

Institution: University of Surrey		
Unit of Assessment: 17 Business and Management Studies		
Title of case study: Formalising Artisanal and Small-Scale Mining in Sub-Saharan Africa		
Period when the underpinning research was undertaken: 2014 – 2018		
Details of staff conducting the underpinning research from the submitting unit:		
Name(s): Professor Gavin Hilson	Role(s) (e.g. job title): Chair of Sustainability in Business	Period(s) employed by submitting HEI: Sept 2012-Ongoing
Period when the claimed impact occurred: 2014-2020		
Is this case study continued from a case study submitted in 2014? N		
1. Summary of the impact (indicative maximum 100 words) <p>In sub-Saharan Africa (SSA), artisanal and small-scale mining (ASM) provides income-earning opportunities for over 120 million people and creates hundreds of millions of ancillary jobs. Most ASM in SSA exists in the informal economy due to excessively bureaucratic legalisation, meaning workers face increased risks and cannot access social protection or finance. Hilson's research illustrates the importance of, and legitimises the case for, formalising ASM in the region. His work shaped policy architectures for ASM across SSA, underpinning major interventions, including the €20m UN/ACP/EU Development Minerals Programme, The World Bank's DELVE platform, a formalisation blueprint implemented in Ghana complementing a \$60m World Bank programme, and influenced national ASM programmes for community organisations in Ghana and Mali.</p>		
2. Underpinning research (indicative maximum 500 words) <p>Hilson's research explores ASM's socio-economic impacts, and engages with donors (UN, World Bank, bilaterals) and host governments to change policies, which presently do not take into account the sector's importance in SSA. Most (99%) ASM activities in SSA are in the informal economy where, unmonitored, unsupported and unregulated, they progress along an unsustainable development trajectory, increasing risks, causing environmental damage, and without access to social and financial support. Hilson's research generates empirical data providing a more complete picture of the sector's rootedness and importance in SSA. His research helps legitimise the case for formalising and supporting ASM in SSA and identifies tangible policy-sensitive strategies to achieve this. He accomplishes this through work on four interrelated topics:</p> <p>1. Demonstrating the social and economic importance of ASM in SSA Research is undertaken which <i>inter alia</i> corroborates how ASM provides direct income to at least 20-30 million (mostly poverty-driven) people in SSA (and the groups involved), shedding light on the type of work undertaken and how it impacts families; has created at least 100-120 million additional jobs in the downstream/upstream industries it spawns; and accounts for a significant amount of regional mineral output and is a potential untapped source of tax for the region's governments. Due to the importance of building a regional case, the geographical scope is sizable, featuring work undertaken in Sierra Leone, Liberia, Ghana, Mali and Mozambique [3.1, 3.2, 3.3, 3.4].</p> <p>2. Showing how ASM operates and is organised SSA's informal economy These insights show how the region's ASM sector is organised and who populates its many nodes. Hilson adapted the Global Production Network (GPN) framework to map the sector's structures</p>		

[3.3]. Although the development agenda is becoming more receptive to formalising and assisting ASM, donors and host governments continue to struggle to design appropriate support services and licensing schemes. The GPN framework provides valuable guidance in these areas, providing a lens to study the dynamics of relationships forged between the sector's actors. This case uses GPN as the basis for analysis of the informal ASM activities in Ghana. The framework retrieves crucial information needed to inform the design of policies, laws and interventions that formalising ASM requires. A radical change in approach is needed to achieve this, which a modified GPN could inform **[3.3]**.

3. Identifying the drivers of ASM's informality in SSA

This work responds to claims made by the International Labour Organization (ILO) officials in the 1990s that inappropriate laws and policies are potentially fuelling the growth of informal ASM in SSA. Hilson collected empirical data, which illustrate how, by prioritising other industries and making licensing expensive and excessively bureaucratic, governments in SSA have 'informalised' ASM, confining it to the underground economy. His work has gone one-step further, illustrating how current ASM policy frameworks *create* this informality. Regional in scope and legalistic in its theoretical underpinnings, this research crucially shows how regional problems associated with ASM, e.g., persistent environmental degradation, child labour, corruption etc., are simply the products of its informal existence or development trajectory **[3.4, 3.5, 3.6]**.

4. Embedding ASM in development policy

This research focuses on identifying ways to rebrand ASM in ways that 'speak' to a development agenda, which has evolved without recognising its importance in SSA. Emphasis is placed on the themes of **resilience**, a focal point of policy work in the area of climate change and adaptation, and **supply chains**, improved knowledge of which is a priority for Fair Trade, conflict minerals and transparency, and identifying how ASM concerns can be aligned with the Sustainable Development Goals (e.g., through a gender lens). The process gives the sector much needed visibility in the region **[3.1, 3.2]**.

3. References to the research (indicative maximum of six references)

- [3.1] Hilson, G.,** Hilson, A., Siwale, A., Maconachie, R. 2018. Female faces in informal 'spaces': Women and artisanal and small-scale mining in sub-Saharan Africa. *Africa Journal of Management* 4(3): 306-346. DOI: [10.1080/23322373.2018.1516940](https://doi.org/10.1080/23322373.2018.1516940)
- [3.2] Hilson, G.,** Hilson, A., Maconachie, R. 2018. Opportunity or Necessity? Conceptualising Entrepreneurship at African Small-Scale Mines. *Technological Forecasting and Social Change* 131: 286-302. DOI: [10.1016/j.techfore.2017.12.008](https://doi.org/10.1016/j.techfore.2017.12.008)
- [3.3] McQuilken, J. Hilson, G.** 2018. Mapping Small-scale Mineral Production Networks: The Case of Alluvial Diamonds in Ghana. *Development and Change* 49(4): 978-1009. DOI: [10.1111/dech.12403](https://doi.org/10.1111/dech.12403)
- [3.4] Hilson, G.,** Hilson, A., Adu-Darko, E. 2014. Chinese Participation in Ghana's Informal Gold Mining Economy: Drivers, Implications and Clarifications. *Journal of Rural Studies* 34: 292-302. DOI: [10.1016/j.jrurstud.2014.03.001](https://doi.org/10.1016/j.jrurstud.2014.03.001)
- [3.5] Hilson, G.,** Hilson, A., Maconachie, R. McQuilken, J., Goumandakoye, H. 2017. Artisanal and Small-Scale Mining in Sub-Saharan Africa: Re-conceptualising Formalisation and 'Extra-Legal' Activity. *Geoforum* 83: 80-90. DOI: [10.1016/j.geoforum.2017.05.004](https://doi.org/10.1016/j.geoforum.2017.05.004)
- [3.6] Hilson, G.,** Zolnikov, T., Ortiz, D., Kumah, C. 2018. Formalizing artisanal gold mining under the Minamata convention: Previewing the Challenge in Sub-Saharan Africa. *Environmental Science and Policy* 85: 123-131. DOI: [10.1016/j.envsci.2018.03.026](https://doi.org/10.1016/j.envsci.2018.03.026)

4. Details of the impact (indicative maximum 750 words)

Professor Hilson uses his research findings to engage and empower stakeholders capable of effecting the change on the ground needed to make ASM formalisation a reality across SSA.

Hilson's research has resulted in capacity building, data collection, and direct engagement with donors and policymakers, with the aim of establishing a platform to facilitate formalisation of ASM in SSA.

The international/regional level

As a result of his research, Hilson was asked to advise on the EU/UNDP/ACP Development Minerals Programme (Phase I, 2015-2018; €13.1m; Phase II, 2019-2022, €11m). The project provides practical support to harness the continent's mineral wealth to alleviate poverty across 40 African, Caribbean and Pacific (ACP) countries. Hilson was commissioned to produce the **background and strategy-steering report [5.1]** described as the 'technical foundation for delivery' [5.2]. In 2016, Hilson was appointed to the Programme Technical Committee, and as Academic Chair of the International Conference on Artisanal and Small-scale Mining and Quarrying. The Development Minerals Programme Director states that;

"The sheer scale and reach of the contributions of Professor Hilson to international mineral policy making and the reshaping of the global minerals and materials development agenda through this program are hard to overstate", highlighting several examples where his interventions have had impact such as legal and policy reform, creating of cooperatives and associations, and also outlines his impact at the mine, country and global level from better operating standards, to increased employment and *"enhanced resource diplomacy"* [5.2].

In 2017, Hilson collaborated with the World Bank, the world's largest supporter of technical assistance for ASM, informing its ASM formalisation policy. World Bank's Senior Mining Officer stated *"Professor Hilson's work has heavily informed a remade World Bank Policy approach to ASM formalization"* [5.3]. A significant development was the April 2017 launch of the DELVE database/online platform funded by the Bank (<https://delvedatabase.org/>). DELVE builds on Hilson's conceptual and empirical research, including survey tools for data collection [5.4], to gather and share data on ASM to improve decision-making related to sector formalisation. As a result of Hilson's research activity DELVE has been used to gather data on 1,200 miners across Ghana, Mali and Mozambique [5.3].

Since April 2020, Hilson has coordinated baseline COVID-19 data collection in five countries (Ghana, Mali, Sierra Leone, Liberia and Malawi). His findings underpin a US\$5.5m Emergency Response Window from the World Bank's Extractives Global Programmatic Support (EGPS) Trust Fund, supporting work addressing short and medium-term impacts of COVID in ASM communities' globally [5.3].

Hilson continues to collaborate with the World Bank and has written its inaugural **State of the Small-Scale Mining Sector report [5.5]**, a 2019 manifesto identifying the sector's priority concerns and areas where more ASM data/nuance is needed. The report responds to the need for ASM data, particularly in SSA, where World Bank's Senior Mining Officer Dr Perks indicates, *'In sub-Saharan Africa alone, better data would contribute to the implementation of more than 10 active mining technical assistance projects in sub-Saharan Africa with over US\$100 million in support of ASM formalisation'* [5.3]. Hilson and Perks co-authored **The Guidance note for ASM reporting in EITI**, the global standard for open and accountable management in extractive industries implemented by 53 countries [5.3].

Since 2020 Hilson has played a significant role in the US\$180m planetGOLD project led by the United Nations Environment Programme and implemented in partnership with the United Nations Industrial Development Organization, United Nations Development Programme, and Conservation International. Executed by 19 government agencies and other organisations in 9 ASM active countries, it aims to make gold-mining safer, cleaner and more profitable. Hilson co-authored the **Access to Finance Options for Artisanal and Small-Scale Mining report**, which provides models for the planetGOLD activity; *'Piloting a range of models for access to investment and finance for small-scale miners and their communities'*, essential for ensuring the long-term viability and development of a legalized ASM sector [5.6].

In addition to work with inter-governmental bodies, Hilson developed a **framework for formalising ASM** on behalf of the International Institute for Environment and Development (IIED) [5.7], which piloted Hilson's formalisation approach now being implemented in Ghana by the World Bank [5.8].

Capacity Building

Recognising that change must be welcome at all levels, Hilson focused capacity building on *"government officials from developing countries where ASM is widespread, as well as individuals who are stationed at the country-level offices of major donor organisation and the NGOs that deliver technical support to the sector"* [5.9]. These individuals, who attended Hilson's sessions at the National Mining Seminar, are recognised as *"individuals who are in the greatest position to facilitate important policy changes in the ASM sector of their countries"* [5.9]. Since the seminar's 2016 inception, he has educated 89 participants from 34 countries. As a direct result, in 2016 several attendees formed 'The Association of Mine Closure Ambassadors', registered in Nigeria, to examine more closely ASM issues [5.10]. They secured their first grant of AUS\$99,600 in 2018 from AUSAID to fund an ASM formalisation project in Cameroon [5.10]. Hilson's training also impacted the Ghana-based NGO, 'Friends of the Nation', whose Communications, Advocacy and Campaigns Coordinator, Solomon Kusi Ampofo, attended the 2018 session. The organisation has since won over US\$500,000 in grants to assist the formalisation of ASM in Ghana under the auspices of the Minamata Convention [5.11].

Country-Level Support

In Ghana, policymakers have been attempting to reform the ASM sector for over ten years, including banning ASM for nearly two years during 2017-2018. Policy initiatives following the ban included developing a National Action Plan, the *Artisanal and Small-Scale Gold Mining (ASGM) Sector Profile for Ghana*, [5.12]. In 2019 the World Bank launched a project 'Ghana: Artisanal and Small-Scale Mining Formalization', to develop and fund a formalisation programme worth US\$60m [5.13]. Hilson's conceptual model of the Ghana sector [3.3] underpins this project, and the approach he published through IIED [5.7, 5.8]. The model is used to build the case to formalise the sector, then facilitate change through project funding [5.8].

Possibly the most critical area of impact is work with local ASM operators to establish platforms to increase their visibility and formalisation, initiating much needed change from within. For example, the launch of the women's extractive industries NGO, 'Alliance pour la Recherche et le Développement Integre', which aims to connect with women miners, assist them in formalising their activities, and support them [5.14]. Following Hilson's tutelage, the Alliance has connected with 50 of Mali's most influential women *orpaillage* (gold panners), providing the bedrock for making the *orpaillage* sector more visible, and through a national mining forum, connected 200 women miners from 50 different operations across the country [5.14]. He helped create similar platforms in Ghana, specifically in Prestea, one of its most important ASM communities. Hilson's efforts culminated in the registration of the 'Wassaman Small-Scale Mining Association', a legal platform since 2017 that has since benefitted 5,000 people directly (those who are now mining with licenses) in Prestea, making it safer to maintain their livelihoods. These 5,000 people fall under approximately 100 small-scale mining licenses [5.15].

5. Sources to corroborate the impact (indicative maximum of 10 references)

- [5.1] Hilson, G., 2016. Development Minerals in Africa, the Caribbean and the Pacific. Development Minerals Project, United Nations Development Program/ACP/EU, Brussels (http://www.developmentminerals.org/images/pdf/Background-Study_EN.pdf).
- [5.2] Testimonial from Dr Daniel Franks, Director, ACP-EU Development Minerals Program, UNDP (PDF)
- [5.3] Testimonial from Dr Rachel Perks, Senior Mining Officer, World Bank (PDF)

- [5.4] 'Survey Tool: Standardized ASM Questionnaire':
<https://delvedatabase.org/resources/tool-asm-standardized-survey-questionnaire>
- [5.5] Hilson, G. 2019. State of the Artisanal and Small-Scale Mining Sector 2019. DELVE, World Bank, Washington DC. <https://delvedatabase.org/uploads/resources/Delve-2019-State-of-the-Artisanal-and-Small-Scale-Mining-Sector.pdf>
- [5.6] planetGold report: https://www.planetgold.org/sites/default/files/2020-06/Access-to-Finance-Options-for-ASM_FV.pdf
- [5.7] Hilson, G. 2016. Artisanal and small-scale gold mining in Ghana. Evidence to inform an Action Dialogue. International Institute for Environment and Development, London. <https://pubs.iied.org/pdfs/16618IIED.pdf>
- [5.8] Testimonial from Morten Larsen, Senior Mining Specialist, Energy and Extractive Industries, The World Bank (PDF)
- [5.9] Testimonial from Ms Ashlee Jackson, Director of International Programs, US Department of Agriculture (PDF)
- [5.10] Testimonial from Mr Dominique Bally, Chairman of Board of Directors, Association of Mine Closure Ambassadors (PDF)
- [5.11] Testimonial from Solomon Kusi Ampofo re grant success (PDF)
- [5.12] Artisanal and Small-Scale Gold Mining (ASGM) Sector Profile for Ghana, Prepared as Input to the National Action Plan in the Republic of Ghana. July 31, 2019 (PDF)
- [5.13] Web page of the World Bank Ghana formalisation project
<https://projects.worldbank.org/en/projects-operations/project-detail/P168002?lang=en>
- [5.14] Testimonial from Massaran Traore, Director, Alliance pour la Recherche et le Développement Integre, Mali (PDF)
- [5.15] Testimonial from Emmanuel Quarm, Chairman, Wassaman Mining Association, Ghana. (PDF)