

# **Technology Assessment**

## **Inclusion of Marginal groups**

**International trends in TA**  
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# TA in India - Overview

- Grunwald, A. (2024) – 3 forms of TA –

- 1) TA as advice to government (PTA),

- 2) TA as public debate (pTA),

- 3) TA during engineering and tech development (constructive TA)

- TA as advice to the government:

India has more than 5 decades long history of TA as advice to the government on matters of S&T (PTA). It is expert-centric and technocratic.

- TA as public debate

- a) through institutional forms generally remains restricted to providing education/information to the public. More focused on innovation, absence of discussion on ELSI and governance aspects.

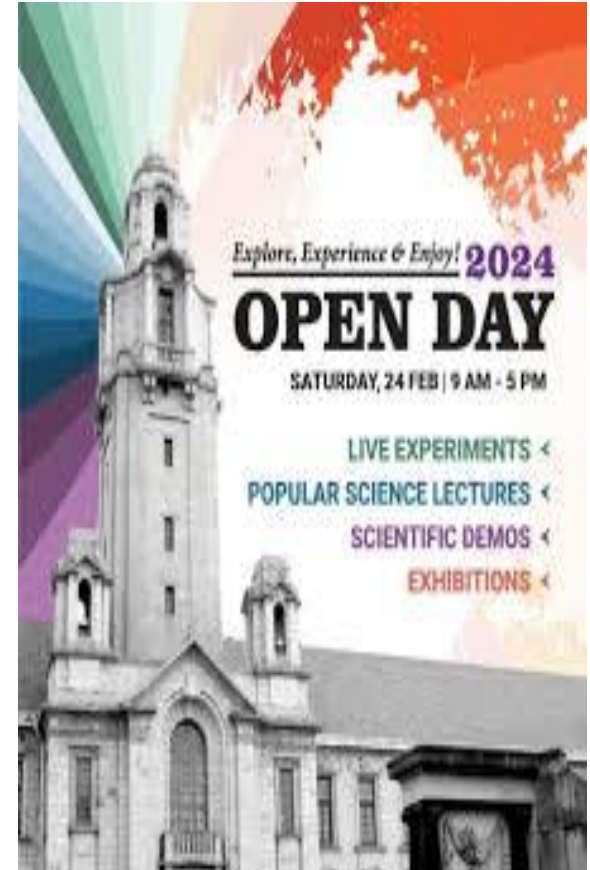
- b) Through Civil Society Organizations (CSOs) and critical academic discourse, is more participatory and engages with ELSI of S&T. Yet, they have limited capacity and resources.

- Constructive TA is mostly absent due to lack of critical capacity and technocratic bias in education systems.

# Inclusion in TA in India – Different models

## 1. Deficit model –

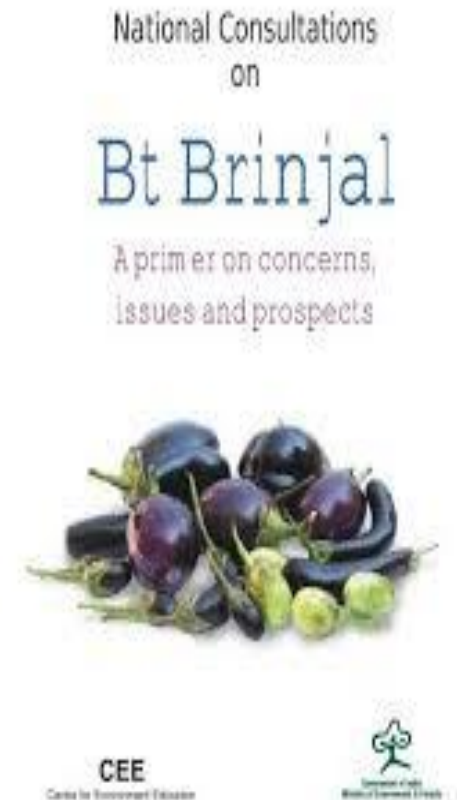
- relies on an assumption that people are generally ignorant and ill-informed,
- unidirectional flow of information from experts to general public.
- Public good is assumed from experts' point of view
- Examples: Majority of formal science advice and PTA in India follows this model.



# Inclusion in TA in India – Different models

## 2. Dialogue model –

- Relies on an assumption that people have valuable inputs regarding the impact of S&T in their lives.
- Two directional flow of information. Experts provide information of S&T and seek feed back from different groups of people of a proposed course of action.
- Mostly, the dialogue happens after expert-led development.
- Examples:
  - Recently, formal TA institutions have started to ask for public response on drafts of important STI policy documents;
  - the consultation for the commercial release of GM Aubergine in 2010 engaged in post-release consultation with different groups.



# Inclusion in TA in India – Different models

## 3. Co-creation/Co-production model

- Members of different groups that would be impacted by an S&T development are involved from the start of the process.
- Continuous dialogue through all staged of S&T development.
- Example: ResplnnBio project, Citizen Science





# TA for second generation bioethanol

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Last year the pollution levels in Delhi had entered the 'severe plus category' following which the Supreme Court-mandated Environment Pollution Authority declaring a public health emergency.

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## Paddy stubble to drive bio fuel production in Punjab, Haryana

By Parshant Krar, ET Bureau Last Updated: Nov 12, 2019, 08:14 PM IST

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Feedback

# Site of Engagement: Vertical

- Farmers were invited to government department.
- Discussion in institutional format and non-native language
- Progressive Farmers selected by the organization, homogeneous group.
- Agreement as mode of exchange - Farmers mostly repeated the government position.
- Farmers were hesitant to be critical of government initiatives.
- Expert as facilitator
- Researcher asking questions



Group discussion, Krishi Vigyan Kendra, Punjab



# Site of engagement: horizontal

- Difficulties in meeting and interviewing farmers who burn the straw due to criminalization and marginalization
- Convivial environment: Farmers' Dialogue event on farmer's field.
- Heterogeneous group- more than 100 farmers practicing different kinds of agriculture.
- Horizontal knowledge exchange in local language.
- Disagreement as mode of exchange
- Researchers as patient listeners.
- Local representative as facilitator



One day Farmers' Dialogue, Organic Farm, Bahawalpur village, Punjab

# Mechanism of knowledge exchange

## Onto-epistemic empowerment

- Different positions and worldviews treated with symmetry and mutual respect.
- Dissolving hierarchy between 'experts' as knowledge providers and 'lay' people as receivers, rather valuing multiple expertise.
- encouraging space for voicing concerns and conflicting positions



Citizen Dialogue, Chandigarh, Punjab.

# TA and inclusion of marginal groups – points to consider

## Critical systems thinking

- Reflexivity on power and structural aspects

## Decoloniality

- Centre-Periphery relations between:
- knowledge/theory and application/practice
- S&T and society

## Intersectionality

- Vulnerability compounded by a combination of multiple marginalities.
- Example: women laborers were doubly marginalized.

## Commitment to care

- An ethico-political obligation for the marginalized
- A continuous dialogue between past, present, and future

# Conclusion

- To ensure TA addresses the concerns of marginal groups in an inclusive manner:
  1. Site of engagement should ensure horizontal knowledge exchange, in local language, in a convivial environment.
  2. In situations of high degree of power asymmetries, diverse worldviews and positions, encouraging respectful disagreement is more useful for the inclusion of marginal worldviews than seeking consensus.
  3. The mode of knowledge exchange should ensure empowering marginal perspectives by symmetrical and respectful engagement with diverse worldviews.
  4. Role of a researcher/expert could be of patient listener rather than facilitator.

Thank you!