

# Bent Roads

*Exploring the Impact of  
Development Projects in Two  
Communities in Myanmar*



FORUM-ASIA



This report was made possible through the collaboration between the Karen Peace Support Network (KPSN) and the Asian Forum for Human Rights and Development (FORUM-ASIA)

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# Acknowledgements

FORUM-ASIA would like to firstly thank KPSN for your guidance in developing this research and resilience in following through with it, despite incredibly challenging circumstances.

KPSN and FORUM-ASIA would also like to express sincere appreciation to the people and organisations who agreed to be a part of this research and dedicated time and energy to answer questions about their lives and livelihoods. A big thank you also goes to local leaders and community members for actively participating in this process. We truly value your contributions to this report and your trust in us.

We would like to express our gratitude to the fact-finding mission (FFM) team on the ground who collected the data presented in this research. Your strength and courage to continue this research amidst uncertainty made this report what it is.

Lastly, thank you Brot für die Welt for the financial support that has enabled this research.

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**The Asian Forum for Human Rights and Development (FORUM-ASIA)** is a network of 85 member organisations across 23 countries, mainly in Asia. Founded in 1991, FORUM-ASIA works to strengthen movements for human rights and sustainable development through research, advocacy, capacity development and solidarity actions in Asia and beyond.

It has consultative status with the United Nations Economic and Social Council, and consultative relationship with the ASEAN Intergovernmental Commission on Human Rights. The FORUM-ASIA Secretariat is based in Bangkok, with offices in Jakarta, Geneva and Kathmandu.



**Karen Peace Support Network (KPSN)** is the largest Karen civil society network consisting of 30 organisations in Burma and Thailand. Its members have been providing support for vulnerable people and communities in this conflict-torn region for decades, striving to empower local communities, building transparent and accountable institutions, and helping to create a sustainable and equitable peace in Burma.

# Foreword

KPSN is a network of Karen CSOs which aims to raise awareness of human rights issues among Karen communities and build their capacity to advocate for and realise their rights. Successive centralised military-led governments, the current military regime and lack of accountability and transparency in so-called extractive 'development' projects threaten the human rights of Karen communities.

This report outlines the impacts of sand and gravel mining from a river near two Karen villages for bridge and road construction in the area. This is in no way a large-scale development undertaking; however, the research shines a light on how irresponsible projects can negatively affect both the environment and local communities. Particularly at a time when attention is focussed on the State Administration Council (SAC) and conflict, this report highlights some of the intersecting challenges facing ethnic nationalities and Indigenous Peoples of Myanmar. In Myanmar, 'development' projects like this one have side-lined the voices of local communities, failed to provide meaningful benefits for the affected communities, often worsening the economic sustainability of community livelihoods, and recurrently come hand-in-hand with militarisation.

Most importantly, this report illustrates the importance of raising awareness of human rights, the environment and the right to Free, Prior and Informed Consent (FPIC) at the local level. We hope that it will illuminate some of the challenges faced not only by the two villages at the centre of the study, but other communities across Myanmar experiencing top-down irresponsible development within the context of a brutal military regime that acts with impunity, both in conflict and in business, as well.

We hope that this report will encourage the local and international community alike to not only listen to, but to hear these voices that are frequently silenced, and take action to loudly oppose the illegal SAC military regime, call for corporate accountability, and advocate for decentralised governance whereby people can collectively decide what development will look like in relation to their communities.

# Foreword

FORUM-ASIA strives to be an ally to individuals and organisations working to protect and promote human rights in their communities and countries. As a network organisation, we undertake research, capacity building and advocacy in close collaboration with our members and partners. Our goal is to shed light on issues that impact marginalised and vulnerable people and communities fighting for their rights in a system designed to work against them.

This study of the impact of extraction and construction activities in Win Yay Township in Myanmar has taken place under extremely trying circumstances. The research team went to great lengths to unearth the testimonies and experiences of residents bearing the brunt of exploitative investment projects designed to further vested interests; projects that promise greater economic outcomes for all, but benefit only a few in reality. It is against this backdrop of a deeply fractured nation in crisis that this report highlights the effect of policies and practices with no checks and balances on the lives of common people just trying to survive and make ends meet.

We hope that this report offers a glimpse into the harsh realities of ostensible 'development' projects in small communities in remote areas, where people are often exploited away from the prying eyes of the international community. Specifically, for a country like Myanmar, where the magnitude of the current crisis often makes us forget the day-to-day lives of the people stuck in the middle, I hope this report encourages you to interrogate such projects in the future with a simple question: development for whom and at what cost?

**Omer Dawoodjee**  
**Interim Executive Director,**  
**FORUM-ASIA**

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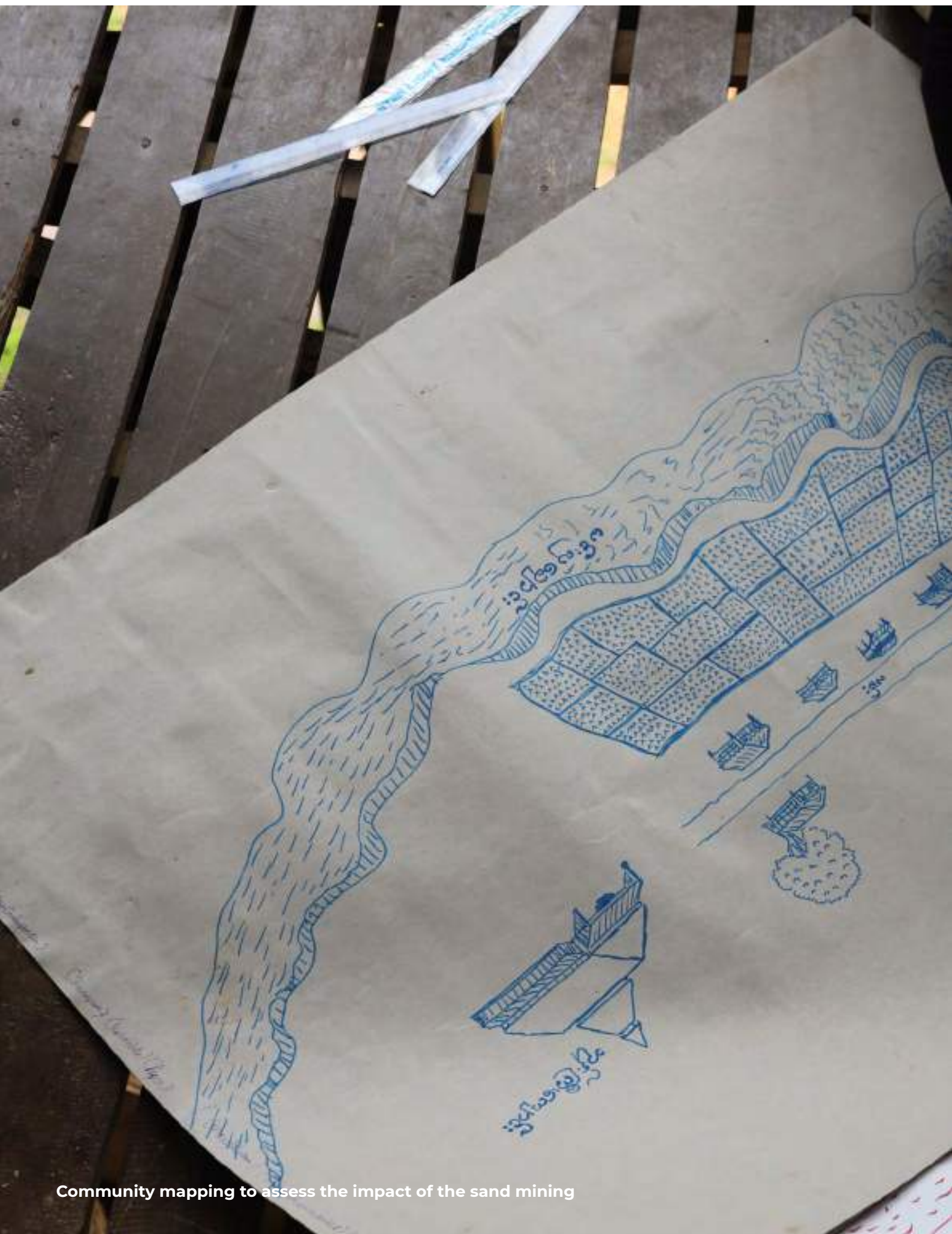
**60ft bridge constructed by companies using some sand and gravel from the river, with the labour of local community members**





# Introduction

This report outlines the findings from community-based research on gravel extraction and road building in two villages in Win Yay Township, Dooplaya District, which is situated in the Karen National Union-controlled area of Myanmar. Based on qualitative research, it outlines the environmental and socioeconomic impacts of extraction and construction projects on the two communities, whilst casting a wider net at investment projects in Myanmar and the human rights situation there. The purpose of this research is to better understand these project-affected communities in order to plan interventions and capacity building, as well as to contribute to making visible the often invisibilised struggles of rural, ethnic and indigenous peoples in Burma.



Community mapping to assess the impact of the sand mining



# Methodology

On 25 July 2022, a consultation meeting was held to seek consent from community members and leaders from the two villages we had selected for the study. The research was carried out from 30 July to 13 August 2022, led by a team of three field research facilitators and 10 community researchers from the project-affected communities. These community researchers were trained on basic research principles and skills in a five-day training workshop before the fact-finding mission (FFM). The research team also carried out a risk assessment.

For this study, we conducted primary and secondary data collection. Primary research consisted of semi-structured interviews and focus group discussions (FGDs). A total of 12 community members were interviewed (eight men and four women). The respondents were selected via purposeful sampling to get the data we needed for this study. This means that they were chosen based on their relevant knowledge and experience: farmers, fisherfolk, locals who have participated in extracting gravel and sand, ordinary villagers, local and district authority representatives, people with knowledge of fishing and farming, and those who experienced the historical floods of 1970, 1998 and 2018. Almost all interviews were conducted in the interviewees' homes and the village hall.

Purposive Sampling was sometimes inevitable, given the context of conflict, especially since the research team was – as much as possible – responsible for limiting risks to villagers and researchers. Random sampling, for example, may have had security repercussions for those involved. Interviews and FGDs were carried out in Karen and Burmese, depending on respondents' language preferences.

The FGDs were carried out in Village A from 31 July to 3 August 2022. A total of 81 people (split up into 12 groups) participated. The community research facilitators organised three discussions per day over the four days. Each FGD had six or seven participants.

In Village B, 57 people joined in the FGDs, which took place from 4 August to 9 August 2022. Over the five days, there were three FGDs held per day, each with five to six participants. On the last day, one discussion was held with elderly participants who had joined in the days prior. The purpose of this FGD was to get more insight into the village's history.



The research in both locations observed the following ethical guidelines:

1. Non-disclosure of interviewees' names who asked for anonymity for security reasons
2. Non-disclosure of any materials related to the preparation and conduction of the research on social media for respondents' safety
3. Obtaining consent from respondents for interviews, photographs, video and audio recordings, and publication of names

The names of the villages are not mentioned in this report due to security concerns.

## Methodological limitations

Several limitations were considered when planning this study, and which must be taken into account when analysing the findings. Following the military coup in February 2021, the political environment in Myanmar has been such that locals fear persecution, attacks and other human rights abuses were they to speak out or perceived to be speaking against the junta. Karen State

and Mon State are presently the sites of armed conflict, including the areas surrounding Village A and Village B. For this reason, travelling to the project site was a significant challenge. However, in coordination with local Karen National Union (KNU) authorities, our field staff and photographer were able to travel to the area safely. The risks to everyone involved in this research, therefore, needed to be carefully considered.

Due to the challenges and perils involved in engaging directly with companies or the central government, it was difficult to obtain exact dates of events in the construction project timeline. Neither did the residents at the time see any value in keeping records of their interactions with the companies or their actions in the community. Therefore, it was not possible to carry out scientific or quantitative data collection on the impacts of the construction work on the river and watershed area because we had to keep a low profile when carrying out the research. Similarly, it was not safe to interview corporate stakeholders or government officials. The result is that the scope of this study is limited to qualitative community-based research regarding the impacts, perceptions and viewpoints of the project-affected communities.





**Local community**



# Background

Myanmar (formerly Burma) is located in Southeast Asia, bordering China to the north, Laos and Thailand to the east, Bangladesh and India to the west and the Andaman Sea and the Bay of Bengal to the south.<sup>1</sup> The country is divided into two main regions: lower Myanmar (the coastal region) and upper Myanmar (the interior region).<sup>2</sup> The northern part is made up of mountains while the rest of the country is filled with rivers.<sup>3</sup>

Comprising seven states, seven regions and one union territory,<sup>4</sup> Myanmar's total area spans 676,578 square kilometres, making it the second-largest country in Southeast Asia.<sup>5</sup> The population currently stands at 55 million<sup>6</sup> with a population density of 84 people per square kilometre.<sup>7</sup> Women make up 51.8 per cent of the total population.<sup>8</sup> The country's primarily rural population accounts for 70 per cent of the total population.<sup>9</sup>

Buddhism is the dominant religion in Myanmar, with nearly 90 per cent of the population identifying with it.<sup>10</sup> Myanmar's unique geographical

- 1 Aung-Thwin, M. A., Aung, M. H., & Steinberg, D. I. (2022). Myanmar. In Encyclopedia Britannica. <https://www.britannica.com/place/Myanmar>
- 2 About Myanmar – ministry of hotels & tourism Myanmar. (n.d.). [Gov.Mm](https://tourism.gov.mm/about-myanmar/). Retrieved 6 December 2022, from <https://tourism.gov.mm/about-myanmar/>
- 3 Ibid
- 4 Myanmar maps & facts. (2021, February 24). WorldAtlas. <https://www.worldatlas.com/maps/myanmar>
- 5 Surface area (sq. km) - East Asia & Pacific. (n.d.). [Worldbank.org](https://data.worldbank.org/indicator/AG.SRF.TOTL.K2?locations=Z4&most_recent_value_desc=true). Retrieved 6 December 2022, from [https://data.worldbank.org/indicator/AG.SRF.TOTL.K2?locations=Z4&most\\_recent\\_value\\_desc=true](https://data.worldbank.org/indicator/AG.SRF.TOTL.K2?locations=Z4&most_recent_value_desc=true)
- 6 Myanmar population (2022) - worldometer. (n.d.). Worldometers.Info. Retrieved 6 December 2022, from <https://www.worldometers.info/world-population/myanmar-population/>
- 7 Population density (people per sq. km of land area) - Myanmar. (n.d.). [Worldbank.org](https://data.worldbank.org/indicator/EN.POP.DNST?locations=MM). Retrieved 6 December 2022, from <https://data.worldbank.org/indicator/EN.POP.DNST?locations=MM>
- 8 Population, female (% of total population) - Myanmar. (n.d.). [Worldbank.org](https://data.worldbank.org/indicator/SP.POP.TOTL.FE.ZS?locations=MM). Retrieved 6 December 2022, from <https://data.worldbank.org/indicator/SP.POP.TOTL.FE.ZS?locations=MM>
- 9 Country profile. (2016, June 9). UNFPA Myanmar. <https://myanmar.unfpa.org/en/country-profile-0>
- 10 Cheesman, N., & Farrelly, N. (Eds.). (2016). Conflict in Myanmar: War, politics, religion. Iseas Publishing. <https://doi.org/10.1355/9789814695879>





positioning has long attracted settlers from neighbouring countries, who are said to account for more than one-third of the country's population.<sup>11</sup> Its rich ethnic diversity includes 135 officially recognised ethnic groups.<sup>12</sup> The Burmans ('Bamars') are the largest (68 per cent), followed by the Shan (9 per cent), Karen (7 per cent), Rakhine (4 per cent), Chinese (3 per cent), Indians (2 per cent), Mon (2 per cent), and others (5 per cent).<sup>13</sup> While the official language of the country is Burmese, there are more than 100 spoken languages, most of which are classified under the Tibetan-Burmese family of languages.<sup>14</sup> The majority of the residents of Dooطلا District are of Karen ethnicity and the main languages spoken there are Karen and Burmese.

Myanmar has a tropical monsoon climate consisting of three main seasons: the hot and dry inter-monsoonal season, the rainy southwest monsoon season and the cool dry northeast monsoon season.<sup>15</sup>

## Political context

Myanmar's political history is complex and nuanced and has repeatedly lent itself to international debate over the years. The Third Anglo-Burmese War and subsequent colonisation by the British in 1885 was a significant turning point in the history of Myanmar. British rule changed the fundamental framework of the country, bringing an end to a dynastic system of governance. Myanmar's first constitution as an independent country was drafted in 1947, shortly before it officially declared independence from Britain in 1948.<sup>16</sup> It then became a parliamentary democracy called the 'The Union of Burma'.<sup>17</sup>

However, democracy lasted only until 1962 when a military coup, led by General Ne Win, took power and turned the country into a single-party military state for the next 26 years.<sup>18</sup> In 1974, General Ne

11 Myanmar. (2015, June 19). Minority Rights Group. <https://minorityrights.org/country/myanmarburma/>

12 Ibid

13 Burma. (n.d.). [CIA.gov](https://www.cia.gov/the-world-factbook/countries/burma/). Retrieved 6 December 2022, from <https://www.cia.gov/the-world-factbook/countries/burma/>

14 Myanmar. (2015, June 19). Minority Rights Group. <https://minorityrights.org/country/myanmarburma>

15 Myanmar - climatology. (n.d.). [Worldbank.org](https://climateknowledgeportal.worldbank.org/country/myanmar/climate-data-historical). Retrieved December 6, 2022, from <https://climateknowledgeportal.worldbank.org/country/myanmar/climate-data-historical>

16 The Constitution of the Union of Burma, (1947). <https://www.ilo.org/dyn/natlex/docs/ELECTRONIC/79573/85699/F1436085708/MMR79573.pdf>

17 Maizland, L. (2021, February 9). Myanmar's troubled history: Coups, military rule, and ethnic conflict. Council on Foreign Relations. <https://www.cfr.org/background/yanmar-history-coup-military-rule-ethnic-conflict-rohingya>

18 Myanmar - since independence. (n.d.). In Encyclopedia Britannica.

Win instituted a new constitution, and the years that followed were marked by economic decline, corruption and food scarcity.<sup>19</sup> This prompted large-scale protests in 1988, where the military violently cracked down on protesters, killing 5,000 people and displacing many more.<sup>20</sup> In 1989, a new military regime changed the country's name from Burma to Myanmar and the capital from Rangoon to Yangon.

During this period, Aung San Suu Kyi started gaining popularity and founded the National League for Democracy (NLD).<sup>21</sup> In 1990, as a result of international pressure, the military held elections, which the NLD won by a landslide.<sup>22</sup> Despite a clear win, the military refused to acknowledge the results and placed Aung San Suu Kyi under house arrest, where she remained, on and off, for the next two decades.<sup>23</sup> In 1997, Myanmar joined the Association of Southeast Asian Nations (ASEAN).<sup>24</sup> In 2006, still under military rule, the capital was moved to Naypyidaw, a city built solely to serve as the administrative centre.<sup>25</sup> Throughout this time, the international community continued to criticise the military's persecution of minority groups.

In 2007, following the military's decision to raise oil and fuel prices in an already impoverished country, Buddhist monks took to the streets in protest, leading to the 'Saffron Revolution', where dozens of activists were brutally attacked while exercising their right to peaceful protests.<sup>26</sup> Despite the Revolution being short-lived, it had significant consequences, with the military junta bowing to international pressure and loosening some controls.<sup>27</sup> In 2008, amidst devastation caused by Cyclone Nargis, yet another constitution was adopted through a controversial

<https://www.britannica.com/place/Myanmar/Since-independence>

19 Maizland, L. (2021, February 9). Myanmar's troubled history: Coups, military rule, and ethnic conflict. Council on Foreign Relations. <https://www.cfr.org/background/yanmar-history-coup-military-rule-ethnic-conflict-rohingya>

20 Al Jazeera. (2021, February 1). Myanmar: Timeline of a fragile democracy. Al Jazeera. <https://www.aljazeera.com/news/2021/2/1/myanmar-military-rule-to-fragile-democracy>

21 Ibid

22 Ibid

23 Ibid

24 Ibid

25 The Editors of Encyclopedia Britannica. (2010). Nay Pyi Taw. In Encyclopedia Britannica.

26 Saffron Revolution. (n.d.). [Harvard.edu](https://rpl.hds.harvard.edu/faq/saffron-revolution). Retrieved December 6, 2022, from <https://rpl.hds.harvard.edu/faq/saffron-revolution>

27 Maizland, L. (2021, February 9). Myanmar's troubled history: Coups, military rule, and ethnic conflict. Council on Foreign Relations. <https://www.cfr.org/background/yanmar-history-coup-military-rule-ethnic-conflict-rohingya>



**Youth playing in part of the river**

referendum, officially making Myanmar a multi-party democratic state.<sup>28</sup> This constitution is still in force today, and divides the country into seven administrative states, seven regions and one union territory.<sup>29</sup> These are further subdivided into townships, urban wards and village tracts.<sup>30</sup>

Despite the constitution's 'democratic' bearing, it gives the military wide-reaching powers even under civilian rule, including a clause reserving parliamentary seats for the military.<sup>31</sup> In 2010, the

28 Constitution of the Republic of Myanmar, (2008). <https://www.wipo.int/edocs/lexdocs/laws/en/mm/mmm009en.pdf>

29 Myanmar Administrative Structure As per 2008 Constitution. (n.d.). Themimu.Info. Retrieved December 6, 2022, from [https://themimu.info/sites/themimu.info/files/documents/Administrative\\_Structure\\_2008Constitution\\_20Mar2020.pdf](https://themimu.info/sites/themimu.info/files/documents/Administrative_Structure_2008Constitution_20Mar2020.pdf)

30 Ibid

31 BBC NEWS. (2011, April 6). Myanmar profile - timeline

military's proxy Union Solidarity and Development Party (USDP) claimed a landslide election victory, officially paving the way for the dissolution of the military junta,<sup>32</sup> despite reports suggesting that the military maintained behind-the-scenes influence over the government.<sup>33</sup> Thein Sein was sworn in as President, and, during his tenure, some improvements were seen. Political prisoners were given amnesty, peaceful protests were allowed, unionisation was permitted, media censorship was reduced and economic reforms were undertaken

<https://www.bbc.com/news/world-asia-pacific-12992883>

32 Maizland, L. (2021, February 9). Myanmar's troubled history: Coups, military rule, and ethnic conflict. Council on Foreign Relations. <https://www.cfr.org/backgrounder/myanmar-history-coup-military-rule-ethnic-conflict-rohingyahttps>

33 Myanmar - government and society. (n.d.). In Encyclopedia Britannica. <https://www.britannica.com/place/Myanmar/Government-and-society>



to encourage foreign investment.<sup>34</sup>

At around the same time, violent clashes erupted in 2012 in Rakhine State, pitting Rakhine Buddhists against Rohingya Muslims.<sup>35</sup> The state security forces were accused of being complicit in perpetrating violence against the Rohingya Muslims.<sup>36</sup> Anti-Muslim rhetoric was integrated into policies, including mentions of inter-religious marriage, population control and conversion.<sup>37</sup> As a

34 BBC NEWS. (2011, April 6). Myanmar profile – timeline <https://www.bbc.com/news/world-asia-pacific-12992883https>

35 Al Jazeera. (2021, February 1). Myanmar: Timeline of a fragile democracy. <https://www.aljazeera.com/news/2021/2/1/myanmar-military-rule-to-fragile-democracy>

36 Ibid

37 Independence and modern rule (1948–present). (n.d.). [Harvard.edu](https://rpl.hds.harvard.edu/religion-context/country-profiles/myanmar/independence-and-modern-rule-1948%E2%80%93present). Retrieved December 6, 2022, from

result of the repeated persecution of Muslims, the international community, as well as various human rights organisations, labelled this campaign of ethnic cleansing as ‘crimes against humanity.’<sup>38</sup>

It is against this backdrop that in 2015, the Aung San Suu Kyi-backed NLD won the general parliamentary elections, officially ending military domination after 50 years.<sup>39</sup> However, discrimination and violence against the Rohingyas continued.<sup>40</sup> In 2017, a brutal

<https://rpl.hds.harvard.edu/religion-context/country-profiles/myanmar/independence-and-modern-rule-1948%E2%80%93present>

38 “All You Can Do is Pray.” (2013). Human Rights Watch.

39 BBC News. (2011, April 6). Myanmar profile - timeline. <https://www.bbc.com/news/world-asia-pacific-12992883>

40 Independence and modern rule (1948–present). (n.d.). [Harvard.edu](https://rpl.hds.harvard.edu/religion-context/country-profiles/myanmar/independence-and-modern-rule-1948%E2%80%93present). Retrieved December 6, 2022, from

military crackdown in Rakhine State prompted more than 745,000 Rohingyas (including 400,000 children) to flee to neighbouring Bangladesh.<sup>41</sup> That same year, the United Nations Human Rights Council set up an investigation into human rights abuses against the Rohingya.<sup>42</sup> This investigation found that the military had perpetrated genocide and war crimes against Rohingya Muslims.<sup>43</sup> Aung San Suu Kyi failed to punish those responsible for the persecution, and her tenure saw the shrinking of democracy and dissent.<sup>44</sup>

In the 2020 parliamentary elections, the NLD again won by a clear majority,<sup>45</sup> but the military rejected the results, alleging fraud and irregularities.<sup>46</sup> Their appeal for repeat elections was thrown out by the election commission.<sup>47</sup> On 1 February 2021, the Myanmar military seized power in a coup d'état, citing unproven irregularities in the election process.<sup>48</sup> NLD members were detained, and former military officer Myint Swe became acting president while Min Aung Hlaing served as Prime Minister of the illegal military regime.<sup>49</sup> Widespread protests broke out in the country soon after the coup, with people resorting to civil disobedience, leading to violent crackdowns from the military regime, self titled the 'State Administration Council' (SAC).<sup>50</sup> The military's 'campaign on terror' suppressed dissent by raiding homes and entire villages, and arresting anyone suspected of being pro-democracy.<sup>51</sup> More than 15,500 people were detained<sup>52</sup> and 1,500

were killed.<sup>53</sup> In an effort to fight back, politicians, activists, lawmakers and minority groups came together to form a government called the National Unity Government (NUG),<sup>54</sup> which created an armed division called the People's Defence Force (PDF) to take on the junta.<sup>55</sup> By 2022, violent clashes between the military and the PDF were commonplace throughout the country, leading to thousands of civilians fleeing to India and Thailand.<sup>56</sup> In ethnic areas, some PDF groups allied with ethnic armed groups to carry out armed resistance. Armed conflict continues to rage across the country. The SAC routinely carries out human rights abuses, including bombing civilian areas, looting, sexual violence and torture.

The NUG has gradually gained a foothold across the country, with its acting president declaring in September 2022 that the military had lost control of almost half of the country.<sup>57</sup> Internationally, more and more countries are now engaging with and officially recognising the NUG as the legitimate government of Myanmar.<sup>58</sup> At the same time, hundreds of civil society groups have appealed to the UN to stop dealing with the military junta to de-legitimise their power.<sup>59</sup>

## Socio-economic and cultural context

Myanmar's economy is primarily agricultural.<sup>60</sup> The sector accounts for one-third of the country's GDP, 20-30 per cent of its export earnings, and

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[1948%E2%80%93present](#)

- 41 (2022, August 9). Myanmar: Crimes against humanity committed systematically, says UN report. UN News. <https://news.un.org/en/story/2022/08/1124302>
- 42 BBC News. (2011, April 6). Myanmar profile - timeline. <https://www.bbc.com/news/world-asia-pacific-12992883><https://www.bbc.com/news/world-asia-pacific-12992883>
- 43 Ibid
- 44 Roth, K. (2018, December 18). Myanmar. Human Rights Watch. <https://www.hrw.org/world-report/2019/country-chapters/myanmar-burma>
- 45 McKenna, A. (2022). 2021 Myanmar coup d'état. In Encyclopedia Britannica. <https://www.britannica.com/event/2021-Myanmar-coup-d-etat>
- 46 Ibid
- 47 Ibid
- 48 Ratcliffe, R. (2022, September 19). The 2021 Myanmar coup explained in 30 seconds. The Guardian. <https://www.theguardian.com/world/2022/sep/19/myanmar-coup-2021-explained-in-30-seconds>
- 49 McKenna, A. (2022). 2021 Myanmar coup d'état. In Encyclopedia Britannica <https://www.britannica.com/event/2021-Myanmar-coup-d-etat>
- 50 Ibid
- 51 Maizland, L. (2021, February 9). Myanmar's troubled history: Coups, military rule, and ethnic conflict. Council on Foreign Relations. <https://www.cfr.org/backgrounder/myanmar-history-coup-military-rule-ethnic-conflict-rohingyahttps>
- 52 Ratcliffe, R. (2022, September 19). The 2021 Myanmar coup explained in 30 seconds. The Guardian. <https://www.theguardian.com/world/2022/sep/19/myanmar-coup-2021-explained-in-30-seconds>

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[theguardian.com/world/2022/sep/19/myanmar-coup-2021-explained-in-30-seconds](https://www.theguardian.com/world/2022/sep/19/myanmar-coup-2021-explained-in-30-seconds)

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- 56 Ibid
- 57 Payen, C. (2022, May 10). Myanmar's civilian president claims resistance controls nearly half the country. France 24. <https://www.france24.com/en/tv-shows/the-interview/20220510-myanmar-s-civilian-president-claims-resistance-controls-nearly-half-of-country>
- 58 Strangio, S. (n.d.). EU parliament voices support for Myanmar's opposition government. [TheDiplomat.com](https://thediplomat.com/2021/10/eu-parliament-voices-support-for-myanmars-opposition-government/). Retrieved December 6, 2022, from <https://thediplomat.com/2021/10/eu-parliament-voices-support-for-myanmars-opposition-government/>
- 59 Al Jazeera. (2021, February 1). Myanmar: Timeline of a fragile democracy. <https://www.aljazeera.com/news/2021/2/1/myanmar-military-rule-to-fragile-democracy>  
Al Jazeera. (2022, September 23). Myanmar civil society tells UN to stop giving regime 'legitimacy.' Al Jazeera. <https://www.aljazeera.com/news/2022/9/23/myanmar-civil-society-tells-un-to-stop-giving-regime-legitimacy>
- 60 Myanmar - Economy. (n.d.). In Encyclopedia Britannica. <https://www.britannica.com/place/Myanmar/Economy>



employs around 70 per cent of its workforce.<sup>61</sup> Rice is the main agricultural product, making up 43 per cent of total agricultural output.<sup>62</sup> The ongoing conflict and the 2021 coup have greatly affected Myanmar's agricultural economy. The national currency – the Myanmar Kyat (MMT) – has continued to depreciate.<sup>63</sup> Combined with the impact of COVID-19, limitations in financing options for farmers and the military's tight grip on agricultural imports and exports, two-thirds of the population is left extremely vulnerable, without stable and sufficient income.<sup>64</sup>

The poverty level continues to escalate owing to the coup and resulting in restricted economic opportunities. Forty per cent of the population currently lives below the national poverty line – almost doubling since 2020.<sup>65</sup> Inflation and the cost of living have also experienced a sharp rise since the military coup and the collapse of financial institutions, along with Russia's invasion of Ukraine,

61 Burma - agriculture. (n.d.). International Trade Administration | [Trade.gov](https://www.trade.gov). Retrieved December 6, 2022, from <https://www.trade.gov/country-commercial-guides/burma-agriculture>

62 Ibid

63 Ibid

64 Ibid

65 Ibid

which has decimated the world economy. A recent Karen Human Rights Group (KHRG) report noted that in Dooplaya, the cost of basic foods such as eggs has doubled since the military takeover.

While the overall literacy rate has steadily climbed to 89.1 per cent over the past decade, there is a marked difference between male and female literacy: 92.4 per cent for the former and 86.3 per cent for the latter.<sup>66</sup> However, this growth has been threatened over the last two years by COVID-19 and the military coup. School enrolment has plummeted to 80 per cent and the number of children currently out of school has doubled to 50 per cent.<sup>67</sup> Nearly 260 schools have been attacked since 2021, resulting in many students and teachers opting not to return to school.<sup>68</sup> This can have catastrophic consequences, leading to a large gap in educational attainment and skills, leaving the largely unskilled young population unable to enter the labour market without employable skills and furthering the cycle of un- and under-employment.

66 Literacy rate (%). (n.d.). World Bank Gender Data Portal. Retrieved December 6, 2022, from <https://genderdata.worldbank.org/indicators/se-adt/?gender=total>

67 <https://www.savethechildren.net/news/myanmar-number-children-out-school-more-doubles-two-years>

68 Ibid

## Human rights and the conflict situation

Internationally, Myanmar has ratified only four out of nine Core International Human Rights Treaties. Most significantly, it has not ratified the International Convention on the Protection of the Rights of All Migrant Workers and Members of Their Families, the Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment, the Convention for the Protection of All Persons from Enforced Disappearance, and the International Covenant on Civil and Political Rights.<sup>69</sup> Despite repeated commitments to ratify the above, the government's promises remain unfulfilled, leaving the international community with few options to ensure adherence to its principles.<sup>70</sup>

Nationally, the 2008 Constitution guarantees equal rights and equal legal protection for all before the law (Chapter VIII, Article 347).<sup>71</sup> It also explicitly stipulates that the country will not discriminate against any 'citizen' of Myanmar, and then proceeds to specify those classified as 'citizens', thereby effectively excluding Rohingya Muslims from the rights and protections it guarantees.<sup>72</sup> This state of affairs is also the lived reality for other marginalised groups, such as ethnic minorities and Indigenous Peoples in rural areas, who are excluded from accessing any purported protections of the state, either through discrimination, state violence, oppression or lack of identification documents.

The grim human rights situation in Myanmar has earned it a categorisation of 'not free' in Freedom House's (Freedom House is a non-profit organisation in the US which conducts research and advocacy on democracy, political freedom, and human rights) civil liberties and political rights score.<sup>73</sup> This means that the rights and freedoms enjoyed by citizens are severely curtailed, resulting in a total lack of free and fair elections, a functioning central government, freedom of expression and association, rule of law, and individual rights.<sup>74</sup>

Myanmar's dire socio-economic and human rights situation has classified it in the bottom 25

per cent of the Human Development Index and Gender Inequality Index, placing it at 149 out of 191 countries.<sup>75</sup> It also ranked 71 out of 116 countries on the Global Hunger Index 2021, appearing as a country with 'moderate' levels of hunger.<sup>76</sup> This coincides with the Multidimensional Poverty Index which stated that 13.8 per cent of the population suffers from 'severe poverty'. This categorisation is defined by one's inability to sustain a healthy life, receive an education, and maintain a living standard that provides food, shelter, water and sanitation.<sup>77</sup>

Human rights abuses and poverty have been on an upward trend since the 2021 military coup due to the regime's brutality, widespread conflict, and the collapse of public services and the financial system. In Karen areas, despite an ever-growing number of internally displaced persons (IDPs) supported at displacement sites, the vast majority have little to no access to humanitarian assistance. Local civil society organisations and community-based organisations estimate that there are currently 40,000 IDPs in Dooplaya District alone. Ever since the coup, residents in conflict-affected areas in the district are unable to harvest crops or tend to their livestock because of ground attacks, SAC activities, and landmine contamination. Farms occupying the proximity of main roads are particularly at high risk of indiscriminate shelling as soldiers secure roads or traverse between camps.<sup>78</sup>

## Corporate accountability and human rights

Myanmar is endowed with extensive mineral wealth, including heavy metals, jade, gemstones, and coal.<sup>79</sup> The extractive industry contributes approximately 4.8 per cent of the country's GDP, 5.2 per cent of state revenues, and 35 per cent of total exports.<sup>80</sup> Gravel and sand extraction from marine and riverine ecosystems, on the other hand, often occurs on a smaller scale. But the Irrawaddy River basin has seen industrial-scale

69 (N.d.). [Ohchr.org](https://tbinternet.ohchr.org/_layouts/15/TreatyBodyExternal/Treaty.aspx?CountryID=119&Lang=EN). Retrieved December 6, 2022, from [https://tbinternet.ohchr.org/\\_layouts/15/TreatyBodyExternal/Treaty.aspx?CountryID=119&Lang=EN](https://tbinternet.ohchr.org/_layouts/15/TreatyBodyExternal/Treaty.aspx?CountryID=119&Lang=EN)

70 Burma and Ratification of International Treaties: the Argument for Ratification of UN Human Rights Conventions, Protocols, and Covenants. (n.d.). <https://aappb.org/wp-content/uploads/2018/09/Ratification-of-treaty.pdf>

71 The Constitution of the Republic of Burma, (2008). <https://www.wipo.int/edocs/lexdocs/laws/en/mm/mm009en.pdf>

72 Ibid

73 (2022). Myanmar. Freedom House.

74 (2020). Freedom in the World research methodology. Freedom House

75 United Nations. (n.d.). Documentation and downloads. Human Development Reports. Retrieved December 6, 2022, from <https://hdr.undp.org/data-center/documentation-and-downloads> <https://hdr.undp.org/data-center/documentation-and-downloads>

76 Global Hunger Index 2022: Myanmar. (2022). [Globalhungerindex.org](https://www.globalhungerindex.org/pdf/en/2022/Myanmar.pdf). <https://www.globalhungerindex.org/pdf/en/2022/Myanmar.pdf>

77 Global MPI country briefing 2021: Myanmar (east Asia and the Pacific). (2021). [Org.uk](https://ophi.org.uk/wp-content/uploads/CB_MMR_2021.pdf). [https://ophi.org.uk/wp-content/uploads/CB\\_MMR\\_2021.pdf](https://ophi.org.uk/wp-content/uploads/CB_MMR_2021.pdf)

78 Karen Human Rights Group. (2022). Denied and Deprived. [https://www.khrg.org/sites/khrg.org/files/report-docs/denied\\_and\\_deprived\\_-\\_english\\_full\\_report.pdf](https://www.khrg.org/sites/khrg.org/files/report-docs/denied_and_deprived_-_english_full_report.pdf)

79 Myanmar Centre for Responsible Business. (n.d.). Mining in Myanmar. <https://www.myanmar-responsiblebusiness.org/pdf/SWIA/Mining/04-Mining-in-Myanmar.pdf>

80 Myanmar. (n.d.). EITI. Retrieved December 6, 2022, from <https://eiti.org/countries/myanmar>



sand extraction over the last few decades, with approximately 20 million tonnes of gravel and sand being harvested every year – which is likely an undercount – representing 10 per cent of the total estimated sediment budget.<sup>81</sup> With the advent of industrialisation, urbanisation and population explosion, the demand for cement and other construction inputs is straining riverine ecosystems due to the extraction of gravel and sand.

While the Constitution guarantees the protection and conservation of the environment, including ‘wildlife, natural plants and natural areas’, and the ‘safety of mine workers and environmental conservation and restoration’ in its Union Legislative List, it fails to explicitly acknowledge some basic human rights.<sup>82</sup>

These include every person’s right to a healthy standard of living conducive to maintaining one’s well-being and the right to security if unemployed or if left without a livelihood as a result of circumstances beyond one’s control, as outlined in Article 25 of the Universal Declaration of Human Rights.<sup>83</sup>

81 WWF. (n.d.). THE AYEYARWADY RIVER AND THE ECONOMY OF MYANMAR REPORT MM 2018 VOLUME 1: RISKS AND OPPORTUNITIES FROM THE PERSPECTIVE OF PEOPLE LIVING AND WORKING IN THE BASIN. [https://d2ouvy59p0dg6k.cloudfront.net/downloads/ayeayarwady\\_risks\\_and\\_opportunities\\_report\\_v1\\_en\\_web.pdf](https://d2ouvy59p0dg6k.cloudfront.net/downloads/ayeayarwady_risks_and_opportunities_report_v1_en_web.pdf)

82 Constitution of the Republic of Myanmar, 2008 <https://www.wipo.int/edocs/lexdocs/laws/en/mm/mm009en.pdf>

83 Universal Declaration of Human Rights, 1947 <https://www.>

In terms of legislation around mining, the main law is the 2015 Mines Law,<sup>84</sup> which regulates the exploration of all minerals except gemstones, which is instead governed by the Gemstone Law of 2017.<sup>85</sup> Another key law is the Mines Rules of 2018, which lists details of mining permits as well as environmental, safety and labour standards.<sup>86</sup> In addition to these primary laws, there are many other supporting legislations administering mineral exploration, including the Myanmar Investment Law of 2016, the Myanmar Investment Rules of 2017, the Environmental Conservation Law of 2012, the Environmental Conservation Rules of 2014, the Environmental Impact Assessment Procedure of 2015, and the Environmental Quality Standards of 2016.<sup>87</sup>

Sand mining management is regulated under the 2006 Conservation of Water Resources and Rivers Law. Under this law, operations extracting more than 50,000 cubic metres must be assessed for environmental impact. However, before 2015,

[un.org/en/about-us/universal-declaration-of-human-rights](https://www.un.org/en/about-us/universal-declaration-of-human-rights)

84 Myanmar Centre for Responsible Business. (n.d.-a). Main Laws Applicable to the Mining Sector in Myanmar. [https://www.myanmar-responsiblebusiness.org/pdf/SWIA/Mining/Main-Myanmar-E\\_and\\_S-Laws-Mining-Sector.pdf](https://www.myanmar-responsiblebusiness.org/pdf/SWIA/Mining/Main-Myanmar-E_and_S-Laws-Mining-Sector.pdf)

85 Reforms set to increase foreign investment and stimulate Myanmar’s mining sector. (2020, January 9). Oxford Business Group. <https://oxfordbusinessgroup.com/overview/opportunities-await-reforms-and-issuance-new-exploration-licences-are-set-revive-sector-activity-and>

86 Ibid

87 Ibid



there was no ceiling on the amount that could be extracted from rivers.<sup>88</sup> The unregulated nature of extracting rare minerals, sand and gravel is cause for concern among local communities, activists, human rights organisations and the media. In 2020, in the worst accident in Myanmar's mining history, a mudslide in an open-pit mine in northern Myanmar killed at least 172 miners<sup>89</sup> as they scavenged for jade scraps left over from mining operations.<sup>90</sup>

This catastrophe was just another in a series of deaths<sup>91,92</sup> from landslides at jade mining sites,

88 Charles Gruel, E. L. (2021). A Monitoring System of Sand Mining in Large Rivers and Its Application to the Ayeyarwady (Irrawaddy) River, Myanmar. *Water*, 13(7). <https://www.mdpi.com/2073-4441/13/17/2331/html#B17-water-13-02331>

89 Silver, A. (2021). Deadly Myanmar mine disaster caused by poor planning, say data sleuths. *Nature*, 595(7866), 160–161. <https://doi.org/10.1038/d41586-021-01740-2>

90 Deutsche Welle. (2020, July 2). Myanmar: Over 100 dead in jade mine disaster. Deutsche Welle. <https://www.dw.com/en/myanmar-over-100-dead-in-jade-mine-landslide-disaster/a-54022612>

91 Deutsche Welle. (2015, December 26). Deadly landslide hits Myanmar jade mine. Deutsche Welle. <https://www.dw.com/en/deadly-landslide-hits-jade-mines-in-northern-myanmar/a-18942770>

92 Deutsche Welle. (2015a, November 22). Scores killed in Myanmar landslide. Deutsche Welle. <https://www.>

which are notoriously poorly regulated, but still manage to attract hundreds of migrant labourers looking to cash in on the abandoned scraps of jade.<sup>93</sup>

Myanmar is slowly gaining a reputation as a 'sacrifice zone' for developed nations seeking to offset the destruction caused by their quest for green energy.<sup>94</sup> A good example is a forest in northern Myanmar famous for its rare earth minerals. These elements are crucial in the production of green energy components used in the supply chains of at least 78 global corporations, including some of the richest companies like Tesla and Apple.<sup>95</sup> Reports suggest that mining these rare earth minerals has resulted in extreme environmental destruction, including the contamination of water bodies and death of livestock and marine animals.<sup>96</sup>

[dw.com/en/scores-killed-in-myanmar-jade-mine-landslide/a-18867110](https://www.dw.com/en/scores-killed-in-myanmar-jade-mine-landslide/a-18867110)

93 Deutsche Welle. (2019, April 23). More than 50 jade miners feared dead in Myanmar landslide. Deutsche Welle. <https://www.dw.com/en/more-than-50-jade-miners-feared-dead-in-myanmar-landslide/a-48452274>

94 Kang, D., & Milko, V. (2022, August 9). "The Sacrifice Zone": Myanmar bears cost of green energy. Associated Press. <https://apnews.com/article/technology-forests-myanmar-75df22e8d7431a6757ea4a426fbde94c>

95 Ibid

96 Ibid



This contamination has also given rise to skin diseases, osteoporosis, respiratory illnesses and gastrointestinal complications in the communities using the water bodies in that vicinity for day-to-day consumption and breathing the air around the mine.<sup>97,98</sup> The promise of lucrative mining has encouraged land grabbing by villagers and roped companies into bribing militias, including those associated with the military regime, just to secure permission to mine.<sup>99</sup> Residents are routinely threatened and abused should they refuse to hand over their land or speak up against mining operations.<sup>100</sup> Land grabbing is not a strange phenomenon in Myanmar, where there is little to no respect or recognition of indigenous custodianship of nature. China benefits most from these operations, with Myanmar being China's largest source of rare earth minerals, making up nearly half of its supply.<sup>101</sup>

In 2021, the Extractive Industries Transparency Initiative (EITI), a global standard for good governance in the extractives sector suspended Myanmar's membership following the military coup on account of political instability and a 'lack of essential freedoms'.<sup>102</sup> In the same year, Global Witness, an international NGO that investigates and exposes environmental and human rights abuses in the oil, gas, mining, and timber sectors released a study disclosing that top-ranking military officials were involved in the jade trade and in doing so, sought greater control of the multi-million dollar industry with a view to lining the military's pockets to fund its war machine.<sup>103</sup> In addition to the jade trade, it is an open secret that the junta uses the extractives industry to generate a large percentage of its income.<sup>104</sup>

Dooplaya District is one of the focus areas of mining-related human rights and environmental violations. In 2017, residents of Sin Pyay village in Win Yay Township expressed concern over the quarrying of limestone for cement production. In the early stages of the project, villagers were not informed about the plans for the area, and later on, despite vocal opposition and multiple complaints from them, the company continued its exploration of the area for mining activities, violating the people's right to free, prior and informed consent.<sup>105</sup>

Similar stories are echoed in Village A and Village B in Win Yay Township. A gravel extraction project is being exploited to expand SAC roads into KNU controlled territory, an act perceived as a bid to increase the military's presence and supply routes in Karen areas. The KNU is a political organisation seeking equality and self-determination, human rights, democracy and equality of the Karen people. The environment is deteriorating in the surrounding communities by way of water erosion and contamination of the aquatic ecosystem. Additionally, the quality of life and livelihoods of the communities are being impacted. The contaminated water is creating greater food insecurity within those communities because of fewer fish, prawns and crabs in the river. This research aims to bridge the knowledge gap on the scale of impact of this gravel extraction project.

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97 Ibid

98 Toxic rare earth mines fuel deforestation, rights abuses in Myanmar, report says. (2022, August 12). Mongabay Environmental News. <https://news.mongabay.com/2022/08/toxic-rare-earth-mines-fuel-deforestation-rights-abuses-in-myanmar-report-says/>

99 Kang, D., & Milko, V. (2022, August 9). "The Sacrifice Zone": Myanmar bears cost of green energy. Associated Press. <https://apnews.com/article/technology-forests-myanmar-75df22e8d7431a6757ea4a426fbde94c>

100 Ibid

101 Ibid

102 The EITI Board has temporarily suspended Myanmar. (n.d.). EITI. Retrieved December 6, 2022, from <https://eiti.org/board-decision/2021-05>

103 Myanmar's military tightened its grip on the country's corrupt jade trade under the NLD. (n.d.). Global Witness. Retrieved December 6, 2022, from <https://www.globalwitness.org/en/press-releases/myanmars-military-tightened-its-grip-on-the-countrys-corrupt-jade-trade-under-the-nld/>

104 Myanmar junta's growing reliance on extractives for cash raises concerns. (2021, June 18). Mongabay Environmental News. <https://news.mongabay.com/2021/06/myanmar-juntas-growing-reliance-on-extractives-for-cash-raises-concerns/>

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105 Villagers raise concerns regarding proposed stone mining and cement production in Win Yay Township, Dooplaya District. (2018, January 18). Karen Human Rights Group. <https://khrgr.org/2018/01/17-3-nbi/villagers-raise-concerns-regarding-proposed-stone-mining-and-cement-production-wi-1>





# Research site overview

Village A and Village B are located in Win Yay Township, Dooplaya District. Dooplaya is one of the seven districts in Karen State under de facto control of the KNU government's Brigade Six. The terrain comprises the Dawna Mountain range along the eastern border with Thailand, and the flatlands in west Dooplaya incorporates four townships with a total population of approximately 475,191 (2014 census data).

The SAC occupies several bases in Karen State, not excluding Dooplaya, and the district has witnessed an increase in violent conflict, particularly shelling and bombings, since the 2021 military coup. From late 2021, fighting between the SAC and Karen resistance forces has escalated on both sides of the Dawna Range. Thousands of SAC troops have been mobilised in the region, including from SAC bases in Dooplaya, which were never withdrawn despite a ceasefire agreement in 2012. Conflict in the form of airstrikes, ground artillery attacks, looting and other types of violence is concentrated near the border around Lay Kay Kaw village. Fighting has also spread west to Kawkareik town.

Villages A and B are about one mile apart and are situated along Maw La stream. There is no active conflict in these communities.

The level of education in both villages is low, and there is a distinct lack of knowledge and awareness about environmental issues, legal and political matters, and rights in general.

## Village A background

Village A is located in a mountainous area in Lamine Sub-Township, Win Yay Township, which, according to the central government administration, is in Mon State. It was established in 1916 with only five households. Today, it accommodates 136 households. All its residents are ethnic Karen, with the majority practicing Buddhism and Animism. In the past, all inhabitants were Buddhist animists, but in 1952, a Karen Baptist Convention family settled there and began converting residents to Christianity. Since its inception, inhabitants have made a living through rice farming, hunting and fishing.



They traded their produce for fish paste from the Mon ethnic people in the lowlands. Because their soil is ideal for farming, they historically cultivated more baskets of rice per capita than they currently do. Village A farmers now also grow cucumber, chilli and eggplants. Betel nuts are a favourite, along with limes, rubber and mangosteen.

They raise chickens, pigs, cows, goats and buffalo, and complement their livelihoods through farming, small businesses and daily wage labour in neighbouring farms or nearby villages.

The population's level of formal education is low: only six people have passed the Basic Education Standard X Examination (matriculation exam) in the entire village. In 1966, the KNU set up a primary school which taught in Karen, English and Burmese. Until the National Ceasefire Agreement (NCA), there was no central government school in the area. After 2015, the central government set up a primary school, which shut down in 2019 because of the COVID-19 pandemic, and has been closed ever since. The village is working with KNU's Karen Education and Culture Department to reopen it.

In 1988, the Burmese military carried out aggressive attacks on Karen villages. Village A was not spared. The military forced residents to flee, but some pleaded to remain. Eventually, people from surrounding areas resettled in the village.

Along with hardships caused by repeated military aggression, the elders in Village A recalled three major floods that wreaked havoc on their lives: the 1970 flood resulted in the loss of many cattle; in 1997, a family of four died; and in 2018, a 120 foot by 20 foot bridge was destroyed, and a villager lost a house.

## Village B background

Village B was founded in 1902. Currently, it accommodates 86 households and five wards, having grown from its original 20 households at inception. When the village was founded, residents cleared a small forest to create room for growing rice. At that time, the farmland was eight acres, comprising two betel nut farms; the rest was forest and mountain. Today, most residents are either farmers or wage labourers. They cultivate rice, betel nuts, rubber, cardamoms, djenkol beans, chestnuts and elephant foot yams.

All the residents of Village B are Buddhist and Animist. The village previously occupied a location west of the Maw La stream. But in 2000, they moved east, with the assistance and management of the KNU, because the former location was on the mountain-side and this posed a challenge for expansion, particularly in light of population increase.

The community started an informal school in 1981 with just one local teacher supported by the KNU. In 2003, missionaries arrived in the village and taught in the primary level for four years. In 2014, a central government primary school was founded, but was shut down due to COVID-19, and has stayed closed following the military coup. In 2022, the village coordinated with the Karen Education and Culture Department to reopen it under KNU administration. But based on information collected during FGDs, no one has passed the matriculation exam in Village B so far. This indicates that the formal education of the community is low.





Children in one of the areas where sand mining has occurred



# Findings

## Gravel extraction and road building work

Both villages rely on the Maw La stream for daily activities like fishing, washing and drinking, and harvesting gravel for building houses and places of worship. Maw La is part of the Ye River, which originates in the Tenasserim Hills and empties into the Andaman Sea. The watershed area is also important to the locals because they harvest food from the plants along the stream. The two villages were selected as a research location because they are in the path of a larger road building project by the central Myanmar government's Ministry of Progress of Border Areas, National Races and Development Affairs, which is responsible for the development of border areas. Three companies are responsible for implementing this project: The World, Thuwana Myay, and Myanmar Amazing Power Company Limited. They were contracted by the Ministry of Progress of Border Areas in 2016. The road starts at the Tanintharyi Highway and leads into Village A. The gravel extracted from both villages is utilised in this six-mile road.

Road construction began after the NCA, when the country opened up to investments and witnessed a wave of so-called 'development projects' from national and international investors. This road project was one such project, being carried out in the name of development but in reality, only profiting corporations while expanding the central government's influence in ethnic areas.

These companies extract gravel from the stream, crush it onsite, and mix it with cement for use in road construction and building bridges. Two bridges were constructed in 2016: a 60-foot and a 120-foot bridge. The 2018 floods destroyed half of the structure of the bigger bridge, but it was reconstructed over nine months in 2020 using local labour.

Residents have been known to gravel from the stream, but on a much smaller scale, and over many years. They have used it primarily for community development projects, including building their houses, the village hall, public buildings and places of worship. In contrast, the companies have excavated around 1,000 pits along the river, according to data gathered from FGDs and an interview with a local broker. This gravel extraction has occurred in four main locations (see map). The road building project has resulted in 400 pits; the 120-foot bridge has left behind 200 pits; and the 60-foot bridge to the north of Village



A and south of Village B has resulted in 200 pits which are located between the two villages. There are an additional 20 pits that have provided gravel and sand for smaller bridges along the stream. In Village A, the companies paid 15,000 MMK (USD 7.2) per pit to the village leader as compensation; in Village B they paid 10,000 MMK (USD 4.8) per pit. While the companies use diggers and grinders to extract gravel, the locals do not use machinery. They collect stones by hand, picking them only from the river bank, rather than dredging or digging up the river bed. The environmental impact of the community's small-scale extraction is minimal, and it is for the direct benefit and use of villagers, in comparison to the industrial extraction taking place.

Locals in both villages do not think that the gravel extraction has provided any benefits for their communities. The road built by the companies is of poor quality and does not have a functional drainage system, which is a prerequisite for mountainous environments. FGD participants shared that after just three months, the road was already damaged for this very reason. There is an old road which the villagers prefer to use. The villagers do use the bridges, however, several people said that if they had known environmental impacts of gravel extraction and road construction on their community, they would have outright rejected the project.

## Environmental and Economic Impact

Residents described several environmental impacts, some caused by the flooding in 2018, others they attributed to the extraction and construction projects. Because of the excavation of the stream bed, one side is now deeper in some parts, resulting in the narrowing of the stream and an increase in velocity of water flow. In other parts, where extraction has widened the bed, the stream is shallower and the flow has decreased.

This seemingly insignificant after-effect has had the direct consequence of intensifying the erosion caused by historical flooding. Overall, there was consensus among FGD participants that the stream has become shallower since industrial extraction of gravel began. As one resident of Village A observed:

**'This stream was so deep that even elephants could not cross it. But as you can now see, the level is such that even children can cross and swim in it.'**

Because the extraction has widened the stream bed, it is shallower in some parts, causing the water level to drop more rapidly during the hot season, likely due to faster evaporation stemming from a bigger water surface area. The extraction of gravel has also reduced the biodiversity in the local river ecosystem, most notable is a reduction in the number of fish as well as a noticeable decrease in size. One fisherfolk from Village A captured the biggest fear of the fishing community:

**'I think due to extracting gravel from the stream, the fish are migrating to other places because they no longer have space to live and are not able to eat moss and plankton from**





stones. If they keep extracting, the fish will definitely die out. The machines and the noise are also contributing to driving away fish.'

Another resident recalled a time when there was grass rooted into the banks of the stream:

'Fish loved to stay there. Now it doesn't have that kind of grass or roots anymore.'

Locals have not only witnessed a decrease in fish populations, but, most notably, a reduction in size and health, likely resulting from a disruption to the ecosystem – least of all the impact on moss, algae and plankton – lower down the food chain. One Village A fisherfolk noted that:



Part of the road

**‘Previously, the fish from the stream were almost the size of my thigh. Now the fish are barely the size of my wrist.’**

During the construction of the bridge, liquid cement poured into the stream and fish died. Some villagers collected those fish and ate them because they were an easy catch floating on the surface. During the nine months of construction, plenty of fish died, villagers told the FFM team. Furthermore, when the old bridge was damaged in 2018, the remainder of its structure was torn down using machines that deposited debris, iron rods and other building materials into the stream which mutilated and injured fish. Residents reported witnessing many dead fish following the demolition. One villager recalled finding a large snakehead fish impaled on an iron rod.

The area surrounding the 120-foot bridge was originally designated to be a fish conservation reserve by the local monk and Village A administrators. Fishing was restricted to preserve the population of aquatic species and thereby sustain the benefits of the stream for the local population. But bridge construction and gravel extraction have ensured that there are significantly fewer aquatic animals in the area. One FGD participant put it this way:

**‘Before, we could see many fish from the bank of the stream. But now they have almost disappeared.’**

Crabs have also been impacted, and are no longer as common a sight as they once were. One Village B woman recounted the situation:

**‘There were many crab holes and huge crabs under the big stones when I used to hunt them. Now, because the companies started digging up the big stones for building roads, there are no more crabs in that area. Some crabs remain, but they are too small to eat. We cannot catch big crabs like before.’**

FGD participants in Village B shared that the water is so shallow in some areas as compared to five years ago when they would catch three kilograms of fish, crabs, prawns or frogs within just an hour. But nowadays, even after spending an entire day fishing, they manage only a few grams.

Residents are aware that the erosion of the stream, both through historical flooding and industrial extraction, is an issue in the conservation of their watershed. The secretary to the Village B administrator explained what they are doing to address some of the environmental challenges:

**‘Now we plant more trees on the hills around here, so we hope that after the trees grow, they will help cool down the local watershed area and the stream will not lose water or dry out during the spring. I think that trees could help to maintain and store our water resources.’**

They also expressed deep concerns that should gravel extraction persist in the future, their attempts to stabilise the stream bank and watershed area from erosion will be hindered.

Farming is the main source of livelihood for both villages. Unfortunately, it does not provide adequate income, and villagers who do not own land are forced to work on others’ farms for a daily wage or run small businesses to support their livelihoods. Others cultivate crops both for sale and subsistence. The forests provide non-timber forest products (NTFPs) such as firewood and wild vegetables, and the stream is a historical source of fish and crab meat, as well as washing and drinking water.

Despite everything, some villagers expressed that they welcome the road altogether – its drainage and other problems notwithstanding – because they believe it will improve their market access; a genuine appeal in a time of economic hardship. However, many lack the awareness to link increased road access to increased risk of armed conflict. (Elsewhere in Karen State, roads are a conduit for supplying SAC troops, many of which have become the focus of armed conflict.) Furthermore, access to market does not necessarily guarantee better prices; in fact, they would now likely go through brokers.



Gravel extraction and construction have had negative impacts on the livelihoods of locals. As highlighted previously, the main environmental impact is the disruption of the stream and watershed ecosystem, which has led to a contraction in edible aquatic species, which has in turn impacted income in Village A because residents can no longer sell surplus fish to supplement their incomes.

Not unlike in Village A, Village B residents shared how the depth of the water has tapered off in certain areas. One of them, a farmer who depends on the stream for irrigation, seemed concerned for the future of his livelihood:

**‘Previously, the water level was up to my chest, but now it barely reaches my knees. This is because of the gravel extraction.’**

A woman who lives beside the stream mirrored his thoughts:

**‘I depend on this stream for daily life and I have never seen the water course sever in my entire life. But this year, the water course almost cut off during summer. I am concerned because if the water course cuts off, I don’t know where I will get water for drinking.’**



By contrast, during the rainy season, the wider sections of the stream bed are not able to contain the overflow of water, and flooding is more severe on the farms located along the stream. One farmer explained this phenomenon:

**‘Before gravel extraction began, the water flowed freely [into the farms] in two channels from the stream bank. But now an extra conduit has appeared in the middle after they started digging up the gravel with machines. Also, the water flowing into my farm is more than before. I am concerned that my farm is going to flood. I have asked them to stop extracting next to my farm.’**

Another interviewee added:

**‘They asked my mother-in-law and she permitted them. Later, I found out and told them to cease, but they simply moved their extraction to another location. I didn’t want them to do it there because I was worried that erosion would cause water to flow into my farm. I don’t want them to do it anymore. I worry that my farm will be destroyed.’**



In the absence of a scientific study, it is indeterminate exactly how industrial work has impacted water flow in different parts of the stream. But what is clear from this research is that there indeed have been impacts on the flow, depth and width of the stream, all of which have affected the availability and predictability of the water in its different sections. With Karen communities in the region already living with the negative impacts of climate change, industrial projects need not exacerbate the precarious situation to compound their vulnerability.

During FGDs, Village B residents expressed concern about being able to meet their future socio economic needs if gravel extraction is allowed to continue. One participant made a grim prediction:

**'If gravel extraction continues, the stream will be shallow, the ecosystem will be damaged, and there will be less water evaporating and therefore less rain. Then we will face water shortages.'**

## Human rights abuses and accountability

Villagers made it clear that neither the companies nor the State Administration Council's Ministry of Progress of Border Areas, National Races and Development Affairs consulted them about the project before it commenced. More importantly, they did not give free, prior and informed consent (FPIC) which is a right of Indigenous Peoples recognised in the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP); no Environmental Impact Assessment (EIA) was carried out either.

Bypassing consent from villagers, the companies instead negotiated directly with village leaders and made a deal to extract stones from the stream, for which they would be paid. Even when the company began extraction, most residents were unaware of what was happening. There was no opportunity provided to exercise their collective rights.



But the vice secretary to the village administrator disagrees:

**‘The KNU had a consultation with the villagers, on whether or not to give consent to the company to extract gravel. No one objected, so they gave the company the go-ahead. In exchange, the company would build the village bridge and road for free. We [village administrators] thought it was a great solution for the village’s transportation problems, so we gave our consent. Regarding the taxes or funds that they [the company] gave KNU, we knew nothing about it. What we knew was that we [village**

**core fund] would receive 2,000 MMK (USD 1) per pit, so the village would get a total of 200,000 MMK (USD 96). But we are yet to receive a penny.’**

From the FGDs, it was clear that a majority of villagers were not even aware that they had the right to say no to the companies. They felt helpless and disempowered. At no point was information shared about potential impacts on them and their environment, and their needs were never taken into account. As one villager put it:

**‘We don’t know about the intentions of gravel extraction because we assumed that the authorities have the right to do it and it’s none of our business.’**

Most villagers also seemed not to be aware that what is happening in their area is part of a bigger road-building project. In one interview, a resident recounted how they were duped:

**'I know nothing about the road building budget. The broker told us that there are plenty of stones just lying around, and they are useless to us. So why not sell them and get some cash for our welfare?'**

One woman expressed the shared belief that no one individual can claim ownership of the stream:

**'It belongs to everyone, so I didn't know that I had the right to determine whether or not I wanted the company to extract gravel next to my paddy field.'**

The central Myanmar government, however, has seen all resources on, above, and below land as the government's, as written in the 2008 constitution. This, coupled with the lack of awareness of such projects, their potential impacts and people's rights, means that citizens are not in a position to oppose them or negotiate fair compensation or other terms.

The FGDs also uncovered another aspect related to labour rights. According to interviewees, in 2016, villagers were asked to work on the construction of both the 60-foot bridge and the 120-foot bridge without pay. In return for their labour, the companies would build a monastery in their community. But apparently, the monastery is yet to be completed. After the 120-foot bridge was destroyed in the 2018 floods, villagers were again contracted to reconstruct it and compensated at a rate of 8,000 MMK (USD 3.8) per day for men and 6,000 MMK (USD 3) for women. The lower wages for women add a gender dimension to the unfair labour practices, further disadvantaging women labourers. Although they were not provided with any safety equipment and worked eight hours a day, locals felt that at the time, the wage was better than their usual salaries.

The Myanmar government did not do any EIA and Social Impact Assessment (SIA) for the project, and also failed to monitor how the companies implemented the project, specifically where they were extracting materials from. The Myanmar government and the companies involved shirked their responsibility to explain the situation to villagers and completely bypassed the FPIC process.

There is a lack of raise awareness about human rights, including collective rights and indigenous rights of the villagers. Therefore, the project-affected communities were not empowered to develop an informed opinion to either agree or disagree with the project.

Extraction and use of resources in or underwater is managed under the KNU's Department of Livestock and Fisheries, according to the draft policy. If the resources are to be used to satisfy the needs or to the benefit of local and indigenous people, permission can be sought from KNU headquarters. Locals are required to follow rules and regulations and avoid any actions that could affect the environment. However, this policy is yet to be formally adopted. Residents of Village A and Village B were not aware of the process of the project, nor familiar with local laws, both KNU and Myanmar administration statutes.







**The river is wider and shallower in some areas since the sand and gravel mining**

# Conclusion

This study set out to document the gravel extraction project in Village A and Village B, and its environmental and social impacts on the local communities. This research found that the sand and gravel mining has altered the flow and depth of the Maw La stream in the local area. The pollution and disturbance to the river ecosystem have also significantly reduced the biodiversity in the river, according to the observations of residents. This has far-reaching consequences and eliminates an income and food source for the community, which is of particular significance, given the economic hardships currently facing the country. The changes in river flow have also impacted farming along the stream, and local farmers are concerned about the future effects of sustained gravel mining in the stream.

During the initial construction of the large bridge, villagers were duped into unpaid labour. The bridge was likely not built to any good standard and was therefore destroyed in 2018 by floods. Villagers were again called on to rebuild it, this time with some remuneration. However, labour rights abuses and unfair wages were evident.

The construction of the road leaves the communities more vulnerable to conflict, as the SAC historically and currently uses road construction to support its military incursions in Karen National Liberation Army (KNLA) areas.

During the project planning, local communities were never consulted. Neither did the companies, the Myanmar government or the KNU government provide adequate information about its potential impacts or what it would mean for their lives, livelihoods, well-being and security. No environmental or social impact assessment was carried out. This egregious lack of accountability echoes countless other small- and large-scale irresponsible 'development' projects in Myanmar. It is also indicative of how local communities are often left out of decision-making processes and given no say in what development looks like for their communities.

This lack of decision-making power and an accountability process is compounded by a paucity of awareness about human rights, indigenous rights and the environment, and is evident in the context of this project. Communities are therefore left without the tools or framework to consider objecting to projects like this sand mining and construction project.

Addressing structural issues and opposing extractive investment projects is a difficult task for communities and CSOs as the civic space in Myanmar is being shrunk and repressed by the regime, and internal accountability mechanisms for corporations, as well as for the SAC at a national and international level, are very limited in their scope and effectiveness.





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# Recommendations

## To CSOs/NGOs:

- Collaborate with local community leaders and community members to increase their awareness of their rights and the principles of FPIC
- Train and empower local youth to become active participants in decision making processes at the local level
- Spotlight on-ground realities of development projects and their impact on people and the environment through targeted research and advocacy efforts

## To mining and construction companies:

- Immediately cease sand mining and construction activities until a comprehensive FPIC process is carried out
- Hold consultations with community members to understand their grievances and take their opinions into account to mitigate the negative effects of operations

## To civil society:

- Amplify the voices of vulnerable communities by supporting campaigns and calls to action by CSOs/NGOs
- Reject the legitimacy of the SAC and its departments and their encroachment into KNU territories

## To the KNU:

- Implement existing environmental policies and protect rivers, forest resources, and endangered species
- Take action to prevent large business interests from profiteering from Kawthoolei's natural resources

## To the UN Working Group on the issue of human rights and transnational corporations and other business enterprises:

- Call for an assessment of development projects across Myanmar and investigation into investments which further the SAC regime
- Call for the companies and authorities responsible to implement existing laws and adhere to UN Guiding Principles on Business and Human Rights

This publication was made possible by  
the generous support of Brot für die Welt.

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