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## BRIEF: Bread and Stones: Co-investing in Mining and Agriculture in Africa

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Africa Australia  
Research Forum

### The Opportunity

There is a resurgence of interest in Africa's one billion people as an emerging market, and the local landscape's enormous natural endowment of suitable agro-ecological land, water, resources, labour, energy, and minerals. The commercial opportunities for international private-sector interests in Sub-Saharan African (SSA) countries as proximal suppliers to European, North African, and Asian markets are enormous. These countries are dynamic, growing markets, dispelling many conventional stereotypes.

For example, when only around 60% of people in Sub-Saharan Africa have access to improved drinking water, and 30% access to electricity, mobile phone ownership has grown from practically zero to around 50% in only a decade. Many new markets such as the telecom industry have developed autonomously and rapidly on a purely commercial basis. These improvements in connectivity in Africa are reaching remote towns and rural areas and are transforming lives. There are similar opportunities to transform the agricultural sector as a driver of economic development.

### Context

The 2013 Africa Australia Research Forum in Perth, Australia, titled 'Bread from Stones', focused on mining, agriculture, and development and sought to strengthen partnerships between mining companies and rural/agricultural communities. This resulted in a discussion paper that sought to explore how foreign direct investment (FDI) for agriculture and mining can benefit from being geographically linked for mutual benefit to accelerate economic transformation of the countries of SSA. This brief summarises the main findings of the study.

Investors in the oil, gas, and minerals sector would have a comparative advantage in parallel investments in geographically proximal projects that may be vertically integrated into the extractive project supply chain and share infrastructure (roads, rail, ports, power, and water). There are some new opportunities of cornerstone extractive projects partnering, co-locating, or developing parallel investments with the agricultural sector as a risk-mitigation strategy within countries in SSA.



PHOTO: PANDIRT

## Why We Focus on Foreign Direct Investment in Africa

Foreign direct investment (FDI) now rivals official development assistance and remittances as the single largest foreign financial inflow. Large flows of FDI are attracted to countries with a foreign aid presence, large natural resource endowments, the rule of law, large market sizes, institutional agglomeration/clustering, and openness to trade. FDI is attractive as a relatively stable form of capital inflow that is less vulnerable to short-term crises and changing market conditions. Today, around 70% of private capital flows into Africa are in the form of FDI. FDI provides the much needed capital for investments in SSA, and natural-resource projects (minerals, oil, and gas) are the overwhelming source of FDI in African countries.

Institutional agglomeration or clustering in the same geographical region has a strongly significant correlation with FDI in Africa. Although mining is unpredictable on the spatial pattern of economic impact, there is a growing level of awareness of the benefits that a greater level of economic linkages between mining and immediate precincts, regional service towns, and major economic hubs; particularly when a critical level of mining activity is sustained in a region over time.

There are numerous benefits of capturing the wider benefits of mining investments by engaging local upstream and downstream linkages leading to economic diversification. Research commonly points to FDI benefiting the host country's current account payments and enhancing foreign exchange earnings, particularly in relation to exports. Enclave capital-intensive developments with few linkages to the local wider economy may result in less indirect benefits of FDI.

As an example of an approach for wider sectoral engagement, the African Mining Vision and the associated Action Plan prescribes a practical approach to achieving equitable and efficient natural resource governance and transparency. There are several evolving governance-related frameworks that the mining industry can adopt to engage with stakeholders during each phase of a mine.

FDI promotes a host country's ability to boost exports by transferring technology and new products, facilitating access to new and large foreign markets, education and training provision, entrepreneurship, upgrading technical and management skills and standards, access to new technology, improving market access, lowering the cost of capital, and shifting investment risk. FDI inflows play a positive role in SSA countries as foreign companies tend to be larger employers, export more, and exhibit higher productivity and growth rates.

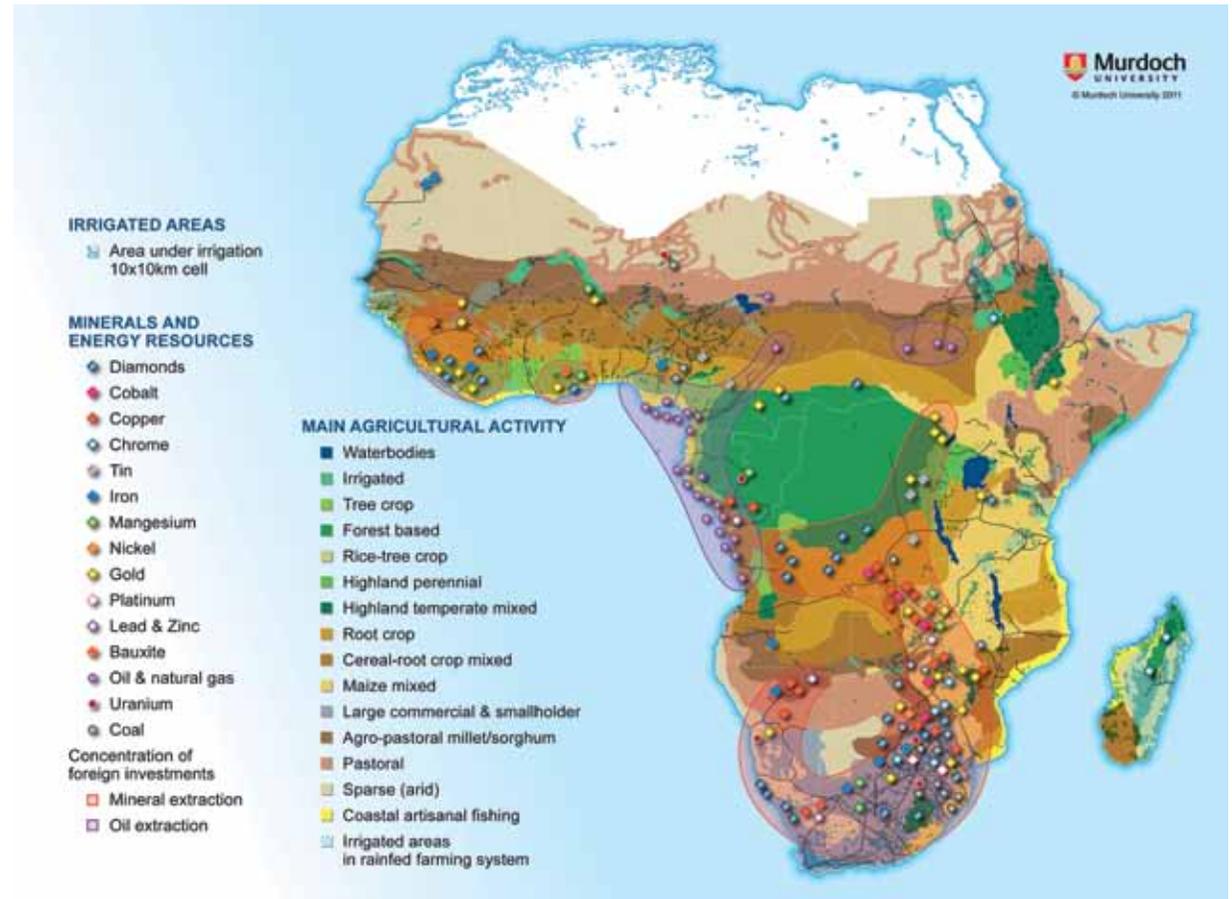
Domestic companies in direct competition within the same industry also benefit from a stronger presence of foreign firms. Indeed, FDI in developing countries is critical to achieving the Millennium Development Goals (MDGs) and the Common African Position (CAP) on the post-2015 development agenda. The private sector is recognised as a principal driver of growth reducing poverty and improving welfare, particularly in the least developed countries in the region. The greater benefits of FDI for SSA are achieved when also aimed at non-primary industries and more towards economic integration and diversification.

## Why We Suggest to Diversify Extractive Investments

Investors understand that local community relations are important for the effective operation of a mine, and demonstration of direct benefits to the community reduces the financial risks derived from political and social unrest and lack of transparency in government. At present many mining companies are engaged in agriculture via corporate social responsibility (CSR) programmes and also some small-scale procurement of locally grown produce for their workforce. They also invest indirectly through improving infrastructure around mines, such as roads, which often enables improved access to markets for local communities.

While CSR and related programmes are usually associated with philanthropy, politics, and social licences, commercial justifications for investing in social programmes are also often necessary. With a critical mass of active partnering between mining investments and commercial agricultural investments, mutual investment synergies may be enabled in sectors of the extractive industries and agriculture, and enhance local economic development multipliers.

The synergies at the local geographical level for mining and agricultural investments include similarities between sovereign risk, seasonality of mining (in tropical environments) and farming labour demand, and growing commercial diversification opportunities to gain from economies of scale, vertical integration, and partnering (including off-take agreements for water, energy, commodities and transport). Additionally, they generate a greater level of commercial and political economy of scale to maximise the benefits of a diversified economy to both citizens of African nations and foreign investors.



**Figure 1: The interface of major mineral and agricultural extraction and investment in Sub-Saharan Africa.**

## Why Diversify into Agriculture?

As agriculture currently employs around 60% of all Sub-Saharan Africans, there is an emerging appreciation of the investment opportunity for the two major primary industries, mining and agriculture, for mutual gain through economies of scale and cost-effective local service development. At this time agriculture is the predominant source of employment and livelihood and a way of life for the majority of Africa's citizens. For several countries,

agriculture is also the single most important foreign exchange earner (Table 1). Recent estimates suggest that Africa has the potential to increase the value of its annual agricultural output from about \$280 billion (in the late 2000s) to around \$800 billion by 2030. Therefore, agriculture is a major focus of African governments and is of key political interest. The potential for co-location of investments in mining and agriculture is shown in Figure 1.

**Table 1: Agriculture in Africa – key statistics.**

Agriculture as share of GDP	30–40%
Employment in agriculture as share of total workforce	60% (SSA)
Female employment in agriculture as share of total rural workforce	50% (SSA)
Contribution of agriculture to the income of the rural workforce	50%
Agricultural export earnings as share of total export earnings	40%
Agricultural produce loss to poor post-harvest management system	30–40% of total production
Average food import bill per year in the 2000s	US\$20 billion
Annual growth rate of agricultural GDP (in real terms), 2002-2007	5.5%
Irrigated land as a proportion of potential	7% <sup>a</sup>
Use of fertiliser per hectare in SSA	13kg <sup>b</sup>
Use of fertiliser per hectare in North Africa	73kg <sup>c</sup>
SSA farm power sources as a percentages (other developing regions)	Hand: 65(25), Animal: 25(25), Engine: 10(50)

<sup>a</sup> In comparison 29% of lands in East and South-East Asia are irrigated and 41% in South Asia.

<sup>b</sup> This is only 7% of the average for East Asia.

<sup>c</sup> This is only 38% of the average for East Asia.

Extractive industrial development is occurring in traditional agricultural regions and corridors with historically limited access to transport and markets. There is an emerging acknowledgement of the opportunity for the two major extractive industries, mining and agriculture, to mutually gain through economies of scale to de-risk and diversify commercial and national interests into the growing economies in Africa for accelerated development.

For example:

- Mining and agriculture share the same or adjacent landscapes.
- Mining and agriculture share and sometimes compete for resources
  - natural resources – notably land and water
  - human resources – workers for mines versus farmers and other agricultural workers.
- Mining and commercial agriculture face common challenges:
  - political and social volatility and instability
  - lack of transparency in government decision-making
  - workforce health (e.g. chronic diseases such as malaria; acute outbreaks of zoonotic diseases)
  - food and nutritional security for mining and agricultural communities.

## The Proposition

While the location of a mine is determined by geology, under certain favourable conditions the presence of a mineral resource is also accompanied by potentially productive agricultural land (soil fertility, rainfall patterns, growing seasons, etc.) for crop and livestock systems that are suitable candidates for FDI. However, we do not propose that where there is a mine the area should be expanded for commercial agriculture in all cases. Even if there is local agricultural production, it does not mean that it is suitable for FDI based-expansion. But the opportunities for co-investments in mining and agriculture in this context should be explored.

What then are the criteria for triggering such FDI investment in agriculture where mining activity is a catalyst for creating interest? Quite simply, it is based on the degree and extent of upgrading of infrastructure (the primary barrier to entry for FDI-scale agriculture).

What then are the catalytic activities that will create FDI opportunities for agriculture in Africa? For example, many African countries invest in sending delegations to global mining conferences and markets, and there are analogous global agribusiness marketing opportunities that similar delegations can attend. While many African countries have sought international assistance in improving legislation and regulation to encourage commercial extractive activity, is the same occurring in relation to improving land tenure rules, transparency initiatives, technology sharing, best practice (etc.) for attracting global agribusiness? We suggest furthering this discussion by engaging with investors and individuals who raise capital for mining activities in Africa.

The encouragement of pilot investment activities will evolve towards practical examples on the ground from the largely theoretical proposition conveyed in this summary (and in greater detail in the full report). These examples can point the way to transformational FDI in the agribusiness sector alongside the mining sector in SSA to help Africa realise its vision for inclusive economic growth and prosperity for its citizens.



PHOTO: DAVID DOEPEL

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The views expressed here are those of the authors and do not necessarily reflect the views of the Crawford Fund, DFAT, Murdoch University or the University of Queensland.

### For further information:

McHenry, M.P. and Persley, G.J. (2015). *Bread and Stones: Co-investing in Mining and Agriculture in Africa*. The Crawford Fund, Canberra, Australia. 20pp.  
<http://www.crawfordfund.org>

## The Crawford Fund

The Crawford Fund is a non-profit, non-government organisation that works to raise awareness of the benefits to Australia and developing countries from international agricultural research, commissions studies on research policy and practice, and arranges specialist training activities for developing country scientists.

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## Africa Research Group, Murdoch University

Murdoch University's trans-disciplinary Africa Research Group has been focused on African research questions in some cases for more than three decades. All members have strong ties with African-based researchers and collaborate with African industry, academic institutions, government agencies, and NGOs.

<http://www.murdoch.edu.au/Africa-Research-Group/>

“Who among you,  
if your children  
ask for bread, will  
give them stones?”  
MATTHEW 7:9

• This brief is part of a study initiated by the Crawford Fund, and involving other like-minded foundations, to analyse the effect of emerging trends in world food security, their implication for the international research agenda, and potential new funding streams for such research. The study will also seek to demonstrate the benefits of investments in international agricultural research. The research study director is Dr Gabrielle Persley, chair of the Doyle Foundation, Scotland.

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