

URANIUM, NUCLEAR, RADWASTE

IN THE CZECH REPUBLIC

The International Anti-nuclear Summer Camp 2017

Döbeln, Germany

July 18, 2017

[Audio Presentation](#) by Olga Kališová, MSc.

Calla - Association for Preservation of the Environment

OUTLINE

► URANIUM MINING

- Closure of the uranium mine Rožná (April 2017)
- Recultivation in Dolní Rožínka?
- Processing rock piles near Příbram (from 2020?)
- Raw Material Policy (May 2017)

► NUCLEAR INDUSTRY

- New nuclear reactors in Dukovany or Temelín nuclear power plants (NPPs)

► RADIOACTIVE WASTE MANAGEMENT

- Siting process for a deep geological repository
- Annual Day Against Repository
- Platform Against Deep Repository (October 2016)
- National Programme on Radioactive Waste and Spent Fuel Management



URANIUM MINING

DOLNÍ ROŽÍNKA

Photos from excursions with:

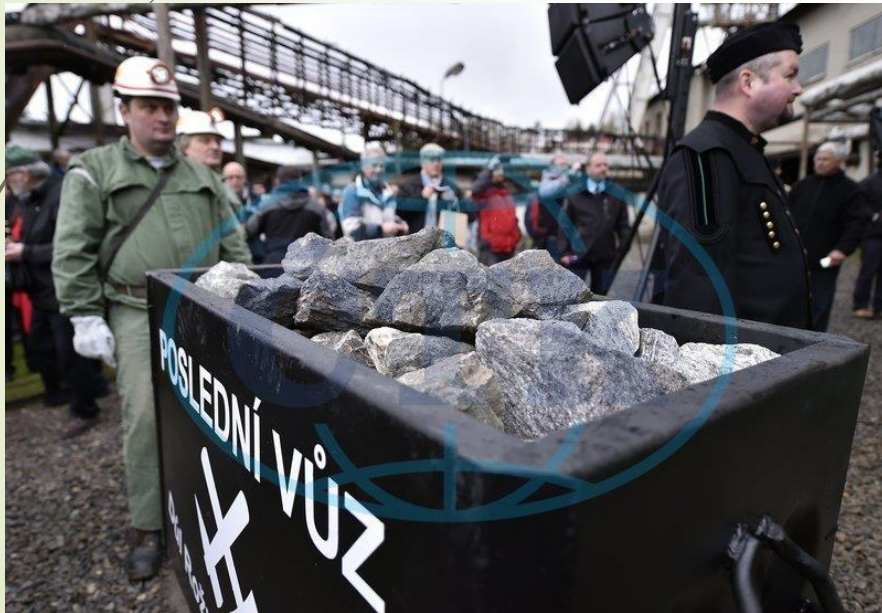
- locals from Brzkov (potential uranium mining site, but not just now) in [Oct 2014](#)
- Romanian journalist Adrian Mogos in [Sept 2015](#), his [article](#) dated Jan 2016



From left to right: chemical treatment plant, mine Rožná, mine Jasan, tailings pond K1
© Olga Kališová, Sept 2015

MINE ROŽNÁ

- The main points about the mine Rožná on [slide 27](#)
- Cca 17 mil t of ore was extracted > **nearly 20 thousand t of U (1957-2017)**
- uranium mining in Dolní Rožínka **finished on April 27, 2017**



Source: Czech Press Agency/ČTK

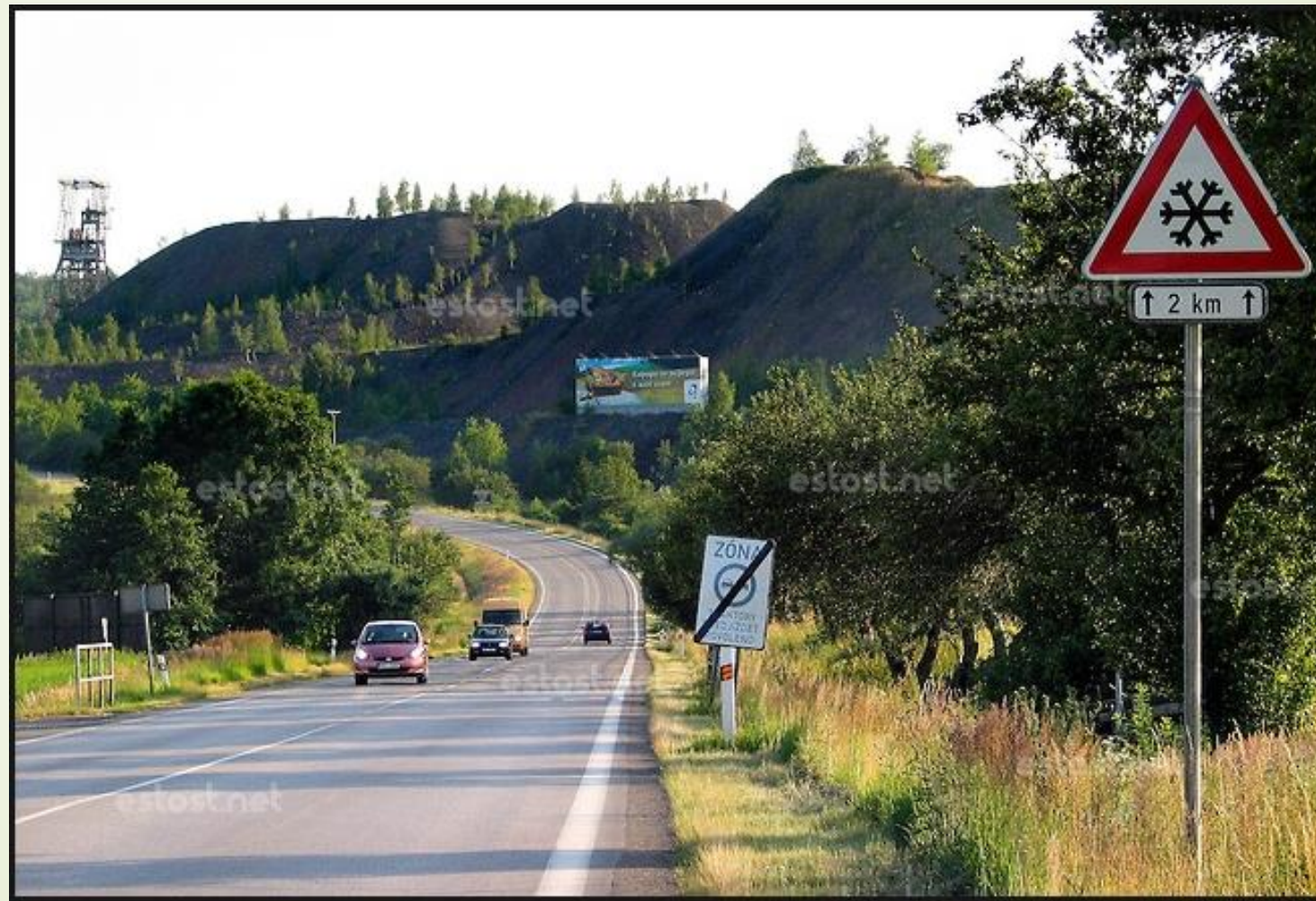
RECOLTIVATION OF THE MINE ROŽNÁ?

- ▶ The mine should serve as technical support for the Bukov Underground Research Laboratory ([URL](#)) – also called as “Facility”
 - ▶ Calla’s critical press releases on the Bukov URL dated [Dec 2016](#) and [Jan 2016](#).
- ▶ The **Bukov URL** is owned by the Radioactive Waste Repository Authority (**RAWRA/SÚRAO**); It is being built by **DIAMO GEAM**; at least until 2025, scientists are here to examine the suitability of the geological environment for the disposal of radioactive waste.
- ▶ Therefore, the former mine will not be recultivated yet (**not flooded with water yet**).

RECOLTIVATION OF CHEMICAL TREATMENT PLANT IN ROŽNÁ?

- ▶ The chemical treatment plant in Rožná will process e.g. ore from waste rock piles from uranium extraction near Příbram.
- ▶ Materials containing Uranium from other countries, including Switzerland, have also been imported in Rožná.
- ▶ According to the director of state enterprise DIAMO Pavel Rychtařík, modification of other strategic raw materials could also be tested in Rožná.
- ▶ **The operation of the plant should therefore be modernized.**

WASTE ROCK PILES NEAR PŘÍBRAM



Source: <http://estost.photoshelter.com/image/I0000eQxh3WFybnS>

RECOLTIVATION OF WASTE ROCK PILES NEAR PŘÍBRAM

- ▶ **11 waste rock piles (= 400 thousand tons of Uranium ore)** in the territorial plan of **14** municipalities and settlements of the Příbram town
- ▶ The DIAMO project to remove the waste rock piles near Příbram ([slide 14](#)) should take about **20 years and start in cca 2020**
 - ▶ Uranium mining waste is gradually going to be **transported using belt conveyors to a single location** where it will be processed progressively.
 - ▶ Estimated cost = **CZK 2.5 billion (EUR 95 million)**



TOTAL COST OF RECULTIVATION IN CZECH REPUBLIC

- ➔ Since 1989, the state has spent **CZK 40 billion (EUR 153 million)** on remediation after mining and processing of uranium ore
- ➔ Another **CZK 60 billion (EUR 230 million)** is planned to be spent after 2017

Source: Calla

NEW RAW MATERIAL POLICY

- **Positive statement of the Ministry of the Environment (MŽP)** to the Raw Materials Policy of the Czech Republic in the Field of Mineral Resources and Resources submitted by the Ministry of Industry and Trade (MPO) dated **22nd March 2017**
https://portal.cenia.cz/eiasea/detail/SEA_MZP244K
- Although the **parts of text, which mention mining the Brzkov-Horní Věžnice uranium deposit, have been removed** in response to the resolute protest actions of the civil society:
- **General conditions in relation to uranium mining:**
 - 16) To define consistently the conditions for the eventual start of uranium mining** in subsequent authorization procedures, in particular to require the development of a detailed hydrogeological model for the deposit area with a proposal for mining measures to avoid negative effects on groundwater status. The measures concerned should be met at the geological survey stages and before the uranium ore mining begins.
 - 17) Effective use of the extracted raw material** including the accompanying minerals.

DISAPPROVAL OF THE RAW MATERIAL POLICY

Declaration of Municipalities of Brzkov ([slide 32](#)), Věžnice, Polná and Přebyslav, and the NGO Our Future Without Uranium of May 2, 2017

- addressed to the Prime Minister and to the Ministries

- ▶ Adjustments in Raw Material Policy are assessed by municipalities and associations as **insufficient** due to:
 - ▶ 1. still **valid Government [Resolution no. 1086](#)** dated December 22, 2014 regarding preparations of new uranium mining in Brzkov-Horní Věžnice
 - ▶ 2. approved **geological surveys** of uranium deposits **on the territory of the whole Czech Republic** (except for the area near Stráž pod Ralskem)
 - ▶ 3. the possibility of extending the protected deposit area on the basis of geological surveys **without the participation of local authorities and private landowners**

DISAPPROVAL OF THE RAW MATERIAL POLICY

Declaration of Municipalities of Brzkov, Věžnice, Polná and Přibyslav, and the NGO Our Future Without Uranium of May 2, 2017

- **Unacceptable** that mining companies could start preparing uranium mining in the future **without the consent of the municipalities and landowners**
- **Unacceptable** that **under these conditions the mining company has the right to mining the deposit** and that the Czech Republic must allow it to invest in the mining
- **Against the negative aspects of mining** (groundwater loss and pollution, dustiness, noise, radon release, landscape damage / ecological burdens, increased heavy road traffic and rail transport, reclamation costs paid by taxpayers, economically inviable uranium mining re [slide 34](#))

>> a proposal to preserve the Raw Material Policy dated 1999 ([slide 4](#))
& to annul Government Resolution no. 1086,

BUT NO SUCCESS



NEW NUCLEAR REACTORS

GOVERNMENTAL SUPPORT

- Jan 2016 – **Permanent Nuclear Energy Committee**
 - Calla's critical PR dated June 15, 2017 (more in the next slide)
- March 2017 – first official suggestions for the **Lex Dukovany** (support of the Energetické Třebíčsko) to speed up the construction process
- June 2017 - the **Amendment to the Building Act** was passed – it **totally limits the participation of NGOs in all administrative proceedings**
 - Has impact on construction of NPPs and a deep geological repository!
 - Calla & other NGOs issued a critical PR dated June 27 (in Czech) + the initiative <https://www.vrattelidemprava.cz/> which was not evidently supported by enough people in CZE

CRITICS OF Government Nuclear Energy Committee

- ▶ Calla's Press release dated June 15, 2017 – "[Government Nuclear Energy Committee – Dealing With Hundreds of Billions of Czech Crowns in a Non-Transparent Way](#)"
 - ▶ Based on the Ministry of Industry and Trade (MPO)'s response to Calla's request for the release of the meeting minutes:

Permanent Government Nuclear Energy Committee's meeting minutes are not processed, only summary conclusions are made instead, called "press releases for the public".
- ▶ The Committee has 10 permanent and 15 non-permanent members and its key task is the interdepartmental coordination of state administration and municipal authorities in the implementation of the National Action Plan for the Development of Nuclear Energy in the Czech Republic. It is impossible to meeting deadlines without taking minutes.
- ▶ **Edvard Sequens, Energy Consultant of Calla**, said: "*Concealing the details of the work of the Government Nuclear Energy Committee is **alarming because it concerns the preparation of the most demanding investment project in the history of the Czech Republic, which, in the event of implementation, pulls out hundreds of billions of citizens' money from their wallets.***"

REGIONAL SUPPORT

REGIONAL SUPPORT

- ▶ April, 2017 - The Vysočina Regional Authority approved the foundation of a **Commission for the construction of a new nuclear power plant in Dukovany**
 - ▶ **Chairman of the Commission:** Governor of the Vysočina Region Jiří Běhounek, **members such as:** Chairman of the Civil Security Commission (OBK) Aleš John, Chairman of the Energetické Třebíčsko Vítězslav Jonáš, CEZ / Director of Dukovany NPP Miloš Štěpanovský etc.
 - ▶ The task of the new commission will discuss the process of **preparing and approving exceptional investment** in new nuclear reactors
 - ▶ The aim is to achieve the **renewal of the nuclear power plant's technology** so that the operation does not have to be interrupted, ie the new NPP is launched **before the decommissioning of the existing NPPs**
 - ▶ Possible construction of another new block in Dukovany **after 2035**
 - ▶ Conditions should be created **for lifetime extention of Dukovany NPP to 50-60 years**

Source: [Regional Authority of the Vysočina Region](#) & www.energeticketrebicsko.cz

MUNICIPAL SUPPORT

- ▶ June 2017 - **EKOREGION 5 & CEZ** concluded a **3-year cooperation agreement** with a promise of annual support of a total of **CZK 16 million (EUR 612 thousand)**
 - ▶ So-called **EKOREGION 5** = municipalities of **Dukovany, Rouchovany, Mohelno, Slavětice, Horní Dubňany and Rešice** from the vicinity of the Dukovany NPP
- ▶ **Long-term financial support to municipalities from CEZ:**
 - ▶ The possibility of extraordinary financial assistance in case of natural disasters
 - ▶ Several tens of millions of crowns per year for the development and welfare of municipalities in the region

Source: Daily Třebíč http://trebicky.denik.cz/zpravy_region/obce-v-okoli-elektrarny-dostanou-penize-smlouvy-jsou-podepsane-20170619.html

VENDORS

ΛΕΝΔΟΚ?

- ▶ Jan-Feb 2017 - “**Negotiations with foreign vendors on the construction of nuclear reactors in the Czech Republic**” in NukeNews No. 24
- ▶ April 2017 - **Korean company Korea Hydro & Nuclear Power (KHNP)** offers Generation III+ reactors for the construction of new nuclear blocks in the Czech Republic + **Confederation of Industry of the Czech Republic** offers support to a company that offers **70% of supplies to Czech companies** (source: Czech Press Agency/ČTK)
- ▶ June 2017
 - **Czech President Miloš Zeman**
“The new Dukovany NPP to **the Russians** and **without a tender**” (source: iDnes.cz, 29.6.2017)
 - **CEZ CEO Daniel Beneš:**
“Moreover, this week on Tuesday [note: 27.6.2017], the **Chamber of Deputies approved a parliamentary version of the amendment to the Building Act**, which will allow us to **shorten the project for a new nuclear block by up to five years**. This Act, Mr. President, will get to your table for signature.”
(source: Mladá fronta DNES, 30.6.2017)



FINANCIAL PLAN

- ▶ June 2017 - Prime Minister Bohuslav Sobotka:

investor in the new block of Dukovany NPP should be **ČEZ or state**

(source: press release by MPO/[ČEZ](#))

- ▶ The **final option** will be decided by the government in **2018 out of these variants**:
 - ▶ **1.** the construction of the new Dukovany NPP would be realized by a **subsidiary of ČEZ**,
 - ▶ **2.** **The state would buy this subsidiary from ČEZ**, and the subsidiary would subsequently construct NPP,
 - ▶ **3.** **the state would buy out part of ČEZ**, which could, for example, include nuclear power plants. And this part would then be **100% owned by the state** and would realize the construction of this block.

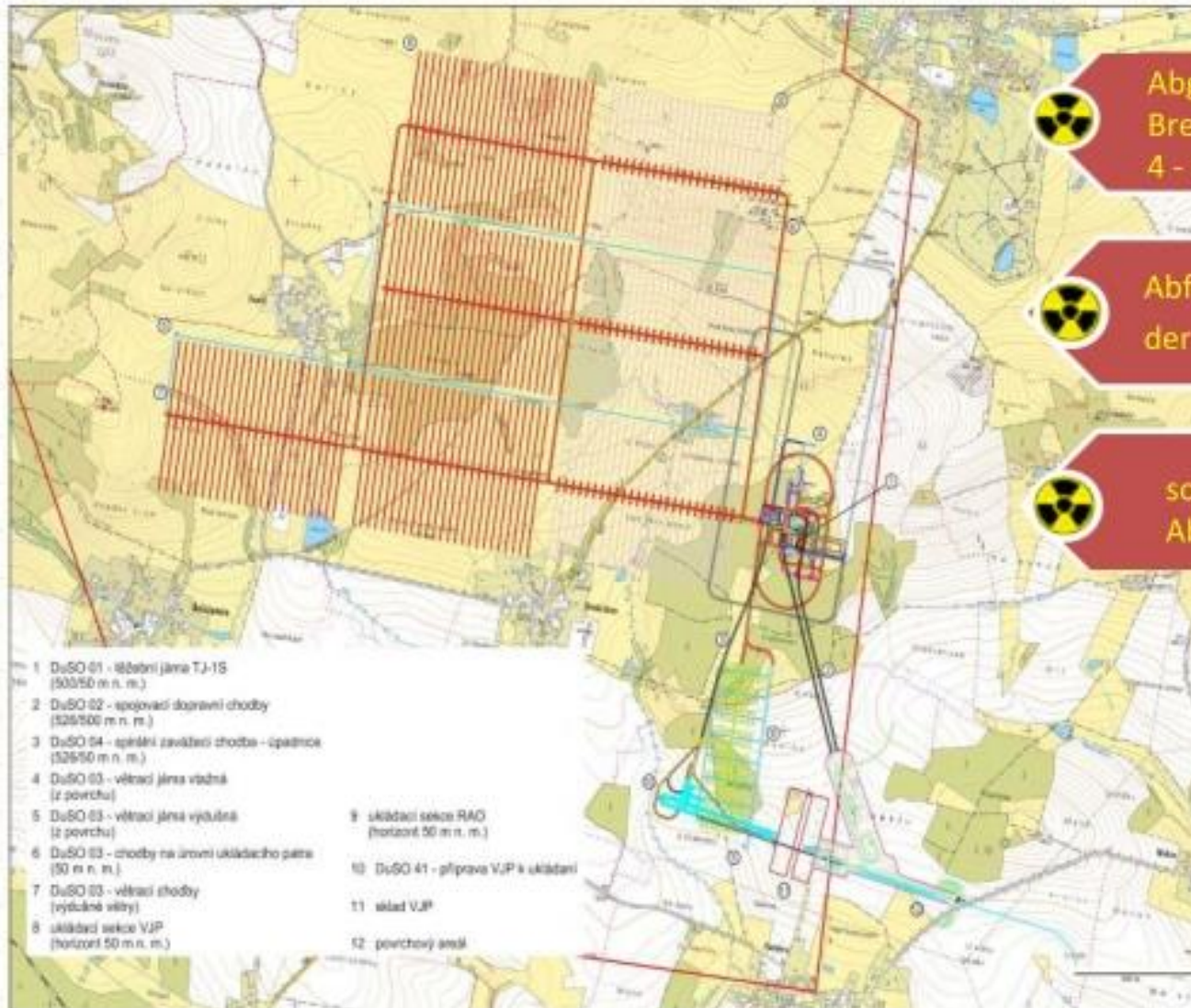
TRANSPORT OF LARGE COMPONENTS

- ▶ **The prerequisites** for the transport of large parts on the Czech national roads with regard to the construction of the new Dukovany NPP:
 - ▶ The Ministry of Transport (MD) is tasked by Prime Minister Bohuslav Sobotka to submit to the Government, by **August 2017, a particular road map for necessary investments on roads and bridges** so that these actions can be prepared and approved in due time.
 - ▶ *Calla's estimate: preparations would take approx. 15 years.*
- ▶ Also, **shipping on the Elbe** is considered.



RADIOACTIVE WASTE MANAGEMENT

Regierungskonzept 2001: Tiefendlager für hochradioaktive Abfälle



Abgebrannte
Brennelemente:
4 - 10 Tausend Tonnen?



Abfälle aus dem Rückbau
der KKW

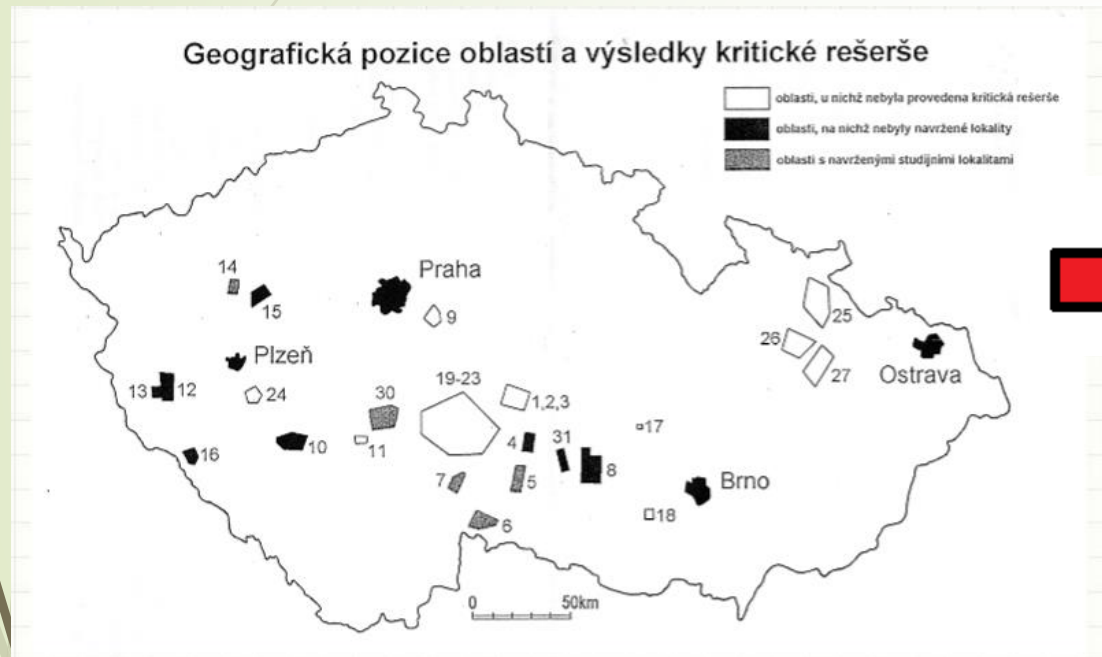


sonstige radioaktive
Abfälle - ohne KKW

FROM 27 SITES in 1990s to 9 SITES in 2017

1990s

2017





SITING PROCESS FOR A DEEP GEOLOGICAL REPOSITORY

- ▶ **Radioactive Waste Repository Authority (RAWRA)/
Správa úložišť radioaktivních odpadů (SÚRAO)**
founded in 2001 <http://www.surao.cz/en>
is in charge of the final site selection
- ▶ The main points summarized in the [presentation](#) “The siting process for a Geological Disposal Facility (GDF) in the Czech Republic – PUBLIC PARTICIPATION“ (August 2015)

NEWS SINCE AUGUST 2015

- **2 new sites ETE-jih (South of Temelín NPP) + EDU-západ (West of Dukovany NPP)** were added to **the original 7 sites** in **May 2016** re the RAWRA's back-up plan called "**Project Moldanubikum**"
- **Act to strengthen the rights of municipalities** has still not been passed by the government, see [PR](#) dated Jan 15, 2017
- **Working Group for Dialogue on a Deep Geological Repository** has dissolved by autumn 2016, see [PR](#) dated June 23, 2016
- **Platform Against Deep Repository** has replaced WG (Edvard Sequens of Calla is the Platform's Secretary), see [PR](#) of Oct 4, 2016
- **European Commission** started infringement procedure with the Czech Republic in April 2016 due to outdated National programme from 2002, see [PR](#) dated July 13, 2017
- New **National Programme on (Concept of) Radioactive Waste and Spent Fuel Management** - the Ministry of the Environment is now dealing with the comments from the SEA public hearing on June 28, 2017, see [PR](#) dated June 27, 2017

DAY AGAINST REPOSITORY

- Protest actions in seven sites of **Čertovka, Březový potok, Magdaléna, Čihadlo, Hrádek, Horka, Kraví hora** (reasons for them in [slide 6](#))
- the sites of **ETE-jih + EDU-západ** do not take part and wait for the results of geological research in November 2017

- Day Against Repository [III.](#)
- Day Against Repository [II.](#)
- Day Against Repository [I.](#)





PLATFORM AGAINST DEEP REPOSITORY

The Platform Against Deep Repository brings together 22 municipalities and 12 associations, in order to enforce such a way of finding a solution which would be open, transparent and which, by law, would sufficiently guarantee possibilities to defend municipality's and the public's rightful welfare.

<http://www.platformaprotiulozisti.cz/>



PRESS RELEASES **SINCE 2014** BY CALLA & PLATFORM AGAINST DEEP REPOSITORY IN CHRONOLOGICAL ORDER

► http://www.nuclear-heritage.net/index.php/Olga_Kalisova

(summary of all PRs in one place, including articles published in NukeNews)

SEE ALSO:

► Calla's PRs in English:

http://calla.cz/index.php?lang=eng&path=e_energy

► Platform's PRs in English/Czech:

<http://www.platformaprotiulozisti.cz/cs/press/>

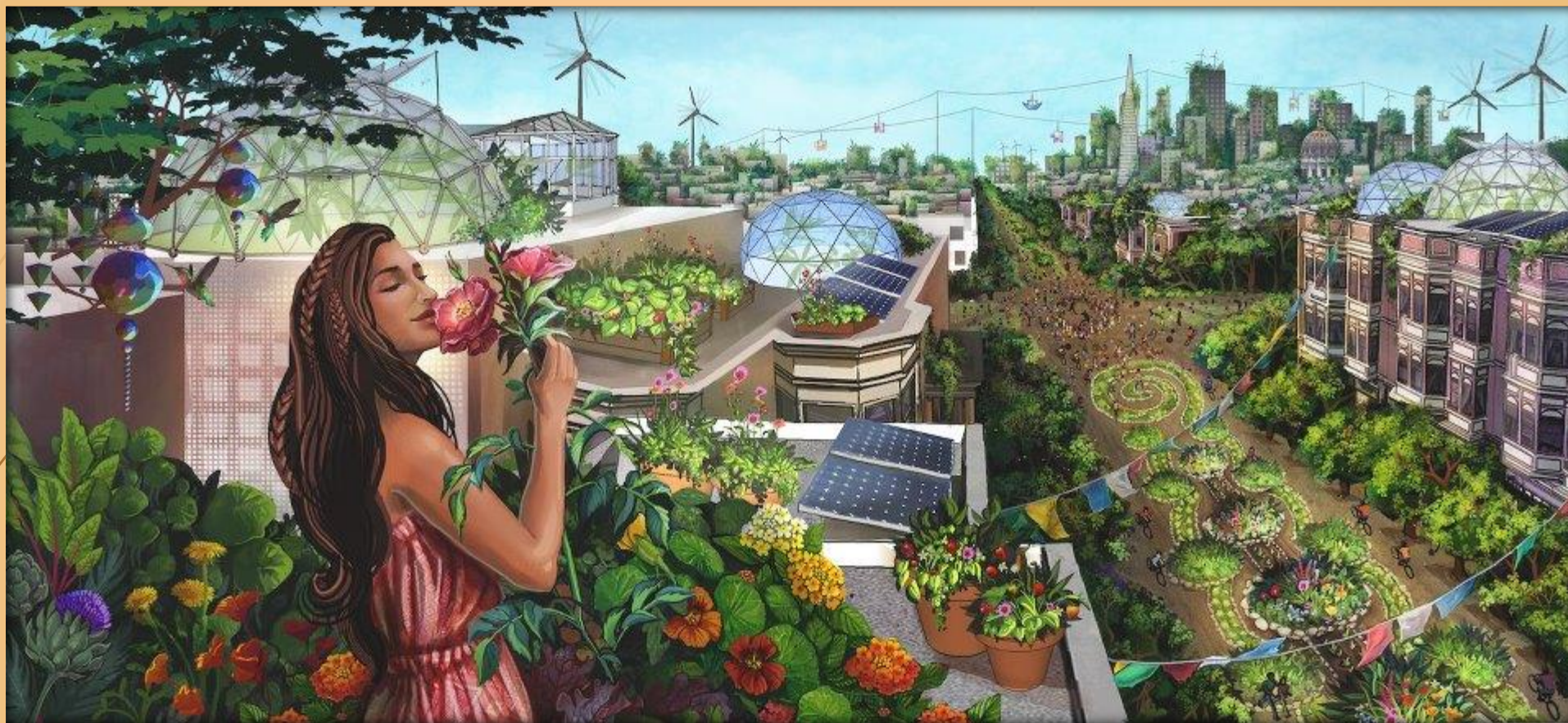
► Nechceme úložiště – news only in Czech:

<http://www.nechcemeuloziste.cz/cs/aktuality>

EXAMPLES of CALLA's COOPERATION ON THE INTERNATIONAL LEVEL RE RWM

- BUND Naturschutz in Bavaria, e.g. [seminar](#) “Germany and nuclear waste - can we learn?” in Nov 2016
- [Joint Project](#) – cooperation 10 NGOs
- Waldviertler Energie-Stammtisch, Lower Austria - e.g. seminar in [Raabs](#) in June 2017, Austrian/Czech cooperation on [Day Against Repository III./Čihadlo](#) site
- Atomstopp in Upper Austria & Friends of the Earth Czech Republic - e.g. [Nuclear Energy Conference](#)
- Nuclear Transparency Watch - [press release](#) dated June 28, 2017
& [Report](#) on the Czech Evaluation of the National Programme on Radioactive Waste and Spent Fuel Management dated July 10, 2017

THANK YOU FOR LISTENING



Calla – Association for Preservation of the Environment

Fráni Šrámka 35, 370 01 České Budějovice, Czech Republic

Website: www.calla.cz , Email: olga.kalisova@calla.cz

Mobile: +420 720 995 944 / Tel.: +420 384 971 930