Responsible Research, Innovation & Risk Assessment... *Are we there yet?*

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Implementing principles & practices of ‘Responsible Research & Innovation’ can help put risk assessment in context.

&

putting risk assessment in context can help to better understand and address sources of controversy.
Concentration of Power & Capital

Intellectual Property in the Form of Patents

The Character of Human/Nature Relations

Divergent Visions for the Future for Agriculture

Different Paradigms of Knowledge

Competing Narratives of Development & Progress
The Social, Cultural and Economic Context of the Innovation & its Historical Legacy & Memory IS IMPORTANT
“This experiment is ecologically irrelevant, but it is what they want...”
“I want to do safety research in the public interest, but to do this I have to obtain my test materials illegally.

Is that ethical?”
The Social, Economic, Legal & Political Context of Regulatory Science & its Associated Ethical Aspects IS IMPORTANT
Responsible Research & Innovation - RRI
Responsible Research and Innovation (RRI) is an ongoing process of aligning research and innovation to the values, needs and expectations of society.

Image Credit: Michael Bernstein
RRI Keys

Rooted in studies and practice of science and technology

Anticipatory governance
Technology assessment
Public participation
Interdisciplinarity

Sociology of scientific knowledge
History and philosophy of science
Precautionary approaches
Responsible Research & Innovation - RRI

Public Engagement:  
*In setting protection goals & endpoints, in defining guidelines, in handling uncertainties...*

Open Access:  
*To test materials, to safety science, to dossiers, to the process of risk assessment...*

Gender Equality  
*In science, in expert panels, in conferences, in the types of questions & issues considered...*

Ethics
Feminist Care Ethics in the Governance of Biotechnology

Table 1: Guiding Questions to Advance a Politics of Care in Biotechnology Governance

<table>
<thead>
<tr>
<th>Question</th>
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<tbody>
<tr>
<td>How many social and ecological relationships shift if this technology is introduced?</td>
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<td>How have interconnections within socio-ecological communities been considered in the development of this technology?</td>
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<tr>
<td>Can the development, introduction or use of this technology create significant ruptures in social or ecological relationships?</td>
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<td>What are the important particularities of this context (e.g., what is the unique history, ecology, and culture of this place, what specific actors or groups will be affected by the technology)?</td>
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<td>How may the impacts and those affected differ across the different contexts of use?</td>
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<td>Are the particularities of different contexts of introduction (e.g., the different ecologies, economies, cultures, and people) being adequately accounted for in the assessment process?</td>
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<td>Where are there relations of dependence (e.g., people dependent on each other, on companies, on infrastructure, on ecological processes etc.), and how may these change due to the technology?</td>
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<td>What is the nature of the relations of dependence in play (e.g., are they experienced as nurturing and empowering or extractive and destructive for those involved)?</td>
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<td>Does the development and use of this technology exacerbate dependencies?</td>
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<td>How does the development, deployment and use of this technology affect the distribution of power and control (e.g., are any actors/groups favored or granted more power over others, how will the technology affect the level of control the impacted actors have over their own future)?</td>
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<td>Who are the most vulnerable actors (both human and non-human) and what measures are in place to prevent abuses towards them?</td>
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<td>Will this technology lead to a concentration of power?</td>
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<td>Does the development, introduction or use of this technology evoke strong emotions among those impacted by the technology?</td>
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<td>How is affect appearing and being handled in the scientific/technological development, in the public debate, and in the assessment process?</td>
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<td>Is the role of affect being granted a legitimate role in decision-making processes or are the affective dimensions of this technological change being downplayed?</td>
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<td>What are the narratives being told by those promoting and those contesting this technology?</td>
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<td>What worldviews, values, assumptions and beliefs are being expressed in these different stories?</td>
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<td>What alternative visions, strategies and technologies do the different stories reveal as available and important for the assessment process?</td>
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<td>Are certain narratives being suppressed, dismissed or excluded?</td>
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EC Keys of RRI

- Gender Equality
- Ethics
- Public Engagement
- Open Access
- Science Education
- Governance
No...it is a really long journey requiring deep cultural change, but...

Working to implement the principles & practices of ‘Responsible Research & Innovation’ can help put risk assessment in context

And doing this will help us to better understand and address sources of controversy