



Challenges of a Radioactive Waste Communication Program

L. Bueno¹, R. Vicente²

¹*lilian@ird.gov.br, IRD/CNEN - Av. Salvador Allende, 3.773, Rio de Janeiro*

²*rvicente@ipen.br, IPEN/CNEN – Av. Lineu Prestes, 2.242, São Paulo*

1. Introduction

Nuclear facilities and activities that manipulates radioisotopes in science, industry and medicine generate radioactive waste which needs to be managed to keep people and the environment safe. Nuclear power has an important role in climate change mitigation (G. Thomas, 2020)¹. Traditionally opponents have been pointing to the problem of nuclear waste disposal and the fear of power plant accidents.

In Brazil, nearby 3.300 radioactive and nuclear facilities demand to construct a national repository. There is a large variety of implicated stakeholders. It means to deal with tensions, uncertainties.

Survey results showed that individuals who perceive more risks tend to oppose repositories, while those who perceive more potential benefits tend to support repositories (Sjöberg and Drottz-Sjöberg, 2009)². Positive attitudes toward nuclear waste repositories arise not only from a focus on benefits but more so from lower perceptions of risks (Seidl et al., 2012)³.

This scenario in fact represents the public demand for safety. In nuclear industry safety culture is a crucial issue. This study aims to propose a radioactive waste communication program that outlines a holistic approach to the issue in the country, with a view to greater social engagement. The objective of this paper is to highlight key components in a program to communicate better with the public about radioactive waste management.

A radioactive waste disposal facility aims at protecting people and the environment from harmful effects of ionizing radiation for current and future generations. All this process may to adequately respect local, regional and national specificities and the strategy refers to pre-operational, operational and post-closure period (CNEN, 2014)⁴. Based on the results and findings of previous studies, we emphasize that there is an extensive work to be made.

2. Methodology

The methodology adopted is qualitative exploratory research, bibliographic review; data analysis from official and technical bodies responsible for radioactive waste and radiological protection. First, it is necessary to identify the individuals, groups and organizations, like non-governmental organizations, workforce, companies, trade unions, schools, universities, outside traditional structures in civil society organisations, youth organisations, vocational training centres, municipalities neighbours, etc. All the stakeholders are important.

3. Results and Discussion

In drawing the communication plan, it is essential to consider the population and its various subgroups and what types of information would be of public interest. We emphasize the high relevance of engaging in participatory processes. The actions have the objective to ensure that public communications are informative, timely, and accurate and are according to the public interest.

Other countries experienced committees where these different parties are represented in order to improve dialogue and quality information (Salati, 2010)⁵. Public information sessions, presentations to community groups, local media briefings, production of publications such as guides and practical materials may be prepared. Also websites, accessible documents, apps, social media resources and other. The communication program has also to involve employees, customers, suppliers, regulators and the public. For effectiveness, institutional transparency and credibility are essential.

Often there are barriers in dialogue. It is essential to consider technical, social, psychological implications, based on scientific knowledge, acting proactively. One of the internet age challenges deserves special attention. It's necessary to tackle the spread of fake news and misinformation, detecting them quickly and using platforms of fact checking. The development of initiatives to verify false information has to be in target. The projects have to incorporate these dimensions.

When dealing with global challenges, looking for effectiveness and efficiency to any contents, it is necessary to establish thematic axes, evaluate how and when received the contents were, whether they were comprehensive, besides to measure this impact on the audience and to improve the communication plan. Public and private managers should rethink public perception, nuclear science goals, communication formats, and the ability to interact with audiences.

Since the decision about site approval process, there are varied issues, such as authorizations, personnel training, equipment, radiological protection, physical protection, among others⁴. Besides all technical and scientific issues, it is necessary to emphasize that communication involves different interlocutors, with different interests, knowledge, training, experiences, and worldview. It is necessary to consider social, ethical, environmental, economic, political dimensions.

In establishing communication with the public it is necessary to respect the local culture and interlocutors specificities, to share experiences and narratives. In short, it is necessary to analyze communication as a process. Communication means to make common. Genuine communication involves dialogical, pedagogical actions that use the knowledge of the other to express other forms of communication.⁵

One of the main strengths is to encourage intercultural spaces, built dialogue, empathy, and active listening. This necessary process to establish public approval working closely with schools, civil society organizations, that lead to a collaborative learning, a kind of global collaborative governance to face these subjects.

There is a challenge that deserves special attention, to tackle the spread of fake news and misinformation, detecting them quickly and using platforms of fact checking. The initiatives to verify false information has to be in target. The projects have to incorporate this dimension.

“In this strategy, narrative is present in myth, legend, fable, tale, novella, epic, history, tragedy, drama, comedy, mime, painting, ... stained-glass windows, cinema, comics, news item, conversation. Moreover, under this almost infinite diversity of forms, narrative is present in every age, in every place, in every society; it begins with the very history of mankind and there nowhere is nor has been a people without narrative. ...it is simply there, like life itself.” (R. Barthes, 1975)⁶

4. Conclusions

One of the expected results is to contribute to a more efficient communication about radioactive waste disposal, considering resources that incorporate new technologies and concepts from digital culture, educational initiatives and scientific dissemination.

It is essential to consider technical, social, psychological implications, based on scientific knowledge, acting proactively and combating the misinformation and fake news.

The authors believe that is important the active listening about various stakeholders demands; innovative message production strategies and approaches; different platforms use; permanent channels of interaction and efficiency in internal communication; training of spokespersons. Despite nuclear science challenges there are mechanisms of public participation based on mutual gains.

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