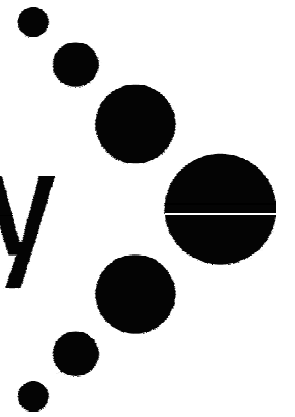


National Nuclear Laboratory



How can networks improve the implementation of Environmental Remediation Projects

WM 2010 – March 2010

Presented by : Mr Peter M Booth, National Nuclear Laboratory



Presentation Scope

- Variance of issues and sites
- Challenges and potential gaps
- Experience of working within networks and learning
 - SAFEGROUNDS
 - CL:AIRE
- Why a Network?
- Key learning points from network membership
- Benefits to ENVIRONET
- What will ENVIRONET provide

Types of Sites requiring ER

- Operational and future sites
 - Facilities of the nuclear fuel cycle
 - Radiological facilities
 - Uranium mining and processing sites
- Legacy sites
 - Closed uranium mining and processing sites
 - Closed NORM sites
 - Former nuclear industry sites and military sites
 - Land contaminated by nuclear and radiological accidents and incidents
 - Orphan radiological sites

Types of challenges associated with ER

- Primarily legacy issues
- Pollution and contamination does not just effect the vicinity of the plant, mine, waste tailings etc
- Nowadays there is a greater focus on environmental legislation and permits, doing it correctly
- Disposal Routes
- Greater requirement for stakeholder engagement
- Sustainable Technologies
- Accessibility
- **COST**

One kind of site



And, another kind of site



Issues and Potential Gaps

- We use the term remediation but is the term management more appropriate?
- Very few provable solutions apart from moving material from one location to another.
- Very little sharing of experiences and output from R&D.
- Do the commercial challenges and restrictions our organisations face allow us to help those who need it most or even each other?

Issues and Potential Gaps

- Need to understand the problem first and often better, but why?
 - To understand the risk.
 - To aid the decision making process.
 - To understand the funding implications.
 - To work within the regulatory framework of each Member State which may be different.
 - To know which solutions may work.
 - To choose the most appropriate options and solutions.
 - Sustainability

Issues and Potential Gaps

- Not just a legacy issue.
- Prevention is better than the cure
 - For new operations we need to understand the complete life cycle.
 - Better planning.
 - Understand waste types and subsequent routes.
 - Solutions are generally problem specific.
- Solutions need to be sustainable – management.
- International R&D should be focussed on technologies.

NNL's experience in network membership

- Experience of working in networks
 - UK based
 - **SAFEGROUNDS ,SD:SPUR, SAFESPUR**
 - SAGTA
 - **CL:AIRE**
 - International
 - NICOLE
 - ENDSEP
 - **IAEA ENVIRONET**
 - IAEA IDN (likely to join)

SAFEGROUNDS, SD:SPUR & SAFESPUR

- SAFEGROUNDS is a forum for developing and disseminating good practice guidance on the management of radioactively and chemically **contaminated land** on nuclear and defence sites in the UK.
- SD:SPUR is a network for developing and disseminating good practice on the sustainable management of **materials and decommissioning wastes** arising from nuclear sites.
- SAFESPUR revolves around working with the SAFEGROUNDS and SD:SPUR networks to **share supplier good practice** for nuclear and defence sites.

SAFEGROUNDS

- Founded in 1998.
- Has over 150 members, predominantly UK based.
- Steering Group of c20 members representing industry, regulators, government departments and NGO's.
- Its aims are to:
 - Create, maintain and promote guidance;
 - Provide a forum for debate and encourage stakeholder participation;
 - Provide information on policy, regulatory and technical issues;
 - Develop further SAFEGROUNDS supporting documents.

SAFEGROUNDS

- Achievements
 - Widely recognised
 - Produced guidance on land management, site characterisation, record keeping, decision making and stakeholder engagement.
 - Brought industry, regulators and NGO's closer together through constructive dialogue.
 - Bi-annual conference.
 - Guidance widely used by a variety of stakeholders.
 - c400 website hits per month – 25 countries.
 - Key documents are regularly downloaded.
 - Industry expect contractors to adhere to the guidance.

Potential involvement with these networks

- Free membership (2) and access to network output.
- Business Networking Opportunities.
- Engage with the UK nuclear supply chain.
- Share knowledge transfer.
- Opportunities to showcase your international case studies to new and existing UK markets.
 - Participate, speak, sponsor and exhibit at upcoming events, workshops and conferences in the UK
 - Share your lessons learnt and challenges of your site practices

SAFEGROUNDS, SD:SPUR & SAFESPUR

- <http://www.safegrounds.com/>
- <http://www.sdspur.com/>
- <http://www.safespur.com/>
- Please contact rajnika.patel@ciria.org
- or
- peter.m.booth@nnl.co.uk

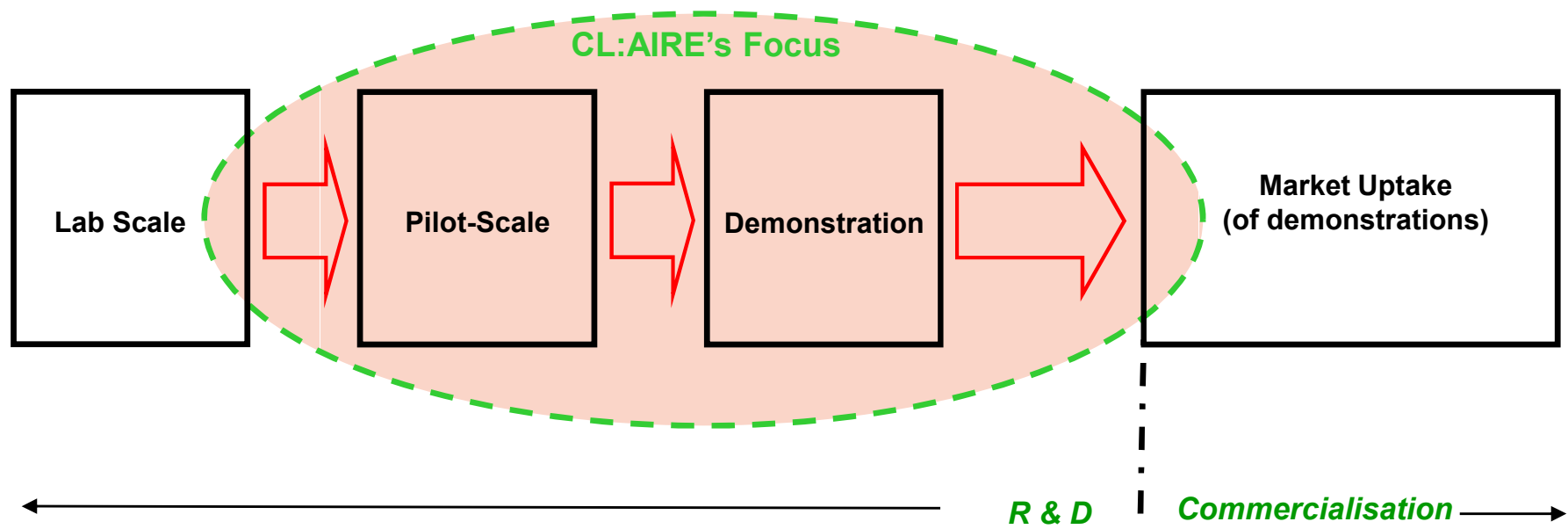
CL:AIRE

- Contaminated Land Applications in Real Environments
- **CL:AIRE** is an independent not-for-profit organization
- Objectives include:
 - to stimulate the *regeneration of contaminated land* in the UK by raising **awareness of**, and **confidence in**, practical and ***sustainable remediation technologies***.
 - fulfilling a need for **objective, scientifically robust appraisals** of *remediation technologies* and effective methods for monitoring and investigating sites.
 - initiation of a Brownfield **Skills Development Framework** for appropriate training

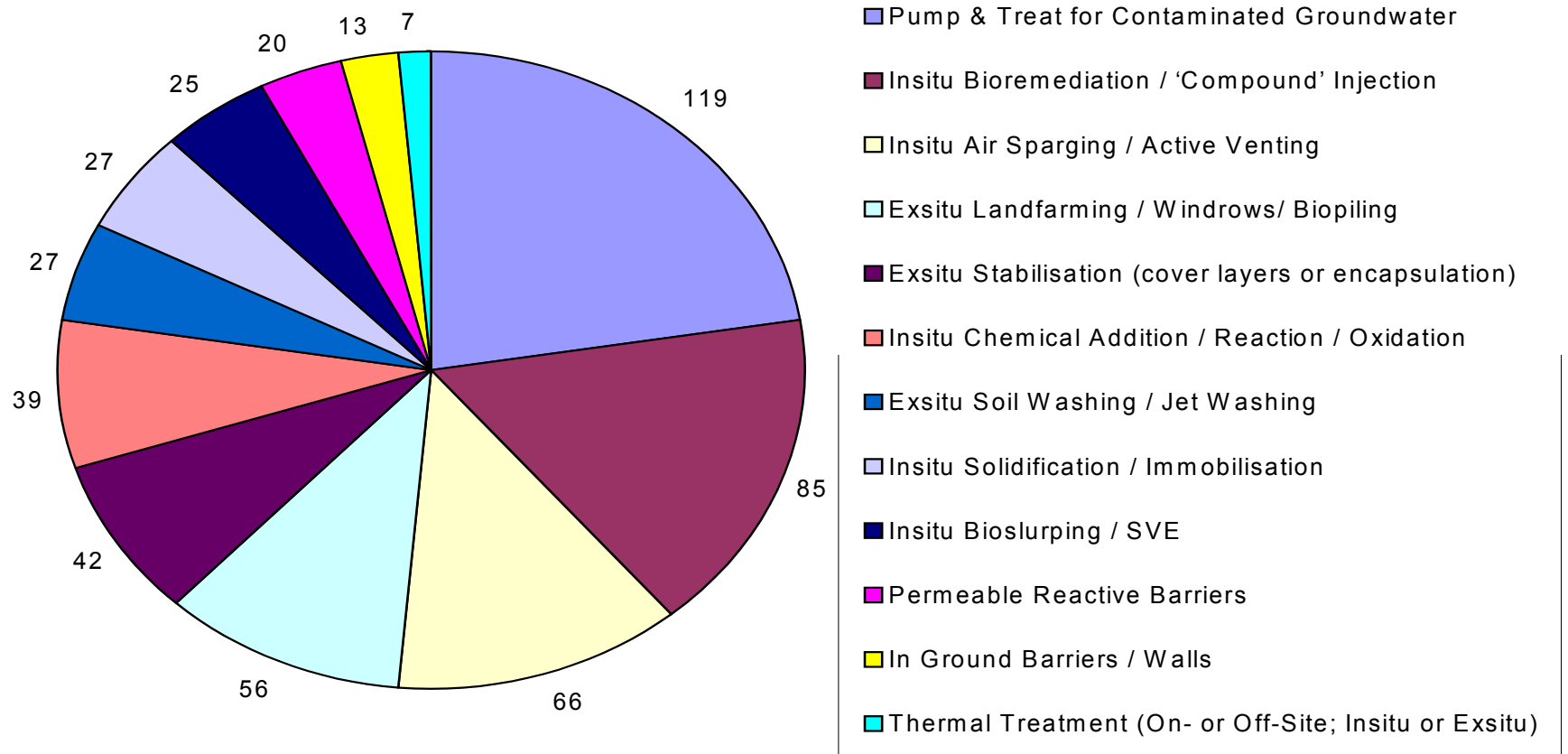
CL:AIRE - Key Achievements

- Produced over **70 Publications**
- Evaluated and **Approved over 50 Projects** through CL:AIRE's Technology & Research Group
- Dissemination to Contacts Database of **~5000**
- Convened over **150 events**
- Established & **trusted brand** in Technical Publications & Training
- **Leading in delivery** of National Frameworks / Initiatives
- **Excellent reputation** in Europe & Worldwide

CL:AIRE - Research to Market



Contractor: Number of Contaminated Land Remediation Projects undertaken between 2001 and 2007, by type



CL:AIRE

- Anyone can register with CL:AIRE to receive information
- c350 international contacts receive information
- Monthly news and events e-alert
- Collaborate with;
 - Eurodemo (demonstration projects database)
 - SuRF (Sustainability)
- Welcome the demonstration of technologies
- Can help international organisations find UK partners

CL:AIRE

- www.claire.co.uk
- Contact;
 - nicola.harries@claire.co.uk

Why Networks?

- What limits communication and information sharing?
 - Competition
 - IPR
 - Safety and Security
 - Don't like to admit to mistakes
 - Are we arrogant as an industry?
 - Do we think our solutions are the best.
 - Are we willing to learn from others, especially other industries.

Why Networks?

- Networks provide a platform for sharing information, best practice, developing guidance, lobbying, learning from past mistakes.
- Develops trusting relationships.
- Saves costs and re-inventing the wheel.
- Provide support to those countries and organisations that need it most.
- Those who think they have the knowledge and solutions can learn too – it is not just a one way process.

Key Learning Points and Benefits

- SAFEGROUNDS

- Brought together communities from opposite ends of the spectrum.
- Understand each others views.
- Gained consensus.
- Developed guidance that all parties can agree on .
- Provided a forum well respected and referenced in the UK.
- Learnt how to get over some commercial challenges.
- Saved money and time.
- Learnt from other industries.

Key Learning Points and Benefits

- CL:AIRE

- Recognised nationally and by UK government.
- Has facilitated site demonstrations of a wide range of technologies.
- Can take initial ideas through lab scale and pilot scale trials through to the market place.
- Non nuclear industry successes and learning are being applied to the nuclear industry.
- Share funding.
- Can help international organisations find UK partners.
- All output and learning is made available.

Benefits to ENVIRONET

- Experience of dealing with a wide range of stakeholders.
- Experience of the methods associated with running networks and disseminating information.
- Production of best practice in a transparent manner.
- Understand technology availability and applicability.
- Experience in decision making and optioneering.
- Apply learning on sustainable solutions.
- Transferability of non nuclear solutions.
- Pulling together expertise to solve the problem.

What can ENVIRONET offer

- General networking
- Not just for developing IAEA member states
- Sharing of experiences
- Helping to understand the reasons behind success and failure
- Understanding how to apply sustainable solutions
- Stakeholder engagement
- Training
- Hopefully provide a focus which will assist Member States gain funding support