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RADIOACTIVE
WASTE REPOSITORY
AUTHORITY

Stakeholder involvement in Radioactive Waste Management in the Czech Republic

SÚRAO - Radioactive Waste Repository Authority

www.surao.cz

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The State guarantees the safe disposal of all radioactive waste

As stated by the Atomic Act No. 18/1997

The Concept of Radioactive Waste and Spent Nuclear Fuel Management (approved by the Government of the Czech Republic on 15 May 2002, resolution No. 487 and newly taken into account by resolution No. 1061 of 15 December 2014, followed by the SEA process) states the following:

- **SÚRAO** is responsible for the **disposal** of RAW
- Waste producers are responsible for the **safe management of RAW**
- The establishment of the Nuclear Account to collect financial means for final disposal – NPP producers pay 50 CZK/MWh (small producers approx. 30,000 CZK/200-litre drum for disposal)
- **The NPP operator is responsible** for **NPP decommissioning and the processing of RAW** before its final disposal and creates financial provisions to cover the cost of future NPP decommissioning
- **SÚRAO's Board** – supervisory body – 11 members (representatives of the state administration, radioactive waste producers and the public)

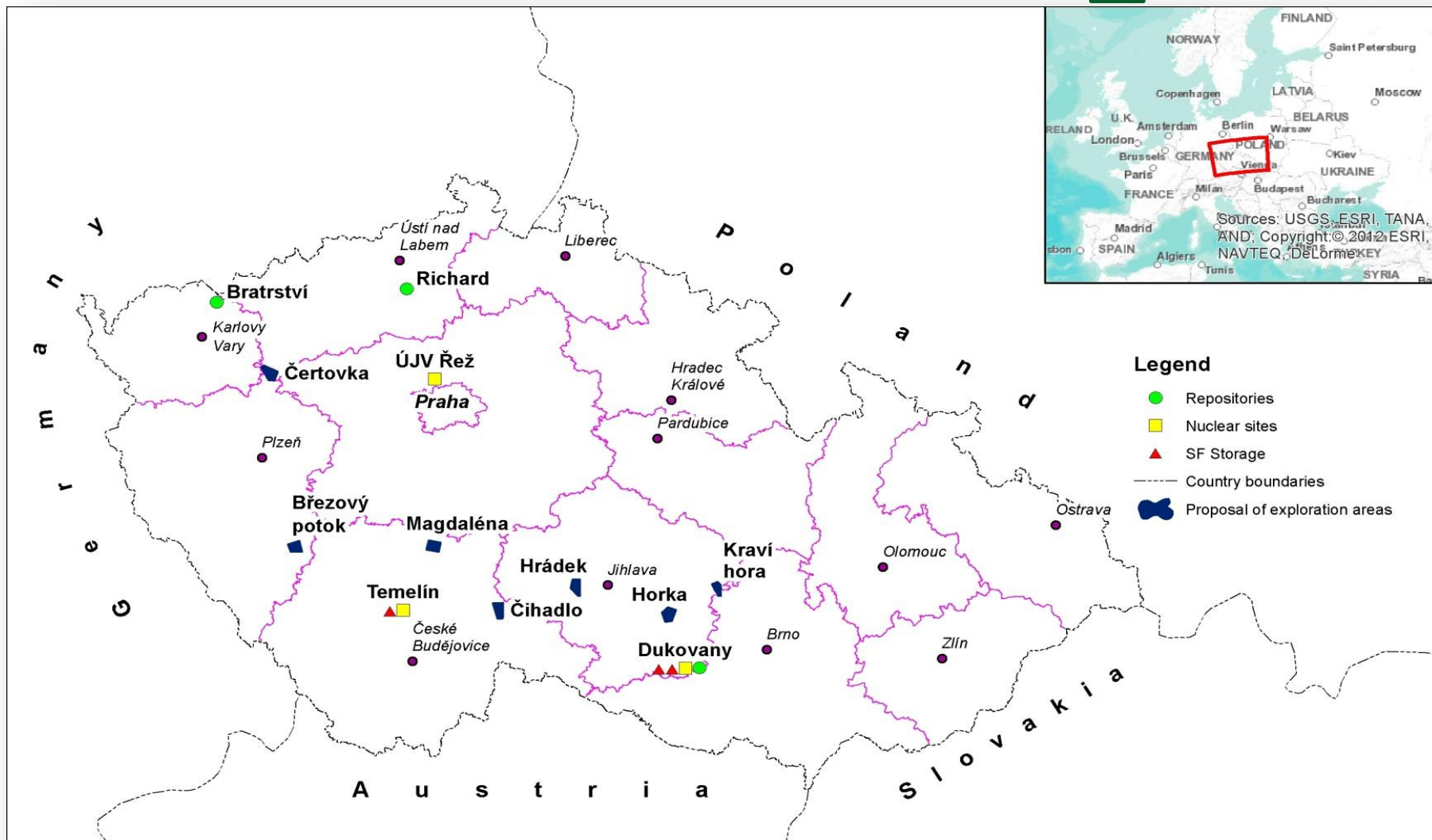
Welcome to the Czech Republic

3 repositories in operation; 7 potential sites for a DGR



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Dukovany Repository

Near-surface repository



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situated within the Dukovany NPP complex

Disposal of LLW/ILW from the nuclear power sector

Capacity: 55 000m³ disposal space (180,000 drums)

Operation: since 1995

Surface area: 1.3ha

RAW disposed of in emplacement chambers



Richard Repository



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(near the town of Litoměřice)

Former limestone mine

Disposal of LLW/ILW from the research,
health sectors/institutional RAW

Capacity: 10 000m³

Operation: since 1964



Bratrství Repository

(near the town of Jáchymov)



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Former uranium mine

Disposal of LLW/ILW with naturally-occurring radionuclides/institutional RAW containing naturally-occurring radionuclides

Capacity: 1 200m³

85% filled

Operation: since 1974



SNF storage



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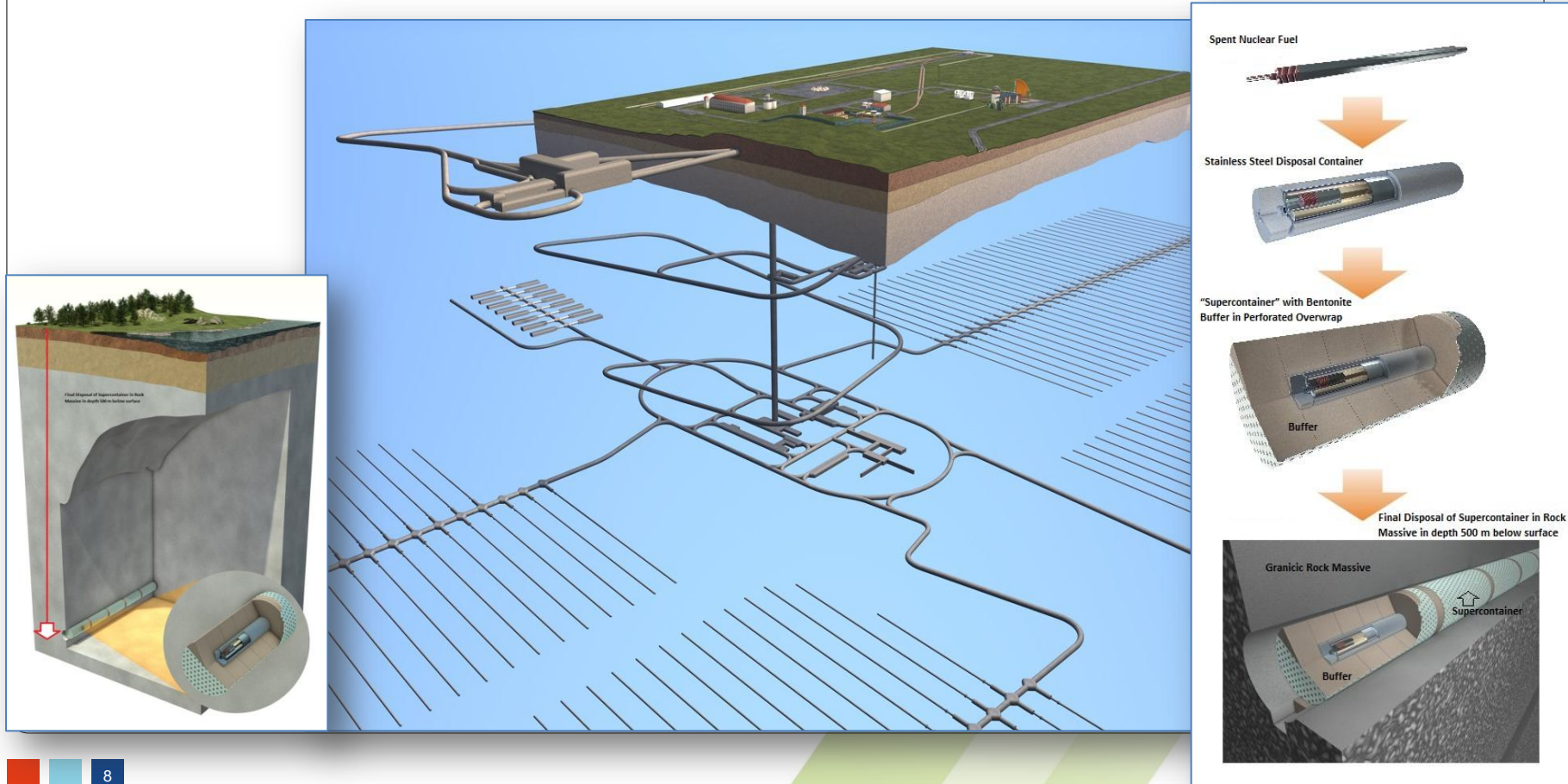
3 storage facilities

- 2 NPP Dukovany
- 1 NPP Temelín
- Castor casks





Reference design of a deep geological repository





DGR siting process

Brief summary

- **1992 – 2003:** The site selection process has been under way since 1992; **2003** - 6 potential sites were selected in 4 regions for subsequent geological survey work based on the evaluation of criteria generally applicable to nuclear facilities, start of the Geo Bariera Project (only airborne geological survey). **Local public against geological work in the years 2003 – 2005.**
- **2003 – 2010:** Many localities against DGR development and also against geological survey work (a series of referenda in the years 2003-2004, 2007-2008 and 2012-2013).
- **2005 - 2009** The project was **SUSPENDED** - time to find public acceptance
- **2008** – focus on military (and other) areas.
- **2010:** New site selection strategy based on the voluntary participation of local municipalities
- **2011:** Amendment to the Atomic Act: financial contributions to affected municipalities – CZK 600,000/year per municipality + CZK 0.30 per m² annually, with a maximum annual contribution of CZK 4 million per municipality (a total of over CZK 70 million/year/affected locality to compensate for geological survey work).
- **2012-2013:** Intensive discussions with municipalities concerning geological survey acceptance conditions at the localities.



DGR siting process (2)

2013 – to the present

- **Situation at the localities:** some municipalities have agreed with survey work, others remain against: e.g. Kraví hora site → 6 municipalities are for and 2 against (one of which is against the DGR, but not against survey work).
- **Modification of the strategy** → SÚRAO has divided survey work into 3 stages and submitted applications to the Ministry of the Environment for the approval of investigation areas concerning only the initial stage of geological investigation work at all 7 localities for the construction of a deep repository for the disposal of radioactive waste (Kraví hora: on 5 May 2013, the other 6 localities: September 2013).
- **October 2014:** The Ministry of the Environment issued its approval of investigation areas at all 7 candidate sites.
- **March 2015:** A number of municipalities appealed against the decision of the Ministry;
- **September 2015:** approval of investigation areas confirmed at all 7 sites
- **December 2015:** financial contributions sent to all 40 municipalities



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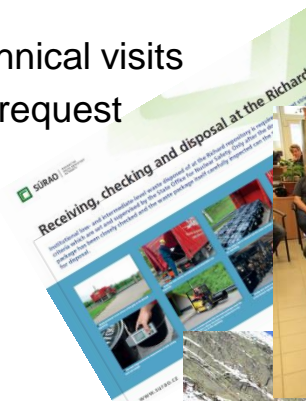
Communication and information

7 sites – 40 municipalities, 18 000 inhabitants

- Distribution of leaflets, newspapers, technical visits
- Regular meetings, special meetings on request
- Information centres
- Working Group on Dialogue meetings



- Involving the public in the decision making process
- International experience (ARGONA, IPPA, FSC)





Public involvement development

First public hearing in May 2009

2007-2009: ARGONA Project www.argonaproject.eu

– first Reference Group for Stakeholders → **first Czech public hearing in May 2009**

November 2009: National conference – “**Deliberation - Way to the Deep Geological Repository**”, under the auspices of the Minister of Industry and Trade → **first Czech “round table” discussion involving all stakeholders**

June 2010: “**round table**” discussion on how to establish transparency and open dialogue with all stakeholders; establishment of the “Working Group for Dialogue” – an independent discussion forum for establishing transparency in the site selection process involving the public

25 November 2010: → **first meeting of the Working Group for Dialogue**
(representatives from state administration authorities, local communities, local NGO, Czech NGOs, both chambers of the Czech Parliament, SÚRAO)

- **2011-2013: IPPA Project** www.ippaproject.eu
 - Implementing Public Participation Approaches
 - End Users Conference, September 2013, Prague
- **Since 2001: FSC** – Forum on Stakeholder Confidence (NEA/OECD)
 - Facilitates the sharing of experience in addressing the societal dimension of RWM
 - **FSC Meeting, October 2012, Prague + Carlsbad**





Working Group for Dialogue on a DGR

Established in November 2010 – national stakeholder group

To ensure mutual and meaningful dialogue on the DGR siting process

Advisory group for the MIT and MoE

Enforcement of municipalities in the process of DGR siting ⇒ proposals for legislative changes

33 members - local municipalities, NGOs, MP, senator, SÚRAO, SÚJB, MIT, MoE, sociologist, lawyers

2015 WG transferred under the Government Council for Energy and Raw Materials Strategy

New Working Group aims from 2015



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The mission of the Working Group is to ... find ways in which to involve the public (local government, NGOs) in terms of information provision and the decision-making and legislative processes concerning the preparation and implementation of the deep geological repository project. (from Status 2015)

Discussion on the criteria for DGR site selection

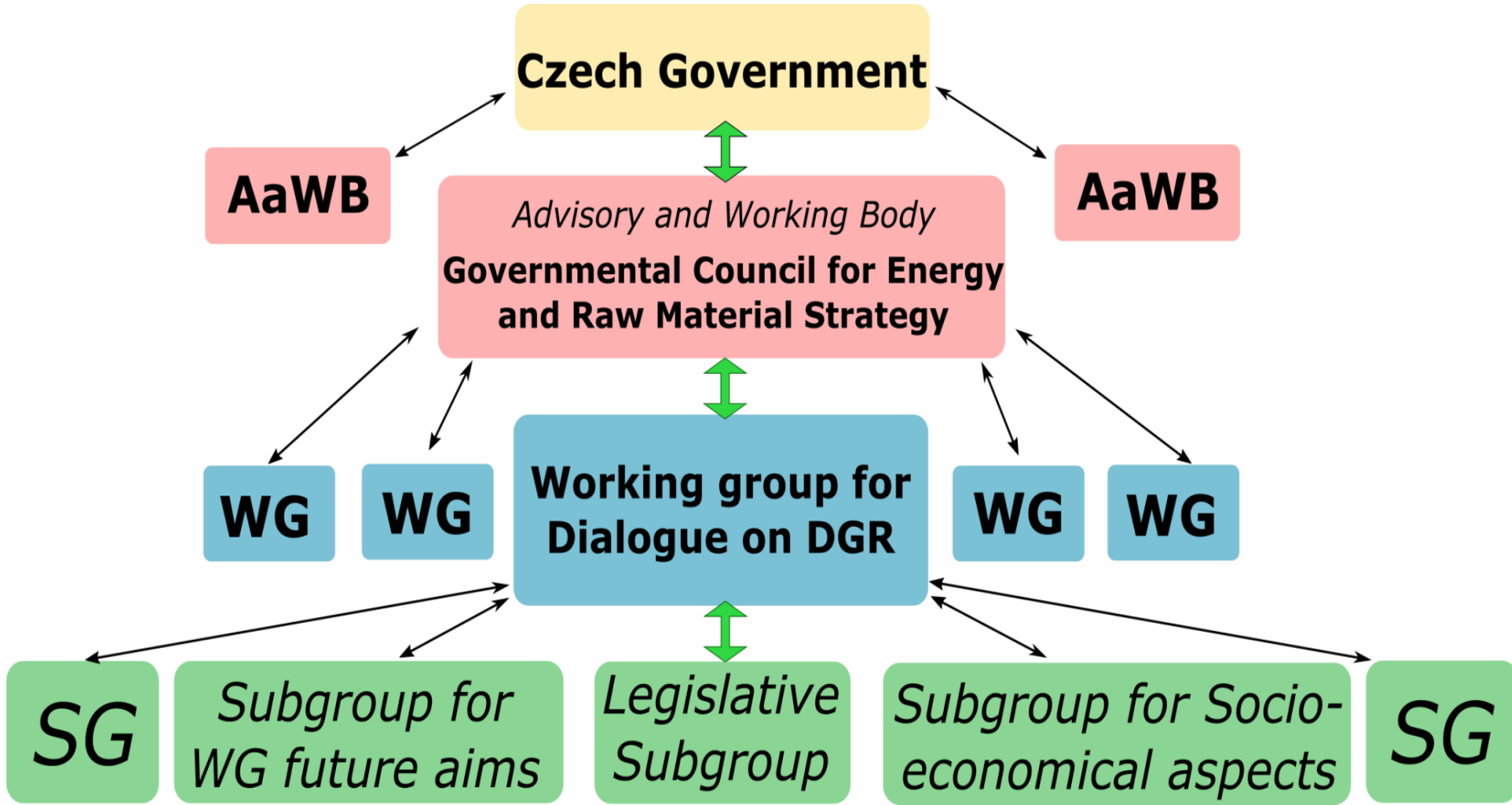
Debate on the Concept of Radioactive Waste and Spent Nuclear Fuel

Extension of the tools available for providing information and the equitable distribution of compensation in the localities

Establishing cooperation with foreign organisations similar to the WG for Dialogue

Collection of information and its distribution among the public

Funding for these activities



Candidate and Final Site Decision-Making Process

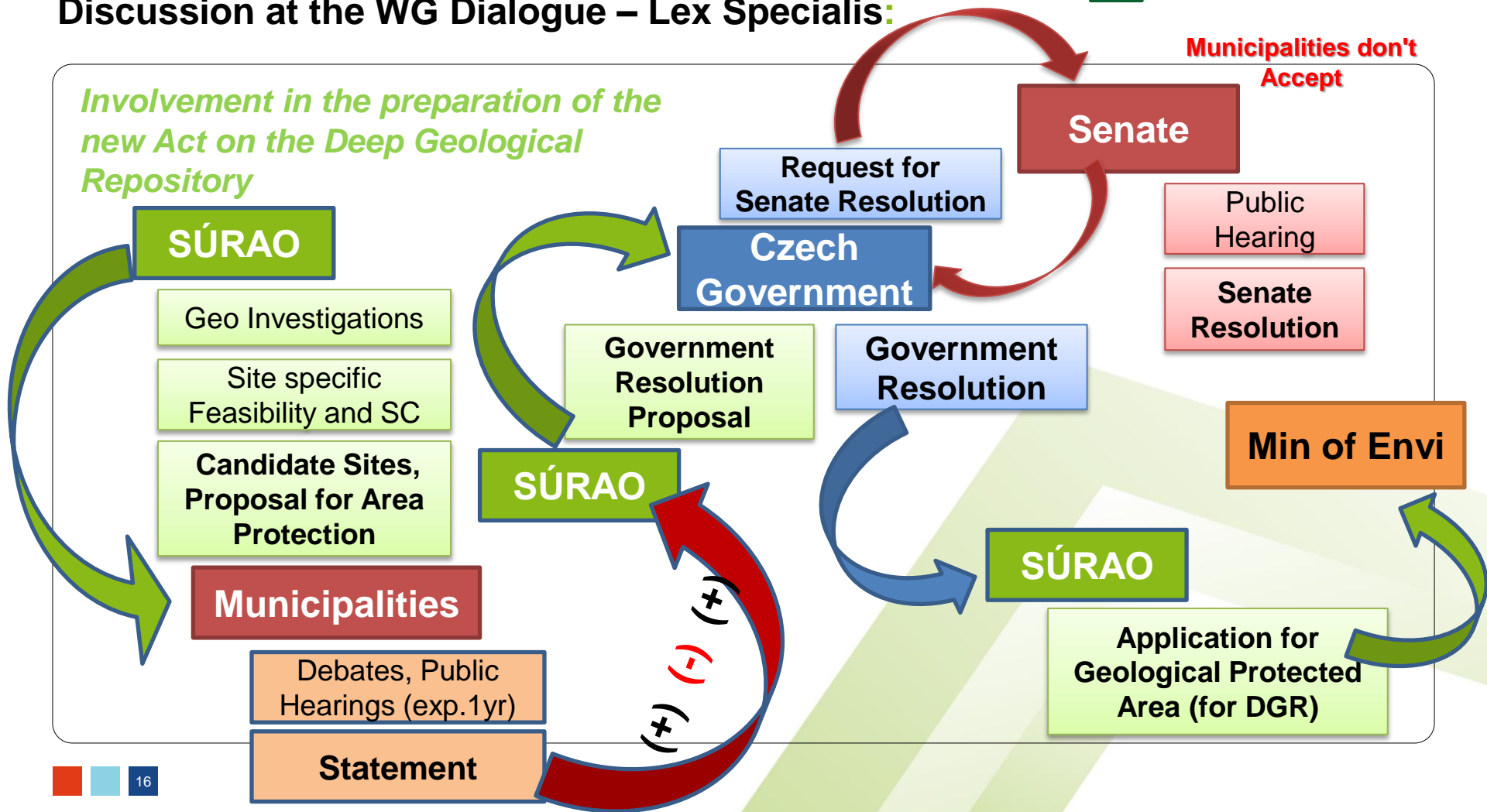


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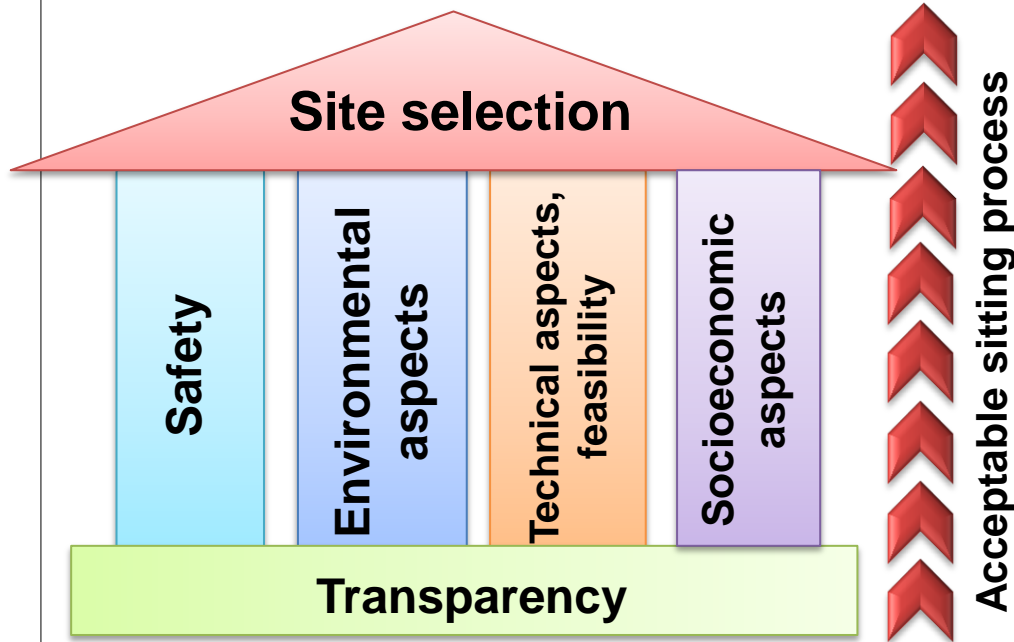
Discussion at the WG Dialogue – Lex Specialis:

Involvement in the preparation of the new Act on the Deep Geological Repository





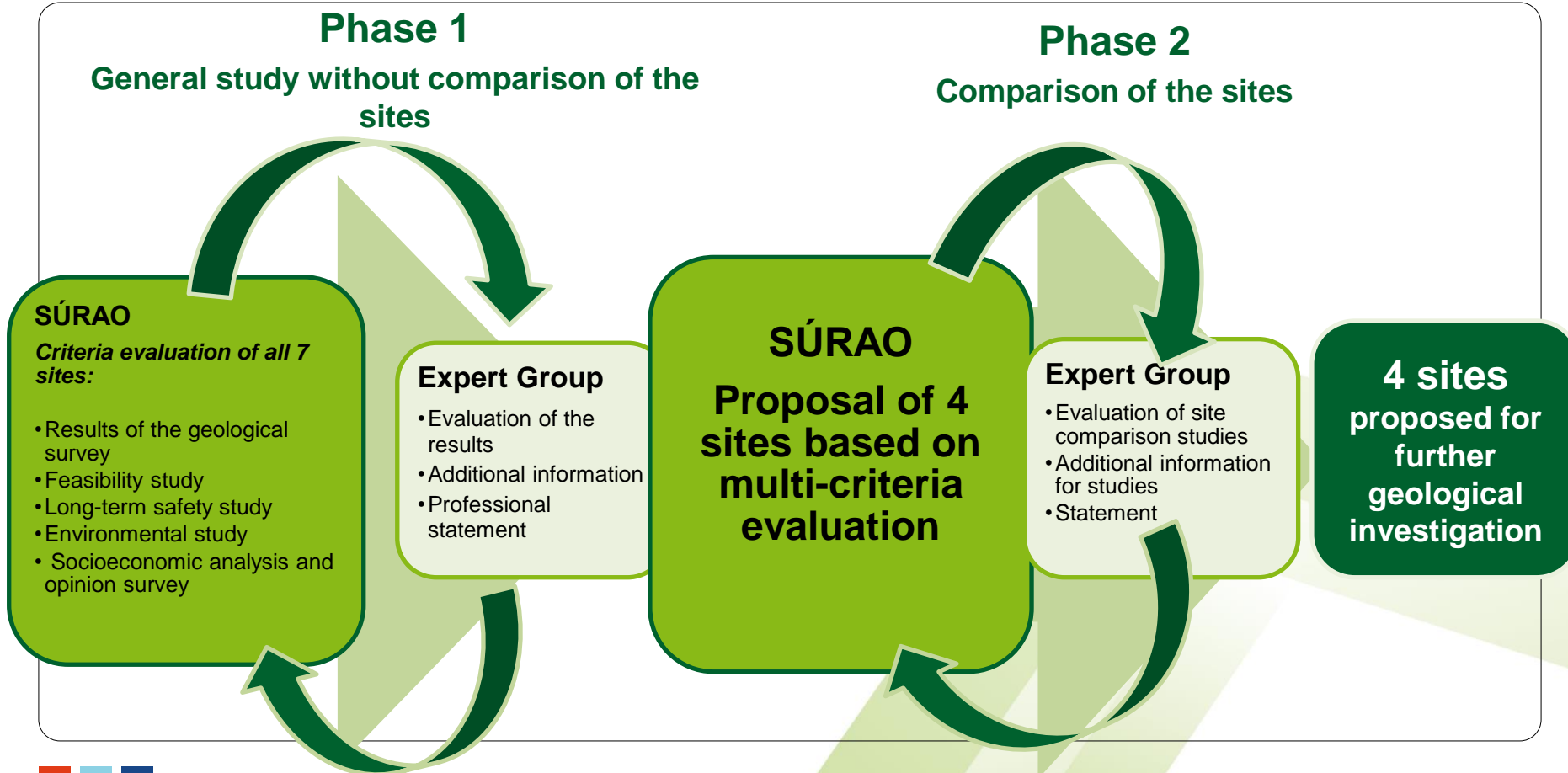
DEEP GEOLOGICAL REPOSITORY



- 2020 – Two candidate sites
- 2025 – Safety approval of the final site
- 2030 – Construction of an underground research laboratory
- 2050 – Construction of the DGR
- 2065 – Commissioning of the DGR (Atomic Act)



Site reduction from 7 – 4 in 2020



Social science in the siting process



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Opinion surveys, socioeconomic and social studies

- The need to study and analyse social impacts and conditions was recognised relatively soon
- Sharing international experience in the decision-making process

Independent studies in 2015

by the Institute of Sociology of The Czech Academy of Sciences

Methodology of communication and participation in the deep geological repository decision-making process, certified by the Ministry of Industry and Trade

Roles of the local communities in the DGR decision-making process

Perception and evaluation of DGR negotiations



Implementer studies



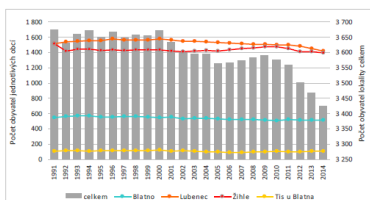
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Opinion surveys to monitor

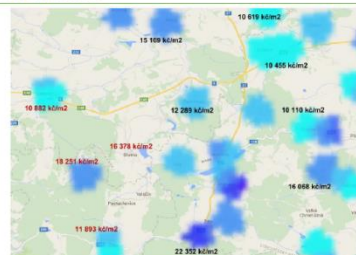
- Level of knowledge, trust, information, dis/agreement, threats, positive or negative expectations

vývoj počtu obyvatel v lokalitě



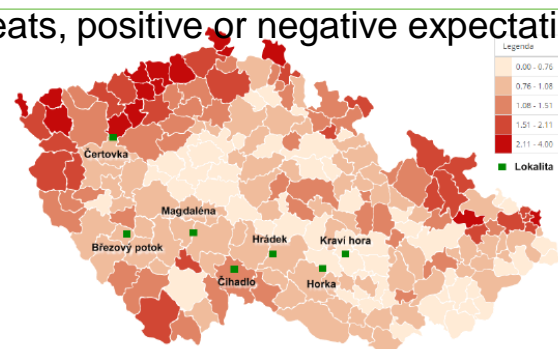
V posledním desetiletí 20. století počet obyvatel víceméně kolísá, výkyvy v řádu desítek osob, celkový počet obyvatel však v tomto období nikdy neklesl pod 3 600 osob.
Výraznější pokles až po roce 2001, resp. 2009, kdy se celkový počet obyvatel snížil až na současné minimum 3 424 osob.
Nejvýznamnější úbytek v obci Žihle: od r. 1991 o více než 8 % osob, v Lubenci ale obdobně.

rovnání cen nemovitostí



Výstavba nových bytů (rodinné i bytové domy) v lokalitě Čertovka
byty celkem 0 30 2 8 5 2 5 3 6 5 5 15 1 7

Sociální charakteristika



Index sociálního znevýhodnění:

- podíl dětí narozených matkám s nejvyšší základním vzděláním,
- podíl dětí narozených matkám mladším 18 let,
- podíl osob s nejvyšší základním vzděláním ve věkové kategorii 20 až 44 let.

Socioeconomic study – 7 sites, 40 municipalities, more than 18 000 inhabitants

- 2-year project – ends in December 2016
- Socioeconomic description of all the sites including development over recent decades
- Focus on living standards, infrastructure, inhabitants, real estate prices, employment etc....
- The study will offer basic facts on, and a description of site development during the last 10 years and identify individually important factors at each site
- To predict the DGR's socioeconomic influence in the future



Thank you for your attention

www.surao.cz

Video: Current deep geological repository concept:

<http://youtu.be/Q3klant3HNq>