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# FOREWORD

On behalf of Research eWisely Lab, I am pleased to announce the publication of the International Journal of Women, Sustainability and Leadership Studies. This Journal is a half-yearly peer-reviewed academic journal produced by the Research eWisely Lab. It aims to publish research, reports, and literature reviews relating to women, sustainability, leadership and SDGs. We accept publications in English, Spanish and Portuguese that cover the following topics:

- Women, the Sustainable Development Goals (SDGs) and the Agenda 2030
- Women, Corporate Sustainability Reporting and Performance
- Women, Sustainable Energy and Extractives (Mining, Oil and Gas)
- Women, Sustainability and Climate Change
- Women, Education and Impact Research for Sustainable Development
- Women and Sustainable Lifestyles
- Women and Sustainable fashion
- Women and Sustainable Entrepreneurship
- Women, Sustainable Livelihoods, agriculture and fisheries
- Women, Sustainability and Leadership  
Women, Sustainability and Impact Investing

The way that women are represented or challenged within disruptive industries and challenging environments, the linkages with the industry and socio-environmental sustainability issues, attraction and retention of women at the work place, women entrepreneurs and implications for their livelihoods, for example, are some of the topics this journal covers. The journal is designed to be an interdisciplinary journal, and it encourages young scholars, practitioners and students within all relevant disciplines to submit their work for publication. In this issue, we feature the work of researchers from PNG, Colombia and Brazil:

Franco, I (2017). Toward a Women-Centric Approach to Sustainability in Resource Regions. *International Journal of Women, Sustainability and Leadership*, 1(1), 3-18

Ribeiro-Duthie, C (2017). Gender and Child Labour in the Small-scale Mining. *International Journal of Women, Sustainability and Leadership*, 1(1), 19-23

Dela Hoz, K, Cano, N, Franco, I (2017). Desarrollo Sostenible- El Caso Colombiano. *International Journal of Women, Sustainability and Leadership*, 1(1), 24-31

Reategui, C. Women's Empowerment Programs: Opportunities to Reduce Gender Based Violence in Papua New Guinea. *International Journal of Women, Sustainability and Leadership*, 1(1), 32-35

Accordingly we invite contributions. The call for submissions is general, so as long as articles deal with issues dealing with women and sustainability theory we consider them for publication. Contributions will be blind peer-reviewed, and submitted work should be original and not published or under consideration for publication elsewhere. Authors are encouraged to submit their publications through eWisely.org. All communications, including manuscripts and general enquiries, should be directed to [invest@ewisely.org](mailto:invest@ewisely.org).

Isabel B. Franco, Ph.D  
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Exceptional Women in Sustainability (eWisely)  
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# Toward a Women-Centric Approach to Sustainability in Resource Regions

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**ABSTRACT**— The world has experienced rapid resource development threatening community livelihoods and human capital assets, particularly those of women. This research explores the linkage between disruptive industries like extractives and lack of sustainable livelihood options for women, which at the present scenario is not only causing productivity losses in extractive enterprises, but is also jeopardizing regional sustainability in resource locations. Research findings presented in this article show that stakeholders are increasingly being tasked with social responsibilities to forge sustainable livelihoods and enhance the human capital of communities, particularly of women. However, they do not know how to respond to emerging sustainability challenges. The paper proposes a strategic women-centric approach to sustainability to help stakeholders integrate women's livelihoods and human capital assets into the extractive industry or other economic sectors relevant for the local economy. This approach has the potential to foster overall sustainability, particularly in the context of developing resource regions. This piece is based on a qualitative research technique for data analysis and case study research methodology.

**KEY WORDS** — Sustainability, extractives, human capital development, enterprises, women, livelihoods, development

THE notion of sustainability is taking centre stage in the context of developing resource regions. The increase in resource developments has impacted on women and their opportunities to fashion sustainable livelihoods and enhance their human capital assets. Extractive enterprises have fostered an economic boom and it is pivotal for the global economy with revenues from the sector accounting for US\$ 863 million in 2009 in countries like Colombia (Molina-Escobar & Restrepo-Baena, 2010; Ponce, 2010). However, a lack of sustainable livelihood options particularly for women jeopardizes the sustainability of extractive enterprises and local communities.

Women adjacent to extractive operations are more commonly experiencing a loss of livelihood options and human capital assets. Hence, there is a need to engage extractive enterprises to help them fashion sustainable livelihoods in resource regions (Buitrago Franco, 2014). Moreover, there is a recognition that natural resources, particularly, minerals and metals, will not last for long and that local communities, mostly women should rely on other economic activities apart from mining to advance toward sustainability.

This paper argues that disruptive industries like extractives should engage in helping women enhancing human

capital development and therefore fashion more sustainable livelihood options, particularly in the context of developing resource locations. This can create sustainable added value to extractive enterprises and local communities. In this context, this research proposes a strategic women-centric approach to sustainability. This approach encapsulates a process of building capacities through the enhancement and maintenance of women's human capital assets. Hence, this section focuses on an examination of these assets. More importantly, it explores the ways in which women's assets can be developed or employed to forge more sustainable livelihoods in contexts where disruptive industries operate. Six priority areas for women were identified and examined: entrepreneurship, employment and leadership, education and sustainability, innovation and infrastructure in the form of technology. The research conducted in Risaralda, Colombia indicates the importance of this sustainability approach for being developed according to women's expectations and needs.

The situation exemplified in Risaralda shows that companies often make choices on behalf of communities, implementing inappropriate sustainability approaches that do not always tackle critical social and economic issues important to the community, mostly for women. Similarly, in the context of resource regions, other approaches to sustainability with a focus on women often implement mining-oriented actions to attract and retain a viable local workforce. On the other hand, many of Risaralda's women have benefited from initiatives supported by a range of stakeholders, that have been aimed at developing their assets and creating alternative livelihoods in priority areas

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other than mining. This approach has met women's expectations and equipped them with capacities to respond to mining impacts and so establish sustainable livelihoods.

The discussion in this paper is organized as follows: Section 2 introduces the methodology and Risaralda, Colombia, the case study area. Section 3 introduces a literature review that presents the theory that supports this study. This is followed by section 4 that introduces a women-centric approach to sustainability and discusses key findings. Conclusions are presented in section 5.

## 2 METHODOLOGY

This paper is based on empirical research in Risaralda, Colombia. The selection of the case study was based on three criteria: 1) a developing resource region; 2) evidence of women starved for sustainable livelihood options 3) a region that displays complexities and opportunities in integrating livelihoods of women in extractive industries or other relevant sectors in the local economy. This section also provides a more detailed description of Risaralda, Colombian case study.

Colombia is a Latin American country located on the north of South America that has experienced an escalating resource growth over the last three decades (Torres, 2001; Idarraga et al, 2010). Mining along with oil extraction represented 4.6 percent of the Colombian GDP in 2005 (UPME, 2006). The resource industry is also becoming one of the most representative economic sectors in Risaralda, Colombia. Thus, many local governments in these municipalities have succeeded in fostering sustainable resource development through effective fiscal management and efficient public institutions.

Risaralda is located in the Colombian Andes mountain range. Mining and exploration projects operated in Risaralda impact on women and their livelihoods in both urban and non-urban areas. According to the last census register (DANE, 2005) Risaralda hosted a population of 859,666 people in 2005. Out of the total population 665,104 people inhabited urban areas, whereas 194,562 were located in peri-urban and rural areas. 51.3 percent of the population was female and 48.7 percent male. Statistics also show that Risaralda hosted 230,532 households in urban and non-urban areas. Community livelihoods are compromised due to increase of extractive operations in the region. Women being the most susceptible to this "poverty trap" increases the complexity of finding livelihood options and opportunities to aide in their transition out of poverty. Hence, the importance of assisting the industries and key stakeholders in forging sustainable livelihoods for women in resource regions.

A qualitative methodological strategy was applied to develop the research presented in this paper. The qualitative strategy applied to this study involves the combination of

a number of qualitative methods and techniques, reducing any bias and limitations derived from the application of single methods (Singleton & Straits, 2010). Using the case study as the basic methodological approach, the analysis incorporated a literature review, document analysis (policy analysis), stakeholder analysis, face-to-face semi-structured interviews and group interviews. This paper is based on the Research Report 'The Untapped Potential of Women's Livelihoods for Sustainable Resource Development' (Franco & Derbyshire, 2016) and PhD research conducted at the University of Queensland (Buitrago Franco, 2014).

## 3 THEORY

The world has experienced rapid resource development threatening community livelihoods, particularly those of women. The total net output of the resource sector in the world grew by 1.7 percent in 2013 (UNIDO, 2014). However, increased growth of the sector has given rise to complexities in the industry, leading to unsustainable resource development at locations where extractive enterprises operate with major implications for women and community livelihoods (Kitula, 2006). Poor resource development practices in rural areas poses significant caveats to social welfare services, discourages participation of women in local political dialogues, educational inequalities further perpetuating the rural land tenure. Due to gender gaps, it is often the case that rural female household heads have limited access to land, training, financing, and other benefits that are generally available to men. Thus, public emphasis on support and investment aimed at helping women are vital for increasing productivity and improving livelihoods for women and their families in resource rich regions (Hilson and Banchirigah, 2009). This section presents a literature review that explores linkages between, extractive enterprises, women and sustainable livelihoods.

Concepts like sustainable livelihoods abound in the present day sustainable development (SD) literature. While the notion of SD owes its origins to environmental activists in the 19th century, in the contemporary era, SD is seen as a broad term encompassing a wide range of social, economic, environmental and political elements (Dresner, 2008). Global organizations such as the World Bank and the United Nations have embraced the Brundtland Commission's definition of SD; one that states it is "Meet(ing) the needs of the present without compromising the ability of future generations to meet their own needs" (World Commission on Environment and Development, 1987, p. 31).

Forging sustainable livelihoods necessitates placing people, particularly women at the centre of sustainability agendas. This approach transcends the notion of sustainability and therefore has the potential to overcome community development limitations (often caused by community resource-dependence). Scholarship in sustainability, corporate social responsibility and business ethics argues that

communities receiving paternalistic treatment by corporations encounter limitations in achieving sustainable development aspirations (Cornelius et al, 2008; Jenkins, 2004; Veiga, et al., 2001). Jenkins (2004, p. 26) in Buitrago Franco (2014) calls this 'false dependency': a scenario in which corporations act as providers of services and business for communities. It only worsens when communities become "mere puppets in the regeneration game played out by large national, regional and local agencies" (Cornelius et al, 2008, p. 358). Yet, extractive enterprises can however significantly contribute to helping communities, particularly women forge more sustainable livelihoods and integrating them in the extractive industries or other sectors relevant for the local economy. This approach also has the potential to assist extractive enterprises in fostering sustainable resource practices.

Forging sustainable livelihoods in resource regions can assist women in becoming active participants in shaping their life plans and achieve their sustainable development aspirations. Recent resource development has positioned the extractive industry as one of the main economic activities in the region. In the Colombian case, operations have been undertaken by Canadian and domestic exploration and mining companies. Metals production in Risaralda represented 6.71 percent of Colombia's total production in 2005 (UPME, 2006). Extractive enterprises play a strong role in enhancing women's assets, an approach that is leading to more sustainable livelihoods in Risaralda, Colombia. Research shows that effective public policies and governance arrangements as well as approaches to women engagement and empowerment are factors that have contributed to forge sustainable livelihoods in resource regions (Figueiredo and Perkins, 2013; Raha et al, 2013; Buitrago Franco, 2014).

Risaralda's Government authorities agree that the extractive industry is essential to meet regional competitiveness standards and achieve sustainable development goals. It is important to note that companies are accountable for meeting acceptable sustainable resource development and are asked to have a strong commitment to regional development. An innovative approach adopted by stakeholders to assist women in forging sustainable livelihoods, includes: education, employment opportunities, innovation, entrepreneurship and infrastructure in the form of technology (Buitrago Franco, 2014). These pillars, as constituent components of a sustainable resource governance framework, are considered as fostering factors to develop less resource-dependent communities and help them create more sustainable livelihood options. However, we can see the transfer of economic dependency from local capacity building initiatives to short-term dependency on resource revenue. For resource regions, localization of corporate policies will provide an economic boost to grass-roots capacity building and upskilling initiatives. Thus, the involvement of women in extractive enterprises and other local economic sectors is paramount to forging sustainable resource regions

and for the advancement towards sustainable resource development (Buitrago Franco, 2013). Business literature therefore recognizes the role of women participation in the local economy, particularly in running business in non-traditional sectors such as mining, construction and manufacturing (Anna, A.L, et al, 1992). In addition, scholarly debates address concerns regarding the lack of empowerment and poor decision-making skills in integrating community and women in the local and global economy (Christensen & Grant, 2007; Mabudafhasi, 2002; Muthuri, 2007; Said-Allsopp and Tallontire, 2015).

One of the most significant research findings in the Risaralda case study has to do with active women engagement. Women have played a strong role in the formulation of local development agendas, becoming active participants in achieving their development aspirations (Buitrago Franco, 2014). Women have benefited from socially responsible practices intended to help them cope with livelihood transformations induced by the extractive industry. Such initiatives comprise activities, like agribusiness, dress-making, jewellery, coffee production and agriculture. For example, former informal miners and miners' wives have been provided by the company with dress-making training to create alternative livelihoods and realize their entrepreneurial potential. These actions have been implemented either as a result of effective government-corporation partnerships or as a response to women's requests.

#### 4 DISCUSSION AND RESULTS

This section aims to discuss existing approaches to help women in developing resource regions forge sustainable livelihoods. It is argued that women's livelihoods are very often threatened due to lack of sustainable assets to realize their full potential. This section also discusses and underlines that women's livelihoods can be protected by disruptive industries through more sustainable practices. This resulted in the development of a strategic women-centric approach to sustainability.

Extractive enterprises have been pivotal in protecting women's livelihoods in the case study area. However, there is still room for improvement in helping women enhance their assets to cope with extractive-induced changes. Extractive activities will eventually affect the livelihood of women in farming, jewellery design, artisanal mining, large-scale mining and other economic activities. Women farmers, for example, are choosing artisanal mining over agriculture which might displace traditional livelihood options in the long-term. However, it is mainly due to active women participation and the enhancement of women's assets to further integrate livelihoods into the mining sector that the industry will have less severe impacts on developing resource regions. Active participation of women in livelihood making has also helped them proactively embark on enterprises, request the required resources and skills to positively transform their assets and help them cope with

potential mining impacts. Existing approaches have also helped women achieve their development goals and forge sustainable livelihood options.

Based on women's expectations, the extractive enterprises and governments have embarked on sustainable business agendas. This has had positive impacts on locals, as these practices are more in tune with local circumstances. Women consultation in relation to needs and expectations is highly appreciated in the development of these initiatives, resulting in immediate benefits for them. For example, local coffee and jewellery producers, as well as female entrepreneurs have already experienced the benefits of these initiatives:

“We have been trained in jewellery design ... the company has also provided us with some financial assistance to attend international fairs so that we can promote and sell our products” (Community Members, Interview, October, 2012).

There is a close relationship between good governance and sustainable livelihoods for women. Collaboration for forging sustainable livelihoods of women has been a driver to enhance resilient assets. Governance is not restricted just to the role of government but also involves other parties such as extractive enterprises and civil society (Davies, 2005). It is part of the role of these three parties to help women develop asset-based adaptation strategies to help women forge sustainable livelihoods and cope with mining impacts.

Furthermore, understanding the political and economic agendas of international companies involved in operations is necessary to gauge the impact and success of sustainable livelihood development and capacity building initiatives. Exploration projects currently undertaken by Canadian companies occupy large areas of land that host important reserves of gold. Informal miners who previously worked in this area are involved in ongoing negotiations with the Canadian company to explore possibilities of relocation and opportunities for their livelihood transformations. A group of informal miners, including both women and men, has obtained a concession to keep mining the land where the Canadian company operates. This process focuses on employment generation for informal miners at the large scale mining enterprises. However, this dialogue between local stakeholders and international companies is necessary in order to enforce the necessity to localize capacity building in a gender inclusive manner.

Lessons can be learnt from the Colombian case and applied to other developing resource locations. Sustainable livelihoods for women need to be further developed according to their expectations and needs. This bottom-up approach to sustainability is already having significant effects on many women in Risaralda, Colombia and equipping them with more resilient assets that will help them sustain their

livelihoods in the long-term. However, if top-down approaches, it is, neglecting women's development aspirations, keep being implemented, this will not only be detrimental for women but also for companies operating in resource regions as it will escalate community discontent and resentment toward the industry. This will threaten the expansion of future projects, increase complexities in extractive enterprises and may compromise the social licence to operate and sustainability in developing resource regions.

Integrating livelihoods of women in the extractive industry or other sectors relevant for the local economy will create value for both, extractive enterprises and women themselves. However, stakeholders particularly the extractive industry meets difficulties to pursue such integration and build resilient assets. Women's livelihoods have undergone substantial transformations led by local dynamics. Violent times in Colombia, Risaralda diminished community opportunities to develop livelihood options other than mining. The low income that some women got from small-scale gold mining was inefficiently spent, and gender and power dynamics amongst small miners increased internal conflict in the community. In addition, “low educational level impeded women miners effectively administering the income they got from gold extraction” (Community Leader, Interview, November, 2012). Informal miners did not know how to handle the benefits derived from artisanal small scale mining; neither did they realize the magnitude of the social and environmental problems triggered by poor mining practices. This situation led to some local authorities partnering with community members and other local stakeholders to provide capacity-building in the form of education (for example, a vocational program on jewellery making), providing women with sustainable and alternative employment and livelihood options.

In 2008, government authorities extended the impact of this initiative and agreed with communities that they were going to add sustainable value to raw materials extracted in the region. This was the beginning of successful multi-stakeholder collaboration in which “governments and civil society actors partnered to create a jewellery association—a community-based organization” (Community Leader, Jewellery CBO, Interview, November, 2012). The association is one of a number of income generators at the local level. At the present time, the organization is self-sustainable and employs locals. The arrival of multinational companies in the region has further strengthened the work of CBOs in Risaralda. A Canadian company operating in the region strongly supports this initiative as they are keen to “promote social sustainability in other industries relevant for the community... [Similarly, the international corporation] is in a permanent dialogue with State actors to know more about community's needs and be able to assist women and local communities increase income” (Corporate Representative, Interview, October, 2012).

Collaborative approaches for enhancing women's assets have resulted in positive outcomes for the women involved. For example, "the company helped the municipality to open a plant for waste collection which has the potential for generating income for the local community" (Community Leader, Jewellery CBO, Interview, November, 2012). Ongoing collaboration between companies, educational institutions and civil society organizations has also helped women create asset-based strategies to increase local income: "Universities located in the region are helping us undertake market analysis to improve cost production and increase income ... this is very important for us because we are a key stakeholder for [Risaralda's agriculture sector]" (Community Leader, Blackberry CBO, November, 2012).

Furthermore, the representation of women through gender equality initiatives presented in the peace deal with FARC has been pivotal in the government's awareness of the importance of women and their livelihoods. This recent agreement exemplifies the significance of the role that gender has to play in the development of sustainable livelihoods in Colombia's mining regions. A 2012 United Nations analysis of 31 peace processes between 1992 and 2011 show that women make up 4% per cent of signatories, 2.4% per cent of chief mediators, 3.7% of witnesses and 9% of negotiators (UN Women, 2012). What this means for the future of gender inclusion and representation for women in resource regions is significant. The agreement in the Colombian case seeks to atone destruction and limitations imposed by conflict whilst addressing inherent inequalities for women in Colombia. As evident in Clause 5 of the agreement, "... the sub-commission on gender to conclude the work it has been engaged in as promptly as possible, consisting of the revision of the agreements 1, 2 and 4 of the General Agreement with a gender-based approach" (Alto Comisionado para la Paz, 2016). This meaning clauses 1, 2 and 4. The first agreement is comprised by plenipotentiary members of the delegations, to which other advisors decided by each party may be added, in addition to the advisors responsible for each topic, in order to facilitate rapprochements at the strategic level, make the warranted decisions to streamline the drafting of agreements, and supervise the work of the delegations. The inclusion of women in the governmental bureaucratic processes and discussions further represents the growing importance in women as actors of the public sphere. This change is a significant step toward legitimizing the role of women in resource regions. Furthermore, empowers women to become primary economic actors of socio-developmental change within resource rich regions of Colombia.

Fashioning sustainable livelihood of options for women has also been driven by the need for economic diversification. This has led to some positive livelihood transformations, as women have been able to generate income from industries other than mining. In addition, supported by

private and government organizations, community associations, in which women actively participate, are not only increasing income but also fostering livelihood opportunities in jewellery design and sales. This has reduced community dependency on both small and large scale mining and has sustain existing community and women livelihoods.

#### 4.1. A Women-centric Approach to Sustainability

This section presents a women-centric approach to sustainability and equips us with a broader understanding of the relationships between women in resource regions and sustainable livelihoods. The investigation identified six key forms of women's assets that need to be enhanced. These were identified from the data derived from the fieldwork and interviews. This inductive derivation indicates their critical importance. They need to be protected and further built on to enhance women resilience in resource regions of Colombia. These assets are: entrepreneurship, employment, education and sustainability, innovation and infrastructure in the form of technology. Despite other forms of human capital (religion, culture, etc) sometimes being mentioned, these five were constantly identified as central. The following sections justify why these five assets need to be further enhanced. It will also be argued that without an appropriate sustainability approach in place to develop these primary assets, the ability of local communities, particularly women, to interact with disruptive industries like mining will be compromised. Hence, the purpose of this section is to better understand how this women-centric approach to sustainability can contribute to enhancing women's assets and overall sustainability.

##### Entrepreneurship

Income has been generated mostly from proactive entrepreneurial activities. This form of community income has undergone substantial transformation in parts of Risaralda and so has had an impact on its role as an asset for women's livelihoods. Violent times in Risaralda diminished community opportunities to develop livelihood options other than mining. The low income that some communities got from small-scale gold mining was inefficiently spent, and power dynamics amongst small miners increased internal conflict in the community. In addition, "low educational level impeded [gold miners] in effectively administering the income they got from gold extraction" (Community Leader, Interview, November, 2012). Informal miners did not know how to handle the benefits derived from small scale mining; neither did they realize the magnitude of the social and environmental problems triggered by poor mining practices. This situation led to some local authorities partnering with community members and other local stakeholders to provide sustainable livelihood options, particularly for women (for example, a vocational program on making jewellery), providing women with alternative livelihood options.

In 2008, government authorities extended the impact of this initiative and agreed with communities that they were going to add value to gold extracted in the region. This was the beginning of successful multi-stakeholder collaboration in which “governments and civil society actors partnered to create a jewellery association—a community-based organization” (Community Leader, Jewellery CBO, Interview, November, 2012). The association is one of a number of income generators at the local level. At the present time, the organization is self-sustainable and employs locals. The arrival of multinational companies in the region has further strengthened the work of CBOs in Risaralda. A Canadian company operating in the region strongly supports this initiative as they are keen to “promote social sustainability in other industries relevant for the community... [Similarly, the international corporation] is in a permanent dialogue with State actors to know more about community’s needs and be able to assist civil society organizations to increase income” (Corporate Representative, Interview, October, 2012).

Collaborative approaches for sustainable enterprises and livelihoods have resulted in positive outcomes for the communities involved. For example, “the company helped the municipality to open a plant for waste collection which has the potential for generating income for women and the local community” (Community Leader, Jewellery CBO, Interview, November, 2012). Ongoing collaboration between companies, educational institutions and civil society organizations has also helped communities to create asset-based strategies to increase local income: “Universities located in the region are helping us undertake market analysis to improve cost production and increase income ... this is very important for us because we are a key stakeholder for [Risaralda’s agriculture sector]” (Community Leader, Blackberry CBO, November, 2012).

Income generation through entrepreneurship has also been driven by the need for economic diversification. This has led to some positive livelihood transformations, as locals have been able to generate income from industries other than mining. In addition, supported by private and government organizations, community associations are not only increasing income but also fostering employment in jewellery design and sales. This has reduced the relevant community dependency on both small and large scale mining and has strengthened existing community, but mostly women’s assets.

### Employment and Leadership

With the support of government and companies, community-based organizations have played a key role in transforming livelihood assets, particularly those of women. Employment and leading roles of women in non-conventional industries are considered primary assets of women. Leadership and employment are assets rooted on community organizations. “Both, women and men have a strong

sense of community. They own agriculture-based community associations that stimulate the local economy, foster employment and leadership. For example, they own associations for blackberry and coffee production and commercialization” (Corporate Representative, Interview, October, 2012). Active women participation has led to the creation of local initiatives for social sustainability. It has also become the driver for enhancing many communities’ coping capacity through employment generation.

Driven by strong links of reciprocity and empathy, locals more often partner with other civil groups or local stakeholders to develop community associations. The importance of becoming self-sustainable reinforces their desire for a high level of economic independence and points to a need to enhance these organizations. This will not only strengthen their capacity to respond to potential mining impacts but also assist them in becoming leading contributors to local employment. To date community-based organizations have contributed strongly to protecting and enhancing employment assets in Risaralda. Community organizations provide employment opportunities to 616 households (see Table 1) and they expect to play a stronger role in the coming years. A female representative of one of these CBOs said: “At the present time we are benefiting 11 households through employment generation ... In the future it will not only be 11 but 20, 30, 50 families benefited from this organization” (Community Leader, Jewellery CBO, Interview, November, 2012). Table 1 shows three community organizations’ contributions to employment generation in the region.

**Table 1 Three CBOs and employment generation**

Type of Association	Households benefited from CBO’s employment
Association for coffee production and commercialization (APECAFE)	499
Association for blackberry production and commercialization (AMORQUIN)	106
Association for jewellery production and commercialization	11

State actors have also taken part in fostering social sustainability by supporting these organizations. The regional government often encourages exploration and mining companies to engage with CBOs to develop such community livelihood assets. In response, companies have committed to supporting the community endeavours; however, they also have a particular interest in linking community organizations’ work with company goals. Local authorities acknowledge that the industry plays a key role, and actions need to be undertaken to generate mining-related employment opportunities. Nevertheless,

companies willing to employ community members also need to contribute to local development aspirations: "We want mining companies to operate socially responsible. We want most of their employees to be locals. Employees should also be equipped with suitable conditions to perform their jobs with high safety standards" (Senior Local Government Representative, November, 2012).

Creating sustainable livelihoods is a long-term process (Rakodi & Lloyd-Jones, 2002; Carney, 2003). Hence, if mining is to support the long-term development of work opportunities for women outside mining, the industry needs to come up with strategies to protect and enhance livelihood assets from the start of advanced exploration through mining development stages of the mining cycle and also after mine closure. Corporate representatives state that "during the exploration stage (they) are hiring locals to support current drilling projects...The local community board gives (the company) potential workers' CVs and (the company) selects them through an internal process" (Corporate Representative, Interview, October, 2012).

Other corporate initiatives for employment generation are based on the implementation of bottom-up (community) approaches to employment. However, these initiatives are still in a very early stage and so their impact on women cannot yet be measured. For example, dress-making programs in which female leaders are participating, are one of the initiatives in place: "This training will help us get employed either by the company or educational institutions to make the company workers' or school students' uniforms" (Community Representatives, Focus Group, November, 2012).

Various factors have contributed to enhance employment, but mostly leadership for employment generation as primary assets. Addressing the long-term effects of the gradual escalation of mining operations on local employment will be more effectively done by enhancing existing self-sustainability, community independence and multi-stakeholder collaborations. However, leadership in employment generation has also been possible in some cases due to the implementation of relevant and bottom-up initiatives in the form of education and training. This is another pivotal factor that will help women and their families adapt to the impact of the extractive industry in the region.

### **Education and Sustainability**

Education in the Risaralda case comprises both non-mining and mining-orientated initiatives. Interestingly, there is a particular interest in education for sustainability. Findings regarding education are linked to four aspects. First, approaches to education are generally based on community needs and expectations. Second, the existing approach acknowledges community diversity. Civil society groups

are different and stakeholders involved in education implementation pay particular attention to these differences. For example, gender is a highly valued variable in the implementation of education initiatives. Third, corporations undertaking projects in the area are aware of the importance of education as an approach to development and have embraced this approach as a constituent component of their sustainability agendas. And fourth, community members, particularly women, have also been educated to understand the principles of sustainability through workshops and seminars. These aspects have, in the cases explored here, helped local stakeholders develop an approach to development tailored to local circumstances.

Existing education approaches seem to meet community development aspirations. This is helping locals to positively transform their assets and prepare to deal with potential mining impacts. Initiatives now in place cover a wide range of priority areas for locals, such as agriculture, jewellery and social responsibility. Women have also been involved in other relevant initiatives like human relations, conflict resolution and dress-making. The main determinant of the success of these initiatives in Risaralda is the involvement of the community in decision-making processes.

Non-mining education actions are usually demanded by, and at times implemented by civil society actors. Locals very often promote collective action to request what they consider relevant to develop their livelihoods. "The company provided us with training in coffee making and coffee tasting. We have also requested support from companies and governments resulting in the implementation of jointly funded education actions" (Community Leaders, Focus Group, October, 2012). Findings indicate that this approach has positive results for women. "We have been involved in several initiatives delivered by different organizations such as Artesanias de Colombia, government-funded educational institutions and NGOs. We have experienced the benefit of these initiatives. It is reflected in the products that we design" (Community Leader, Jewellery CBO, Interview, November, 2012).

Where non-mining initiatives are led by local stakeholders they take into account community differences. Education initiatives are tailored according to community distinctions such as gender: "Women in the region identified their education priority area. They said they wanted to be trained in dress-making. We hired a trainer from a government-funded educational institution and allocated other resources, like dress-making machines" (Corporate Representative, Interview, October, 2012). Female leaders see this initiative as a means to build resilience to potential mining impacts. As noted in earlier chapters, females currently undertaking education initiatives in Risaralda often have associations with mining. They are small-scale miners' wives, employees, or wives of employees, and some

of them are small-scale miners themselves. It is worth emphasizing that equipping mining-dependent individuals with assets in areas other than mining is highly important in fostering social sustainability: "I am happy with the mining company's contribution. They provided us with a trainer and other resources. I am very happy; we have been able to benefit from this (program)" (Female Community Leader, Interview, November, 2012).

Another central determinant to the success of the existing approach is related to the intrinsic link between education and Sustainability. Education has been considered as a constituent part of sustainability and some training in sustainability has been delivered as an education initiative. For example, one of the companies operating in the region provides education on social responsibility. This is intended to increase community members' awareness of sustainability principles and help them "identify the stakeholders involved in sustainability at the local level ... most of the people in town including government representatives are part of this initiative" (Community Representative, Interview, November, 2012).

The education initiative on sustainability is led by the company and involves key areas relevant for locals. In the frame of this program, community members have been given education in human relations, food security, family guidance and conflict resolution (Community Representatives, Focus Group, November, 2012). Community members have a strong perception that education in social responsibility has assisted them in coping with shocks like internal conflict. One of the respondents agrees that being exposed to this initiative has helped her and the community organization she represents "prevent conflicts within (the) association" (Community Leader, Interview, November, 2012).

Both non-mining and mining education programs are being implemented in Risaralda and despite a mining education approach in place these actions have been implemented without any detriment to community livelihood assets. A key finding of this research is the fact that communities in Risaralda do not perceive mining as the only priority area. It is only one of the options available to develop livelihood assets. Despite being implemented in a partnership between governments and companies, the mining-orientated approach used in Risaralda involves women consultation and decision-making. Locals understand their livelihoods have to adapt to changes triggered by the extractive industry. This implies engaging with extractive enterprises but not depending on it. "We have initiatives related to mining in place. Some of them involve artisanal mining, environment, etc. However, our people cannot only rely on these initiatives as companies might leave in the future" (Community Representative, Interview November, 2012). Other mining-related education areas include but are not limited to "safety, occupational health, labour risk, blasting and drilling" (Local Miners, Focus Group,

November, 2012). A combination of mining and non-mining initiatives in the form of education has served as a means to build long-term sustainability. This has delivered positive outcomes for locals as they have been able to employ their assets in vital areas for their life plans. Education as a primary asset has also equipped locals to gain meaningful employment and therefore relevant and innovative approaches to sustainable livelihoods.

## Innovation

Education, employment and innovation are strongly connected in the communities in the Risaralda case. Women have been able to gain meaningful experience as a result of innovation. In addition to this, innovation has improved their livelihood conditions as they have been able to access jobs themselves as well as foster employment opportunities for other locals. Women can access gainful livelihood options because they have benefited from innovation. Innovation is not limited to mining but involves other areas equally important for local development. The government has played a key role in the development of innovation programs and so helped foster its worth as a livelihood asset:

Local authorities administer the centres for occupations and skills. This educational institution is intended to up-skill students in bakery, electricity and other occupations in high demand at the local and regional levels. Once students finish school, they are certified with relevant experience in their field (Government Representative, Interview, November, 2012).

It is part of the role of government to contribute to building resilient livelihood assets. However, other stakeholders are equally responsible for this. In Risaralda, governments and other stakeholders are taking part in the establishment of strategies to provide locals with opportunities to foster innovation and benefit from it. The private sector and civil society actors are committed to supporting community organizations through innovation initiatives, in the form of research and skills to help them gain expertise in key areas for local development:

"Universities play a key role in the region, particularly in undertaking research. They are helping us develop marketing strategies to expand our local business" (Community Leader, Interview, November, 2012). As universities can be difficult to access for locals due to low educational attainment and financial constraints, companies and governments strongly support the Centres for Higher Education (CERES).

We have nearly ten undergraduate programs in the centre. Ten universities offer education at CERES. This has benefited people from remote areas, as they do not have to migrate to other locations in search of education opportunities. They are provided with education

in town, over the weekends (Government Representative, Interview, November, 2012).

Community members, particularly female farmers, commute on weekends to sell their local goods at the public market. They also take this opportunity to participate in educational initiatives funded in partnership by governments and companies:

We have an agreement with a higher education institution. It consists of promoting innovative initiatives for productive chains. We supported the participation of a community leader from a CBO for blackberry production. This organization lacked expertise in this area and therefore we strongly supported his involvement in this innovation initiative (Corporate Representative, Interview, October, 2012).

Both state and non-state actors have actively contributed to strengthening the possibilities for work experience as a primary asset. Other more tangible community assets like infrastructure have also been enhanced by local stakeholders.

### Technology and Infrastructure

Technological resources and local facility improvements for education are often perceived as key strategies to mobilize women's assets. This is reflected in local stakeholders' increased interest in incorporating infrastructure for more sustainable livelihoods as a constituent element of their sustainability agendas. Companies "have been proactive in the provision of infrastructure. ... (for example), they provide us with infrastructure and facilities to educational institutions and community members" (Government Representative, Interview, November, 2012). Infrastructure, particularly technological resources have been provided to foster long-term improvements in livelihoods and to physically equip educational institutions.

Infrastructure in the form of technology has improved many women's capacity to cope with mining impacts. Mining may threaten existing food and food storage systems in Risaralda, with immediate effects on traditional agrarian livelihoods and food security itself. The industry may also affect local crops. Because many locals obtain most of their food from local agriculture, infrastructure to strengthen existing agrarian systems has become a key priority for local stakeholders: "One of the mining companies is helping us design some plants for blackberry production... we have no problems with company representatives. Instead, we have to thank them for their support" (Community Leader, Interview, November, 2012). In this regard, corporate representatives state, "(we) are helping community members with improvements in infrastructure and resources for blackberry plantations. (We) are also implementing the same approach for banana plantations" (Corporate Representative, Interview, November, 2012). Corporate support

has extended to the broader community and to those who are not directly impacted by current projects: "The company has funded some education activities and has provided our community with some other physical resources" (Community Representatives, Focus Group, November, 2012).

Corporations more often mobilize resources to strongly support improvements in infrastructure for the education sector. However, they have a particular interest in higher education. Increased corporate investments in infrastructure have resulted in positive outcomes for universities near the case study area. Such investment has been translated into benefits for local women.

Corporate support for infrastructure has also been directed to non-formal education. According to the Colombian System for education, non-formal education aims to build work-related competences in the illiterate or poorly-educated members of the population (DNP, 2010). Participants in non-formal education initiatives have already experienced the benefits of corporate investment: "The house where we are taking (the dress-making) training is going through remodelling. The company is helping us with this. It will be much larger and in better physical condition by next year". (Female Community Leader, Interview, November, 2012). Indeed, infrastructure has become essential for livelihood asset transformation. Companies and other local stakeholders like governments are building local infrastructure to help community members cope with the effects of mining in the long-term.

### 4 CONCLUSIONS

Women's pre-existing vulnerabilities, as well as the complexities in disruptive industries, like the extractive industry are likely to result in more adverse impacts on women, their livelihoods and human capital assets. Successful integration of livelihood options in the local economy face a number of complexities that might increase or diminish disruptive industries' ability to help women forge more sustainable livelihood options. This paper recommended an strategic approach to sustain women livelihoods by enhancing human capital assets and integrating those in the local economy. It also highlights best practices to be applied to other developing resource regions.

This paper also indicated that priority human capital assets and livelihood areas which are the most valuable for women are those that help them achieve their own development aspirations. Because of this, a women-centric approach is more likely to foster overall sustainability than corporate and/or government top-down approaches. In those cases in which companies have embraced community-oriented and women-driven agendas, women claim to have become more resilient to cope with disruptive industries-induced transformations. Women who have been properly consulted about livelihood priorities have been

able to strengthen key assets, becoming more capable of coping with mining-induced changes. However, such approaches need to be included as a constituent component of both corporate and government policies. It is not solely extractive enterprises' responsibility to make these approaches valuable for women as governments also need to share responsibilities with companies in this regard. Governments also need to consult women.

In both cases consultation should not be merely the token provision of information but should be such that women are involved in decision-making about matters such as priorities for the allocation of funds and asset transformation. Consultation processes should include female artisanal miners, farmers and women entrepreneurs. Similarly, major attention needs to be paid to existing community and women associations to help women become active suppliers for the large scale extractive industry or other industries relevant for the local economy. These lessons drawn from the Colombian experience can be applied to other regions in Latin America and elsewhere.

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#### REFERENCES

- Alto Comisionado para la Paz. (2016). *Acuerdo Final para la Terminación del Conflicto y la Construcción de Una Paz Estable y Duradera*. Bogotá, Colombia: Alto Comisionado para la Paz.
- Anna, A. L., Chandler, G. N., Jansen, E., & Mero, N. P. (2000). Women business owners in traditional and non-traditional industries. *Journal of Business Venturing*, 15 (3), 279-303.
- Buitrago Franco, I. (2014). *Building Sustainable Communities: Enhancing Human Capital in Resource Regions*. PhD Dissertation, The University of Queensland, Brisbane.
- Buitrago Franco, I. (2013). *Mining, Capacity-Building and Social License: Making the Links*. Paper presented at the World Mining Congress. Montreal, Canada. Peer Reviewed Paper.
- Carney, D., 2003. *Sustainable Livelihoods Approaches*. Retrieved 25 March, 2014, from [http://www.eldis.org/vfile/upload/1/docu-ment/0812/SLA\\_Progress.pdf](http://www.eldis.org/vfile/upload/1/docu-ment/0812/SLA_Progress.pdf).
- Cornelius, N., Todres, M., Janjuha-Jivraj, S., Woods, A., Wallace, J. (2008). Corporate Social Responsibility and the Social Enterprise. *Journal of Business Ethics*, 81(2), 355-370.
- Christensen, J. & Grant, M. (2007). How Political Change Paved the way for Indigenous Knowledge: The Mackenzie Valley Resource Management Act. *Arctic*, 60(2), 115-123.
- DANE (Departamento Administrativo Nacional de Estadísticas). (2005). *Perfil Risaralda*. Bogotá: DANE.
- Davis, G. A., & Vásquez-Cordano, A. L. (2013). The Fate of the Poor in Growing Mineral and Energy Economies. *Resources Policy*, 38(2), 138-151.
- Dresner, S. (2008). *Principles of Sustainability*. London: Earthscan.
- Figueiredo, P., & Perkins, P. E. (2013). Women and water management in times of climate change: participatory and inclusive processes. *Journal of Cleaner Production*, 60, 188-194.
- Franco, I., & Derbyshire, E. (2016). *The Untapped Potential of Women's Livelihoods for Sustainable Resource Development*. Brisbane, Australia. WISELy. Retrieved from [www.ewiseby.org](http://www.ewiseby.org)
- Jenkins, H. (2004). Corporate Social Responsibility and the Mining Industry: Conflicts and Constructs. *Corporate Social Responsibility and Environmental Management*, 11(1), 23-34.
- Kitula, A. G. N. (2006). The environmental and socio-economic impacts of mining on local livelihoods in Tanzania: A case study of Geita District. *Journal of cleaner production*, 14(3), 405-414.
- Hilson, G., Banchirigah, S.M., 2009. Are alternative livelihood projects alleviating poverty in mining communities? experiences from Ghana. *J. Dev. Stud.* 45 (2), 172–196.
- Idarraga, A., Munoz, A., Vélez, H., 2010. Conflictos Socio-Ambientales Por La Extracción Minera En Colombia: Casos De La Inversión Británica. *Censat Agua Viva*, Bogotá.
- International Centre for Tropical Agriculture (CIAT) (2013). *Policies for Bridging the Urban-Rural Gap in Colombia*: CIAT
- Mabudafhasi, R. (2002). The Role of Knowledge Management and Information Sharing in Capacity Building for Sustainable Development--an Example from South Africa. *Ocean & Coastal Management*, 45(9-10), 695-707.
- Molina-Escobar, J.M & Restrepo-Baena, O.J. (2010). Colombian Mining Sustainability. *Dyna-Colombia*, 77(161), 149-151.
- Muthuri, J.N. (2007). Corporate Citizenship and Sustainable Development - Fostering Multi-Sector Collaboration in Kenya, *Journal of Corporate Citizenship*, 28(12), 73-84.
- Ponce, A. (2010). *Panorama del Sector Minero*. Bogotá: Unidad de Planeación Minero Energética.
- Singleton, J.R. & Straits, B.C. (2010). *Approaches to Social Research* (Fifth edition ed.). New York: Oxford University Press.
- Said-Allsopp, M., & Tallontire, A. (2015). Pathways to empowerment?: dynamics of women's participation in Global Value Chains. *Journal of Cleaner Production*, 107, 114-121.
- Singleton, J.R. & Straits, B.C. (2010). *Approaches to Social Research* (Fifth edition ed.). New York: Oxford University Press.
- Raha, D., Osbahr, H., & Garforth, C. (2013). Does watershed development implemented through public private partnership empower women? A case review from Rajasthan, Western India. *Journal of Cleaner Production*, 60, 18-33.
- Rakodi, C. & Lloyd-Jones, T. (2002). *Urban Livelihoods: A People Centred Approach to Reducing Poverty*. London: Earthscan Publications.

Torres, I., 2001. *The Mineral Industry of Colombia*. Retrieved March 26, 2014 from <http://minerals.usgs.gov/minerals/pubs/country/2001/comby01r.pdf>.

UNIDO (United Nations Industrial Development Organization). (2014). *Mining and Utilities*. Vienna: Industrial Development Organization.

UPME (Unidad de Planeación Minero Energética). (2006). *Colombia País Minero 2019*. Bogota: Unidad de Planeación Minero Energética.

UN Women (2012). *Women's Participation in Peace Negotiations: Connections between Presence and Influence: UN Women*

Veiga, M., Scoble, M., McAllister, M.L. (2001). *Mining with Communities*. *Natural Resources Forum*, 25(3), 191-202.

WCED (World Commission on Environment and Development). (1987). *Report of the World Commission on Environment and Development: Our Common Future*. Oslo: WCED.

Trans. *Knowledge and Data Eng.*, preprint, 21 Dec. 2007, doi:10.1109/TKDE.2007.190746.(PrePrint)

# Gender and Child Labour in the Small-scale Mining

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**ABSTRACT**— The world has experienced rapid resource development threatening community livelihoods and human capital assets, particularly those of women. This research explores the linkage between disruptive industries like extractives and lack of sustainable livelihood options for women, which at the present scenario is not only causing productivity losses in extractive enterprises, but is also jeopardizing regional sustainability in resource locations. Research findings presented in this article show that stakeholders are increasingly being tasked with social responsibilities to forge sustainable livelihoods and enhance the human capital of communities, particularly of women. However, they do not know how to respond to emerging sustainability challenges. The paper proposes a strategic women-centric approach to sustainability to help stakeholders integrate women's livelihoods and human capital assets into the extractive industry or other economic sectors relevant for the local economy. This approach has the potential to foster overall sustainability, particularly in the context of developing resource regions. This piece is based on a qualitative research technique for data analysis and case study research methodology.

**KEY WORDS** — Women labour; child labour; small-scale mining; extractive industry; gender inclusion.

## 1 INTRODUCTION

**T**HE presence of women in mining as miners or co-workers is seldom reviewed in the literature. The debate on gender inclusion have highlighted the relevance of the subject and a number of social movements have developed in more recent times focusing on women interests and rights on several fronts including: domestic violence, discrimination, stereotypical approach to set work positions, the gender pay-gap and other inequalities. Historically there has been very little published in relation to women as a workforce in the mining sector. This should not be misinterpreted to indicate a lack of women in the sector as the omnipresence of women is quite evident to anyone familiar with the extractive industry, especially in the small-scale sector, where children can also be seen. This is theme of a compelling debate in this bilingual collection of writings in Spanish and Portuguese centered on the participation of women and children in ASM (Artisanal and Small-scale Mining) in Latin America. The book is strengthened by contributions from authors across the continent, drawing on research and experience not only in Bra-

Tabak (as per book presentation) observes that while gender relation studies became common in some parts of the world in the 1970's they only made an appearance of any note within Latin America from around the 1980's. As noted by Castilhos in the preface, this collection is a pioneer of sorts in the field as publications relating to women's labour into mining particularly within Latin America have been, until this volume, somewhat rare and disorganized.

The book draws on a number of roundtables held between 2005 and 2006 at the Brazilian practices and research Centre for Mineral Technology with professionals from across Latin America discussing the work conditions of women and children active within the small-scale mining sector.

## BODY OF TEXT (COLLECTION OF CHAPTERS)

In part I, 1st chapter, Gabriela Factor and Andrea Mastrángelo discuss the common assumption that women presence within mining is an impossible or untraceable subject. These authors remark that women are and were always involved in mining, either as workers, wives, daughters, or widows. Given the informal features of the ASM mining subsector, where work environments and home are often co-located, mixed or neighboring, it is understandable that not only women but also children are of-

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ten called upon to undertake tasks within small mining settings. However, even when the women and children undertake tasks directly related to mining operation their work is most often not formally or informally recognized. In larger formal enterprises – where power structures will be determinant to organize social structures – other factors that not a sense of social responsibility will determine the extent and degree of gender inclusion. A remarkable example given by Factor & Mastrángelo illustrates how gender exclusion can occur in the large scale mining setting even when skills and expertise of women are recognized. From a necessary critical perspective when talking about the necessity of gender inclusion, the authors reported the case of a daughter of miners who had studied for and been awarded a technical degree applied to mining. Despite being recognized as the better-qualified candidate for a position into a large scale mining enterprise in Oruro, Bolivia, the young lady was not selected for the job position. And the rationale given: in the field mining locations, there was no facilities to accommodate women and as such they did not employ the female candidate. This is an example of where the evolution of gender roles clashes with and are often out of step with institutional structures. The authors sensibly highlight that “there is no sustainable development without gender inclusion”.

The fact that gender is a social construct is the central theme of the second chapter, where Carlos Renato Carola brings Simone de Beauvoir proposal that woman and man are not born with predefined knowledge or behaviour of how to be a woman or a man, but they learn the roles according to expectations of and limits to being a woman or man within the societies they live within. Several examples from literature are brought to illustrate the dynamics of gender social representations, with a focus on gender inequities traditionally taken for granted or considered natural.

Despite the technological advances in mining; such as mechanization, that have in many cases reduced the need for muscle power normally associated with the sector, however to date this development has not resulted in significant increases in the employment of women within the minerals sector.

And the minerals industry is still – for many – stereotypically considered as work somewhat hard, heavy, labour intensive. Hence, more appropriate for a man, traditionally considered a “superior biological being” – quoting Carola (2002), these are observations by Zuleica Castilhos and Nuria Fernández Castro in the third chapter. The authors will also underline the fact that women have always been present in mining, either as family either working directly in the mining processes. In spite of that, they are not paid for their tasks as they are often considered incidental labour assisting males, who are formally employed and recognized as workers. At the time of the book’s release in 2006, the authors reported the International Labor Organization

data on rates of women participation in the mining sector as such: 10% in Asia, 20% in Latin America, and 40% in Africa. These figures illustrate the significance of women’s employment in the sector, even in regions with lower recognized rates of women employment such as Asia with 10%, the lack of publications regarding their role is remarkable. The lack of publications also lends weight to the recurrent observation that the work of women in mining is framed as “invisible”. It should be noted that the focus of this book is the ASM mining subsector within Latin America, and that ASM is generally considered a phenomenon more common to developing economies, according to the World Bank and United Nations Development Program. While women’s presence in the extractive industry has been recently reassured, it seems that gender inclusion and gender equity is an avenue to be yet broadened in the medium and large scale mining sectors. At the same time, women’s work rights also need to be grounded in the small scale mining sector.

In chapter 4, Angela Jorge and Hildete Pereira de Melo address gender in the Brazilian extractive industry using data collected through the Brazilian Institute of Geography and Statistics (IBGE, in Portuguese acronym). While limited to 1991 and 2001, their analysis provides a snapshot of the Brazilian extractive sector, which indicates an increasing participation of women in the workforce. The general women participation concentrates in the services sector, and the majority of the women workforce in Brazil occupies the position of domestic maids.

When focusing on the extractive industries – the purpose of the book – women participation was of 7, 2 % but only 2, 7 % would be working in the technical positions related to the industry as per the author’s analysis. The higher percentage of women working in the extractive industry concentrates in the administrative positions – a type of task that tends to be relatively consistent across a range of different businesses. Children participation is reported to be very low and they are associated by these authors to the efforts from Brazilian government in meeting the International Labour Organization recommendations to forbid and eliminate child work. The authors observe that the distribution of women participation is higher in oil and gas companies and also in the southeast region of the country, where Petrobras headquarters are located and it constitutes the most representative employer in the extractive resources sector in Brazil.

Chapter five addresses directly the issue of child labour through the contributions of Maria Helena M. R. Lima and Nilo da Silva Teixeira. They explain that presence of children in the small mining is more often related to family traditions and lack of school provision than any type of overt family exploitation. At that time of publishing the book medium and large-scale mining companies did not employ children. But previously there have been attention drawn to an apparent lack of concern regarding child labour

within their supply chains. Then these companies have been considered allies of the Brazilian government in the fight against this form of abuse of children's rights. In 2003 the numbers of children working in the extraction and processing of metals and non-metals minerals in Brazil was estimated to be 145,967 nonetheless. In Lima & Teixeira's assessment, the main activities children were employed in within the sector was in clay extraction and modeling, sand and stone extraction and the production of charcoal – which supplies the iron processing industry. The authors believe that the use of child labour is still wide spread and most likely underreported.

In chapter 6, Francisco Rego Chaves Fernandes observe that socio-environmental responsibility has gained increased attention among businesses, government and consumers in Brazil. However, some companies seem to have expressed concern towards child labour more for maintaining their social license to operate, rather than due to a clear sense of social responsibility in itself. After an overview on approaches to social responsibility in the USA, Europe and Brazil, the author underlines the initiative of ISO 8000 – a certification on “social accountability” that compiles work rights and conditions including the recommendations of ILO to child labour. Fernandes remarks that at the time the article was written, 354 companies in the world had received ISO 8000 certification with 50 of those being present within Brazil. The author reports that it is globally estimated that approximately one million children are working within mining, An occasional lack of references detracts slightly from what is otherwise a strong body of work and this is the criticism the same author leveled at government agencies such as the Ministry of Work and Employment (MTE, in Portuguese acronym) and IBGE, for instance. The author reported a lack of precise numbers from these agencies to indicate the total number of children working per state and municipality or per economic activity in Brazil.

In part II some case studies are presented, what gives a panorama of the ‘state of art’ of the subject in Latin America. More complete articles or exploratory studies are gathered to contribute to the debate and points out paths for solutions on several challenges of the sector. Chapter 1 starts with child labour in Peruvian mining – *Trabajo infantil en la minería peruana* – by César Mosquera, where he recognizes that child labour is a global phenomenon with far reaching impacts. Mosquera bases his assessment on the 2002 statistics from the ILO, which reports 245 million children between the ages of 5 and 14 years old engaged in child labour. The author describes the causes and consequences method for his assessment of child labour in a country where mining was peaking its contribution to the GDP (Gross Domestic Product) between the 1990's and 2000's. Changes in Peruvian legislation – which excluded the reality of artisanal and small-scale mining – and the liberalization on the trade of gold had as effect an increased informality amid the smallest players in the gold sector,

soaring the production until 2004. From the total population of children between 6 and 17 years old in Peru, Mosquera reports that 28% were working. An initiative to change the situation came in 1990 with actions based on the International Convention on Children Rights and the plan for eradication of children's work released in 2005, just before the series of roundtables that generated the publication.

After a sensible overview on child labour, Mosquera focuses on the small-scale mining, which he estimates to include approximately 30,000 families from the regions of Puno, La Rinconada, Madre de Dios, Huaypetuche, Nazca-Ocona, Santa Filomena and Pataz. In these localities 2 out of 3 families with children were thought to be working in the mining activities, but parents would consider their work as mere aid or support. According to the author, the high rate of child labour in the country was not merely due to poverty; or due to the informality of the artisanal and small-scale mining; or to the lack of schools. Children also work due to cultural reasons within regions in the country, where child labour was seen as a way of formation more relevant than formal education or recreational activities. Of all the writing in the book, Mosquera is one of the strongest contributions due to his thorough collection of data and analysis on the subject the author aimed to address: children in the ASM sector.

In chapter 8 – *Misericordias preciosas: trabajo infantil y género en la minería artesanal en Misiones, Argentina* – Andrea Mastrángelo considers the effects of social changes to explore a type of work not always visible: children and women in mining. The theme of invisibility of women and child labour is then analysed in the context of socioeconomic and social relations – as what Mastrángelo refers to. The article brings depth to the overall publication through the ethnographical approach undertaken. One of the highpoints is the very insightful approach to the issue of mothers' separation from their children due to relocation for work relating to efforts to improve overall livelihoods.

Chapter 9 brings a *Propuesta de auto diagnóstico de la situación de las mujeres mineras en zonas de extrema pobreza*, by Ana Maria Ananibar, Daniel Lafuente and Luddy Montesinos, where the authors analyse geographical, historical and socioeconomic aspects, with emphasis on the role and structure of cooperatives in the Bolivian regions of Tipuani, Cangalli, Chuquini, Las Lomas and Unutuluni. A number of issues related to mining in Bolivia are also evaluated including education, health conditions, work environment and conditions, perceptions and views of the research cohort, leisure, social security, production processes of small-scale mining, environmental risks, and family relations. These issues provide a potential guide for further research in the area, as a method was not evenly followed amidst chapters in this pioneer publication, what would have potential to extend its already valuable contribution to the debate.

In the last chapter, a case study from Brazil describes the extraction of and the artisanal work with soapstone in the municipality of Santa Rita de Ouro Preto – Trabalho familiar no artesanato de pedra sabão – by Zuleica C. Castilhos,<sup>3</sup> Olivia Maria de Paula Alves Bezerra, Maria Helena M. Rocha Lima, Alessandra Portugal and Nuria F. Castro. The activity is described along with its historical development in the area surrounding Ouro Preto – this city being an important location of mining in Brazil since the colonial period. This chapter is based on a survey of 33 of the 123 people involved with soapstone extraction and artisanal work. The historical context of the activity, its commercialization, the production processes, the cohort's perception of the workers association, as well as the occupational health and safety hazards related to the practice are described in this exploratory study.

The book encloses with a set of maps and pictures that illustrates areas and topics covered, giving visibility – reported and discussed in several chapters in this publication – to some of those cohorts not always visible, shown

or remembered on discussions about challenges of the mining industry in general.

### CONCLUSIONS

Whether each author or chapter followed the same framework or topics covered in their articles, the task of answering about the situation of women's and children's labour in the small-scale mining sector could gather a more accessible and complete compilation of data. Further analysis and solutions would probably advance. However, put into perspective, when it is taken into account that few works tackle the issue of gender inclusion and children work within mining, "Gender and child labour in the small scale mining" at the time of its publication was a strong and timely contribution to set pavements on the proposed subject in the extractive industry and worth being checked.

### REFERENCES

*A full list of references can be found in the original open access publication at <http://mineralis.cetem.gov.br:8080/handle/cetem/592>*

# Desarrollo Sostenible del Capital Humano de las Mujeres en la Industria Extractiva – El Caso Colombiano

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**RESUMEN** — El principal reto que enfrentan las empresas en el desarrollo de sus reportes de sostenibilidad, es la incorporación de un enfoque sostenible que promueva ambos, la sostenibilidad corporativa y social. Investigación científica en el caso colombiano evidenció que la industria extractiva debe invertir en seis formas de capital humano de las mujeres que habitan las regiones donde se realiza el aprovechamiento de recursos naturales, a saber: educación, innovación, empleo, emprendimiento, liderazgo y sostenibilidad. Estos tres componentes hacen parte del denominado ‘Marco para el Desarrollo Sostenible del Capital Humano’™. Los informes de sostenibilidad existentes y agendas de responsabilidad social de las empresas en las regiones donde se realiza el aprovechamiento de los recursos naturales rara vez incorpora estos componentes simultáneamente o en su defecto no existe una implementación adecuada de los mismos en contextos como el colombiano. El presente reporte realiza una aplicación práctica de estos seis componentes a la luz de los reportes de sostenibilidad de empresas extractivas operando en Colombia. El reporte presenta hallazgos preliminares de investigación científica tendiente a explorar la aplicación del ‘Marco de Desarrollo de Capital Humano’™ en el contexto colombiano.

**PALABRAS CLAVE**— Women labour; child labour; small-scale mining; extractive industry; gender inclusion.

## 1 INTRODUCCION

EL presente reporte tiene como propósito realizar una aplicación práctica del ‘Enfoque para el Desarrollo Sostenible del Capital Humano’™ en el caso colombiano. Este enfoque es único innovador y busca por un lado realizar el potencial de las mujeres en industrias no convencionales como la extractiva y su cadena de valor y por otro, promover prácticas sostenibles y responsables en la industria, especialmente en las regiones donde se realiza el aprovechamiento de recursos naturales (minerales, metales, gas y petróleo). Este enfoque está soportado en investigación científica y busca brindar soluciones sostenibles a la industria y a las partes interesadas para que estas a su vez generen oportunidades a las mujeres que trabajan en el sector y aquellas que habitan en las regiones donde la industria opera (Buitrago Franco, 2014).

El enfoque consiste en seis componentes educación, empleo, emprendimiento, sostenibilidad, liderazgo e innovación.

La investigación encontró que hay una compensación mínima de la industria minero-energética y la cadena de valor por el capital natural extraído (minerales, metales, petróleo y gas). Esta situación impacta principalmente varias formas de capital humano de las mujeres que habitan las regiones donde se realiza el aprovechamiento de recursos humanos, siendo las mujeres dentro y fuera de la industria las más impactadas con la expansión de las operaciones extractivas. Este hecho además aumenta el riesgo social y capital reputacional de las empresas que operan en las regiones en vías de desarrollo donde se realiza el aprovechamiento de recursos naturales. El presente reporte de investigación aplica este enfoque desde la teoría a la práctica realizando una revisión de los informes de sostenibilidad de empresas en la industria extractiva operando en Colombia.

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## METODOLOGIA

La metodología que se utilizó para la realización del presente estudio involucró dos componentes, a saber: a) alineación de los reportes de sostenibilidad de las compañías extractivas con los componentes del marco 'Desarrollo Sostenible del Capital Humano' y un segundo componente denominado b) Inclusión de la mujer dentro de los componentes del framework 'Desarrollo Sostenible del Capital Humano'.

### 2.1. Alineación de los reportes de sostenibilidad de las compañías extractivas con los componentes del framework 'Desarrollo Sostenible del Capital Humano'

Con el fin de desarrollar el reporte de desarrollo sostenible del capital humano en Colombia en primera instancia se seleccionaron seis compañías extractivas (minería, petróleo y gas) representativas con una actividad activa en Colombia, a las que se les revisó y analizó el último informe de sostenibilidad determinando los estándares de sostenibilidad bajo el cual se alinean y como se articulan con los componentes del 'Marco de Desarrollo Sostenible del Capital Humano' que comprende educación, empleo, emprendimiento, innovación (o investigación), liderazgo y uso de tecnología. De allí fueron analizadas las estrategias implementadas en cada uno de estos componentes y como ha sido la participación e inclusión de la mujer en este último reporte de sostenibilidad para cada compañía extractiva.

### 2.2. Inclusión de la mujer en los componentes del 'Marco Desarrollo Sostenible del Capital Humano'

Una vez evaluada la inclusión de la mujer dentro de los componentes del framework se rankearon cada una de las compañías con el fin de contabilizar en puntos como están posicionadas cada una de ellas con respecto a la otra en miras de buscar soluciones sostenibles en términos de la inclusión de la mujer en el sector extractivo. El ranking se llevó a cabo de la siguiente manera:

- 3 puntos: Se reporta y tiene una estrategia para cada uno de los componentes del marco y discrimina entre número hombres y mujeres
- 2 puntos: Se reporta y tiene una estrategia para cada uno de los componentes del marco pero no discrimina entre número de hombres y mujeres
- 1 punto: Se reporta una implementación para cada uno de los componentes del marco pero las estrategias no son especificadas
- 0 puntos: No se reporta una estrategia para cada uno de los componentes del marco

Finalmente se hizo una sumatoria total para cada una de las compañías bajo las directrices anteriormente descritas

indicando aquellas compañías extractivas que obtuvieron el menor y mayor ranking.

## RESULTADOS

Los resultados se muestran en los siguientes dos componentes: a) 'Reporte de sostenibilidad de género en Colombia con base a los componentes del marco 'Desarrollo Sostenible del Capital Humano' y b) Puntaje de sostenibilidad de género en Colombia con base a los componentes del enfoque de desarrollo sostenible del capital humano que se presentan a continuación.

### 3.1. Reporte Marco Desarrollo Sostenible del Capital Humano

Anglogold Ashanti Colombia, Reporte de Sostenibilidad 2010, Global Reporting Initiative (GRI-3)

#### Educación

- Capacitación a Docentes: fortalecer y mejorar el desempeño de los estudiantes del municipio de Cajamarca, en las Pruebas Saber y Pruebas de Estado ICFES mediante la capacitación y orientación a docentes y estudiantes

#### Empleo

- 987 empleos directos, 209 empleos temporales, 10 empleos por prestación de servicios. Entre empleos directos y temporales 199 son mujeres el resto son hombres

#### Innovación (investigación)

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#### Liderazgo

- Escuela de liderazgo Juntas de Acción Comunal: Contribuir a la modernización de las Juntas de Acción Comunal para que sean más eficientes en el logro del mejoramiento de la calidad de vida de sus afiliados y de sus comunidades de influencia mediante un proceso de formación y de capacitación para los integrantes de las organizaciones comunales y sociales de Cajamarca

#### Uso de la Tecnología

- Mejora en la infraestructura física de la plaza de mercado de Cajamarca
- Adecuaciones físicas de la planta de beneficio animal en la sección de porcinos y bovinos
- Construcción del Aula Múltiple en el Hogar Infantil el Muñequero

Red Eagle Colombia, No reporta informe de sostenibilidad con relacion a estandares internacionales

### Educación

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### Empleo

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### Innovación (investigación)

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### Liderazgo

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### Uso de la Tecnología

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Cerrmatoso South32, 2015, Global Reporting Initiative (GRI-3)

### Educación

Fundación educativa Montelíbano \$1.550.

100 becas para educación superior.

Se estructuró un programa de 90 horas dirigido a preparar en cuatro competencias a 106 adultos jóvenes de las comunidades de área de influencia, a saber: comprensión lectora, lógico – matemáticas, tratamiento de la información digital y competencias ciudadanas.

- En el 2015 un total de 100 jóvenes ingresaron y continuaron el programa de becas de educación superior.
- Se realizaron en total de 88 Patrocinio SENA
- Otros beneficiarios: 799 estudiantes en edad preescolar, 3728 estudiante de básica primaria, 4.046 estudiantes de educación secundaria, formación de 34 docentes
- 7 sedes educativas rurales mejoraron su infraestructura beneficiando a 1.112 Estudiantes 90 Docentes

### Empleo

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### Innovación (investigación)

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### Liderazgo

- Empleados directos: 934 término indefinido (64 mujeres, 870 hombres); termino fijo: 4(1 mujer, 3 hombres).

- 685 contratistas. Termino fijo 25 (5 mujeres, 20 hombres; obra 660 (90 mujeres, 570 hombres).

- Empleos directos del área de influencia directa (hombres 359, mujeres 23). Empleos indirectos del área de influencia directa (hombres 305, mujeres 52).

- Para el año 2015, se mantuvo el indicador de participación de mujeres a pesar del proceso de optimización en el que se ha visto inmersa la Compañía, situándose en 7% de la planta de personal

- Capacitación y entrenamiento de los trabajadores 873 hombres (45.7 horas), 65 mujeres (53.7 horas) con base a la evaluación de desempeño.

- 7 cabildos indígenas, 5 juntas de acción comunal, 1 consejo comunitario de comunidades negras (4500 habitantes, 850 familias). 57% hombres (75% edad productiva), 43% mujeres (27% edad productiva)

- Para el periodo 2015 se realizaron un total de 6 mesas de trabajo con los comités de diferentes comunidades.

- 15 líderes comunitarios revisaron el EIA para el proyecto de expansión minera (MEP)

### Uso de la Tecnología

Cerrejon, 2015, Global Reporting Initiative (GRI-4)

### Educación

Mejoramiento en la captación de agua: El 94,4% del total de agua utilizada para la operación es reciclada. Sólo el 5,6% del agua empleada proviene de la captación de fuentes superficiales, subterráneas y de agua lluvia.

Optimización de la operación de secadores (gas natural), optimización del uso de extrusoras (electricidad), mejoramiento de la eficiencia en las calcinadoras (gas natural), mejorar el sistema de control de hornos (electricidad)

Sistema de filtros, reducción del uso de carbón, optimización de la flota de camiones.

Se estructuró el proyecto de construcción de la sede del SENA regional de Córdoba en Montelíbano - contemplado en la Alianza por lo Social-, en la que Cerro Matoso invertirá aproximadamente 10.000 millones de pesos.

Mejoramiento en infraestructura a 7 instituciones educativas rurales de san José de Uré y Puerto Libertador.

- Fortalecimiento educativo y desarrollo de competencias en "Pruebas Saber".

612 estudiantes beneficiados de los grados tercero, quinto, noveno y once. 105 jóvenes de educación superior apoyados con el pago de matrícula, auxilio de manutención, y plan de acompañamiento académico durante sus estudios.

848 jóvenes y 115 docentes de 14 instituciones educativas participaron en programas Jóvenes Más Emprendedores y Juventud Rural.

59 becas de matrícula y mensualidad en carreras técnicas y profesionales a 10 estudiantes

### Empleo

12.865 puestos de trabajo: 6.133 directos (5.695 hombres, 438 mujeres), 6.732 indirectos (6.083 hombres, 649 mujeres)

### Innovación (investigación)

- Innovación en la protección y el uso eficiente del agua en la operación, siguiendo las mejores prácticas de la industria minera.

### Liderazgo

- Horas de capacitación anuales por empleado (hombre 45 horas, mujer 39 horas).

- Evaluación de desempeño y desarrollo profesional por género y categoría de trabajo MPT1 (729 hombres, 181 mujeres), PTC2 (711 hombres, 42 mujeres)

- Mesa de líderes Con el fin de definir e implementar conjuntamente soluciones a los retos del pos reasentamiento.

- Durante 2015 se llevaron a cabo 50 sesiones con la Mesa de Líderes conformada por representantes de las comunidades reasentadas. fomentando el empoderamiento de las comunidades en el desarrollo de proyectos de abastecimiento y la protección de las fuentes hídricas (modelo de gestión integral del agua).

### Uso de la Tecnología

- Desarrollo de 56 soluciones de abastecimiento (45 sistemas de captación de aguas lluvia, 1 solución temporal para la entrega de agua en un carro tanque. Reparación de 11 JAGÜEYES a lo largo de la vía férrea infraestructura que permite la captación de agua lluvia, mitigando el desabastecimiento en épocas secas

- Construcción de 5 pozos profundos. Estas soluciones tecnológicas generan disponibilidad de 118.000 litros de agua al día y capacidad de almacenamiento de 39 millones de litros para el beneficio de 1539 personas, 323 familias y 23 comunidades

- Inauguración en el Internado Indígena Akaupa el aula ambiental "Naturaleza Viva" construida en alianza con la Fundación Colombia Verde y Limpia. Beneficiando a 1100 estudiantes y 39 docentes de internado.

- Entre 2009 y 2015 se ha logrado reducir en un 56 % la captación de agua de alta calidad.

- Establecer alianzas con entidades nacionales e internacionales como USAID, Servicio Geológico Colombiano, Embajada de Holanda, Orden de Malta, entre otras, para desarrollar soluciones de abastecimiento de agua, de mediano y largo plazo en La Guajira.

Continental Gold, 2015, Global Reporting initiative (GRI-4)

### Educación

- 831 millones de pesos colombianos.

- Capacitación: 9.31 horas por persona al año

### Empleo

582 empleos: 223 indirectos, 359 directos (85 mujeres, 274 hombres), de los cuales el 50.4 % es de Buritica, 0.8% de Santa Fe de Antioquia, 35.7% de Medellín, 11.2% resto del país, 1.9% del exterior.

Cargos directivos (17% mujeres, 83% hombres); Jefes (18% mujeres, 82% hombres); coordinadores (42% mujeres, 58% hombres); profesionales y de soporte (52% mujeres, 48% hombres); aprendiz (63% mujeres, 38% hombres), operativos (13%, 87% hombres).

empleados con contratos a término fijo, pilotos de Puerto Bolívar y empleados a término indefinido que ingresen en el último trimestre del año.

### Innovación (investigación)

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### Liderazgo

- Durante el 2015 se llevaron a cabo 9 reuniones con los diferentes grupos de interés del área de influencia directa del proyecto con los mineros en proceso de formalización y los líderes comunitarios (principios de inclusión, materialidad y capacidad de respuesta fueron respetados en estas sesiones de diálogo).

· PTC: personal técnico calificado (técnicos, operadores, auxiliares, secretarías y oficinistas).

· MPT: empleados de manejo y confianza de la organización. Se excluyen

- Alianzas estratégicas para la sostenibilidad (grupos sociales y ambientales).

- Gracias al programa de Formación para el Empleo con el apoyo del SENA, la Gobernación de Antioquia y la Alcaldía Municipal, en 2015 brindamos capacitación a 590 personas.

### Uso de la Tecnología

- Infraestructura educativa 55 millones COP

Mineros S.A, 2016, Global Reporting Initiative (GRI-4)

### Educación

- Mineros S.A apoya la construcción de sedes educativas, restaurantes escolares, dotación de equipos de cómputo, dotación de kits escolares, entrega de material para la promoción de la lectura, reparación y mejoramiento de aulas, entre otras acciones. Se beneficiaron doce instituciones educativas rurales de los municipios de Anorí, El Bagre y Zaragoza

- Donación de becas: 33 becas a hijos de jubilados de la compañía, quince becas para bachillerato, quince becas universitarias y cuatro auxilios para cursos.

- Donación de quince mil colecciones de Secretos para Soñar (Contiene 4 tomos diseñados para promover la lectura en la escuela).

- Apoyo a la actualización de la metodología para la enseñanza del ajedrez, dirigida a profesores: dos talleres a 48 educadores, donación de mis ejemplares del libro El Ajedrez como Herramienta Pedagógica.

- Realización de talleres para la prevención y formación para enfrentar el Bullying, dirigidos a 5.678 estudiantes de instituciones educativas de El Bagre y Zaragoza.

- A través del Programa de Educación Ambiental se realizaron 96 eventos en 32 instituciones educativas de los municipios del El Bagre, Anorí, Zaragoza y Nechí, con los cuales se capacitaron 1.198 estudiantes y 24 docentes.

### Empleo

- Mineros S.A para el 2016 contaba con 1.731 colaboradores en los municipios de El Bagre, Zaragoza, Nechí, Anorí, Medellín y otras partes del país, de los cual el 8% son mujeres

### Innovación (investigación)

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### Liderazgo

Realización de sexto encuentro con las Juntas de Acción Comunal (JAC) del área de influencia de las operaciones del Grupo en Colombia, en 2016 asistieron 33 juntas de acción comunal.

Se realizaron 26 reuniones, para el apoyo a la gestión de los Comités de Convivencia de los municipios de El Bagre y Zaragoza.

Apoyo a la realización de dos pasantías convocadas por Naciones Unidas y la Universidad de Antioquia, a las que asistieron cuarenta miembros de los Comités de Convivencia Municipales.

- Horas totales de formación 33.980 impactando a 1.489 personas

### Uso de la Tecnología

Construcción de sistemas de suministro de agua (conducción y almacenamiento) en siete comunidades del Bagre, Zaragoza y Nechí.

Construcción de 82 soluciones sanitarias que beneficiaron a igual número de familias en ocho comunidades de El Bagre y Zaragoza.

Drummond LTD Colombia, 2015, Global Reporting Initiative (GRI-4)

### Educación

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### Empleo

Números de hombre contratados directamente: 4.733

Número de mujeres contratados directamente: 190.

### Innovación (investigación)

Drummond a través de la innovación busca alternativas de mejora en los procesos de mitigación y control de impactos potenciales en las operaciones, y define 4 estrategias de innovación: Reducción de impacto, implementar medidas de manejo ambiental adecuadas, implementar esquemas de monitoreo confiable y pertinente, construcción de futuro: enfoque uso y calidad del agua, calidad del aire, biodiversidad.

### Liderazgo

- Capacitación a servidores públicos: A través del Taller - Seminario de Buen Gobierno como capacitación y fortalecimiento con la finalidad de potenciar la acción y gestión de los líderes en aras del beneficio comunitario

- Horas promedio de capacitación a empleados: Nivel operativo 80 horas hombres, 65 horas mujeres.

- Nivel asistencial 60 horas hombres, 15 horas mujeres.

- Nivel profesional 50 horas hombres, menos de 10 horas mujeres.

- Nivel táctico 25 horas hombres, menos de 10 horas mujeres.

- Nivel estratégico 20 horas hombres, 10 horas mujeres.

- Medición de competencias: sesiones grupales e individuales de coaching (219 colombianos, 23 expatriados).

Dialogo permanente con comunidades a través del Departamento de Relación con Comunidades.

Talleres de formación o informativo con las comunidades.  
Políticas de reasentamiento de comunidades.

### Uso de la Tecnología

Construcción de filtros caseros para la potabilización de agua

### 3.2. Puntaje de sostenibilidad de género en Colombia con base a los componentes del enfoque de desarrollo sostenible del capital humano

Con base en los resultados, AngloGold Ashanti Colombia en su reporte de sostenibilidad del 2010 solo contempla la inclusión de género en el componente de empleo representado por el 16 % del total. Con respecto al componente educación, liderazgo y uso de tecnología presenta una estrategia clara, sin embargo, no se realiza ninguna actividad de inclusión de género. En el componente de innovación no se reporta nada al respecto.

Cerromatoso South32 su reporte de sostenibilidad del año 2015 esta soportado en el componente de generación de empleo haciendo una diferenciación amplia entre empleos directos (indefinidos y fijos) contratistas (fijos y de obras) y directos en el área de influencia directa del proyecto. Asimismo, realiza una discriminación acerca de la participación de género en cada uno de ellos; siendo las mujeres el 7% del personal de planta. En cuanto al componente educativo contabiliza el número de personas beneficiadas, sin embargo, no se conoce el porcentaje de beneficiados femeninos. En lo concerniente a liderazgo y participación se muestran las estrategias de participación de la mujer pero las cifras son desconocidas. Asimismo, en el uso de tecnologías son claras las estrategias de mejoras en infraestructura y optimización en las operaciones del proceso, sin embargo, no se contabiliza la población beneficiada por estas estrategias de mejoras. Finalmente la evidencia muestra que no se presentan estrategias de innovación.

lo concerniente al componente de empleo se observa la poca contratación de mujeres en las operaciones realizadas por la compañía y actualmente representa el 8%. Además de esto en el componente de innovación no fue posible identificar estrategias claras.

Los resultados para Drummond Ltd Colombia evidenciaron mayor discriminación por género en el componente de liderazgo. Sin embargo, la participación de mujeres en capacitación fue en todas las categorías muchos más baja que los hombres. En su mayoría el número de horas de formación fue menos de 50% de las horas de formación para los hombres.

Respecto a la contratación de mujeres por parte de Drummond Ltd Colombia se observa que no supera el 80% del personal contratado para las operaciones en mina y puerto.

Red Eagle mining Colombia no reporta informe de sostenibilidad a la fecha.

Corrección es la compañía extractiva mejor posicionada con respecto a las demás compañías incluidas dentro del presente análisis, esto se evidencia en la generación de empleos directos e indirectos diferenciados entre hombres y mujeres. En el liderazgo se muestra la inclusión tanto de hombres y mujeres. Asimismo en innovación y tecnología y educación se especifican las estrategias adoptadas y solo el número de beneficiados sin una diferenciación entre hombres y mujeres para el componente educativo.

Continental Gold es la compañía que se posiciona en el puesto más bajo en el Ranking. No se presentan estrategias claras ni número de beneficiados en el componente educativo y de liderazgo puesto solo se contempla el capital invertido. En innovación no se reportan estrategias, sin embargo está fuertemente posicionada en términos de empleo haciendo la diferenciación entre empleos directo e indirectos y los cargos directivos, operativos, profesionales y aprendices ocupados tanto por hombres como por mujeres.

Teniendo en cuenta los resultados de los componentes que involucra el marco, para Mineros S.A no discrimina acerca de la discriminación de género como evidencia de participación de hombres o mujeres en las estrategias planteadas.

Para Mineros S.A en lo concerniente al componente de empleo se observa la poca contratación de mujeres en las operaciones realizadas por la compañía y actualmente representa el 8%. Además de esto en el componente de innovación no fue posible identificar estrategias claras.

Los resultados para Drummond Ltd Colombia evidenciaron mayor discriminación por género en el componente de liderazgo. Sin embargo, la participación de mujeres en capacitación fue en todas las categorías muchos más baja que los hombres. En su mayoría el número de horas de formación fue menos de 50% de las horas de formación para los hombres. Respecto a la contratación de mujeres por parte de Drummond Ltd Colombia se observa que no supera el 80%.

### References

Buitrago-Franco, I (2014). *Building Sustainable Communities: Enhancing Human Capital in Resource Regions*. PhD Dissertation. Brisbane, Australia: The University of Queensland.

Drummond Ltd Colombia. (2016). *Informe de Sostenibilidad 2015*. Gatos Genelos Comunicaciones. Recuperado el 02 de abril de 2017, de <http://www.drummondLtd.com/noticias-publicaciones/informes-de-sostenibilidad>

Grupo Empresarial Mineros S.A. (2017). *Memoria de Sostenibilidad 2016*. Recuperado el 02 de abril de 2017, de <http://mineros.com.co/pdf/Memoria-Sostenibilidad-2016.pdf>

South 32 Cerro Matoso (2015). *Reporte de sostenibilidad 2015*. Recuperado 11 de marzo de 2017, de <http://www.fundacioncerromatoso.org/index.php/cerro-matoso/ reporte-de-sostenibilidad-2015>

Continental Gold (2015). *Informe de Sostenibilidad 2015*. Recuperado 11 de marzo de 2017, de [http://www.continentalgold.com/wp-content/uploads/2016/09/CNL\\_SustainabilityReport\\_ES\\_fontquality.pdf](http://www.continentalgold.com/wp-content/uploads/2016/09/CNL_SustainabilityReport_ES_fontquality.pdf)

Cerrejon (2015). Informe de sostenibilidad 2015. Recuperado 11 de marzo de 2017 de, [http://www.cerrejon.com/site/Portals/0/Documents/pdf/Informe%20sost\\_2015\\_ce.pdf](http://www.cerrejon.com/site/Portals/0/Documents/pdf/Informe%20sost_2015_ce.pdf)

AngloGold Ashanti Colombia (2010). Reporte a la sociedad Oro sostenible 2010. Recuperado 11 de marzo de 2017 de, <http://www.anglogoldashanti.com.co/saladeprensa/Informes/Reporte%20a%20la%20sociedad,%20Oro%20sostenible%202010.pdf>

# Women's Empowerment Programs: Opportunities to Reduce Gender Based Violence in Papua New Guinea

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**ABSTRACT** — The research proposes to understand how Women's Empowerment Programs (WEPs) are being constructed by different development actors (i.e. a private resource company, a religious organisation, a governmental department, and an international organisation) in one resource rich province of Papua New Guinea (PNG). The distinct discourses concerning women's empowerment and how these have underpinned the construction of WEPs by development actors in PNG will be examined. The research will observe the implicit understandings of 'empowerment' and the expected outcomes of the different programs from the perspective of the development actors as well as of the program participants. This will provide insights into how the development actors expect WEPs to influence gender relations in this context, specifically gender based violence (GBV), and their rationale for that. The research will also explore whether the participants anticipate WEPs will bring about such change (and again, their reasons for expecting so). The current paper presents findings from the literature review phase of the doctoral research project.

**KEY WORDS** — Women; development programs; GBV; extractive industry; PNG; social development.

## 1 INTRODUCTION

Social relations in Papua New Guinea (PNG) have been shaped by culture, colonialism, Christianity, and more recently, by international organisations, and private foreign resource companies operating in the country (Eves, 2006; Taylor, 2008; Jubilee, 2013; MacIntyre, 2011, 2012; World Bank, 2013; Zimmer-Tamakoshi, 2012). Although national social statistics are not comprehensive, one pattern accompanying the various associated social and economic transformations has been changes in gendered power relations, a widening of gender gaps, gender discrimination and higher levels of gender based violence (GBV) in remote communities.

Some of these socio-economic changes are taking place in remote regions of PNG where extractive projects are becoming ever more present. The country's economy is heavily dependent on its vast natural resources. Mining, and oil and gas total 20 percent of its Gross Domestic Product (GDP) (ADB, 2015). Resource sector consists mostly of oil, liquefied natural gas, gas gold, copper, nickel, and silver extraction. (ADB, 2015). The concentration of minerals and oil & gas in PNG has resulted in high levels of inequality and corruption, what some call 'the resource curse'. The resource curse refers to the paradox that countries with an abundance of natural resources, specifically non-renewable resources like minerals and fuels, tend to have less economic growth, less democracy, and worse development outcomes than countries with fewer natural resources.

This is many times attributed to weak governmental institutions in the resource country, which leads to corruption and mismanagement of funds. (Davis and Franks, 2014). Major extractive industries bring with them paid employment, cash economy, mobility (in-migration), and capitalist and western ideals, among other forces of change (Banks, 1999; Bainton, 2008).

There is also a considerable literature suggesting there are shifting power dynamics in communities near large resource projects, that contribute to the subordination of women and GBV, with men controlling most of the wealth and decision-making avenues between community and company (Cane, 2014; World Bank, 2013 Oxfam, 2011, 2012; Jubilee, 2013; MacIntyre, 2011, 2012; Jolly, 2012; Keenan and Kemp, 2014, Zimmer-Tamakoshi, 1997, Bainton, 2008).

As a response to these concerns, resource extraction companies are joining other actors, like religious organisations, the PNG government, and international development agencies, who have traditionally occupied the space of implementing Women's Empowerment Programs (WEPs). Most of the WEPs initiated by these actors target GBV, among other gender inequity issues.

Research into WEPs in regions affected by resource extraction would supplement research conducted by international organisations and NGOs (World Bank, 2013, 2014; Jubilee, 2013; Oxfam, 2012, 2013) on gender issues near extractive projects in PNG. It can contribute to a greater consideration of extractive companies' relationship with gender inequities and GBV, as well as develop understanding of various development responses to the situation and identify opportunities for change.

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The research takes place in PNG, in an area where three women's empowerment programs are being operated by different development actors. The field site will provide an example of a remote area in PNG where the subordination of women and their experience of GBV and other inequities is relatively high and where a major resource project is underway.

## 2 RESEARCH DESIGN

The research project aims to recognize how WEPs can become more sustainable in remote, patriarchal communities and be effective in reducing GBV. Specifically, the research raises the following questions:

What changes in gender relations, gender inequities and GBV do development actors (private resource company, religious organisation, governmental department, and international organisation) envisage will occur through their WEPs?

What are women participants' expectations of WEPs? In particular their expectations with relation to addressing gender inequities, and their most visible symptom of GBV? How do different development actors engage with women's empowerment discourses – shared language and practices that provide the parameters of social behaviour – and what are the implications for their WEPs?

Central themes that emerge from the literature as fundamental to understanding WEPs were issues of whether they attempt to change agency or structure; experiences in the private or public domain; and the challenges to sustaining outcomes in countries where strong patriarchal socio-cultural norms prevail. One area where current knowledge is scant, is the requisites for WEPs to achieve sustainable results, as regardless of approaches being taken, the evidence is that they struggle to gain traction and buy-in from the communities where they operate, particularly in strongly patriarchal socio-cultural societies.

Critical feminist theory emerges as the most appropriate lens to examine the themes and gaps identified in the literature review. This theory provides an opportunity to consider socio-cultural complexities and remain sensitive to traditions and customs, while supporting social change that is grounded in equal human rights, and providing individuals and communities with avenues towards gender equity. It also assists observation of how different development actors have prescribed notions of developmental change through their WEPs, by encompassing a wide net of possible avenues for addressing GBV and supporting gender equity. Some other aspects to be highlighted from the literature are as follows:

- Feminist theories emphasize that women's status is a result of the interplay of many individual and collective factors besides gender, including culture, colonial legacies, industrial development, race, and economic standing (Steans, 2013; Mohanty, 2011).
- Approaches to development have moved from women in development (WID), with a focus on inserting women into development interventions with a westernised individualistic approach, to gender and development (GAD), which concentrates on socially situating women so a more sustainable development can be achieved by taking into account the context in which women live (Visvanathan, 2011; Cane 2014; Cornwall and Rivas, 2015).
- Notions of women's empowerment are related to women's ability to make choices and linked to their resources, agency and achievements, particularly as emphasized by Kabeer (1999).
- Some research also examines how WEPs have been implemented through different avenues on the ground and highlights the different strategic approaches some of these programs have used. In particular, how many of the WEPs have taken an individual empowerment attitude in the past, seen in WID, and are now shifting towards inclusive community WEPs, advised by GAD, which attempt to include components of addressing social norms in order to achieve gender equality (Cornwall, 2016; Nazneen, Hussain and Sultan, 2011).
- A body of research describes the socio-cultural context of PNG and women's social experiences within it. This includes the different valuing of men and women in their culture, the roles and responsibilities they have, and how globalisation is impacting on traditional structures and transforming gender relations (Zimmer-Tamakoshi, 2012; Bainton, 2008; MacIntyre, 2012; Jolly, 2012; Eves, 2012).

## 3 METHODOLOGY

This research compares three case studies centring on the WEPs of three different development actors in a remote and patriarchal, resource-rich province of PNG, as implemented by a resource company, an international organisation, and the government or a religious organisation or local NGO.

The research is composed of thirty one-on-one one-hour interviews with development actors and WEP participants, and three three-hour focus groups with WEP participants. Shadowing of development actor's personnel will also be sought. The fieldwork will take approximately three months intermittently, during 2017.

This approach integrates the development actors and WEP participants' experiences and perceptions of WEPs and

their capacity to address GBV. The research takes a qualitative approach to the issues and does not attempt to quantify the prevalence or reduction of GBV.

### 3 EXPECTED OUTCOMES

This current research project will result in:

- Additional knowledge of the social and cultural structure of the field study area.
- Opportunities for women to share their expectations and perceptions of WEPs and the capacity of the programs to address gender inequities, particularly GBV. This will enhance our understanding of how women experience these programs.
- Improved understanding of the multiple factors that shape women's disadvantage in a particular region of PNG and the potential for these to be addressed by WEPs.
- Recommendations about the key opportunities and challenges for running programs to transform gender relations in this region, and as such providing further understanding of gender-sensitive development.

### 3 CONCLUSIONS

The research project, by focusing on both the development actors' and the participating women's expectations and understandings of WEPs aims to recognize how these programs can become more sustainable in remote, patriarchal communities and be effective in reducing GBV.

### REFERENCES

- Asian Development Bank (ADB). 2015. *Economic Analysis (Summary). Country Partnership Strategy: Papua New Guinea, 2016-2020*. Available at: <http://www.adb.org/sites/default/files/linked-documents/cps-png-2016-2020-ea.pdf>
- Bainton, Nicholas A. 2008. *Men of Kastom and Customs of Men: Status, Legitimacy and Persistent Values in Lihir, Papua New Guinea*. *The Australian Journal of Anthropology*, Vol. 19, Issue 2.
- Banks, Glen. 1999. *The Economic Impact of the Mine. 'Dilemmas of Development: The Social and Economic Impact of the Porgera gold mine, 1989-1994'*. ANU E Press, Canberra.
- Cane, Isabel. 2014. *'Community and Company Development Discourses in Mining: The Case of Gender in Mongolia'*, PhD Thesis, The University of Queensland, Australia.
- Cornwall, Andrea. 2016. *Women's Empowerment: What Works?* *Journal of International Development*, Vol. 28(3), p.342-359.
- Cornwall, Andrea and Althea-Maria Rivas. 2015. *From 'Gender*

*Equality and 'Women's Empowerment' to Global Justice: Reclaiming a Transformative Agenda for Gender and Development, Third World Quarterly*, Vol. 36(2), p.396-415.

Davis, Rachel and Daniel M. Franks. 2014. "Costs of Company-Community Conflict in the Extractive Sector." *Corporate Social Responsibility Initiative Report No. 66*. Cambridge, MA: Harvard Kennedy School.

Eves, Richard. 2012. *Christianity, Masculinity and Gender Violence in Papua New Guinea*. [State, Society & Governance in Melanesia Discussion Paper 2012/2]. ANU, Canberra. Available at: [https://www.academia.edu/1498878/Christianity\\_Masculinity\\_and\\_Gender\\_Violence\\_in\\_Papua\\_New\\_Guinea](https://www.academia.edu/1498878/Christianity_Masculinity_and_Gender_Violence_in_Papua_New_Guinea)

Eves, Richard. 2006. *Exploring the Role of Men and Masculinities in Papua New Guinea in the 21st century: How to Address Violence in Ways that Generate Empowerment for Both Men and Women*. Caritas Australia. Available at: [http://www.engaging-men.net/files/resources/2011/REves/Eves\\_Masculinity\\_and\\_Violence\\_in\\_PNG\\_2006.pdf](http://www.engaging-men.net/files/resources/2011/REves/Eves_Masculinity_and_Violence_in_PNG_2006.pdf)

Jolly, Margaret. 2012. *Introduction—Engendering Violence in Papua New Guinea: Persons, Power and Perilous Transformations*. 'Engendering Violence in Papua New Guinea'. ANU E Press, Canberra.

Jubilee Australia Research Centre. 2013. *Pipe Dreams: The PNG LNG Project and the Future Hopes of a Nation*. Available at: [https://www.google.es/url?sa=t&rct=j&q=&esrc=s&source=web&cd=3&cad=rja&uact=8&ved=0ahUKEwjMlbq\\_6YjMAhVEkIMKHTvvAMYQFggo-MAI&url=http%3A%2F%2Fwww.jubileeaustralia.org%2FLiteratureRetrieve.aspx%3FID%3D112463&usg=AFQjCNFLSt4Z4fBkF6NqBMJRIOn8k0OMDw&bvm=bv.119028448,d.dGo](https://www.google.es/url?sa=t&rct=j&q=&esrc=s&source=web&cd=3&cad=rja&uact=8&ved=0ahUKEwjMlbq_6YjMAhVEkIMKHTvvAMYQFggo-MAI&url=http%3A%2F%2Fwww.jubileeaustralia.org%2FLiteratureRetrieve.aspx%3FID%3D112463&usg=AFQjCNFLSt4Z4fBkF6NqBMJRIOn8k0OMDw&bvm=bv.119028448,d.dGo)

Kabeer, Naila. 1999. *Resources, Agency, Achievements: Reflections on the Measurement of Women's Empowerment*. *Development and Change*, Vol. 30(3), pp.435-464.

Keenan, Julia and Deanna Kemp. 2014. *Mining and local-level development: Examining the gender dimensions of agreements between companies and communities*. Brisbane, Australia: Centre for Social Responsibility in Mining, The University of Queensland.

MacIntyre, Martha. 2011. *'Modernity, Gender and Mining: Experiences from Papua New Guinea'*. *Gendering the Field: Towards Sustainable Livelihoods for Mining Communities*. ANU E Press, Canberra.

MacIntyre, Martha. 2012. *Gender Violence in Melanesia and the Problem of Millennium Development Goal No. 3*. 'Engendering Violence in Papua New Guinea'. ANU E Press, Canberra.

Mohanty, Chandra Talpade. 2011. *Under Western Eyes: Feminist Scholarship and Colonial Discourses*. 'The Women, Gender

and Development Handbook (3rd Ed)'. Zed Books, London and New Jersey.

Nazneen, Sohela, Naomi Hossain and Maheen Sultan. 2011. *National Discourses on Women's Empowerment in Bangladesh: Continuities and Change*. Institute of Development Studies, and Pathways of Women's Empowerment. Available at: [http://onlinelibrary.wiley.com/doi/10.1111/j.2040-0209.2011.00368\\_2.x/pdf](http://onlinelibrary.wiley.com/doi/10.1111/j.2040-0209.2011.00368_2.x/pdf)

Oxfam. 2011. *Listening to the Impacts of the PNG LNG Project*. Available at: [http://www.banktrack.org/manage/ems\\_files/download/listening\\_to\\_the\\_impacts\\_of\\_the\\_png\\_lng\\_project/oaas\\_pnglnglisteningprojectreport\\_1110.pdf](http://www.banktrack.org/manage/ems_files/download/listening_to_the_impacts_of_the_png_lng_project/oaas_pnglnglisteningprojectreport_1110.pdf)

Oxfam. 2012. *The Community Good: Examining the Influence of the PNG LNG Project in the Hela Region of Papua New Guinea*. Available at: <https://www.oxfam.org.nz/sites/default/files/reports/Community%20Good%20Report%20%28May%202012%29.pdf>

Steans, Jill. 2013. *Gender in International Relations*. 'Gender and International Relations'. Wiley Press, Oxford.

Taylor, John P. 2008. *The social life of rights: 'gender antagonism', modernity and raet in Vanuatu* [Paper in special issue 20: *Changing Pacific Masculinities*. Taylor, John P. (ed.) [online]. *Australian Journal of Anthropology*, Vol. 19, No. 2, pp. 165-178.

Visvanathan, Nalini. 2011. 'Introduction'. *The Women, Gender and Development Reader*. Zed Books.

World Bank. 2013. *Extracting Lessons on Gender in the Oil and Gas Sector*. Available at: [http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2013/08/01/000356161\\_20130801150603/Rendered/PDF/798940NWP0280E0Box0379795B00PUBLIC0.pdf](http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2013/08/01/000356161_20130801150603/Rendered/PDF/798940NWP0280E0Box0379795B00PUBLIC0.pdf)

Zimmer-Tamakoshi, Laura. 2012. *Troubled Masculinities and Gender Violence in Melanesia*. 'Engendering Violence in Papua New Guinea'. ANU E Press, Canberra.



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