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The globalization of trade continues to cause social and environmental harm despite the array of actors working to govern it. Actors working in iterative coordination to solve shared problems are called regimes, and global governance research is increasingly focused on regime composition (the type and number of regime members) because it impacts regime effectiveness (Biermann et al. 2009, Young 2011). Much of this research explores the rise of transnationalism in regimes, i.e. the increasing number of private and civil society actors working across national boundaries and using voluntary programs to solve problems (Auld et al. 2018). In the realm of global trade, many transnational actors use voluntary sustainability standards (VSS) to encourage better environmental behavior among global value chain actors. Of these, third-party product certification and labeling programs—which separate the rule writers, targets, and compliance auditors—aim to be the most objective and therefore effective programs. Yet the actual impacts of programs on the problems they were created to solve is unclear.

One driver of ambiguity is the tendency of certification research to focus on the behavior of Northern actors (those based in industrialized, high-income countries). On the one hand this is helpful—most certification programs are launched by Northern actors, so understanding why and how they contribute to regimes is important (Auld 2014). On the other hand, most Northern programs target Southern producers, so understanding Southern actors' response to Northern programs is equally important (Schouten and Bitzer 2015). Southern actors such as producers, retailers, activists and governments may respond to Northern programs in a variety of ways, ranging from cooperation to competition to condemnation, which all shape regime composition and therefore effects.

A second driver of ambiguity on certification impacts is the tendency of research to focus on a narrow range of sectors. Within the forests, fisheries, and tropical agriculture sectors, deep knowledge on program proliferation via complementary and competitive dynamics is accruing, and there is growing consensus on their limited positive impacts on environmental problems in the global South (Dietz et al. 2019, Gulbrandsen 2010, van der Ven and Cashore 2018, van der Ven et al. 2018). Yet the generalizability of these findings to other sectors is unknown. Research is beginning to broaden by studying certification dynamics in non-traditional sectors like marine aquarium fish, wine, and cannabis (Bennett 2017, Bloomfield and Schleifer 2017, Delmas and Lessem 2017). Such research reveals important empirical phenomena that help develop and refine private governance theories, and more such research is needed.

One non-traditional sector particularly worthy of further research is certified gold jewelry sourced from the artisanal and small-scale gold mining (ASGM) sector. Gold is often found contexts with rich environmental resources but weak or unhelpful institutions and few alternative livelihoods. Accordingly, many of the 15-30 million miners in the sector live in poverty, choosing ASGM as an informal livelihood of last resort and using whatever mining techniques are available to them (Hilson and Pardie 2006, Hilson and McQuilken 2014, Marshall and Viega 2017). For example, unlike large-scale mining corporations which rely primarily on cyanide-based techniques, ASGM often uses mercury, a relatively affordable and available toxic heavy metal that the international community is actively working to mitigate (Selin 2014, Spiegel et al. 2018, UNEP 2018). In a common process called mercury amalgamation, miners grind up gold-laden dirt or rocks and mix them with liquid mercury, which binds to gold particles within the slurry to form a ball of mercury-gold amalgam. This ball is then burned, vaporizing the mercury and leaving behind an impure but saleable mass of gold that then enters global value chains (gold from both informal and formal sectors is either sold to Southern governments or exported to refineries in the North, after which roughly 60% is sold to jewelry manufacturers and retailers) (UNEP 2018). While this process makes ASGM the leading source of mercury pollution globally (it travels through the atmosphere re-depositing in distant waterways where it bio-accumulates in aquatic food chains), the sector also has the potential to foster social and economic development, which are important goals in the Global South (Hilson et al. 2018, UNEP 2018).

Accordingly, several transnational governance initiatives now target ASGM and may be particularly important because Southern governments are sometimes unable or unwilling to adequately govern environmental problems themselves (Auld et al. 2018). In 2011, Northern-based Fairtrade International launched a certification program to mitigate mercury pollution and other social and environmental issues emanating from ASGM. The certification literature now includes analyses of this initial program and theoretical reflections on the wisdom of ‘fair trade’ gold generally (Childs 2008, 2010, 2014; McQuilken 2016, Hilson et al. 2016, Hilson et al. 2018, Fisher 2017, Sippl 2015). Yet an updated analysis focusing on the evolution of Southern responses to the initial (and now defunct) program and the resulting new programs that have emerged would help clarify and develop the literature on certification impacts. And because Southern responses effect regime composition, they may be driven by the same ideational and material forces that drive other actors to join, reject or alter regimes (Hasenclever et al. 2000, O’Neill et al. 2004, Young 2011). This paper therefore asks: What are the main Southern responses to ASGM certification programs, and what roles did ideas, interests and power play in shaping them?

The paper answers this question by situating the analysis of Southern responses to Fairtrade’s certification program in the literature on the drivers of regime composition. It then reviews both existing research on ASGM certification and the new data informing this paper’s analysis. The findings are presented via three coupled responses to Fairtrade’s initial certification program (i.e. responses from a Southern mining organization called the Alliance for Responsible Mining (ARM) and responses from the Southern producers and retailers that both ARM and Fairtrade target): cooperation and complaint, competition and tepid uptake, and supplementation via a weaker program. Process tracing of the roles played by ideas, interests, and power suggest support for a basic intuition about the drivers of Southern responses to Northern-led certification programs: high levels of ideational affinity, interest alignment and financial power among programs and participants supports Northern program success; the opposite supports program failure; and in-between levels may foster competition from Southern programs and widespread uptake of relatively weak sustainability rules.

The ASGM case is emblematic of this latter situation, and the paper’s analysis of it makes several contributions to the certification and global governance literatures. First, in addition to reporting current ASGM certification impacts and evolving uptake patterns, the paper’s original findings on the drivers of Southern responses Fairtrade’s gold program helps this Special Issue generate broader hypotheses suitable for future testing and theory development. Its analysis of Southern-grown programs targeting Southern value chain actors further contributes to the growing literature on South-South cooperation on trade and aid (Quadir 2013, Schliefer and Sun 2018), as well as provides one of the first academic analyses of the Alliance for Responsible Mining’s CRAFT Code, launched in August 2018 to address the sector’s link to conflict and struggles with legality. Overall, the paper fosters deeper understanding of commodity regime composition and therefore effectiveness by focusing on Southern agency in an important yet understudied commodity case.

The Drivers of Regime Composition and Effects

While in the past the certification literature often ignored points of tension between the context in which programs are designed and the context in which they are implemented, research now recognizes that ideational and material contexts play key roles in shaping actors’ responses to programs (Childs 2008, 2010, Hilson and Pardie 2006, Hilson and McQuilken 2016, Manning et al. 2012, Schouten and Bitzer 2015, Spiegel et al. 2018). These responses, in turn, shape regime composition. When producers, retailers, and activists decide to cooperate, compete with or condemn programs, they are *de facto* joining or rejecting regimes, shaping the levels of transnationalism and fragmentation within them. The regime literature typically analyzes such decisions by tracing the process by which ideas, interests and power shaped them.

While once controversial, it is now widely accepted that ideas shape regime composition and functionality (O’Neill et al. 2004). When the creators and targets of governance programs agree about

facts and subscribe to the same norms, program support becomes easier because actors are intrinsically motivated to change (Gneezy and Rustichini 2000). Yet these conditions do not always exist and are quite scarce in remote regions of the global South struggling with poverty. Lower levels of education make reasoning about causes and consequences more difficult, negative past experiences with Northern interventions erodes trust in new ones, and belief in the value of sustainable development compromises is not unanimous (Childs 2014, Fisher 2018, Goldstein 2019, Zaitchik 2018). In other words, commodity production sites often spawn full-fledged (if informal) communities with entrenched norms that certification's prescriptions might violate (Goldstein 2019). Therefore, in line with constructivist theories of international relations, any analysis of responses to certification programs should explore how ideas shaped them.

Ideas, in turn, shape interests, which seldom align perfectly between Northern and Southern actors (Cashore and Bernstein 2018). As the editors of this Special Issue note, many environmental problems lack pareto-improving solutions—programs often make actors strictly worse or better off. The more the interests of certification programs and their targets diverge, the more consumers will have to pay to incentivize change. While consumers are willing to pay more for certified coffee (Hainmueller et al. 2015), it is not clear how *much* more they are willing to pay (it is in consumers' interest to pay the smallest amount that achieves their goals). In such contexts of interest misalignments, Southern responses to programs may be competition via new programs that better align interests, or rejection of the certification approach altogether.

While such analysis of interests is central to neoliberal theory, realist scholars add that actors may be willing but unable to pursue their interests due to varying levels of power. Southern agency may be constricted, for example, by low levels of financial resources, health, education, or freedom (Sen 1999). In line with Hasenclever et al.'s (2000) arguments, this paper posits that rather than one of these forces explaining all Southern responses to certification programs, ideas, interests, and power likely interact to produce outcomes.

Gold Jewelry Certification

Commodity regimes targeting minerals include an array of transnational initiatives varying according to the minerals governed (e.g. gold, diamonds, tantalum, tin, tungsten), issue of interest (e.g. conflict, poverty, environment, formalization), geographic scope (e.g. global versus the Great Lakes region of East Africa), producer scale targeted (e.g. large- versus small-scale), program type (e.g. third-party certification, second-party labeling, or capacity building projects), and program duration (e.g. one-off grant-funded pilots versus ongoing, self-sustaining initiatives) (Auld et al. 2018, Hilson 2014, Hilson et al. 2017, Sippl 2015, Van Bockstael 2018). Some prominent members of the gold regime include the No Dirty Gold campaign, the Artisanal Gold Council, Solidaridad, and various multinational mining corporations (Auld et al. 2018, Bloomfield 2015, IGF 2017, Sippl 2015). This paper focuses on Southern responses to the desire of third-party certification programs to create a global standard for certified artisanal gold that addresses the economic, social, and environmental issues in the sector.

The literature on ASGM certification is growing. Early analyses were speculative and general, focusing on the now-defunct joint-program between Fairtrade International (FLO) and the Alliance for Responsible Mining (ARM). Hilson et al. (2016) worried that the joint-program would not reach the miners most in need of help. Childs (2014) worried that even if those in poverty *were* reached, miners might reject certification due to their negative experiences with past development interventions and reliance on informal networks for services. Even if miners *did* want to certify, Fisher (2018) details the numerous obstacles they face on the path to certification. Hilson et al. (2016) highlight the obstacle of permit acquisition, warning that governments might prefer to give permits to larger, more lucrative mining operations. Still other papers throw doubt on the entire premise of global standards connecting Southern producers to global jewelry markets. Hilson (2008) notes that in many regions the final buyer is governments, not jewelry consumers. And Hilson and McQuilken (2016) emphasize that the

socioeconomic and political contexts in which ASGM occurs vary so much regionally that globally-oriented, one-size-fits-all programs are not likely to succeed.

A second wave of research focuses on the joint-program's demise and its replacement with competing programs launched by Fairtrade International (Hilson and McQuilken 2016, Hilson et al. 2018, Sippl 2015, 2019). Sippl (2015) provides high-level description of the split and resulting programs, while Hilson et al. (2018) cover similar ground adding the vantage point of Northern ethical jewelers and certification program representatives who are frustrated by and resigned to program results (respectively). Sippl (2019) provides detailed program comparison and hard data on program trends and results, highlighting their lackluster contributions to broader regime interests such as achievement of the UN Sustainable Development Goals.

While providing an empirically helpful starting point, this literature needs causal analysis of the factors driving these outcomes in order to build private governance theory. It would specifically benefit from more focus on the drivers of Southern actors' behavior (e.g. why mining organizations joined or left programs, why Southern ethical jewelers are making certain choices, and why Southern mining organizations are responding in specific ways to sector circumstances). Finally, the literature needs an update via contextualization and analysis of emergent ASGM programs to understand the full range of Southern responses to the idea of fair trade certified ASGM. This paper provides each of these contributions. Indeed it is the among the first papers to analyze the CRAFT Code, which launched in August 2018 as the latest response of Southern-based ARM to the idea of certified gold.

Methodology and Data

Research on minerals is a helpful complement to research on agriculture and fisheries because minerals share enough commonalities with these sectors to make meaningful comparisons while adding nuance through their unique characteristics. Gold mining is comparable to tropical agriculture and fisheries in its employment of a large number of Southern subsistence producers who compete with large-scale capital-intensive corporations for sales in Northern markets (van der Ven and Cashore 2018, Gulbrandsen 2010). Production sites are likewise geographically constrained (e.g. coffee, fish, and gold are found only in specific regions). And low wages, child labor, deforestation, toxic chemical use and links to sub-state violence are all frequently issues in mining and agriculture (Auld et al. 2018, Bloomfield 2015). Yet minerals differ from agriculture and fisheries because they are non-renewable resources, require ongoing acquisition of new land, and in the case of precious minerals have high price-to-volume ratios. These similarities and differences maximize ASGM's value as a sector-case—its similarities make it part of the larger population of Southern subsistence livelihoods, and its differences help place parameters on the range of sectors for which previous findings are generalizable.

ASGM certification program case selection was straightforward. As stated in the introduction, this paper focuses specifically on third-party value chain auditing and product labeling programs (certification programs, for short) that are often used to govern forests (e.g. Forest Stewardship Council), fisheries (e.g. Marine Stewardship Council, Aquaculture Stewardship Council), and tropical agriculture (e.g. Fairtrade International, Rainforest Alliance) and the focus of a large global governance literature as well as this Special Issue (Cashore et al. 2004, Auld 2014, Bartley 2018). As of mid-2019, a variety of sources confirm that only two programs fitting this definition govern ASGM: those run by Fairtrade International (FLO) and the Alliance for Responsible Mining (ARM) (Auld et al. 2018, IGF 2017, ITC Standards Map 2019). While other organizations use market-based mechanisms and labels to address the sector (e.g. 'Just Gold', 'Better Gold Initiative,' and Solidaridad's programs) these are either not third-party programs or rely on ARM's or FLO's standards in their work. Since FLO was the first-mover in the sector and is a Northern organization (it is headquartered in Germany and emerged in the 1980s to unite the disparate fair trade organizations scattered around Europe at that time (FLOCERT 2019)), the responses of Southern stakeholders to FLO's programs are the main focus of this paper. The responses of these actors are coupled temporally, i.e. the responses of Southern activists-turned-program-creators are paired with the responses of Southern program targets (producers and retailers) for each critical juncture

in time. Accordingly, ARM's response to FLO is one focus of the paper because they were conceived in and are headquartered in Colombia, making them a Southern organization. Like FLO, ARM has expanded since inception to install offices and staff in variety of strategic global locations, but both organizations' origins, headquarters, and self-identifying descriptions clearly designate them as Northern- and Southern-led organizations. The second focus of the paper is the responses of Southern artisanal mining organizations (ASMOs) and Southern ethical jewelry retailers to both programs.

The data informing the analysis come from several sources. First, the author interviewed members of certification programs' leadership and strategy teams as well as Southern government representatives in three waves: December 2015-March 2016 (FLO and ARM, in person and by phone); August 2018 (ARM, by phone); November 2018 (ARM and government mining and environment ministry members from Peru, Colombia, Gabon, Cameroon and Uganda, in person). Each interview with certification programs was roughly an hour and focused on the evolving relationship between ARM and FLO, why ASMOs (dis)engage with programs, and in ARM's case the reasoning behind their new CRAFT Code. Government interviews were brief, focusing on their levels of awareness of certification programs and beliefs about program prospects relative to other governance methods. Second, the author interviewed two academics recently returned from 2018 field research trips in the mining hotspots of Ghana (Tim Adivilah) and Peru (Ruth Goldstein) because they possessed some of the most recent data available on miners' and governments' ideas, interests, and levels of power, helping to update the robust literature on ASGM in these countries (Diringer et al. 2015, Goldstein 2019, Hilson and Pardie 2006, Hilson 2017, Hilson and McQuilken 2014, 2016a, Smith 2019, Viegas et al. 2015). Third, the author launched an original, in-depth survey of five Southern ethical jewelry retailers participating in ARM's program to learn what ideas, interests, and resources drove their and their Southern jewelry customers' behavior. And fourth, the author use organizations' websites to compile an original database tracking which ASMO's certified and decertified with ARM and FLO 2013-2019. Since the information on websites changes rapidly, this is an important source of historical and current data.

Analysis of the data was inductive, yet guided by this Special Issue's focus on ideas, interests, and power, which served as a sensitizing and organizing device. Grouping the data in this way enabled basic measurements (high, medium, low) of levels of ideational affinity, interest alignment, and material power among actors. Mapping these revealed important points of (mis)alignments and (dis)empowerments between actors that make Southern responses to Northern programs intuitive and potentially predictable.

Results

The analysis suggests three distinct coupled (program-participant) Southern responses to the Northern certification program launched by FLO in 2011: cooperation and complaint; competition and tepid growth; and supplementation through weaker standards. This section presents these temporally, examining the ways that ideas, interests, and power shaped them.

Response 1: Cooperation and Complaint

Since its emergence in the 1980s, FLO has tried to reduce poverty and foster sustainable development by writing production and trading rules for Southern commodity producers. As recounted in his book (Valerio 2013) and to the author (December 2015), in the early 2000s, UK jewelry retailer and fair trade activist Greg Valerio learned about the work being done by a group of activists in Colombia to make ASGM a safer, less destructive livelihood. Valerio believed that gold sourced from such miners would make a great fair trade product, so he and the activists organized to create the Alliance for Responsible Mining (ARM), wrote a production and trade standard for ASGM based on FLO's standards for agriculture, and built a value chain compliant with the standard. What ARM lacked was the knowledge and reputational power to market their value chain to global consumers, which would be needed to scale the program to reach other ASGM communities. Since FLO had precisely the marketing skills,

advertising budget and brand credibility ARM needed, Valerio pitched the idea of partnership to FLO's leadership in 2003.

FLO agreed to partnership for two reasons. First, in the early 2000s FLO and ARM enjoyed high levels of ideational affinity. Both believed FLO was morally obliged to help ASGM given its mission and organizational capacity. FLO's leader Harriet Lamb and ARM's Valerio further enjoyed the rapport and trust necessary to make partnership between two otherwise dissimilar organizations work. Second, FLO and ARM had highly aligned interests: FLO wanted to diversify into a non-food product category to achieve its strategic goals, and ARM needed a partner with FLO's skillset to achieve its goals (Author 2014, Valerio 2013, FLO 2003). In other words, the organizations had complementary power asymmetries. In 2009, they signed a 3-year partnership contract. Because of FLO's institutional strength and experience, FLO formally owned the program while ARM was a collaborative consultant. But because of ARM's essential role as industry expert and liaison, and their desire to grow as an organization, they demanded their name be on the label, too (Valerio 2013).

The resulting Fairtrade and Fairmined Gold program employed a global standard covering social, economic, and environmental issues, and gold complying with it hit markets in 2011 (Fairtrade and Fairmined Standard 2010). To participate in the program, miners had to achieve certified compliance with one of two versions of the standard, which differed primarily in requirements on mercury: the basic standard required its reduction, whereas the "ecological" standard required its elimination. In return, the first buyer would pay miners 95% of the international gold price (up from the 70% frequently earned in uncertified markets) plus 10% for basic gold or 15% for ecological gold.

In interviews, ARM and FLO recalled that the joint-program accrued many complaints: miners wanted more money, consumers wanted lower prices, retailers wanted the higher volumes and faster timing they needed for their business models. By 2013, the organizations were due to either renew or end their partnership. They ended it for two reasons. First, while they still shared identical interests—reforming ASGM into a more responsible and lucrative livelihood—they now had different ideas about the best strategies for pursuing those interests and responding to the market's feedback. ARM wanted to raise basic standard premiums and start a labeled, mass-balanced gold program that would mix certified and uncertified gold to provide higher volume, lower priced sourcing options. FLO disagreed with this strategy, wanting instead to *lower* premiums to raise customer demand (and therefore volumes of payments to miners) and denounced mass-balancing as 'greenwashing.' Second, over the course of their partnership, the initial power asymmetries that once drew them together dissolved: FLO learned about mining, ARM learned about marketing, and both learned how to secure grants for ASGM certification projects. In other words, their once complementary capacities became redundant. Now capable of existing as separate programs and unable to resolve their ideational differences, the organizations split in 2013 to create the competing programs that exist today: Fairtrade Gold (FLO) and Fairmined Gold (ARM).

Response 2: Competition and Tepid Growth

From their respective program headquarters in Germany (FLO) and Colombia (ARM), the organizations revised their programs. As Sippl (2015, 2019) explains in their program comparison, both programs kept the core components of the joint program in place, but some key changes flowed from their ideational clash. Both ARM and FLO still aim to create "opportunities" for artisanal miners in low- and middle-income countries by addressing social, economic, and environmental issues; both increase rule stringency over time; both target the same global consumers (ARM 2014, FLO 2013). Programs differ in their views on capitalism: FLO seeks to "change conventional trading systems" (FLO 2013, p.4) whereas ARM aims to build ethically "viable businesses" (ARM 2014, p.4). The specific changes in program rules partially reflect this difference in ideology as well as some of the ideational differences that drove their separation. Regarding premiums, both programs made the changes they had wanted to: ARM's miners now receive relatively high basic premiums of \$4,000/kg of gold (instead of 10% of the international gold price in the joint program and double FLO's new offer of \$2,000/kg), and ecological premiums are now \$6,000/kg (generally less than the joint-program's and FLO's offer of 15% of the gold price). Regarding mass-

balancing, however, both programs ditched the initial ideas they fought over and adopted identical changes: in addition to their classic fully-traceable labeled-gold model, they both now offer a semi-traceable mass-balancing model, gold from which does *not* bear program labels. Additionally, ARM aims to drive more money to miners through a donations system for actors unable or unwilling to source artisanal gold. FLO does not do this because it departs too much from its ‘trade not aid’ philosophy and might allow bad industry actors to continue unethical sourcing. Instead, FLO aims to drive more money to miners by waiving license fees for small-scale goldsmiths.

Response to the programs by Southern producer and retail participants is best described as tepid—uptake is present, but growth is slow and the percentage of targets reached is minimal. Licensee uptake (uptake by jewelry wholesalers and retailers who use program labels) fluctuates significantly over time. ARM’s and FLO’s licensee numbers were roughly even in 2017: 136 to 137, with ARM leading in North America, Latin America, and Asia, and FLO leading in Europe. Since then, ARM’s numbers have grown while FLO’s have plummeted. In mid-2019, ratios are 196 (ARM) to 60 (FLO), with ARM continuing to lead in North America, Latin America and Asia, and acquiring the lead in Europe in 2019. FLO does, however, lead in Africa.

Table 1 shows that Southern licensees are participating in ARM’s program more than FLO’s (23 to 7). In part, this is due to a lack of awareness about program choices: none of the ethical jewelers working with ARM knew FLO had a gold program, despite FLO’s programs in other sectors being many of these retailer’s inspiration for sourcing certified gold. Retailers found ARM through their own research and friends’ suggestions, rather than through ARM’s marketing campaigns, and only some cared about ARM’s Southern status (two Colombian jewelers liked ARM’s Colombian roots for advertising reasons—they wanted to sell gold mined and certified in and by Colombians). More than Southern versus Northern status, most retailers care most about whether a program can provide easy and timely sourcing at the right price: the leading excuse their Southern customer’s give for foregoing ARM’s gold when shopping is that it is too expensive. After price, consumers say they don’t know enough about ARM, and none of the retailers believe consumers know or care about mercury (so they definitely would not be interested in paying more for ecological gold without significant educational intervention). Instead, Southern retailers and consumers’ priority issues are diverse—some care more about the environment while others care about poverty or child labor. Yet all retailers agreed that all consumers cared about ‘illegal mining.’ And none believed that consumers were interested in jewelry made from recycled gold, indicating that demand for mined gold will continue. This is bad for many social and environmental problems, but good for the miners who have no alternative livelihoods and for the programs working to support them.

Table 1. Program Licensees (Spring 2019)		
	ARM	FLO
Northern Licensees	173	53
Southern Licensees	23	7

Yet despite the average artisanal miner’s need for the higher payments they can get through program participation (the average miner is in extreme poverty according to World Bank classifications), total program uptake levels are extremely low: data provided by the certification programs suggest that only about 0.01% of artisanal miners are certified. Participating miners span Latin America, Africa, and Asia (see Table 2). And participation patterns vary significantly year to year as ASMOs certify and decertify in different countries and with different programs. In mid-2019, both programs have 10 ASMOs certified: ARM has 8 in Latin America compared to FLO’s 9, but FLO gained most of these in late 2018 (FLO had only 1 in South America in 2017). ARM is leading in Asia (2 ASMOs) and FLO is leading in Africa (1 ASMO). Three of ARM’s 10 ASMOs are certified under ecological standards whereas none of FLO’s are. But static snapshots of uptake are limited value: examining uptake over time reveals that 2013-2019, 19 ASMOs gained and maintained certification whereas 7 ASMOs tried then decertified, i.e. dropped out. Dropout rates are currently at 38% for both organizations 2011-2019 (6 out of the 16 who

tried certification quit). But if FLO’s recent acquisitions are not counted, their dropout rate is 75% (i.e. FLO lost more ASMOs that it gained 2011-2018).

Table 2. Producer Uptake (Spring 2019)		
	ARM	FLO
Africa	0	1
Asia	2 (2 Ecological)	0
Latin America	8 (1 Ecological)	9
Totals:	10	10

The drivers of ASMO decertifications fall into three categories, and the levels of agency present in each category varies. For three ASMOs, desire for more money drove decisions. Oro Verde, the Colombian Ecological ASMO that inspired the original joint-program, was located in a region that was both remote and ecologically protected. Remoteness meant that logistical costs were high, and protected status meant the range of allowable mining methods was narrow. Miners were permitted to pan for gold but wanted to increase production by using larger-scale technology. The government denied their request, saying that permits for those methods were already allocated to other larger-scale operators. Rather than resuming mining at status quo levels, they decertified in 2013. Like Oro Verde, Cotopata in Bolivia was small and remote, resulting in low output and low margins. When they were additionally hit by lower-than-expected demand circa 2015, they decertified. Low demand also drove the decision of Coodmilla Cooperative (La Llanada) to downgrade from ARM’s ecological to basic certification—in 2016 they could not find enough buyers for their higher-priced ecological gold but *could* find buyers at the lower basic standard prices, so they downgraded to the basic standard in 2017. By 2018, however, they decertified from the basic standard, too.

A combination of low financial and governance capacities drove the decertification of Ugandan ASMO, Syanyonja Artisan Miners Alliance (SAMA), originally certified under FLO’s basic standard. SAMA’s struggles with ASMO management delayed their certification, resulting in low cash flows. Accordingly, after their mine collapsed they did not have the financial resiliency to rebuild. Governance struggles, alone, drove Comunidad Aurífera Relave (AURELSA S.A.) to decertify—they could not stop undocumented mining from occurring within their permit’s borders. For a sixth ASMO, the desire for more freedom and a *surplus* of capacity drove the decertification decision. Peruvian ASMO Sociedad de Trabajadores Mineros S.A. (SOTRAMI) produced at a sufficiently large scale to qualify for the Responsible Jewelry Council’s less prescriptive program, so they switched in 2016.

A small number of ASMOs are working towards but have not yet achieved certification, but the vast majority of artisanal miners are not engaging either program at all. There is some evidence to suggest that a lack of awareness of programs shapes this result. While ASGM has been a livelihood in Ghana and Peru for centuries (Goldstein 2019, Hilson and Pardie 2006, Hilson 2017, Hilson and McQuilken 2016a, Viega et al. 2015) and certification a governance option for nearly a decade, Goldstein and Adivilah confirm earlier reports that few miners are aware of alternatives to current mining practices and the types of assistance available to them, and report that as of 2018 *no* miners in the key communities they studied were aware of certification programs (a few thought they knew about certification, but misunderstood it to mean either legally permitted or having completed any kind of capacity building program, such as Solidaridad’s) (Adivilah 2018, Goldstein 2019). Most of the Southern government representatives from mining and environment ministries interviewed were similarly unaware of FLO’s and ARM’s programs, and the few who had heard of them saw them as something aspirational to be aimed for in the longer-term future rather than an immediate solution to their present ASGM problems.

Even if awareness about programs rises, it is not clear that the average miner will want or be able to participate. The population of miners who have certified earned on average about \$15/day *prior* to certification, an income three times higher than the typical poverty line in middle-income countries

(\$5/day) (World Bank 2019). By contrast, the average artisanal miner earns about \$1.83/day, placing them below the international line for extreme poverty (\$1.89/day). This gap suggests that it may be difficult for the average miner to build the financial and technical capacity needed to participate in programs.

And even if they built this capacity, it is not clear they will want to certify because the interests of miners and programs are misaligned. On legality, for example, programs require miners to obtain mining permits from the government, but miners often mine without them because of the length of time required to get them (if they can get them at all) and a range of other political socio-economic reasons (Marshall and Viega 2017,). In Peru, there is an 8 year backlog of applications; in Ghana, permits can only be approved by one government official located far away from most of the mines, making the process very slow (Adivilah 2018, Goldstein 2019). So despite wanting the protection and pride legality provides, the need to earn income immediately to cover daily expenses is often miners' top priority (Adivilah 2018, Goldstein 2019). Therefore mining legitimately (in compliance with laws and with the consent of local communities) yet illegally is often in miners' interests, but at odds with certification's legalization requirement.

Increasing the number of legal permits for ASGM is not always in the interest of Southern governments, either (Adivilah 2018, Goldstein 2019, Hilson 2017, Marshal and Viega 2017, Spiegel et al. 2018). On the one hand governments want to provide their citizens with jobs to grow the national economy and secure political support (miners unions are strong in some countries, e.g. Peru, Ghana). On the other hand, ASGM is associated with a range of environmental problems that draw negative attention from Southern governments' donors and partners in multilateral environmental treaties. Since governments perceive large-scale mining to be less environmentally harmful than ASGM, the compromise they typically strike is to allot only a small-number of permits to ASGM, if any, yet not enforce the laws very strictly. This way, miners can earn a living and if ASGM causes a problem that attracts global condemnation, it is likely miners were working illegally, which allows governments to save face. The interests of certification programs and governments are therefore misaligned.

Programs' and participants' interests are also frequently misaligned on mercury. Despite the international consensus on mercury's harm represented by the UN Minamata Convention and the decades of educational efforts in the ASGM sector, many miners (and some government members) still have misconceptions about mercury, doubting its toxicity or the amount of pollution attributable to ASGM (Goldstein 2019, Hilson et al. 2007, Speigel et al 2018, Speigel and Viega 2010, Zolnikov 2012). This is understandable for many reasons: mercury is harmless to the touch, invisible and odorless when vaporized, its harm accumulates over time, communities have used it in mining for generations, and it is mostly Northerners telling Southerners to stop using—a situation easily interpreted as “green colonialism” in which people with power use environmental justifications to pursue their interests at the expense of those less powerful (Goldstein 2019, Zaitchik 2018). Other miners and community members accept mercury's toxicity, but explain that other harmful issues and situations take precedence in their lives, such as human trafficking, mining accidents, traffic fatalities, and poverty-induced hunger (Goldstein 2019, Adivilah 2018, Speigel et al. 2018). Looking at the behavior of certified miners with regard to mercury, the majority are well-above the poverty line yet continue to opt for the ‘basic’ versions of standards which allow mercury use to continue rather than the ‘ecological’ versions which require mercury elimination, and few ASMOs are investing social premiums in mercury-free technology. This suggests that even if the average miner *did* possess the financial power to adopt mercury-free technology, they may not be intrinsically motivated to change this particular behavior, so consumers will have to pay them more to change it (which infringes on consumers' interests to get the lowest price for the production conditions they want). In summary, while certification program requirements to reduce mercury use and exposure may in fact be aligned with miners' interests, the ideational and political socio-economic contexts in which miners exist means that other interests are of higher priority to miners, resulting in *misalignments* of program and participant interests.

Response 3: Supplementation via Weaker Standards

Because of the tepid response to their competing certification program, ARM’s third response to FLO is the creation of a new program intended to serve as a ‘stepping stone’ to their certification program: the Code of Risk-mitigation for ASM engaging in Formal Trade (the CRAFT Code). ARM launched CRAFT in August 2018 to address the needs of both upstream and downstream value chain actors. Upstream, many miners are failing to gain or maintain certification despite wanting to improve their businesses and earn more money. Downstream, value chain actors such as refineries, manufacturers, and retailers are facing increased pressure from the international community to ensure their operations are conflict-free. Gold is one of four conflict minerals targeted by new domestic and regional legally-binding agreements such as the US’s Dodd-Frank Act and EU’s Conflict Minerals Regulation. These laws require downstream actors to document their supply chains and identify whether any portion of them operate in Conflict-Affected and High-Risk Areas (CAHRAs). If they do, companies must stop using that supply chain or take measures to ensure that their suppliers are not linked to violent non-state actors. Such measures are called ‘due diligence,’ and the OECD created a Due Diligence Guide (DDG) that companies can follow step-by-step to prove compliance with the laws.

The problem with the laws and the DDG is that they were designed for buyers sourcing from large-scale mining operations rather than from ASGM. Accordingly, compliance with the laws may have the unintended effect of diverting buyers *away* from ASGM because the DDG does not provide enough detail on how to source from ASGM appropriately. Accordingly, artisanal miners may lose access to formal markets and become *more* dependent on informal ones which can be rife with links to conflict. In other words, new laws may deepen rather than mitigate the problem of conflict minerals by disenfranchising the ASGM sector.

ARM’s CRAFT code aims to rectify this situation. Just as the original joint certification program based itself on FLO’s existing standards for agriculture, the CRAFT code is based on the OECD’s DDG. The code requires ASMOs to write a “CRAFT Report” for potential buyers that details their compliance with the rules housed in the code’s five modules (Table 3). The modules require the neutralization or mitigation of the DDG’s “Annex II” risks, such as child and forced labor, illicit financial flows, and relationships with armed groups. They further suggest (but do not *require*) that miners aspire to address the DDG’s “non-Annex II” risks, such as environmental degradation and unsafe, discriminatory workplaces. ASMOs creating such CRAFT Reports will be easy for buyers to source from. ARM hopes participating ASMOs will therefore attract more buyers, earn more income, and be better positioned to participate in ARM’s certification program.

Table 3: CRAFT Code Self-Reporting VSS			
Sequence	Standard Requirements: Pass =		Pass Enables Producer to:
Module 1:	Organization	Nominate a Responsible Person from the ASM Mineral Producer (AMP) able to write or oversee writing of a CRAFT report on conformity with Modules	Apply
Module 2:	Legitimacy	Document attempt or willingness to legalize (depending on country context), attempt to sell through state-approved channels (if present); dialogue with local stakeholders, absence of complaints against AMP from local stakeholders	Sell as Candidate
Module 3:	Annex II Risks— High Priority	Affirm absence of certain types of child labor, forced labor, extortion Obtain third-party confirmation that: no claims of violence are filed against AMP members (or if claims exist, perpetrators are evicted from AMP); AMP does not exist in a Conflict-Affected High Risk Area, or if it does, neither the AMP nor AMP’s	

		transport routes are controlled by non-state armed groups or associated with war crimes	
Module 4:	Annex II Risks— Medium Priority	Make and adhere to plans to manage risk of extortion, bribery, money laundering, tax evasion, hiring security forces known for abusive practices Make and adhere to plans to disclose data to EITI, track the origins of minerals sold, foster peaceful relations with public and private security forces Document all payments to public officials	Sell as Affiliate
Module 5:	Non-Annex II Risks—	Include in CRAFT report aspirations to create an improvement plan for at least one of these issues: child labor; sexual violence and harassment; discrimination; safety rules, equipment, and first aid; whole ore amalgamation and amalgam burning; cyanide leaching; water contamination; community integration and coordination with Protected Area authorities, farmers and ranchers, large-scale miners, water users; complaint procedures and decision-making structures; formalization beyond legitimacy	Continue to Sell as Affiliate

There are two categories of difference between the CRAFT Code and ARM’s (and FLO’s) certification programs. The first is procedural, which changes the program’s type: CRAFT is a self-reporting program rather than a third-party certification program. This lowers the cost of participation for miners because no audits are needed, but may also lower buyers’ faith in the veracity of the claims made. The second category is issue scope. Rather than requiring ASMOs to obtain legal permits, CRAFT requires ASMOs to prove legitimacy, i.e. ASMOs must mine in compliance with national laws and with the consent of local stakeholders. CRAFT is further stricter on conflict but weaker on environmental protection. Regarding conflict, ASMOs must prove that no claims of violence are filed against them, argue that any relationships to conflict-affected areas are benign, and make plans to mitigate risks and disclose financial data. Regarding non-conflict issues, to continue to sell gold as a CRAFT affiliate, miners must write in their report that they *aspire* to address at least one of the issues listed in the Code’s instruction manual. In other words, CRAFT does not require miners to undertake any environmental behavior change. It hopes that miners participating in the program will become exposed and sensitized to environmental issues such as mercury pollution through interaction with the program, and that this will naturally build their desire and capacity for change.

ARM was better positioned than FLO to create such program due to its organizational design and growing financial capacity. ARM is a smaller, more agile organization whose board can more swiftly make decisions relative to FLO’s, who’s board oversees an organization managing roughly 15 product categories and for which decisions must be approved by several multi-stakeholder bodies. Any experiment undertaken in one product category may effect FLO’s brand and therefore the performance of its other product categories—a consideration ARM is less burdened by. If, as a hypothetical, activists denounced a Fairtrade program similar to the CRAFT Code as ‘greenwashing,’ consumers might not only stop buying Fairtrade Gold, they might stop buying Fairtrade coffee, bananas, and wine, too. ARM must worry about this too, but their design and organizational culture foster more risk-taking in pursuit of growth. ARM’s geographic expansion via satellite offices in global policy-making hubs also enabled them to create a strong network. ARM leveraged these social resources to gain the funding and partnerships it needed to shape and launch the CRAFT Code (while ARM is the lead author, the program emphasizes that it is a multi-stakeholder initiative) (ARM 2018).

ARM's actions have resulted in a program that is well-positioned to enjoy broad uptake at the expense of deep change. CRAFT does a better job than certification programs of aligning its interests with those of miners and Southern governments, who are ambivalent on legality and mercury but who want more peaceful and profitable ASGM. It also aligns with the interests of many consumers who want better (but not perfect) gold for lower prices than certification programs offer. CRAFT is further more accessible to the average low-capacity miner because it does not require the purchase of audits or new equipment. The program may serve both ARM's and FLO's interests, too, if it fulfills its intention of inspiring and enabling miners to continue positive reforms, with or without certification.

Conclusion

To summarize, this paper examined three responses of Southern ASGM actors to Northern certification programs: cooperation and complaint, competition and tepid uptake, and supplementation with a weaker program. Following analytical practices in the regime literature, it traced the process by which ideas, interests, and power shaped these responses. The idea to certify ASGM flowed from North to South to North, resulting in a joint North-South program that satisfied few constituencies. While ARM's and FLO's interests remained aligned, their ideas about how to pursue those interests and respond to feedback diverged at a moment when their capacities were redundant rather than complementary. With both the desire and power to act, ARM created a competing certification program. Yet neither new certification program managed to align the interests of miners, governments, and consumers on key issues such as legality, mercury, and 'fair' prices, so programs experienced tepid uptake characterized by low levels of participation by miners and only, on average, among miners already out of poverty. Further, over a third of miners who tried programs quit, and relatively few engage the mercury-free program options. To better align constituent interests, ARM created a self-monitoring and reporting program called the CRAFT Code to supplement its certification programs, believing its lower costs and lower thresholds on legality and environmental issues would make it both more popular and accessible to miners and global retailers.

Future research should assess the performance of the CRAFT Code, specifically whether the program is serving as a ladder-to-the-top for miners (i.e. they 'graduate' to certification programs) or whether CRAFT is siphoning participants away from certification programs, serving as a race-to-the-bottom mechanism. Relatedly, more research is needed on consumer responses to both CRAFT and fair trade programs to better understand the types of priorities and tradeoffs they wish to see in programs. Research on Southern consumers' ethical preferences would be particularly useful and align with the growing literature on South-South trade (Schleifer and Sun 2018). Research is also needed on the preferences of understudied value chain members, such as refineries and manufacturers, regarding certification. And in addition to noting that programs would benefit from being sensitive to local geological, social and political contexts, deeper understanding of the determinants of effective mercury reduction and elimination programs will be necessary for global human and environmental health.

Overall, the findings from this case study reflect some basic intuition about Southern responses to voluntary programs created in the North. When program and participant ideas and interests are aligned, and participant power levels are high, Northern-led programs should enjoy widespread uptake of meaningful rules. When misalignments and low power levels are present, Southern actors will be unwilling or unable to participate in programs or create competing ones, and other governance forms will likely prevail. In between these extremes is when Southern actors are likely to launch home-grown programs because there is gap to fill between what producers want and what initial programs gave, and Southern actors have sufficient power to create a program aiming to fill that gap. Environmental standards in such program may be weaker, but uptake may be more widespread.

The ASGM case falls in this middle zone: medium levels of ideational misalignments and material power among actors led ARM to create programs aiming to be more popular than FLO's among Southern producers and global consumers (first its competing certification program, then its CRAFT Code). It is important to note, however, that Southern responses (including ARM's) seem driven less by feelings of Southern solidarity and more by strategic desires and capacities. As of mid-2019, producer

uptake is roughly even across Northern- and Southern-led certification programs. And while most Southern retailers only sell ARM's gold, data indicate they partner with ARM not because they prefer it to FLO, but because they did not know FLO's program existed. Finally, ARM's motives are varied. Yes, they created CRAFT to align better with miners interests, but also because an institutional window of opportunity opened via new legally-binding conflict mineral laws and actors willing to pay for programs that help businesses comply with them. While the CRAFT Code is free to use, its development and maintenance results from donations, which serve as a new income stream for ARM and its partner organizations, and build ARM's visibility and reputation among potential donors (ARM 2018).

Future research should use this ASGM certification case study in conjunction with the other sector case studies in this Special Issue to probe the generalizability of the paper's intuition on Southern responses, an important task helping scholars and practitioners learn more about why and how global regimes governing the environment, development, and conflict are changing. Understanding the changing nature of regimes is essential to guiding them towards their most equitable and effective configurations to the benefit of global human and environmental well-being.

References

- Adivilah, T. 2018, Author's interview with Tim Adivilah, PhD Candidate at University of Massachusetts, Boston, MA.
- Alliance for Responsible Mining (ARM). 2014. Fairmined Standard. Version 2.0.
- Alliance for Responsible Mining (ARM), 2019. <http://www.fairmined.org/our-impact/>
- Alliance for Responsible Mining (ARM). 2018. CRAFT Code. <http://www.responsiblemines.org/en/our-work/standards-and-certification/craft/>
- Auld, G., 2014. *Constructing Private Governance: The Rise and Evolution of Forest, Coffee, and Fisheries Certification*. Yale University Press.
- Auld G, Betsill M, VanDeveer S. 2018. Transnational Governance along the Mineral Lifecycle. *Annual Review of Environment and Resources*.
- Bartley, Tim. 2018. *Rules without Rights: Land, Labor, and Private Authority in the Global Economy*. New York, NY: Oxford University Press.
- Biermann, Frank, Philipp Pattberg, Harro Van Asselt, and Fariborz Zelli. 2009. "The Fragmentation of Global Governance Architectures: A Framework for Analysis." *Global Environmental Politics* 9(4): 14–40.
- Bennett, E.A., 2017. Extending ethical consumerism theory to semi-legal sectors: insights from recreational cannabis. *Agriculture and human values*, pp.1-23.
- Bloomfield M.J., 2015. *Dirty gold: How activism transformed the jewelry industry*. Cambridge, MA: MIT Press.
- Bloomfield, M.J. and Schleifer, P., 2017. Tracing failure of coral reef protection in nonstate market-driven governance. *Global Environmental Politics*, 17(4), pp.127-146.

- Cashore, Benjamin, Deanna Newsom, and Graeme Auld, 2004. *Governing Through Markets: Forest Certification and the Emergence of Non-State Authority*. New Haven, CT: Yale University Press.
- Cashore, Benjamin, and Steven Bernstein. 2018. "The Tragedy of the Diffusion of the Commons Metaphor: Bringing the Environment Back in to Environmental Studies." Paper presented at the ISA Annual Convention in San Francisco, USA, 1–32.
- Childs, J., 2008. Reforming small-scale mining in sub-Saharan Africa: Political and ideological challenges to a Fair Trade gold initiative, *Resources Policy* 33(4), pp.203–209.
- Childs, J. 2010. 'Fair trade' gold: A key to alleviating mercury pollution in sub-Saharan Africa? *International Journal of Environment and Pollution*, 41 (3-4), pp. 259-271.
- Childs, J., 2014. A new means of governing artisanal and small-scale mining? Fairtrade gold and development in Tanzania. *Resources Policy*, 40, pp.128-136.
- Dietz, T., Grabs, J. and Chong, A.E., 2019. Mainstreamed voluntary sustainability standards and their effectiveness: Evidence from the Honduran coffee sector. *Regulation & Governance*.
- Diringer, S.E., Feingold, B.J., Ortiz, E.J., Gallis, J.A., Araújo-Flores, J.M., Berky, A., Pan, W.K. and Hsu-Kim, H., 2015. River transport of mercury from artisanal and small-scale gold mining and risks for dietary mercury exposure in Madre de Dios, Peru. *Environmental Science: Processes & Impacts*, 17(2), pp.478-487.
- Delmas, M.A. and Lessem, N., 2017. Eco-premium or eco-penalty? Eco-labels and quality in the organic wine market. *Business & Society*, 56(2), pp.318-356.
- Fisher, E., 2017. Solidarities at a distance: Extending Fairtrade gold to east Africa. *The Extractive Industries and Society*.
- FLOCERT, 2019. Customer Database. <https://www.flocert.net/about-flocert/customer-search/>
Accessed March 2019.
- Fairtrade and Fairmined Standard, 2010. Accessed in 2011: <http://www.responsiblemines.org/> Standard is no longer posted on website, but is available by request: arm@responsiblemines.org
- Fairtrade International (FLO). 2013. Fairtrade Gold Standard.
- Gneezy, U. and Rustichini, A., 2000. Pay enough or don't pay at all. *The Quarterly Journal of Economics*, 115(3), pp.791-810.
- Goldstein, Ruth, 2019. Mother of God, Son of Jupiter: Mercury Rising and (re)producing gendered-environmental racisms in a quickly heating planet. Working paper under review with *Environmental Humanities*.
- Government of Ghana, 2019. "Government to lift ban on small-scale mining on December 17," General News on the government's website. Accessed April 2019:
<http://www.ghana.gov.gh/index.php/media-center/news/5274-government-to-lift-ban-on-small-scale-mining-on-december-17>

- Gulbrandsen, Lars H. 2010. *Transnational Environmental Governance: The Emergence and Effects of the Certification of Forests and Fisheries*. Northampton, MA: Edward Elgar.
- Hainmueller, J., Hiscox, M.J. and Sequeira, S., 2015. Consumer demand for fair trade: Evidence from a multistore field experiment. *Review of Economics and Statistics*, 97(2), pp.242-256.
- Hasenclever, Andreas, Peter Mayer, and Volker Rittberger. 2000. "Integrating Theories of International Regimes." *Review of International Studies* 26(1): 3–33.
- Heemskerk, M., 2002. Livelihood decision making and environmental degradation: Small-scale gold mining in the Suriname Amazon. *Society & Natural Resources*, 15(4), pp.327-344.
- Hilson, G., Maconachie, R. Formalising artisanal and small-scale mining: insights, contestations and clarifications (2017) *Area*, 49 (4), pp. 443-451.
- Hilson, G., 2017. Shootings and burning excavators: Some rapid reflections on the Government of Ghana's handling of the informal Galamsey mining 'menace'. *Resources Policy*, 54, pp.109-116.
- McQuilken, J., and Hilson, G., 2016a. Artisanal and small-scale gold mining in Ghana, Evidence to inform an Action Dialogue. International Institute for Environment and Development: pubs.iied.org/16618IIED/
- Hilson, G., McQuilken, J. 2016. Moving Overseas? Critical Reflections on the Implementation of Latin American Ethical Gold Schemes in Sub-Saharan Africa, in *Critical Approaches to the 'New Extraction'* (ed. K. Deoandan and M.J. Dougherty), Routledge, London.
- Hilson, G. and McQuilken, J., 2014. Four decades of support for artisanal and small-scale mining in sub-Saharan Africa: a critical review. *The Extractive Industries and Society*, 1(1), pp.104-118.
- Hilson, G. and Pardie, S., 2006. Mercury: an agent of poverty in Ghana's small-scale gold-mining sector?. *Resources Policy*, 31(2), pp.106-116.
- Hilson, G., 2008. 'Fair trade gold': Antecedents, prospects, challenges. *Geoforum*, 39(1), pp.386-400.
- Hilson, G., Hilson, A. and McQuilken, J., 2016. Ethical minerals: Fairer trade for whom?. *Resources Policy*, 49, pp.232-247.
- Hilson, G., Gillani, A. and Kutaula, S., 2018. Towards sustainable pro-poor development? A critical assessment of Fair Trade gold. *Journal of Cleaner Production*, 186, pp.894-904.
- International Trade Center (ITC) Standards Map. Accessed April 2019.
<http://www.standardsmap.org/Index.aspx>
- Manning, S., Boons, F., Von Hagen, O. and Reinecke, J., 2012. National contexts matter: The co-evolution of sustainability standards in global value chains. *Ecological Economics*, 83, pp.197-209.
- McQuilken, J. (2016) 'Ethical gold' in sub-Saharan Africa: A viable empowerment strategy?', *International Development Planning Review*, 38(2), pp. 179–199.

- Marshall, B.G., Veiga, M.M., 2017. Formalization of artisanal miners: Stop the train, we need to get off! *Extractive Industries and Society*, 4 (2), pp. 300-303.
- O'Neill, K., Balsiger, J. and VanDeveer, S.D., 2004. Actors, norms, and impact: Recent international cooperation theory and the influence of the agent-structure debate. *Annu. Rev. Polit. Sci.*, 7, pp.149-175.
- Quadir, F., 2013. Rising Donors and the New Narrative of 'South-South' Cooperation: what prospects for changing the landscape of development assistance programmes?. *Third World Quarterly*, 34(2), pp.321-338.
- Saldarriaga-Isaza, A., Villegas-Palacio, C. and Arango, S., 2015. Phasing out mercury through collective action in artisanal gold mining: Evidence from a framed field experiment. *Ecological Economics*, 120, pp.406-415.
- Schleifer, Philip, and Yixian Sun. 2018. "Emerging Markets and Private Governance: The Political Economy of Sustainable Palm Oil in China and India." *Review of International Political Economy* 25(2): 190–214.
- Schouten, Greetje, and Verena Bitzer. 2015. "The Emergence of Southern Standards in Agricultural Value Chains: A New Trend in Sustainability Governance?" *Ecological Economics* 120: 175–84.
- Sen A., 1999. [Development as Freedom](#). New York: Alfred Knopf.
- Sipl, K., 2015. Private and civil society governors of mercury pollution from artisanal and small-scale gold mining: A network analytic approach. *The Extractive Industries and Society*, 2(2), pp.198-208.
- Sipl, K. (2019). Golden Opportunity? Certification programs for Artisanal and small-scale Gold Mining and the UN Sustainable Development Goals, *Global Environmental Politics* (under review).
- Smith, N.M., 2019. "Our gold is dirty, but we want to improve": Challenges to addressing mercury use in artisanal and small-scale gold mining in Peru. *Journal of Cleaner Production*.
- Spiegel, S.J., 2009. Socioeconomic dimensions of mercury pollution abatement: Engaging artisanal mining communities in Sub-Saharan Africa. *Ecological Economics*, 68(12), pp.3072-3083.
- Spiegel, S.J., Agrawal, S., Mikha, D., Vitamerry, K., Le Billon, P., Veiga, M., Konolius, K. and Paul, B., 2018. Phasing Out Mercury? Ecological Economics and Indonesia's Small-Scale Gold Mining Sector. *Ecological economics*, 144, pp.1-11.
- UN Environment Program (UNEP), 2019. Global Mercury Assessment 2018. UN Environment Programme, Chemicals and Health Branch. Geneva, Switzerland.
- Valerio, G., 2013. *Making trouble: Fighting for fair trade jewellery*. Lion Books.
- Van Bockstael, S. The emergence of conflict-free, ethical, and Fair Trade mineral supply chain certification systems: A brief introduction (2018) *Extractive Industries and Society*, 5 (1), pp. 52-55.

- van der Ven, H. and Cashore, B., 2018. Forest certification: the challenge of measuring impacts. *Current Opinion in Environmental Sustainability*, 32, pp.104-111.
- van der Ven, H., Rothacker, C. and Cashore, B., 2018. Do eco-labels prevent deforestation? Lessons from non-state market driven governance in the soy, palm oil, and cocoa sectors. *Global environmental change*, 52, pp.141-151.
- Veiga, M.M., Angeloci-Santos, G. and Meech, J.A., 2014. Review of barriers to reduce mercury use in artisanal gold mining. *The Extractive Industries and Society*, 1(2), pp.351-361.
- Veiga, M.M., Angeloci, G., Ñiquen, W. and Seccatore, J., 2015. Reducing mercury pollution by training Peruvian artisanal gold miners. *Journal of Cleaner Production*, 94, pp.268-277.
- World Bank, 2018. Poverty and Shared Prosperity 2018: Piecing Together the Poverty Puzzle. Washington, DC: World Bank.
- Young, O. R., 2011. Effectiveness of international environmental regimes: Existing knowledge, cutting-edge themes, and research strategies. *Proceedings of the National Academy of Sciences*, 108(50), 19853–19860