RESPONSIBLE RESEARCH AND INNOVATION IN PRACTICE

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POLICY BRIEF

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This policy brief provides insight into

- → The concept of Responsible Research and Innovation (RRI)
- → The relevance for RRI in [China]
- → The RRI-Practice project

The RRI-Practice project

The main aim of RRI-Practice is to analyse RRI related discourses and pathways to implementation, including barriers and drivers, in 22 research conducting and research funding organisations, in 12 European and non-European countries, in order to identify, understand, disseminate and promote RRI implementation best practices that can be scaled up at European and global levels.

The Chinese case study included two organizations, Chinese Academy of Science and Technology for Development (CASTED) and National Science Foundation of China (NSFC).

The project is funded by the European Commission, in the period 2016 – 2019

Interpretations of RRI

The European Commission emphasises five policy keys for RRI: ethics, gender, open access, societal engagement and science education (see https://ec.europa.eu/programmes/horizon2020/en/h2020-section/responsible-research-innovation).

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Responsible Research and Innovation (RRI) has emerged in recent years, especially in Europe, as a science policy framework that seeks to achieve a) engaged publics and responsible actors in the science and innovation field; and b) ethically acceptable, sustainable and socially desirable research and innovation outcomes that are aligned with societal needs and challenges.

To cope with new social challenges in the new era of social and economic development, China's development philosophy evolves into five key concepts, namely innovation, coordination, green development, opening up and sharing, which have an affinity with Responsible Research and Innovation (RRI) principles. As a newly introduced theoretical and policy concept, RRI has attracted a large scale of the attention across research institutes, industries and the public sectors in China. The concept has been written into the latest national plan for STI. Social actors for responsible research and innovation, such as the public, scientific community, enterprises, and government, are emerging and growing up in China.

Studies in the project show the principles of RRI have already been embedded in research and innovation in China, even though they might not be labelled as "RRI." For example, as a national-level think tank that plays a key role in national STI policy making, Chinese Academy of Science and Technology for Development (CASTED) has been trying to introduce the ideas of RRI into the national STI policy system through policy research and advisory. Their studies on scientific ethics, gender equality in science, public image of scientists, open access and inclusive innovation, have a prominent impact on China's STI policy orientation towards more responsible innovation. National Science Foundation of China (NSFC) is the most important funding organization for basic research in China. The main target of NSFC is to implement the state policy orientation on basic research and to promote excellent research and innovation through an open, fair, and transparent funding procedure. Though RRI is not yet within the scope of main work content and functions of NSFC, we can see some of the RRI keys, such as ethics, gender equality, and open science are already involved in NSFC's organizational practice. The practices of RRI in China are facing many challenges still. Institutional and policy framework for more responsible innovation need to be built. Platform and channels for public engagement in STI need to be constructed. International cooperation on RRI needs to be strengthened.

Chinese RRI workshop (February 22nd, 2017)

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RRI in national STI policy

The notion of Responsible Research & Innovation is formally written in the 13th Five-Year National Science and Technology Innovation Plan (2016–2020). Article 24 "Creating A Social and Cultural Atmosphere for Encouraging Innovation" of Chapter 7 "Strengthening Science Popularization and Construction of Innovation Culture" mentioned: "promoting responsible research and innovation, strengthening research ethics, enhancing research ethics education, raising science and technology personnel's awareness of scientific research ethics, and guiding enterprises to pay attention to and undertake social responsibility for protecting ecology and ensuring safety in technological innovation activities."

For a full account of the Chinese case study in the RRI-Practice project, please see here

https://www.rri-practice.eu/wp-content/uploads/2018/09/RRI-Practice_National_Case_Study_Report_CHINA.pdf

Do research and innovation create societal problems or solve them?

- Innovation is the key factor that driving China's economic and social development. However, China has come to a historical stage that the social impact, social acceptance and social responsibility of scientific research and innovation have to be emphasized and seriously considered.
- As the economic and social development phase of China at this moment is different from that of European countries, the responsibilities of innovation are also different. Therefore, when discussing the responsibility of innovation, the situation and the demand of China should be considered with a perspective of historical development.
- In China, the responsibility to the public interest is considered as more important than that to the individual demand, and the responsibility to the health and safety issues are considered as more important than that to privacy, open access and gender equality issues.
- Public's opinions on and attitudes to innovation are important and need to be considered. The challenge, however, is how to increase the quality of public participation when the public's scientific knowledge and awareness are extremely diversified.

Do we have the tools for being responsible?

Policy recommendations in Chinese context:

1. Strengthening the institutional construction for RRI.
   a) Promoting the research organizations to build up ethical committees.
   b) Further complement the code of ethical norms in research and innovation.
   c) Providing training course of STI ethics to researchers.
   d) Issuing more preferable policies to promote the occupational career development of women scientists.
   e) Increasing the incentives of scientists to communicate with the public by reforming the science management system including evaluation system.
2. Building up platform and channels for public engagement in STI.
   a) Collecting the public needs of engagement in STI.
   b) Exploring channels of public engagement that fit the Chinese reality best.
   c) Constructing the platform of communication between scientists and the public.
   d) Strengthening the science popularization to improve the capacity and quality of public engagement.
3. Enhancing investment in RRI.
   a) Funding more research projects on how to ensure the responsibility of research and innovation.
   b) Strengthening the international cooperation on RRI theory and practice.

Partners:
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The RRI-Practice consortium