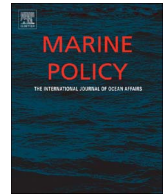




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How could Nautilus Minerals get a social licence to operate the world's first deep sea mine?

Colin Filer^{a,*}, Jennifer Gabriel^b^a Crawford School of Public Policy, Australian National University, Canberra, Australia^b The Cairns Institute, James Cook University, Cairns, Australia

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ABSTRACT

It is now twenty years since people began to debate the question of how mining companies could show that they possessed a 'social licence' for industrial activities that are known to have significant environmental and social costs. Amongst those who believe that the concept has some significance beyond the realm of corporate propaganda, there has been a growing tendency to treat it as something that has to be obtained from local communities who bear most of these costs, and therefore have to be convinced that the costs are outweighed by the benefits. This paper shows how this definition poses a particular problem for the operators of deep sea mining projects because of the uncertainties that surround the definition of the community from whom the licence needs to be obtained. It also shows how different actors, including corporate actors, have tried to shape the 'negotiation space' in which to debate the presence or absence of a social licence for the world's first deep sea mine in Papua New Guinea.

1. Introduction

The potential economic value of the seafloor massive sulphides, or 'black smokers', associated with the volcanic 'ring of fire' beneath the Bismarck and Solomon seas, was established in the 1990s. In 1997, the Government of Papua New Guinea (PNG) granted the first of several exploration licences to Nautilus Minerals Ltd ('Nautilus') to establish the feasibility of mining these deposits. A licence to mine the most prospective collection of deposits, known as Solwara 1, was granted to the same company in January 2011, and production is expected to start in 2018. This site is located mid-way between the coastlines of New Ireland and East New Britain provinces, at a depth of roughly 1600 m. It is currently estimated to contain about 120,000 dry tonnes of copper, with smaller quantities of zinc, gold and silver, and extraction of these minerals from the mining lease will take less than three years [1].

It is unlikely that the cost of exploring the resource and developing the new technology required to extract it will be covered by the revenues that it generates, so this operation will only prove to be successful if the same technology is then applied to other resources of the same type. For this reason, the Solwara 1 project has come to be seen as an engineering experiment, an environmental experiment, an economic experiment, and a policy experiment, whose outcomes will shape this element of the 'Blue Economy' in the wider Pacific Islands

region [1–3]. This paper investigates one aspect of the policy experiment, which is the question of how a 'social licence' could be obtained for the operation of such a project.

2. The social licence to operate

The 'social licence to operate' entered the vocabulary of the mining industry during a period of intense introspection that took place between 1996 and 2002 [4–8]. Much of the recent literature on this subject treats the social licence as something that mining companies obtain from local communities [9–15]. However, when the concept first entered the vocabulary of the mining industry, it did not seem to have this narrow point of reference, mainly because it came by way of the World Business Council on Sustainable Development, which attached the idea of a social licence to the third (social) pillar of sustainable development [6] and the third (social) line in the 'triple bottom line' [16]. Indeed, the idea that mining companies were losing their social licence was linked to the idea that such a licence could no longer be obtained from the management of 'corporate and community affairs' – that is to say, from the management of relationships with government regulators and local communities [4,17,18].

But if the social licence now had to be sought from another collection of 'stakeholders', how were they to be identified? One answer

* Correspondence to: Resources, Environment & Development Group, Crawford School of Public Policy, J.G. Crawford Building #132, Lennox Crossing, The Australian National University, Acton ACT 2601, Australia.

E-mail address: colin.filer@anu.edu.au (C. Filer).

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to this question consists in the elaboration of a concept of ‘civil society’ that includes local communities but not government regulators [10]. A second answer maintains the separation between ‘community’ and ‘society’, but proposes that a social licence has to be sought from some combination of ‘community actors’ and ‘social actors’ [19,20]. A third answer suggests that there is no answer, because the idea of a social licence only carries weight with corporate actors because it is unclear which, if any, group of stakeholders has the power to withhold it or take it away [7,21,22]. All three of these answers envisage the social licence as something that a company may win or lose as a result of its bilateral relationship with groups of people outside the company who hold a stake in the development of the project to which the licence supposedly applies [23].

However, one of the most interesting features of this concept (as opposed, for example, to the idea of ‘corporate social responsibility’) is that it suggests a triangular relationship between the actors who may or may not grant it, the (corporate) actors who may or may not obtain it, and a third group of actors who constitute the audience that passes judgement on its credibility [24]. This triangular relationship can be situated in a rectangular ‘negotiation space’ where a social ‘corner’ is indeed distinguished from the corners occupied by the ‘company’, the ‘government’, and the ‘local community’ (see Fig. 1). It could then be argued that the social corner is the one occupied by the audience, since there is no point in a company seeking to persuade the members or representatives of a local community that they have granted the company a social licence if indeed they have already granted it.

However, this hardly settles the question of which actors actually do occupy this social corner, and therefore have the right or the power to pass judgement on the credibility of a company’s claim to possess a social licence. Company managers might believe that these ‘social actors’ include the bankers from whom they seek loans to finance the development of a new mining project, especially if these bankers subscribe to the Equator Principles [25], and therefore align their loan conditions with the safeguard policies of the World Bank [26]. But those actors who regard themselves as the representatives of ‘civil society’ because they make it their business to discredit corporate claims to the possession of a social licence will say that bankers belong in the corporate corner, along with all the other business people who seek to profit from the development of a mining project [27].

The uncertainty that surrounds the identification of purely social actors is one reason why mining company actors have recently been inclined to construe the social licence as something that simply emerges out of their negotiations with local community representatives. However, the question of who actually occupies the community corner, and who has the right or power to represent this group of actors, is also a question without a simple answer. For any given mining project, the local community is normally understood to comprise the people who reside, or have a right to reside, in the ‘mine-affected area’. The boundaries of this area are often identified by a process of environmental and social impact assessment that takes place before the project is authorised by government regulators [28]. However, this process rarely produces a final answer to the question of membership, let alone the question of representation, because these questions are essentially political, just like the question of who represents ‘society at large’ [29].

Indeed, the same point can be made about all four corners in the negotiation space that surrounds each mining project. The identities of

the actors and the nature of the roles that they perform are not fixed by the ‘rules of the game’ but are continually modified by the process of negotiation. This point is made repeatedly in recent ethnographic work on the ‘performance’ of corporate social responsibility in specific mining companies or at specific mine sites [30–32]. A social licence to operate is therefore to be understood as something that *becomes* the subject of negotiation between a specific set of actors who may occupy any of the four corners in a negotiation space, each of whom may have a different connection to this licence.

3. The Solwara 1 dilemma

If Nautilus wishes to claim ownership of a social licence, as well as a government licence, to operate the world’s first deep sea mine, it has to deal with two disconcerting problems. The first problem has been created by the formation of a complex network of ‘civil society’ actors who are thoroughly opposed to the project and are most unlikely to accept that such a licence exists. The second problem has been created by the company’s own attempts to show that the project will not cause any significant damage to the assets or livelihoods of any local community in PNG.

If this mine will not have a ‘mine-affected area’ whose owners or occupants need to be compensated for the negative impacts they experience, then it would seem that there is no group of local people whose support for the project can be held up as evidence of the existence of a social licence. Opponents of the project do not accept the non-existence of a mine-affected area. But, in this negotiation space, the question of who belongs to the ‘community corner’, if it exists at all, has proven to be far more problematic than it has for mining projects above sea level.

So far as the company is concerned, the question is whether it is possible to construct the sort of community that has the capacity to grant a social licence to operate without being the sort of community that is attached to a mine-affected area. But before considering the company’s attempt to answer this question, it is necessary to consider the way that government policy constrains the kind of answer that may be provided, and the way that ‘civil society’ has sought to limit the company’s options.

4. The national policy framework

Whatever constitutes a social licence to operate, it is generally agreed to be something distinct from the sort of government licence that has already been granted for any particular project. Nevertheless, the laws and policies adopted by a host government may still exert some influence on the ways in which different actors, including government officials, understand the concept of a social licence [33]. PNG government officials and advisers have been working on an Offshore Mining Policy since 1998, but this is still a work in progress, so the Solwara 1 project has been authorised under the laws and policies that apply to the development of onshore mining projects.

Section 108 of the Mining Act 1992 requires a government official known as a ‘warden’ to conduct a ‘hearing’ prior to the grant or renewal of an exploration or mining licence. Such hearings are meant to be conducted in the proposed licence area, and should provide an opportunity for local ‘landholders’ and other people who might be affected by the proposal to make objections or otherwise air their views. Their views, along with those of anyone else who objects to the proposal, have to be taken into consideration before a licence is granted, but none of the people consulted in this way have a right of veto. If no objections are made by ‘landholders’ or other residents of the proposed licence area, then this could be taken as evidence of a social licence.

Section 154–156 of the Mining Act also require the holder of an exploration or mining licence to have a compensation agreement with landholders, and that agreement needs to be authorised by government

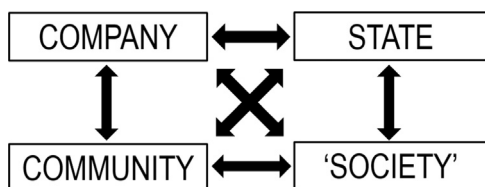


Fig. 1. A rectangular negotiation space.

officials, before the licence-holder can cause any disturbance to the land. The landholders who make this type of agreement could also be said to grant the licence-holder a kind of social licence when they do so [34].

Finally, Section 3 of the Mining Act requires the Minister for Mining to convene a ‘development forum’ prior to the grant of a large-scale mining concession in order “to consider the views of those persons whom the Minister believes will be affected” by such action. In its current form, the Act does not explain the purpose of this form of consultation but, in practice, it entails the negotiation of benefit-sharing agreements between representatives of the National Government, the relevant provincial and local-level governments, and the customary owners (or ‘holders’) of the land to be covered by the mining concession [35]. The mining company is allowed to be part of this negotiation, but the benefits are understood to be those that the National Government secures in its capacity as the nominal owner of the mineral resource. The benefit-sharing agreements therefore have the effect of making the lower levels of government, as well as the ‘landowning community’, seem like the providers of a social licence.¹

Division 5 of the Environment Act 2000 requires that a process of environmental (including social) impact assessment be undertaken by the company, and an environment permit be granted by the Minister for Environment, before the Minister for Mining grants a large-scale mining concession. This process involves a separate form of consultation with local landowners and other people liable to be affected by the proposed project, and their willingness to accept the predicted impacts could also be taken as evidence of a social licence. If this process were directly connected to the process entailed by the development forum, then impacts and benefits would be linked in the social licence granted by members or representatives of a mine-affected community that includes the customary owners of the areas leased to a mining company. However, this connection is not made in legislation or policy, and only rarely made in practice [35].

PNG government officials have consistently maintained that the seabed cannot have any ‘landholders’ apart from the State itself, so there is no need for any compensation agreement to be signed before the grant of a seabed exploration licence. Nevertheless, warden’s hearings were conducted prior to the grant of the numerous exploration licences that Nautilus has acquired from the Government, and such hearings have taken place in nine different provinces [36].

Prior to 1998, it was generally thought that PNG’s provincial governments had very limited powers over the country’s territorial seas, and those powers were almost entirely confined to the regulation of fishing. However, the Organic Law on Provincial Boundaries passed in that year enlarged the apparent scope of their jurisdiction by dividing the whole of the exclusive economic zone between the coastal provinces.

Under the provisions of the current Mining Act, it could be argued that the Solwara 1 project is not big enough to warrant the conduct of a development forum. However, national government representatives have acknowledged the right of the New Ireland and East New Britain provincial governments to derive a share of the benefits, and hence to negotiate a benefit-sharing agreement, even if these agreements were still subject to further negotiation after the mining lease was granted [37]. This process was delayed by the intransigence of New Ireland’s Provincial Governor, Sir Julius Chan, who refused to take part until the National Government honoured the commitments it had made to his province in the benefit-sharing agreement for the Lihir gold mine that was signed in 1995 [38–41].²

¹ This licence also has the advantage of being renewable, since the benefit-sharing agreements are normally subject to review at intervals of five years.

² In 1995, Sir Julius was not only the MP representing Namatanai District, where the Lihir mine is located; he was also the Prime Minister who played an active role in finalising the agreement [35]. Having lost his seat in 1997, he returned to the Parliament as Governor of New Ireland Province in 2007, and his son Byron was elected as the MP

The process of environmental impact assessment (EIA) for the Solwara 1 project included a process of consultation with “provincial and local governments, local communities, non-governmental organisations (NGOs) and various other stakeholders, including the international scientific community” [36]. This process was largely completed over a period of twelve months between 2007 and 2008, and included presentations at eleven warden’s hearings conducted in seven provincial capitals during that period. Additional consultations with local communities were confined to three provinces (New Ireland, East New Britain, and Madang). Officials from the Department of Environment and Conservation presumably conducted a further round of consultation after they had received the environmental impact statement, and before their minister granted the project’s environment permit in 2009, but there is no public record of this process.

5. The challenge from ‘civil society’

The Solwara 1 project has encountered stiff opposition from a variety of NGOs, including some of those that were consulted during the EIA process. The opponents have been based in several different locations, both inside and outside PNG, and might best be regarded as a coalition of actors speaking to different local, national, regional and global constituencies [42]. While most of these actors regard themselves as representatives of ‘civil society’, some would say that they represent local communities whose members might experience the negative environmental impacts of the project. Some national politicians and public servants have also voiced their opposition to the project in their capacity as state actors.

To judge by the number and length of articles published in PNG’s two national newspapers, the opposition came to a head in the second half of 2012, eighteen months after the Government had issued the mining lease, and then quickly subsided (see Fig. 2).³ However, messages delivered through various social media outlets suggest a more continuous rumbling of discontent through the network established and maintained by some of the key players [43].

Three types of argument have been mounted against the project. The first is a scientific argument based on the precautionary principle [44], which says that deep sea mining should be prohibited until there is greater knowledge of its possible environmental impacts. The second is a religious argument that makes a more mysterious appeal to Christian values, despite the lack of any reference to deep sea mining in either the Old or the New Testament. The third argument relies on the principle of free, prior and informed consent, as embodied in the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP). Although these three lines of argument have been combined in various ways, it is the third that has the clearest bearing on the presence or absence of a social licence if that is to be construed as a licence granted by local communities. The question thus posed is which indigenous communities in PNG should have been given the right to grant or withhold their free, prior and informed consent to this particular project.

Some government and company actors might say that the question makes no sense because the vast majority of PNG’s population count themselves as ‘customary landowners’, so there are no indigenous minorities. Furthermore, even if PNG has an indigenous majority, most government and company actors would still say that the question makes no sense if the seabed has no customary owners. Opponents of

(footnote continued)

for Namatanai District in the same year. Byron was appointed as Minister for Mining in the National Government in 2011, which added the dynamics of a family relationship to negotiations between the two levels of government.

³ The most plausible explanation for this outburst of publicity is a series of Supreme Court decisions, in the second half of 2011, which effectively put an end to attempts by a group of community and social actors to prevent the Ramu nickel mine in Madang Province from adopting the practice of deep sea tailings disposal.

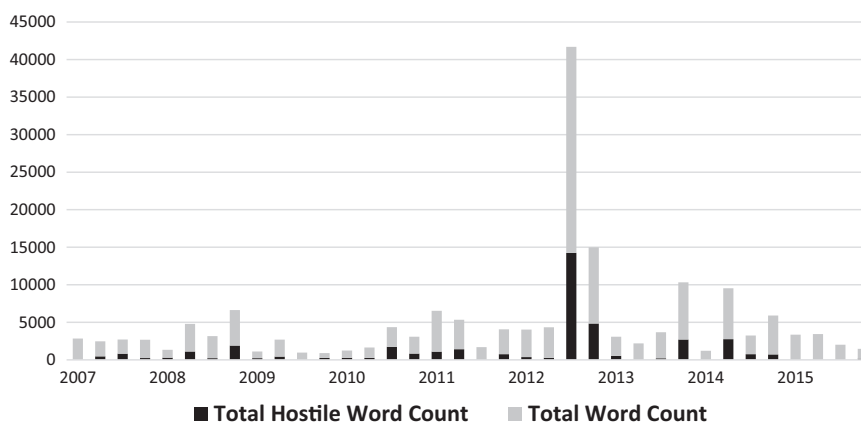


Fig. 2. Quarterly trends in press coverage of deep sea mining in PNG, 2007-15.

the Solwara 1 project, and deep sea mining more broadly, do not accept either of these arguments [45]. Instead they appeal to the requirement contained in article 32 of the UNDRIP which says that: “States shall consult and cooperate in good faith with the indigenous peoples concerned through their own representative institutions in order to obtain their free and informed consent prior to the approval of any project affecting their lands or territories and other resources” [46].

From this point of view, it is not necessary to make any claim about customary ownership of the seabed. All that is required is evidence that a deep sea mine will affect the marine ecosystem services to which the members of (indigenous) coastal communities have customary rights. This is the point at which the precautionary principle comes back into play, since it is difficult to prove in advance that a deep sea mine will not have any negative impact on any population of fish or other marine organisms that have some value to members of coastal communities [47].⁴ But the uncertainty that surrounds the prediction of environmental and social impacts, and the identification of the ecosystem services to which indigenous people have a customary right, is matched by an equivalent uncertainty about the constitution of what the UNDRIP calls ‘representative institutions’.

If the PNG Government were to grant its own citizens an effective right to veto the grant of exploration or development licences for major mining projects, the obvious way to do this would be to amend the provisions of the Mining Act that relate to the conduct of warden’s hearings. However, the PNG Government has not yet ratified the UNDRIP, and despite occasional calls for the ownership of mineral resources to be transferred from the State to the customary owners of the land that lies on top of them [49], the ministers and agencies responsible for regulation of the mining industry have been steadfast in their refusal to grant any legal right of veto, partly because they think that customary landowners already have quite enough power to disrupt the development of major mining projects [50].

The current policy framework in PNG’s mining sector does provide for the establishment of institutions through which customary landowners and members of mine-affected communities can be represented in the negotiation of benefit-sharing agreements, but warden’s hearings have been conducted in the spirit of town hall meetings, where anyone who turns up can voice their own opinion. Since the current policy framework excludes the possibility of customary landowners being represented in the negotiation of a benefit-sharing agreement for a deep sea mining project, it is not at all clear how ‘mine-affected communities’, as opposed to members of the public, could be identified

⁴ This has taken the argument about consent into strange waters, since some of the ecosystem services in question have a peculiar ‘cultural’ quality. This is best exemplified by speculation that a deep sea mine might disturb the sharks that are subject to the customary practice of ‘shark calling’ in some of the coastal communities of New Ireland Province [48].

and represented in a form of warden’s hearing that would conform to the requirements of article 32 of the UNDRIP, even if government regulators were willing to countenance such an idea.

In 2008, one of the bodies established to represent the views of people opposed to the project, the Bismarck Solomon Seas Indigenous Peoples Council,⁵ engaged an American scientist to review the company’s environmental impact statement. He maintained that this document misrepresented the level of community support that was expressed in the regional consultation process, and recommended the establishment of a ‘citizens’ advisory council’ to represent the interests of all stakeholders who might experience the negative environmental impacts of the project, and has since argued that this should be the body from which the company would obtain its social licence [51,52].⁶ In the present context, discussion of this idea has not progressed beyond the point at which company and government actors have both dismissed it as a request for them to fund the establishment of another forum for the opponents of deep sea mining to refuse a social licence for this project.

6. The corporate response

On one hand, Nautilus has been dealing with a government that has taken far too long to amend its policy framework in ways that might clarify the official conception of a social licence for this type of mining operation. On the other hand, it has been confronted with a noisy coalition of interest groups that has done its best to convince a national, regional and global audience that no such licence should be granted. The company’s response to this conundrum has taken several different forms.

One form of response has been the accumulation and dissemination of ‘scientific evidence’ as an antidote to the anxieties expressed by members of the opposition. The whole of the environmental impact statement for the Solwara 1 project [36] was made available on the company’s website after the environment permit had been granted in 2009. This did not exactly satisfy the critics, who professed to find numerous flaws in its construction [51,53], and wanted to know why the company had not been equally forthcoming with the independent review of this document commissioned by the Department of Environment and Conservation before the permit was granted.⁷

More recently, the company has commissioned and disseminated a second study that deals with the problem of environmental impacts in a rather different way, by purporting to show that the value of the

⁵ The circumstances surrounding the formation of this body are explained at <http://www.mpi.org.au/issues/deep-sea-mining/deep-sea-mining-png/>

⁶ This proposal was based on his own experience with the councils established to deal with the environmental impact of the Exxon Valdez oil spill in Alaska.

⁷ The simple answer to this question is that the company had no right to publish a report commissioned by the government.

ecosystem services that would be destroyed by the production of a tonne of copper from the Solwara 1 deposits would be far less than the value of those services that have been or would be destroyed by the production of that amount from a typical terrestrial mining operation [54]. This exercise in ecological economics appears to be aimed at the financial community as much as the scientific community, and would probably not make much sense to the members of any local community in PNG. It would certainly have some appeal in World Bank circles, where this type of environmental accounting has been popular for some time, and is one reason why the World Bank has supported the prospect of deep sea mining in PNG, even while it also supports the application of the precautionary approach [3]. On the other hand, it seems rather unlikely that the PNG Government would forego the prospect of another terrestrial copper mine simply because it had a deep sea mining industry, and once again, the critics have not been impressed by the calculus [55].

The company's approach to the alleviation of environmental anxiety within PNG has taken two forms. The first has consisted of a partnership with an American university to train a select number of students in marine science, so that they can participate in a program to monitor the environmental impact of the mine once it starts to operate. The second has consisted of a continuation of the process of public consultation initiated in 2007, which is now conceived as a form of "engagement with local landowners, the scientific community, government agencies and stakeholder groups to advance the understanding of the natural environment at Solwara 1 and the limited impacts of deep sea mining" [56]. The company estimates that 20,000 people have now participated in some form of 'community engagement' in 46 different locations around the country [56].

None of this would be sufficient to satisfy those critics who continue to demand some evidence of free, prior and informed consent. The failure of the PNG Government to ratify the UNDRIP does not exactly solve this problem for the company because, like most major mining companies, it has made a commitment, "where appropriate", to comply with the Equator Principles, and hence with the Performance Standards of the International Finance Corporation [35]. Since 2012, Performance Standard 7 ('Indigenous Peoples') has included the requirement for consent, as well as consultation, and that is probably one reason why some of the actors in the social corner have made such a fuss about it [26]. The company could take the line that PNG does not contain any indigenous people, but experience with other major resource projects has shown that the bankers do not buy this argument [57,58]. The company could also argue that the latest version of Performance Standard 7 did not apply when the Solwara 1 project was subject to the process of environmental and social impact assessment required by Performance Standard 1, or it could argue that the ongoing program of 'community engagement' does count as a way of securing consent. It is certainly hard to see how the company could produce an 'indigenous peoples plan' for this project, given the level of uncertainty that still surrounds the identification of 'affected communities'.

Company representatives have also decided that they should not just rely on the development forum to produce a social licence from the relevant provincial and local-level governments, but have established separate 'working groups' to negotiate their own agreements with the two provincial governments. These were not intended as alternative benefit-sharing agreements, but as ways to secure political ownership of the company's plans to fund a number of community development initiatives in each province [59,60]. The establishment of a 'community development fund' was promised as a sort of mitigation measure in the environmental impact statement for the Solwara 1 project. There it was stated that Nautilus would pay two kina (about 0.75 US cents) into this fund for each tonne of ore that it extracts from the seabed, and community requests to access this fund would be assessed by a committee comprising "provincial government, church, industry and PNG-based NGO groups" [36]. While critics have complained that this

is a paltry sum when compared to the total value of production [51], the company's latest annual report states that it has already started to spend some money on its community development program while it awaits the delivery of its mining equipment [56].

7. The coastal area of benefit

For all the efforts documented in the 'corporate social responsibility' sections of its annual reports, Nautilus still lacked a single 'local community' from which it could claim to have obtained a social licence, even if this was not a community of 'project area landowners', or even a 'mine-affected' community in the conventional sense of that term. The solution to this particular problem was to produce an artificial community that has come to be known as the 'coastal area of benefit' (CAB).

In the latest (and most likely final) draft of the Offshore Mining Policy (OMP), the CAB is defined as "[t]he closest LLG ward to the nearest landward boundary of a Mining Lease together with three adjacent coastal LLG wards in both directions along the coastline". In the case of the Solwara 1 project, the closest local-level government (LLG) ward is Rasirik in the Namatanai Rural LLG area. Four of the other wards in the CAB belong to the same LLG area, while two others belong to the Sentral Niu Ailan ('Central New Ireland') Rural LLG area. In 2011, the national census counted a total of 7736 people resident in these seven wards. It is not clear who first came up with the idea of defining the local community in this way, but company personnel certainly played a key role [61,62].

A 2013 draft of the OMP described the CAB as an entity that would be represented in the development forum by its 'recognised leaders', but did not say how its boundaries would be defined. It also said that all of the royalties from a deep sea mine would be used to fund "marine research and other State-approved projects" within this area, and thus implied that no share of the royalties would be transferred to the host provincial government(s) or LLG(s). In this draft of the policy, a host provincial government would not even be represented in the development forum. However, this draft seems to have been overtaken by the progress of negotiations between the corporate and state actors involved in the Solwara 1 project. The New Ireland 'working group' was formally established by means of an agreement between provincial government and Nautilus representatives in July 2013 [61], and the negotiation of a benefit-sharing agreement between the National Government and the two provincial governments was 'recommended' in October that year [62]. It was at this juncture that the National Government proposed to allocate 60% of the royalties to New Ireland and 40% to East New Britain [63]. In December, the seven wards that now belong to the CAB received their first visit from a delegation comprising national and provincial government officials along with Nautilus personnel [64].

In August 2015, the Provincial Governor, Sir Julius Chan, was quoted as saying that the people of the two LLG areas were now to be treated "as if they were landowners", and this would mean that "we will direct 20 per cent of the royalties to the seven wards adjacent to the area in which the project will be implemented" [65]. In the same statement, he implied that this arrangement would compensate for the fact that the National Government had issued the mining licence to Nautilus "without the people's consent".

The latest draft of the OMP does indeed say that the population of the CAB shall be entitled to benefits whose value is equivalent to 20% of the royalties collected by the National Government. In this respect, the newly constructed local community has become a mirror image of the landowning community whose members are already entitled to 20% of the royalties collected from a terrestrial mining project under the terms of the Mining Act. Since all members of the new community are resident in New Ireland, rather than East New Britain, the implication is that the balance of the 'royalty benefit' will be shared equally between the two provincial governments.

While the latest draft of the OMP acknowledges the need for “an effective and tangible benefit distribution and participation mechanism” for LLGs, as well as provincial governments, it seems to share the assumption made by Sir Julius that LLGs will not be beneficiaries in their own right. In that case, it is not clear how the population of the CAB is meant to be represented in the development forum, and if it is represented there, whether this means that the LLG has no other form of representation.

The five wards in the Namatanai LLG area accounted for 22% of its total population in 2011, while the two wards in the Sentral Niu Ailan LLG area accounted for only 9% of its total population. It is also worth noting that one of these two wards is actually further (as the crow flies) from Rasirik ward than one of the wards in the Namatanai area that is not counted as part of the CAB. People resident in one of the council wards that lies just outside the CAB have some reason to complain about the arbitrary nature of its definition, especially in light of the fact that people living inside it are not officially recognised as either ‘project area landowners’ or as people who will jointly (and exclusively) experience the negative impacts of the project.⁸

It is not hard to see why this artificial local community has been constructed as the entity that will receive the benefits that would be earmarked for local landowners and their LLG under a typical benefit-sharing agreement for a terrestrial mining project. It is a matter of time as much as a question of space. Since the Solwara 1 project and its successors will each have an operational life of only two or three years, the benefit stream will be correspondingly truncated. If it were designed to reach the whole population of one or two LLG areas, its effect on local livelihoods would be diluted to the point at which the prospect of receiving it might not create the required sense of ‘project ownership’ on the part of the recipients.

On the other hand, the artificial nature of this local community is partly acknowledged by the stipulation made in the current draft policy that there will be no “[d]irect cash payments of mineral royalties to individuals or associations”. The customary owners of mining leases on land are entitled to receive such payments precisely because they are landowners. But if the local-level royalty benefit is to take the form of ‘community development projects’, it is unlikely that two LLGs could be entrusted with the task of ensuring that the benefit is confined to a minority of their respective populations. Although the current policy does not touch on this issue, it would make more sense for Nautilus to pay the money directly into the community development fund that it has already established, and deduct this amount from the royalties owed to the National Government. In that case, it would become a sort of ‘royalty credit’, rather like the tax credit that mining companies can already claim by funding local infrastructure. And in that case, the company’s control over its expenditure would add value to the social licence that it wants to secure from the beneficiaries.

8. Conclusion

It is clearly difficult for Nautilus or any other mining company to obtain and maintain a social licence for a deep sea mine, partly because of the physical separation of the mineral deposit from anything that might be construed as a ‘local community’, and partly because of the way in which the very concept of a ‘social licence’ has come to be construed by the different actors involved in the negotiation of conventional mining projects on land. The second difficulty has taken a particular form in PNG because of the way that the national policy framework has created a specific type of negotiation space around terrestrial mining projects, and the National Government has struggled to adapt this framework to a new set of circumstances. However, the

same issues are likely to arise in other jurisdictions, regardless of any previous experience in the negotiation of big mining projects, because this negotiation space is shaped by a number of other forces aside from the policies of host governments. Company actors can bend this shape in certain directions that suit their own perceived need for a social licence, but other actors can bend it in other directions that make it harder for them to satisfy this need. Even if some sort of settlement can be negotiated in respect of the world’s first deep sea mine, it may still fail to constitute a precedent that will make it any easier to prove the existence of ‘community support’ for those that follow.

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References

- [1] Cardno, *An Assessment of the Costs and Benefits of Mining Deep-sea Minerals in the Pacific Island Region: Deep-sea Mining Cost-benefit Analysis*, Pacific Community, Suva, 2016.
- [2] S.P.C. Pacific-ACP, *states regional legislative and regulatory framework for deep sea minerals exploration and exploitation 111*, SPC (SOPAC Division Published Report, Suva, 2012).
- [3] World Bank, *Precautionary Management of Deep Sea Mining Potential in Pacific Island Countries*. World Bank, Washington (DC) 2016.
- [4] L. Danielson, *Architecture for Change: An Account of the Mining, Minerals and Sustainable Development Project*, Global Public Policy Institute, Berlin, 2006.
- [5] C. Filer, J. Burton, G. Banks, *The fragmentation of responsibilities in the Melanesian mining sector*, in: C. O’Faircheallaigh, S. Ali (Eds.), *Earth Matters: Indigenous Peoples, the Extractive Industries and Corporate Social Responsibility*, Greenleaf Publishing, London, 2008, pp. 163–179.
- [6] H.S. Dashwood, *The Rise of Global Corporate Social Responsibility: Mining and the Spread of Global Norms*, Cambridge University Press, Cambridge, 2013.
- [7] J.R. Owen, D. Kemp, *Social licence and mining: a critical perspective*, *Resour. Policy* 38 (2013) 29–35.
- [8] D. Franks, *Mountain Movers: Mining, Sustainability and the Agents of Change*, Routledge, London, 2015.
- [9] I. Thomson, R.G. Boutilier, *Social license to operate*, in: P. Darling (Ed.), *SME Mining Engineering Handbook 1*, Society for Mining, Metallurgy and Exploration, Littleton (CO), 2011 (1779–96).
- [10] J. Prno, D.S. Slocombe, *Exploring the origins of ‘social licence to operate’ in the mining sector: perspectives from governance and sustainability theories*, *Resour. Policy* 37 (2012) 346–357.
- [11] E. Raufflet, S. Baba, C. Perras, N. Delannon, *Social licence*, in: S.O. Idowu, N. Capaldi, L. Zu, A. Das Gupta (Eds.), *Encyclopedia of Corporate Social Responsibility*, Springer, Heidelberg, 2013, pp. 2228–2233.
- [12] R.G. Boutilier, *Frequently asked questions about the social licence to operate*, *Impact Assess. Proj. Apprais.* 32 (2014) 263–272.
- [13] K. Moffat, A. Zhang, *The paths to social licence to operate: an integrative model explaining community acceptance of mining*, *Resour. Policy* 39 (2014) 61–70.
- [14] R. Parsons, J. Lacey, K. Moffat, *Maintaining legitimacy of a contested practice: how the minerals industry understands its ‘social licence to operate’*, *Resour. Policy* 41 (2014) 83–90.
- [15] J. Syn, *The social license: empowering communities and a better way forward*, *Soc. Epistemol.* 28 (2014) 318–339.
- [16] J. Elkington, *Cannibals with Forks: The Triple Bottom Line of 21st Century business*, Capstone, Oxford, 1997.
- [17] International Institute for Environment and Development and World Business Council for Sustainable Development, *Breaking New Ground: Mining, Minerals, and Sustainable Development*, Earthscan, London, 2002.
- [18] C. Ballard, G. Banks, *Resource wars: the anthropology of mining*, *Annu. Rev. Anthropol.* 32 (2003) 287–313.
- [19] N. Gunningham, R.A. Kagan, D. Thornton, *Shades of Green: Business, Regulation, and Environment*, Stanford University Press, Stanford (CA), 2003.
- [20] M.L. Dare, J. Schirmer, F. Vanclay, *Community engagement and social licence to operate*, *Impact Assess. Proj. Apprais.* 32 (2014) 188–197.
- [21] F. Vanclay, *The triple bottom line and impact assessment: how do TBL, EIA, SIA, sea and EMS relate to each other?*, *J. Environ. Assess. Policy Manag.* 6 (2004) 265–288.
- [22] R. Parsons, K. Moffat, *Constructing the meaning of social licence*, *Soc. Epistemol.* 28 (2014) 340–363.
- [23] J. Morrison, *The Social License: How to Keep Your Organization Legitimate*, Palgrave Macmillan, Basingstoke, 2014.
- [24] S. Wheeler, *Global production, CSR and human rights: the courts of public opinion*

⁸ Given the possibility that this way of defining the CAB could produce an even more peculiar, or less equitable, result in another part of the country, the current draft policy allows the licence-holder to negotiate an alternative definition with the relevant provincial government.

- and the social licence to operate, *Int. J. Hum. Rights* 19 (2015) 757–778.
- [25] Equator Principles, *The Equator Principles June 2013: A Financial Industry Benchmark for Determining, Assessing and Managing Environmental and Social Risk in Projects*. (<http://www.equator-principles.com/index.php/ep3>).
- [26] International Finance Corporation, *IFC Performance Standards on Environmental and Social Sustainability: Effective January 1, 2012*, IFC, Washington (DC), 2012.
- [27] S. Kirsch, *Mining Capitalism: The Relationship Between Corporations and Their Critics*, University of California Press, Oakland (CA), 2014.
- [28] S.A. Joyce, M. MacFarlane, *Social Impact Assessment in the Mining Industry: Current Situation and Future Directions*. Working Paper 46, Mining, Minerals and Sustainable Development Project, London, 2001.
- [29] S. Bice, K. Moffatt, *Social licence to operate and impact assessment*, *Impact Assess. Proj. Apprais.* 32 (2014) 257–262.
- [30] D. Rajak, *In Good Company: An Anatomy of Corporate Social Responsibility*, Stanford University Press, Stanford (CA), 2011.
- [31] A. Golub, *Leviathans at the Gold Mine: Creating Indigenous and Corporate Actors in Papua New Guinea*, Duke University Press, Durham (NC), 2014.
- [32] M. Welker, *Enacting the Corporation: an American Mining Firm in Post-authoritarian Indonesia*, University of California Press, Berkeley, 2014.
- [33] N. Gunningham, R.A. Kagan, D. Thornton, *Social license and environmental protection: why businesses go beyond compliance*, *Law Soc. Inq.* 29 (2004) 307–341.
- [34] C. Filer, D. Henton, R. Jackson, *Landowner Compensation in Papua New Guinea's Mining and Petroleum Sectors*, PNG Chamber of Mines and Petroleum, Port Moresby, 2000.
- [35] C. Filer, *Development forum in Papua new guinea: upsides and downsides*, *J. Energy Nat. Resour. Law* 26 (2008) 120–150.
- [36] Coffey Natural Systems, *Environmental Impact Statement: Solwara 1 Project*. Brisbane: Coffey Natural Systems for Nautilus Minerals Niugini, 2008.
- [37] P. Samar, *Managing Director, PNG Mineral Resources Authority, personal communication*, September, 2015.
- [38] I. Nicholas, *Chan and NIP team call for change*, *National*, 30 April, 2009.
- [39] E. Kuamin, *Sir Julius condemns seabed mining*, *National*, 13 August, 2010.
- [40] Anon, *Sir Julius remains steadfast*, *National*, 14 September, 2012.
- [41] Anon, *Joint group to oversee Solwara 1*, *National*, 18 July 2013.
- [42] Deep Sea Mining Campaign, Earthworks, Mining Watch Canada, Oasis Earth, Mineral Policy Institute. *Submission to the International Seabed Authority on the Report to ISA members and stakeholders: Developing a Regulatory Framework for Mineral Exploitation in the Area*, 2015.
- [43] C. Roche, S. Bice, *Anticipating social and community impacts of deep sea mining*, in: E. Baker, Y. Beaudoin (Eds.), *Deep Sea Minerals and the Green Economy*, Secretariat of the Pacific Community, Suva, 2013, pp. 59–80.
- [44] World Commission on the Ethics of Scientific Knowledge and Technology. *The Precautionary Principle*. Paris: United Nations Educational, Scientific and Cultural Organization, 2005.
- [45] Blue Ocean Law, *An Assessment of the Secretariat of the Pacific Community Regional Legislative and Regulatory Framework for Deep Sea Minerals Exploration and Exploitation*, Blue Ocean Law, Guam, 2016.
- [46] AGNU, A/RES/61/295, 13 September 2007. *United Nations Declaration on the Rights of Indigenous Peoples*.
- [47] J.L. Luick, *Physical Oceanographic Assessment of the Nautilus Environmental Impact Statement for the Solwara 1 Project*. An Independent Review, Austides Consulting for Deep Sea Mining Campaign, Adelaide, 2012.
- [48] J. Chandler, *Mining the abyss*. *The Global Mail*. 6 December 2013.
- [49] P. Donigi, *Lifting the Veil that Shrouds Papua New Guinea*, UA Business Brokerage, Boroko, 2010.
- [50] C. Filer, *The role of land-owning communities in Papua New Guinea's mineral policy framework*, in: E. Bastida, T. Wälde, J. Warden-Fernández (Eds.), *International and Comparative Mineral Law and Policy: Trends and Prospects*, Kluwer Law International, The Hague, 2005, pp. 903–932.
- [51] R. Steiner, *Independent Review of the Environmental Impact Statement for the Proposed Nautilus Minerals Solwara 1 Seabed Mining Project*, Papua New Guinea. Report to the Bismarck-Solomon Seas Indigenous Peoples Council, 2009.
- [52] R. Steiner, *Perspectives Citizens' Advisory Councils to Enhance Civil Society Oversight of Resource Industries (Perspectives 10)*, United Nations Environment Programme, Nairobi, 2013.
- [53] H. Rosenbaum, *Out of Our Depth: Mining the Ocean Floor in Papua New Guinea*, Deep Sea Mining Campaign, Melbourne, 2011.
- [54] D. Batker, R. Schmidt, *Environmental and Social Benchmarking Analysis of the Nautilus Minerals Inc. Solwara 1 Project*, Earth Economics, Tacoma (WA), 2015.
- [55] H. Rosenbaum, F. Grey, *Accountability Zero: A Critique of the Nautilus Minerals Environmental and Social Benchmarking Analysis of the Solwara 1 Project*, Deep Sea Mining Campaign, Melbourne, 2015.
- [56] Nautilus Minerals. *Annual Report 2014: Forging Ahead*. Nautilus Minerals Inc., Toronto, 2015.
- [57] Asian Development Bank, *Papua New Guinea: preparing the PNG Gas Project*, Asian Development Bank, Technical Assistance Report, Manila, 2005.
- [58] World Bank, *Country Partnership Strategy for the Independent State of Papua New Guinea for the Period FY2013–2016*, World Bank, Washington (DC), 2012.
- [59] S. Mauludu, *Nautilus deals with two govts (7 August)* *National* (2014) (7 August).
- [60] Anon, *Nautilus committed to helping provinces*, *National*, 9 June, 2015.
- [61] Adam Wright, *Vice-President – PNG operations*, *Naut. Miner., Pers. Commun.* (2015) (December).
- [62] Anon, *Joint group to oversee Solwara 1*, *National*, 18 July 2013.
- [63] Anon, *Solwara 1 project recommences MoA talks*, *Post-Courier*, 16 October 2013.
- [64] Anon, *Nautilus visits New Ireland villages*, *Post-Courier*, 6 December 2013.
- [65] Anon, *Project to benefit people*, *National*, 11 August 2015.