

THE QUEST FOR RESPONSIBLE SMALL-SCALE GOLD MINING

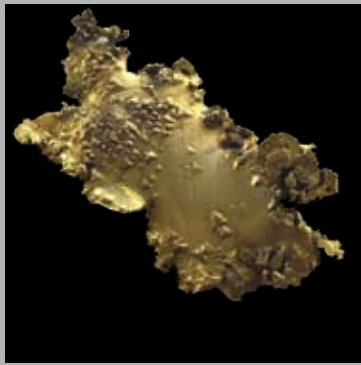


A Comparison of Standards
of Initiatives Aiming for
Responsibility

February 2010



EARTHWORKS™



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Aiming for Responsibility

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Scott Cardiff, EARTHWORKS

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Summary

As currently practiced, artisanal and small-scale mining (ASM) of metals can have destructive impacts on communities and the environment. Adopting principles and standards for responsible ASM practices may allow miners to minimize harmful impacts and allow ASM to provide a net benefit to communities. A number of initiatives have sought to determine what those responsible practices should be and how they can be implemented.

In order to provide some guidance and suggestions to existing and new initiatives, we have compared common and leading principles or standards of multiple initiatives working towards developing more responsible artisanal and small-scale metals mining practices. We selected the voluntary initiatives from the following institutions for this comparison:

- Alliance for Responsible Mining (ARM) / Fairtrade Labeling Organizations (FLO)
- CRED Jewellery
- EcoAndina
- Fair Trade in Gems and Jewelry
- Mammoth Tusk Gold (MTG)
- Oro Verde™
- URTH Solution

No single initiative that we examined represented precautionary, comprehensive, best practice standards for all of the aspects of small-scale mining that we considered. Each of the initiatives had points for which it was closer to representing best practice, and points where it was further from best practice. Although it can be difficult to compare across initiatives that include retailer-based and mine site- or certification-based efforts, the comparison of standards suggests improvements that could be made in the initiatives. All of the initiatives would benefit from strong standards on biodiversity, energy use, and involvement of principle stakeholders in development of standards.

The stronger points from all of these initiatives, in combination with the precautionary principle and known best practice, could be combined to form a composite of best practice in responsible small-scale gold mining. Such a certification system would include practices such as respecting human rights; obtaining community consent; guaranteeing revenue sharing and transparency; not operating in areas of armed conflict; respecting workers' rights and health and safety standards; not using mercury or other toxic chemicals; and not operating in protected areas, among others. Traceability and third-party verification of compliance would provide further assurance of responsible sourcing.

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A. Introduction

Artisanal and Small-scale Mining (ASM) of gold can have widespread destructive social and environmental impacts. For example, artisanal and small-scale mining of gold has been implicated in conflict and human rights violations in places such as the Democratic Republic of the Congo, and can be associated with problems such as child labor and dangerous working conditions.¹ Widespread use of mercury for gold extraction by miners threatens the health of miners and that of communities eating stream and river fish in which the mercury accumulates.² Mercury from previous mining can also be released again from riverbeds by mining that does not itself use mercury.³ ASM of gold can also destroy riverbanks that are dug into, and can result in siltation of streams and rivers that clogs river channels and leads to flooding.⁴ Finally, small-scale gold mining is responsible for extensive destruction of tropical forests and other ecosystems, including in protected areas, when forests and vegetation are cleared to get at the minerals below.⁵ For example, ASM of gold has destroyed around 200km² of forest in the Madre de Dios region of Peru.⁶ In French Guiana, over 115km² have been deforested by ASM of gold, and over 40km² may be lost every year in Suriname to ASM of gold.⁷

If undertaken responsibly, however, the harmful impacts of ASM could be minimized and small-scale metals mining could have the potential to provide a net benefit to communities. Initiatives seeking to achieve this through the development of fair trade networks may face inherent socio-economic obstacles because of issues such as the structure of the gold trade in some regions, problems with relying on international trade for development purposes, and the transient and complex nature of some mining communities.⁸ Nonetheless, much recent and encouraging work has occurred in the field of ethical or responsible sourcing of minerals from artisanal and small-scale mining. In reviewing and comparing initiatives aiming for responsible ASM, we sought to build on existing literature while focusing on ASM of metals rather than including initiatives on recycled metals or ASM of gems.⁹

In order to advance the goal of sharing information between initiatives and examining initiative gaps, we identified and compared standards or reported current practices on certain specific social and environmental criteria for some leading voluntary initiatives. We obtained the information on standards or current practices from written standards published on-line or provided by initiative representatives, as well as from interviews of initiative representatives. We did not independently verify information at the sourcing sites of the initiatives and, therefore, are only comparing the reported standards and practices of the initiatives, not their performance.

The initiatives include different forms of ASM. Initiatives include operations that represent subsistence artisanal and micro-mining as well as corporate mining (locally owned small-scale mining companies).¹⁰ Different initiatives also originate at different parts of the supply chain, and we have compared the standards of both retailer, mine-focused, and broader initiatives.

The No Dirty Gold campaign's Golden Rules principles serve as an important frame of reference for what responsible mining should entail.¹¹ These principles are applicable to ASM but are different from detailed standards and so serve, in combination with the precautionary principle and international conventions and standards, as a reference point in this comparison, rather than as a separate initiative.

We have not included all possible initiatives. Even though governmental involvement in minimizing the harmful impacts of ASM is essential, we have not included initiatives by individual governments. Some voluntary ASM initiatives are also not comparable because



of their larger scope, because they are only in their early stages, because they are more industrial, because they lack clear standards, because they source from the same sites as initiatives we compared, or because they are seemingly not directly linked to mining at specific sites.¹²

B. The Initiatives and Comparison Topics

1) The initiatives

We identified the following initiatives as concrete certification projects for comparison across various social, human rights, and environmental principles and standards for ASM metals:

Alliance for Responsible Mining (ARM) / Fairtrade Labelling Organizations International (FLO) Standard Zero for Artisanal Gold and Associated Silver and Platinum (<http://www.communitymining.org/>)

The Alliance for Responsible Mining, ARM, is “a pioneering global initiative whose mission is to set standards for responsible artisanal and small-scale mining (ASM) and to support and enable producers to deliver “fairmined” certified metals and minerals through economically just supply chains to the markets, in order to contribute towards the transformation of ASM into a socially and environmentally responsible activity, and improve the quality of life of marginalized artisanal miners, their families and communities.”¹³ It was formed to replicate, expand, and adapt the Oro Verde™ Initiative created in 1999 in the Chocó in Colombia. ARM is based in Colombia and has pilot projects in Bolivia, Colombia, Ecuador, and Peru. ARM is partnering with the Fairtrade Labelling Organizations International (FLO) to seek to jointly implement a fair trade gold system. ARM/FLO information is based on the draft standards available on the ARM web site.

ARM / FLO – Ecological Premium (<http://www.communitymining.org/>)

ARM / FLO offers an environmental premium category based on the standards originally developed by Oro Verde™. Oro Verde™ is now part of the initiative led by ARM and intends to follow fair trade standards as well as environmental premium standards of ARM. The name Oro Verde™ will remain as a brand and registered trademark, which will differentiate metals coming from the Chocó. ARM/FLO Ecological Premium information is based on the draft standards available on the ARM web site.

CRED Jewellery (<http://www.credjewellery.com/>)

CRED Jewellery is a UK-based retailer and manufacturer. CRED obtains materials from ARM, Oro Verde™, and other sources, although CRED gold reportedly comes solely from Oro Verde™. Mineral source countries have included Colombia, Peru, Ethiopia, Tanzania, India, and Nepal.¹⁴ CRED statements on their practices represent their “Fair Trade Vision” as represented on their web site¹⁵ and in their Quality Assurance Programme of September 2009 (available by request). These are more similar to principles than the standards of some of the other initiatives. CRED is affiliated with the ARM/FLO standards.

EcoAndina (<http://www.ecoandina.org/es/4706/4841.html>)

EcoAndina is an organization based in Argentina that promotes projects focused on sustainability, including an artisanal alluvial gold mining project and renewable energy projects. Mining involves some machinery to dig pits from which gold is

later washed in channels but does not involve suction dredging. EcoAndina is a supplier for Fair Trade in Gems and Jewelry and others. EcoAndina information is based on an interview as they are still working on a more formal standards process.¹⁶

Fair Trade in Gems and Jewelry / Fair Trade e.v. / Faire Edelsteine (<http://www.faire-edelsteine.de/>)

Fair Trade in Gems and Jewelry is a smallholder mining and jewelry manufacture and retail company, i.e. "a group of mining engineers, geologists, gemstone experts and goldsmiths who want to establish the fair trade of precious metals and gemstones [and distribute] gemstones, gold, silver and jewellery in high artistic and crafty qualities. ... [S]tones are directly bought from mining cooperatives in ... Lesotho, Sierra Leone, Madagascar and Tanzania. Then they are processed by certificated polishing cooperatives in India. Gold and silver from ecological responsible small-scale mines are produced by mining cooperatives in Argentina (from EcoAndina) and Bolivia (silver mainly from tailings rehabilitation)."¹⁷ The company is based in Germany. The principles and standards include standards for refining and export. The information that we used is based on the documents on the website and from Thomas Siepelmeyer.¹⁸

Global Mercury Project

The Global Mercury Project, which preceded the Global Mercury Partnership¹⁹ and was managed by the United Nations Industrial Development Organization (UNIDO), the Global Environment Facility (GEF) and the United Nations Development Programme (UNDP), developed draft guidelines on responsible mercury management in gold ASM. We examined the June 2007 version of those guidelines for comparison with initiatives that allow mercury use.²⁰ Since the Guidelines only address mercury use, we only included those Guidelines in the texts in the Appendix, not in the comparison chart.

Mammoth Tusk Gold (MTG <http://www.mammothgold.com/>)

Mammoth Tusk Gold is a placer gold mining company that also runs Mammoth Gold certification and is based in Whitehorse in the Yukon of Canada. Mining operations are relatively mechanized but are small-scale. Principles for the information are available on the website; standards are available by contacting Mammoth Tusk Gold.²¹ Standards exist in the Yukon regulatory context, which includes regulations relative to First Nations. Implementation timelines are under development.

Oro Verde™ (<http://www.greengold-oroverde.org/>)

Oro Verde™ is now part of the initiative led by ARM and will follow fair trade standards as well as environmental premium standards of ARM. The name Oro Verde™ will remain as a brand and registered trademark, which will differentiate metals coming from the Chocó. Standards included in this document are only those listed on the Oro Verde™ website.²²

URTH Solution (<http://www.urthjewellery.com/our-values.php>)

URTH is a jewelry manufacturer and retailer based in Beverly Hills, California. URTH Solution represents URTH's ethical practices. URTH has sourced gold from Bolivia and Madagascar.²³ URTH has been undergoing a transition. We obtained standards information from URTH directly.²⁴

2) Comparison topics

We compared the standards or practices for the different initiatives with respect to aspects of potential harmful impacts of small-scale mining. Such impacts are well recognized in many ASM situations, and include involvement of operations in conflict and human rights violations; social impacts for existing communities and indigenous peoples; child labor and dangerous and toxic working conditions; contamination of water with silt, cyanide, and/or mercury; air contamination with mercury; and enduring destruction of waterways, forests, and other natural areas.

The different principles and standards topics identified for the comparison of initiatives were the following:

1) Social topics —

- Human rights
- Conflict zones exclusion
- Community consent
- Indigenous peoples
- Miner group structure and governance community-based
- Workers' rights and health and safety
- Anti-discrimination
- Community development and sustainable livelihood
- Transparency, disclosure, and legality

2) Environmental topics —

- General environmental protection/responsibility
- Prohibition of toxic substances, including mercury and cyanide
- Mine waste managed and siltation restricted
- Biodiversity / important ecological areas excluded
- Habitat destruction restricted
- Site closure and rehabilitation/restoration
- Responsible energy use

3) Certification topics —

- Standards development multi-sector
- Verification and tracing independent, third-party

C. Comparison Chart¹

Category	Principles and Standards	ARM/FLO-Standard Zero	ARM/FLO-Ecological Prem.	CRED Jewelry	EcoAndina	Fair Trade in Gems & Jewelry	Mammoth Tusk Gold	Oro Verde™	URTH Solution
Social	Human rights	1	1	1	0.5		1		0.5
	Conflict zones exclusion	0.5	0.5	1	0.5		1		0.5
	Community consent	0.5	0.5	1	0.5		0.5	0.5	0.5
	Indigenous peoples	0.5	0.5	0.5	0.5		0.5	0.5	0.5
	Miner governance community-based	1	1	1	0.5	1			
	Worker's rights, health, safety	1	1	1	0.5	1	1		0.5
	Anti-discrimination	1	1	1	0.5	0.5	0.5		
	Community development & sustainable livelihood	1	1	1	0.5	1	0.5		0.5
	Transparency, disclosure, and legality	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
	Social Score	7	7	8	4.5	4	5.5	1.5	3
Environmental	Prohibition of mercury and cyanide		1	1	1	1	1	1	
	Waste managed & siltation restricted	0.5	0.5	1	1	0.5	1	1	0.5
	Biodiversity/ecology exclusion			1	0.5		0.5		
	Habitat destruction restricted		0.5	0.5	0.5		0.5	0.5	
	Site closure and rehabilitation / restoration	0.5	0.5	0.5	0.5		1	0.5	
	Responsible energy use				0.5		0.5		
	Environmental Score	1	2.5	4	4	1.5	4.5	3	0.5
Certification	Standards development multi-sector	0.5	0.5						
	Verification & tracing independent, third-party	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5

¹ Initiatives that represent more precautionary/responsible or more complete stated positions on a given principle or standard are marked with an "1". Initiatives with statements that seem less precautionary or complete on a given principle are marked with a "0.5". Details on the exact language of the initiatives are noted in the text. ARM/FLO Ecological Premium standards are rated as including ARM/FLO Standard Zero standards as well as the additional Premium standards. Ratings are based on reported standards, not performance.

D. Common and leading standards

1) Social Topics

The different initiatives almost all express respect for human rights, although only ARM/FLO and CRED mention international conventions on human rights. Although most of the initiatives also stipulate preventing their initiatives from contributing to conflict, only Mammoth Tusk Gold and CRED state that operations should not occur in a conflict zone in accordance with CRED having signed the Golden Rules.

Most of the initiatives also require some form of agreement with communities. Only CRED, however, states an intent to have mining be in accordance with community Free, Prior, and Informed Consent; the other initiatives require consultation and/or agreement/consent of indigenous peoples or community authorities. Mammoth Tusk Gold is the only one to specifically seek to address other potential indigenous concerns with mining operations, such as cultural heritage.

Several of the initiatives address governance of the group of miners. ARM/FLO and Fair Trade in Gems and Jewelry standards are the only two to note that the group should be community-based and democratic. ARM/FLO standards also indicate that Fair Trade premiums should benefit the community as well as the miners' organization and their partners. CRED indicates a preference for small, local, cooperative structures, in addition to referring to ARM/FLO standards. Fair Trade in Gems and Jewelry also indicates that the organization should be based on the concept and practice of solidarity.



Figure 1. Artisanal gold miner in Ghana. Artisanal mining is often dangerous work. Responsible ASM needs to protect the rights and health and safety of workers. Photo by USAID.

Worker rights and health and safety include many different sub-topics. Child labor is not allowed unless the children are at least 15 under ARM/FLO and Fair Trade in Gems and Jewelry standards. In the case of ARM/FLO and URTH, those under 18 cannot do difficult or dangerous labor and work must not interfere with schooling. ARM/FLO, Fair Trade in Gems and Jewelry, and URTH specifically ban forced labor. The right to organize is guaranteed under ARM/FLO, Fair Trade in Gems and Jewelry, and Mammoth Tusk Gold. ARM/FLO and Mammoth Tusk Gold have important provisions for guaranteeing worker safety. Fair Trade in Gems and Jewelry have distinguishing policies on seeking to ensure a living wage that are slightly more

prescriptive than those of ARM/FLO and are similar to the living wage stipulation and Ethical Trading Initiative (ETI) Base Code referred to by CRED. ARM/FLO, on the other hand, has unique provisions to require efforts to provide a form of health and pension security for organization members. ARM/FLO standards and CRED also prohibit harsh treatment of workers. Regarding discrimination, most of the initiatives state that no

discrimination will occur, but ARM/FLO specify additional forms of discrimination, including discrimination based on disabilities, language, national or social origin, marital status, age, and union memberships, that others do not provide details on. ARM/FLO also seeks to provide appropriate conditions for allowing pregnant and breast-feeding women to work. Discrimination based on gender identity (rather than just sex) is not specified by any of the initiatives except in CRED's reference to the ETI.

ARM/FLO and Fair Trade in Gems and Jewelry note that premiums must be used in part for community projects. CRED refers to ARM/FLO standards. Although EcoAndina, Mammoth Tusk Gold, and URTH also note development priorities, they do not provide guidelines for how that should occur or do not indicate the allocation of funds for specific projects. Fair Trade in Gems and Jewelry is unique in indicating that funds should not be used to invest in means to produce metal that are more environmentally detrimental. Fair Trade in Gems and Jewelry also is the only initiative to note that supporting agricultural land use is a priority relative to supporting land use for mining activities.

Most of the initiatives note that operations must be legal. ARM/FLO, CRED, Fair Trade in Gems and Jewelry, and Mammoth Tusk Gold also note other stipulations on transparency and/or disclosure. Few of the initiatives, however, clearly note how disclosure to the general public occurs. Only ARM/FLO and Oro Verde™ seem to have their full standards readily available on-line.

2) Environmental Topics

All but two of the initiatives forbid the use of mercury or cyanide, although Fair Trade in Gems and Jewelry may allow for a possible phase-out with a defined timeline, and Mammoth Tusk Gold does not name the chemicals themselves. ARM/FLO and URTH both allow certification of extraction using mercury and cyanide but provide standards for how mercury amalgamation should occur. Those mercury management standards, however, are not as detailed or comprehensive as the guidelines of the Global Mercury Project. Given the difficulty of implementing and monitoring relatively safe use of mercury, given the health, economic, and environmental impacts of mercury, and given the availability of mercury-free technology, use of mercury does not represent precautionary best practice.²⁵ ARM/FLO, CRED, and URTH also stipulate that tailings should not be disposed of in waterways, but with ARM/FLO that is a Progress requirement only. Except for CRED, none of those initiatives or ARM/FLO Ecological Premium or Fair Trade in Gems and Jewelry has standards specifically limiting siltation of waterways, a stipulation noted by CRED, Mammoth Tusk Gold, and Oro Verde™. Mammoth Tusk Gold, however, does not seem to impose seasonal restrictions on activities to protect aquatic life such as spawning fish that would seem relevant in the Yukon. CRED requires preventing pollution of water resources, although details are lacking. CRED and Mammoth Tusk gold also note the value of limiting water consumption.



Figure 2. Panning for gold in the Yukon and sedimentation from small-scale gold mining in French Guiana. Siltation can threaten fish habitat and cause massive degradation of streams and rivers. Photos by Janothird and Ludovic Salomon²⁶ licensed Creative Commons Attribution-Share Alike 3.0



Figure 3. Placer mining in the Yukon. Even small-scale placer mining has the potential to destroy important habitat in river valleys. Photo by Janothird, licensed Creative Commons Attribution-Share Alike 3.0.

Almost none of the initiatives give adequate consideration to staying out of protected areas and important or sensitive biodiversity areas. CRED refers to the No Dirty Gold campaign's Golden Rules and not sourcing from mining in protected areas, fragile ecosystems, or other areas of high conservation or ecological value. Mammoth Tusk Gold notes that operations avoid endangering such areas, although its standards suggest this means complying with the law in Yukon. Habitat protection within the area of operation also seems inadequate for all the initiatives. ARM/FLO Ecological Premium and Oro Verde™ aim to minimize disruption and allow an ecosystem the capacity to recover but do not define in how many years the ecosystem ought to recover. The Oro Verde™ limit on deforestation could seemingly still allow complete deforestation of a given hectare of forest in 20 years time. CRED requires preservation of ecosystems but does not define how that should occur. Mammoth Tusk Gold describes some distinct practices that ought to limit habitat destruction, and EcoAndina is the only initiative to indicate demarcating sensitive areas to be avoided.

All of the initiatives, except URTH, include conditions that require some form of reclamation and/or rehabilitation/restoration after mining ceases. ARM/FLO (and, thus, CRED) and Mammoth Tusk Gold are the only initiatives to require filling or blocking of pits, and CRED is the only one to refer to the need for the mine to cover all cleanup costs. Mammoth Tusk Gold is the only initiative to have extensive standards on reconstruction of stream channels and to require removal of hazards and reclamation and re-contouring. Oro Verde™ (and, thus, CRED) is unique in requiring removal of topsoil and replacement at end of mining and requiring "ecological stability" within three years, but "ecological stability" is not defined. ARM/FLO Ecological Premium requires rehabilitation to occur but without defining methods, endpoints, or timelines. None of the initiatives require restoration of an ecosystem to the pre-existing conditions or other endpoint as measured in any particular way.

Only a few initiatives address responsible energy use. EcoAndina uses solar panels for some water pumps. Mammoth Tusk Gold has the goal of conserving energy and reducing greenhouse gas production. CRED indicates an intention to work on the issue. No initiative appears to have a concerted requirement to use or move towards using only renewable energy sources.



Figure 4. Aerial view of mechanized alluvial and primary gold mining in French Guiana. Mining in sensitive tropical areas can devastate forests, streams, and biodiversity. Photo by Ludovic Salomon, licensed Creative Commons Attribution-Share Alike 3.0 Unported License

3) Certification Topics

None of the initiatives have truly third party, multi-stakeholder, multi-sector standards-development procedures. Although limited information on development of standards is available, most of the initiatives appear to have developed standards internally, or with limited consultation with some stakeholders. ARM/FLO has conducted extensive consultation but it remains unclear how comments on draft standards were addressed. ARM/FLO decisions on standards are also made by a Board that includes miner and jeweler interests but does not appear to include stakeholders such as NGOs concerned mainly about negative impacts of small-scale mining. The governance is, therefore, seemingly different from that of a third party certification system such as the one under development for the Initiative for Responsible Mining Assurance (IRMA) for large-scale mining.²⁷

Little information is available about verification of compliance with standards and tracing. Mammoth Tusk Gold certification involves audits of compliance by Ernst and Young and recommendations by a multi-stakeholder committee to Mammoth Tusk Gold. The inclusion of the multi-stakeholder committee is noteworthy, but the internal development of standards limits our ability to describe Mammoth Tusk Gold as a third party certification system overall. Although ARM/FLO standards documents do not report on a definite verification system, this will apparently occur in accordance with FLO procedures and physical traceability of gold is guaranteed for ARM/FLO Ecological Premium, with exceptions made for the ARM/FLO Fair Trade/ Fairmined gold (non- Ecological Premium). Oro Verde™ indicates using an external verification body²⁸ that could provide a degree of independence, Fair Trade in Gems and Jewelry appears to use internal or University of Aachen verification²⁹, and URTH indicates that an unidentified third party expert evaluates compliance. CRED states that it will use third party certification where available, and that it uses a contractual chain that addresses ethical principles.

E. Conclusions

The array of efforts on responsible small-scale gold mining bodes well for the development of more responsible small-scale mining. All of the initiatives that we compared included several good standards and most of the initiatives included several standards that we could consider precautionary best practice.

None of the initiatives that we examined, however, represent best practice for all topics. Although it can be difficult to compare across initiatives that include retailer-based, mine site-based, and certification-based efforts, the comparison on standards suggests improvements that could be made in all of the different initiatives.

Each of the initiatives has points for which it is closer to representing precautionary best practice, and points where it is further from best practice. ARM/FLO standards are relatively close to best practice on social concerns, but ought to exclude conflict zones from certification and specifically require consent of indigenous communities. Also, ARM/FLO standards are weak on environmental concerns, as they do not exclude certification of operations in protected or sensitive areas, do not adequately protect habitat or have clear restoration goals, do not address energy use, and, except in the case of the Ecological Premium, do not exclude certification of mercury and cyanide operations. CRED standards have a few similar opportunities for improvement on habitat protection and restoration and energy, and Oro Verde™ standards would benefit from inclusion of the social standards and some of the environmental standards that it currently lacks. EcoAndina, as it formalizes its standards, and URTH, as it develops its operations,

have the opportunity to develop formal strong standards on all topics covered. Fair Trade in Gems and Jewelry has strong standards on the topics that it covers but does not cover a large number of topics: additional standards on conflict zones, consent, indigenous peoples, biodiversity and protected areas, habitat protection, energy, and siltation and waste would increase the level of assurance provided by the initiative. Mammoth Tusk Gold, which has strong standards on several topics including conflict zones, would benefit from requiring community ownership in projects, consent of communities, guaranteed living wages, additional guarantees on protecting aquatic habitat, and not operating in important ecological or high biodiversity areas. Some of these conditions may be guaranteed by regulations in the Yukon, but explicit stipulation in the standards would increase applicability of the standards outside of the Yukon. All of the initiatives would benefit from strong standards on biodiversity, energy use, and involvement of principle stakeholders in development of standards.

The stronger points from all of these initiatives, in combination with the precautionary principle and known best practice, could together form a composite of best practice in responsible small-scale gold mining. Such a certification system would:

- embrace respect for human rights;
- not certify operations in areas of armed conflict;
- obtain the consent of indigenous and other local communities;
- ensure that miners' organizations were community-based and cooperative;
- ensure that working conditions respected workers rights and health and safety and provided a living wage and health and pension benefits as feasible;
- ensure that part of profits went to projects that benefitted the community in a sustainable development framework;
- be transparent and disclose all ethical sourcing information to the public;
- not certify operations using mercury, cyanide, or other toxic chemicals;
- limit siltation of waterways and prevent any water pollution in accordance with defined water quality criteria;
- not certify operations in any protected area designated under international conventions or under national, regional, or local authority or in other areas important for their ecological functions or their biodiversity³⁰;
- protect and limit impacts in sensitive habitats;
- limit deforestation and habitat destruction in accordance with local forest and ecosystem uniqueness and capacity to regenerate after mining;
- only certify operations that can restore ecosystems to pre-mining conditions or to an ecological community similar to undisturbed zones in the region within a defined short period of time; and
- use renewable energy sources for energy needs.

Full traceability and third-party verification of compliance would provide further assurance of responsible sourcing.



Figure 5. Gold from Swiss bank. Provenance information and traceability are needed to indicate if gold like this contains dirty gold or gold from more responsible operations. Source: Public domain

F. Appendix

Text of Initiative Principles and Standards by Topic

Note: sources of information are those listed in The Initiatives, section B.1.

1) Social Topics

Human rights

ARM Standard Zero

"Responsible ASM is based on the Universal Declaration of Human Rights and on later UN declarations regarding the cultural, social and economic rights of individuals. The rights of artisanal and small-scale miners must be respected, and their violation, denounced. Responsible community based artisanal and small-scale miners organizations respect the human rights, as well as the social, economic, cultural, and labour rights of each and every person involved and of the local community, as fundamental principles. The rights of women, disadvantaged groups and individuals, including migrant workers, are specifically included. ... The STANDARD follows the Universal Declaration of Human Rights on ending discrimination. ... FLO and ARM may temporarily suspend the use of KP [Kimberley Process] certified diamonds from countries that are accused of KP violation by human rights NGOs but not yet officially suspended or sanctioned by KP. ... FLO and ARM may temporarily suspend or permanently ban the use of gem- and semiprecious stones originating from countries where human rights NGOs report the abuse of artisanal miners."

CRED Jewelry

"No harsh or inhumane treatment is allowed." "We are a signatory of the No Dirty Gold Campaign's Golden Rules. These are... Respect basic human rights outlined in international conventions and law. ... Our precious metals are mined in compliance with the labour, community development, and environmental policies within the FLO/ARM fairtrade gold and associated precious metals standard."

EcoAndina

It is important to EcoAndina to respect human rights.

MTG

"Mining operations respect basic human rights outlined in international conventions and Canadian law." ... "Placer mining operations and activities respect laws and administrative requirements as outlined in the Canadian Charter of Rights and Freedoms and in the Yukon Human Rights Act. Certified mining operations comply with all Canadian and Yukon Human Rights legislation and regulations. Certified mining operations have adopted policies and practices that promote and reflect the following principles: every individual is free and equal in dignity and rights; discrimination is discouraged and eliminated; and recognition of the inherent dignity, worth, and of the equal and inalienable rights of all members of the human family. All personnel of a certified mining operation are aware of the operation's human rights policies and practices and of their own obligations in the successful implementation of these policies and practices. The mine or its personnel are not complicit in human rights violations, nor do they ignore, condone, or benefit from human rights abuses in companies and businesses they deal with."

URTH Solution

"The minerals are not mined, processed, transported or traded under threat of physical or sexual violence, nor are the proceeds from the sale of the mineral used to fund armed conflict or other illegal activities."

Conflict zones exclusion

ARM Standard Zero

"We will not support organizations that are involved with armed conflict in any way, including financing conflict or the use of revenue to engage in activities that facilitate the purchasing of arms. ... Revenues of the ASMO and its PPs must not be used directly or indirectly to finance or support illegal activities or armed conflicts."

CRED Jewelry

"All our diamonds are certified as conflict-free." "We are a signatory of the No Dirty Gold Campaign's Golden Rules. These are... Ensure that operations are not located in areas of armed or militarized conflict. ... Our precious metals are mined in compliance with the labour, community development, and environmental policies within the FLO/ARM fairtrade gold and associated precious metals standard."

EcoAndina

EcoAndina only sells to people or organizations that they know and that do not contribute to conflict. There was conflict in the area of operation approximately 20 years ago but there is none now.

MTG

"Mining operations do not lead to, initiate, escalate, or sustain violent conflicts." ... "Yukon Placer mining operations and activities do not initiate or lead to violent conflict. Placer mining operations only operate when duly permitted under the Yukon's strict regulatory regime. Conflict is discouraged and avoided through a secure land tenure process, a known assessment and permitting regime and the successful management of placer gold resources and ongoing efforts at cooperation, co-management, and conservation. Yukon mining operations do not operate in areas of violent conflict. Mining operations will cease immediately upon notice by appropriate authorities of the existence of violent conflict in the area, or of the risk of such conflict."

URTH Solution

"The minerals are not mined, processed, transported or traded under threat of physical or sexual violence, nor are the proceeds from the sale of the mineral used to fund armed conflict or other illegal activities."

Community consent

ARM Standard Zero

"Where indigenous peoples or other ethnic groups are owners of the territory and are different from the miners themselves, responsible ASM organisations will undertake consultations based on the spirit of ILO Convention 169, with respect for local cultural practices in order to reach agreements with the local traditional authority and community, with regards to the impacts and benefits of mining operations and trading in that indigenous or ethnic territory. ... The mining operations are conducted with the agreement of local community authorities."

CRED Jewelry

"CRED also adheres to Oro Verde™ standards." "We are a signatory of the No Dirty Gold Campaign's Golden Rules. These are... Obtain the free, prior, and informed consent of affected communities... [and] [e]nsure that projects do not force communities off their lands. ... Our precious metals are mined in compliance with the labour, community development, and environmental policies within the FLO/ARM fairtrade gold and associated precious metals standard."

EcoAndina:

EcoAndina does not work in an area without direct participation of that community and the cooperative or association has the support of the community.

MTG:

"Certified mining operations respect, protect, and promote community self determination and the rights of affected communities to actively participate in the assessment of new and existing projects and plans. ... Mining operations recognize the legal and customary rights of Aboriginal people to self-determination, control over their lands, protection of cultural integrity, and a healthy and productive environment."... "Project proposals after 2003 have been assessed by an independent assessor that has ensured sufficient time for public input into the project. An independent assessor has reviewed the proponent's project proposal and has judged it to be complete and adequate. The project proposal is submitted to a mandatory public review process. Comments and concerns of local communities and other affected stakeholders have been solicited, documented, accounted for, and given full and fair consideration during the assessment. Continued efforts are made by the mining operation to develop and maintain open relationships with local communities. The mining operation encourages and supports the participation of affected communities and other stakeholders in the assessment, monitoring, and evaluation processes. The recommendations made by the environmental and socio-economic assessors are publicly available to ensure that communities and participants can see how their concerns were dealt with, and what recommendations were made by the assessors to the Decision Body. ... Certified placer mining operations respect indigenous peoples' special status and their relationship to the land. First Nations are acknowledged as Decision Bodies for new projects that occur on their settlement land with the right to accept or reject projects. Placer mining project proponents must consider the need to protect the rights of First Nation under their respective final agreements. Placer mining project proponents must consider the environmental and social-economic effects of a project and identify alternatives to the project. This includes protection of culture, traditions, health, and lifestyles. Placer mining operations, where possible, will enhance the well-being and traditional economies of indigenous people. Meaningful consultation opportunities with First Nation are provided. Meaningful consultation includes: timely notification of project consultation; provision of timely, relevant, and complete information; adequate time given for review and response; reasonable efforts made to address and accommodate concerns; consultation will be culturally appropriate; consultation efforts are commensurate with the size and scale of the project; and consultation respects and honors the special legal and political status of Yukon First Nations. "

Oro Verde™

"The mining operations must be conducted with the agreement of the local community council."

URTH Solution

"There are no bad relations between the surrounding permanent communities and the community of the mine."

Indigenous peoples

ARM Standard Zero

"Where indigenous peoples or other ethnic groups are owners of the territory and are different from the miners themselves, responsible ASM organisations will undertake consultations based on the spirit of ILO Convention 169, with respect for local cultural practices in order to reach agreements with the local traditional authority and community, with regards to the impacts and benefits of mining operations and trading in that indigenous or ethnic territory."

CRED Jewelry

"CRED also adheres to Oro Verde™'s criteria." "Indigenous peoples are at the heart of our policy. The United Nations Declaration on the Rights of Indigenous Peoples enshrines the right to self-determination, to control development of their societies, and to pursue their own traditional economic and social activities. Part VI of the Declaration establishes rights in relation to land and resources, recognizing indigenous peoples' rights to keep and strengthen their distinctive spiritual relationship with their land and waters, to control the use of their land, waters and other resources, to have returned to them land and resources taken without their consent, to receive assistance in order to restore and protect the environment, and to determine strategies for developing their land and resources. We aim to source from indigenous communities and to help them secure their right to remain as owners of their traditional lands, in the face of increasing competition from mining companies which have a shorter-term stake in protecting local cultures and ecosystems. Where indigenous people are denied these rights we will campaign on their behalf."

EcoAndina

The mining communities, cooperatives, and associations are indigenous themselves and the cooperatives and associations have the support of the communities.

MTG

"Mining operations recognize the legal and customary rights of Aboriginal people to self-determination, control over their lands, protection of cultural integrity, and a healthy and productive environment." ... "Certified placer mining operations respect indigenous peoples' special status and their relationship to the land. First Nations are acknowledged as Decision Bodies for new projects that occur on their settlement land with the right to accept or reject projects. Placer mining project proponents must consider the need to protect the rights of First Nation under their respective final agreements. Placer mining project proponents must consider the environmental and social-economic effects of a project and identify alternatives to the project. This includes protection of culture, traditions, health, and lifestyles. Placer mining operations, where possible, will enhance the well-being and traditional economies of indigenous people. Meaningful consultation opportunities with First Nation are provided. Meaningful consultation includes: timely notification of project consultation; provision of timely, relevant, and complete information; adequate time given for review and response; reasonable efforts made to address and accommodate concerns; consultation will be culturally appropriate; consultation efforts are commensurate with the size and scale of the project; and consultation respects and honors the special legal and political status of Yukon First Nations. Traditional knowledge shared by First Nation must be given full and fair consideration. In cases where traditional knowledge is recognized as propriety [sic] the confidentiality of traditional knowledge will be respected and protected. Indigenous culture, spirituality, and history are identified, respected, and where necessary protected. In cooperation with First Nations cultural, historic, or religious sites are identified and protected. Spiritually significant places are treated with the utmost respect, and if required location and information pertaining to the area will be treated as confidential. In cooperation with First Nation areas containing evidence of cultural or archeological significance are well managed and protected. In cooperation with First Nations steps are



taken to support the education of non-First Nation and encourage recognition and respect for areas of cultural and o spiritual significance."

Oro Verde™

"The mining operations must be conducted with the agreement of the local community council."

URTH Solution

"There are no bad relations between the surrounding permanent communities and the community of the mine."

Miner group structure and governance community-based

ARM Standard Zero

"The STANDARD applies to "Artisanal and Small-scale Miners' Organizations" (ASMO). ASMO are member organizations and have the responsibility for Fairtrade certification. Under its umbrella there are several organizational realities of ASM that are part of the mining communities (see definitions described below). ASMO (Artisanal and Small-scale Miner's Organization)... An organisation comprised by self-employed miners that are members/shareholders. The ASMO, or members of it, owns valid mining rights (mining concession, contract, etc.) that allow all members and production partners to work legally. In addition, usually a series of other self-employed artisanal miners may be allowed by the ASMO to work under its umbrella in the mining area. These can be individual miners, family units, groups of self employed miners or even other community based organizations like women mineral selectors, who are working in close coordination with the ASMO and (for the purpose of this STANDARD) called "production partners". As production partners are allowed by the ASMO to work in its mining area, the ASMO is responsible for compliance with the STANDARD in its mining area and for organizing their activities (e.g. make sure that production partners' work areas do not interfere, etc.), and production partners are responsible to follow instructions of the ASMO. All miners of the organization and its production partners are registered (the minimum requirements for registration are described further below). In some cases contracted workers work in the ASMO's processing plant, within workgroups in the mine hired by the organization, or hired by individuals of the production partners. In some cases Production Partners are legally established small-scale mining companies with formalized business operations. If the amount of workers they employ exceeds 50 contracted workers, then these production partners are considered as Small-Scale Mining Organizations (SSMO) which have to apply separately for Fairtrade certification and a supplement applies (Chapter 5). If Production Partners are not a legal company but hire workers, then the organization (ASMO) has the responsibility over these workers (implications for applicability of Chapter 4 on Labour Development and Premium use are described below in the STANDARD). ... Responsible ASM contributes to the sustainable human development of their communities. Responsible Artisanal and Small-scale Mining improves the quality of life of men and women miners, their families, and the community that hosts ASM endeavours, respecting the conceptions and priorities of each community. ... The Artisanal and Small-scale Mining Organization (ASMO) is comprised by community based artisanal or small-scale miners including artisanal mining entrepreneurs with contracted workers. ... The ASMO registered all miners that work in its mining area and has rules and criteria for its Production Partners (PP) that work in their mining area. ... Taxes, fees, royalties and other tributes as required by applicable legislation are paid to the relevant authority. The mining operations are conducted with the agreement of local community authorities. ... The ASMO plays an active role in planning and promoting local sustainable development [Progress requirement only]. ... The ASMO has a legal, transparent and democratic organisational structure in place, which enables effective control by the members. There is a general assembly with direct or delegated voting rights for all members as the supreme decision



making body, and an elected Board. The staff answers to the General Assembly via the Board. ... The ASMO holds a General Assembly at least once a year. ... The ASMO's annual report, budgets and accounts must be presented in an understandable and clear manner for all, to and approved by the General Assembly. From the moment of certification, the organization works towards transparent planning of the business. Such planning is approved by the General Assembly [Progress requirement only]. The organization establishes or improves internal mechanisms of members' control over the administration [Progress requirement only]. The participation of members in the ASMO's administration and internal control is promoted through training and education. There is improvement of the flow of information from board to members about the business and the organizations' policies [Progress requirement only]. ... Measures will be taken to review the members' commitment to the organization [Progress requirement only]. ... Within one year of certification the ASMO carries out a needs assessment how the Fairtrade benefits help promote the environmentally-sustainable social and economic development of the organization, its production partners and the community. ... The use of the Fairtrade Premium is approved by the General Assembly of the Organization. The decision is transparent to members, production partners and workers." [Also see ARM section under Workers' rights and health and safety]

CRED Jewelry

"As a policy, we prefer small over large, local over foreign, collective ownership over hired labour. This means we give our business (where ever possible) to artisanal miners or mining organisations who own their own production. This is the model which we believe is the most able to nurture local development and build community sustainability because a greater proportion of the value of the mineral stays in the local economy and it legitimises local ownership of the resource and helps protect traditional cultures of production. ... We are our suppliers' partners, not masters. We work in a spirit of cooperation, dialogue, and shared benefit through trade. Either directly or through support organisations, we work to help our suppliers improve their capacity to comply with our labour, environmental, and community development requirements." "Our precious metals are mined in compliance with the labour, community development, and environmental policies within the FLO/ARM fairtrade gold and associated precious metals standard."

EcoAndina

The mining organizations are cooperatives (formally registered) or associations. Cooperatives have Presidents and associations have coordinators. Decisions are made at general meetings in accordance with indigenous customs.

Fair Trade in Gems and Jewelry

"The Fair Trade concept for gold aims to help to improve the working and living conditions of small scale miners, who are organised in co-operatives, family or similar associations, or small companies. Small scale is defined as the miners preferably not employing hired labour on a casual or permanent basis, instead depending on their own labour and that of members of their family or village / community, who have passed the minimum age for employment. ... Their association ... has to be independent and democratically controlled by its members. This means that the members of the organisation participate in the decision making process which determines the general strategy of their organisation, including decisions related to the destiny of the additional resources available through advantageous Fair Trade conditions; has administrative transparency and effective control by the members and its board over the management, minimising the risk of fraud and offering the members the necessary instruments to be able to act adequately in case of fraud; has a philosophy based on the concept and practice of solidarity; ... is statutorily open to new members. The members of the association have to share the benefits of Fair Trade, in particular any increase in income, in a suitable manner with their employees, whether casual or permanent. Such an arrangement needs to be fixed at the outset of a

Fair Trade relationship and agreed in writing between the association and Fair Trade in Gems and Jewelry. Where applicable the association and its members or the small companies ... are ready to accept [an] independent trade union(s) or worker's organisation, where they exist, as an equal partner and guarantee their participation in the decision making of the fair trade programme, in particular regarding the use of the premium."

Workers' rights and health and safety

ARM Standard Zero

"Responsible ASM is decent work in line with the ILO Conventions. Work in Responsible Artisanal and Small-scale Mining is performed in conditions of freedom, equality, safety, and human dignity, free from child labour, allowing the access of small-scale minerals producers, workers and their families to a decent standard of living. ... The STANDARD requires the fulfilment of the Chapter on labour conditions according to the following six principles: 1) All labour requirements are applicable to all workers and employees employed directly by the ASMO (administration, processing plant or in mineral extraction) from the first year on; 2) All Health and Safety requirements apply principally to all registered miners (ASMO members, self-employed miners of the production partners (PP) and workers). The ASMO is responsible for compliance except where a Small-Scale Mining Organization (SSMO) assumes the entire responsibility for compliance; 3) If ASMO members or production partners employ an amount of workers that can be legally unionized, then also all labour requirements apply and the ASMO is responsible; 4) All labour conditions apply for SSMOs that apply for Fairtrade certification by their own; 5) If a PP that is not a legal company but has more than 50 workers, all labour conditions apply, for which then the ASMO is responsible; 6) Mayor requirements such as Child Labour apply for all registered miners. Responsible are the certified organization (ASMO, and SSMO). ... *Employment Policy*. Within three years of certification the ASMO has developed an employment policy as part of its development plan. *Freedom of Labour*. Fair Trade follows ILO Conventions 29 and 105 regarding forced labour. Forced or bonded labour must not take place. This can take the form of worker debt schemes with the involving the miner, his organisation or intermediaries, by retaining of due payment, of identity documents or other personal effects of value, or under threat. Forced labour, including bonded or involuntary prison labour, does not occur. Employment of a worker is not conditioned by employment of their spouse. Spouses have the right to work elsewhere. ... *Progressive Elimination of Child Labour*. Fair Trade follows ILO Conventions 138 and 182 regarding minimum age for employment and elimination of the so called Worst Forms of Child Labour. In many cases national laws have determined ages above 15 as minimum employment age in mining, and prohibition of youths under 18 to do underground or dangerous work. Minimum contracted employment age must not be less than 15, or existing national law for the mining sector, if this age were older. Persons under 18 years of age shall not be employed for any type of work which, by its nature or the circumstances under which it is carried out, is likely to jeopardise the health, safety or morals. Persons under 18 years who participate in mining through family work should not execute tasks that are especially dangerous for them, such as subsoil and underwater activities, heavy loads, the use of toxic substances and night time shifts, extended shifts, or shifts prior to school schedule. Working does not jeopardize schooling or the social, moral or physical development of the young person. The complete elimination of all forms of un-allowed child work or labour in ASM will be part of the vision and forms part of the development plans of the ASMO [Progress requirement only]. The ASMO undertakes actions to help adolescents who need to work to technical training and employment opportunities that do not represent a danger for their health, safety and schooling [Progress requirement only]. *Freedom of Association & Collective Bargaining*. Contracted workers increase in importance in ASM as processes evolve towards greater technification. A typical ASM operation may have a combination of family production units, self-employed workgroups,

contracted workers, and migrant workers. Fairtrade follows ILO Conventions 87 and 98 regarding trade union freedom and collective negotiation. Workers and employers should have the right to establish them in organizations and participate in their election, and to formulate their statutes, to elect their representatives and to formulate their programs. Workers should have adequate protection against any act of discrimination aimed at diminishing trade union freedom in relation with their employment. In any case if any employer that could be the ASMO, a production partner, or a Small-scale Mining Company (SSMO) employs an amount of workers that can be unionized according to local law (unionizing work force is legally permitted for 25 workers, 30 workers etc.), then [the following] Chapter applies. The ASMO or the employer (if different and applicable) recognises in writing and in practice the right of all workers to establish and to join workers' organizations of their own choosing and to collectively negotiate their working conditions. The ASMO allows trade union organisers to meet all the workers, and allows workers to hold meetings and organise themselves without the interference of the management. The ASMO or the employer (where applicable) ensures that neither workers nor their representatives are discriminated against or suffer other repercussions because of freely exercising their right to organise or because of their decision whether or not to join a workers' organization and/or participate in its legal activities. If no active and recognised union is able to work in the area, the ASMO encourages the workers to democratically elect a workers' committee which represents them and which negotiates with the employer to defend their rights and interests [Progress requirement only]. If no union is present, the ASMO and the workers' committee gets into a process of consultation with the national union federation(s) and the International Chemical, Energy and Miners Union (ICEM) about improvement of the workers' representation and implementing a Collective Bargaining Agreement (CBA) [Progress requirement only]. The representation and participation of the workers is improved through training activities for workers. The ASMO or the employer (where applicable) provides adequate resources for this to take place [Progress requirement only].

Conditions of employment. Contracted workers increase in importance in ASM as processes evolve towards greater technification. A typical ASM operation may have a combination of family production units, self-employed workgroups, contracted workers, and migrant workers. The STANDARD follows ILO Conventions 100 on equal remuneration and ILO Convention 110 on conditions of employment of workers. Conditions of employment and in particular salaries are equal to or exceed sector CBA regulations where they exist, regional average wages or official minimum wages for similar occupations, whichever is higher. The employer shall specify wages for all functions. Payment is made regularly and in a timely manner, in legal tender and is properly documented. Other relevant conditions of employment like maternity leave, social security provisions and non-monetary benefits are at least equal to national law, the sector CBA regulations where they exist or the Agreement signed between the workers' organization and the employer, whichever is higher. All permanent workers must have a legally binding written contract of employment [Progress requirement only]. An adequate regulation on sick leave is put in place [Progress requirement only]. A working hours and overtime regulation is put in place [Progress requirement only]. Salaries are gradually increased to levels above the regional average and official minimum. Where possible all regular work that requires hired labour is undertaken by permanent workers [Progress requirement only]. Local and migrant, seasonal and permanent workers receive equivalent benefits and employment conditions for equal work performed [Progress requirement only].

Health and Safety Conditions at the Workplace. Fairtrade adheres to ILO convention 155 that "prevents accidents and health impacts resulting from work, is related to working, or emerges while working, reducing to the minimum, in a reasonable and feasibility way. The causes related to the working environment". Fairtrade also follows ILO Convention 176 about Health and Safety in the Mines that establishes Requirements for minimum security for all mining operations, and expects miners to comply as much as possible. Health and safety conditions apply for all miners under the ASMO (members and Production Partners, self-employed, workers). But not all requirements are applicable for



alluvial mining (escape routes etc.) or for mineral selectors. The responsibilities are defined as described above. The Health and Safety Equipment for hard rock mining is also subject of the registration process of the ASMO (see above). Work processes, workplaces, machinery and equipment on the production site are as safe as reasonably practicable. The certification body may require that a competent authority or independent inspection agency carry out an inspection. The ASMO has a committee in charge of taking decisions and implementing actions in health and safety in the workplace. The organisation will ensure that all registered miners working in the mining area of the ASMO have access to information and basic training on health and safety in mining, its main risks and hazards, and how to prevent, prepare and respond to emergencies. The ASMO ensures that all registered miners use basic equipment for personal protection, in accordance to the nature of the mine, the work to be done and the place. The ASMO has a clear and defined policy and process to deal with gender based violence, and will sensitise its registered miners against sexual harassment at work. The ASMO will work with local authorities towards making a gender based diagnosis of the main risks and vulnerabilities to accidents and to disasters in the community because of mining activity [Progress requirement only]. The ASMO is in charge of designing and implementing a mining rescue plan and first aid program depending on the kind of mining activity it develops [Progress requirement only]. All persons working in the mining operations undergo voluntarily regular medical checks. Records must be established within one year of certification [Progress requirement only]. Workplace dangers have been identified and are being managed and monitored [Progress requirement only]. The ASMO will work towards increasing community and miners' awareness of the risks through education and communications [Progress requirement only]. *Social Protection.* Most ASM do not have health or other insurance, or pension provisions. However, many Miners' organisations do have informal health systems, either through some kind of solidarity fund or through purchased group liability insurance. The spirit of this requirement is to ensure that men and women miners have health and pension protection. Measures for Social Protection apply to all registered miners (members of the ASMO, miners of the PPs, self employed miners and workers) working in the mining area of the ASMO. The ASMO is responsible for including all registered miners into a social safety net. In the absence of social security protection systems, the miners affected by accidents, occupational disease, or disaster receive solidarity help from the ASMO through economic support collected among the miners and the community. The ASMO will recognise to the widow/widower of a deceased registered miner, the rights and obligations held by the deceased in the mine and in the organisation, in accordance with his/her capabilities and experience, with the object of preventing her/his abandonment and that of her/his family. The ASMO will make efforts to ensure that all registered miners benefit from some kind of social security scheme covering health and pension [Progress requirement only]. In the event of death of a worker, reparation should be given by the ASMO or the employer (where applicable) to the widow/widower and heirs, if there were any [Progress requirement only]. *Supplement for Small-Scale Mining Organizations (SSMO).* Management allocates time during regular working hours and provides other resources that are necessary for or conducive to the successful implementation of the Fairtrade programme. Within one year of certification management ensures access to primary education for the children of all permanent resident workers [Progress requirement only]. Management should also pay special attention to the education of workers' children in general [Progress requirement only]. The SSMO has an appropriate human resources management system that is charged with implementing good industrial relations, training programmes and the development of its employees. A Joint Body (JB), with representatives of the management and representatives of the workers, has been created, with the purpose of deciding about the use of the Fairtrade Premium. A legal body is established before any assets are acquired using the Fairtrade Premium. This body comprises and represents all employees of the SSMO as the owner of any property acquired with the Fairtrade Premium. All groups of workers are able to participate in the election of and to be nominated to the Joint Body.



The composition of the Joint Body should reflect the composition of the workforce. The workers' representatives are chosen through a democratic process that is properly documented. The management representatives are appointed by management. All expenditure of the Fairtrade Premium and related issues are decided exclusively by the Joint Body, after consultation with the workers and in accordance with the guidelines for Fairtrade Premium use. The Joint Body, including the management representatives, is accountable to the workers and certification body for the administration and use of the Fairtrade Premium. The Joint Body, in consultation with the workers, prepares a yearly Fairtrade Premium work plan that takes into account the needs of all the various groups of workers. All requests/suggestions for Fairtrade Premium use are documented. Decisions by the Joint Body are also recorded. The Joint Body should strive to reach decisions by consensus. Failing this, no decision can be approved if the majority of the workers' representatives do not consent. Management and workers' representatives have equal voting rights. The Joint Body meets regularly and during working hours. The Fairtrade Premium may not be used to cover the running costs of the SSMO or the costs of compliance with the minimum requirements of this standard or associated product-specific standards unless stated differently. Information about the Fairtrade Premium amount is reported to all Joint Body members. A separate Fairtrade Premium account is established and worker representatives from the Joint Body, together with management are joint signatories. The certification body, Joint Body members and, if it exists, the internal audit committee have the right to check the relevant books of the Fairtrade Premium account. Regular capacity building for workers' representatives on the Joint Body is undertaken in order to ensure that they can carry out their functions. Management allows and supports this training to take place, partly during work time. Within one year of certification the internally approved Joint Body rules and regulations are in place [Progress requirement only]. *Management of Toxic Substances*. Amalgam burning never takes place in homes and kitchens. Toxic and dangerous substances such as explosives, mercury and cyanide will not be kept in houses, but in places with adequate conditions. The use of toxic and dangerous substances, such as mercury and cyanide, is under responsibility of trained adults over 18 years of age, and never pregnant or breastfeeding women, and persons with mental deficiencies or chronic liver, kidney or respiratory diseases. ... Any cyanide leaching plant must be operated by personnel trained in the safe and proper use of cyanide. ... Amalgam burning must be done only in designated premises providing privacy and security, and with proper equipment and trained personnel [Progress requirement only]. ... The ASMO does not engage in, support or tolerate the use of corporal punishment, mental or physical coercion or verbal abuse."

CRED Jewelry

"Employment is freely chosen; working conditions are safe and hygienic; child labour is not used; living wages are paid; working hours are not excessive; no discrimination is practised; regular employment is provided; no harsh or inhumane treatment is allowed."

"We broadly refer to the [Ethical Trading Initiative] Base Code and specifically The Alliance for Responsible Mining's (www.communitymining.org) fair trade gold standard's labour section, to determine minimum acceptable practice for the treatment of workers in the mining, refining, gem manufacturing, and jewelry industries." "We are a signatory of the No Dirty Gold Campaign's Golden Rules. These are ... Respect workers' rights and labor standards, including safe working conditions. ... Our precious metals are mined in compliance with the labour, community development, and environmental policies within the FLO/ARM fairtrade gold and associated precious metals standard."

EcoAndina

Workers rights are respected by virtue of the fact that they manage the operations through cooperatives and democratic associations. Workers have appropriate helmets, clothes, and boots. Dust is limited through wetting. The EcoAndina foundation provides worker safety trainings.

Fair Trade in Gems and Jewelry

"If the members of the association need to supplement their own and their family's labour capacity, the following additional regulations apply: no child below the age of 15 is allowed to work in mining; and the members of the association have to share the benefits of Fair Trade, in particular any increase in income, in a suitable manner with their employees, whether casual or permanent. Such an arrangement needs to be fixed at the outset of a Fair Trade relationship and agreed in writing between the association and Fair Trade in Gems and Jewelry. Where applicable the association and its members or the small companies recognise the right of all employees to organise and/or to join an independent union or any other genuine worker's representation and the right of collective bargaining; [and] are ready to accept the independent trade union(s) or worker's organisation, where they exist, as an equal partner and guarantee their participation in the decision making of the fair trade programme, in particular regarding the use of the premium. ... The ... refining unit ... meets the following conditions: the five minimum standards of the ILO (International Labour Organisation) have to be observed at the facility involved (right to unionisation, right to collective bargaining, no child labour, nor forced labour, no discrimination; see above)...; workers at the facility involved in processing for a Fair Trade order are paid at least the relevant minimum wage; [and] if no official minimum wage is applicable, or if the existing minimum wage is not enough for two adults to sustain their family, the association which gives the gold for refining should negotiate to share financial benefits with the labourers in the refinery, too, in order to achieve the target of self-sufficiency in income."

MTG

"The mine shows a high regard for its workers. ... Mining operations respect workers rights, and are in compliance with applicable labor standards." "Certified placer mining operations meet or exceed the requirements and thresholds contained in the Yukon Employment Standards Act. Remuneration packages are fair and on par with prevailing local standards. Employment practices comply with applicable laws and promote fair and equitable treatment of employees. There is no gender discrimination or harassment in the workplace. Mining management ensure equal pay for work of equal value, as well as equal employment opportunities and protections for workers of any race, ethnicity, religion, caste, sexual orientation, or political opinion. The rights of workers to organize and voluntary [sic] negotiate with their employers is recognized. Mine personnel are familiar with the content of the International Labor Organization Conventions 87 and 98. Employees have access to, and are aware of dispute resolution mechanisms for employee grievances, and may raise issues to the Employment Standards Board for decision without fear of repercussions. Placer mining operations meet or exceed the requirements and thresholds contained in the Yukon Occupational Health and Safety Act. Mine management complies with the employer's duties pursuant to the Act. Mine personnel are aware of relevant regulations and their rights and legal responsibilities. Mine personnel cooperate with and assist governing safety and health representatives in the performance of their duties. Mine personnel support and cooperate with health and safety committee members. Workplace, machinery, equipment, and processes under the employer's control are safe and without risks to health and safety of employees. Equipment and processes are regularly inspected, tested, and maintained to meet established safety standards. Work techniques and procedures are adopted so to prevent or reduce the risk of occupational illness and injury. Appropriate first aid personnel and equipment, and safety equipment are available and accessible on site. Employees are required to wear appropriate personal protective equipment on the site as a condition of their employment. Work safe programs are in place that promotes [sic] improved worker knowledge and skills and support continued improvement of conditions. Workers are given necessary instruction and training, and are adequately supervised taking into account the nature of the work and the abilities of the workers. Workers are made aware

of any hazard in the work and in the handling, storage, use, disposal, and transport of any article, device, or equipment, or of a biological, chemical, or physical agent. Hazardous materials, substances, and areas are clearly identified and demarcated. Hazardous materials and substances are contained, transported, and/or disposed of in a manner that will prevent environmental damage and protect public and worker safety. The mine has documented policies and procedure [sic] for the safe handling of hazardous materials and substances."

URTH Solution

"The miners are paid above local market rate for their gold. In Tipuani, Bolivia we are organizing health and safety courses that address issues such as mercury (sometimes used to extract gold from sand) reduction, management and elimination. In Wazuli, Bolivia, workshops on health and safety will begin April 7, 2008 and will provide miners with essential equipment such as safety hats and masks." "There is no hazardous child labor, as defined by ILO Conventions 182 and where a child is a person 17 years of age or less. Where children do work in the production, processing, transportation, and trade of the mineral through family work, their involvement does not affect their ability to attend full-time education, such as educational opportunities exist in their community; does not threaten their social, physical or moral development; does not require them to execute tasks that are especially dangerous, such as subsoil and underwater activities, lifting or transporting heavy loads, the use of toxic substances, night-time shifts, extended shifts, or shifts prior to school schedule. There is no forced or bonded labor (e.g. from indebtedness, informal labor, or prison labor) in the production, processing, transportation or trade of the mineral. ... Miners must be paid a wage equivalent to the going local market for their mineral."

Anti-discrimination

ARM Standard Zero

"Women's work is properly valued and rewarded. In the organizations and initiatives of responsible ASM, equality should exist among men and women in all rights, access to resources, the use of earnings, and participation and incidence in decision-making processes. Women are always paid for their contribution to the production process and are empowered in their organisations. The miners' organisation ensures equal pay for equal labour regardless of the labourer's gender. In organizations, processes and activities where there is marginalisation of women, measures and actions shall be taken in order to improve equality. ... The STANDARD follows the Universal Declaration of Human Rights on ending discrimination. The Declaration rejects "distinction of any kind such as, race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth or other status" (art. 2). The STANDARD expects Artisanal and Small-scale Mining organizations to apply these principles within their own stated rules and regulations (constitution, by-laws and internal policies). As the STANDARD is a voluntary social standard aiming to support the development of its beneficiaries, "positive discrimination" is intended. The ASMO does not discriminate against members or restrict new membership on the basis of race, colour, sex, sexual orientation, disability, marital status, age, religion, political opinion, language, property, nationality, ethnicity or social origin unless this is consistent with its goals and objectives. Furthermore there must be no discrimination regarding participation, voting rights, the right to be elected, access to markets, access to training, technical support or any other benefit of membership. Programs related to disadvantaged/minority groups working within the miners' organisation are in place to improve the position of those groups in the organization, particularly with respect to recruitment, staff and committee membership [Progress requirement only]. Appropriate measures are being taken to ensure equal representation of women in the Miners' organization [Progress requirement only]. ... Fair Trade follows Conventions 45, 100 and 111 of ILO against worker discrimination. It rejects "any distinction, exclusion or preference



based on race, colour, sex, religion, political opinion, national ascendancy or social origin that alters equal opportunity or treatment in employment and occupation" (Art. 1). The spirit of this requirement seeks to protect people who are vulnerable due to their physical, cultural, social or economic characteristics, especially women miners; also disabled or ill persons, HIV-AIDS orphans, or persons displaced by conflict or ex-combatants seeking a new beginning. The ASMO ensures that there is no discrimination on the basis of race, colour, sex, sexual orientation, disability, marital status, age, religion, political opinion, membership of unions or other workers' representative bodies, national extraction or social origin in recruitment, promotion, access to training, remuneration, allocation of work, termination of employment, retirement or other activities unless this is consistent with the ASMO's goals and objectives. The ASMO will recognize the same opportunities to men, women, and disadvantaged individuals regardless of their provenance or origin in all areas of mining activity, as a worker, member or entrepreneur, through the recognition of their specific capabilities and needs [Progress requirement only]. The ASMO provide support to pregnant and breast-feeding women (women miners, women mineral selectors, or contracted women miners), so that they can pass to lighter, non dangerous work, access health services, have access to childcare facilities where they can breastfeed their infants and receive benefits of social security where applicable [Progress requirement only]. ... The ASMO does not engage in, support or tolerate behaviour, including gestures, language, and physical contact, that is sexually intimidating, abusive or exploitative. ... Appropriate measures are being taken to ensure equal opportunities of women in the SSMO [Progress requirement only]."

CRED Jewelry

"No discrimination is practised." "We broadly refer to the ETI Base Code and specifically The Alliance for Responsible Mining's (www.communitymining.org) fair trade gold standard's labour section, to determine minimum acceptable practice for the treatment of workers in the mining, refining, gem manufacturing, and jewellery industries." "Our precious metals are mined in compliance with the labour, community development, and environmental policies within the FLO/ARM fairtrade gold and associated precious metals standard."

EcoAndina

No discrimination occurs. Some of the mining groups include women.

Fair Trade in Gems and Jewelry

"Their association ... does not accept any form of political, racial, religious or sexual discrimination."

MTG

"There is no gender discrimination or harassment in the workplace. Mining management ensure equal pay for work of equal value, as well as equal employment opportunities and protections for workers of any race, ethnicity, religion, caste, sexual orientation, or political opinion." "Certified mining operations have adopted policies and practices that promote and reflect the following principles: ... discrimination is discouraged and eliminated."

Community development and sustainable livelihood

ARM Standard Zero

"The STANDARD has been drafted in such a way as to ensure that conflicts between miner's organizations and communities involved in agriculture do not occur in first place. ... We declare our commitment to the Millennium Development Goals and the Johannesburg Declaration on Sustainable Development. ... Responsible ASM contributes to the sustainable human development of their communities. Responsible Artisanal and Small-scale Mining improves the quality of life of men and women miners, their families,

and the community that hosts ASM endeavours, respecting the conceptions and priorities of each community. ... The ASMO plays an active role in planning and promoting local sustainable development [Progress requirement only]. ... Within one year of certification the ASMO carries out a needs assessment how the Fairtrade benefits help promote the environmentally-sustainable social and economic development of the organization, its production partners and the community. Within three years of certification, the ASMO has a development plan in place to address how the Fairtrade benefits help promote the environmentally-sustainable social and economic development of the organization [Progress requirement only]. The development plan is based on democratic and transparent decision-making [Progress requirement only]. The ASMO administers and manages the Premium transparently. The planned use of the Fairtrade Premium is decided by the Premium Committee and properly documented. The use of the Fairtrade Premium is approved by the General Assembly of the Organization. The decision is transparent to members, production partners and workers. As soon as Fairtrade Premium is available, the organization puts an annual Fairtrade Premium Plan and budget in Place [Progress requirement only]. *Supplement for Small-Scale Mining Organizations (SSMO)*. The SSMO has a Fairtrade program that addresses the social and economic development. ... The SSMO must demonstrate that any Fairtrade revenues will promote the social and economic development of the workers. ... Within one year of certification the SSMO has adopted an annual work plan for social improvement, taking the progress requirements as reference [Progress requirement only]. ... The price shall be based on the LBMA fixing for gold (London Bullion Market Association) and be at least 95% of the LBMA fix for the pure content, FOB export point. ... Price payments are made in whole to the ASMO that sells the gold to the buyer. The ASMO is responsible for transferring the payment to whom it belongs. ... In addition to the price, buyers shall pay a Fairtrade Premium, calculated as 6% of the applicable LBMA fixing. During the first year after implementation of the STANDARD, the Premium shall be revised each 3 months by FLO-ARM on request of any producer or buyer. In addition to the price buyers shall pay an extra Ecological Premium, calculated as 9% of the applicable LBMA fixing on top of the Fairtrade Premium, if gold carries such label. During the first year after of implementation of the STANDARD, the Ecological Premium shall be revised every 3 months by FLO-ARM on request of any producer or buyer. ... Premium payments are made in whole to the ASMO that sells the gold to the buyer. The ASMO is responsible for transferring the corresponding share of the Premium to PPOs if applicable." [Also see ARM section under Workers' rights and health and safety]

CRED Jewelry

"More generally, we contribute to the sustainable social and economic development of all the communities where our materials are mined, processed, refined, and manufactured. We work with partners to empower these communities and improve their quality of life in line with the Millennium Development Goals. We do this through supporting initiatives such as the development of Fair Trade precious metals." "Our precious metals are mined in compliance with the labour, community development, and environmental policies within the FLO/ARM fairtrade gold and associated precious metals standard."

EcoAndina

10% over the gold market price is paid for the EcoAndina gold and the EcoAndina foundation encourages the cooperatives and associations to put their individual earnings towards responsible development activities.

Fair Trade in Gems and Jewelry

"The Fair Trade concept for gold aims to help to improve the working and living conditions of small scale miners, who are organised in co-operatives, family or similar associations, or small companies. Small scale is defined as the miners preferably not employing hired

labour on a casual or permanent basis, instead depending on their own labour and that of members of their family or village / community, who have passed the minimum age for employment. ... In order to have maximum beneficial impact, Fair Trade will focus, at least initially, on existing producer structures, rather than become involved in the establishment of new ventures. Mining activities in a community / region should only be second or third in regard to the means of earning a living; i.e. Fair Trade supports especially the use of the land for agriculture and/or cattle ranching first. Mining should not reduce the possibilities of a community / region to live from the land. New mining ventures 'in the middle of nowhere' (like with most gold or gemstones rushes) without the proper infrastructure and the means of living from the land should not be supported. ... Fair Trade aims to contribute to the improvement of the working and living conditions of small scale miners in two ways: by establishing as direct a link as possible to Fair Trade buyers, i.e. eliminating unnecessary middlemen; [and] by monitoring the payment by the Fair Trade buyers of a price, which will cover at least the basic needs of the families (including their own labour) as well as provide a 'Fair Trade premium'. In other words: A Fair Trade price must enable two adult workers to provide the needs of an average family with respect to food, shelter, clothing, educational and medical care. On top of this the Fair Trade price must also provide a margin, which will allow the members of the association options and means for projects like improving the structure of the association, building up a fund against emergencies, contributing towards the improvement of the community, lessening the environmental impact of the mining. ... In order to satisfy the regulations spelled out above, the minimum price for Fairly Traded gold will be the Standard price for gold at the LME [compare with ARM], deductions for impurities will be valued accordingly. ... The Fair Trade premium shall be used by the miners' association to ensure that all its members, as well as any employees and any workers engaged in processing, receive at least any legally applicable minimum wage. Should this be insufficient to cover the basic needs of an average family with the income of two full time earning family members, the individual incomes of the members of the association have to be raised. Following that, the members of the association decide jointly how best to spend the money in line with the principles given in § 2.1.2. The Fair Trade premium may not be used to introduce new mining methods which may be more harmful to the environment than the present methods in use. Should the total Fair Trade premium substantially exceed of the basic needs of a family as defined above under Fair Trade criteria, the association shall deliberate how it can contribute to the wellbeing of the community/communities, to which its members belong, or if other similar producer groups can be supported. The exact nature of such support should be decided by the sales organisation. ... All parties involved in the Fair Trade of gold share the commitment to stimulate a process of social improvements in the mining areas in constant dialogue with each other resulting in the redefinition of minimal standards for acceptance and the development of a system of evaluation to judge improvements during the process."

MTG

"The mine has a positive impact on local communities. ... Certified mining operations respect, protect, and promote community self determination and the rights of affected communities to actively participate in the assessment of new and existing projects and plans." ... "All certified mining operations foster and contribute to the socio-economic well-being of the local community. The mining operations continued efforts to maintain a positive relationship with local communities may include, participating or sponsoring local events or community groups, minutes of meetings, public announcements, news-letters, etc. Affected communities, local businesses, and residents are given opportunities for employment, training, and business opportunities to provide goods and services to the certified mining operation. Yukon business is considered and treated as the preferred source for the purchase of materials and services. Hiring policies for non-family members of the owners demonstrate a preference for employment of local residents."

Oro Verde™

"The origin of gold and platinum (for royalty purposes) must be declared in favor of the respective municipality."

URTH Solution

URTH Solution assures a "portion of all profits from URTH sales are reinvested back into the communities where the gold was mined." The projects range from health and safety classes, to clean water, to building a school for the community. "Miners must be paid a wage equivalent to the going local market for their mineral."

Transparency, disclosure, and legality

ARM Standard Zero

"Responsible Artisanal and Small-scale Mining (ASM) complies with the national legal frameworks. Where national legislation does not recognize the legal rights of community-based artisanal and small-scale miners, despite their legitimate efforts towards legalization, we will, as far as possible, work with organized ASM and national governments, to lobby for improved public policies for responsible ASM organizations interested in committing to the principles. ... The ASMO has a legal, transparent and democratic organisational structure in place, which enables effective control by the members. There is a general assembly with direct or delegated voting rights for all members as the supreme decision making body, and an elected Board. The staff answers to the General Assembly via the Board. ... All mining operations and processing plants comply with national environmental laws." [Also see ARM section under Miner group structure and governance community-based]

CRED Jewelry

"Transparency is the cradle in which everything else is nurtured. Transparency means knowing and disclosing the origin of our materials, the geography of all our supply chains, and the ethical performance of our materials at each point of transformation. Without transparency from mine to retail, we could not guarantee the ethical quality of our jewelry. Being transparent does not just mean being open to scrutiny; it means willingly communicating the truth. This is why we promise to tell the customer not only where our jewelry comes from, but to be honest about the ethical strengths and weaknesses of each piece or component, so the customer can make an informed choice. We also promise to communicate clearly our ethical framework to our staff and suppliers. ... Our sourcing relationships are built on dialogue, listening, and mutual respect. ... We aim to invert the secrecy of the industry by being fully transparent about our jewelry and the promises it embodies.... In sourcing our materials we seek full transparency from mine to retail wherever possible.... We require [suppliers] to ... Abide by national environmental legislation." "We are a signatory to the No Dirty Gold Campaign's Golden Rules. These are ... [f]ully disclose information about social and environmental effects of projects. ... Our precious metals are mined in compliance with the labour, community development, and environmental policies within the FLO/ARM fairtrade gold and associated precious metals standard."

EcoAndina

Sites are open to anyone to visit and permit is from local mining directive to the communities.

Fair Trade in Gems and Jewelry

"The refining unit assures and proves by documentation that all gold given to it for refining by the association of the miners can be fully accounted for and can be traced to the association... The producer associations or small company will report in particular on a regular basis on the following: Report at least once a year on its membership and structures (changes in numbers, elections of office bearers, ...); report at least once a year on and confirm without delay, if asked to do so, gold sales under Fair Trade conditions; report at least once a year on achievements of social and environmental targets in cases where not all criteria were fulfilled initially; report at least once a year on conditions, improvements/changes at refineries, export agencies etc. involved in the Fair Trade of gold; [and] report at least once a year on relevant developments like changes in the legal framework, etc. The importers have to inform Fair Trade in Gems and Jewelry of all Fair Trade orders of gold (schedule, supplier) at the time of ordering. They also have to report on any relevant changes in the legal framework or otherwise in their market, which may affect Fair Trade in gold. ... The Fair Trade system shall rely as much as possible on self-monitoring of the democratic miners' association and their sales organisation. However, a minimum level of ongoing outside monitoring, and in particular in cases of doubt, the reporting of irregularities etc., the Fair Trade in Gems and Jewelry has to be able to implement outside monitoring measures itself or through appointed agents. Written records are to be maintained showing that the relevant majority of those involved in the mining of gold have benefited from its Fair Trade and have been involved in the decision making process on the use of the Fair Trade premium. Furthermore proper separate accounts for the use of all Fair Trade premiums have to be maintained, and these accounts have to be certified by a chartered accountant on an annual basis. Fair Trade in Gems and Jewelry undertakes to keep all business secrets of all involved parties, of which it may gain knowledge, in confidence and not pass them on to third parties."

MTG

"Certified mining operations will provide full disclosure of social and environmental effects of projects. ... The Certification Standards are subject to independent, third party verification, and public review." ... "The recommendations made by the environmental and socio-economic assessors are publicly available to ensure that communities and participants can see their concerns were dealt with and what were recommended. All certified mining operations have complied with the project assessment requirements to fully disclose all information about the project plans and potential environmental and socio-economic effects including the proposed mitigations of negative effects, as required by the laws applicable at the time their project proposal application was submitted for assessment. Prior to any permits being issued for the mining operations, full disclosure of the known and potential environmental, social, economic, culture, tradition and health effects of the proposed mining operations have been made. If any negative potential effects were identified during assessment, corrective and mitigative measures were identified and judged to be adequate by the independent assessor. Comments and concerns of local communities and other affected stakeholders have been solicited, documented, and given full and fair consideration prior to permitting the mining operations."

Oro Verde™

"The origin of gold and platinum (for royalty purposes) must be declared in favor of the respective municipality. ... Local, regional and national regulations must be followed."

2) Environmental topics

Prohibition of toxic substances, including mercury and cyanide

ARM Standard Zero

"Whole ore amalgamation of gold with mercury is not allowed. A mercury-free concentration process must precede amalgamation. Concentration may be done mechanically or manually. If mercury is used in mineral processing, the use of retorts or alternative mercury recovery techniques is mandatory. Amalgam burning never takes place in homes and kitchens. Toxic and dangerous substances such as explosives, mercury and cyanide will not be kept in houses, but in places with adequate conditions. The use of toxic and dangerous substances, such as mercury and cyanide, is under responsibility of trained adults over 18 years of age, and never pregnant or breastfeeding women, and persons with mental deficiencies or chronic liver, kidney or respiratory diseases. Instruments and tools used for any operations with mercury must not be used in any other domestic activity. Nitric acid must not be used for dissolving amalgam. If the organization uses cyanide to recover gold, cyanide solutions and tailings must be detoxified in a lined pond or tank before discharge. Amalgamation and cyanidation tailings and solutions must not be discharged into water, or where they can reach the water bodies. Any cyanide leaching plant must be operated by personnel trained in the safe and proper use of cyanide. Amalgam burning must be done only in designated premises providing privacy and security, and with proper equipment and trained personnel [Progress requirement only]."

ARM Green Premium

"No mercury or cyanide may be used for mineral processing; only gravimetric methods are used."

CRED Jewelry

"CRED also adheres to Oro Verde™'s criteria." "We require [suppliers] to ... Minimise the use of toxic chemicals, such as mercury and cyanide, in the mining and processing of precious metals. ... All our gold and platinum will be sourced from fairtrade and fairtrade Green certified sources." "We are a signatory of the No Dirty Gold Campaign's Golden Rules. These are ... [e]nsure that projects do not contaminate water, soil, or air with sulfuric acid drainage or other toxic chemicals. ... Our precious metals are mined in compliance with the labour, community development, and environmental policies within the FLO/ARM fairtrade gold and associated precious metals standard. In addition, we ensure that none of it has been mined or processed using toxic chemicals, such as mercury and cyanide."

EcoAndina

Industrial exploration in the area around the early 1900's used mercury and may have contaminated some areas. Operations do not use mercury or cyanide.

Fair Trade in Gems and Jewelry

"In order to work towards a minimisation of the negative environmental impact of their mining activities, the producer associations and their members undertake to observing the following guidelines: no cyanide and / or mercury may be used. ... If more environmentally safe methods of gold extraction become available and feasible, the association will organise training seminars to promote such usages and phase out methods which cause more damage to the environment. In cases where the fulfilment of the criteria is not complete at the time of the signing of a partnership agreement, a written commitment to fulfil the missing elements indicating the precise measures and time-limits will be mutually agreed upon."

Global Mercury Project (UNIDO)



"1. No person should heat mercury amalgam to recover the gold without using a retort, which must be used to contain the mercury vapor releases. Retorts should be used to recycle mercury. 2. No person should amalgamate the entire ore, through the use of a mercury-copper plate or putting mercury into any gravity concentrator, centrifuge, or ball mill. 3. Mercury may be used through a gold recovery unit equipped with an amalgam barrel, provided that the barrel has an amalgam separator. 4. No person should use mercury in conjunction with cyanide, or conduct cyanidation of mercury-rich tailings. 5. No person should use mercury for amalgamation or any other purposes in any natural water body or within a distance of 100 metres from any natural water body, including rivers, streams, lakes, and other water bodies. 6. No person should use mercury for amalgamation or any other purposes in residential areas or within a distance of 100 metres from any residential areas, including villages, towns, cities, or settlement areas. 7. Mercury should be stored safely at all times when not used; in (a) a secure location that is inaccessible to children; and (b) unbreakable air-tight containers that are covered with a thin layer of water (e.g. 1 centimetre) to prevent mercury evaporation. 8. Any disposal of mercury should be done in a safe and proper way. No person should discharge mercury, or mercury-contaminated tailings, into a water body. Disposal of mercury must be done by placing mercury in a clay or laterite soil-lined pit of 5 metres depth, located 100 metres away from any water body. When the hole is filled with mercury and/or mercury-contaminated tailings, this must be covered with 0.5 metres of clay or laterite, then compacted, covered with soil, and revegetated. 9. Amalgamation should only be allowed in designated sites (amalgamation pools). For any mining location where amalgamation occurs, the primary license holder or mine manager shall designate a portion of the mining location as the prescribed structure, facility or locale where amalgamation may take place. Amalgamation may only take place in such structure, facility or locale. The holder of an ASM license shall ensure that washing or settling ponds are constructed in his or her license area to provide for washing and sluicing, and no such washing and sluicing shall be done along or close to rivers, streams or any other water sources. 10. The location of amalgamation, and the building where mercury is kept after and before the amalgamation process, must be situated in areas free of flooding. 11. On a mine location where mercury is used, the primary license holder or mine manager should be held responsible for safe mercury-related practices as well as the individuals who use mercury. The license holder or manager should: (a) institute reasonable safety measures to prevent the exposure of employees or other persons to mercury fumes; (b) provide retorts and instruction on how to use retorts; and (c) ensure that no employee or other person handles mercury unless they are wearing suitable protective clothing, including gloves; and should provide such protective clothing free of charge 12. People who perform amalgamation must ensure that no pregnant women, or children under the age of sixteen, enter the structure, facility or locale in which amalgamation is carried out; 13. In a location where amalgamation occurs, the manager of the location should hold an amalgamation license. 14. When miners apply for mining licenses and before beginning operations, they should demonstrate awareness of how to comply with these guidelines. 15. The above guidelines demonstrate minimum *threshold requirements*. These measures significantly reduce mercury emission and exposure where properly implemented. However, in all cases possible, miners should be encouraged to adopt appropriate mercury-free mineral processing methods."

MTG

"Certified mining operations do not discharge any harmful levels of waste material including sediments into streams, rivers, or lakes." ... "Chemicals are not used in any of the processing equipment that release sediment or water. ... Mining operations do not result in the contamination of water, soil, or air with sulphuric acid drainage or other toxic chemicals. Placer mining operations must not need or exceed the applicable mining land use regulations regarding the storage and handling of fuel and petroleum products including a spill contingency plan must be in place and a copy must be posted on the site and at

all locations where fuel is kept. The transfer and handling of petroleum products must be done in a manner to prevent spillage. All petroleum products, hazardous waste, and chemicals must be stored in a secure manner and in a location consistent with the requirements of the Environment Act. All equipment and vehicles must be maintained and operated in a manner designed to prevent spills of fuel, lubricants, coolants, or oil. Sufficient spill clean-up equipment and materials must be on site in a state of preparedness to clean up any fuel spills. If a spill occurs and soils are contaminated with petroleum products, the soil must be appropriately segregated and treated. Measures are taken to prevent or minimize adverse environmental impacts that are a result of accidents, unforeseen circumstances, or catastrophic events. Appropriate emergency response and contingency plans are in place in the event of accident of [sic] malfunction. Regular inspections of tailings dams, ditches, and water structures are undertaken to look for signs of instability or erosion. Corrective action is taken when required."

Oro Verde™:

"There should be no toxic chemicals used in the extraction process."

URTH Solution

"In Tipuani, Bolivia we are organizing health and safety courses that address issues such as mercury (sometimes used to extract gold from sand) reduction, management and elimination." "Where either [mercury or cyanide] is used, Urth Solution will work with the communities to introduce cleaner technologies, e.g. the Cleangold sluice. A mercury-free concentration process (gravimetric concentration, hand-sorting etc.) must precede amalgamation; the proper use of retorts; the amalgam is not burned in domestic residences; instruments and tools used for operations with mercury must not be used in any other activity; nitric acid should not be used to dissolve mercury from the amalgamation; any residual cyanide solution must be neutralized before responsible discharge; neither explosives nor cyanide, mercury, nitric acid, nor other toxic substances used for processing should be stored in domestic residences; [and] amalgamation tailings and cyanide waste solutions must not be discharged into water, or where they can reach water bodies."

Mine waste managed and siltation restricted

ARM Standard Zero

"Fuel residues and their containers should not be dumped in water bodies. ... Where mining could lead to acid mine drainage (AMD) or generation, the organisation shall employ effective methods to isolate acid forming materials from water. ... Tailings and contaminated water are not discharged into water bodies [Progress requirement only]."

ARM Green Premium

"Ecological disruption due to mining is minimised through an environmental management plan that ensures that the local ecosystem is not placed beyond capacity to recover."

CRED Jewelry

"CRED also adheres to Oro Verde™'s criteria." "We require [suppliers] to ... Minimise water use and prevent pollution of water resources. ... All our gold and platinum will be sourced from fairtrade green certified sources." "We are a signatory of the No Dirty Gold Campaign's Golden Rules. These are ... [e]nsure that projects do not contaminate water, soil, or air with sulfuric acid drainage or other toxic chemicals [and] [r]efrain from dumping mine wastes into the ocean, rivers, lakes, or streams. ... Our precious metals are mined in compliance with the labour, community development, and environmental policies within the FLO/ARM fairtrade gold and associated precious metals standard."

EcoAndina

Rivers are already turbid but settling ponds are used when needed to prevent siltation.

Fair Trade in Gems and Jewelry

"If more environmentally safe methods of gold extraction become available and feasible, the association will organise training seminars to promote such usages and phase out methods which cause more damage to the environment."

MTG

"Certified mining operations do not discharge any harmful levels of waste material including sediments into streams, rivers, or lakes." ... "Disposal of any waste generated through the operations and activities of the mine does not result in the harmful alteration, disruption, or destruction of fish habitat. The sediment discharges from settling ponds into streams, rivers, and lakes do not pose a risk to the native aquatic ecosystem and does not result in the loss of fish habitat. Tailings impoundments are constructed to prevent the release of harmful levels of sediments into streams, rivers, or lakes. Placer mining operations must meet or exceed the applicable federal and territorial laws regarding the generation, handling, storage and transportation of special waste as described in the Yukon Environmental Act, Special Waste Regulations. Sewage and wastewater associated with camp operations must be disposed of in accordance with the Public Health and Safety Act of the Yukon. All garbage and refuse shall be kept in a covered container until removed from the site or, where appropriate incinerated and buried. Monitoring protocols are implemented to ensure the early detection of any contaminants in the area. Relevant indicators and benchmarks are used to support the monitoring and compliance efforts. Where there is discharge from the settling facilities, weekly water analysis must be undertaken on samples taken upstream and downstream of any effluent discharge from the mining operation. The operator must submit an annual report to the Yukon Territory Water Board with the results of this monitoring. Certified mining operation supervisors are fully trained to allow them to discharge of their responsibilities in complying with the terms and conditions of the water use license, including practices to minimize water consumption and to maintain a high water quality."

Oro Verde™

"Tailings and poolings must not exceed the local ecosystem capacity for rehabilitation. ... The silt load into stream river or lake system will be controlled in quantity and frequency so that the native aquatic ecosystem is not disrupted."

URTH Solution

"Amalgamation tailings and cyanide waste solutions must not be discharged into water, or where they can reach water bodies."

Biodiversity / important ecological areas excluded

ARM Standard Zero

"If the mining operation is located within a legally designated protected area or archaeological heritage area, authorization is required from the relevant authority stating that the mining activities are legal and compatible with the conservation and management objectives of the protected area."

CRED Jewelry

"We require [suppliers] to ... Preserve ecosystems, particularly those that form the environment of indigenous people." "We are a signatory of the No Dirty Gold Campaign's Golden Rules. These are ... [e]nsure that projects are not located in protected areas, fragile ecosystems, or other areas of high conservation or ecological value."

EcoAndina

EcoAndina works to prevent impacts on sensitive biodiversity areas. Operations do not occur in protected areas. Operations occur near but not in a protected area.

MTG

"Mining operations do not endanger fragile ecosystems, conservation areas, or heritage resources." ... "Mining operations respect areas where lands are specially designated for protection, aimed at ensuring that mine operations do not endanger fragile ecosystems, and conservation areas. Mining operations respect laws and administrative requirements aimed at protecting vulnerable species and their habitat from disturbance, harassment, or impeding their movement and safety. Mining operations respect laws and administrative requirements aimed at the avoidance of existing heritage sites, and the preservation and the reporting and full disclosure of newly discovered archeological, paleontological, or historical resources."

Habitat destruction restricted

ARM Green Premium

"Ecological disruption due to mining is minimised through an environmental management plan that ensures that the local ecosystem is not placed beyond capacity to recover."

CRED Jewellery:

"CRED also adheres to Oro Verde™'s criteria." "We require [suppliers] to ... Preserve ecosystems, particularly those that form the environment of indigenous people. ... All our gold and platinum will be sourced from fairtrade and fairtrade Green certified sources." "We are a signatory of the No Dirty Gold Campaign's Golden Rules. These are ... [e]nsure that projects are not located in protected areas, fragile ecosystems, or other areas of high conservation or ecological value. ... Our precious metals are mined in compliance with the labour, community development, and environmental policies within the FLO/ARM fairtrade gold and associated precious metals standard."

EcoAndina:

Sensitive terrestrial/riparian areas are marked off for exclusion from mining. Siltation is limited.

MTG:

"Mining operations do not endanger fragile ecosystems, conservation areas, or heritage resources." ... "Mining operations respect laws and administrative requirements aimed at protecting vulnerable species and their habitat from disturbance, harassment, or impeding their movement and safety. ... The mine employs low environmental impact exploration techniques (drilling, trenching or other testing) prior to mining development to ensure that there are gold resources in areas that are to be disturbed. The mine plan is developed prior to disturbance to minimize the number of roads that need to be constructed and area that will be disturbed. ... The mining operation shall protect fish habitat, ensure the stability of stream channels, avoid erosion and ensure that reconstructed channels provide suitable habitat."

Oro Verde™

"There should be no massive ecological destruction. This state being defined by changes to an ecosystem that places it beyond a possibility of recovery [on the medium term *in Spanish version*]. ... In forested areas mining activities must not exceed 10% of a hectare during [rotational] periods of two years. ... Biodiversity indicators will be established during the process in the intervened ecosystem."

Site closure and rehabilitation/restoration

ARM Standard Zero

“Open pits and underground mine apertures must be refilled or blocked sufficiently to enable ecological regeneration and ensure hazard prevention. ... The introduction of any technological change should be accompanied by an environmental mitigation plan. ... Intervened areas must be rehabilitated and re-vegetated [Progress requirement only].”

ARM Green Premium

“Rehabilitation of the native ecosystem takes place from the outset of new operations.”

CRED Jewelry

“CRED also adheres to Oro Verde™’s criteria.” “We require [suppliers] to ... Practice reforestation, where appropriate, as not every ecosystem requires this. ... All our gold and platinum will be sourced from fairtrade and fairtrade Green certified sources.” “We are a signatory of the No Dirty Gold Campaign’s Golden Rules. These are ... [c]over all costs of closing down and cleaning up mine sites. ... Our precious metals are mined in compliance with the labour, community development, and environmental policies within the FLO/ARM fairtrade gold and associated precious metals standard.”

EcoAndina:

Rivers returning to a mined area after low-water period or after release of diversion level out holes and piles created by mining.

MTG

“Mining operations are responsible for the full costs of reclamation and the closure of the site.” ... “... Reclamation Plan and a Final Reclamation and Decommissioning Plan must be submitted and approved by the regulators. The Plans must demonstrate how disturbed areas will be re-sloped, contoured, or otherwise stabilized to prevent long-term soil erosion, slumping, and subsidence and the reclaimed areas will be made aesthetically pleasing and/or made to blend with the natural topography. All areas disturbed must be left in a condition conducive to re-vegetation by native plant species, or if adequate seed stock is not naturally available the disturbed areas will be re-seeded with non-invasive species. The mining operation shall protect fish habitat, ensure the stability of stream channels, avoid erosion and ensure that reconstructed channels provide suitable habitat. Reconstructed channels must maintain similar length, bends, water velocity changes and fish habitat features as in pre-mining conditions, or as specified in the Water License. ... Prior to the expiry of the Water License and of the Mining Land Use Permit, the mine site must be decommissioned in accordance with the approved Final Reclamation and Decommissioning Plan. Everything must be removed from the sites, including but not limited to, all buildings, machinery, materials, fuel drums, used hydrocarbons, unburied solid waste, and metal waste. Reclamation and re-contouring of the land must be completed. Disturbed areas must be stable and re-vegetation begun. Re-contoured land must be aesthetically pleasing and conform visually to other land forms in the area. Final stream channels must approximate its pre-mining condition in length, gradient, and stability, and any dams or dykes across stream channels must be removed or reclaimed. All potential hazards to the flora, fauna and humans must be removed.”

Oro Verde™

“The mined areas should gain ecological stability within three years. ... Top soil removed from the site should be replaced during the exploitation process.”

Responsible energy use

CRED Jewelry

"We intend to turn our attention to opportunities such as green energy,"

EcoAndina

Fuel oil is used for larger machines but a number of water pumps use solar energy.

MTG

"There is a commitment to continual improvement, and reducing their carbon footprint."
... "Mining operations demonstrate a commitment to the 'greening' of its operations, a reduction to its operational footprint and have explicit goals to reduce its environmental impact. Energy conservation measures, energy and greenhouse gas reduction, waste reduction, and recycling are identified as explicit goals. The mine strives to find new technology or methods that reduce the consumption of petroleum products and greenhouse gas production."

3) Certification topics

Standards development, verification, and tracing

ARM Standard Zero and Ecological Premium

"Standard Zero underwent three rounds of public consultation between August 2006 and December 2007. ARM's consultation has included: face to face workshops and learning sessions at local, national, continental and global levels, invitations to provide input were circulated via several list-serves such as the Madison Dialogue and the Global Mercury Project, and it was posted in 4 languages on the ARM website inviting interested parties to submit comments. The Technical Committee has reviewed stakeholder input, and suggestions incorporated where feasible. Miners have been at the heart of developing Standard Zero, being represented both in the Board of ARM and on the Technical Committee. ... it was recognised that a lot of hard work was still required before standards to enable Fairtrade certification of gold could be finalised and agreed. In particular, the FLO Board indicated that consultation with FLO producer networks should be undertaken to ensure that conflicts between mining organisations and communities involved in agricultural farming are avoided. Secondly, further work was requested to ensure credible and robust environmental implementation of the programme, and explore how more organisations with specific environmental expertise might be involved in this. Further work on integrating ARM's existing Standard Zero with the Fairtrade standards has been done through the creation of a joint standard body: the Gold Standard Sub-committee which involves delegates from ARM's technical committee and FLO's Standards Committee. ... This document offers the integrated STANDARD for public consultation, to be held between August 3rd and September 14th. The results of the next phase of work, including integration of consultation input and the final joint FLO and ARM standards for artisanal and small-scale gold mining, will be submitted to the boards of Fairtrade Labelling and the Alliance for Responsible Mining in December 2009. If approved by both boards, it is expected that gold products carrying the FAIRTRADE® Mark, and Arm's FAIRMINED® mark, to be available by mid-2010. ... Formal agreements are stipulated between the registered production partners and the ASMO members/shareholders, in terms of responsibility of the ASMO for internally monitoring standards compliance, and ensuring traceability and democratic governance of the Premium. A Premium committee within the ASMO, separate from the General Assembly of the core ASMO, ensures that the use of the Premium is defined by the miners and their workers that operate in the mining area of the organization and that are registered (criteria below). ... This STANDARD allow certifying gold produced at a particular publicly registered mining area, or mine where progress by the miners' organisation in compliance with the STANDARD can be inspected and



tracked over time. It includes a system to ensure the traceability of the metals from mine to market, which is designed to guarantee that the labelled product (FAIRTRADE® and FAIRMINED® gold, silver and platinum) put on the market is a product coming from a certified mine. ... All precious metals, which are sold with the FLO-ARM label, must have been produced by certified Artisanal Small-scale Mining Organizations (ASMO) at their certified mines. ... All operators will be subject to inspection and certification to assess compliance with this standard. ... There exist clear written agreements for all Fairtrade transactions with all involved parties on all levels of mining, processing and trading. ...

Traceability within the miners' organization. The entire volume of Fairtrade Gold produced by the ASMO and processed in the ASMO's own processing plant(s) is physically traceable. If the ASMO or its PPs lease or hire third party owned equipment for mineral processing, complete physical traceability of the gold is ensured. Joining, blending and consolidating certified mineral or intermediate products from two or more certified Miners' organizations for the purpose of joint processing is allowed. If the ASMO or its PPs needs to contract third party operators to process their mineral or to perform further enrichment of intermediary products, best available efforts towards full compliance to physical traceability requirements are made. Where full compliance to physical traceability requirements imposes disproportional costs, ASMOs and operators are exempt from physical traceability requirements. ASMOs which are certified for "Ecological Premium Gold" have to assure full compliance to physical traceability requirements. Full traceability through documentation must be assured for the entire volume of Fairtrade Gold produced by the ASMO. *Traceability of gold during trade, transport, transforming and manufacturing.* All transactions between the ASMO and the trader/buyer are subject to full compliance to physical traceability requirements. Joining, blending and consolidating volumes of Fairtrade gold is allowed at any stage. All transactions between the trader/buyer any subsequent operator or between operators, including transport, are subject to full compliance to physical traceability requirements. During any process of further enrichment or manufacturing, all possible efforts towards full compliance to physical traceability requirements are made. Where full compliance to physical traceability requirements imposes disproportional transforming costs, limiting access to Fairtrade markets for miners, refiners and manufacturers will be temporarily exempt from physical traceability requirements. Operators (buyer/trader, transporter, refiner, manufacturer, etc.) handling "Ecological Premium Gold" have to assure full compliance to physical traceability requirements. Documentary traceability must be ensured by any operator at any point of the supply chain by using an identification mark on all related documentation.

CRED Jewelry

"In sourcing our materials we seek full transparency from mine to retail wherever possible. ... Where we do not have complete control over the practices of others, such as our suppliers and manufacturers, we use third-party certified materials. Where we cannot get third-party assurance, we use a chain of warranties to get contractual commitments from our suppliers that they are not in violation of our ethical principles. We also personally visit their operations, and work hard to build and maintain good personal relationships with all of them. ... Where we can control business practice, we do first party monitoring of the implementation of our ethical policy in our decision-making and our operations. In the future, we plan to disclose our progress in an annual sustainability report... ."

EcoAndina

EcoAndina conducts verification and is in the process of formalizing certification.

Fair Trade in Gems and Jewelry



"The strict ecological and social conditions on all stages of the mining, processing and distribution of gemstones and precious metals are supervised by extensive monitoring of 'Fairtrade'." "The refining unit assures and proves by documentation that all gold given to it for refining by the association of the miners can be fully accounted for and can be traced to the association."

MTG

"The Certification Standards are subject to independent, third party verification, and public review." ... "[T]he evidence used in the certification process has been classified into four categories: Documentary Evidence... Inspections... External Confirmation... [and] Owners and Managers Statutory Declaration. ... Mammoth Tusk Gold has retained the services of Ernst & Young to undertake the certification assessment. ... [T]hey will issue a ... Report to Mammoth Tusk Gold. The ... Report will assign a rating the mine – 'Substantively Meet the Standards', 'Adequately Meet the Standards', or 'Needs Improvements'. The ... Report [and] supporting evidence will be made available to buyers who sign a confidentiality agreement with Mammoth Gold."

Oro Verde™

"Certifying entity: Instituto de Investigaciones Ambientales del Pacífico (IIAP)"

URTH Solution

URTH Gold is ethical gold. "A third party expert evaluates each community to guarantee they meet our fundamental values or agree to conform to them."

Endnotes

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see also

Levin, Estelle. 2007. Fair trade minerals: opportunities, challenges, and finding a way forward for sustainable ASM. Presentation at CASM's 7th ACC, Ulaan Baator, Mongolia.

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¹⁰ For this report we consider that artisanal mining is "mining conducted with rudimentary tools such as picks and shovels, usually informally by individuals or small groups of people on a subsistence basis" and includes assets of less than US\$50,000. Micro-mining can be considered to be semi-mechanized and include assets of less than US\$0.5m, whereas small-scale mining can be considered to be mechanized and include assets of less than \$US100m. These definitions are in accordance with Resource Consulting Services. 2008. Feasibility study for the development of a fair trade diamond standard and certification system.

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¹¹ <http://www.nodirtygold.org/goldenrules.cfm>

¹² These include the Ethical Metalsmiths; CASM (Community and Small-scale Mining

<http://www.artisanalmining.org/>), which has supported a number of other initiatives including the Alliance for Responsible Mining (ARM), the Durban Process

(www.gorillas.org/Project!Durban_Process_for_Ethical_Mining and

www.unep.org/grasp/Newsletters/GRASP_Newsletter_3E.pdf), the Peace Diamond Alliance, and the Diamond Development Initiative; the Global Mercury Partnership

(http://www.chem.unep.ch/mercury/partnerships/new_partnership.htm), and others; the

Cleangold® sluice (<http://www.cleangold.com/>), which uses gravitational and magnetic methods to extract gold, and the related Artminers initiative (<http://www.artminers.org/>); the British Ethical

Jewellers Association; Rapaport Fair Trade in Diamonds and Jewellery¹², which has sourced some gold from Sierra Leone and Madagascar (CASM 2008); Goldlake/Eurocantera

(<http://www.goldlake.co.uk/Index.aspx?idmenu=2998#>) alluvial gold mining in Honduras; Target Resources' mechanical gold mining plans; and the Clear Conscience project by Lori Bonn Designs.

¹³ "Our Mission." Alliance for Responsible Mining <http://communitymining.org/content/view/19/30/> Accessed January 2010.

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- ¹⁷ <http://www.faire-edelsteine.de/index.php?id=32> Accessed January 2010.
- ¹⁸ Personal communication with Thomas Siepelmeyer, 15 January, 2009.
- ¹⁹ http://www.chem.unep.ch/mercury/partnerships/new_partnership.htm
- ²⁰ Technical Measures for Incorporation into the U.N. International Guidelines on Mercury Management in Artisanal and Small-Scale Gold Mining. <http://www.chem.unep.ch/Mercury/Sector-Specific-Information/Docs/UN%20International%20Guidelines%20on%20Mercury%20in%20ASM%20V12.pdf>
- ²¹ Standards compared and listed in this document are from an earlier draft of current Mammoth Tusk Gold standards. We believe that the draft standards we examined do not differ in substance from the current version.
- ²² http://www.greengold-oroverde.org/ingles/oroverde_ing.html Accessed January 2010.
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- ²⁶ <http://nateko.over-blog.com>
- ²⁷ IRMA is governed by a Steering Committee that consists of representatives from five sectors: the mining industry, the jewelry industry, labor unions, affected communities, and NGOs. See <http://www.responsiblemining.net/governance.html>
- ²⁸ Instituto de Investigaciones Ambientales del Pacífico. See <http://www.iiap.org.co/>
- ²⁹ Communities and Small-Scale Mining (CASM). 2008. Certification and Artisanal and Small-Scale Mining: an Emerging Opportunity for Sustainable Development. http://www.artisanalmining.org/UserFiles/file/CASM_Fairtrade_Final.pdf
- ³⁰ including the following: buffer zones of protected areas; zones that were part of protected areas until de-listed for mining purposes; Alliance for Zero Extinction sites; BirdLife International Important Bird Areas; Key Biodiversity Areas; High Conservation Value Forests delineated according to Forest Stewardship Council activities; NatureServe ecosystems rated imperiled or critically imperiled; and countries that have not yet fulfilled national conservation priority zone protection goals if those countries overlap with Global 200 Ecosystems listed as Critical or Endangered, Biodiversity Hotspots and Wilderness Areas, Centres of Plant Diversity, or Endemic Bird Areas.