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The role of the dialogue in the co-expertise process after a nuclear accident: the power of narrative

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Abstract

In the aftermath of major nuclear accidents, affected populations face profound disruptions to their everyday lives, sense of identity, and capacity for action. Recent evolutions in radiological protection, particularly those reflected in ICRP Publications 138 and 146, have emphasized approaches that place participatory dialogue, stakeholder engagement, and the sharing of knowledge at the center of the recovery process. Drawing on lessons from the Fukushima Dialogue meetings and on Paul Ricœur's philosophical theory of narrative framework and recognition, this chapter analyses the role of participatory dialogue as both a practical tool for radiological protection and an ethical space for the "reconstruction" of individual dignity and community cohesion. Dialogue functions not merely as information exchange, but as a narrative framework where autonomy, responsibility and dignity can be rebuilt.

Introduction

The practical implementation of radiation protection has undergone significant changes in recent decades, particularly under the growing influence of ethical reflection, social sciences, and post-accident feedback analysis. In particular, ICRP Publication 138, which defines the fundamental ethical principles underpinning the radiological protection system, such as beneficence, non-maleficence, prudence, justice, dignity, accountability, transparency, and inclusiveness, marked a decisive turning point towards taking into account the moral, social,

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and relational dimensions of radiation protection (ICRP, 2018). This approach recognizes that radiation protection cannot be reduced to a simple quantitative risk assessment or technical optimization; it must be understood as a practice rooted in individual and collective experience, influenced by values and science, and co-constructed with concerned individuals and radiation protection experts.

Building on this ethical framework, ICRP Publication 146 introduced and formalized the concept of a co-expertise process, designed to address the complexity of recovery after a nuclear accident and the need to actively involve relevant stakeholders (ICRP, 2020). This co-expertise is based on the fact that populations living in areas affected by an accident possess irreplaceable practical knowledge of their living spaces, the social relations within their community, and their daily living conditions.

The Fukushima Dialogue meetings, initiated in 2011 by the ICRP and continued with the support of local civil society organizations, are an exemplary application of this development (Figure 1). For more than a decade, the Fukushima Dialogue meetings have demonstrated how structured participatory dialogue between residents, experts, professionals, and authorities can help participants regain a degree of autonomy, develop self-confidence, and better understand the different perspectives of those affected by the accident. These meetings have also helped some participants to make informed decision about their future. The testimonies gathered during these meetings have highlighted not only the daily difficulties of living in a contaminated territory, but also the existential upheaval caused by uncertainty, displacement, and the loss of control over the situation. The dialogue meetings have thus emerged not simply as a communication tool, but as a shared space to give meaning back to the situation experienced by the residents and communities impacted, and also to restore their autonomy (Ando et al., 2023a,b).

FIGURE 1. 25th Dialogue Meeting organized by NPO Fukushima Dialogue.

About dialogue, the French philosopher Paul Ricœur developed a theory of narrative that offers a particularly valuable philosophical framework for understanding why participatory dialogue plays such a central role in the co-expertise process. Ricœur emphasizes that individuals and communities reconstruct their identity through narrative frameworks that allow them to interpret their experiences, that is, to understand how they lived the past and are living the present, and thus to recognize each other as moral actors. His conception of identity as a narrative framework highlights how fundamental telling one's story, listening to others, and constructing a shared narrative of events is for regaining dignity and agency (Ricœur, 2005). The narrative aspect of participatory dialogue brings an ethical dimension which plays a transformative role for participants. Ricœur's reflections help us to understand why participatory dialogue is not only a discussion which can lead to deliberations and decisions but also a framework for sharing views within which the meaning of the situation lived by the participants is recreated and their difficulty is recognized, thus allowing them to reconstruct their living conditions after a disturbing event such as an accident. In other words, this so-called reconstruction is, for Ricœur, the fruit of a personal reflection understood as a reappropriation of each individual's effort to exist.

1. The post-nuclear accident disruption

Major nuclear accidents destabilize the daily lives of many people, far beyond the immediate radiological damage. Individuals suddenly find themselves confronted with a profound loss of control over their environment and a destabilization of their daily lives. Everyday actions once taken for granted, such as preparing meals, letting children play outside, tending the garden, or maintaining family routines, become sources of uncertainty, hesitation, and anxiety.

The most innocuous decisions take on new importance, as they must incorporate the invisible presence of radiation and adapt to fluctuating information depending on the evolving situation. Families and communities can be fragmented due to evacuation orders or relocation policies. Tensions disrupt established relationships between family members or within communities. These tensions, based on differing perceptions of risks or choices regarding what to do about the radiation, weaken the bonds forged over time. Many residents also report forms of anxiety, fuelled not only by radiation exposure but also by fears related to long-term health effects, economic decline, the loss of cultural heritage and the stigmatization of their communities (Maeda et al., 2017; Takebayashi et al., 2017). Individuals face painful and morally complex dilemmas, such as whether to stay or leave, return home after an evacuation, or whether to let children play outside. This climate of uncertainty, combined with a perception of risk shaped by many factors can ultimately uproot residents from their familiar environment and social relationships (Ando, 2016). These disruptions threaten the material, symbolic, and existential dimensions of life. Materially, those people relying on agriculture, fishing, or forestry livelihoods may never fully return to pre-accident conditions. Symbolically, belonging to a place which is a key component of the sense of identity and intergenerational continuity can

be profoundly damaged when the land, the home, and the community become associated with contamination or exclusion. Public spaces, local foods, and cherished landscapes may come to evoke fear rather than familiarity. Existentially, the sudden disruption to daily life produces a loss of coherence and continuity, challenging individuals' ability to project themselves into the future or maintain a stable sense of self.

The loss of control on living conditions reduces the ability to act and speak which are vital conditions that Ricœur identifies for maintaining the identity of people and their dignity. The erosion of these conditions can leave individuals feeling suspended between a past that no longer seems accessible and a future that remains uncertain. To counter this downward spiral, which can prove catastrophic for certain isolated or vulnerable individuals, participation in dialogues can become a lifeline.

2. Dialogue as a narrative framework

In the co-expertise process, as outlined in ICRP Publication 146, dialogue forms the central procedural mechanism through which stakeholders collectively, express concerns, interpret information, and discuss priorities. Rather than being merely a vehicle for information exchange, participatory dialogue creates a reflective and deliberative space where experts, authorities, and residents engage as partners. Through this mechanism, residents play no longer just passive recipients of expert decisions (Ando, 2021). This dynamic fosters a robust foundation for sharing information, negotiating decisions, acknowledging diverse experiences, and cultivating confidence both in scientific information and in the collective capacity of communities to shape their own recovery (Figure 2).

FIGURE 2. Spontaneous dialogue between residents at the occasion of a visit of the waste storage site in Suetsugi.

Evidence from the ETHOS project in Belarus and post-Fukushima initiatives indicates that this process functions as a "narrative" in the sense developed by Ricœur (Figure 3). His theory of narrative identity emphasizes that human beings understand themselves and others through the stories they tell, receive, and reinterpret over time. In this view, narrative frameworks are more than descriptive accounts of events; they are structures that give coherence to lived experience by linking the past, present, and future into a meaningful whole (Ricœur, 1983). This narrative framework allows individuals to integrate disruptions, contradictions, and crises into a renewed sense of self. Because nuclear accidents profoundly interrupt life trajectories, shattering daily routines, expectations, and symbolic frameworks, the capacity to reconstruct a coherent narrative becomes central to restoring sense of identity and agency for residents and communities.

FIGURE 3. Initial dialogue of the CORE Programme in the Bragin district in Belarus.

This is where participatory dialogue occupies a pivotal role: it becomes the social arena where individual narratives converge, are reconciled, and are collectively elaborated. It functions as a space of recognition — a sphere where the legitimacy of each person's experience is profoundly affirmed, and where the simple act of listening is elevated to a vital moral gesture. Ricœur insists that recognition is essential for ethical life: to recognize another is to affirm their dignity, to welcome their perspective, and to engage in the co-construction of shared meaning. Such recognition empowers participants to negotiate shared rules, revise their interpretations of events, and gradually rebuild a moral sense of identity that has been destabilized by a negative event like a death of a loved one or a disaster like a nuclear accident.

In post-accident contexts, where silence, uncertainty, and powerlessness may dominate, participatory dialogue meetings offer a crucial space for articulating what had previously remained unspoken. Participants recover their voice by recounting experiences of fear, displacement, stigma, or resilience. These testimonies enable emotional validation, helping individuals recognize their own reactions as legitimate and shared. They also foster mutual understanding, as residents, experts, and authorities hear one another's stories and grasp the diversity of lived realities. Studies following both Chornobyl and Fukushima have shown that such dialogical and narrative framework practices significantly contribute to regaining confidence, rebuilding social ties, and reconstructing meaning in disrupted lives (Barasch and Kelly, 2019). They enable isolated or fragmented narratives to be transformed into shared diagnoses and collective forms of understanding. When residents, experts, professionals, and decision-makers engage in structured participatory dialogue, the multiplicity of individual experiences and associated views, is brought together and gradually shaped into a more coherent representation of the situation. Through this process, the group involved in the dialogue develops a shared language, identifies common priorities, and clarifies points of divergence. This interpretive work done together, does not merely help participants understand the radiological situation and the many other challenges they face in their daily life, it also supports the co-design of local projects to protect people and to improve their living conditions by, for example, local monitoring surveillance networks, food-screening initiatives, community-based decontamination projects, or support systems for vulnerable groups (Schneider et al., 2026). As demonstrated in the ETHOS project and later in Fukushima, such co-constructed local actions tend to be more effective and better accepted than purely top-down interventions (Lochard et al., 2026; Ando et al., 2026).

For participatory dialogue to fulfil this ethical and practical function, however, it must adhere to rigorous standards. Ethical participatory dialogue requires transparency in the sharing of information, inclusiveness in the selection of participants, and a genuine respect for minority voices — including those who choose not to return, those who remain sceptical of official statements, or those whose economic activities are disproportionately affected. It also requires an acknowledgment of differing values and life projects, and a conscious avoidance of paternalism in expert behaviour. These elements ensure that participatory dialogue goes beyond a basic communication exercise to serve as a genuine space for deliberation and recognition. This ethical framework aligns with Ricœur's insistence that moral action be mediated through just institutions and fair procedures. By acknowledging a plurality of perspectives and upholding equity, the co-expertise process transforms dialogue into an embodiment of ethical life, where shared narrative frameworks serve as the essential foundation for collective action.

3. The role of testimonies in the dialogue

Testimonies also play a foundational role in the co-expertise process: they restore dignity to those who speak while simultaneously calling for a sense of responsibility in those who listen. In the aftermath of a nuclear accident, individuals often find their capacity to act and to speak diminished by fear, uncertainty,

or simply social pressure. (Shigemura et al., 2012) When residents begin to share their stories describing their daily struggles, their doubts, their strategies for coping, or their hopes for the future, they progressively regain agency through the act of narrating. At the same time, these stories impose an ethical duty on experts and authorities, who must respond with empathy, respect, and accountability to realities described by the affected persons. Studies conducted after Chornobyl and Fukushima have shown that such testimonial practices strengthen mutual recognition and create the conditions necessary for more democratic and resilient forms of living together in a contaminated environment (Norris et al., 2008).

The ethical aspects of recovery following a nuclear accident encompass a broad set of principles to be embodied in the co-expertise process to guide decision-making and community rebuilding: transparency, autonomy, trust, accountability, intergenerational justice, equity, solidarity, and the protection of vulnerable groups. These values are not abstract aspirations but practical requirements for ensuring that recovery efforts are fair, participatory, and respectful of human dignity. Transparency, for example, allows residents to access reliable information about radiological conditions, while autonomy ensures their right to make informed choices about their lives and futures. Long-term engagement, and responsibility involve not only the duty to act prudently but also the obligation to repair past harms and prevent future ones (ICRP, 2020).

Dialogue provides the environment in which these ethical values are enacted and tested in practice. It is through participatory dialogue that inequities are revealed, contested, and addressed, allowing diverse stakeholders, for example residents, evacuees, workers and local leaders to articulate their specific concerns and vulnerabilities. This dialogical process also supports decisions that honour environmental stewardship, ensuring that recovery strategies are ecologically sound and attentive to the needs of future generations (Ando et al., 2024). Recent analyses of post-Fukushima recovery have emphasized that long-term sustainability depends on integrating environmental ethics with local knowledge and community participation (Murakami et al., 2025).

FIGURE 4. Dialogue at the Olmany kolkhoze.

Sharing narrative frameworks about land, work, and community life further strengthens ethical considerations of post-accident recovery by helping residents and local communities articulate the values they wish to preserve, the activities they hope to restore, and the responsibilities they feel toward their environment (Figure 4). These narrative frameworks inform decision-making processes that balance immediate needs with long-term responsibilities, reinforcing Ricœur's idea that ethical action emerges from the interplay of recognition, justice, and shared meaning. From this perspective, participatory dialogue is not simply a technical step in the co-expertise process, but a moral approach based on mutual respect.

4. Dialogue and the use of facilitation techniques

Experience from various post-accident initiatives — including the ETHOS project and CORE program, the ICRP Dialogue initiative, and subsequent efforts by local authorities and the Fukushima Dialogue NPO — demonstrates that structured facilitation within an appropriate ethical framework significantly enhances the effectiveness of these interactions (see Box 1). One such facilitation technique is the Identification, Diagnostic, Prospective and Action (IDPA) method. Originally used in the ETHOS project and CORE Program in Belarus, and later systematically applied in the Fukushima Dialogue meetings, this method is presented briefly in the following paragraphs.

Box 1. The Fukushima Dialogue (2011 - to present day)

Following a visit to Belarus during which Japanese members of the International Commission on Radiological Protection (ICRP) learned about the ETHOS team's dialogue experience, a first dialogue meeting was held in Fukushima Prefecture in November 2011 (Lochard, 2015). This meeting focused on improving living conditions after the Fukushima accident, and was held in the presence of representatives of regional and national authorities, as well as mayors and professionals from the affected localities, university researchers, national and international institutes, and NGOs. Building on the success of this first meeting, the ICRP subsequently organized 14 more dialogue meetings between 2011 and 2015. These meetings, which were held over 2 days at weekends, gathered invited participants including Belarusians and Norwegians, local, national, and international observers. They were facilitated by ICRP members, using a common language and the Identification, Diagnostic, Prospective and Actions (IDPA) dialogue technique, giving each participant the opportunity to express her/his view and to react to the views of the other participants. They were summarized by rapporteurs, after which there was a period for general discussion. All dialogue meetings were simultaneously translated and video recorded (Lochard et al., 2019). In early 2016, a group of regular participants to the dialogue meetings requested ICRP to hold further meetings. Entirely supported financially by the Nippon Foundation, facilitated by ICRP and logistically supported by Fukushima Medical University and the Ethos in Fukushima NPO, 8 meetings

were held between February 2016 and the end of 2018. In June 2019 the NPO Fukushima Dialogue was officially established with the main objective to continue the Dialogue meetings (NPO Fukushima Dialogue, 2019). This date marks the start of the third series of dialogue meetings entirely organized by local residents, held annually in the autumn. The dialogues take place in person in the various municipalities affected by the accident but can also be followed online, always including a day for site visits and a day for facilitated dialogue. They are video-recorded and a summary is published online on the NPO's website in the following days, along with the full video of the discussions. The NPO Fukushima Dialogue organized the 27th dialogue meeting in December 2025!

FIGURE 5. General view of the Dialogue Meeting held in Date City in February 2012 (photo: Chris Clement).

The IDPA method, developed by Professor Ollagnon of the Paris Institute of Technology for Life, Food and Environmental Sciences in the 1980s, aims to facilitate dialogue between stakeholders facing complex or conflicting situations. Integrated into the "heritage audit" approach, it was designed to address emerging environmental challenges in France, such as groundwater pollution in Alsace or the reintroduction of bears in the Pyrenees. Later, this method was applied to various land-use planning projects involving stakeholders with divergent, even opposing, viewpoints.

The objective of IDPA is to bring together the expertise of all stakeholders, each considered a valuable expert in their own right. It seeks to determine the conditions and means to collectively support the resolution of the problems raised. Unlike traditional survey methods, IDPA does not simply gather opinions or measure attitudes, but aims to develop strategic thinking. Participants are not placed in a passive position, but play an active role as experts on the problem they are experiencing, thus contributing to a deeper understanding and effective solutions.

Participants are selected based on their ability to influence the situation, their representativeness (experts, authorities, professionals, NGOs, etc.), and sometimes randomly to diversify perspectives.

Their number depends on the complexity of the situation and the available resources. A facilitator, assisted by rapporteurs, guides the session. Participants first agree on a strategic question, formulated clearly and openly to avoid influencing responses. The IDPA method is based on a framework of four steps: Identification of the situation and the problem at stake, Diagnosis of the actions to manage the problem, Prospective on the evolution of the situation, and Actions proposed to respond to the problem. Each step is addressed in two discussion rounds. During the first step, each participant expresses their point of view on the aspects related to the step, and then responds to the comments of the other participants during the second step. To ensure a fair dialogue, strict procedural rules are applied: equal speaking time for everyone, and a ban on interrupting and debating. Each step is summarized and followed by a general discussion. If the situation is complex, the exercise may extend over several days. In short, IDPA promotes mutual listening and the reflection and convergence of views by structuring the exchanges for constructive collective (Lochard et al., 2023a).

Following the Fukushima nuclear accident in 2011, members of the International Commission on Radiological Protection (ICRP), inspired by the Chornobyl experience in Belarus and the IDPA methodology, organized a series of dialogue meetings in Fukushima Prefecture. The first meeting, in November 2011, brought together various local stakeholders, Japanese and international experts, as well as guests from Belarus and Norway, to address the challenges of long-term rehabilitation of the affected areas. To date, 24 meetings have been held in approximately ten municipalities, using a simplified and adapted version of the IDPA methodology combining the four steps because of the time constraint. These meetings, open to observers and the media, and recorded, took place in an innovative setting to ensure transparency and smooth communication, despite the presence of a large audience and the need for simultaneous Japanese/English translation. An experienced facilitator and a rapporteur ensured the fairness and transparency of the discussions. Ten to fifteen stakeholders, selected from among the participants, actively took part in the IDPA methodology, while the others attended as observers. Despite the loss of anonymity usually required, this did not disrupt the smooth flow of the discussions. Over time, the format of the meetings evolved, moving from two days to a single day indoors, with the other day dedicated to field visits.

Through the testimonies of the participants, these dialogues led to a better understanding of the societal consequences of the Fukushima accident such as the dilemmas whether to stay or leave the affected territories, the discrimination and stigmatization aspects as well as the crucial importance of radiation measurements and ethical considerations in the recovery process (Naito et al., 2026). These testimonies enriched the ICRP's recommendations for the protection of people and the environment in the event of a major nuclear accident, aiming to improve preparedness and support for communities in the event of a future nuclear accident (ICRP, 2020).

Conclusion

Experience has shown that dialogue rebuilds confidence in protection strategies, increases transparency in scientific reasoning, and trust in one's own capabilities, yet its transformative influence extends far beyond these immediate benefits. In the aftermath of a nuclear accident, people often face profound disruptions to their sense of agency, sense of identity, and belonging. Dialogue provides a social and ethical environment where these disruptions can be voiced, heard, and gradually reconstructed. By articulating their fears, uncertainties, and hopes, residents begin to reconnect with a shared humanity and a collective resilience (Aldrich DP, 2012).

Through participation in dialogue and co-expertise activities, individuals regain self-esteem, rediscover initiative, and reconstruct meaning in their disrupted lives. Dialogue helps residents see themselves not merely as passive recipients of expert guidance but as active contributors with valuable experiential knowledge. This shift in sense of identity enhances their capacity for personal initiatives —whether through citizen-based radiation monitoring, community-led evaluations of protective actions, or shared deliberation about the future of their life and environment. Dialogue also offers a space for emotional expression and validation, allowing fear, anger, uncertainty, and hope to be acknowledged without judgment. Studies following Fukushima have shown that such emotional processing, when embedded in a supportive dialogical structure, significantly strengthens long-term resilience and fosters a renewed sense of personal and collective agency (Schneider et al., 2025).

The French sociologist Edgar Morin said that culture means not feeling powerless in the face of problems (Morin, 1992). Dialogue helps restore precisely this cultural capacity by enabling individuals and communities to reconnect with their ability to interpret complex situations and respond with creativity and discernment. Through collective reflection and shared narrative framework, participatory dialogue cultivates a form of practical wisdom — an adaptive intelligence that emerges from the interplay of diverse experiences, values, and interpretations. As a result, people recover not only confidence in their own capabilities but also a sense of belonging to a community that can imagine and enact a shared future. Such recovery of confidence and belonging is not merely psychological but ethical. It reinforces dignity, autonomy, and solidarity, making participatory dialogue an indispensable element of the co-expertise process.

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