Public Negotiation about Nuclear Waste Disposal in Russia

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Research questions

- Nuclear waste strategy towards nuclear waste disposal
- Transition and periods
- Does the transition towards new nuclear waste strategy involves the participatory modes?
- **classification of waste - storage or disposal methods - public participation**

1. History
2. Classification/Management/Inventory (First Stage)
3. Public Hearings (Second Stage)

First Stage (2011-2015)

Development and implementation of a regulatory and procedural framework

Second Stage (2015-2018)

A disposal system for low-level and intermediate-level waste

Final Stage (2018-2021)

A disposal system for high-level waste

Soviet nuclear waste policy

- Politics of ignorance
- Lack of institutional and legal frameworks
- Nuclear waste mismanagement
- Political Context
- Spent Nuclear Fuel Case
- No inventory of the accumulated waste
- Nuclear Safety Institute (IBRAE) - IEAE Safety Guide Requirements (2010):

SOVIET PERIOD

Fallouts and Disaster at Mayak Facilities (1949, 1957, 1967)

LATE SOVIET PERIOD

Chernobyl Disaster (1986)
Kara Sea contamination (1970-1980)
Andreev Bay storage accident (1982-1989)

1990s-2000s

Seversk (Tomsk 7) accident (1993)

International requirements

Legal and Regulatory Regime	Absence of the law regulating final disposal of accumulated RAW
A comprehensive approach to the nuclear safety	Interdependencies between all stages of RAW management are not adequately taken into account
RAW Management Stages	- monitoring of RAW storage conditions is limited and selective - no incentives to reduce the volume of RAW - the terms of temporary storage are not defined - The issues of closure of disposal sites for liquid radioactive waste have not been elaborated
	Special Waste (IBRAE, 2015: 47)

Classification, Management Inventory

- **Removable Waste**

- the risks of radiation exposure, costs associated with the extraction do not outweigh the risks and costs associated with the disposal of radioactive waste in their location

- Further classification and method of disposal

- HLW, ILW, LLW, VLLW, SIR

- Liquid Nuclear Waste Disposal Sites ?

- Public Hearings

- 20% of accumulated waste

- **Special Waste**

- the risks of radiation exposure, costs associated with the extraction outweigh the risks and costs associated with the disposal of radioactive waste in their location

- Historical Waste / Nuclear Heritage

- Methods: Conservation and disposal at the site

- Criterions: Collective effective irradiation dose, Potential exposure risk and Economic Costs

- No public involvement (situated out of settlements)

- 80% of accumulated waste


Восточно-Сибирское море
Билибинская АЭС
180
Баренцево море
Карское море
Море Лаптевых
Ботнический залив
Днепр-2
Днепр-1
Агат
Пират
Горизонт-4
ОАО "Норильский горно-металлургический комбинат им. А.П.Завенягина"
Горизонт-3
Метеорит-2
Рифт-4
Республика Коми
Глобус-4
Горизонт-1
Горизонт-2
Рифт-1
Глобус-2
Рубин-1
Кварц-2
Глобус-3
Кристалл
Кимберлит-4
Кратон-4
Кратон-3
Кратон-2
ФГУП ГНЦ РФ ФЭИ
Филиал НИФХИ им. Л.Я. Карпова
Москва
ФГУП "Радон"
Кирово-Чепецкое отделение ФГУП РосРАО
Кратон-1
Рубин-2
Охотское море
ОАО "МСЗ"
Глобус-1
Тайга
Гелий (5)
Кимберлит-3
Метеорит-3
Шпат-2
Нева-1,2,3,4
Шексна
Ока
Вятка
ОАО "СМЗ"
ФГУП "РФЯЦ ОАО "ЧМЗ" ВНИИЭФ
Ангара
Кварц-3
Грифон1,2
Кимберлит-1
Бензол
Батолит-1
Нововоронежская АЭС
ОАО "ГНЦ РФ НИИАР"
ОАО "УЭХК"
Администрация Режевского городского округа
Тавда
Регион-1
Кама1
Кама-2
ФГУП "ПО "МАЯК"
Регион-2
Магистраль
Бутан(5)
ФГУП "ЮУрИБФ"
Сапфир-1
Сапфир-2
Метеорит-4
ОАО "СХК"
ОАО ОДЦ УГР
ФГУП ФЯО ГХК
ФГУП НО РАО
Кварц-4
ОАО "ПО ЭХЗ"
Тахта-Кугульта
Регион-4
Вега (15)
ОАО "ГМЗ"
ОАО "НЗХК"
Рифт-3
ОАО "ППГХО"
Метеорит-5
0 250 500 750 Километров
Условные обозначения
Радиоактивные отходы
особые
решение отложено
Мирные ядерные взрывы
особые

Площадки для дальнейшего обоснования и выбора участков по созданию пунктов захоронения РАО

Public Hearings

- Public Hearings: Zheleznogorsk, Sosnovy Bor, Uhta (Komi), Novouralsk Ozersk, Severs
- Various Levels of Engagement and its Impact on the decision-making
- Nuclear infrastructure and Economies
- Safety Discourse
- Urban and Regional Development
- Possibility of Extraction
- Monetary compensation

Sosnovy Bor Site

Conclusions and Recommendations

- Nuclear waste - blackboxed issue
- New strategy opens nuclear waste for public participation
- Removable waste - disposal - public hearings
- Special waste - no public engagement
- A technical approach
- Retrievability / Reversibility
- Compensation

Novouralsk Disposal Site