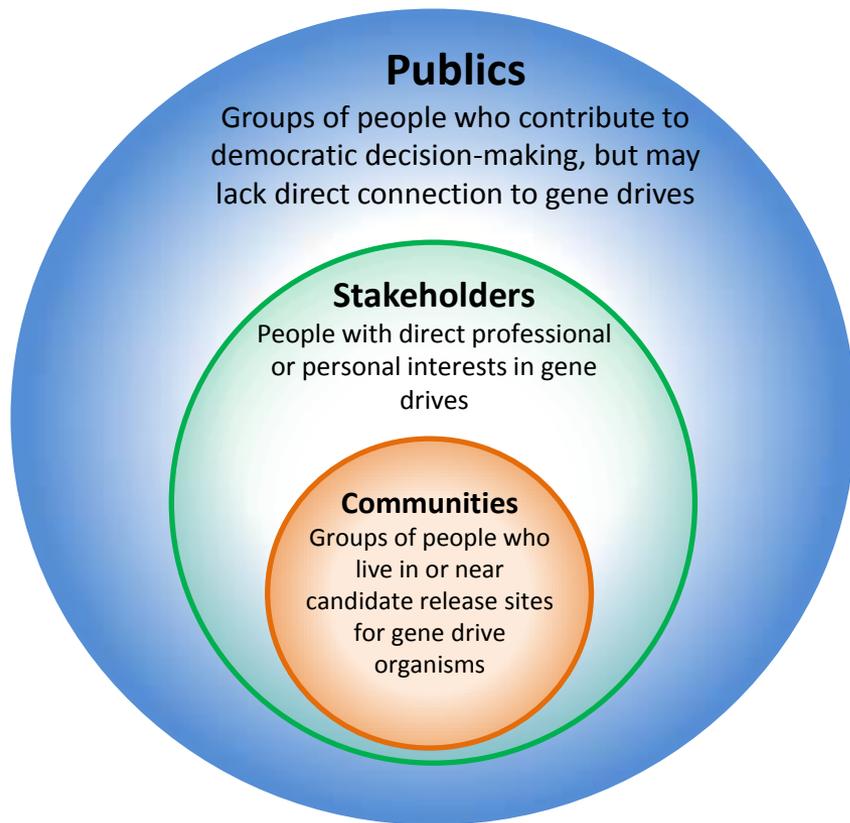- Archived webcast of public release and slide presentation

Responsible Science to Develop Gene Drive Technologies

A responsible science approach calls for continuous evaluation and assessment of the social, environmental, regulatory, and ethical considerations of gene drives.

(NASEM, 2016)

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Public Engagement as a Priority

Publics
Groups of people who contribute to democratic decision-making, but may lack direct connection to gene drives

Stakeholders
People with direct professional or personal interests in gene drives

Communities
Groups of people who live in or near candidate release sites for gene drive organisms

Public engagement cannot be an afterthought.

The outcomes of engagement may be as crucial as the scientific outcomes to decisions about whether to release a gene-drive modified organism into the environment.

(NASEM, 2016)

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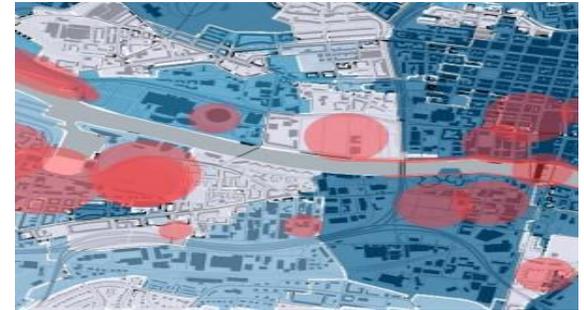SCIENCES · ENGINEERING · MEDICINE

Motivations for Engagement

- Local knowledge
- Principles of justice
  - Transparency
  - Informed consent
- Opportunities for mutual learning
  - Scenario development
  - Reflective deliberation
- Building of trust

(NASEM, 2016)

Dps.mn.gov/divisions/ojp

udsu-strath.com

Keymind.com.br

Globoforce.com

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Designing Information Flow

Type of Engagement		
Public Communication		
Public Consultation		
Public Engagement	Sponsor ← →	Public Representative

Rowe, G., & Frewer, L. J. (2005). A Typology of Public Engagement Mechanisms. *Science, Technology and Human Values*, 30(2), p. 255.

Challenges of Engagement

- **Who** should be engaged?
- What are the **goals** of engagement?
- **When** should engagement occur?
- How can **cultural differences** among those involved in engagement be recognized and respected in ways that enhance deliberation?
- What are potential triggers for **polarization**?
- How should the results of engagement feed into practical and formal **decision making** about research and technological deployment?

(NASEM, 2016)

Expert & Citizen Assessment of Science & Technology

A Distributed Network of Institutions for Peer to Peer Public Deliberation

https://ecastnetwork.org/

ABOUT   EVENTS   PARTNERS   PROJECTS   PUBLICATIONS   VIDEOS


CATEGORIES

Event (15)

USING PUBLIC ENGAGEMENT TO INFORM

POLICY DECISIONS

Participatory Technology Assessment

- Participation + Expertise

- Distributed, Agile, Collaborative

- Institutionally non-partisan while inviting and integrating diverse values and perspectives

- Integrated into government policy-making, wider societal debates, and technological R&D, dissemination, and management.
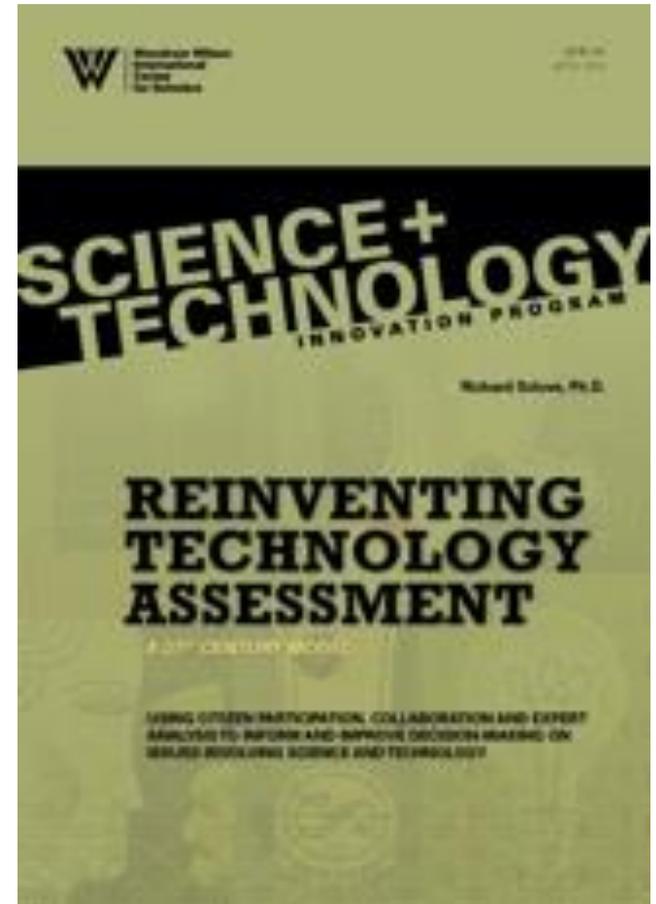
ECAST Projects

- 2012: **World Wide Views on Biodiversity** in four U.S. cities (Boston, Washington, Denver, Phoenix) for input to the UN Convention on Biological Diversity.

- 2014: **Participatory Technology Assessment of NASA's Asteroid Initiative** (Boston, Phoenix, on-line).

- 2015: **World Wide Views on Climate and Energy** in four U.S. cities (Boston, St. Paul, Ft. Collins, Phoenix) for input to the Paris Climate Meeting (COP 21).

- 2015-2018: **NOAA Community Engagement for Environmental Literacy, Improved Resilience, and Decision-Making** in six U.S. cities (Boston, Phoenix, Minneapolis, Oakland, Raleigh, and 3 TBD).

- 2016: **Stakeholder Workshop on Genetically Engineered Algae** (Phoenix), aligned with EPA's public meeting on revised guidelines for GE algae.

- 2016-2017: **DOE Participatory Engagement for Energy Policy and Planning** in five U.S. cities (Boston, Raleigh, Norman, Portland, Oakland).

Genetically Engineered Algae: Public Engagement Strategies

October 27, 2016

Tempe, Arizona

Purpose

- Convene a diverse group of stakeholder leaders* for a discussion of how to best engage broader public audiences in the development of EPA's forthcoming guidance for genetically engineered (GE) algae and related governance decisions.

  *from industry, academia, civil society organizations, and federal agencies

Critical Questions

1. What potential GE algae technologies and applications will be of most interest to public audiences?

2. Who should be engaged (i.e., how should the public be constructed)?

3. What do citizens (non-experts) need to know to effectively engage them regarding GE algae?

4. What questions should we ask to make engagement useful?

5. When and how can the outputs of engagement be integrated into the decision-making process?

Scenarios chosen by stakeholders

1. Food – direct consumption

2. Food – indirect consumption (e.g. algal fishmeal)

3. Bioremediation

4. Algal fuel (e.g., gasoline substitute)

Somewhat organized list of insights and

Donald Trump Is Elected President in Stunning Repudiation of the Establishment

By MATT FLEGENHEIMER and MICHAEL BARBARO   NOV. 9, 2016

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NEW YORK   ASSOCIATED PRESS
Donald Trump's Victory Speech
By THE ASSOCIATED PRESS
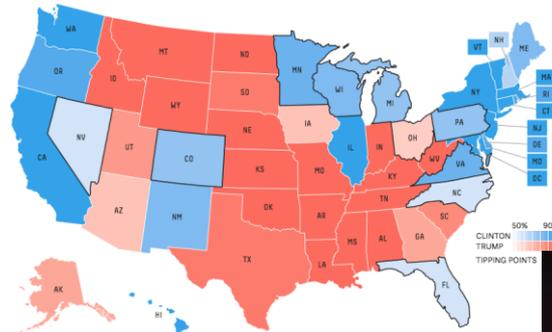
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Donald J. Trump addressed supporters in New York early Wednesday after he was elected president in a stunning upset against Hillary Clinton. By THE ASSOCIATED PRESS on November 9, 2016. Photo by Eric Thayer for The New York Times. Watch in Times Video »

How we access "public opinion" to inform political decision making
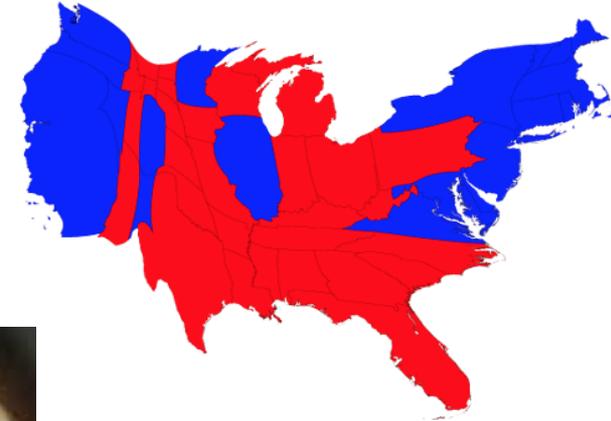
Engagement

Knowledge + Public Values + Deliberation