

Between Risk and Commemoration: Managing Nuclear Harm at Semipalatinsk

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- How do we think of (post)nuclear futures in the case of persistent radiological harm, especially in postcolonial and post-Soviet contexts?
- Theoretical tension: between risk and recognition paradigm
- “Shifting the way we look at risk: the importance of what is not visible and of the processes of constructive forgetting” (Boudia and Jas 2007: 8)

Références

Soraya Boudia et Nathalie Jas, « Risk and Risk society in Historical Perspective », *History and Technology*, 23, 4, 2007, p. 317-331

RISK AND “RISK SOCIETY” IN HISTORICAL PERSPECTIVE

Soraya Boudia and Nathalie Jas

Since the mid-1980s “risk” has constituted a sort of banner to which the social sciences have rallied. It has given rise to a whole range of research in the political science, sociology and economics spheres. Concepts such as Patrick Lagadec’s “Risk Civilization”, Ulrich Beck’s “Risk Society”, or Anthony Giddens “Risk Culture”[1] symbolize and underpin this movement, which, although polymorphic, is built around a common premise: the conviction that risk is a characteristic feature of contemporary societies and a central parameter when analyzing them. Our “modernity” is seen as part of a radical break that occurred around the early 1970s born out of the transition from an “industrial” to a “post-industrial” or “risk society”, in which humanity must deal with a set of global risks that it has itself engendered through its scientific and technological activities for which the planet has become a vast laboratory. Paradoxically, in order to handle these “risks”, our societies have an even greater need for science and technology which alone can provide the conceptual and technical tools to enable mankind to grasp, identify, quantify, classify and guard against such risks. These transformations are also reflected in an unprecedented development of regulatory measures concerning administrative control and management systems at local, national and international levels.

- Transitional justice and cultural memory: “working through” difficult pasts, mostly at the state level (Adorno 1959, Torpey 2006, Jelin 2007)
- Is visibility = recognition? What does justice look like for victims of the Polygon?
- Empirical question: how does independent Kazakhstan manages the legacies of nuclear testing: the land, the knowledge, and the victims?

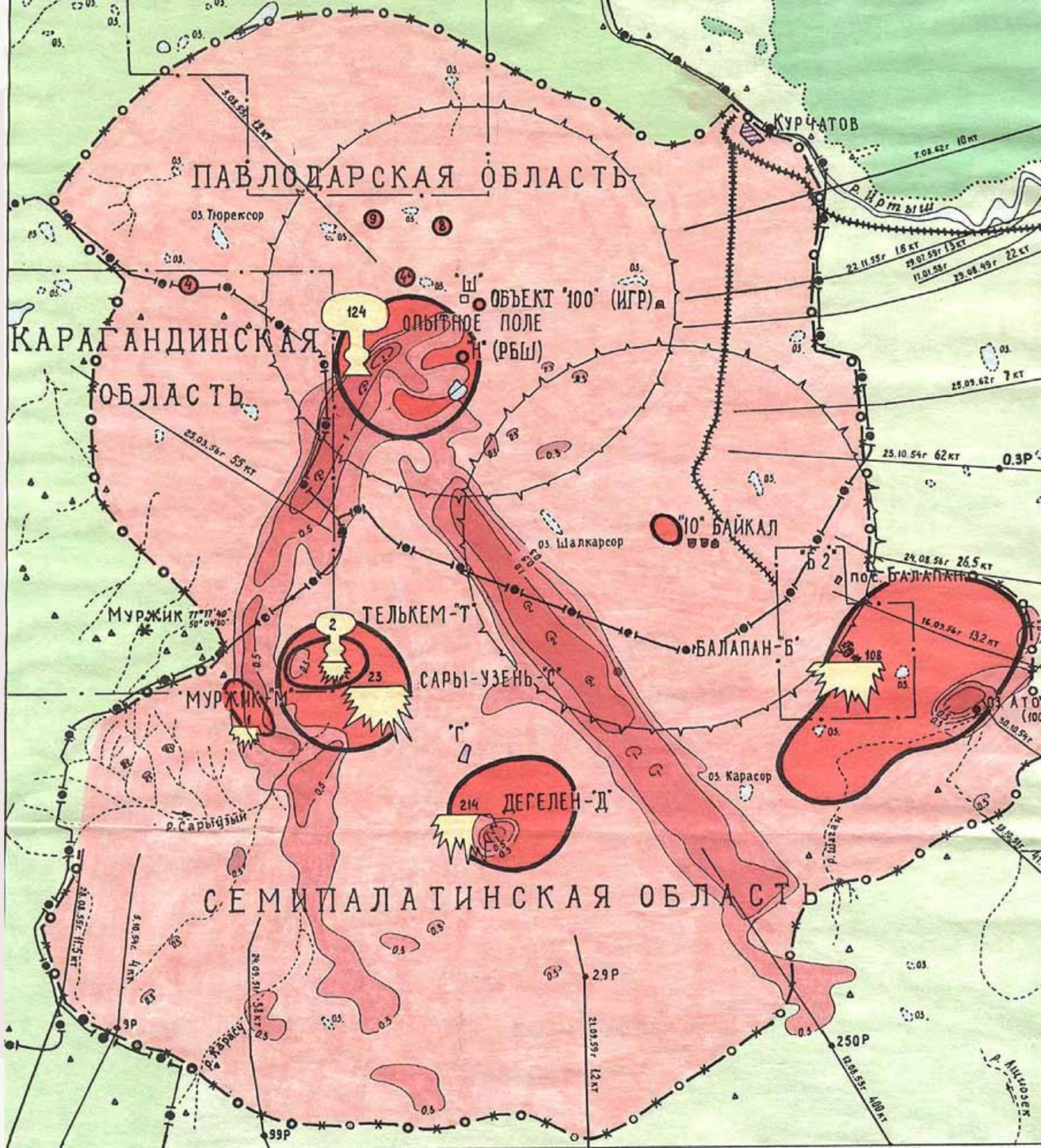


The Polygon

- 18,500 km²
- Active: 1949-1989
- Total tests: around 456
  - 116 atmospheric tests (1949-1963)
  - 340 underground tests (1961-1989)
- Official closure by President Nazarbayev: August 29, 1991

- Overlapping boundaries (administrative, radiological, security, epistemological, infrastructural)

- Polygon as “symbiosis of an ultra-modern research institute, experimental factories, testing grounds, and essentially a large prison camp” (Sakharov 2006: 256)



- Available commemoration: commemorative date (29 of August), a memorial park, reparation law of 1992
- Does not register as recognition according to many victims because 1. the monuments are in disrepair, 2. recent memory activism that goes beyond the commemorative canon is often blocked by local officials, 3. reparation law is guided by risk paradigm => mnemonic closure



Film by Aigerim Seitenova, still taken from aigerimseitenova.com


Загрязненность радионуклидами территорий прилегающих к СИЯП
ПАВЛОДАРСКАЯ ОБЛ
КАРАГАНДИНСКАЯ ОБЛ
СИЯП
СЕМЕЙ
Баянаул
Шемонаиха
Ленногорск
Усть-Каменогорск
Зыряновск
Большенарымское
Чарск
Георгиевка
Курчум
Катонкарагай
Аягоз
Зайсан
Semey
Зона чрезвычайного радиационного риска
Зона максимального радиационного риска
Зона повышенного радиационного риска
Зона минимального радиационного риска
– цезий-137 (Cs-137)
– америций-241 (Am-241)
– плутоний 239-240 (Pu-239-240)
– торий (Th-232)
– калий-40 (K-40)
– радий (Ra-226)
– уран (U-238)

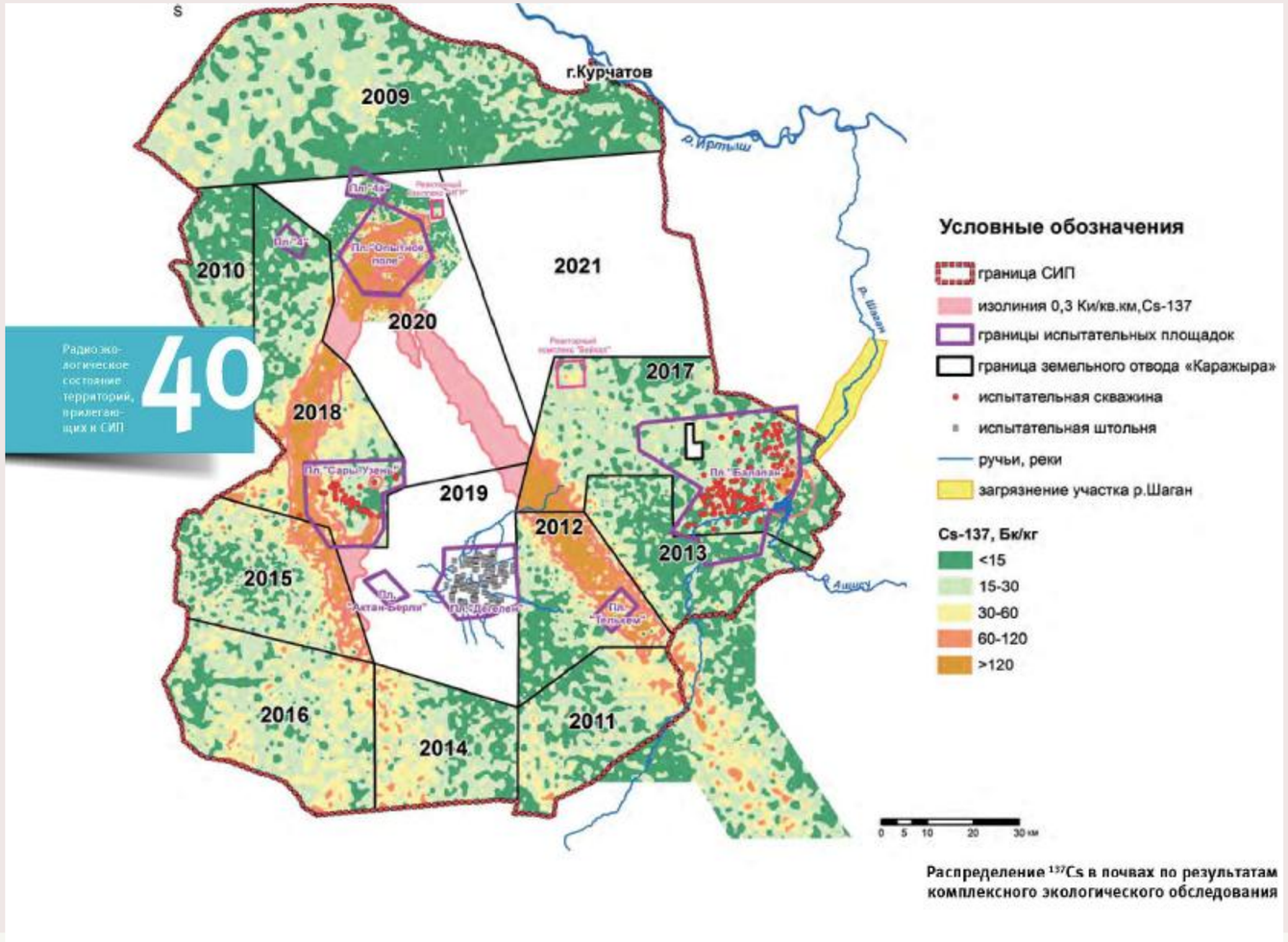
- National Nuclear Center (NNC)
- Institute of Radioecological Safety and Ecology
- Comprehensive environmental surveys of the Polygon between 2008 and 2021
- Where do the maps come from? Documents left by the Soviet army + memoirs of “atomic veterans,” made available by Rosatom



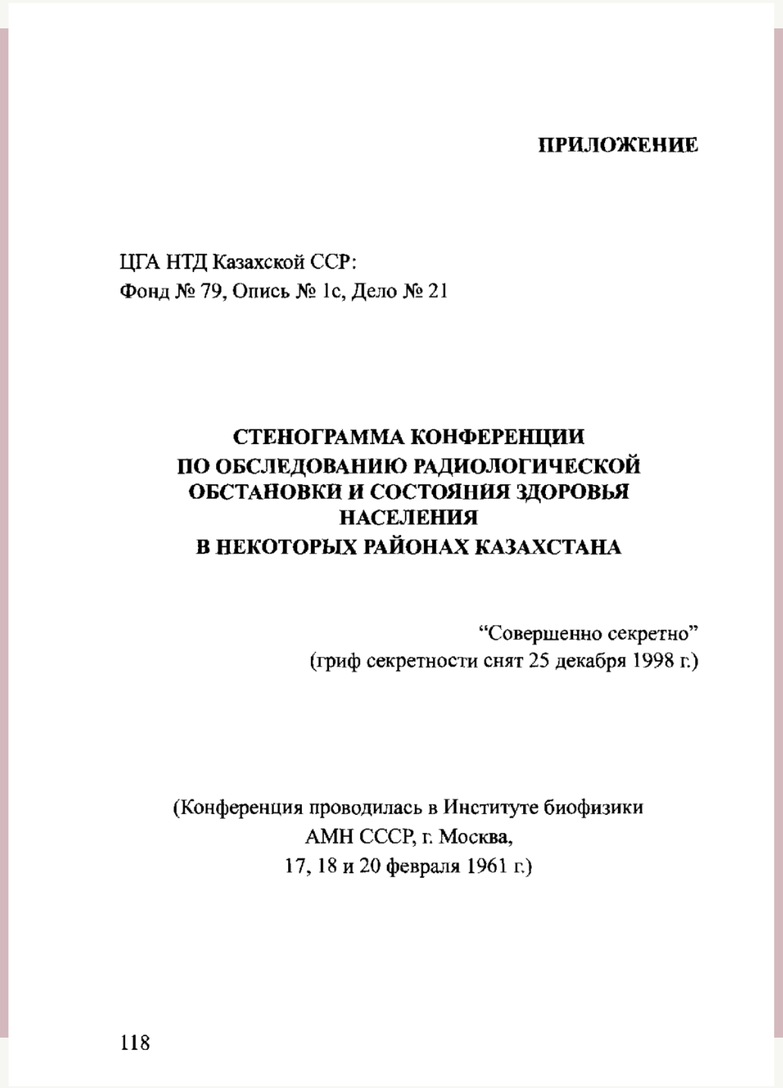
Radiobiological sciences and risk estimates

- **Epistemological assumptions:**
  - Low admissible doses
  - The possibility of containing radiation within designated zones
  - Fragmentation (soil, air, water, animal products, etc)
  - Predictive models of risk (modeling “worst case scenarios”)
  - Privileging physicists’ knowledge over epidemiological (patterns of symptoms)

  - Similar debates that Moscow scientists had with local Kazakh scientists in the late 1950s-early 1960s (Kassenova 2023, Atchabarov 2015, Bauer 2018)



- “Institutional doubling” : parallel radiological investigations in 1956-1957
- The Institute of Regional Pathology of the Kazakh Academy of Sciences in Alma-Ata (now Almaty)
- Institute of Biophysics of the USSR Academy of Medical Sciences
- Culminated into 1961 conference at the Moscow Institute of Biophysics (differences in measurement as much as 7 vs 500 roentgen in Kainar)
- “Kainar syndrome”



ПРИЛОЖЕНИЕ

ЦГА НТД Казахской ССР:
Фонд № 79, Опись № 1с, Дело № 21

**СТЕНОГРАММА КОНФЕРЕНЦИИ
ПО ОБСЛЕДОВАНИЮ РАДИОЛОГИЧЕСКОЙ
ОБСТАНОВКИ И СОСТОЯНИЯ ЗДОРОВЬЯ
НАСЕЛЕНИЯ
В НЕКОТОРЫХ РАЙОНАХ КАЗАХСТАНА**

“Совершенно секретно”
(гриф секретности снят 25 декабря 1998 г.)

(Конференция проводилась в Институте биофизики
АМН СССР, г. Москва,
17, 18 и 20 февраля 1961 г.)

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Modern NNC and IRBE

- Why do modern scientists in NNC and IRBE reproduce epistemological assumptions from the Soviet military-industrial complex and “radiophobia” discourse?
- Center-periphery power legacies between Kurchatov and rural areas around it
- Fear of local stigma and “discursive contamination”
- Lack of capacity to provide control
- The disaster is over, now the main problem is a lack of infrastructure

Risk: people or territory?

The new proposed borders of “Semipalatinsk Zone of Nuclear Safety” (signed in 2023, came into effect April 2026)

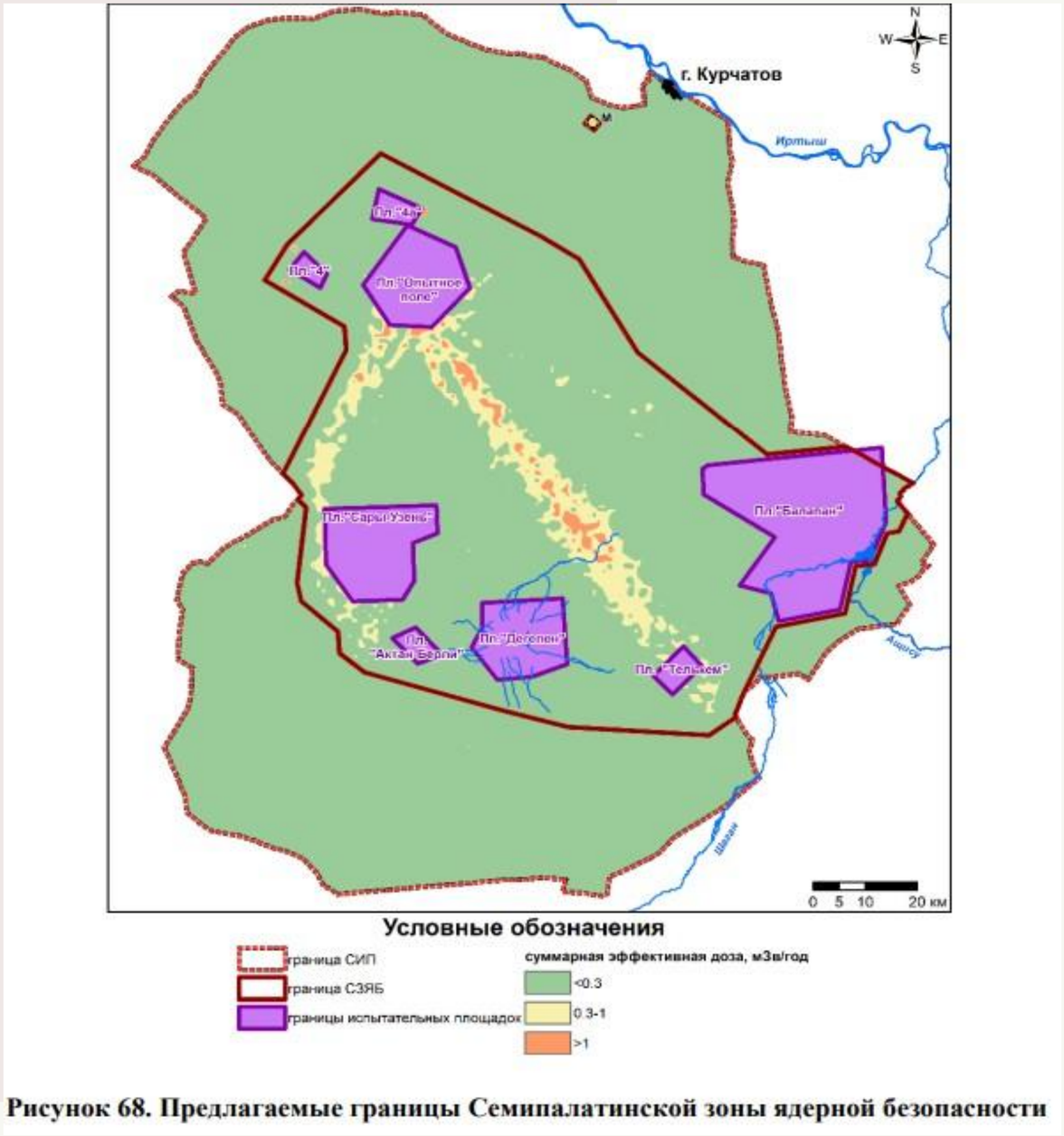


Рисунок 68. Предлагаемые границы Семипалатинской зоны ядерной безопасности

Reparative justice and risk

- The existing reparative justice models do not account for how risk is produced, and for both epistemological and socio-economic legacies this territory has => the victims feel that the system have failed them

- What models of reparative justice work when symbolic recognition exists but technical systems and economic support lag behind?
- Who has authority to define contamination, exposure, and victimhood?

Alternative visions exist → local activists, community knowledge, different spatial imaginaries but they need institutional backing (Happy to discuss in Q&A)


Thank you!