

## **Brazil National Workshop Report**

Luis Reyes-Galindo; Marko Monteiro; Phillip Macnaghten

### *Executive summary*

Discussions were lively and institutions seemed very open to the concept of RRI, many of them identifying in their institution's missions many values related to RRI: serving the community, providing research and development to ensure societal betterment, commitment to open access (and sometimes open science) and willingness to engage with society. Though differing from the EU's implementation, in institutional talk about actions and initiatives we could detect multiple values that resonate with an RRI perspective on science and technology. This does not mean, it must be said, that these institutions implement RRI or even that their programs help to consolidate RRI values or perspectives (involving ethics, engagement, gender equality, open access and science education). It does mean that there is an overall openness to ideas stemming from the RRI framework which, if negotiated in a positive way, could readily engage with observed Brazilian institutional practice.

Challenges to RRI implementation were also discussed: the more visible ones were, as expected, the lack of infrastructure necessary to implement actions needed to make RRI concrete. Engaging with society or making data open implies costs and infrastructure not always present in a system like Brazil's, often strapped for resources and under constant institutional uncertainty. A second challenge was related to institutional values very dear to Brazilian institutions, e.g. if the framing and design of RRI policies were read as a limiting an institution's full autonomy – traditionally an important value in Brazil. A third challenge is the way science and research is conducted in Brazil, relying on personal connections which enable (or make impossible) specific projects or policies.

As Prof. Phillip Macnaghten put it after the event, despite Brazil's challenging political moment and uncertainties related to funding of science and economic growth overall, there fortunately was a general sense of optimism. Judging from the workshop, there appears to be a genuine desire to construct ties and dialogue around RRI as a way to organize dispersed policies and initiatives in the participating institutions.

### *Introduction*

Date and location of workshop: 16 February 2017, Casa do Professor Visitante, State University of Campinas – UNICAMP.

## Participant list:

NAME	INSTITUTION
Paula Xavier dos Santos ( <a href="http://ppgics.icict.fiocruz.br/paula-xavier-dos-santos">http://ppgics.icict.fiocruz.br/paula-xavier-dos-santos</a> )	FIOCRUZ – Oswaldo Cruz Foundation ( <a href="http://portal.fiocruz.br/en">http://portal.fiocruz.br/en</a> )
Mauricio L. Barreto ( <a href="https://scholar.google.com.br/citations?user=TDIX5D0AAA">https://scholar.google.com.br/citations?user=TDIX5D0AAA</a> )	FIOCRUZ – Oswaldo Cruz Foundation ( <a href="http://portal.fiocruz.br/en">http://portal.fiocruz.br/en</a> )
Eduardo do Couto e Silva ( <a href="https://br.linkedin.com/in/eduardodocoutoesilva">https://br.linkedin.com/in/eduardodocoutoesilva</a> )	CNPEM – Centro Nacional de Pesquisa em Energia e Materiais ( <a href="http://cnpem.br/">http://cnpem.br/</a> )
Cyntia Sandes de Oliveira ( <a href="https://www.linkedin.com/in/cyntia-sandes-oliveira-82548410b/">https://www.linkedin.com/in/cyntia-sandes-oliveira-82548410b/</a> )	CAPES – Ministério da Educação ( <a href="http://www.capes.gov.br/">http://www.capes.gov.br/</a> )
Gláucia Maria Pastore ( <a href="https://www.prp.unicamp.br/pt-br/sobre-a-prp/pro-reitora-de-pesquisa">https://www.prp.unicamp.br/pt-br/sobre-a-prp/pro-reitora-de-pesquisa</a> )	UNICAMP – State University of Campinas ( <a href="http://www.unicamp.br/unicamp/english">http://www.unicamp.br/unicamp/english</a> )
Carlos Affonso Pereira de Souza ( <a href="https://www.linkedin.com/in/carlos-affonso-souza-98735ba8/">https://www.linkedin.com/in/carlos-affonso-souza-98735ba8/</a> )	ITS Rio ( <a href="https://itsrio.org/en/en-home/">https://itsrio.org/en/en-home/</a> )
Sergio Queiroz ( <a href="http://www.fapesp.br/3160">http://www.fapesp.br/3160</a> )	FAPESP – São Paulo Research Foundation ( <a href="http://www.fapesp.br/en/">http://www.fapesp.br/en/</a> )
Poliana Fernanda Giacheto ( <a href="https://www.embrapa.br/equipe/-/empregado/334399/poliana-fernanda-giachetto">https://www.embrapa.br/equipe/-/empregado/334399/poliana-fernanda-giachetto</a> )	Embrapa Agricultural Informatics ( <a href="https://www.embrapa.br/en/informatica-agropecuaria">https://www.embrapa.br/en/informatica-agropecuaria</a> )
Luciana Alvim Santos Romani ( <a href="https://www.embrapa.br/en/equipe/-/empregado/289646/luciana-alvim-santos-romani">https://www.embrapa.br/en/equipe/-/empregado/289646/luciana-alvim-santos-romani</a> )	Embrapa Agricultural Informatics ( <a href="https://www.embrapa.br/en/informatica-agropecuaria">https://www.embrapa.br/en/informatica-agropecuaria</a> )
Cassia Mendes ( <a href="https://www.embrapa.br/en/equipe/-/empregado/265751/cassia-isabel-costa-mendes">https://www.embrapa.br/en/equipe/-/empregado/265751/cassia-isabel-costa-mendes</a> )	Embrapa Agricultural Informatics ( <a href="https://www.embrapa.br/en/informatica-agropecuaria">https://www.embrapa.br/en/informatica-agropecuaria</a> )
Flávio Fonte-Boa ( <a href="https://www.linkedin.com/in/fonte-boa-flavio-11879b2a/">https://www.linkedin.com/in/fonte-boa-flavio-11879b2a/</a> )	Ministry of Science, Technology, Innovations and Communications ( <a href="http://www.mcti.gov.br/">http://www.mcti.gov.br/</a> )

*Comments on participation based on national structures (e.g. why this NGO, policy, other group participation; what is missing, etc.):*

Invitations were initially extended to cover a wide range of stakeholders: government ministries, federal and state funding agencies, universities, private sector, NGOs, amongst others, to be representative of the major actors in the Brazilian science and technology system. CAPES is linked to the Ministry of Education, for example, and manages the evaluation of all graduate programs in the country, runs a major portal that makes scientific production “open” to all public universities, and overall has a crucial role in all public universities (and thus most of Brazilian scientific research). FAPESP and UNICAMP will be the case studies; Embrapa is a major publicly-funded company that develops agricultural research, and has presence across Brazil. We approached the Embrapa central administration in Brasilia, but only managed to bring 3 researchers from a unit based in Campinas. We invited and set up the participation of Embrapii, a new public company modelled on Embrapa but whose mission is to promote innovation through bridging research and the private sector, but the representative had to cancel last-minute. A key government organisation and science funder, the National Council for Scientific Research (CNPq),

did not reply to request for representatives. The biggest lack of participation came from industry, as stakeholders could not be recruited despite repeated invitations (to FIESP and CNI). We invited CGI.br, the organisation that manages internet governance for Brazil, and were unsuccessful despite having good contacts; but we managed to bring someone from ITS Rio, a think tank who deals in topics related to innovation, especially internet and data governance. We were excited to have someone from the Ministry of Science, Technology, Innovations and Communications, who expressed particular interest in maintaining post-workshop contact. CNPEM is a major national laboratory with research in nanotech, biotech and condensed matter and particle physics, currently building the Sirius light synchrotron. Finally, Fiocruz is a major player in health research, with units all over the country and significant contacts also with industry and the public health system.

### *Understanding of responsibility and RRI*

**How is responsibility in research and innovation framed by the participants?** In general, participants tried to align existing institutional programmes to what they understood as RRI's goals through the 5 key topics. A common opinion across the presentations was that although they weren't "doing RRI", most of the institutions had long-standing programmes which could be read as "RRI by other means". In general, the participants showed a lot of interest in using RRI as a new way to engage with these problems more comprehensively, given that similar issues were already considered important within the organisations. 'Responsibility' was understood principally as an institutional obligation to public accountability and to the pursuit of established national interests.

**Is there broad consensus on what is responsibility in science and innovation or did the participants' views differ considerably? How did this differ between different actors?** The concept of responsibility in and of itself was not a major part of the discussions and there was a 'common-sense', pragmatic approach to responsibility. We noted that for a good number of the participants, 'responsibility' had strong resonances with ideas of 'relevance', i.e. relevance of scientific and technological activity to issues of national interest. Some actors (i.e. Embrapa) framed the question of national interest as "producing innovations for agriculture", thus going back to its mission and an economic view of innovation. Others were very keen on making research public and available as a key issue within what RRI would mean in Brazil (i.e. Fiocruz). Opinions also seemed based on personal nuances, as we could see that people tended to be opinionated based on pre-existing interest in RRI-related issues.

**Is the term RRI used at all? How? What do people understand by it?** Only one of the participating institutions was aware of RRI before being invited to the workshop. The term was not used on its own. Some people researched the term after our invitation and were more aware/interested after the workshop.

**Are the ideas and concepts that underpin RRI used by participants? Are any of the keys mentioned as aspects of responsibility?** Yes. Participants often used the five RRI keys to illustrate examples of institutional actions that were responses to specific keys. This was partly because many of them wanted to bring to the discussion actions already in place, which were framed as RRI for the workshop. Almost

all of the participants asked about this when accepting the invitation, and most were “briefed” on what RRI meant, so this might have influenced them to use the term in this way during the workshop.

**If so, what terms are used? In what way is this context specific?** The use varied depending on the organisations. Participants from federal and state level organisations tended to illustrate how the keys were used in the specific contexts of established policies, or how the values underlying the keys were being promoted within the organisations. Participants from institutions specialising in local actions tried to link the concepts to specific operationalisations in local contexts. Scientific and educational institutions tended to focus more on how the keys could be linked to interactions with their communities, or of communities with the general public.

**In what way can the AIRR dimensions help to evaluate how participants are referring to RRI and related concepts, including emerging and broadening notions of responsibility?** Marko felt that the AIRR dimensions were the least present in the discussion, and maybe the most difficult to be debated locally. Many saw responsibility as something natural to what science could mean, in terms of being socially relevant, pursuing national interests, etc. But being anticipatory or reflexive were hardly discussed.

**When presented to the project’s concept of RRI, what were the participants’ responses?** As we said above, they were generally enthusiastic about the concept, and saw them as close to their own institutional values and missions. Towards the end some challenges were discussed (e.g. autonomy, etc)

**How was responsibility in research and innovation defined? Where there differences between the participants?** One interesting difference was the mostly economic view of innovation present in Embrapa’s presentation, as opposed to the interests in open access/open science at Fiocruz. Responsibility was in general defined as being socially relevant, pursuing national interest and working towards the progress and development of Brazil. Economic development and accountability towards society were key aspects present in most institutions.

**What was identified as significant barriers and drivers to the further development of responsibility in research and innovation, to RRI (and potentially to the keys)?** The current political climate in Brazil was generally seen as a barrier (uncertainty, lack of resources). Other more specific challenges mentioned were: policies tend to work better if they start “federally” and then are implemented locally in institutions (Fiocruz); RRI could be rejected if it was perceived as a threat to institutional autonomy (FAPESP).

**At what level (state, institutional level, individual researchers) did the participants tend to address responsibility in research and innovation?** At all levels, we would say, although this issue did not come up as much as desired. They mostly referred to their institutions, which were state and federal, so we understood that this would have to be a part of the system in all its complexity.

## *Reflections on the workshop process*

**How easy was it to recruit people?** Given the relatively short timeline for organising the workshop we were pleasantly surprised that we reached the necessary number of participants. The single biggest obstacle – foreseen by the organising team – was that Brazilian institutions are extremely hierarchical and formal, and invitations first had to be sent to the highest ranks in the organisations (e.g. presidency) and only then could specific members of the organisation be contacted. This made recruitment depend on first receiving a formal reply from the Head of the organisation (or most often, their secretaries), which is painfully slow when dealing with the larger, government institutions. Once the invitations were formally accepted and had trickled down to specific departments or persons, invitees tended to respond positively. In the case of several government organisations, however, neither emails nor direct calls could get past the formal gatekeeping. It also proved impossible to find any interest from the industry sector, and this apathy to involve industry was in fact a topic that appeared several times during the workshop discussions.

**How easy was the conversation; was there a degree of conflict to the discussions? To what extent did the facilitator have to steer the discussion with specific questions (in contrast to an easy flow of discussion)?** The conversations during the discussion parts of the workshop were remarkably easy, with continuous dialogue both between participants and between participants and organisers. Participants were also eager for more information on RRI itself from the project leaders. The one issue was that institutions tended to fall back on the idea that they needed to advertise their institutions and their actions to the group, instead of debating or discussing informally. Presentations were more formal than expected and went on for more than 10 minutes. This made discussions harder to steer during the process.

**Did the participants seem interested in the project's results?** Yes, and in fact there was widespread interest from participants in both learning more about RRI and in the possibility of organising future events of a similar nature. Several participants also expressed interest in continuing to work with the Brazilian RRI team on topics of common interest and organising future joint meetings.

### **Impacts:**

The workshop was successful also in the sense of producing impacts. After the event, we kept in contact with participants and a few opportunities arose directly related to their participation. In this sense we feel the workshop was in itself a rich engagement activity, which helped to build a small but relevant network of people interested in and possibly engaged with RRI in Brazil.

- One of the most interested parties was Fiocruz. Paula Xavier, who will be responsible for that institution's data policies for the next few years, was also very interested in thinking about social impact assessment and indicators, and held a meeting with the RRI Practice team the day after the event. We discussed several potential points of interest and collaborations, including a possible

anticipatory engagement exercise related to the CIDACS project in Salvador, State of Bahia. We have since received invitations from Fiocruz to participate in an upcoming academic meeting on open access.

- Interview for a radio podcast – Radio USP/Revista Pesquisa FAPESP

<http://revistapesquisa.fapesp.br/2017/03/20/podcast-marko-monteiro/>

The magazine Pesquisa FAPESP is one of Brazil's foremost science journalism magazines. Associated with science funder FAPESP, it reaches all of scientists with FAPESP projects, and is also found in bookstores and magazine stands. It frequently leads debates around science policy issues in the country.

- The same magazine mentioned RRI Practice in an article on HEIRRI, another H2020 project: <http://revistapesquisa.fapesp.br/2017/02/13/inovacao-responsavel-na-ue/>
- Since the workshop, Marko Monteiro has received invites to deliver talks related to RRI in several venues. He was invited to do a talk to the GEOPI research group about RRI (<http://www.ige.unicamp.br/geopi/>). GEOPI is a research group from DPCT/UNICAMP, and deals with research evaluation, having done extensive research with both public and private companies. The talk was attended by professors from UNICAMP, graduate students and undergraduates.
- Marko Monteiro will also talk at the Embrapa Environment, whose representatives were present in the National Workshop. Embrapa Environment (<https://www.embrapa.br/en/meio-ambiente>) is a part of the larger Embrapa company, a public firm dedicated to agricultural research and innovation and one of the major players in Brazilian science and innovation. Another unit of Embrapa was present and the Workshop as invitees, Embrapa Agricultural Informatics (<https://www.embrapa.br/en/informatica-agropecuaria>).
- Dr. Monteiro was also invited to speak at the IAC – Instituto Agronômico in Campinas (<http://www.iac.sp.gov.br/>), a 130 year-old public research institute also focusing on agriculture. The invitation is to speak at an event related to undergraduate research projects, so the audience will most probably include both researchers and students.
- Tweets and retweets from the event also helped gain visibility.