Round-table series 2016

The round-table series 2016 is organized by the EESC's Consultative Commission on Industrial Change (CCMI) in partnership with relevant European and national organizations: Euromines, Euracoal, IndustriAll Europe, the European Commission and numerous national high level partners from academia, geological surveys, NGOs and civil society.

The objective of the round-table debates is to link the Member States' economic and industrial policy along the value chain from raw materials to end-products and to develop strategies and overcome obstacles to maintain a well-functioning European industrial fabric by improving investment conditions and creating new jobs.

Summary of the EESC Irish Roundtable

1. Mining activities in Ireland

Since the 1970s mining in Ireland has made significant advances. Increasingly, sustainability and corporate responsibility aspects have become part of both the management of mines and mining legislation. In the past some mining sites were left with major problems with tailings and contaminated rivers, although these were different times when employment was a priority and prior to an understanding of potential environmental effects. In a country where mining is not a major industry, every bad example has had a significant impact and Avoca (former copper mine), Silvermines and Tynagh (former polymetallic deposit: lead, zinc and copper) have all left their marks on the environment and on the public perception.

In more recent times, Navan, Galmoy and Lisheen zinc mines have all set good examples of the benefits that responsible mining can bring to a region and to the country. Navan, the home town of Tara mines, and the more rural areas around the recently closed Galmoy and Lisheen mines have all benefitted economically and

socially from mining and between the three mines, have created approximately 3,000 jobs economy wide in 2011. At all three operations, mine owners have worked with government, its agencies and local communities in a positive way and have operated in a very responsible manner. They are good examples of how social, economic and environmental responsibility is now an integral part of this industry.

The new reality of the 21st century is that China consumes nearly half of all base metals and for many materials produces more than 50% indeed for many minerals more than 90%. Europe consumes about 30% of world's annual zinc production, but produces only 4%. Ireland has been Europe's number 1 producer of zinc metal in concentrate and 10th in the world. In 2015 Ireland slipped to 2nd place in Europe and 11th in the world. Ireland is a mature terrain but there are promising projects such as Glencore's PallasGreen although it would take maybe seven years at the earliest to be in production. But market conditions do change and therefore potential mines such as Pallas Green in Limerick, Conroy Gold's Clontibret project in Co. Monaghan, and Blackstairs lithium projects in Co. Carlow and Wicklow will benefit from continued support.

There have been very positive changes in how former mining sites are managed in Ireland, with some very good examples evident.

2. Relevant institutions for mining industry and raw materials policies

The Minister for Communications, Energy and Natural Resources has statutory responsibility for the regulation of exploration for and development of all minerals, other than stone, clay, sand and gravel.

The Exploration and Mining Division (EMD) of the Department of Communications, Energy and Natural Resources functions include formulation and implementation of minerals policy, regulation and the administration of the State prospecting licence and mining facility system and the active promotion of mineral exploration and development.

EMD provides a "one-stop-shop" for mineral exploration licences in Ireland, providing an efficient and timely response to applications received. There are currently 500 active prospecting licences in place. A Prospecting Licence (PL) provides the holder with security of tenure as it is only the holder of the valid PL who can apply for a State Mining Facility (SMF).

To develop a mine three licences/permits are required from three statutory bodies. The three statutory bodies are EMD, EPA and the Local Authority. EMD grants an SMF, EPA grants an IPC licence and the Local Authority grants planning permission. EMD has established a close working relationship with the EPA and the relevant Local Authorities to ensure the process is streamlined with minimal regulatory duplication. This strong cooperation between the statutory bodies has worked well for mining operations to date.

The Division provides a full support service on all regulatory matters, as well as a large range of free datasets.

- Reference Data on Prospecting Licence Areas and status through online geographic information system (GIS)
- Quarterly publications including current ground holdings
- Significant exploration data holdings including geology, geochemistry, geophysics (airborne and ground) and drilling is made available online and free of charge (websites mineralsireland.ie and http://www.dcenr.gov.ie/natural-resources/en-ie/Minerals-Exploration-Mining/Pages/home.aspx). This vast amount of data and interpretations consists of company reports, including drill logs
- Information on environmentally sensitive areas and constraints
- Technical advice and field-based contact during exploration programmes
- General advice on requirements to bring a deposit to the development stage
- Advice on applications for State Mining Facilities
- EMD is represents Ireland on mineral matters at EU level.

The Geological Survey of Ireland (GSI), a division of the Department of Communications, Energy & Natural Resources (DCENR) and is responsible for providing geological advice and information, and for the acquisition of data for this purpose. GSI produces a range of products including maps, reports and databases

and acts as a knowledge centre, research funder and project partner in all aspects of Irish geology. Among the data provided by GSI in support of mineral exploration is historical exploration reports (Open File Data) and Mine Records of historic mining activity, as well as modern digital geological mapping and a drill core library. GSI also act as a project partner in several EU Raw Materials initiatives, such as Minerals4EU, often in collaboration with EuroGeoSurveys, The Tellus programme[1] is a major initiative of modern geological and environmental baseline mapping, comprising airborne geophysics (magnetics, radiometrics and EM) and soil, stream sediment and water geochemistry, which is due to be completed cross the entire island by 2023. GSI data is made available online for free.

Geoscience Ireland (GI) is a network of 25 companies, delivering integrated expertise in water, minerals, environmental and infrastructure development to clients in over 50 countries. GI is supported by the Geological Survey of Ireland and Enterprise Ireland as a business cluster. The GI network provides design, consultancy and contracting services to multilateral agencies, governments and the private sector.

Universities provide graduates and leaders for the sector for the future. Ireland is already good at this and provides at universities excellent leaders and graduates on an international scale, covering mainly geology, geometallurgy and some areas of minerals processing. A major new initiative is the Irish Centre for Research in Applied Geoscience (iCRAG)[2], which has specific clusters of research around both minerals and social licence to operate. University sector will support the EIP-RM and economic development in Ireland:

- Diversify the palette of mineral deposits being sought in Ireland
- Developing more efficient methods and systems of exploration
- Identifying added value elements in Irish mineral deposits

Several support institutions are now in place to support exploration and mining companies who wish to become established in Ireland.

3. Mineral exploration in Ireland

The Fraser Institute 2015 rankings place Ireland as the 4th jurisdiction in the world for mining and 1st for policy perception from 109 jurisdictions. The high quality data provided by the Exploration and Mining Division and the Geological Survey of Ireland and the Tellus and iCRAG programmes are great examples of how collaboration between industry and government helps to provide exploration companies momentum and encouragement in order to kick start the circular economy with respect to raw materials.

EMD provide a transparent and equitable exploration licensing regime. Prospecting Licences are normally issued within four months of an application being submitted. Ireland is a mature terrain and in terms of exploration for base metals deposits, companies recognise that future discoveries will be deep and “blind”. Exploration companies working in Ireland have risen to this challenge and adopted exploration techniques such as seismics to provide the necessary information to understand the deep geology, structure and mineral potential. This combined with deep drilling is providing a step change in our understanding of Ireland’s mineral potential. It is also recognised that new discoveries are directly related to drilling. A robust regulatory system has supported Ireland’s continued exploration activities.

At the same time there are a number of companies carrying out exploration for a range of other commodities. In general, more shallow exploration techniques are applied to these properties.

[1] Tellus is a ground and airborne geoscience mapping programme, collecting chemical and geophysical data that will inform the management of Ireland’s environment and natural resources. Tellus is undertaken by the Geological Survey of Ireland and is funded by the Department of Communications, Energy and Natural Resources. All data from Tellus are made available free of charge online.

[2] The Irish Centre for Research in Applied Geosciences (iCRAG) performs a broad range of raw materials research, which is designed to improve understanding of associated minerals deposits and develop related exploration models. Research projects are conducted on the public understanding and perception of geosciences with a complementary public outreach programme. Funding €30m Total; People 54 PhD, 8 MSc, 43 Post-Doc, 6 Ops Staff; Term 1st January 2015 for 6 Years

Ireland has a long history in exploration and mining. This has resulted in the development of home grown exploration expertise which is internationally transferrable. Many of Ireland's exploration professionals export their expertise worldwide.

Tellus and iCRAG are great initiatives to assist explorers in generating compelling new targets in Ireland's world class zinc district. Promotion of research, support of teaching institutions and involvement in forums and societies are effective means of developing key ideas. Geoscience Ireland is an excellent network of mining, minerals and environmental companies who collaborate with government and the private sector.

Ireland is considered to be a very positive environment for exploration and mining and this is verified by the continued high ratings from the Fraser Institute surveys.

4. Conditions for sustainable mining in Ireland

Mining companies must ensure that they operate in a safe and sustainable way. This includes the introduction of best practice in all aspects of the operation, with safety and wellbeing of the workforce a top priority.

Mining activities must generate profit, which is a primary function of any mining company and this will generate spending, taxes, boosting local economy and promoting industrial growth. Where possible, the mining sector must and does create employment by hiring local people and investing in their on-going training and development.

Skills developed in serving a mining industry are transferrable to international markets. Thus enabling the preservation of jobs and economic capacity notwithstanding reduced activity in the domestic mining sector. Fostering of indigenous skills is provided by creation and support of local and European geoscience clusters.

Regarding community and social responsibility, mining and exploration companies must create, maintain and nurture relationships with community, local government, trade unions and other stakeholders to ensure that all voices are heard in both support and objection. Community fora are becoming popular and can be very productive.

Mining a certain mineral deposit is finite, so mining companies should put in place arrangements for the future of their employees, the local community and the local environment. This may include local funding, redundancy packages, training for life after mining and community involvement in the rehabilitation and use of the closed site.

In some cases, development of industrial zones around a mining operation is possible, as infrastructure is in place. Lisheen is currently working to establish a green energy hub at its site and recently received EU status as a Model Demonstrator Site with the assistance of politicians, government and state bodies.

The good examples must be shared wherever possible in Ireland and throughout Europe.

Where possible, create environments for renewable resources. ***There are two good examples:***

- ***The Lisheen wind-farm*** set up by the Lisheen team in 2009 now produces up to 60MW of power, which is between 1 and 2% of the Irelands average power demand.

- ***The Silvermines Hydro Electric Power Station Project*** proposal plans to use the existing disused open-pit at Ballynoe, aiming to turn a negative environmental mining legacy into a positive, long term one with local and national benefits.

The Irish Environmental Protection Agency's view was that mineral extraction (mining and associated primary processing) should be covered by the Industrial Emissions Directive permitting system (formerly IPPC). This could resolve many issues around the social pillar, participation in IED decision making, access to information and access to justice. This directive would include BAT standards which harmonise the quality of operations across the EU. Environmental liability, energy efficiency, and continuous improvements would be considered

as part of this process and not just waste storage. Most importantly aftercare and closure is standardised under IED. This would improve the clarity of process and (usually) single permitting – i.e. reduce the potential for complex multiple permits. A second point made was the need to use a strong trusted and real communicator for the activities, who would ideally be local or regional and understands the impacted community. Local communication offices around the activity should be established and monitoring and inspection/performance files open to the public. A community monitoring committee could be essential.

At the end there must be community gain – where the mining activity contributes to the improvement in social and environmental infrastructure of the community.

While a certain mineral deposit is finite, Ireland is now developing sustainable industry on closed mining sites and it is important that communities continue to benefit from exploration and mining activities.

5. European and national policies to facilitate investments in mining

Decisions to invest in countries are based on a whole host of metrics: prospectivity and availability of ground, regulatory system, permitting, sovereign risk, infrastructure, fiscal regime and mining law, cost of services and of holding ground, security of tenure, quality of in-country geologists and engineers.

Ireland and the EU compete for limited exploration dollars. Government and European policies must be in place and balanced between mineral extraction, the environment and communities.

The trust triangle between mining companies, government and its agencies, and the local community is a key component to the success of any mine. This needs to be established at the exploration stage and become a high priority during the feasibility and planning stage, and continue in the construction, operation, closure and after closure phases.

Metals and minerals sustain the infrastructure for our civilization. Therefore taxation should also be adequate.

In Ireland corporation tax for mining is at 25% whereas for other sectors it is 12.5% or 6% for IT start-ups. There are no incentives for exploration and none are foreseen. Canada is seen as an example for incentivising exploration spending.

Corporate taxation for mining may need to be reviewed in order to continue to attract exploration and mining companies to Ireland.

6. Public Perception of Mining and Geoscience activities. Tackling societal challenges

In late 2015 GSI commissioned a systematic review of the public perception of geoscience in Ireland: "***Review of Key Issues around Social Acceptance of Geoscience Activities & Earth Resources in Ireland. FINAL REPORT***". The aim was to better understand how the public perceive geoscience activities (e.g. extractive industries) and how industry and government can gain more social acceptance for their activities from the relevant stakeholders.[3]

- A comprehensive minerals policy in line with the Aarhus Convention was enhanced with additional processes put in place following the ratification of the Aarhus Convention in 2012.
- Distributions of benefits to the communities in which the resources are located should be investigated. The concept already exists within the electricity generation business, with electricity bill reductions for those living within a certain distance of wind-farms.
- Longer term benefits, such as significant infrastructural investment, should also be considered.

[3] http://www.gsi.ie/Research/Public+Perception+of+Geoscience.htm

The clear national benefits should also be outlined, and these include:

- Security of supply
- Financial benefits
- Ethical behaviour – it is not reasonable to expect other countries or jurisdictions to supply the raw materials you need, when those materials are available in your own area.

The 2015 white paper on energy introduces the concept of an ‘energy citizen’ perhaps this could also be extended to a ‘resource citizen’. Ireland has shown in the past that an outwardly controversial policy with clear national benefits can be accepted if benefits are explained properly.

The recently published report by the GSI shows continued interest in evaluating and improving public perception of geoscience activities. Consideration should be given to the development of a 'resource citizen' to help the development of policy.

The report was made based on the information provided by the following persons:

- Mr. John Barry, Independent geologist and entrepreneur
- Mr. Seamus Boland, Member of the European Economic and Social Committee
- Dr. Aoife Braiden, GSI Research Manager
- Prof. Richard Conroy, Chairman, Conroy Gold
- Dr. Eibhlin Doyle, Department of Communications, Energy and Natural Resources, Ireland
- Dr. Jonathan Derham, Environmental Protection Agency
- Mrs. Renata Eisenvortová, Representative Euracoal & Delegate CCMI
- Mr. Sean Finlay, Director, Geoscience Ireland
- Mr. Dumitru Fornea, Member of the European Economic and Social Committee
- Mr. Paul Gordon, SLR Consulting
- Mr. Linas Lasiauskas, Member of the European Economic and Social Committee
- Mr. Brendan Morris, Irish Mining and Quarrying Society
- Mr. Mark Rachovides, President Euromines
- Mrs. Veronika Sochorová, Communication Manager Euromines
- Mr. Slavko Šolar, European Commission, DG for Internal Market, Industry, Entrepreneurship and SMEs, GROW Unit G4 Raw Materials, Metals, Minerals and Forest-based industries
- Mr. Gerry Stanley, Geological Survey of Ireland
- Ms. Lucie Studničná, President of Consultative Commission on Industrial Change (CCMI) of European Economic and Social Committee (EESC) president of EESC
- Mr. Koen Verbruggen, EurGeol PGeo, Director of Geological Survey of Ireland
- Mr. John Walsh, Director of iCRAG (Irish Centre for Research in Applied Geosciences)