File name: Avsnitt 6 - Key Information File.wav

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[00:00:21:19 - 00:00:23:21]

**Marie:** Hej allihopa, och välkomna till podcasten Bergrummet som vi kör här i Östhammars kommun. Aktuella frågor inom slutförvar, kan man väl säga. Och idag tänkte vi prata med ett par gäster som har engelska som arbetsspråk. Så vi kommer att ha den här sändningen på engelska.

[00:00:52:11 - 00:00:52:11]

**Marie:** Vi kommer dock på nåt sätt att tillgängliggöra det här på svenska, eller hur Magnus? Som sitter bakom spakarna och nickar på huvudet.

[00:00:54:12 - 00:00:56:14]

**Marie:** I studion har vi då jag själv, Marie Berggren, som sitter bakom en mikrofon, och så har vi såklart.

[00:01:01:04 - 00:01:01:04] **Anna:** Anna Bergsten, sitter här.

[00:01:04:00 - 00:01:13:18]

**Marie:** Yeah. And we will leave it to you to introduce yourself, our international guests. Um. Please start.

[00:01:14:06 - 00:01:21:00]

**Thomas Keating:** And I'm Thomas Keating, um, a postdoctoral researcher at Linköping University. And. Yeah, a real pleasure to be here.

[00:01:22:05 - 00:01:35:23]

**Anna Storm:** Yes, and I'm Anna Storm, also working at Linköping University, uh, together with Thomas in the Division of Technology and Social Change technique or "social förändring" in Swedish.

[00:01:36:03 - 00:01:53:14]

**Marie:** You're so welcome to our studio. We will talk a little bit of, um, information preservation. And you have a project that is shortened KIF, can you please tell us a little bit about what is KIF?

[00:01:55:04 - 00:01:56:05]

Marie: Who will start?

[00:01:56:16 - 00:01:57:00] **Thomas Keating:** I can.

[00:01:57:00 - 00:03:18:07]

Thomas Keating: Go first. So the key information file or the KIF. KIF is written documents envisaged to be around 40 pages long and containing only the most crucial information about the spent fuel repository planned to be constructed in Foshan Park. And the idea with the key information file is that it would literally access a key to wider information and archives that somebody in the future could then use to navigate to find information about the spent fuel repository. So it's part of the Swedish nuclear fuel and waste management company. So SCB wider plan about how they're going to communicate to the future the existence of the spent fuel repository. And in writing this document where, I guess commissioned by them to think about ways that information about nuclear waste sites can be communicated through time, but also as independent researchers to think about what else is involved in the survival of information into the future. So it's a really speculative and pragmatic task, involves different kinds of methods and different kinds of information transfer techniques that we've been exploring over the last two and a half years.

[00:03:20:00 - 00:03:23:03]

Marie: And this is not just only a Swedish project, is it?

[00:03:23:16 - 00:03:59:24]

**Anna Storm:** No, it's, um, it's part of a broader, uh, long term ongoing international collaboration within, um, both between universities, but mainly so far within um, industrial or state and company actors within the nuclear industry internationally, uh, who have been thinking together to develop different tools and ways to, uh, to communicate these critical information about, uh, the repositories to the future.

[00:04:02:03 - 00:04:25:04]

**Marie:** And this is is quite a difficult task, I guess, with a with both imagination and kind of of, uh, future perspectives. That is not not common always in the industry, uh, at all. So, uh, what how do you collect this input to this project?

[00:04:27:06 - 00:06:33:08]

**Thomas Keating:** To say it's a difficult task is maybe an understatement. A lot of people, when we tell them about the project. I've had people laugh at me. I've had people kind of raise their eyebrows and nod, and a lot of people have said, good luck with that. And in a kind of half joking, slightly dismissive way, um, but yeah, precisely because the reality is no human message has ever lasted the entire length of time that the spent fuel repository is designed to last. Um, and the key information file isn't a file written for 100,000 years, but it's meant to be a stepping stone for this long term information transfer about the spent fuel repository in Mach, and would also form a kind of international network of different um, key information files globally, corresponding to their own national, uh, nuclear waste burial sites.

So there are lots of difficulties with that task. And in terms of how we've assembled the key information file, what goes into it, the input, it's, um, really varied. We've tried to draw on methods from across the social sciences and the sciences, uh, trying to think about different disciplines and expertise that can contribute to this task of communicating information through time. So that includes history and geography, anthropology and but also thinking as well about different kinds of arts of memory and communication. So even things like performance, um, storytelling, these are the things we think complement scientific knowledge in, in, in thinking about how information is transferred. I mean, if we look at what messages have been, what kind of information has been communicated through time, it's not been kind of very factual information, but often very interesting, provocative, even scary kinds of stories and information have attracted and inspired people to keep them. Keep them going. So we're interested in how formal nuclear waste management practices can learn from these different methods and techniques.

## [00:06:35:06 - 00:07:37:13]

Anna Storm: I could maybe add that we are also while we have. Develop this idea how we could create such a key information file which is both informative, understandable, interesting and engaging. We have also, uh, we have not just stayed in our research offices. We have really tried to interact with lots of different groups of people, uh, other researchers and artists, as you just said, Thomas. But also young people, um, people with previous knowledge about nuclear waste storages, but also people without previous knowledge about, uh, nuclear waste storage in order to, uh, get as many reactions and impressions and ideas, uh, as we possibly could, um, to hopefully be able to present something that speaks to, to as many as possible.

## [00:07:37:13 - 00:07:53:21]

**Marie:** And today you have visited our municipality as well and have had had a talk with, with this group, the politicians within our municipality and really interesting thoughts. How what are you experience of that?

[00:07:55:07 - 00:08:02:23]

Marie: This is an upcoming question just now, I'm sorry, but I, I really think it's.

[00:08:03:15 - 00:09:21:11]

Anna Storm: I think our now as we just had this discussion, we haven't really digested um, all the comments we got. But generally I would say that this is of course a very knowledgeable group. So this this represents a deep knowledge in especially two aspects, both, uh, the, the local knowledge, uh, but also very deep knowledge, uh, regarding the repository itself, but also actually regarding the, uh, the issue of information transfer, which, uh, many in this group already had, uh, thought about before we came. So it was not, um, it it was easy to, uh, to tell what our ambitions were, and we could directly dive into actually both very detailed questions about, uh, the effectiveness of different wordings or images or color languages, but also bigger ones about the role of this key information file in, in relation to the landscape or different generations and the persistence of, of the Swedish language and so on.

**Anna:** Could you why is it important to remember it? I mean, could you in you're saying the things that uh.

[00:09:32:13 - 00:09:33:24]

Anna Storm: Yeah. I mean, it's um,

[00:09:35:04 - 00:10:01:02]

**Anna Storm:** uh, as I guess many of, uh, maybe the listeners to this podcast, living close By, know that the, the spent fuel will be, uh, dangerous to to humans and to other, um, living beings for a very, very, very long time, uh, into the future, uh, and therefore, it's, uh.

[00:10:03:02 - 00:10:35:21]

**Anna Storm:** Today we as a society have agreed that it's it's our responsibility to, uh, to to tell future generations, as in the best way we could, about the characteristics of this material. In what way? It's dangerous. In what way? It is stored, to the best of our knowledge, safely. Um, and and what what you could do if you, um, encounter this, this place and this information in the future.

[00:10:36:17 - 00:10:43:03]

Marie: Can you see that this, um, this work with a Kiff can be useful in in other areas.

[00:10:44:21 - 00:12:28:13]

**Thomas Keating:** I mean, lots of areas in terms of how what it teaches us about how we imagine the future, even thinking about pragmatic questions. One thing I learned on this project is just the real vulnerability of things like digital archives. We tend to think today that everything is very secure. We've got lots of backup copies of things stored digitally, and certainly digital archives are very accessible and allow us to find information quite relatively quickly. But actually they're very vulnerable to. And in terms of the key information file, we're writing a document that's meant to be really well understood and accessible and readable to a non-expert audience. But it's also meant to be something that's safe and secure and preserved through time. That's not vulnerable to being destroyed or forgotten about. And so it's not simply the case that we could just make a website and leave it up there without anyone visiting it. And equally, the idea of storing it on a digital hard drive doesn't guarantee any long term security even beyond the next 100 years. So we really thinking a lot about what kinds of archiving, what kinds of storage is really suitable for keeping information going, keeping it renewed, but also making sure it's safe. Um, and it's not easily any easy question to answer. It's really difficult. Um, even talking to archivists, there's lots of debate around the relative role of paper, and even things like ceramics have been talked about a lot as a really good medium to transfer information. So, uh, yeah, we're still investigating and trying to work out, actually. How do we do that? What expertise do we need to draw on to keep this information alive?

[00:12:30:05 - 00:13:00:02]

**Marie:** Yes, because we when we talked earlier this day, you showed us that there are three parts even in this work. One of them are the paper and the, the information with letters.

But you also have two other parts that you are interested in as a, as a medium for, for translating and transferring the message. And can you describe them a little bit?

[00:13:01:10 - 00:15:00:05]

Thomas Keating: Well, we had kind of three key modes of nuclear memory communication that we're interested in. So how to communicate information about these nuclear waste sites. And particularly thinking about the long term, um, information transfer for the spent fuel repository and for the high level nuclear waste. And we're interested. Yes. Firstly in kind of archives. So paper letters but also rock archives and physical things are kept, um, and stored, usually in a kind of archival system, but also in a kind of museum. So those are kind of one way that we remember things, but clearly there's lots of other of others. And the second that we mentioned a little bit is thinking about the role of different, um, aesthetics and art. So what role do artists play in all of this? And for us, that's crucial, because it's also about the way that, um, art can provoke us. It can make us inspired. It can confuse us. I mean, we you can even frustrate us thinking about the use of the cipher in the if we artistic things can make us fascinated and even kind of frustrated at times, and that itself can keep interest in ideas alive. And the third and final one was really thinking about all kinds of social practices. So everything from oral storytelling to theater and operas that we discussed, um, you know, cultural practices that, um, aren't very secure in terms of their kind of materiality, but they're secure because humans have tended to use those things to communicate things, even if the message changes along the way. So in the case of thinking about opera and and song, these or even mythological stories, new elements get added onto them all the time. People change their original meaning, so it may not resemble the original thing anymore, but in it's changing, it becomes renewed for a new generation.

[00:15:04:13 - 00:15:09:04]

**Anna:** Is there anything while you've been working with it that has, uh, surprised you?

[00:15:09:18 - 00:16:40:11]

Thomas Keating: Uh, so many things. I'll limit myself to one. The one, the one main thing has been just the immense, um, fragility that surrounds the work around the key information files. So really, we talk a lot about how to keep information alive across multiple generations that, you know, the idea that we need to just not just communicate to our kind of grandchildren and their children, but how is it communicate beyond 5 or 6 generations or even across centuries and millennia? And so it's really big questions, philosophical questions about, you know, what it means to, you know, make something that to last forever. And who will we communicate with in the future? Will it be a human? Will it be an AI? Will it be something we can't even imagine? Who will read the key information file in the distant future? But in the here and now, we often forget information that's been written down even from the last 1 or 2 decades. We found reports written by people about this topic that people had forgotten existed, and we talked to people and experts in this area, and they're often quite frustrated that conversations they had in the 90s have been repeated again today, with a seeming lack of awareness of actually, how so? And this kind of amazing irony of this. So, you know, it seems that we're trying to talk about keeping information alive across millennia, but we can't keep it alive across a few years. And that's a real, um, surprise for me. Yeah.

Marie: And that is one of the issues that, that this municipality also have lifted in, in our work, that it is so important to have this translation between generations and, and keep knowledge ahead all the time in, in this process that we have been into since 1995. Well, if our listeners want to to take take part of the Keith and read the Keith, when, when can they expect to do that? So we can publish it on our website later on.

[00:17:16:14 - 00:18:15:16]

**Anna Storm:** With a good idea. Uh, so, uh, we will work with, uh, our version of, uh, this very first key information file written actually in even in the world, um, uh, for about, uh, ten months more. Uh, so we will, uh, finalize what we think is a is a good first idea about how this key information, what it should look like. Um, and towards the end of this year, 2024, we will hand it over to SCB, who will be in charge, um, after that, on on how to update it and, and and where to to put it. But we are currently thinking about where to where this first version will be placed on our website.

[00:18:15:16 - 00:18:16:17]

Marie: Of course.

[00:18:16:17 - 00:18:50:19]

**Anna Storm:** Municipal website, certainly. Maybe in a local archive, maybe in the National Archives, maybe somewhere in Fort Mark as well. Um, and on some, maybe some different media as well. Maybe not only paper, uh, and online. We'll see. Uh, but there would be a, uh, we, we will uh, it will be available, uh, towards the end of the year, uh, and then hopefully very present also afterwards. So then everyone is welcome to, to take part.

[00:18:50:19 - 00:19:00:02]

**Marie:** We will, um, remind our viewers and listeners of where they heard about the kif first we will remind them.

[00:19:00:08 - 00:19:56:19]

**Thomas Keating:** Can I add this one little thing just so in full this year, the cliff should be available in its physical form, but there'll also be a film that we hope to show here. Um, maybe the world premiere. Yeah, of our of our project, which we've made into a short film. Um, so we'd be really happy to welcome people from this area to that film screening and get a chance to speak with you and also perhaps have a kind of introductory talk about the cliff. Um, so that's another part of the kind of continual conversation and dialogue we'd like to keep about this project and about the long term communication of this information. So yeah, very welcome to join and more information to follow. We we have a project website called Nuclear Memory dot WordPress.com. Um, so if you look at nuclear memory, WordPress.com, um, there'll be information there about the exact date of the film. And I imagine on the municipality website we.

[00:19:56:19 - 00:19:58:23]

**Anna:** Will put it will be when it's decided.

[00:19:58:23 - 00:20:23:14]

**Marie:** Yes. And we will put that link also into the. To the podcast site. Uh, here. Well, thank you so much for joining us in the studio. This was really interesting. And the time just went off, but now it's time to finish. Um, and I go back to Swedish. Thanks again. Och alla ni lyssnare är välkomna igen den 16 februari. Och ni kan såklart lyssna på gamla avsnitt. Vi har ju numer också publicerat oss på Spotify, och vi är väldigt stolta över det.

[00:20:43:01 - 00:20:44:00]

**Marie:** Och är det så att man inte har Spotify så kan man gå in på vår hemsida www.osthammar.se/podcast. Och med det tänker jag mig att vi säger hej då allihopa.