



**Analysis of long term options  
in the management of closed  
uranium mining sites:**

***A pluralistic expertise experience:  
Groupe d'Expertise Pluraliste  
in Limousin (France)***

*IRPA 12 - Buenos Aires, 20 October 2008*

**Yves Marignac**  
GEP Coordinator



## SUMMARY

### **Context and Concerns**

- Uranium mining, post-mining and concerns

### **Role and Means**

- Mission, organisation and means of GEP

### **Work in progress**

- Priorities and current work of GEP

### **Interim Balance and Next Steps**

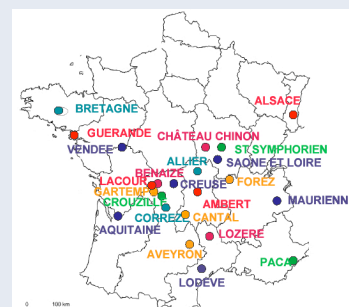
- Achievements and challenges



## CONTEXT AND CONCERNS

### □ A large and complex industrial legacy

- Uranium mining in France = 76,000 t U
  - > 200 Mt waste rocks, scattered on > 200 sites
  - > 50 Mt mill tailings, on 17 disposal sites
- Closure work done: now treatment, monitoring...



Uranium mining zones in France



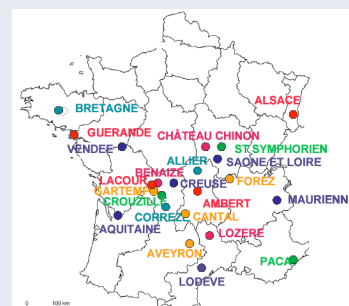
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- Modified cycle of natural born radionuclides
  - > Impact on health? Impact on ecosystems?
  - > Local concerns (esp. Limousin), media and juridical cases
- Sustainability of remediation (long term issue)



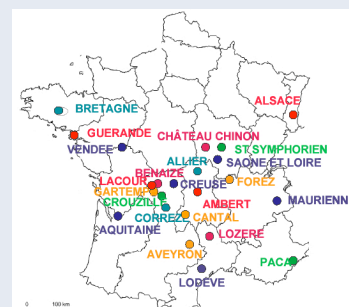
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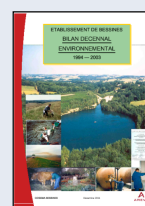
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### □ Local and national authorities' response

- Long term plan to be defined (2006 Act)
- Limousin:
  - specific operator assessment (Areva)
  - critical review (mainly IRSN)
- **GEP: pluralist expertise group** on uranium mining sites in Limousin



## ROLE AND MEANS OF GEP

### □ Assignment by Government and ASN (2006-2009)

1. Contribute to the **critical analysis**
2. Help choices with **recommendations** for management and monitoring (reduction of impacts, long term, methodology...)
3. Contribute to the **information** of local stakeholders and the public



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Competencies  
(technical fields)

Viewpoints  
(prof. positions)

Public Institutes & Administration	NGOs and independent	Industry	Foreign experts
IRSN, InVS, Academics, Authorities	Independent experts, Local NGOs	Areva NC	International REX (IAEA), UK, CH, B, L...
16 experts	5 experts	3 experts	6 experts



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### □ Suitable and effective means

- Adequate rules (e.g. co-animation of groups)
- Appropriate funding (including for specific experts work)
- Access to existing and needed studies and external exchanges
- Dialogue with local stakeholders through established commissions



## GEP'S WORK AT A GLANCE

### □ Transfers to the environment

- Understanding the current level of efficiency of containment systems (regarding waterborne and airborne transfers)
- Adapt water treatment and target activities to impacts
- Further assess contribution of mining sites / radon



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- Go beyond health impact assessment set forth in regulations
- Develop **innovative methods** adapted to context and concerns (e.g. radiological impact on ecosystems)

**1** **Environmental Impact**  
*radiological and chemical*

**2** **Health Impact**  
*radiological and chemical*

**3** **Health monitoring**



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### □ Regulatory issues and long term

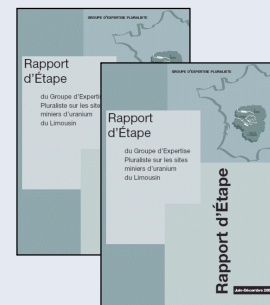
- Implementation of the regulatory framework for long term management
- Timescale and scenarios to consider
- Memory, liability, stewardship issues



## GEP'S INTERIM BALANCE AND NEXT STEPS

### □ Demonstrated operational status

- Deliveries**
- 2 interim reports (end 2006, end 2007)
  - First recommendations implemented
  - Reports to local commissions (Limousin)
  - Website on-line





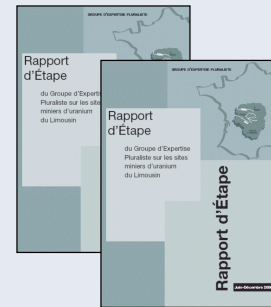
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### □ Evidence of added value

- Playground for broader technical and scientific dialogue
- Enhanced and innovative methodology
- Interlinking technical and societal analysis to address long term issues



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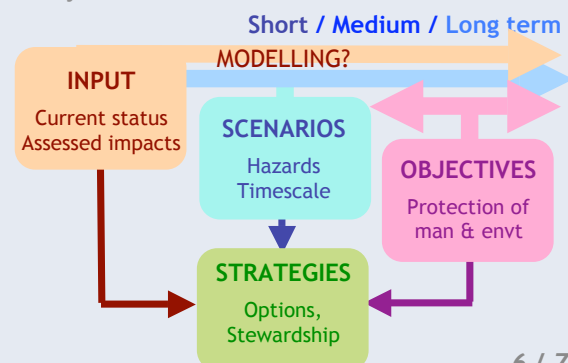
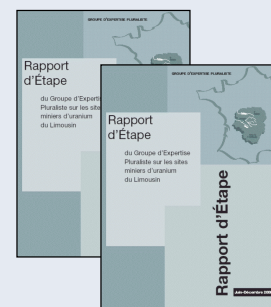
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### □ Challenges for future work

- Conclude on innovative studies
- Build prospective assessment based on current status
- Draw a global approach from site-specific studies





## CONCLUSION

### □ GEP:

**An innovative approach opening new fields  
with encouraging interim results  
and a challenge to deliver comprehensive/operational conclusions**

**Important to share with the radiation protection community  
on methodology and results  
to share experience and ensure consistency**

Thank you for your attention!

**More information:** IRPA 12: **Poster Session**  
**Article on the website**

**Website:** [www.gep-nucleaire.org](http://www.gep-nucleaire.org) (in French)

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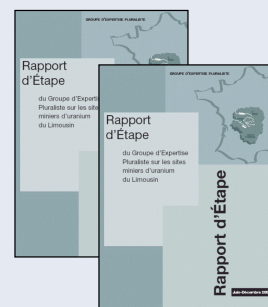
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