

**INFORMATION AND MEMORY FOR FUTURE DECISION MAKING**  
**Radioactive waste and beyond**

A workshop on preserving information and memory over centuries and millennia in the context of sustainable development and the future human environment

**Stockholm 21–23 May, 2019, Näringslivets Hus, Storgatan 19, Stockholm**  
**Programme updated April 2<sup>nd</sup>**

		<b>21 MAY AFTERNOON</b>	<b>Chair: J. Palm</b> National Archives of Sweden
13:00	<b>1. OPENING TALKS</b>		
	<b>Welcome</b>	<b>K. Åström</b> Director General, National Archives of Sweden	
	<b>Background to the workshop and expectations<sup>1</sup></b>	<b>T. Hilding-Rydevik</b> Swedish National Council for Nuclear Waste	
	<b>2. SETTING THE SCENE</b>		
13:25	<b>The vision document for the workshop<sup>2</sup> (20'+5')</b>	<b>C. Pescatore</b> Linnaeus University and Independent Consultant	The vision document, its reference questions and proposed draft principles and practical goals. Introduction to workshop topics.
13:50	<b>Cultural heritage, nuclear waste and the future (20'+5')</b>	<b>C. Holtorf and A. Högberg</b> Linnaeus University	Some lessons to be learned from collaborative research since 2011.
14:15	<b>Social memory (20'+5')</b>	<b>C. Green</b> Swedish University of Agricultural Sciences	If we know how it worked in the past, do we have the tools for the future? How memory is created and preserved in society with and without societal continuity.
14:40	<b>Local perspectives on memory in the context of managing future waste legacies (20'+5')</b>	<b>A. Bergsten</b> Östhammar Kommun <b>B. Liedberg- Jönsson</b> Oskarshamn Kommun	Communities are faced with managing both radioactive and non-radioactive waste. Expectations on memory preservation from the Environmental Court in the

<sup>1</sup> See also a description of the workshop in ANNEX 1 to this program

<sup>2</sup> C. Pescatore, *Information and memory for future decision making: radioactive waste and beyond*, available from <http://lnu.diva-portal.org>

			context of spent fuel management.
15:05	<b>Perspectives from environmental organizations (15'+5')</b>	<b>J. Swahn</b> Swedish NGO Office for Nuclear Waste Review (MKG)	Societal verification, rolling stewardship and security issues. How environmental NGOs discuss nuclear waste and future generations.
15:25	<b>Break</b>		
16:00	<b>Role of the national archives in Sweden, especially with reference to future legacies (20'+5')</b>	<b>M. Geber</b> National Archives of Sweden	What goes into the national archives? Which role do they have for documenting "environmental legacy"? Links to other archives or memory institution? Which are strengths/ vulnerabilities?
16:25	<b>The NEA RK&amp;M project (20'+5')</b>	<b>S. Hotzel</b> Chair of RK&M group of the OECD/NEA	Main findings of the Records Knowledge and Memory Preservation (RK&M) project of the Nuclear Energy Agency of the OECD.
16:50	<b>Information and knowledge preservation over generations in a regulatory context (15')</b>	<b>C-H. Pettersson</b> Swedish Radiation Safety Authority (SSM)	
17:05	<b>Recent perspectives on legislation in Sweden (15')</b>	<b>G. Szendrő</b> Senior Advisor at Swedish Ministry of Environment and Energy	Current efforts in updating Swedish law.
17:20	<b>Facilitated Discussion</b>	<b>P. Zettersten/TBD</b> SSM	The facilitator will invite the audience to raise and discuss issues about what was heard.
18:00 - 19:00	<b>Get together</b>	Hosted by Swedish National Council for Nuclear Waste	Finger food and non-alcoholic drinks. Alcoholic drinks bought personally.
		<b>22 MAY MORNING</b>	<b>Chair: C-H. Pettersson</b> SSM
8:00	<b>Coffee</b>		
8:15	<b>3. THEMES DISCUSSION</b>		Introduction to the session
8:30	<b>Theme 1: Sustainable Development and information-and-memory preservation</b>	Facilitators: <b>J. Swahn</b> (MKG) <b>C. Pescatore</b> (Linnaeus University and Independent Consultant)	<i>Questions for discussion are presented in ANNEX 2</i>
10:00	<b>Coffee</b>		

10:30	<b>Theme 2: Law and Regulation and long-term responsibilities on preservation of memory in society</b>	Facilitators: <b>C-H. Pettersson</b> <b>A. Bratt</b> Swedish Radiation Safety Authority (SSM)	<i>Questions for discussion are presented in ANNEX 3</i>
12:00	<b>Lunch</b>		
		<b>22 MAY AFTERNOON</b>	
13:00	<b>Theme 3: Role of actors vis-à-vis the future</b>	Facilitators: <b>E. Setzman</b> <b>S. Tunbrant</b> Swedish Nuclear Fuel and Waste Management Company (SKB)	<i>Questions for discussion are presented in ANNEX 4</i>
14:30	<b>Coffee</b>		
15:00	<b>Theme 4: The significance of cross-sectoral collaboration in managing societal challenges</b>	Facilitators: <b>C. Holtorf</b> <b>A. Högberg</b> Linnaeus University	<i>Questions for discussion are presented in ANNEX 5</i>
16:30	<b>Fruit-break mingle</b>		
		<b>23 MAY MORNING</b>	<b>Chair: A. Storm</b> Stockholm University
	<b>4. LESSONS TO BE LEARNED</b>		
8:30	<b>Reports from day 2</b>		A 10-minute report on each theme by its facilitators.
9:15	<b>Coffee</b>		
9:45	<b>Discussion of the draft guiding principles and practical goals in the vision document</b>	<b>C. Pescatore</b> Linnaeus University and Independent Consultant	<i>The current draft is presented in ANNEX 6.</i> Aim here is to collect further input before the finalization by the organizing committee (see Box 1 hereafter)
11:00	<b>Perspectives on the workshop (20')</b>	<b>T. Svanelid</b> Journalist	
11:20	<b>5. CLOSURE</b>		
	<b>Overall remarks</b>	<b>A. Storm</b> Stockholm University	
	<b>Final salutations</b>	<b>C-R. Bråkenhielm</b> Swedish National Council for Nuclear Waste	
11:40	<b>Adjourn</b>		

### **Box 1 Representation in the Organizing Committee**

- National Archives of Sweden
- Swedish Nuclear Safety Authority (SSM)
- Swedish National Council for Nuclear Waste (Kärnavfallsrådet)
- Swedish Nuclear Fuel and Waste Management Company (SKB)
- Östhammar Municipality
- Oskarshamn Municipality
- Swedish NGO Office for Nuclear Waste Review (MKG)
- Linnaeus University
- Stockholm University

## ANNEX 1 – WORKSHOP DESCRIPTION

Sustainable development has been defined in many ways. The most frequently quoted definition is from the Brundtland Report. *"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs."* One of the needs that future generations will have to meet is the ability to make decisions, specifically concerning legacies inherited from the past.

The present workshop, and supporting vision document<sup>3</sup>, is about starting a broad-based reflection in Sweden and elsewhere on how to help future society maintain or regain awareness of some of the most relevant legacies that they will inherit – notably nuclear waste. Such reflection would also identify difficulties, potential conflict of interests, target achievements and potential paths forward.

This workshop and reflection are timely in Sweden, in that the Swedish government is in the process of deciding about a repository for final disposal of spent nuclear fuel to last 100 000 years. A similar, deep underground repository for the indefinite isolation of mercury-tainted and other processing waste is slated to be operating shortly. Even if current management approaches may not require human beings' continued attention or presence, ought we not facilitate the task of dealing with those legacies – specifically by providing relevant documentation and information – if that is what future societies may want or need?

At the same time, there are about 80,000 potentially or confirmed contaminated areas in Sweden, of which approximately 1,300 have been assessed to entail very great risks to human health or the environment. When they will be remediated, the polluted soils will be disposed of in a number of deposits that will be constructed all over the country. How then to ensure that future generations will remember that these places must be considered to be off-limits for housing, play grounds etc.? Besides, will all of these deposits function as planned? Remediation of contaminated areas are thus another example where the need arises to conceive a **Records, Knowledge and Memory (RK&M)** preservation strategy that will support future generations to make decisions based on exploitable information.

The workshop will take advantage of national and international thinking in the field of RK&M preservation, including the findings of a recent, eponymous international project dealing more specifically with radioactive waste. Nuclear waste, whose literature on the subject is fairly large and recent, can act as a useful trigger for better understanding the wider questions at hand as well as suggest possible strategies and tools. The vision document made available in advance of the workshop provides background to the relevant questions for the workshop as well as a draft set of principles that would inform future actions in the area of memory preservation.

During the last decades the issue of RK&M preservation has moved up on the agenda in Sweden and in other countries. Eventually, this may create a critical mass towards strengthening and enlarging current practices in records, knowledge and memory preservation for the benefit of future generations.

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<sup>3</sup> C. Pescatore, *Information and memory for future decision making: radioactive waste and beyond*, available from <http://lnu.diva-portal.org>

**IN THE FINAL PROGRAMME THERE WILL BE INFORMATION IN THE ANNEXES**

**ANNEX 2**

**Theme 1: Sustainable Development and information-and-memory preservation**

**ANNEX 3**

**Theme 2: Law and Regulation and long-term responsibilities on preservation of memory in society**

**ANNEX 4**

**Theme 3: Role of actors vis-à-vis the future**

**ANNEX 5**

**Theme 4: The significance of cross-sectoral collaboration in managing societal challenges**

**ANNEX 6**

**Guiding principles and practical goals  
towards preserving memory and information for future generations in the  
context of sustainable development**

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## ANNEX 6

### **Guiding principles and practical goals towards preserving memory and information for future generations in the context of sustainable development**

The May 2019 workshop in Stockholm could become the venue to help formulate and communicate a chart of guiding principles and practice goals to inform future work in the area of RK&M preservation concerning legacies that present society may bequeath to future generations. A draft future chart is suggested for discussion. Namely:

#### Preamble

*"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs."* (Brundtland report)  
One need that future generations will have to meet is the ability to make decisions, specifically concerning legacies inherited from the past. Sustainable decision making will require access to intelligible records, exploitable knowledge as well as memory of past actions and decisions over time scales of millennia. Ethically, it rests on the generations at the origin of each long-term legacy to identify and implement durable strategies for Records, Knowledge and Memory (RK&M) preservation.

#### Principles

- Enabling future members of society to make knowledgeable decisions is part of responsible, ethically sound management of environmental legacies in the context of sustainable development. It is also in line with a prudent approach regarding safety.
- The relevant institutions ought not to plan the ending of oversight, whereas the potential loss of oversight needs to be anticipated and planned for.
- Any strategy for the preservation of RK&M should integrate the possibility of discontinuities in the future.

#### Practical Goals

- Institutional and non-institutional players should to determine and communicate their role in preserving RK&M and take relevant, coordinated actions. Ideally, law helps identify roles and goals and regulation guides practice.
  - Regulatory guidance and supervision should be developed to support RK&M preservation.
- Preparing for future RK&M preservation is best addressed while a project leading to a legacy is being designed, implemented and funded.
  - The operational phase of some of these projects creates an opportunity for the development of inclusive and workable RK&M strategies.
  - During the operational phase, institutional stakeholders must prepare for the ending phase, when their own roles will be reduced and new roles will be played increasingly by other stakeholders – especially in the area of RK&M preservation. Responsibilities ought to be determined ahead of time.

- During the operational phase, the institutional stakeholders can facilitate the preparation and implementation of archives; administrative restrictions on land use; regular reporting by governments under one or more international mechanisms or agreements, etc.
- There is no single best means of RK&M preservation over all timescales. All available communication channels should be explored and a few retained for the final preservation strategy.
  - RK&M preservation approaches should include provisions for knowledge reconstruction and for providing information to future generations with and without requiring the involvement of intermediate generations.
  - Records will be used mostly by future members of society and attention should be given to the needs of these users in terms of facilitating readability and intelligibility, providing, in particular, relevant information on the context in which the legacy and the records were created.
  - The various components of the RK&M system should apply robust, simple and understandable techniques and support materials, and should not rely on technological provisions alone.
  - Overall, a multi-faceted approach should be formulated for the RK&M preservation of each project whereby the various components of the RK&M system complement each other, provide for redundancy and maximize the chances of survival of a recognizable and comprehensible message.
- Synergies should be sought with other societal institutions and international bodies.
  - There are important benefits to be gained from partnerships and collaborations between different players and sectors in society.
  - Agreements should be reached that are likely to survive beyond the end of the operational phase and can thus contribute to RK&M preservation.
  - A concerted approach at the international level may contribute further to the development of national strategies.
  - Synergies and lessons to be learned should be sought wider than just the specific legacy of concern.