

INTERNATIONAL DEVELOPMENT POLICY SUBMISSION

Development Minerals Program

1.0 Overview

Australia has considerable expertise in the mining and minerals industry that should be utilised to advance Australia's international development objectives. This was something recognised by the Rudd/Gillard governments when they implemented the \$137 million Mining for Development initiative between 2011 and 2015. If Australia is to progress its objectives in relation to the Sustainable Development Goals (SDGs), minerals should once again be a key priority in Australia international development policy. Furthermore, policy should recognise the significant importance of so-called 'Development Minerals' to achieving the SDGs. Although historically neglected, Development Minerals such as sand, clay, gypsum and dimension stones have attracted new attention from international development agencies such as the United Nations Development Programme, which launched the €13.4m ACP-EU Development Minerals Programme in 2015.

A new focus on Development Minerals will provide the Australian Government with a different lens with which to view international development, and open opportunities to deepen engagement with governments in priority countries. This is an agenda being advanced by the Sustainable Minerals Institute at UQ which, for the past seven years has been convening global support for Development Minerals with organisations such as UNDP, UNEP, and OECD. Inclusion of Development Minerals in Australia's International Development Policy will provide opportunities for DFAT to complement and leverage existing work by such organisations, especially in the Pacific.

2.0 Key recommendations

We argue that for Australia to make a significant contribution to the Sustainable Development Goals in its priority countries, it is essential that future development programming includes a renewed focus on minerals and mining and in particular, Development Minerals.

For the mining and metals sector as a whole we suggest that Australia's International Development Policy should refocus efforts on transferring Australia's broad range of technology, policy, and governance expertise to government, civil society and the private sector in priority countries. This might entail design and implementation of an IM4DC Phase 2-type program, involving the following kinds of activities:

- Short term secondments by government, civil society, and industry to Australian centres of excellence in the minerals industry, such as UQ's Sustainable Minerals Institute and the Western Australia School of Mines.
- Support for students to study mining-related topics in Australia under the Australia Awards program
- Short courses and study tours to transfer knowledge and technology from Australian experts to stakeholders in priority countries, for example in areas such as minerals governance, minerals policy, mines safety, mineral processing, environmental management and so on..
- Supporting research projects that build knowledge and capacity in key areas.

Australia's international development policy must also focus on Development Minerals given how central they are to achieving the SDGs. Programming can include support for governments, civil society, and industry in the following areas:

- **Research** – research and development of knowledge products, including studies, technologies, management systems, and services.
- **Education** – development and delivery of curricula for Higher Education institutions, as well as the Supervision of Research Higher Degrees (Masters and PhD students) whose studies relate to Development Minerals.
- **Capacity building / technical assistance** – delivery of training programs, workshops and webinars covering a wide range of skill and knowledge areas relevant to the sector. Capacity building should extend beyond training to take a systematic, participatory, peer-to-peer, transformative and empowered approach that places the miner and quarry worker at the centre of projects.
- **Policy development and advocacy** – support governments in their efforts to lead development of policy and promote advocacy for the sector and its stakeholders with the aim of improving regulation and management and creating greater appreciation of its importance to sustainable development.
- **Networking** – providing opportunities for South to South and triangular knowledge exchange through placements, workshops, cross supervision of students at universities and collaborations.

The following thematic areas should be prioritised in development programming:

- **Poverty reduction and livelihood improvement:** a large proportion of the world's mining workforce are informal artisanal and small-scale quarry workers that mine local materials and live in circumstances of poverty. Empowering miners including where relevant through formalisation and regularisation can help improve incomes and working conditions.
- **Sourcing sustainable sand, gravel, and crushed stone:** sand is the world's second most used natural resource and is critical for infrastructure. Despite acute environmental, social, and economic challenges, little is known about the scale and scope of the sector globally.

- **Producing alternative construction materials as a by-product of mineral processing:** reducing the generation of tailings and mineral wastes, which are the world's largest waste stream and contributing to the transition to a circular economy.
- **Low carbon alternatives for concrete production:** cement is the most widely used building material in the world but is a major contributor to global climate change. Alternatives such as Limestone Calcined Clay Cement (LC³) and geopolymer are promising low carbon alternatives.
- **Labour intensive road construction:** local materials like cobblestones can be a durable alternative to imported asphalt for paving rural and urban roads, and a very large employer of youth in stone masonry.
- **Disaster reconstruction and quarried materials:** climate change, natural disasters and conflict drive significant demand for construction materials often overwhelming the capacity of local economies to provide local materials for reconstruction. Quarried materials are absent from disaster planning and the role of quarrying as a refuge and livelihood during reconstruction is overlooked.
- **Rocks for crops:** local soil amendments primarily sourced from crushed stone are an alternative to imported fertilisers.
- **Green industrialisation, structural transformation and import substitution:** in the developing world large amounts of industrial minerals and construction materials are imported that could be produced locally to support green industrialisation.
- **Strengthening the private sector and regional supply chains:** small and medium sized enterprises require capacity building, business improvement and market diversification to support a robust and resilient local industry that is capable of supplying domestic and regional needs. Local clays to produce clinker for local cement is one example. This can enable countries to produce low carbon cement with the potential to reduce CO₂ emissions by up to 40%
- **Decent work and child labour:** occupational health and safety, working conditions and child labour are major challenges.
- **Urbanisation and the demand for construction materials:** the world is urbanising with major ramifications for the urban and peri-urban built environment and the consequent demand for construction materials.
- **Gender and social inclusion:** the majority of the global informal quarry workforce are women and youth, who will benefit greatly from efforts to improve their employment circumstances.

3.0 Australia's past and current support for minerals and development

The Australian Government has a long history of working with various stakeholders in Australia and overseas to maximise the contribution of mining and other extractive industries to international development. The most significant program in recent years was the \$137 million Mining for Development Initiative, which ran between 2011 and 2015. The centrepiece of this initiative was the International Mining for Development Centre (IM4DC), which was co-hosted by UQ and the University of Western Australia. Over the course of four years, IM4DC

implemented an innovative program of knowledge sharing and research with a focus on empowering stakeholders in developing countries to influence and improve resource governance back in their home countries.¹ IM4DC supported 2,726 participants from 789 institutions in 65 countries across the Asia-Pacific, Africa, and Latin America, with over 300 delivery partners including universities, government and industry bodies, NGOs, mining, and services companies engaged in activities.

Today, DFAT's support for mining and the broader extractive industries is more limited, both in terms of geography and scale of investment. Investment is primarily focused on resource rich developing countries in the Indo-Pacific region and is mainly delivered through three programs: the Extractive Industries Transparency Initiative (EITI), the Extractives Global Programmatic Support (EGPS) Multi-Donor Trust Fund managed by the World Bank, and the International Monetary Fund's work on managing natural resource wealth.² An overarching objective of Australia's investment in the extractives sector in the Indo-Pacific region is to enhance government capacity to make the most of a country's resources and ensure that the benefits flow equitably to local communities.

4.0 Putting Development Minerals on Australia's international development policy agenda

Australia endorsed the 2030 Agenda for Sustainable Development and the Sustainable Development Goals (SDGs) in 2015.³ The Australian Government recognises that achieving the SDGs is in the country's national interest due to their role in contributing to "regional, global prosperity, productivity and prosperity". It also recognises that the SDGs are consistent with its key priorities and efforts in the areas of health, education, agriculture, water, the environment, economic development, and gender equality. The SDGs do not, however, make any reference to the role that minerals play in sustainable development, despite the fact that other natural resources, such as forests, water, air, gas, and energy are mentioned throughout the goals and targets.⁴ In fact, the words mineral, mining and miner are entirely absent in the SDGs, even though minerals are essential to the achievement of many of the goals. It is therefore essential that Development Minerals are included in Australia's development programming going forward.

5.0 An overview of Development Minerals – the Materials that Underpin Development

Development Minerals are minerals and materials that are mined, processed, and used domestically, in industries such as construction, manufacturing, and agriculture. They include 'industrial minerals' like clay, gypsum, salt, feldspar, granite, and silica, and construction materials such as gravel, construction sand, crushed rock, and dimension stones (e.g., marble, granite, and sandstone). Development Minerals have traditionally been neglected by policy makers, international development agencies, and others in part due to their low price per unit

¹ IM4DC Final Report, 2011-2015

² Other extractive related initiative supported by DFAT include the Kimberley Process, Transparency International's Accountable Mining Program, and the Voluntary Principles on Security and Human Rights.
<https://www.dfat.gov.au/development/topics/development-issues/infrastructure-trade-facilitation-international-competitiveness/extractives-sector-development-assistance>

³ Australian Government (2018). Australia's Voluntary National Review on the Sustainable Development Goals
<https://www.sdgdata.gov.au/about/voluntary-national-review> Accessed 22/11/2022

⁴ Franks, D.M., Keenan, J. & Hailu, D. (2022). Mineral security essential to achieving the Sustainable Development Goals. *Nat Sustain.* <https://doi.org/10.1038/s41893-022-00967-9>

of volume when compared with high priced minerals like copper, iron ore, and gold.⁵ This has led to a perception that they are of low value when in fact they comprise 84% of global mineral production by volume and are of immense importance to local development, particularly in developing countries.

Tens of millions of people worldwide derive a livelihood from Development Minerals, working in quarries, artisanal and small-scale mining enterprises, or in one of the many related downstream industries such as brick or glassmaking. Development Minerals are literally the materials that underpin development and are therefore of critical importance to achievement of the Sustainable Development Goals. As Franks (2020) explains, they include, “the clay bricks and roof tiles that provide shelter, the mineral fertilisers fundamental for agriculture, the garnet that filters water or the gravel and stone that builds bridges and paves rural roads”.

Unlike, energy and metallic minerals (including so-called “critical minerals” like copper, lithium, cobalt, rare earths etc.), whose value is mostly derived from global markets, the value of Development Minerals is in their local and domestic processing and use. In comparison to the metals sector, Development Minerals have closer links with the local economy, and have the potential to generate more local jobs, with a greater impact on poverty reduction. Take the example of sand, which accounts for 74% of all minerals extracted worldwide each year. According to UNEP, this often neglected (and taken for granted) mineral is essential for infrastructure and economic development, “providing livelihoods within communities and maintaining biodiversity”.⁶ It is also linked to all 17 of the Sustainable Development Goals (SDGs). Despite its importance, extraction of sand is largely ungoverned in many parts of the world and results in significant adverse environmental and social impacts. UNEP and others have even referred to a global “sand crisis” that demands immediate action by governments and other stakeholders to prevent sand extraction overtaking natural replenishment of supplies.

⁵ Franks (2020). The Neglected Minerals of Development. *The Extractive Industries and Society* 7, pp. 4053-460

⁶ UNEP 2022. Sand and sustainability: 10 strategic recommendations to avert a crisis. GRID-Geneva, United Nations Environment Programme, Geneva, Switzerland