



# Responsible nanotechnology R&I – Societal engagement practices

## Dialogforum Nano of BASF

### Introduction

**NANO2ALL** is an initiative funded by the European Union's Horizon 2020 Research and Innovation programme under the Grant Agreement Number 685931. It supports the establishment of Responsible Research and Innovation (RRI) policy and governance on nanotechnologies. NANO2ALL also aims to identify RRI practices, with a focus on societal engagement in nanotechnology research and innovation (R&I) across Europe and beyond, with the purpose to share knowledge, experience and recommendations with other nanotechnology stakeholders and motivate a wider application of such mechanisms in our region.

RRI is an *“approach that anticipates and assesses potential implications and societal expectations with regard to R&I, with the aim to foster the design of inclusive and sustainable R&I”*<sup>1</sup>. As a dimension of RRI, societal engagement implies interactions between relevant stakeholders (companies, research organisations, policymakers, civil society organisations (CSOs), consumers, affected citizens and others) in order to align research, development and innovation with the values, expectations and needs of the society. Such interactions can take various shapes, such as brainstorming, scenario workshops, user committees, online forums, dialogues, informal / formal meetings, or other formats.

**This short report provides brief insights into the Dialogforum Nano of BASF, which comprised a series of face-to-face dialogue sessions on nanotechnology, initiated by the chemical company, BASF.** The description also touches upon how RRI is present within BASF and the motivations driving societal engagement. Finally, it presents BASF’s short recommendations on these aspects and points out existing needs for increased societal engagement practices in R&I. Data for this report was gathered via desk research and a structured interview with BASF Innovation & Technology Policy division.

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<sup>1</sup> European Commission website: <https://ec.europa.eu/programmes/horizon2020/en/h2020-section/responsible-research-innovation>



## Institutional anchor points of RRI at BASF

**BASF** ([www.basf.com](http://www.basf.com)) is a large chemical company with 114,000 employees supplying nearly all sectors and almost every country in the world. Its broad portfolio ranges from chemicals, plastics, performance products and crop protection products to oil and gas. **BASF** has its headquarters in Germany and owns companies in more than 80 countries.



BASF is also involved in nanotechnology research and development which it applies in the development of new products. **BASF's** customers for nanotechnology enabled products are intermediary organisations, such as cosmetic companies, plastics companies or paint producers, and thus it does not have a direct contact with consumers / final users.

**RRI is not a term used by BASF, as this terminology can be more linked to academic / political circles in Europe. The idea of RRI, however, is embedded in the company's operation**, especially in BASF's sustainability management and its research and stakeholder management. Stakeholder engagement for instance is manifested through BASF's Stakeholder Advisory Panel at Board level. It also includes the many stakeholder engagement activities in the context of the company's political communication and sustainability management. In the context of R&I it can be linked to the concept of open innovation (a term related to RRI and more frequently used in industrial contexts).

The Creator Space™ program is an approach to bring stakeholders with different views together to develop jointly in a co-creation process a mutually valued outcome. The program was launched during BASF's 150th anniversary year in 2015. In around 50 initiatives around the globe, BASF employees discussed solutions to challenges with a focus on the three anniversary themes of food, smart energy and urban living with more than 6,000 partners from industry, academia, government and society. The key drivers of stakeholder engagement at BASF are sustainability and the need to best manage stakeholder expectations. This latter driver gained strength after the experience acquired in handling controversial topics, like the GMO public debate.

Sustainability is also part of the stage gate process. BASF's continuous analysis of the sustainability of its whole portfolio using the externally certified Sustainable Solution Steering® method and its Value-to-Society assessment deliver valuable information that **bring societal perspectives on board and that pay into the R&D of the company**. In fact, market assessment before and during the innovation and development phase in form of market reports also include stakeholder perspectives. This also applies to BASF's nanotechnology R&D. A diverse team of experts on toxicology, safety, analytics, regulation and communication is engaged world-wide with different stakeholders. One activity is its comprehensive engagement in safety research. Another activity is the Dialogforum Nano of BASF.

## Societal engagement at BASF

In the context of the chemical industry, societal engagement has a long tradition, and BASF has been involved in this more than 20 years. BASF has undertaken a range of societal engagements on diverse topics, including sustainability, agriculture, nanotechnology, among other themes.



**The Dialogforum Nano of BASF started in 2006 and at that time the GMO debate was at its peak.** It was then when the European nanotechnology public debate was emerging. Recognising the potential of nanotechnology, as well as the failure of the previous risk debates, BASF decided to shape the debate on this new technology actively.

The Dialogforum Nano of BASF was focused on **establishing a dialogue with CSOs, including German and European non-governmental organisations (NGOs), trade unions, and churches.** The dialogues were not only led by BASF communication people but integrated a number of BASF staff with different expertise and different responsibilities including R&D. By that the stakeholder feedback was carried back widely in the company.

**One Dialogforum Nano of BASF consisted of a series of 4-5 face-to-face dialogues with 20-25 participants, accomplished over a period of 2 years,** with intermediate teleconferences and short visits to BASF research facilities.

The topics were identified with all participants together at the first dialogue. Along the dialogue process, mainly the 2 topics governance (discussing questions, such as whether voluntary commitments are suitable tools to govern such a technology) and transparency (discussing questions, such as who has to communicate with who and how to be more transparent) were discussed. Using specific application areas such as cosmetics or paints made the discussions more concrete. The toxicological aspects of nanomaterials were not debated in-depth as that would require higher expertise in toxicology aspects from the engaged participants.



Independent experts with knowledge on the addressed theme (for instance nanotechnology and environment) were also invited to contribute their views which helped to stimulate the debate and to further discuss each topic. The dialogues were organised and moderated by an independent moderator (external organisations experienced in the topic of nanotechnology and with expertise in conducting dialogues), contracted for the purpose. The participant list was drawn up jointly by BASF and the moderator organisation, while participants were mostly invited by the moderator. **The independent moderator was an important element of the dialogue,** and acted as a neutral and independent interface between BASF and the CSOs. The moderator also carried out bilateral interactions with the CSOs allowing that their requirements and claims are communicated and better considered within the process.

The Dialogforum was open to all stakeholders, also critical ones. Those stakeholders were actively approached who were previously involved in the debate. Therefore, no empowerment prior to the events was necessary. The main outcomes of the dialogues were joint reports / positions addressing policymakers, companies and also other stakeholders. The reports were jointly published with all participants and presented and discussed with a wider group of stakeholders in political events in Berlin and Brussels. Most difficult was to find stakeholders who want to be engaged. **CSO representatives often mentioned the lack of resources as a reason for not being able to participate.**

The dialogue process brought interesting insights to BASF and it proved to be a unique experience for the company. It **raised additional awareness within the business units about the perspectives of stakeholders and also affected the way safety research was done.**

As for future stakeholder engagement, BASF is planning to focus on other topics that are more publicly debated at the moment. From the CSOs the company got the feedback that nanotechnology is not so high on their agenda for the time being.

## Recommendations and needs on societal engagement into nanotechnology R&I

BASF's future recommendations for societal engagement into nanotechnology research and innovation include the following:

- Societal engagement in R&I is an optimal tool for mutual learning, building trust and transparency
- Societal engagement has to be though a continuous process to enhance its results, rather than a single event or sets of single events
- It is preferred to have a **continued dialogue with the same participants** to build on the relationship and to evolve previous conversations
- The participants for the societal engagement must be chosen depending on the topic
- It is most beneficial to **initiate dialogue at the earliest stage** of new emerging technologies so to avoid strong positions of stakeholders
- It is advisable to first **map internal expectations** within the organisations and management about such engagement and be aware of what can be achieved within the planned process
- It is more beneficial to have an **independent moderator** to provide an impartial interface which can also increase the likeliness of participation

The biggest challenge is to find enough and interested stakeholders for the dialogue. Further needs for a larger roll-out are organisations that offer services for implementing stakeholder engagement activities.

Another need is the creation of **communication channels** to disseminate information on such practices and experiences (the media might not be interested in this theme) that could motivate others to adopt similar strategies.

