

# Green colonialism

Research on colonial injustices related to nickel mining in West Papua



**Anne-Linn Machiels**

Master Thesis, MSc Industrial Ecology

Dr. ir. Udo Pesch (TU Delft)

Dr. Shivant Jhagroe (Leiden University)

August 22, 2022



*In solidarity with all Indigenous peoples  
Who are on the frontline  
of defending their lands  
and protecting the worldwide biodiversity*

## ACKNOWLEDGMENTS

---

I love acknowledgements. Ever since I started working on this thesis, I have been looking forward to the point where I would allow myself to start writing about all the wonderful people around me that have helped to make this whole thesis project a valuable and inspiring time for me. Writing a thesis would never have been possible without the support, inspiration and collaboration I have gained with the people surrounded me; it was a collective process.

First of all, I want to give special thanks to my supervisors. Udo Pesch, your support and guidance has been of great importance for finding a research topic that fits within my values and interests. You gave me all the space to do it my way, which made me writing this thesis with a lot of passion and motivation. Then, Shivant Jhagroe, as a second supervisor, your encouragement throughout the way gave me extra motivation and energy to do this research. The few moments we were sparring has been very valuable for my thesis. You showed me new interconnections and came up with ideas to get the most out of it. Udo and Shivant, your supervising together felt as the best team I could have for this thesis.

My sincerest thanks to all of the interviewees who contributed to this work. I am very grateful that I met new people by doing these interviews and that you all shared their knowledge and stories with me. You all gave me motivation to continue my research and write a story which I can share with others in striving for justice.

I would also like to give my thanks to Darko Lagunas. We met a year ago to see whether we could collaborate together in doing research for addressing justice issues in the supply chains of renewable energy technologies. The moments of brainstorming and working together helped me a lot for writing this thesis.

And, thank you Kamiel Verhelst, for making time to explain me how to analyse satellite data, and making a map to use in my thesis and a video to use for my presentation. And thank you Floor Pekelharing and Toos Stants, for designing the timelines.

I want to thank my close study-friends Floor Pekelharing, Simon Schilt and Manon van Ginkel. To have you as my friends gives me so much support and inspiration to strive for my passions, which has brought the best out of me during my master study.

I am also grateful to all study friends who wrote their thesis in the Architecture building at the TU Delft. Your listening ears about my passion and motivation for writing this thesis, but also the fun and relaxing breaks, made my thesis time in Delft as I wished it should be.

Last but not least, I want to end these acknowledgements by dedicating a special mention to my sister, mom and dad, who witnessed my last thesis struggles days before the deadline.

## ABSTRACT

---

With the growing threats of climate change, plans such as the European Green Deal (EGD) aim to mitigate climate change effects. However, the mining needed for the materials for renewable energy technologies could exacerbate threats to biodiversity and other ecosystems. Herein, nickel is one of the key materials required for a range of energy transitions. An area where this comes together is the Raja Ampat region in West Papua, the world's richest coral reef area. However, since West Papua has been marked over the last decades by internal armed violence, military rule and isolation since the recolonisation from The Netherlands to Indonesia in the 1960s, nickel mining is taking place on colonised lands of Indigenous Papuans. Therefore, this research set out to investigate how nickel mining in West Papua is related to colonial injustices. Using desk research, interviews, and decoloniality in praxis, this research has been set out through three different time periods through the history, present and future prospects. Thereby, this research finds that colonial and racist structures that were set out by the Dutch as nickel mining exploration activities have been taken over by Indonesia, where nickel mining has been developed further which the Papuans often experience negative consequences. Now, with the growing demand for nickel for energy transitions, colonialism can be legitimised for the 'green' energy transitions. As a consequence, Papuans will continue facing their struggle against colonial injustices of not having their right to self-determination, freedom of culture and identity expression, and ongoing traumatisation.

# TABLE OF CONTENTS

Acknowledgments.....	4
Abstract.....	5
List of figures.....	9
1 Introduction.....	10
1.1 Research contribution for Industrial Ecology .....	11
1.2 Thesis outline .....	11
2 Theoretical framework.....	13
2.1 Conceptual frameworks .....	13
2.1.1 Energy justice: the missing justice dimensions.....	13
2.1.2 Colonialism .....	14
2.1.3 Colonial injustices.....	14
2.1.4 Exploitation colonialism .....	16
2.1.5 Settler colonialism.....	17
2.1.6 Green colonialism .....	17
2.2 Conceptual integration .....	18
2.2.1 Conceptual framework.....	18
2.2.2 Some other definitions .....	20
2.3 Literature review .....	22
3 Method .....	25
1.1 Research approach .....	25
3.1.1 Steps research approach and data gathering.....	25
3.1.2 Case study .....	27
3.1.3 Timeline .....	30
3.1.4 Interviews.....	31
3.1.5 Validity of method .....	34
3.2 Decoloniality in praxis.....	35
4 Dutch colonial period.....	37
4.1 Dutch colonisation .....	38
4.1.1 1828: Dutch settlement .....	38
4.1.2 1848: Colonial border line through New Guinea .....	38
4.1.3 1898: Administrative posts .....	39
4.2 Geological research.....	39
4.2.1 1907: Systematic mapping.....	39
4.2.2 1945: Indonesian declaration of independence .....	40
4.2.3 1949: Dutch-Indonesian Round Table Conference.....	41

4.2.4	1950: Papuan political representatives letter to Dutch Minister .....	42
4.2.5	1956: Discovering nickel ores in Raja Ampat .....	43
4.2.6	1961: License for exploration of lateritic ores .....	44
4.3	Right of self-determination .....	44
4.3.1	1961: Establishment of New Guinea Council .....	44
4.3.2	1962: New York Agreement .....	45
4.4	Conclusion .....	47
5	Indonesian colonial period .....	48
5.1	Indonesian colonisation .....	49
5.1.1	1963: Indonesia's Transmigration program .....	49
5.1.2	1967: Indonesia opened foreign investment mining .....	49
5.1.3	1969: 'The Act of Free Choice' .....	50
5.1.4	1984: Arnold Ap's assassination .....	51
5.1.5	2001: Special Autonomy Law .....	52
5.1.6	2004: Ban on foreign journalists, researchers and NGOs .....	53
5.1.7	2017: Petition for referendum in West Papua .....	54
5.1.8	2019: Papua protests: The Great Uprising .....	55
5.2	Nickel mining development in Raja Ampat region .....	57
5.2.1	1969: Nickel exploration in Raja Ampat .....	57
5.2.2	1996: PT Gag Nickel establishment under a COW .....	57
5.2.3	1999: Indonesian Forestry law .....	58
5.2.4	2003: Raja Ampat ecosystems has the world's highest coral reef biodiversity .....	59
5.2.5	2003: PT Gag Nickel granted permit to resume activities .....	59
5.2.6	2005: Raja Ampat on tentative list UNESCO .....	62
5.2.7	2006: PT Kawei Mining Sejahtera .....	62
5.2.8	2008: BHP Billiton end agreement with PT Antam .....	63
5.2.9	2011: Moratorium law .....	65
5.2.10	2013: PT Kawei Mining Sejahtera license for nickel mining .....	66
5.2.11	2018: PT Gag Nickel license for nickel mining .....	66
5.3	Conclusion .....	70
6	European Union .....	72
6.1	European Green Deal .....	73
6.1.1	2015: Paris Agreement .....	73
6.1.2	2020: European Green Deal and Indonesian nickel ore export ban .....	74
6.1.3	2021: EU Just Transition Mechanism .....	75
6.1.4	2022: Russian-Ukraine war and REPowerEU .....	75
6.2	Future of West Papua .....	76

6.2.1	2021: Green State Vision .....	76
6.2.2	2022: IPCC report .....	77
6.2.3	2022: PT Antam EV battery project.....	79
6.2.4	2033: End of license Kawe island and 1.5 degrees rising temperature.....	80
6.2.5	2047: End of license Gag island .....	80
6.2.6	2050: EU as first climate-neutral continent .....	82
6.3	Conclusion .....	86
7	Conclusion .....	87
8	Discussion .....	88
8.1	Study limitations .....	88
8.1.1	Application of theory .....	88
8.1.2	Subjectivity .....	88
8.1.3	Results tensions.....	89
8.2	Implications.....	90
8.2.1	Research.....	90
8.2.2	Policy .....	91
8.2.3	Societal.....	91
8.3	Recommendations.....	92
8.3.1	Fieldwork research in Raja Ampat.....	92
8.3.2	Other minerals or metals needed for energy transitions.....	92
8.3.3	Non-colonial EGD .....	93
	Epilogue .....	94
	Bibliography .....	96
	Appendix.....	114
A.	Calculations nickel reserves and production.....	114
B.	Calculation EU nickel market demand .....	115
C.	Calculation PT Gag Nikel reserves.....	116
D.	Calculation deforestation Gag island .....	117



## LIST OF FIGURES

---

Figure 1. West Papua on a map (Mandavi, 2006).....	28
Figure 2. Share of nickel metal in energy technologies (IEA 2022, p. 6).....	29
Figure 3. Map of Raja Ampat, circles: north Kawe island, south Gag island (Unfala, 2019) .....	30
Figure 4. Five practices for decoloniality in ecology(Trisos et al., 2021) .....	36
Figure 5. Map of physiographic province in West Papua.....	40
Figure 6. Map and nickel laterites potential of the report of Molengraaff (1957) .....	433
Figure 7. Distribution of population at Gag island in 2009 (Hastanti & Triantoro, 2012) .....	49
Figure 8. Locations of nickel and the COW for Gag island (van Leeuwen, 1994).....	50
Figure 9. Nickel mining on Kawe island (Morgan, 2012) .....	63
Figure 10. Indonesia forest moratorium areas in Raja Ampat region (Ministry of Environment and Forestry Indonesia, 2020) .....	65
Figure 11. PT Gag Nickel prospect area (Prihasto et al., 2013) .....	65
Figure 12. Production schedule scheme of Prihasto et al. (2013) adapted to the new licenses by Kamiel Verhelst, a geographic system analyst(left) .....	67
Figure 13. Forest on Gag island (green), the Moratorium area (brown), and the deforestation (pink) (Global Forest Watch, 2022) (right) .....	67
Figure 14. Satellite pictures of Gag island in 2017 and 2022 (Global Forest Watch, 2022).....	67
Figure 15. Photos of nickel mining on Gag island (PT Gag Nickel, n.d.).....	69
Figure 17. Global primary outlook of nickel from 2015 to 2030 (Gregoir & van Acker, 2022, p. 37).73	

# 1 INTRODUCTION

---

Globally, the condition of coral reefs is deteriorating by the rising temperatures. With 1.5 degrees warming expected, which is pretty much inevitable to reach in the early 2030s (IPCC, 2021), more than 90 per cent of the world's reefs will experience heatwaves that are too frequent for them to recover (Adele et al., 2022). To reach the Paris Agreement goals, which aim to mitigate climate change's effects on these ecosystems, several versions of a 'Green New Deal' have emerged in the last two years.

However, these energy transition plans have led to another threat to these ecosystems, as mining needed for the materials for renewable energy technologies could exacerbate threats to biodiversity and other ecosystems (Sonter et al., 2020). Herein, nickel is one of the key materials required for a range of the energy transition, but also the mined commodity that is highly exposed to biodiversity risks (Moran et al., 2016; Pascal et al., 2008 and Mudd & Jowitt, 2022), as over 60 per cent of global nickel production happens in areas with high biodiversity risks (Myers et al., 2000 and Gregoir & van Acker, 2022). Due to the Paris Agreement, it is estimated that nickel is one of the metals that will have the strongest acceleration in demand growth, as it is expected that it will have a rise of 99 per cent in demand in 2050 (Hund et al., 2020, p. 1-3). A large part of this rising demand is from Europe since the EU nickel demand of the global market demand will be between 23 to 50 per cent in 2050 by the European Green Deal (EGD) policies (Gregoir & van Acker, 2022; appendix B).

Since Indonesia has the largest nickel production and reserves in the world (USGS, 2021; appendix A), Indonesia is seen as one of the leading countries for the production of nickel for renewable energy technologies (Arrobas et al., 2017 and Gregoir & van Acker, 2022). One of the locations of nickel mining lies the Raja Ampat in West Papua. Located in the Coral Triangle, the Raja Ampat region is known for having the richest coral reef species and the most biodiverse marine ecosystem in the world (Elmslie, 2017, Indrawan et al., 2019, p. 817; Allen, 2007; Veron et al., 2009). Thus, the rising demand for nickel for the energy transition leads to threats to these ecosystems in the Raja Ampat, with risks of damaging coastal fisheries and Indigenous lands (Auciello et al., 2021; Fairphone, 2017, and Mudd and Jowitt, 2022).

The nickel mining in the Raja Ampat region also takes place in an ongoing conflict situation. West Papua has been marked over the last decades by internal armed violence, military rule and isolation since the recolonisation from The Netherlands to Indonesia in the 1960s, where observers of the conflict estimate that between 100,000 and 500,000 West Papuans have been killed (Martinkus, 2020 and Giay, 2016). Despite the genocides that are going on, it is one of the most severely underreported long-term conflicts (Csevár, 2021). Officially in 2004, nearly all foreign journalists, researchers, non-government organisations and humanitarian agencies have been banned from entering West Papua (Csevár, 2021; HRWC, 2015; McNamee, 2020; Wangge & Webb-Gannon, 2020). As a consequence, reporting human

rights abuses and environmental destruction has been severely limited. As a result, tracing human rights violations and environmental damage impacts of mining in West Papua is difficult.

With the rising demand for metals for energy transitions, it is a difficult challenge to see how the exploitation of metals in West Papua will be further developed, as Eicchorn (2020) indicated. As a consequence, this can further conflict with the needs and rights of Indigenous Papuans. This colonisation, however, is often invisible because of the popular illusion that policies promote energy transitions based on renewable energy, improving the positioning of electromobility systems, and low-carbon renewable energy production are often labelled as ‘green’, ‘renewable’, and ‘environmentally friendly’ (Dunlap and Laratte, 2022, Jerez et al., 2021). As the IPCC (2022) listed colonialism as a historical and ongoing driver of the climate crisis, and an ongoing issue that is exacerbating communities’ vulnerability to it, this research seeks to research how nickel mining in West Papua is related to colonial injustices. For this, giving context to the historical background is important to understand present colonial injustices. And, looking at some future prospects, allows for more understanding of the rising threat of nickel mining for the Papuans and their environments, which is a necessity for understanding how to go beyond reproducing historical and current inequalities of colonialism. Therefore, this research answers the following question:

How is nickel mining in West Papua related to colonial injustices?

## **1.1 RESEARCH CONTRIBUTION FOR INDUSTRIAL ECOLOGY**

The field of industrial ecology (IE) has its goal of enabling solutions for sustainable development. However, sustainable solutions can go hand in hand with colonial and capitalist exploitation and social exclusion. Therefore, this investigation contributes to the field of industrial ecology (IE) by providing a decolonial ecology perspective on the ecological crisis. A decolonial ecology perspective is an ecological extension of existing critiques of colonialism. Decolonial ecology, as described by Ferdinand (2022, p. 175), is a renewed critique of historical and contemporary colonisations and their legacies and puts colonialism as the central issue of the ecological crisis. Thereby, the colonial relationship is not only between human beings but also between non-humans, landscapes and lands. It follows from the observation that pollution, loss of biodiversity, and global warming are the material traces of these colonial relationships, comprising global social inequalities and gender – and racial discriminations. This research contributes to the field of decolonial ecology by showing the struggles of Indigenous communities in West Papua against colonialism by addressing colonial injustices. And, this research shows these colonial injustices by using practices for decoloniality in the ecology of Trisos et al. (2021).

## **1.2 THESIS OUTLINE**

To answer the research questions, this research has the following structure. First, the theoretical framework is presented. Here, the theoretical insights used in this research are described, and the used

concepts are explicitly defined and integrated, followed by a literature review. Secondly, based on this review and integration of literature, these research objectives are met by this research's approach, translated into sub-research questions. Thirdly, translating this approach into empiric research, this research operationalises these ideas into practice, as described in the research methods. Fourthly, the three sub-research questions are presented, divided over three sub-chapters. Fourthly, these answers lead to a conclusion in which the main research question is answered. Fifthly, in the discussion, this study's limitations are described and recommendations for further research are given. As an epilogue, some further solutions for just energy transitions are presented.

## 2 Theoretical framework

---

In this theoretical framework, firstly, concepts of colonialism are described in their theoretical context, which will be used for the conceptual integration. Secondly, in this conceptual integration, energy justice is reconsidered through a decolonial perspective. Therefore, this conceptual integration consists of the concept of exploitation -, settler -, and green colonialism. And, thirdly, in the literature review, I discuss the research gaps, challenges and how I will build further on research that has already been done within this field. In this way, the literature used in this study is described, integrated, and critically assessed in this theoretical framework. The theory I will offer here should when further elaborated elsewhere, be able to connect decolonial perspectives on energy justice-related aspects.

### 2.1 CONCEPTUAL FRAMEWORKS

#### 2.1.1 Energy justice: the missing justice dimensions

In academia, over the years more attention has been paid to energy justice frameworks. Energy justice has strong links with environmental – and climate justice literature, united by a concern of justice. Against the background of the environmental and climate justice literatures and sharing the same basic philosophy, energy justice aims ‘to provide all individuals, across all areas, with safe, affordable and sustainable energy’ (McCauley, Jenkins, & Forman, 2013).

However, energy justice literature is mainly based on Western theorists and anthropocentric concepts have tended to dominate the discourses of energy justice (Sovacool et al., 2017), where it overlooks alternative interpretations of justice. In pointing out these theoretical and empirical shortcomings, critical energy justice scholars have acknowledged the need to consider non-Western epistemologies and worldviews in discussions about just energy futures (Castán Broto et al., 2018; Sovacool et al., 2017). Therefore, one of the proposed principles of Sovacool et al., is the intersectionality principle, for expanding the idea of recognitional justice to encapsulate new and evolving identities in modern societies, as well as acknowledging how the realisation of energy justice is linked to other forms of justice e.g. socio-economic, political and environmental. Recognitional justice can be defined as the right to self-determination and acknowledgement of a person’s rights, values, cultures, and knowledge systems (Howe, 2018; Fathoni et al., 2021). A form of justice that is missing in energy justice frameworks, as Ramirez and Böhm (2021) argued, is the cognitive justice dimension. Cognitive justice can be defined as the right for different understandings and ways of life to coexist (Rodriguez, 2017), which points to alternative ontologies and lifeworlds and calls for the validation of knowledges and ways of knowing born through struggle and resistance (de Sousa Santos, 2014). This is, as Ramirez and Böhm mentioned, important for recognising the different forms of knowledges and lifeworlds of indigenous peoples, which often conflict with frames of Western knowledge.

Still, as Dunlap and Laratte (2022) argued for environmental justice presupposition, where energy justice presupposition is build further on, tend to presuppose and aim for a fairer trajectory of industrial development in areas of contested megaprojects ('safe, affordable and sustainable energy'), implicitly leaving project rejection out of question. This perspective is based on the assumption that market dynamics and technological innovation are the key drivers of energy future pathways, thereby overlooking the role of power relations and sociocultural perceptions in imagining and building energy futures (Delina & Janetos, 2018). This environmental justice presupposition, as Alvarez and Coolsaet (2020) document, can risk imposing statist-colonial projects on Indigenous and autonomist peoples, which manifests in the loss of territorial control. As a consequence, energy justice frameworks can produce new injustices or perpetuating existing ones – a situation that can be termed as the coloniality of justice.

### 2.1.2 Colonialism

Therefore, researching colonialism and its colonial injustices enables to get a broader understanding of what these injustices in the energy transitions could entail. At its simplest, colonialism can be defined as a practice of acquiring full or partial control over another country, territory, or people, occupying it, sometimes with settlers, sometimes indirectly, and exploiting it economically (Mohamed et al., 2020; Kohn & Reddy 2017). Colonialism can be recognised by different characteristics, as Butt (2013) identifies three primary characteristics of colonialism: (1) the external domination of one people by another; (2) the imposition of colonial 'culture and customs onto the colonised'; and (3) the exploitation of the colonised (f.e. slavery, natural resource extraction and 'misappropriation of cultural property'). This also justified what Spivak (1988) following Foucault called 'epistemic violence', which constructed a method of knowledge to justify claims to superiority over the 'Other' and that simultaneously served to discredit and subjugate alternative perspectives, and knowledge that asserted different values and ontologies (Foucault, 2003). For instance, 'white culture' of the Dutch colonists became performative (as Indonesian culture is now in West Papua) in that it signified the naturalisation of cultural superiority and privilege, sometimes in alliance with a localised elite.

### 2.1.3 Colonial injustices

For understanding why colonialism is unjust, I use four existing accounts of why colonialism is unjust, provided by Lim (2021): (1) the violation of basic rights, (2) unequal and unfair terms of political association, (3) violent domination, and (4) (racial) exploitation.

Firstly, the violation of basic rights, is the dehumanising treatment endured by Indigenous peoples. Butt (2013, p. 3) notes that colonialism "involved multiple instances of slavery, rape, and sexual enslavement, murder, torture, displacement, and the misappropriation and destruction of property, alongside many other serious moral transgressions." Amongst those other transgressions might also be denials of self-determination, experiencing the imposition of an economic order, or the supplanting of

one's prior culture and language (Tan, 2007). These instances of injustice are, however, as Lim (2021) writes, not unique to colonialism, and are clearly wrong for moral reasons that are independent of colonial relationships.

Secondly, colonialism is unjust by the inequality and unfairness in terms of political association, because it denies Indigenous peoples for equal and reciprocal terms of political association. There are two dimensions of association that may fail to meet the criteria of equality and reciprocity. Firstly, by looking at the process through which the colonial relationship was established. Many Indigenous peoples were violently conquered and simply did not give their consent to be ruled. Yet there are also cases where consent was given, but under deceptive and manipulative conditions that were severely disadvantageous to colonised persons, and therefore do not meet the criteria for equality and reciprocity (Ypi, 2013, p. 181). Secondly, by looking at the underlying norms and principles that govern the political association in question. In many cases, associative norms like trade-related guidelines or rules controlling the movement of people (including their right to settle) were unilaterally imposed by colonisers onto the colonised, instead of being created through processes of fair deliberation (Ypi, 2013, p. 175).

Thirdly, colonialism is unjust by the violent domination, as the inequality in power between coloniser and colonised was sufficiently extreme, to the extent that violence could have been arbitrarily exercised without repercussions for the coloniser (Bufacchi, 2017, pp. 207–208). As Bufacchi describes, the capacity for violent domination exemplifies the inherent arbitrariness of colonial rule, under which colonising powers could forcefully violate subjects' basic rights at their own behest (pp. 207-208). While violence was the main instrument of arbitrariness in many contexts, wielded to make colonised subjects feel “vulnerable, violated, degraded, and inferior”, it must be noted that domination does not require the actualisation of violence (p. 209).

Fourthly, colonialism is unjust by its (racial) exploitation, as dominant groups are able to systematically reap unjust benefits from other subordinated groups (Lim, 2017). Historically speaking, as Lim wrote, colonialism involved the creation and maintenance of racial hierarchy, which rendered colonised populations vulnerable to harms at the hands of colonising powers. In turn, colonising powers systematically instrumentalised these vulnerabilities to their own benefit. In the same sense, we may say that colonising powers instrumentalised the vulnerability of colonised populations – specifically, the racial vulnerabilities established by colonialism itself – by using their unequal social status as a means of extracting labour, land, and resources from them allows dominant groups to treat them unjustly and benefit from unjust treatment. Thus, (racial) exploitation constitutes a colonial injustice, with its consequence that certain present-day practices can be seen as “colonial” because they uphold racially exploitative systems and conditions.

These colonial injustices exist in different forms of colonialism. For this research, by defining some forms of colonialism, it will help for understanding how different forms of colonialism have caused, and are causing, colonial injustices in the case of nickel mining in West Papua. Therefore, I have chosen to elaborate on three forms of colonialism: (1) Exploitation colonialism; (2) Settler colonialism; and (3) Green colonialism.

#### **2.1.4 Exploitation colonialism**

Exploitation colonialism describes the use of force to control another country for purposes of exploiting its population as labour and its natural resources as raw material (Longley, 2021 and Frankema and Buelens, 2013, p. 60, 61). This form of colonialism consists of trading posts as well as larger colonies where colonists would constitute much of the political – and economic administration. For these trading posts, it does not have to require as many colonists to emigrate. In the case of West Papua and mining, this form of colonialism is closely related to racial exploitation, as Kusumaryati (2021b) and Eichhorn (2022) have shown. As Kusumaryati (2021b) wrote, Indigenous Papuans or Melanesians have identified with their 'Blackness' throughout the period pre-dating their occupation by Indonesia, to their time under Dutch colonisation. Thus, as Kusumaryati (2021b) pointed out, the colonisation by the Dutch was reliant on a racial politics that placed indigenous Papuans 'at the lowest ladder of colonial society, while "native" Indonesians and Chinese played the role of colonial and mission mediators'. According to Eichhorn (2022), these relationships have been effectively transposed and replicated through 'industrial racism' and 'industrial colonisation'.

'Industrial racism' is therefore a term defined by Eichhorn, where it refers to the dehumanisation and neglect of indigenous and racialised populations through the exploitation of resources for the furtherment of development. This form of racism is built upon historical timelines of racialisation and racism, and therefore exists through time and space also after the period of Dutch colonisation. The racism therefore becomes embedded in a society, and is therefore systemic, both the industrial coloniser and the Indonesian government. These forms of structural, or systemic, racism and exploitation have parallels with state-run colonisations in history, as Eichhorn states, and still use some of the overt forms to justify and facilitate them, but they have far more of a long-lasting nature. For instance, a more overt forms of racism against Melanesians include some of Indonesians' views on their lower intelligence, and depictions of them as monkeys (Chao, 2021).

As Eichhorn explained, this systemic racism is closely allied to the constructs of a displacement within the lands of West Papua, and is couched in an institutional and industrial form, with power structures imprinted by the very nature of 'conquest' and exploration of material capital, at the expense of human and cultural capital. For this displacement to succeed, there is a need for a 'dehumanisation' of indigenous groups by an industrial coloniser or an activity which both simultaneously denigrates and upholds indigeneity. Herein, Eichhorn concludes, industrial colonisation, and an imposition of a



capitalist structure of development by the coloniser, is a form of industrial racism, which relies on a racism that operates at several levels, but is ultimately predicated on age-old colonial views of superiority, a lack of an acceptance of the same development trajectories as the indigenous people, and frameworks that do not allow for the true identities of Indigenous Papuans to flourish. Moreover, it attaches differential values to the need to exploit and extract wealth and assigns a form of paternalistic development to indigenous Papuans.

### **2.1.5 Settler colonialism**

Another form of colonialism, which in the case of West Papua was driven by resource extraction and territorial consolidation, is settler colonialism (McNamee, 2020). Settler colonialism can be defined, according to Whyte (2018), where one of where large numbers of settlers claim land and become the majority. In Whyte's understanding, settler colonialism refers to complex social processes in which at least one society seeks to move permanently onto the terrestrial, aquatic, and aerial places lived in by one or more other societies who already derive economic vitality, cultural flourishing, and political self-determination from the relationships they have established with the plants, animals, physical entities, and ecosystems of those places. When the process of settler colonialism takes place or has already occurred in some region, the societies who are moving in or have already done so can be called 'settlers,' and the societies already living there at the beginning of settlement, 'Indigenous people'.

By looking at the settler colonialism from European countries, as Lim (2017) explained, it can be seen how the vulnerability of colonised populations was instrumentalised to take land from them. Coulthard (2014, p. 7) characterises the settler-colonial relationship as one where "facets of economic, gendered, racial, and state power [...] has been structured into a relatively secure or sedimented set of hierarchical social relations that continue to facilitate the dispossession of Indigenous peoples of their lands and self-determining authority". Central to the notion of 'progress' and 'improvement' was the notion of colonised populations' racial inferiority: as a matter of their inherent 'backwardness' and 'deficiency', they were viewed as incapable and undeserving of holding legitimate property rights, which could only be justly held by 'intellectually advanced' and 'economically productive' European countries. In the case of West Papua, the transmigration program of the Indonesian government implemented in the 1960s, where the Indonesian government promoted migration, has led to displacement and marginalisation of Papuans (McNamee, 2020 and Macleod, 2015). This migration has increased to the extent that Papuans are now a minority in their own land (Elmslie, 2017).

### **2.1.6 Green colonialism**

Then, lastly, for defining green colonialism, different names can be used, as Sultana (2022) writes, which often has similar outcomes of domination, displacement, degradation, and impoverishment. Therefore, I light out some names with definitions for exploring the concept of green colonialism.

Firstly, as Jerez et al. (2021) indicated, the emphasis on carbon emissions and their measurement has left aside aspects such as the ecological footprint and environmental justice issues; instead, it has promoted a green recovery (Valdivieso, 2012) that hides the increase in consumption and investments in megaprojects with low ecological credibility and that is presented as low carbon emitters. This green mining, as Jerez et al. explained, is referred to megaprojects for technologies based on renewable energy, which reproduces traditional extractivist logic of nature's coloniality by climate change mitigation proposals, consequently leaving numerous socio-environmentally degraded territories, reinforcing the historically subordinate role of the Global South<sup>1</sup> as a provider of raw materials for the green economy (Dunlap, 2017) of the Global North. Thus, it ends up transferring the social – and environmental costs of 'zero-carbon lifestyles' of the Global North to the societies and ecologies of the Global South, which leads to an emerging 'decarbonisation divide' (Sovacool et al., 2020). For instance, as Jerez et al. have shown, lithium mining occurs under the same productive and historical conditions of green capitalism but with colonial features, generating new waves of exploitation of subaltern indigenous territories.

Secondly, as Táíwò (2019) explained, climate colonialism involves the deepening or expanding of domination of less powerful countries and peoples through initiatives that intensify foreign exploitation of poorer nations' resources or undermine the sovereignty of native and Indigenous communities in the course of responding to the climate crisis. For instance, Sultana (2022) writes, mining activities can be related to climate coloniality, which benefit a few while dispossessing larger numbers of historically-impooverished communities, often elsewhere.

Within a country, Normann (2020) defines green colonialism as the extension of colonial relations of plunder and dispossession to the green era of decarbonisation, where renewable energy development might intensify colonial losses of land and rights of indigenous peoples. In the case of West Papua, by the rising nickel demand for the 'green' technologies, colonial relations between the Indonesian government and Indigenous Papuans can be extended by new nickel mining projects, which intensifies new colonial losses of land and rights of the Papuans.

## 2.2 CONCEPTUAL INTEGRATION

### 2.2.1 Conceptual framework

Drawing upon this literature, I made a conceptual integration to research colonial injustices. As it seems that energy justice frameworks has blind spots on colonial legacies, the historical context needs to be researched to address these blind spots. By researching these forms of colonialism, it enables me to research the connections between historical and present colonial injustices. These concepts helps me to

---

<sup>1</sup> An alternative that I prefer is 'recovering countries', when it comes to countries that were once colonised. 'Recovering countries' emphasises that the colonial era is not long ago at all, and many countries still suffer from the effects of centuries of exploitation and destabilization by colonising countries. (OneWorld, 2021)

look at the colonial injustices that are taking place in the case of nickel mining in West Papua. I could have looked at other justice frameworks as well, such as environmental justice, but since it is mainly about nickel mining for renewable energy technologies, elaborating further on energy justice literature fits the best for this research. There are many more forms of colonialism than what has been shown in this conceptual integration. Also, other concepts than green colonialism could be researched, however, as it has been a conceptual search for me, I have chosen for this concept as I think this can help me the best for doing this research and addressing the blind spots in the so-called 'greenness' and address the conflict and contradiction. I have chosen to use this word as it draws people attention and triggers people to think critically about those so-called 'green' energy systems: it makes a connection between the positive image frame for legitimising colonial practices. Therefore, I have made the following three definitions based on the conceptual frameworks that I have discussed in section 2;

Forms of colonialism:

- **Exploitation colonialism** refers to the control of lands for the purposes of exploitation of resources which relies on the dehumanisation of indigenous and racialised populations;
- **Settler colonialism** refers to where large numbers of settlers claim land from Indigenous communities and become the majority on these lands;
- **Green colonialism** refers to deepening or expanding colonial relations of violence and dispossession through mining activities that intensify foreign exploitation of Indigenous lands or undermine the sovereignty of Indigenous communities in the course of responding to the climate crisis.

Colonial injustices:

- (1) the violation of basic rights;
- (2) unequal and unfair terms of political association;
- (3) violent domination;
- (4) (racial) exploitation.

Through researching the different forms of colonialism, different injustices can be recognised. This will be done critically by providing justice perspectives in the case of West Papua. A research to take as an example for providing non-dominant ideas of energy justice is that of Jara and Bruns (2020). In this research, Jara and Bruns were encouraged to expand their view of energy futures beyond the replacement of fossil energy systems to consider the transformation of colonial legacies of gender violence, land dispossession, and environmental exploitation as key components of just energy futures. This, because of the underscored centrality of self-determination in Indigenous futures. Therefore, I will build further on the research of Jara and Bruns, by researching multiple, interconnected, and often neglected dimensions of justice from the view of Papuans.

In this manner, these concepts allow for research on colonial injustices. For instance, think of how nickel mining could perpetuate green colonialism, by the rising demand of nickel for the European energy transition. This can lead to different colonial injustices, for instance the violent domination and violation of basic rights. By extracting land and resources, violent domination leads to cultural genocides of Indigenous communities, as these cultures are intertwined with the forest and marine environment. Or, allowing nickel mining on Indigenous lands is unjust in its denial of self-determination, which is unjust by its human rights violations. Then, this leads to different energy justice issues. For instance, by assessing the intergenerational equity principle, future generations of these Indigenous communities are threatened to practice these cultural heritages, traditional knowledges and traditions, and thus enjoying a good life. Another example is when assessing the intersectionality principle, the extraction of land and resources is linked to other forms of justice issues as political and environmental injustices by its denial of the right of self-determination of Indigenous peoples. Thus, linking colonial injustices to energy justice principles, and providing decolonial perspectives, it gives a better understanding of green colonialism.

## 2.2.2 Some other definitions

### 2.2.2.1 *Indigenous Papuan and Melanesian*

It is important to affirm, as Eichhorn (2022) indicated, that as far as geopolitical definitions are concerned, Papuans are Melanesians. West Papua itself makes up the far western reaches of Melanesia, which also includes Papua New Guinea (and Bougainville), New Caledonia, the Solomon Islands, Vanuatu and Fiji. Their Melanesian identity, for many Papuans, makes them culturally, linguistically and ethnically distinct from Austronesian Indonesians, who make up the majority of Indonesia's ethnic diversity (Webb-Gannon, 2021). As of 2020, West Papua's population was about four million, nearly half of whom were Indigenous Papuans. This Indigenous category comprises more than 260 ethnolinguistic groups who have lived on the island of New Guinea for at least 40,000 years (Kusumaryati, 2021b, p. 456). The identity of Melanesians, as with many indigenous populations of the world, can be closely linked to the land, and the resources that are being extracted from it. This is important in the context of the exploitation more widely of Melanesians, as Eichhorn explained. Were it not for this exploitation, Eichhorn wrote, it is likely that the term 'indigenous' would not even be used. As Kirsch (2010) showed, racist caricatures of 'tribal violence' have been used to accentuate the indigeneity of those who oppose the various forms of resource extraction. Thus, Eichhorn concludes, that this racialisation of indigenous Papuans is in effect a result of the resource extraction, and tangibly linked to the degree of their historic and present-day dehumanisation and exploitation. This combined identity marks the perimeter of a struggle for survival, intrinsically linked to land, river, forest and the ability to gain financially from their own rights to these resources. Thereby, Eichhorn wrote, identity becomes captured within a narrative of oppression, and violence, redefined with reference to a coloniser and their positioning and frameworks even to address this.

#### **2.2.2.2 *Right of Self-Determination***

As Robinson (2010) explained, the right to self-determination refers to the creation of independent States in the context of decolonisation ('external self-determination'). In the post-colonial context self-determination refers to the recognition of minority rights and the right all peoples to determine their own economic, social and cultural development within the confines of the state ('internal self-determination'). In more recent years, Robinson indicated, this internal right to self-determination has been used, for example, to ensure indigenous peoples have right of approval of development planned on or near traditionally owned lands. Thereby, an aspect of self-determination is to be free from violence and human rights abuse.

In the case of West Papua, as Robinson explained, that the people of West Papua claim the external right to self-determination, and their independence, on the basis of applicable rules of customary international law regarding decolonisation, which states that 'the subjection of peoples to alien subjugation, domination and exploitation constitutes a denial of fundamental human rights' and the UN Charter. This law is reinforced by State practice, pursuant to which countries around the world have gained independence from their former colonial powers. Indonesia argues that, at its independence in 1945, the territory of the Dutch East Indies included West New Guinea. In short, Robinson concludes that it is not the case the entire colony of the Dutch East Indies including West New Guinea, which I will go further on in my sub-research questions. As Robinson indicated, subsequent events and the practice of the international community with respect to West New Guinea recognised the independent right of West Papuans to independence, separate from Indonesia.

#### **2.2.2.3 *Environment***

Colonialism did not only devastate the local communities living on the lands settler-colonisers stole, it also devastated ecosystems, as I have mentioned in my contribution for IE. Therefore, I will also use the concepts of environment. For environment, I use Whyte's (2018) definition, where it reference to many different relationships connecting human and nonhuman living beings (plants, animals, persons, insects), non-living beings and entities (spirits, elements) and collectives (e.g. forests, watersheds).

#### **2.2.2.4 *Renewable energy***

Lastly, I want to made some reflections on my using the word renewable energy. Choosing to relate colonial injustices to energy injustices, is actually already from a very western point of view. Energy justice frameworks came into the light with the growing energy transitions and its justice issues, however injustices that are related to this have already been for a long time exposed by Indigenous and decolonial scholars of climate/environmental justice fields. Talking about these energy technologies in the dominant energy transitions mainly refers to high technologies. The question can already be asked where energy and these high technologies comes from; and how this relates to the colonial past. The concept of energy itself can already be seen as a colonial concept. That many scientists pledged that we need not only more efficient technology and renewable fuels, can come from the historical particularity

of energy as we know it, dependent on fossil fuels, and making it a thoroughly modern thing coming from the Industrial Revolution.

Also, I refer to these technologies as ‘renewable’ or ‘green’, as these are the common names to define these ‘sustainable’ technologies. Generally, renewable energy is referred as energy derived from natural sources, such as sun or wind, that are replenished at a higher rate than they are consumed. After all, energy could be said to nourish life itself, its production and reproduction, and all activity. Therefore, would rather prefer to talk about defining renewable energy as the self-production and local consumption of energy,

### 2.3 LITERATURE REVIEW

Little research has been done about the nickel mining in the Raja Ampat region in West Papua. This, as mentioned in the introduction chapter, can be explained partly due to the fact that it is becoming difficult for foreign journalists, NGOs and researchers to do work in West Papua. Still, some valuable research contributions have been made on which I can build on.

Firstly, McNamee (2020) showed how Indonesian settler colonialism in West Papua is operating. McNamee found that Indonesian settler colonialism in West Papua from 1964 to 1999 was driven by the twin logics of resource extraction and territorial consolidation. As McNamee indicated, primary sources are rare; social science largely rests on facts relayed from trusted government confidantes and informants, local media, and second-hand reports from the Papuan diaspora. Still, the paper provides evidence yet that transmigration has been strategically used by Jakarta to defeat minority insurgents and to secure control over Papua’s rich resource base. And, as McNamee indicated, given its extreme levels of racial stratification, repression, and resource alienation, West Papua represents perhaps the purest form of settler colonialism in the world today. The origins of this settler colonialism, as McNamee wrote, have been built on the Dutch settler colonialism. The Dutch were long committed to European racial supremacy and resource extraction in the East Indies. Yet, the Netherlands rules West Papua relatively benignly and even belatedly promoted Papuan self-rule in the mid-20<sup>th</sup> century. Next to this, what this research shows, is how almost all of West Papua’s resource wealth has been monopolised by outsiders, and transmigration for resource extraction is a pattern of this Indonesian settler colonialism. So, this paper is a valuable contribution of Indonesian settler colonialism in West Papua and its link with resource extraction, where I want to add on researching Dutch and Indonesia settler colonialism with the case of nickel mining in the Raja Ampat region. Also, it has left some open questions for me - for instance how the demand for metals for the energy transition influence the conflict.

Secondly, Kusumaryati (2021a) did research on the politics of corporation Freeport and contemporary colonialism by the Indonesian State in West Papua. As Kusumaryati indicated that corporations have had outsized political roles, especially during colonialism when transnational corporations such as the

Dutch East India Company shaped colonial entities. In this research, Kusumaryati showed how Papuans' discourses on the Freeport corporation, which has the world's largest gold and second largest copper mine in West Papua, is largely neglected to date, point to the unique political role that Freeport plays in the region and how it is situated within the broader history of colonialism and imperialism. However, Papuan discourses are largely neglected by the ongoing violence and oppression. They argue that, as a corporation, Freeport is not only criminal but also colonial. Therefore, Kusumaryati recommended to study Freeport in a way that consider its character within the broader historical development of corporations as political actors. From what I can take from this research, therefore, is that other mining corporations in West Papua could also been characterized within a broader historical development of corporations as political actors, and could be seen by Papuans as colonial. Thereby, this research has also left some open questions for me: how are the nickel mining corporations in the Raja Ampat region been characterized within a broader historical development of corporations as political actors? And, what are Papuan discourses on these nickel corporations?

Thirdly, the research of Eichhorn (2022) showed the role that resource extraction has played in enabling a form of racism in West Papua. In this research, Eichhorn showed the history of mining projects in West Papua, and how this has displaced indigenous populations. Thereby, Eichhorn indicated, that this development of mining reserves is at the expense and the destruction of indigenous lives in West Papua, as this process has relied on a dehumanisation of indigenous people, and an ignorance of their agency in determining their own needs. Eichhorn's research also demonstrated that this racism has been both explicitly and implicitly supported by Western and Global South governments. And, Eichhorn indicated, that the needs and rights of Indigenous Papuans can be further threatened, if the global North's decarbonising energy production happens to continue in a rapid rate. Thereby, the same abuses of power associated with resource extraction can be continually replicated. These 'abuses' may become more subtle, and less overt with time, Eichhorn writes, wherein the coloniser might use their accreditation within various frameworks to assert and legitimise their presence within the region. Therefore, as Eichhorn concluded, only if Indigenous people are given true autonomy over their own resources and are allowed to return to their means of self-determination, as has been seen in other nearby regions, true decolonisation can occur. However, Eichhorn indicated, decolonisation is never an end-point. Therefore, it is important to have a true embracing of an end to industrial racism and colonisation. For this, I want to build on this research, by the new challenge of the rising metal demand for the decarbonising energy production and its colonisation, to go beyond industrial racism and colonisation.

Then, as last, the research of Zografos and Robbins (2020) and Dunlap and Laratte (2022) provided critical examinations of the EGD. Zografos and Robbins argued that the EGD could put severe pressure on lands held by Indigenous and marginalised communities and reshape their ecologies into 'green sacrifice zones'. Thus, by the cost shifting of the EGD, it risks reproducing a form of climate colonialism in the name of 'just transition'. As the EGD is a recent development under the other GND

plans worldwide, systematic studies linking them to coloniality are lacking. Therefore, by researching in how far ‘green colonialism’ is related to the EGD, my research can build further on this recommendation. Then, in the paper of Dunlap and Laratte, they argued that the European Green Deal intensifying patterns of capitalism and (colonial) mining. Therefore, they recommend for further research, that degrowth scholars should acknowledge, learn from and, if possible, celebrate the committed land struggles that slow or stop, the growth of destructive infrastructures and capitalist industries, and affirms practices of rejecting, which they refer to decolonising, dominating growth-oriented institutions and practices.

So, what this last section of the literature review shows, is how resource extraction and racism against Indigenous Papuans has played an important role in the colonial history of West Papua, and is still continuing through Indonesian settler colonialism and mining corporations. There are many open questions, as far as I know, since no research has been done on the colonial injustices associated with the nickel mining in the Raja Ampat region in West Papua, and how rising metals demand for energy transitions plays a role in West Papua. Therefore, by bringing together decolonial conceptualisations of justice, based on Papuan perspectives, I research the colonial injustices that are related to nickel mining in West Papua. In the following chapter, I describe my methodological approach to engage with these perspectives.



## 3 METHOD

---

In this chapter, the theoretical framework in practical use is described. First, the steps of the research approach and its data gathering is presented. Secondly, the case study of this research is described. Thirdly, the timeline that is set up for this research is described with some reflections. Then, fourthly, the interview method is described, where my interviewees and my interview process throughout my research is elaborated. Lastly, my decoloniality in praxis will be described with some personal reflections.

### 1.1 RESEARCH APPROACH

#### 3.1.1 Steps research approach and data gathering

This research took an exploratory and case study approach to identify colonial injustices. This has been a flexible approach; throughout my research, I have been open to adapt my research to my new findings. The exploratory approach has been chosen as there was limited data available by doing research in The Netherlands. Also, it has been a deductive process: based on generalisations I took from my theories, I researched specific cases. For this, I took a qualitative research approach with semi-constructed interviews, a common method for finding non-published information in the field of qualitative research. This all has led me to a research approach consisting of three steps.

##### 3.1.1.1 *Dutch colonial period*

The first step of this research is to get an understanding of the colonial injustices resulted from the Dutch colonial period. For this, I started with doing research on the Dutch colonial period in West Papua and how geological research developed over time. Herein, a timeline with relevant events could be constructed; from the Dutch settlement in West Papua in 1828 to the New York Agreement in 1962. I have researched this in three parts: (1) Dutch colonisation, (2) geological research, and (3) the right of self-determination.

To do historical research by using historical archives was very important for this research step. The interviews with Vera Wesseling and Sophie Wijsenbeek-Schreurs, and Fako Kluiving, were important interviews to help me further with collecting historical reports to use for my research by providing reports Stratenus (1952), van Bemmelen (1953) and D'Audretsch et al, 1966. Thereby, I found out when, where and by whom nickel ores were founded in West Papua and specifically in the Raja Ampat region. For instance, I came across a reference of a report of Molengraaff (1957), who had done research for the TU Delft in the Raja Ampat region. Then, I request the report at the TU Delft library for an appointment to read the report and make pictures to use for the research.

Next to that, from other interviews with Raki Ap, Fadjar Schouten-Korwa and Julia Jouwe, I gained more insights into the history during the Dutch settlement from Papuan perspectives. Their perspectives

showed me how Papuans experiences of the decolonisation period during the Dutch colonial period and how the findings of geological research had played a role in the decolonisation process. Therefore, this research approach led to the first sub-research question: *Which injustices related to nickel mining resulted from the Dutch colonial period?*

### **3.1.1.2 Indonesian colonial period**

The second step is to get an understanding of the colonial injustices resulted from the Indonesian colonial period. For this, I also used the research I have done in historical archives for writing the first part of this step, (1) Indonesian colonisation. Herein, I also used the report of Pieter Drooglever, as a lot of valuable information can already be found in this book, since Pieter Drooglever did research for 20 years at the time. By reading pages from words in the register as ‘mining’ and ‘Raja Ampat’, and the political representative of the Raja Ampat during the decolonisation period, Abdullah Arfan.

Furthermore, the stories and perspectives I gained from the interviews contributed to this step for setting out a timeline of relevant events. For the second part of this step, (2) the nickel mining development in the Raja Ampat, I conducted interviews from the beginning until the end of my research which I elaborate throughout this step. Also, I have done desk research of reading news articles, scientific articles, blogs, press releases, satellite data and books. For instance, an important source that had led to do more research was of a report of Fairphone (2017), where they mentioned several risks of nickel mining in the Raja Ampat region. Also, to gain a better understanding about what happened in the past with the nickel mining developments in the Raja Ampat region, blogs on the website of MAC (.n.d.) was important for exploring. Also, scientific articles about the biodiversity in the Raja Ampat gave me more insights about the biodiversity surrounded on the islands Gag – and Kawe. And, I have done a remote sensing analysis by doing research on the satellite data of the website Global Forest Watch. And, I have used different academic search engines: TU Delft library, Leiden University library, Scopus and Google Scholar. Herein, I used keywords as: Raja Ampat AND mining, Raja Ampat AND nickel, Gag island AND nickel, Raja Ampat AND biodiversity, Raja Ampat AND local community, Gag island AND local community. Then, I have made a selection based on whether the articles would provide me with more information on the nickel mining developments regarding to my sub-question.

For these two parts, I read the books of Jason Macleod (2015), Webb-Gannon (2021), and Martinkus (2020), which helped me to learn more about the conflict in West Papua and its root causes. Also, I could build further on their research and experiences they shared, which I have also incorporated in my research. This led me to write out a timeline from the recolonisation by Indonesia after the New York Agreement, starting with its transmigration program in 1963, to the current nickel mining developments on Gag island in 2022. From this, the second sub-research questions followed: *Which injustices related to nickel mining resulted from the Indonesian colonial period?*

### 3.1.1.3 European Union

During the time that I have been researching, from January to August in 2022, there have been significant events that have shaped this step in the research. The Russia-Ukraine war caused an acceleration in the renewable energy transition through the REPowerEU plan by the EU, and shifting geopolitical power in the international nickel market. Also, the published reports of Arrobas et al. (2017), Hund et al. (2017), Gregoir & van Acker (2022), and IEA (2021) gave me more insights to which extent nickel mining in the Raja Ampat in West Papua is linked to the European Union Green Deal and its justice issues. Thirdly, the sixth assessment report of the IPCC (2022) has mentioned for the first time that colonialism is a historical and ongoing driver of the climate crisis, which meant that officials and scientists from around the globe now recognise the significant role colonialism has played in climate change.

Also different developments took place within my case study of Gag island. As first, EcoNusa (2022) published a short documentary where they showed the concerns from the community of Gag island and the pollution that has already been taken place. Secondly, a scientific article was published in April from Mudd and Jowitt (2022). Herein, they mentioned risks on biodiversity for the nickel project on Gag island. And, on the website of PT Gag Nickel a press release was published of an EV Battery Agreement that has been signed with different companies.

Therefore, I decided to divide this third step in two parts: (1) European Green Deal, and (2) the future of West Papua. In the first part I mainly investigated how nickel extraction in the Raja Ampat and in Indonesia is related to green policies of the EU. In the second part I looked at the justice issues by looking at some future prospects related to the EGD and Raja Ampat region. Herein, the reports I have mentioned earlier, and perspectives I gained from the interviews, gave me insights in justice issues of nickel mining in West Papua. From this, the third sub-research question could be answered: *Which justice issues of nickel mining are related to the European Green Deal?*

These three sub-research questions together answers this research's main question:

How is nickel mining in West Papua related to colonial injustices?

### 3.1.2 Case study

Next to the exploratory research, this study has a case study approach, for deepening and taking into account multifaceted understanding of complex issues of existent real life context. However, a disadvantage of using case study approach is that is about a single case only, as I have researched the nickel mining in the Raja Ampat region in West Papua. By describing events related to colonial injustices in a larger context, the case study is connected to a broader perspective. For instance, after the referendum of the 'Act of Free Choice' in 1969, which was carried out by the Indonesian government, West Papua became internationally recognised as a province of Indonesia. However, Indonesia had no legal or moral right to claim sovereignty over West Papua, as about 1025 Papuan

elders among the one million Papuans who were handpicked at gunpoint and forced to say vote for the referendum to remain with Indonesia (Drooglever, 2005). This context is important for researching how colonialism is related to nickel mining in West Papua, as the Papuans still do not have their right of self-determination by an unfulfilled decolonisation process, while the Indonesian government gained power for claiming Indigenous lands for mining operations.



*Figure 1. West Papua on a map (Mandavi, 2006)*

Nickel is a metal that is needed for a range of low-carbon technologies: renewable energy technologies, green electromobility technologies as EVs, and for the entire energy system, in technologies that improve efficiency and reduce emissions (IEA, 2021). This makes nickel a critical element in ‘green’ policies (Hund et al., 2017). According to the Arrobas et al., (2020), nickel production will rise with 99% in 2050<sup>2</sup>. For example, the most efficient coal-fired power plants require a lot more nickel than the least efficient ones in order to allow for higher combustion temperatures (p. 21). The international nickel market is characterised by two main types of output: high-grade class 1 nickel products and low-grade class 2 nickel products (Gregoir & van Acker, 2022). The demand growth for nickel in batteries requires class 1 nickel. Indonesia has the largest nickel reserves and is the biggest nickel producer in the world (USGS, 2022), where it is expected that it will be the leading nickel producer country in the future (Gregoir & van Acker, 2022).

---

<sup>2</sup> 2050 projected annual demand from energy technologies as percent of 2018 annual production (Arrobas et al., 2020, p. 103).

**The rapid deployment of clean energy technologies as part of energy transitions implies a significant increase in demand for minerals**

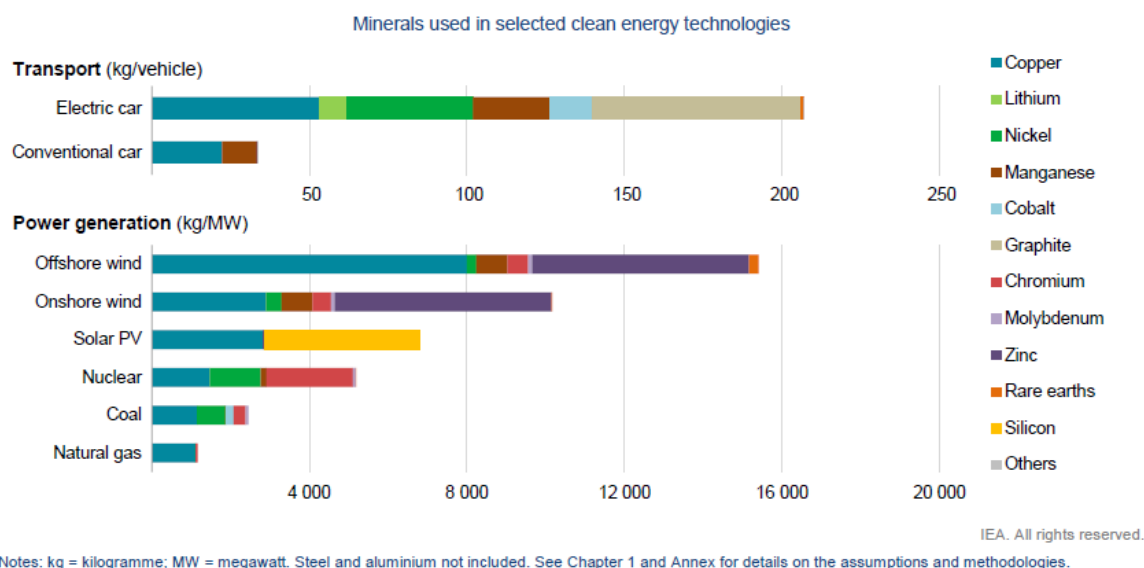


Figure 2. Share of nickel metal in energy technologies (IEA 2022, p. 6)

Therefore, this research focus on the nickel mining in the Raja Ampat region in West Papua, which consists between the 610 and 1,500 islands, including several large, mountainous islands. The Raja Ampat is part of the Coral Triangle and contains the richest marine biodiversity in the world (Elmslie, 2017, Indrawan et al., 2019, p. 817; Allen, 2007; Veron et al., 2009). Raja Ampat can be translated as the ‘Four Kings’ (‘Raja’ means king, and ‘ampat’ means four) which represents four of Raja Ampat’s largest islands. (Andaya, 1993). The name from the local mythology tells a women who finds seven eggs. Four of the seven hatch and become a king who occupy four of Raja Ampat’s largest islands: Misool, Waigeo, Salawati, and Batanta (Andaya, 1993)). The other three become a ghost, a women, and a stone.

As Turak and Souhako (2003, p. 25 - 27) described, the population structure of Raja Ampat should be understood within the context of Papua’s contact with regional neighbours. The term ‘Papuan’ refers to inhabitants of New Guinea and Raja Ampat Islands. Thus, the population structure of Raja Ampat is diverse and this complicates the issue of customary resource ownership. According to Turak and Souhako, almost every community in the Raja Ampat has lived there for a long period of time would claim to be indigenous, including those who freely admit descent from people who originated from the Molluca’s and other non-Papuan islands of Ceram, Ternate and Bajo, as well the Biak people from the Gelvink Bay of Papua Island. Other groups, including the Matbat, Salawati, Kawe or Lengenjem people would also claim to be the indigenous people of Raja Ampat. These early contacts are significant to the presence of certain communities in Raja Ampat, namely from the Biak region of Papua as well as the people of Ceram and other Molucca’s islands.



*Figure 3. Map of Raja Ampat, circles: north Kawe island, south Gag island (Unfala, 2019)*

In this region, I focused on the western part of the Raja Ampat, specifically on two islands: Gag – and Kawe island in figure 3. I have chosen to research these two islands, as in the beginning of exploring nickel mining in West Papua, by doing desk research on internet, I found mainly information and data about the nickel mining on these two islands. As there is rarely data to be found about nickel mining in West Papua, it was only feasible for me to do research on these two islands.

### **3.1.3 Timeline**

For this research, I have chosen to do historical research to the present and some future prospects. In order to get an understanding of the context in which injustices are taking place, it is important to give historical context and the perspectives of the Papuans. As Eichhorn (2022) indicated, it is important to establish a historical timeline of events surrounding exploration and exploitation of resources proximal to indigenous Papuans. Thus, this helps to understand colonial injustices related to nickel mining. Therefore, a timeline of relevant events is constructed, based on the information I gained through desk research and the interviews. I have set out three periods from 1828 to the present time, with some future prospects;

- (1) in the Dutch colonial period, I start from the Dutch settlement in 1828 to the New York Agreement in 1962;
- (2) in the Indonesian colonial period, I start from the Indonesia's transmigration program in 1963 to the present (2022) where I research the nickel mining developments on Gag island; and
- (3) the European Union from the Paris Agreement in 2015 to EU's ambition to be climate-neutral in 2050.

Choosing to start with the year 1828 need some reflections, as this is only a very small part of the Papuan history. In practice there is no such thing as ‘the history’. However, there are single historical events that turned the process of colonialism and the nickel mining development in West Papua which started by the Dutch settlement. Therefore, I had to remove a big part of the Papuan history in this research. As Rodney (1981) explained, the removal from history follows from the loss of power which colonialism is represented. Therefore, it is important to do research from the viewpoint of historically oppressed groups. For researching in historical source material, there are multiple histories written, with multiple perspectives, on the same events. This also became recognisable during this research, as the Papuan histories and narratives are mainly underrepresented in written books, news articles, and so forth. Therefore the Papuan perspectives as a guideline for my research, by doing interviews and choosing studies and books in which Papuans often speak, such as the books of Macleod (2015) and Webb-Gannon (2021), and the research of Kusumaryati (2021a, 2021b).

### 3.1.4 Interviews

#### 3.1.4.1 *Snowball sampling*

Interviews were done through snowball sampling. This ‘snowball sampling’ reflects an analogy to a snowball increasing in size as it rolls downhill. Through snowball sampling, I started with some first interviewees, and through their social networks, I was connected to other people who contributed to my research. This has led to eleven interviews, listed in a chronological order from the beginning of my research to the end:

1. Raki Ap – Spokesperson of the Free West Papua Campaign Netherlands, activist, political refugee, public servant
2. Sophie Kwizera – Policy advisor raw materials at the Policy & Programs department of ActionAid Netherlands
3. Fadjar Schouten-Korwa – Lawyer specialised in international law, human rights and the right to self-determination
4. Vera Wesseling and Sophie Wijsenbeek-Schreurs – Hapin helps to improve the economy and the livelihood of the population of Papua. Vera Wesseling is a financial administrative assistant, Sophie Wijsenbeek-Schreurs is a program & communication manager
5. Anonymous 1
6. Anonymous 2
7. Szilvia Csevár – Public international law professional, Lecturer Public International Law Researcher at UN Studies in Peace and Justice, Centre of Expertise Global Governance Leiden University

8. Anonymous 3 – Indigenous Papuan
9. Fako Kluiving – Theater maker, father was a Dutch geologist in West Papua during the Dutch colonial period
10. Julia Jouwe – Journalist, activist and founder of The Young Papua Collective, granddaughter of Nicolaas Jouwe
11. Jason Macleod – Educator, organiser, and researcher with expertise on the conflict of West Papua

By choosing snowball sampling I had to start through my own network. Later on, I also had interviews who had a different view on this, or addressed its complexities in the current situation. So, in my subjectivity, I tried to be as transparent as possible. When I started, I emailed several people and organisations to ask for an interview: Raki Ap, Sophie Kwizera, Fadjar Schouten-Korwa, Vera Wesseling and Sophie Wijsenbeek-Schreurs, Szilvia Csevár and Julia Jouwe. Then, I came in touch with two people who both indicated to stay anonymous in this research, where the interviews gave me more insights in the nickel mining development on Gag island and the Raja Ampat region in general. Also, when I visited the office of Hapin for an interview, I talked with employees at the office about my research, and one of the employees got me in touch with Fako Kluiving. With my visit and interview with Fako Kluiving, he showed me maps, photos, letters and reports. Then, we read in a report from his collection of another Dutch geologist, Gerard Johan Hendrik Molengraaff, who had done research in the Raja Ampat and found nickel ores in different areas during the Dutch colonial period. Then, lastly, I also came in touch with an Indigenous Papuan and Jason Macleod who are living in West Papua and Australia. I therefore conducted the interviews in different ways: meeting in person, online video interviews, and calling.

#### **3.1.4.2 Semi-structured**

For this research, I have done semi-constructed interviews, which allowed to gather data that has not been documented before (Menken and Kestra, 2016). I have followed some guidelines for feminist qualitative interviewing from Hesse-Biber (2012), which helped me to do interviews in a way for contributing to social justice: addressing how interview materials are used, analysing and presenting interview material with an eye to its historical context, carefully think through the purpose of interviewing (study and learn as much as possible before approaching others), primarily by asking for commentary on developing analyses or feedback on representation decisions, and involving interviewees in decision making about representation in various ways. Therefore, the topics I discussed and the questions I asked in the interviews were based on the background, knowledge and experiences of the interviewee. There was one final question that I asked to every interviewee: *What does justice mean to you? And for the conflict situation in West Papua?*



#### 3.1.4.3 Coding

During the process of elaborating the results of the interviews, I structured the codes into categories and sub-categories to create a storyline for my research. To get a better understanding why I decided this, I give some examples with some telling quotes of these categories.

Important historical events were indicated to give historical context of present-day issues: the New York Agreement, the ‘Act of Free Choice’ referendum, Indonesia’s transmigration program, Special Autonomy law, ban on foreign journalists, researchers and NGOs, the petition of the ULMWP and the Papua protests. For example:

For the Papuans, two contradictory events happened. Where they received their preparation for self-determination in 1961, in 1962, without consultation with the Papuans, a land treaty was signed with Indonesia for the transfer of sovereignty. (Raki Ap, 2022)

If you look at the whole process, there are unjust aspects to it. So those who are the traditional owners of the land have had no say in its use. [...] What concerns me with regard to West Papua is that at the very beginning of the decolonisation process, things did not go in a fair way and the entire say was taken away, and the structure of the special autonomy law has exacerbated this. (Fadjar Schouten-Korwa, 2022)

And, I decided to describe the ban of foreign journalists, researchers and NGOs in 2004, as two researchers indicated the challenge of doing research in West Papua:

People were hugely suspicious of us, as they were really threatened and very reluctant to speak out. And there was a heavy kind of military police presence as well. [...] The head of the policy pulled a gun on us, it was quite intimidating. (Jason Macleod, 2022)

If you are a human rights worker, or journalist, or any record of view being interested in issues taking place in West Papua, those permits are being systematically denied. [...] when a journalist is getting the special permit in Indonesia to enter West Papua, the journalist can be arrested by Indonesian forces. Actually, you are lucky when your permit is denied. (Szilvia Csevár, 2022)

Another category, the nickel mining on Gag island, had some concerning quotes regarding to injustices, for example:

When we started in 1996, Raja Ampat was just a name. There was no diving, apart from the diving we did. And we were amazed how beautiful it was. It was not known. [...] Because the process of the mining on Gag island had already been approved and in process, it sort of kept going, while it really should not been there, or at least it should be extremely well-monitored and care managed for any pollution from it. (Anonymous 2, 2022)

There were a number of protests, and they were all heavily repressed. [...] Basically, everyone who I know, who opposed Gag at that time, was received threats or some kind. Anyone who took that position was threatened by the police and military. And even those people who were in favour of mining [...], if they raised questions about the mine, they found it very hard to express that publicly by the fear repercussions. [...] And particularly they did not want risk being associated with pro-independence movements. (Jason Macleod, interview, 2022)

Yes, I have also driven around with a boat, and I saw directly: what a mess. (Anonymous 1, 2022)

Also, some interviewees indicated that the nickel mining could have negative consequences for the cultures of the Papuans, for instance:

[...] our lives and forests always relate to our cultural lives. Because all the values and philosophies of Indigenous people's life and cultures is always depend on the nature. [...] But when you clear all the forest [...] you are killing Papuans slowly and softly by the name of development and investment in West Papua. (Anonymous 3, 2022)

If you compare with the palm oil plantations, the consequences really go further than just depleted land or people losing their jobs. This is really a threat to a culture. [...] it is so much part of who they are, so that threat affects a part of their identity. (Vera Wesseling, 2022)

### 3.1.5 Validity of method

Choosing to do research in The Netherlands and not fieldwork in West Papua need some reflections to the validity of the method of this research. I have chosen to conduct my research in The Netherlands for various reasons: the changing corona measures, my network I could use for interviews within the Netherlands, safety reasons, and language barriers. This has led several challenges that affected validity.

Firstly, by creatively consulting a variety of sources, I have been able to plot an extensive timeline to examine colonial injustices. Due to colonial history, archives of Dutch geological research can mainly be found in the Netherlands, where I have been diving into. However, researching the history of anti-colonial resistance has been difficult, as historical records often contain written sources written from the perspective of the coloniser. I was therefore limited in researching the oral history related to geological research in the Raja Ampat during the Dutch colonial period.

Secondly, the languages that I speak has also influences on the resources and interviewees that I have found. I send interview requests to different NGO in Indonesia and West Papua, and also the mining company PT Gag Nikel, unfortunately I received little to no response. Because of this I have also not been able to speak to any Papuans who live in the Raja Ampat region. I did, however, translate several news articles, documentaries, and reports from the Indonesian language to English through Google

Translate. But because I don't speak the Indonesian language, I must have missed sources on the internet and databases that otherwise could have given me new information.

However, there are also advantages by doing research from. The benefits of choosing for this way for this research, is that I could show what could be known from here, especially as The Netherlands was a former coloniser of West Papua and I had access to sources that could not be found on the internet, such as the historical archives of the TU Delft. Also, by doing my research in The Netherlands, this research attempt to show what has been made invisible in what is happening at the nickel mining locations. For instance, the ban on foreign journalists by the Indonesian governments led to a limited amount of news articles that could be found about the nickel mining.

### 3.2 DECOLONIALITY IN PRAXIS

As I am privileged in many ways – me being a woman, white, born and raised in The Netherlands, having a Dutch passport, academic educated, raised in a privileged family – and I am aware of that I see things situation from my own experiences. Therefore, for doing decoloniality in praxis, meaning actively undoing systems and ways of thinking, I practiced some recommendations of Trisos et al. (2021) shown in figure 4, which could help to do academic ecological practices: (1) decolonise your mind, (2) know your histories, (3) decolonise access, (4) decolonise expertise, and (5) practice ethical ecology in inclusive teams.

Doing research from a decolonial view, I looked at stories from the perspectives of the colonised. So the story and research I have written down are the stories of the oppressed. Therefore, during my research process, I kept doing different things to learn more about history: listening to stories, attending guest lectures, watching documentaries, and reading books. I also worked on my preliminary results by getting interim feedback on whether the Papuan perspectives were well presented. For instance, I met with Julia Jouwe to get feedback on my historical timelines and their justice issues, which provided an added value to sharpen the historical timeline from the viewpoint of the Papuans.

Also, I shared the perspective and stories I gained throughout my research through different activities. Firstly, together with Julia Jouwe and Raki Ap I also wrote an opinion piece as a reaction to a newspaper article in the Dutch newspaper *Trouw* that was published in February 2022, 'If Groningen no longer supplies gas, West Papua offers solace'. The opinion site *Joop BNN* posted our opinion article, with the title 'Getting gas from West Papua is colonisation 2.0' (Jouwe et al., 2022). Secondly, Vera Wesseling interviewed me for the storytelling collective *Papua Dalam Hatiku*, an initiative from the organisation *Hapin*, to share my personal story of my connection with the Papuan movement (Stichting Hapin, 2022). And lastly, together with Raki Ap, we gave a lecture about 'Green colonialism' on the TU Delft during a seminar on sustainable management of critical raw materials.

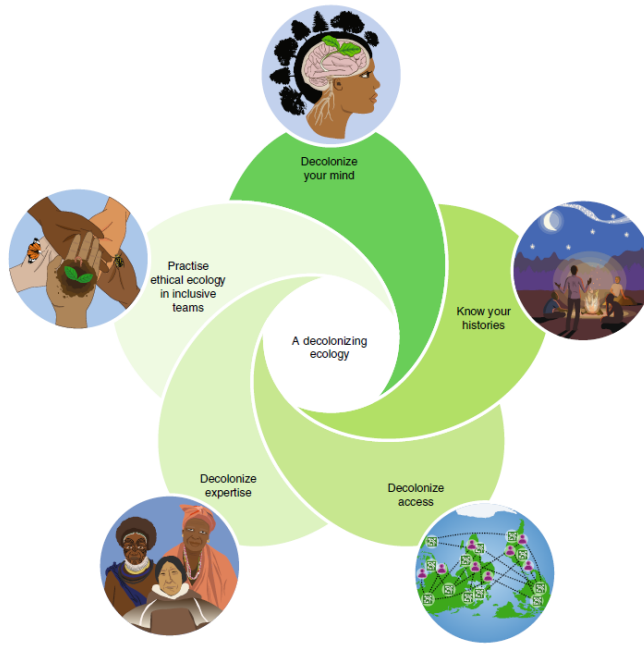


Figure 4. Five practices for decoloniality in ecology (Trisos et al., 2021)

## 4 DUTCH COLONIAL PERIOD

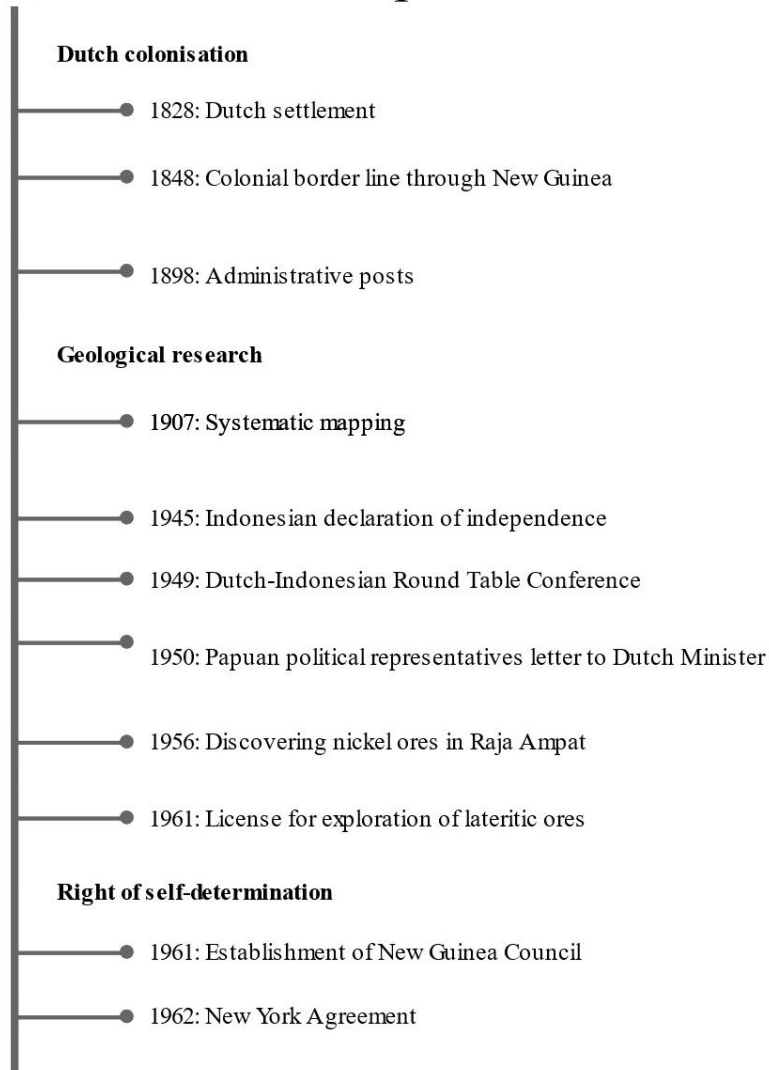
---

*You often hear from the Papuans: “If we did not had that gold, they would not have been interested in Papua, and then nothing would have happened.”– Fadjar Schouten-Korwa*

In this chapter, the nickel mining during the Dutch colonial period is researched. Firstly, the Dutch settlement is shortly described. In the second part, events are described that are related to nickel mining development during the Dutch colonisation and in how far this relates to the development process. This leads, thirdly, to a deeper investigation how nickel mining influenced the right of self-determination in West Papua. Together, these allow for answering the first sub-research question:

Which injustices related to nickel mining resulted from the Dutch colonial period?

### ★ Dutch colonial period



## 4.1 DUTCH COLONISATION

### 4.1.1 1828: Dutch settlement

In 1828, the Netherlands occupied and claimed lands of Indigenous Papuans, which was the beginning of a long colonial occupation. The Netherlands established a settlement in the western part of the island New Guinea and proclaimed sovereignty. This competition led, in time, to a more established colonial presence on the island. By establishing a settlement, the Dutch contained a structural principle clearly stated in the deeds of the Dutch-East Indies (VOC). Before claiming sovereignty, many colonised populations were violently conquered and simply did not give their consent to be ruled; the Dutch were in an area which they claimed without feeling familiar to it. For instance, in the history is written that there were 'fights' against piracy, as Stratenus (1952, p. 6) wrote: "Also the interest of the Dutch East India Company in New Guinea was not great and did not go further than a vigil for the spice monopoly and the fight against piracy", and: "If one now wants to take possession of a piece of impassable jungle with the domain declaration in hand, the population will immediately be in the greatest difficulties."

### 4.1.2 1848: Colonial border line through New Guinea

In 1848, New Guinea became divided between the western and eastern part, where the Dutch settlers claimed the western part of the island. Thereby, the Netherlands had enlarged their claim on the island. This colonial border, an artificial straight line, has been cut through traditional lands of Indigenous communities and its traditional border lines. From the perspective of justice, this created a new step in colonial injustices of the Dutch colonialism by denying the self-determination of these communities and their traditional land rights, as Szilvia Csevár explained to me:

This artificial straight line by colonial powers is not a border line where any of the local communities would recognise as the border line of anything, let alone an international borderline.

As a consequence, this artificial border and claiming Indigenous lands created problems. Stratenus (1952, p. 30) indicated how the Papuans had a different legal view, where Papuan communities had their own rights system based on their environmental surroundings: "The native population of New Guinea, however, has a completely different legal view. Paradoxically, one could say that there is no waste ground in New Guinea. Every tree, every stone, every river, yes, even the sea far off the coast, are objects of certain rights, property rights, hunting rights, fishing rights, etc. These rights, which never belong to individuals but to communities, are, moreover, inalienable, because the Papuans simply cannot imagine permanent alienation." What this clearly shows, is how the Papuan communities already derived economic vitality, cultural flourishing, and political self-determination from the relationships they had established with their environment. These traditional lands of the Papuans are going through tribes, which are nowadays called the 'Adat rights', as Vera Wesseling explained:

The Adat law, the land rights known to the Papuans, are different from what we see as land rights. Adat rights goes straight by tribe, and they know exactly where those boundaries are, but the international land rights do not take that into account.

However, the inaccessibility of the land, soil, and climate, malaria, lack of labour, and fundamental rights made the Dutch colonists for a long time rarely settles in Western New Guinea, as Stratenus (1952) explained. Thus, for a long time, it was in economic sense more beneficial for Dutch companies to locate on other islands as Java and Sumatra (Stratenus, 1952, p. 13).

#### **4.1.3 1898: Administrative posts**

Then, in 1898, New Guinea was divided in two administrative posts (Droogleever, 2005, p. 31). The Dutch colonial administrations had opened posts and conducted exploration intent on familiarising them with their colony, including the Raja Ampat group. The main reason for this was the expansion of British and German control in the east. The Dutch wanted to make sure the United Kingdom and Germany would not move the border to the west. For this, as Kusumaryati (2021b) explained, Dutch colonialism relied on a racial politics that put indigenous Papuans at the lowest ladder of colonial society, while “native” Indonesians and Chinese played the role of colonial and mission mediators. Therefore, they initially used the term “Oceanic Negro” to refer to Papuans, which indicates Africa as their cardinal comparison (Ballard, 2008). They also used terms like “savages,” “pigmy,” (Wollaston, 1912; Stirling, 1943; Bijlmer, 1935) and “Stone Age” (Slama & Munro, 2015; Rutherford, 2019) to refer to the indigenous population.

## **4.2 GEOLOGICAL RESEARCH**

### **4.2.1 1907: Systematic mapping**

From 1907 onwards, West Papua got more systematically mapped (Ekkelenkamp, 2019, p. 181). During this time, more geological research has already been done in the Dutch East Indies where nickel ore locations potential has been recognised by the Netherlands Indies Geological Survey in 1909 and 1910 (Van Leeuwen, 1994). Further development in the mining sector was stimulated by the successes in the Australian part of New Guinea, where important gold discoveries were made in 1924 (Droogleever, 2005, p. 58). On the Dutch side, this led to the establishment of an international combination, the NV Mijnbouw Maatschappij Nederlands Nieuw Guinea (Limited Mining Company Netherlands New Guinea), in which the Billiton company owned 25 percent of the share (p. 58). Also, in 1924, a report was published where geologist Loth, for as far from my knowledge<sup>3</sup>, found the first nickel ores in the northern Vogelkop (1924, p. 137).

---

<sup>3</sup> I was unable to view this report to read the details of the findings

Still, during this time, the Dutch government still had only settlements along the coast (McNamee, 2020), where the vast majority of these Europeans were not officials but rather missionaries. For the Dutch government, the mining opportunities were interesting, and they aimed to present that the Netherlands would miss out on opportunities that could be seized by others (Drooglever, 2005, p. 59). Therefore, in the second half of the 1930s, the Limited Mining Company Netherlands New Guinea carried out a large-scale systematic exploration (Drooglever, 2005, p. 58). This has resulted that in 1938, the Nederlandse New Guinea Maatschappij (NEGUMIJ) (Netherlands New Guinea Company) was founded, but with a very limited capital. Also, from 1939 on, New Guinea became largely mapped photogrammetrically (Ekkelenkamp, 2019, p. 217). From these expeditions, in 1939, nickel ore was first found on the island of Waigeo (D'Audretsch et al, 1966, 5cd).

These expeditions did not immediately lead to profitable activities. As Drooglever indicated, business confidence was lacking and the political necessity ultimately did not speak strongly enough. Also, these expeditions did not go without resistance from the Papuans. Drooglever (2005, p. 58, 59) mentioned that there was much resistance from the population for these expeditions. This made the Dutch concluding that this type of activity could only be successfully started when the area had been brought under enough forced administration. However, as Fako Kluiving says, from his father's experience there was also cooperation between the Papuans and the Dutch geologists.

[...] people also came with stuff, money, and other things. So it also gave you some kind of economic gain, so people wanted to work for the Dutch.

#### 4.2.2 1945: Indonesian declaration of independence

In 1945, the Indonesian National Revolution started, as Indonesia declared its independence, followed by a war of independence. Still, exploration of mining opportunities in West Papua has been continued. Remarkable in this time, is that not only the Dutch was doing mapping. Also the USA did activities for mapping, as Fako Kluiving showed me a map published by the Geological Society of America in 1946 (figure 5).

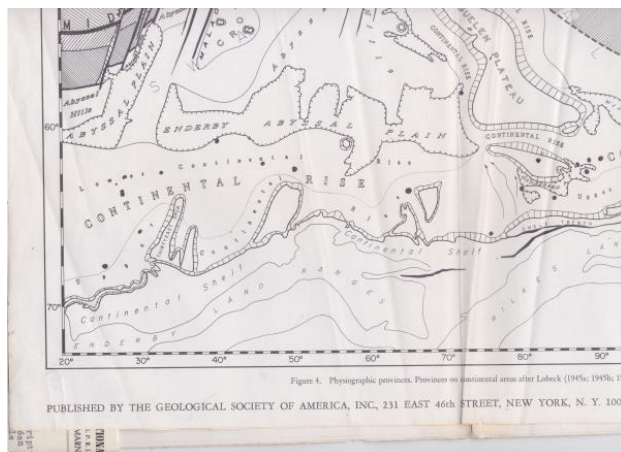


Figure 5. Map of physiographic province in West Papua



This map was an area where earthquakes occurred and its fracture lines, where you see Madagascar, India, Indonesia and Australia. Mapping the physiographic provinces, a region having a particular pattern of relief features or land forms that differs significantly from that of adjacent regions, could be a first step indicating important mineral sites. As Fako Kluiving said, the USA was also carrying out flights for doing research which areas could be interesting for mining exploration:

I heard the story that the Americans have carried out flights in that area, and they have also scanned New Guinea by making photos. And from those photos they could roughly say which areas were interesting and which were less interesting [for mining exploration].

#### **4.2.3 1949: Dutch-Indonesian Round Table Conference**

The war between the Netherlands and Indonesia has ended after a Round Table Conference that was held in The Hague in 1949. The 1949 agreement that recognised the Republic of Indonesia as a sovereign state. Despite the political independence, the Dutch government took a tough stance on the economy of Indonesia since the Netherlands lost a lot of money because of the military expenses that were used during the independence war (Van Reybrouck, 2020, p. 517). Therefore, all permits and concessions enjoyed by Dutch companies remained in full force, and Indonesia had to take over all the debts resulted from the colonial period of the Dutch East Indies. Thus, the Dutch settlers kept colonial possessions and unfair economic relations remained almost the same (Ekkelenkamp, 2019, p. 23).

The Dutch also stated that the colony of West New Guinea was to remain under Dutch rule. As a consequence, The Netherlands continued to administrate 'Netherlands New Guinea'. The Dutch government recognised that West Papua was geographically, ethnically and culturally different to Indonesia and so the Dutch government began preparing West Papua for its own independence throughout the 1950s. This was challenged by Indonesia, on the basis of West New Guinea's association with the Netherlands East Indies (Rifai-Hasan, 2009).

The reason for this, as van Reybrouck (2020, p. 518) writes, was mainly because of a symbolic value and the discovering of minerals. This has also been mentioned by Fako Kluiving, where he said how West Papua was the last piece of the Dutch colonial empire:

In fact, New Guinea was the last thing left for the Dutch colony.

For the Dutch government, it became important to show how the Netherlands was able to implement an effective decolonisation policy (Drooglever, p. 284). The self-determination and future of independence for the Papuans was an important building block for The Netherlands, in order to keep intact the (self) image of a 'good' coloniser. For this, it was necessary to invest in 'modern development'. Also, a geopolitical aspect of foreign investment became important, as the Dutch could give other nation states a power in share, and thereby keeping good relations. This gave the Dutch settlers a legitimacy of investing in a 'good management' of Netherlands New Guinea. During this time,

foreign interest mainly came from the USA, Japan and Australia. Therefore, since 1949, the Dutch shifted exploration activities to West Papua, as the Dutch were committed to strengthening the economic base of the colony (Drooglever, 2005, p. 284).

This becomes also clear in a report of Stratenus (1952). For this report, time, Stratenus worked for a year as an economic adviser to the Government of New Guinea. Later on, he points out why it is in the interest of the Netherlands to do geological and mining exploration (p. 113). “[...], there is another part of the administrative task where expansion is necessary, this time not in the interest of Papua, but in the interest of the Netherlands. I am referring here to exploration, especially geological and mining exploration.” The fact that Papuas were seen as primitive in this too and were therefore not taken into account, was also the case in this report. For instance, Stratenus called the Papuans (p. 2):

“Among the most primitive of the world”

Herein, Stratenus indicated that it is the role of Dutch mining services to do the exploration phase of the nickel ore. For a systematic research of the whole area is it “clearly a government task”, and it can be taken over by private companies for further research when something has been found.

#### **4.2.4 1950: Papuan political representatives letter to Dutch Minister**

As Drooglever (2005, p. 763) wrote, the move towards self-determination became the main aim of Dutch policy in respect of New Guinea from 1945 onwards. However, in 1950, the Indonesian government was proposing to gain sovereignty over West Papua. In 1950, four Papuan political representatives send a letter to the Dutch Minister of Union Affairs and Overseas Kingdoms (Arfan et al., 1950). Herein, they addressed their concerns on what has been reported in the newspapers about the Indonesian government proposal on the case of West Papua. In this proposal, after a certain transition period the Indonesian government would take over West Papua as a province of Indonesia. One of them these representatives was Abdullah Arfan, who was representative for the Raja Ampat (Drooglever, 2005). This gives me some indication that here was a desire for independence in the Raja Ampat. The letter made clear how the political representatives see this as a big threat, where “Accepting or not accepting this proposal is a matter of life or death for the Papuan people”, and the Papuans would have “no longer a chance of an independent existence if such proposal is adopted.” They made a statement containing the wishes and desires of the Papuans. The statement that has been send contained points, such as:

- (1) The right to self-determination is a democratic internationally recognised right and recognition of this right also brought peace in the Dutch-Indonesian conflict and should not be pushed aside.

(2) the Papuans are not Indonesians, they are not Dutch either, but they are Papuans and wish to remain themselves. They are and feel akin to the Papuans of Australian New Guinea from whom they cannot be cut off, as the Indonesian delegation wishes.

(3) the Papuans have long for closer contact with the Papuans of Australian New Guinea and the Melanesians, as they are related to them and closer to them culturally and socially than to the Indonesians.

(4) It is unacceptable for the Papuan people to surrender sovereignty to the Indonesians as it will then always be impossible for the Papuan people to ever become a sovereign people themselves.

As Szilvia Csevár explained, decolonisation is about what the Papuans want, which became clear in the process towards independence of The Netherlands: an own state. As Szilvia explained:

Decolonisation is about: what do the people of West Papua want?

Thus, this made clear how Papuans relate themselves as Papuans of the whole island of New Guinea, and they demand the right of self-determination and sovereignty. Despite this, there was an additional twelve years of Dutch rule, where political and economic interests of outsiders were growing.

#### 4.2.5 1956: Discovering nickel ores in Raja Ampat

As West Papua remained under Dutch control, there was an acceleration on mapping West Papua for exploring mineral locations. Further exploration for nickel and other metals was recommended by geologists and economists to the Dutch government (van Bemmelen, 1953), these shifted exploration activities of the Dutch settlers led to the discovering of more nickel laterites, for instance the Cyclops Mountains in 1949 (Van Nes, 1954, 19556) and on Waigeo and other islands in the Raja Ampat in 1956 (Molengraaff, 1957; figure 6).

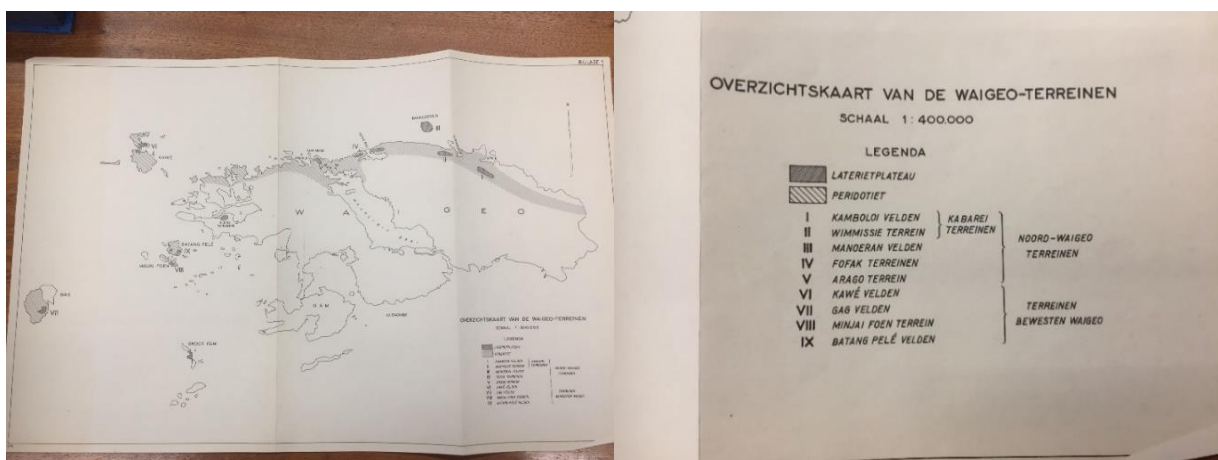


Figure 6. Map and nickel laterites potential of the report of Molengraaff (1957)

Ekkelenkamp (2019), who researched the role of the Dutch presence in Indonesia in the development of geodesy in the Netherlands, concluded that the establishment of the TU Delft must be seen as a

result of Dutch activities in Indonesia. Later on, the TU Delft also set up geological research projects in West Papua. This has led to a research project of Gerard Johan Hendrik Molengraaff, a Dutch geologist, together with TU Delft students from Delft University of Technology of the Department of Mining Engineering. This investigation aimed to explore further the iron-containing laterites could contain nickel and cobalt. In these reports, attention has been drawn to the possible reserves in the areas in West-Waigeo and on the island of Gag (Molengraaff, 1957, 1960). Next to these outcomes, it also shows how the TU Delft contributed to Dutch activities in West Papua by doing geological research.

#### **4.2.6 1961: License for exploration of lateritic ores**

In the time of transfer to independence for the Papuans, as Drooglever (2005, p. 288) wrote, plans were made in place for a large-scale exploitation of its mineral resources, were mainly the results of copper played an important role. Based on government-sponsored follow-up work in both regions, a group of Dutch companies together with the US Steel Corporation formed a company in 1960 to explore and develop these deposits under by the ‘Pacific Nikkel Mijnbouw Maatschappij’ (Pacific Nickel Mining Company) (Van Leeuwen, 1994). The next year, in 1961, the Dutch government granted different companies for exploration and exploitation licenses for a period of 75 years for the lateritic ores on Waigeo and in the cyclops Mountains: the Pacific Nickel Mining Company, in which the following stakeholders participated: United States Steel Corporation (USSC), Navien Company, ‘Nederlandsche Handel-Maatschappij’ (Netherlands Trading Company), the ‘Oost-Borneo Maatschappij’, and W. Müller and Coy (D’Audretsch et al., 1966). This remained with an exploration phase, as the political situation got changed later on. Also, in 1962, the Dutch government signed a contract with a newly established company, the Pacific Nikkel Mijnbouw Maatschappij, in which the OBM, its Dutch partners and the USSC participated Drooglever (2005, p. 288). As Drooglever wrote, the company would focus on the exploitation of nickel and cobalt in the Cyclops Mountains near Hollandia and the Raja Ampat. Thus, the licenses were given in a time where Papuans were with the Dutch government in a process towards independence. So, what this mainly shows, is how the Dutch government was safeguarding economic interests for mining nickel after the independence. To have a better understanding of the independence process that was also going on in that time, the establishment of the New Guinea Council in 1961 and the New York Agreement in 1962 are two important events to explain in more detail.

### **4.3 RIGHT OF SELF-DETERMINATION**

#### **4.3.1 1961: Establishment of New Guinea Council**

An important date which represents the West Papuan independence from the Dutch and the establishment of West Papua sovereignty was on the December 1 in 1961 (Webster, 2001-2002, p. 507). While, in fact, West Papuans did not become legally independent on that date, a New Guinea Council with a majority of West Papuan members had been formed in October of that year, and on December 1

the council subsequently celebrated the adoption of national unifying symbols, including the Morning Star flag, a national anthem, and the name of the territory, West Papua (King 2004, 49).

So, on this day in 1960, West Papuans were granted their freedom by the Dutch government. In the queen's speech of 1960 (The Dutch government, 1960), queen Juliana said how the population of New Guinea has its right on self-determination. She mentioned that the Dutch government is of opinion that, in order to make a responsible choice about their own future, the Papuans had to be able to orientate themselves freely and without threat wherever they wished. Next to this, she mentioned how a conversation with the Indonesian government was not possible, as the Indonesian government imposed conditions that were contrary to the right to self-determination.

For this reason many West Papuans still celebrate December 1 annually as a commemorative day of West Papuan national unity and identity. Julia Jouwe, the granddaughter of Nicolaas Jouwe who designed the Morningstar flag, explained what the Morning Star flag means:

He always said: "The white star of hope in a red lane of battle." The struggle is very layered, because red symbolises the blood, pain, and struggle. Still, the white star shows that you should always have hope in the struggle.

Also, the flag represents the right of self-determination, as Raki Ap mentioned:

The Morning Star flag is our symbol of freedom [..].

The right of self-determination is the right of a people to determine its own destiny. In particular, the principle allows a people to choose its own political status and to determine its own form of economic, cultural and social development. It means ultimately the right to determine freely, and Queen Julian's speech was a promise to strive for justice for the Papuans by its development towards self-determination.

#### **4.3.2 1962: New York Agreement**

However, in these years, The Netherlands and Indonesia were in conflict regarding who has the power of the territory administration of West Papua. Also, the USA wanted to prevent Indonesia to be influenced by communism during the Cold War, and therefore undertook actions. In 1962 on the 15<sup>th</sup> of August, there came a deal between the United States, the Netherlands, and Indonesia, known as the New York Agreement. During this process, Papuans were not consulted as America, Dutch, and Indonesian authorities considered them to be too primitive to have a stake in the decision, let alone have their own nation-state, as Kusumaryati (2021, p. 257b) wrote. As a consequence, the governments of the three countries agreed that West Papua became an Indonesian administered territory (Saltford 2003, 13). When the agreement was signed, The Netherlands transferred sovereignty over West Papua to the United Nations, which transferred it to Indonesia after six months. Raki Ap mentioned how these two

historical events were very contradicted to each other: the right of self-determination in 1961 versus the handover of sovereignty to Indonesia in 1962:

For the Papuans, two contradictory events happened. Where they received their preparation for self-determination in 1961, in 1962, without consultation with the Papuans, a land treaty was signed with Indonesia for the transfer of sovereignty.

What is leading in here, is that the ‘good coloniser’ narrative was active dominant in the decolonisation process between The Netherlands and West Papua, while in the meantime, other interests has played a role (Jouwe, 2021). According to Drooglever (2005), in this agreement, mining interests also played a role. Drooglever (2005, p. 486) described how during the New York Agreement, state Secretary Bot of the Dutch government called attention to the guarantees for concessions and property rights, which were arranged in this agreement. Drooglever indicated that this was particularly important in connection with the recent agreements between some American mining companies, the Oost-Borneo Maatschappij and the Dutch government on the exploitation of the nickel and copper stocks near Hollandia and in the Carstensz Mountains. 155 As Raki Ap explained, the Dutch interests were also safeguarded as much as possible of resource extraction for their own advantages:

The royal family was involved in this New York Agreement, and it was Prince Bernhard who had gone to President Kennedy to safeguard Dutch interests: Shell, Unilever, [...] <sup>4</sup>

Also Fako Kluiving and Fadjat Schouten-Korwa mentioned how the gold reserves in West Papua played an important role in the New York Agreement. For instance, as Fadjat explained:

So the whole situation of West Papua is due to the fact that at the time of the handover, it was very clear that that West Papua contained the largest gold reserves. [...] beyond the geopolitics that played a crucial role at that time, the Cold War, [...]

To conclude, while this agreement was about West Papua – the Papuans did not have a voice in the this agreement. According to the 1962 agreement, Indonesian authorities would organise a referendum to allow Papuans to decide whether they wanted to be part of Indonesia or have an independent state Kusumaryati (2021b). However, a fair referendum never came, which I will elaborate further on in the next chapter.

---

<sup>4</sup> (Folkersma, & De Geus, 2002)

#### 4.4 CONCLUSION

Through this timeline, different injustices related to nickel mining became visible resulting from the Dutch colonial period, a conclusion can be drawn which gives answer to the following question:

Which injustices related to nickel mining resulted from the Dutch colonial period?

Since the Dutch colonists claimed land by setting up administrative posts and colonial border lines with other economic powers through the island of New Guinea, the Dutch claimed Indigenous lands of Papuan communities who already derived economic vitality, cultural flourishing, and political self-determination from the relationships with their environments. Even though The Netherlands had undertaken few activities in West Papua for a long time, when efforts were made to map systematically, more geological research projects were also set up. This geological research produced the necessary knowledge for the Dutch of being able to colonise the natural resources in the environments of the Papuan communities. That the Dutch legitimised this geological research for ‘developing’ West Papua and seeing the Papuans as ‘underdeveloped’ and ‘primitive’, shows how The Netherlands built geological research on racial hierarchical structures. The growth in research after Indonesian independence, also for nickel ores, shows how the Netherlands was still trying to extract as much economic gain as possible from the colony.

In the time of transfer to independence for the Papuans, plans were made in place for large-scale exploitation of its mineral resources, also for nickel mining. The year that the Papuans officially established a New Guinea Council together with the Dutch government, the Dutch government had established the Pacific Nickel Mining Company, together with shares of an American mining company, and released licenses for exploration and exploitation activities for 75 years. A year later on, the New York Agreement was signed. That the Papuans were seen as too primitive to have a stake in the decision shows how racism was a necessary tool to continue to legitimise colonisation. Because of these racial hierarchies, the Dutch government was also able to mine nickel by its arrangements in the New York Agreement. This shows how the Dutch government and companies had ensured a continuation of exploitation colonialism through mining also after the ‘end’ of the colonial era, in which the voices and rights of the Papuans were marginalised.

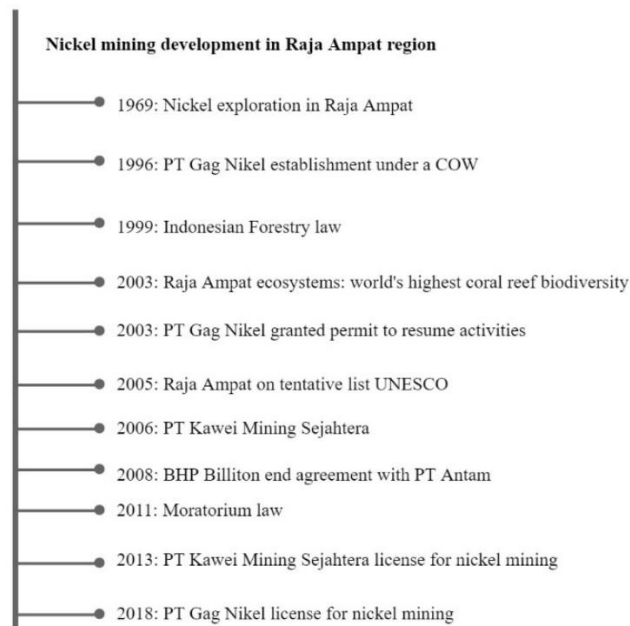
## 5 INDONESIAN COLONIAL PERIOD

*In West Papua, we not only fight for independence, but we fight for independence of life, to have better life, to secure identity and life of the people, to plan and build up our future. – Anonymous 3*

In this chapter, the nickel mining during the Indonesian colonial period is researched. For this, in the first part, events are researched that gives insights in the Indonesian colonisation in West Papua and its injustices that are occurring. In the second part, nickel mining developments in the Raja Ampat region will be researched. Together, these timelines give answer to the following sub-research question:

Which injustices related to nickel mining resulted from the Indonesian colonial period?

### ☆ Indonesian colonial period





## 5.1 INDONESIAN COLONISATION

### 5.1.1 1963: Indonesia's Transmigration program

One of the threats Papuans face since the annexation of the Indonesian government is the Transmigration program that was implemented by the Indonesian government in 1963. Transmigration refers to a policy of resettlement which originated in the Dutch colonial state (McNamee, 2020). The Transmigration program was first introduced by the Dutch government in 1905 (Levang and Sevin, 1989). As McNamee writes, the Dutch colonial policy of sending landless Javanese to the outer islands to increase the amount of land under cultivation was re-purposed by the Indonesian government as a strategy to secure control over West Papua's resources.

In the Raja Ampat region, this program also caused migration to Gag island in the 1960s working on nickel exploration. I have not been able to find out how many Indigenous Papuans already lived on the island before the migrants came. Later on, in section 5.2.1, BHP had around 160 people working for PT Gag Nikel. Looking at the table of Hastanti and Triantoro (2012) in figure 7 the population of Gag island was 633 people in 2009, where a majority of the population were dependent on fisheries. Also, Hastanti and Triantoro indicated that the land ownership were generally dominated by indigenous people Gag Island which consists of 6 clans (klen / keret), namely: Umsipyat, Umsandim, Magtublo, Magimai, Magbow and Umlil. Therefore, I assume that there were already several indigenous communities living on the island before the transmigration.

Tabel (Table) 1. Jumlah dan Sebaran Penduduk di Pulau Gag 2009 (*Number and Distribution of Population at Gag Island*)

Wilayah (Area)	Jumlah Jiwa Number of People	Jumlah KK Number of Household	Jenis Kelamin (Gender)	
			Pria (Male)	Wanita (Female)
RT. I	137	28	73	64
RT. II	131	26	72	59
RT. III	201	47	111	90
RT. IV	164	32	89	75
Jumlah	633	133	345	288

Sumber (Source) : Monografi Kampung Gambir (*Monograph of Gambir Village*), 2009

Figure 7. Distribution of population at Gag island in 2009 (Hastanti & Triantoro, 2012)

### 5.1.2 1967: Indonesia opened foreign investment mining

In 1967, the Indonesian government called for bids for the exploration and development of areas of nickel laterite identified by the Dutch. So, from this time on, Indonesia opened foreign investment mining in West Papua, where the first companies that came to the country were primarily interested in prospects and mineral districts identified by the Dutch. Between 1967 and 1971, three Contract of Work's (COW) for nickel were signed which is shown in figure 8 (van Leeuwen, 1994). An example of how these COW's developed is the Pacific Nikkel Mijnbouw Maatschappij. This company was reorganised in 1969 as P.T. Pacific Nikkel Indonesia to explore and develop these deposits under a COW. These COW's is a contract between the Indonesian government and a company, which governs the company's right and obligations with respect to all phases of a mining operation. The COW company is the sole contractor for and responsible for all mining activities in the contract area, from

taxation, employment, and training of Indonesian nationals to providing infrastructure for the local population. Thereby, a COW gives a different legal relationship between a company and the Indonesian government. Under a COW, the company and the state are positioned in an equal legal footing. This is in contrast to a mining concession, in which the company has a weaker legal position as a concession grantee. A COW basically allows free access to remove resources, but to also resettle indigenous populations with only ‘reasonable compensation’ (Eichhorn, 2022). Later on, it became clear how these COWs for mining had and still have many consequences for the livelihoods of the Papuans and environments.

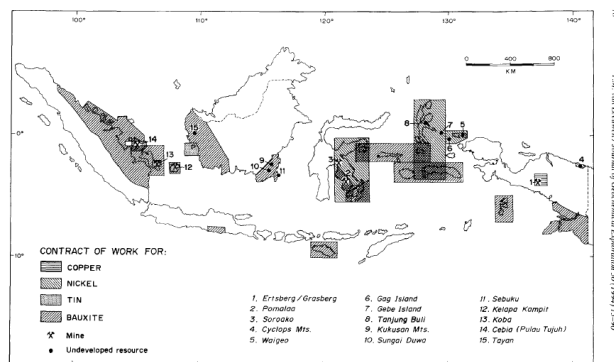


Fig. 3. The locations of copper, nickel, tin and bauxite deposits and areas investigated during phase 1.

Figure 8. Locations of nickel and the COW for Gag island (van Leeuwen, 1994)

In 1967, Freeport-McMoran, an USA owned transnational company, signed a contract with the Indonesian government to explore the mining of copper and gold at the Grasberg mine. Rifai-Hasan points out this was done even before any decision over the status and autonomy of West Papua had been made. 17 This is an early example of where the industrial coloniser effectively ignored the will of the Papuan people. It is well-established that Papuan landowners (Amungme and Kamoro people 18) were not consulted over this contract with Freeport. In addition, Freeport was not subjected to any environmental protection laws in signing this contract, although it is true to say, according to Eichhorn (2022), that Indonesia did not possess such laws to impose anyway. 20 (Eichhorn, 2022) Later on, this led to a COW in 1973 where from today on, Freeport is the largest economic entity in Indonesia and the largest tax payer for the Indonesian government (Elmslie, 2017).

### 5.1.3 1969: 'The Act of Free Choice'

As negotiated in the 1962 New York Agreement, a referendum took place in 1969 where Papuans would vote whether they want to become a province of Indonesia or independent. The Drooglever (2005) report, which is written in commission of the Dutch foreign affairs Minister, reveals that the decolonisation process of the so-called 'Act of free choice' was in fact not an act of free choice at all. Under auspices of the United Nations the faith of the Papuan people was determined by a scam vote in 1967. Only 1025 Papuans, representing 800.000 indigenous Papuans at that time – were literally forced with a gun pointed at their heads by the Indonesian military to vote in favour of annexation with

Indonesia. A multiplicity of evidence of this violation of the fundamental right of self-determination is laid down in Drooglever's book. Different interviewees (Szilvia Csevár, Fadjat Schouten-Korwa, Raki Ap, Fako Kluiving, Julia Jouwe) mentioned how Papuans were forced into a situation to choose for being integrated into Indonesia and the referendum did not go through a fair process. A lot of Papuans therefore refer to 'The act of free choice as an 'Act of no choice'.

#### **5.1.4 1984: Arnold Ap's assassination**

As more and more mining activities were employed, in the context of West Papua, positive effects on the local economy remained negligible, however; the disadvantages, in the form of pollution and land loss, were experienced by the Papuans. For the Papuans, music serves as a symbol for nonviolent resistance. The music of Arnold Ap and his band Mambesak (shining bird) is an example of how Papuans cultural expression was practiced. Arnold Ap was a Papuan cultural leader, musician, curator and anthropologist. Arnold Ap gathered songs and dances from indigenous cultures around West Papua in order to preserve them from Indonesian cultural genocide and asset the West Papuan cultural agency and vitality (Webb-Gannon, 2021). Also, Mambesak articulated Papuan political concerns, for example opposition to environmental problems connected by the mining industry. Thus, these songs demonstrated opposition to the strategies of Indonesian rule, worked to preserve West Papuan cultural practices, and celebrated West Papuan cultural distinctiveness.

Through his work as an anthropologist, curator and bandleader in the highly popular group Mambesak, Arnold Ap celebrated Papuan culture at a time when such expressions of indigenous pride could lead to arrest, intimidation and death. In November 1983, he was arrested by the Indonesian military and imprisoned and tortured for suspected sympathies with the Free Papua Movement. In 1984, Arnold Ap was assassinated by the Indonesian military as a result of his culture-affirming work collecting. Raki Ap, one of the sons of Arnold Ap, explained that his assassination was because of the influence and inspiration Arnold Ap had with his songs for the Papuans:

My father is still known as a cultural man among the people, a legendary, as the Bob Marley of West Papua. What he did with his songs was to inspire the people that they should care about their identity and their culture. Because that makes them Papua. Papuans who do that, disappears in prisons. And if they are unlucky, they get killed.

Since the 1990s, however, the Indonesian government has limited allowance of expressions of indigenous cultural form. However, as Smythe (2013) argues, despite the poverty, continued violence, and racial segregation in West Papua, song has served and continues to serve as a lived symbol of collective identity through which liberation is daily practiced in West Papua. For instance, Raki Ap tells his story and songs through his activist work for the Free West Papua Campaign:

What I tell every day, as my father also told in his songs, is that our culture is under pressure, human rights are being violated. That is my story that I have personally experienced.

So, although direct freedom is rarely experienced in West Papua, music has been one symbol for a unified Papuan identity that protests the extensive violence against the Papuan people carried out by the Indonesian government and military.

#### **5.1.5 2001: Special Autonomy Law**

In 2001, the Indonesian government implemented the Autonomy Law. It was presented as the aim to provide a framework for addressing long-held grievances: recognising customary land rights, providing a measure of self-government, setting up mechanisms for human rights courts and giving West Papuans better access to revenue streams. While on paper, the Special Autonomy law had a few development opportunities for the Papuans, it rarely benefit the Papuans (Webb-Gannon, 2021, p. 4). According to the Indonesian Centre of Statistics and the World Bank, West Papua's regional GDP per capita is significantly higher than the national average, mainly due to mining. Despite this, Papuan's health and income levels have deteriorated under Special Autonomy. According to Amnesty International (2018), West Papua has the highest rate of people living under the poverty line and the lowest Human Development Index in Indonesia.

Next to that, migration continued which caused an increased proportion of non-Papuans in the overall population of West Papua, and is still continuing (Wayar & Blades, 2022). According to Elmslie (2017), especially coastal regions received large numbers of non-Papuan migrants resulting in the increasing minoritisation of the Papuan people and their concomitant militarisation, marginalisation and dispossession. As Macleod (2015) explained, the transmigration is seen by many Papuans as a demographic invasion, taking away employment opportunities and marginalising them in their own land. The threat of transmigration for the Papuans has also been mentioned several times in the interviews. For instance, Fadjar Schouten-Korwa explained to me how this transmigration program has been used as a tactic for a dilution of the Papuans that is now a minority in West Papua:

[...] to ensure that there was a dilution of the Papuan population that is now in the minority.

[...] That is a tactic of which I say: this is also a form of genocide.

Also Raki Ap mentions how this all is an economic choice of keeping the situation of the Papuans like this:

We are kept poor, criminalised and lagged behind in economic position. We are a third-class citizen in our own country. And that is an economic choice.

Anonymous 3 also mentioned how he sees the struggle is fighting for surviving in the poverty most Papuans experience. For him, independence is when the Papuans get themselves and their families out of poverty, and not being dependent on the migrants:

For me true fighting is fight for your life of yourself and your family out of the poverty line.  
[...] That is the real independence one.

So, as Elmslie (2017) concludes, while the Indonesian government claims that accelerated development will help resolve Papuan grievances against Indonesian rule the opposite is likely as the Papuans get left behind in the development process in favour of non-Papuan migrants; they become further marginalised, and their traditional lands are forcibly taken over by government or commercial interests.

Also, in 2003, the Indonesian government undermined the Special Autonomy Law by illegally dividing West Papua into the two provinces of Papua and Papua Barat (a territory-splitting process known as pemekaran). In the case of Raja Ampat Regency, the region was separated from the Sorong Regency and became part of the province of West Papua in 2004. Cases of new provinces or district being created have been accompanied by an increase in the issuance of licences for extractive industries such as mining (Jong, 2022). Even recently, in April 2022, the Indonesian government announced a plan to remap West Papua from two provinces into five. Where government officials have described the creation of the new administrative units as an effort to accelerate the development of the outlying region, Papua's problem is not a lack of development; it is a lack of justice, as Wayar and Blades (2022) states. Fadjar Schouten-Korwa explained the injustice aspects in the process of mining and its tensions between public – and individual interest. In the end, as Fadjar mentions, the core of these injustices and its tensions in the situation of West Papua is the unjust process of decolonisation in the 1960s and its Special Autonomy law followed on. In its simplest sense, autonomy is about a person's ability to act on his or her own values and interests. An essential part of contemporary human rights is the concept of personal autonomy. Every person has to have autonomy so that he/she can feel free to make decisions. However, there has been no real say for the Papuans, and thus its autonomy to act in their own values and interests. As Fadjar Schouten-Korwa explained, these injustices comes back in the very beginning of the decolonisation process that did not go in a fair way, which is also reflected back in the Special Autonomy law:

If you look at the whole process, there are unjust aspects to it. So those who are the traditional owners of the land have had no say in its use. [...] What concerns me with regard to West Papua is that at the very beginning of the decolonisation process, things did not go in a fair way and the entire say was taken away, and the structure of the special autonomy law has exacerbated this.

#### **5.1.6 2004: Ban on foreign journalists, researchers and NGOs**

Another strategy from the Indonesian government to keep the human rights violations and environmental pollution out of the international picture has followed in 2004, where international journalists are not allowed to enter the country and NGO's have been banned from West Papua (Csevár, 2021; HRWC, 2015; McNamee, 2020; Wangge & Webb-Gannon, 2020). Since then, for entering West

Papua, you need a special permit. These permits are routinely denied permission to visit the territory, particularly areas where there are military operations. Szilvia Csevár permit was denied, and this usually happens systematically:

If you are a human rights worker, or journalist, or any record of view being interested in issues taking place in West Papua, those permits are being systematically denied. [...] when a journalist is getting the special permit in Indonesia to enter West Papua, the journalist can be arrested by Indonesian forces. Actually, you are lucky when your permit is denied.

Despite these bans, Szilvia Csevár indicated that there is evidence enough that human rights violations occurs in West Papua:

[...] despite all the efforts by the Indonesian government for preventing journalists or human rights workers to enter the territory, there is credible and reliable evidence that Papuans are being murdered, tortured, arrested, and large scale gender-based violence is being employed.

This led to a control of the narrative of the Papuans and the conflict that has mainly been told by the colonist, which belongs to the strategies of the Indonesian government to keep the colony. As a consequence, Macleod (2015) writes, the country is a secret story, hidden from the world by geopolitics and a policy that keeps foreign journalists, human rights workers and even diplomats out.

### **5.1.7 2017: Petition for referendum in West Papua**

When I asked Raki Ap what is needed for the Papuans who lives in West Papua, he mentioned the responsibility of The Netherlands, as the old coloniser of West Papua. Thereby, the Papuans want to have a new referendum, as the previous referendum was not a fair referendum for the Papuans:

What the Papuans want is that the world is helping them. And especially the Netherlands as the first and foremost, who have once colonised West Papua, and have promised freedom, [...]. The Dutch government has to do what was once promised. And the Papuans want a referendum; so they can really choose whether they want to belong to Indonesia or not.

A remarkable date which shows how many Papuans still demand for a new referendum. The United Liberation Movement for West Papua (ULMWP) gathered signatures for the 'West Papuan People's Petition'. This petition was signed by 1.8 million Papuans who were gathered across West Papua over the years, demanding a referendum of independence for West Papua. The petition was signed by over 70% of the West Papuan population (Doherty and Lamb, 2017), compared with Indonesia's 'Act of No Choice', involving less than 0.2% of the population (Drooglever, 2005 and Wenda, 2017). In 2017, the ULMWP delivered the petition to the UN Special Committee on Decolonisation, where the ULMWP aimed for international recognition of their fundamental right to self-determination. the chair of the UN Decolonization Committee announced that he could not receive the petition because West Papua was not part of the committee's mandate (Webb-Gannon, 2021). Still, the initiative gained global media

attention, with observers realising that the signing of the petition was itself a referendum act, a free expression of the will of the West Papuan people for independence.

As Webb-Gannon (2021) indicated, those who signed the petition and thus supported the independence referendum was a great risk for these people. Many Papuans faced arrest and torture as they signed or facilitated the petition's circulation (Doherty and Lamb 2017). Raki Ap indicated that this became the largest book work of the history of the Papuans, as so many signatures were never collected before.

This became the largest book work in our history: 1.8 million signatures. [...] With this petition, we show that we speak on behalf of many Papuans.

**Do you think such a referendum could be safely held at this point?**

Not at the moment. Because Indonesia does not accept anything and sends the army and police on it when there are protests.

This petition shows why the right of self-determination is a justice issue that needs to be taken into account in regarding to mining activities. Self-determination is a principle of justice, where West Papua has never exercised its legal right to self-determination under international law, to international standards. Different interviewees also indicates that this is an important element when it comes to strive for justice for the future of West Papua. For instance, Julia Jouwe mentioned how the autonomy and inclusion of Papuans is important for achieving justice:

Nothing about us without us. Always work with the communities themselves, they must always remain in control. Papuans in charge. They have to make all the decisions themselves.

### **5.1.8 2019: Papua protests: The Great Uprising**

Since Indonesia took control of the territory, Papuans have been subject to ongoing military operations carried out by the TNI (Indonesian Armed Forces) and acts of violence perpetrated by the Indonesian police. While no one knows exactly how many Papuans have died, killings by the Indonesian military and related deaths have been on such a scale that all Papuan families know relatives or friends who have been detained, disappeared or killed. As I have explained earlier, the ban of foreign journalists and NGO's makes it a challenge to come with accurate facts and figures of the Papuans that are killed since the Indonesian government has claimed the sovereignty of West Papua. Often in literature, reports and news articles, a death toll between 100,000 and 500,00 is often quoted (Cocombre, 2007). According to Macleod (2007), some Papuans claim that church documents estimate the figure to be much higher.

Robinson (2012) also refers to the fact that in 50 years of oppression, it is estimated that as many as 500,000 Papuans have been killed at the hands of Indonesian security forces.<sup>5</sup>

The lack of local media coverage, and that represented by the voices of the oppressed Papuans, is a form of racism that continues to this day (Eichhorn, 2022, p. 10). These ongoing genocides and racialisations against the Papuans led to a new big uprising in 2019. In this year, there were protests throughout West Papua, which were the largest held in the region in years, and widespread all over Indonesia. As Shelton and Wibawa (2019) explained, while previous movements have been largely arranged by Papuan liberation leaders in exile, these recent protests have erupted from within West Papua and have since spread to other provinces. Footage of the military officers calling the students "monkeys" quickly circulated on social media, sparking outrage and one of the largest protests across the region. There were protests across West Papua, against the daily racism, discrimination, marginalisation, and occupation of the Papuans: the protesters' demands range from an end to racial violence to calls for a referendum on independence for the region.

This is manifested in oft-repeated comments by non-Papuans that Papuans are stupid (*bodoh*), lazy (*malas*), drunk (*mabuk*), and primitive (*primitip*) (Giay 2000, pp. 5–6; Timmer 2000a, pp. 278–9; King 2004, p. 63; Karma 2014). Kusumaryati (2021b) documented this racialisation, from before the occupation by Indonesia, through colonial times, where Blackness was apportioned to the Papuan peoples on account of their darker skin and afrohair. Furthermore, this racialisation is exacerbated through a common oppression, exploitation of the land, and the racial hierarchy that they placed onto the indigenous people through this process.<sup>77</sup> Sophie Chao has also stated that the characterisation of Papuans as monkeys evokes 'paternalistic discourses in Indonesia that frame Papuans as premodern subjects and therefore justify the state's attempts to liberate Papuans from the primitive ways of life through development'.<sup>78</sup>

As mentioned earlier, foreign media have been previously banned from West Papua, and similarly the lack of local media coverage, and that represented by the voices of the oppressed, is a form of racism that continues to this day (Eichhorn, 2022). Still, by the last protests, social media has effectively undercut Indonesia's ban on international media and enabled West Papuans to show these protests to other countries, as Fadjar-Schouten Korwa indicated:

[...] it is thanks to the internet of recent years that the news has come out more and more. And communication through social media has certainly contributed to a Black Lives Matter movement, which also contributed developments in West Papua.

---

<sup>5</sup> Jennifer Robinson is an Australian human-rights lawyer who worked on projects involving the accountability of human rights abuses, with a particular interest in the Freeport mine in West Papua. She is involved with the International Lawyers for West Papua (ILWP).



In the past it had been extremely difficult for West Papuans to disseminate news of the atrocities being carried out against them because of Indonesia's media blackout in the territory (Webb-Gannon, 2021). Social media now has become an effectively tool to decolonise the narrative around the conflict. However, spreading social media posts is not going without risks. Raki Ap explained to me how Papuans have the risk of prison, murdered or you have to flee. Also, lawyers, human rights defenders and NGOs cannot do their work properly:

[...] in the best case, you can be interrogated or imprisoned, but in the worst case you have to flee or you will be a political prisoner or murdered. [...] It is terribly dangerous. [...] That is the concern that we constantly express. Therefore, we ask to open West Papua for journalists so that the Papuans have the courage to at least be seen or heard if something is going on. Now, social media is the medium for us to share the suffering, sadness and reality.

## **5.2 NICKEL MINING DEVELOPMENT IN RAJA AMPAT REGION**

### **5.2.1 1969: Nickel exploration in Raja Ampat**

After the referendum in 1969, nickel exploration continued on Waigeo, and new investigations were carried on at Cyclops, Kawe island and Gag island by U.S. Steel corporation (Reynolds et al., 1973). In 1971, extensive drilling programs were undertaken on Gag island to outline possible sources of representative materials for a large tonnage bulk sample for testing purpose. Another foreign company came into a joint agreement later on. In 1989, P.T. Antam signed an agreement with Queensland Nickel Pty. Ltd. Of Australia, to jointly conduct a feasibility study to develop a new lateritic nickel mine on Gag island. Queensland Nickel reportedly agreed to provide more than 100 million dollar to finance the project to develop a nickel mine. In return, P.T. Antam export nickel ore from Gag Island to Queensland Nickel's Yabulu nickel refinery, in Townsville of Queensland, Australia. Why this contract eventually passed to BHP in 1995 is unknown within my research. However, what I do notice is a pattern of several foreign investments for nickel mining on Gag island.

### **5.2.2 1996: PT Gag Nikel establishment under a COW**

In 1995, BHP and P.T. Aneka Tambang started to work together for the nickel mining on Gag island. This has led to, in 1996, P.T. Gag Nikel was formed as an Indonesian company, following the signing of a joint venture agreement between BHP Asia Pacific Nickel Pty. Ltd. (BHPAPN – is a company owned by BHP Billiton) by 75 percent and Indonesia's state-owned mining company, and PT Aneka Tambang (Persero) Tbk by 25 percent (BHP Billiton case studies, 2004).

Also during this time, the companies made use of the transmigration policy. As there was already transmigration in the 1960s to Gag island, most of the employees for PT Gag Nikel were migrants, from what anonymous 2 explained to me:

The most we had was around 160 people, and they were about two thirds from the island, and about one third of from other parts of Indonesia and overseas. [...] The people who were settled on the Gag island were mainly from Patani and other parts of Halmahera.

During that time, there was rarely research done on the forest and marine biodiversity of the Raja Ampat. According to anonymous 2, the biodiversity of the Raja Ampat was rarely known by the company:

When we started in 1996, Raja Ampat was just a name. There was no diving, apart from the diving we did. And we were amazed how beautiful it was. It was not known. [...] Because the process of the mining on Gag island had already been approved and in process, it sort of kept going, while it really should not been there, or at least it should be extremely well-monitored and care managed for any pollution from it.

What is strikingly, is that if anonymous 2 looks back on this with the knowledge from now, the nickel mining should not be there, or with an extremely well-monitored management. Research has been done during that time, as the pollution from the mining activities can cause sediment which can choke the coral reefs. It is not known to me whether this was the case at the time. However, setting up these exploration activities has led to further expansion of the mining location on Gag island, where in 1998 a COW was signed, and a program of exploration and preliminary evaluation was conducted.

### **5.2.3 1999: Indonesian Forestry law**

This COW came just a year before the Forestry Law number 41, in 1999. This law was established by the Indonesian government as a new regulation that prohibited open pit mining in different areas as a response to the rapidly diminishing forests and coral reefs throughout Indonesia. The forest on Gag Island was subsequently reclassified as 'Protection Forest', rendering any mineral deposits on the island not to mine.

During this time, it was expected by Turak and Souhoka (2003, p. 26) that more migration to Gag island would follow. As Turak and Souhoka showed, in 2000, the total population of Raja Ampat was approximately 32,000 people. Around 10 percent of the population was Indigenous, a figure that was likely to decrease with the onset of anticipated migration from other parts of Indonesia with the opening of the nickel mine at Gag and other large-scale commercial ventures anticipated in the natural resources sector. The Raja Ampat population figure indicated that indigenous people in Raja Ampat were underrepresented in political decision-making, including the management of natural resource.

#### **5.2.4 2003: Raja Ampat ecosystems has the world's highest coral reef biodiversity**

Around this time, more scientific research on the Raja Ampat's biodiversity came published.<sup>6</sup> Turak and Souhako (2003) concluded that within the Bird's Head, the Raja Ampat islands ecoregion has the world's coral highest biodiversity. The survey brought Raja Ampat's total number of confirmed corals to 537 species, which contained 75 percent of all known coral species. In addition, 828 fish species were recorded, raising the known total for Raja Ampat to 1,074 fish species. And more studies concluded this, with additional new insights and a higher biodiversity rate than has been discovered before (Veron et al., 2009; Allen and Erdmann, 2009). In the study of Veron et al., they concluded that the Raja Ampat needs to have the world's highest conservation priority by its biodiversity. The study Allen and Erdmann found 1320 fish species in the Raja Ampat, where they indicated that this figure is particularly impressive and is the most species ever recorded for an area of this relatively small size.

The research of Devantier et al. (2009) shows that the Raja Ampat contains 14 coral reefs, which are considered important in future conservation planning. Gag and Kawe are two of those reefs, where Gag has 4 reef habitats and Kawe has 5 reef habitats. Thereby, it shows how nickel mining on Gag – and Kawe island are located in important coral reef habitats.

#### **5.2.5 2003: PT Gag Nikel granted permit to resume activities**

Then, in 2003, the Indonesian Ministry of Energy and Mineral Resources proposed that 22 mining companies have to be allowed to resume their operations (MAC, 2003). This allowed mining development and production activities to resume for these mining companies. This could come in conflict with the local tenure rights. As Turak and Souhako (2003, p. 36) writes, tenure issues in relation to access to, and the management of, resources in Raja Ampat were similar to the practice of many indigenous communities in Papua Province, Melanesia and the wider Pacific. According to Turak and Souhako, several characteristics of the tenure rights and cultural regulations governing resource use in Raja Ampat have been identified as follows:

- Resources are owned communally rather than individually;
- The sasi system is part of the culture of the Raja Ampat communities. Sasi is a mechanism designed to regulate use of natural resources. Based on advice from community members, the clan hierarchy might decide to utilise (buka sasi) or conserve (tutup sasi) particular resources or areas. Sanctions are imposed on those that do not comply with such dictates;
- Access rights granted to third parties are conditional and non-permanent;

---

<sup>6</sup> However, what is important to mention to be aware of, is that there are multiple examples where Western scientists have claimed 'discoveries' of knowledge from local experts, the Indigenous communities (Trisos et al., 2021).

- The granting of access rights to resources requires community consensus but the final decision rests with the customary head of the clan;
- The concept of “right to use but not to own” was becoming more popular among the indigenous people of Raja Ampat. This is likely a response to increasing population and commercial activity threatening a long-standing status quo;
- Raja Ampat communities recognise and respect traditional ownership of natural resources and the concomitant rights of access to those resources; and
- Raja Ampat communities expect reciprocity to be practiced when resources are exploited. On a small scale, this might include transiting fishermen sharing subsistence catch. On a commercial scale, it entails the sharing of wealth through the provision of social services and infrastructure.

During this time, the Australian government also played a role in the situation of nickel mining activities on Gag island. According to Macleod (2003), in an effort to pressure the Indonesian government to allow mining on Gag island, BHP Billiton had enlisted the support of the Australian Government. Jason Macleod indicated that during his research, he learned how the Australian government, defence force and corporations were involved in the nickel mining project on Gag island:

How more I learned, how more I realised how complicit the Australian government was, the Australian defence force, and the Australian corporations.

During this time, Jason Macleod went to Gag – and Kawe island. For Jason Macleod it was quite a challenge a challenge to do research there. In the interview, he mentioned that it was really difficult to do research over there, because of two reasons: (1) people were reluctant to speak out, as there was a lack of trust towards foreign researchers, and (2) the presence of military and police made it risky to do proper research. For instance, a police officer came to stop the work Jason was doing together with a colleague on Gag island:

People were hugely suspicious of us, as they were really threatened and very reluctant to speak out. And there was a heavy kind of military police presence as well. [...] The head of the policy pulled a gun on us, it was quite intimidating.

Still, what he could mention, is that the local fishers were quite stressed about the effects of the nickel mining on the fisheries:

[...] there were a couple of local mines that were being operated by the military police. When we spoke to indigenous landowners and to the local community, if they were working for the mine, they did not talk to us or said that they supported it. If they were involved in fishing, they were quite stressed about it, because the runoff was really affecting local rives, and negatively impacting local fishing.

What made it even a bigger challenge was the risk of being associated with pro-independence movements. As he explained, a lot of those activists often were against mining in the wider context of the independence struggle. From his experience, he saw how it was very difficult to build support necessary to stop it, when using the frame of the independence struggle:

There were a number of protests, and they were all heavily repressed. [...] Basically, everyone who I know, who opposed Gag at that time, was received threats or some kind. Anyone who took that position was threatened by the police and military. And even those people who were in favour of mining [...], if they raised questions about the mine, they found it very hard to express that publicly by the fear repercussions. [...] And particularly they did not want risk being associated with pro-independence movements.

**Did you experience that Papuans in Raja Ampat, and on Gag island, were involved in the independence struggle?**

Not on Gag island, no one we spoke to self-identified with that. And I do not think they would have been free, there was not enough political space to speak free to us. And also, it was dominated with Indonesian migrants over there. People from other parts of the Raja Ampat were heavily involved in the independence struggles.

Thus, by the lack of trust and risks of speaking out for local people, and the military and police located at these locations, may explain why little research and news articles can be found from my knowledge.

Then, since PT Gag Nickel could resume its activities, also plans needed to be made for its waste disposal. Anonymous 2 explained to me about the environmental plans for the nickel mine, where the interviewee mentioned that in the time the interviewee left in 2002, BHP Billiton was considering this Deep Sea Tailing Disposal (DSTD), but this plan has been cancelled. Still, the waste disposal was a big challenge, as there would be a big amount of waste (millions of tons of material) for only a small amount nickel ores:

[...] 95 plus percent of the volume of what has been dig up out of the ground is waste, there is only a small percent that goes to nickel and cobalt. [...] The deep sea tailings placement, it sounds horrible, but it is actually one of the least damaging ways to dispose the material. Still, it is definitely the last choice in a line of undesirable actions.

**Why?**

Gag is a small island, so there is no room for waste on the island, and the sea close to the island is very deep, 3000 metres, the material itself is not chemically active, [...]. Certainly it gives some damage to the local sea bed, but there will be less impact than covering a very large proportion of a small island.

Macleod (2003) had spoken with Ian Wood, previously BHP's environmental manager for Ok Tedi and was later on responsible for the Gag Island project as head of External Affairs at BHP Billiton's Melbourne office. BHP completed its withdrawal from the Papua New Guinea in 2002 after it has caused an environmental disaster in the 1980s and 1990s. The discharge of tens of millions of tonnes of mine waste into the local river system had huge impacts on the local communities and its environment. Given the situation of the Ok Tedi mine, Gag Island would also risk environmental pollution by the mining waste from BHP's operations. To Macleod (2003), Wood explained three options for its waste disposal, which all contain several risks and impacts for the island. The first method effectively involves strip-mining two-thirds to three-quarters of the island via a series of holes drilled into the earth to extract the nickel. These old mined-out holes are then filled in with the mine tailings. This is the most expensive option for the company. The second method involves building a tailings dam in a small valley in the northern section of the island. This valley also happens to be where local people have their food gardens. Both of these land-based options are considered extremely risky, partly because of cost and partly because the high levels of rainfall and seismic activity in the region could jeopardise the structural stability of a land-based tailings option and adversely affect the health and wellbeing of those who live and work on Gag. Spillage from a land-based tailing option could also damage the island's fragile fringe of coral reefs, which are extremely sensitive to run-off and turbidity. Wood concedes that the community would oppose a conventional tailings dam because it would affect their food gardens. The third method is a Submarine Tailings Disposal (STC), which is dumping waste deep in the ocean.

To conclude, this mainly shows the waste disposal issue and its risks for the nickel mining on Gag island. It is unclear for me what has been done with the waste during over the years since exploration activities have resumed again. Still, these risks are important to take into account by the nickel mining that has been done later on since nickel extraction has started.

#### **5.2.6 2005: Raja Ampat on tentative list UNESCO**

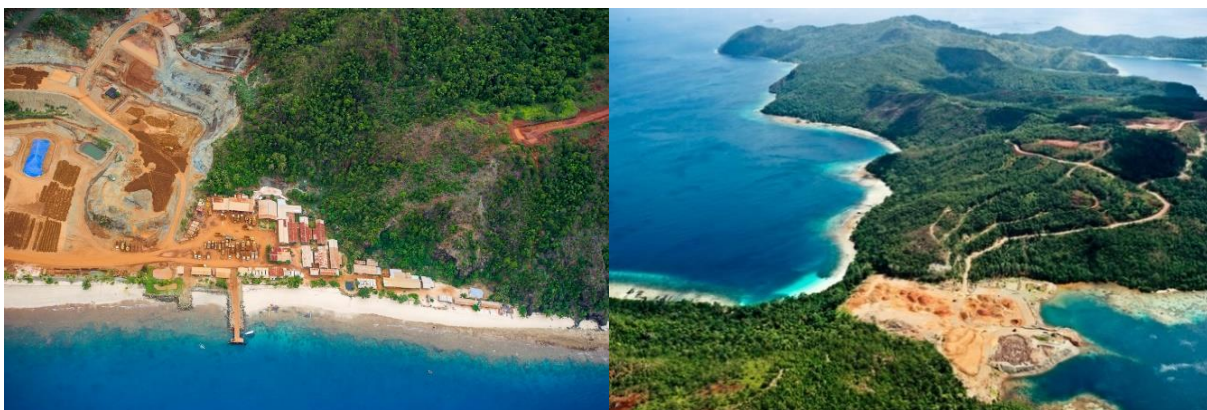
In 2005, the Indonesian Ministry of Environment submitted the Raja Ampat region as a natural heritage on the World Heritage List (UNESCO, 2005). The tentative list provides a forecast of properties that a state party may decide to submit for world heritage inscription in the next five to ten years. Thus, the Indonesian put the region on the "tentative list" to become, like Australia's Great Barrier Reef, a UNESCO world heritage area in 2005. But the application has stalled due to inaction by the government. As Allard (2011) indicated, the reason for this can be to continuing exploitation activities of mining and logging.

#### **5.2.7 2006: PT Kawei Mining Sejahtera**

In 2006, the nickel mining on Kawei island started operating again. Until 2010, PT Kawei Mining Sejahtera was in dispute with PT Anugrah Surya Indotama Mining. According to Allard (2011), the vessels were sent to collect the nickel and cobalt for Palmer's Queensland Nickel company dock at

Manuran Island, where the mining has continued unabated despite a decree by the West Papua governor, Abraham Atururi, banning all mining activity in Raja Ampat. “The mining started in 2006. There were protests but the military and police came and they stopped them,” said Yohannis Goram, from Yayasan Nazareth, a local group that opposed mining (Allard, 2011).

The pictures in figure 9 below showed how some of the environmental damage. Due to its incredibly remote location, these mines are able to operate with almost no environmental impact assessment. Despite these measurements, there is a likely chance that deforestation impacts watersheds, coastlines and marine environments (Mangubhai et al., 2012). Highly erodible soils, very steep slopes and high rainfall in the Raja Ampat makes coastal habitats (particularly shallow coral reefs), more vulnerable to damage from land based activities as mining. One or more authors are aware of impacts from deforestation and poorly planned coastal development including: (a) run-off of topsoil to beaches and marine habitats causing smothering of coral and soft-sediment communities; (b) loss of mangroves due to road construction and logging; (c) direct loss of critical habitat for threatened species through beach modification and coastal vegetation removal; (d) direct loss of coral reefs through reclamation; (e) altered salinity and temperature profiles at river mouths due to interrupted water flow; and (f) introduction of invasive species to forests. At least the pictures of Morgan (2012) provide a view on how deforestation looked like around that time.



*Figure 9. Nickel mining on Kawe island (Morgan, 2012)*

#### **5.2.8 2008: BHP Billiton end agreement with PT Antam**

In 2008, BHP Billiton announced an end to the agreement with PT Antam (BHP, 2009). At that time, according to Chambers (2008), BHP Billiton had already spent 75 million dollars. Several reasons have been suggested why BHP has decided to stop with the Gag island nickel project. First, BHP (2009) mentioned, it could not identify an operation that would support an investment. Above this, the high nickel prices could also played a role according to anonymous 2:

Nickel had been very high priced, it was stumping very badly. They were sort of tired of the Indonesian laws and the legal status was not secure. So the nickel section of BHP Billiton left.

Protests could be a second reason. However, as migrants has been moved in the 1960s to Gag island to work for the nickel mining, the views of the local peoples dependent on their situation. Within the communities of Gag island, some people may have been in favour of mining because it could bring employment. As the research of Hastranti and Triantoro (2012) made clear, the remote geographical isolation, low level of education and economic poverty, caused a lack of awareness of what the impact of nickel mining could be on the environment. Still, there were protests against the nickel mining on Gag island which involved local peoples from Gag island. As Macleod (2015, p. 193) wrote, protests of Indigenous, environmental and human rights activists have been succeeded, which he also explained in the interview:

It was a combination of human rights activists as Johannes Koram, and someone from JATAM. And then there were a couple of other folks, Oxfam was involved, and also people from the Mineral Policy Institute. So it was just a confluence of those local, national and international people co-operating, that really helped to push it through.

For this, what was helpful and effective was shifting the frame, to move away from relating it to the independence struggle, and mainly focusing on environmental degradation and human rights:

Once we shifted frames, and we talked about environmental degradation and human rights. Then it was much easier to develop a broader lines by local Indonesian and international folks. And that ultimately made the difference.

As last, what also could be a reason why BHP stopped, was a report he wrote and was planning to publish. In this report, information was given about how BHP Billiton used money that was intended for local community development projects, to build a military post on Gag island. So in this report, Jason Macleod showed how BHP Billiton was related with the military. When Jason Macleod send the report to BHP Billiton, for a right to reply on it, the company did not respond, but contacted the university to cancel Jason's ethics approval of his research. He thinks the report would quite damaging the image of the company. As BHP Billiton has close relationships with the mining and engineering institute of the university, by giving a lot of investments, he thinks that this gave pressure on the university. And in the end, he was not allowed to publish the report. As he explained:

And the big thing, I think, that really stopped it, I put together this quite detailed report. It had information that the money BHP Billiton gave for local community development project was used to build a military post on Gag island. So I gave that report to Tom Allard, and I was about to publish it, and I send it to the company for a right to reply, and this is while I was doing my PHD. This must be around 2007, 2008. So I round up this report, send it to the company, to let them see it before I would publish it, and to give them a right to reply. However, they did not reply to me, but they contacted my boss, my supervisor at that time. And they contacted the university. And the university.. BHP Billiton was giving lots of money to the engineering and



mining institute of the university. Anyway, they basically threaten to cancel my ethics approval of my research. And they quash the report. And my supervisor was due for promotion, and she did not get promotion over it as well. So they basically stopped that report being published.

### 5.2.9 2011: Moratorium law

In 2011, the Indonesian Ministry of Forestry put into effect new forestry law, the Moratorium law, designed to protect Indonesia's peat lands and primary natural forests from future development. So, according to the Ministry of Environment and Forestry Indonesia (2020).

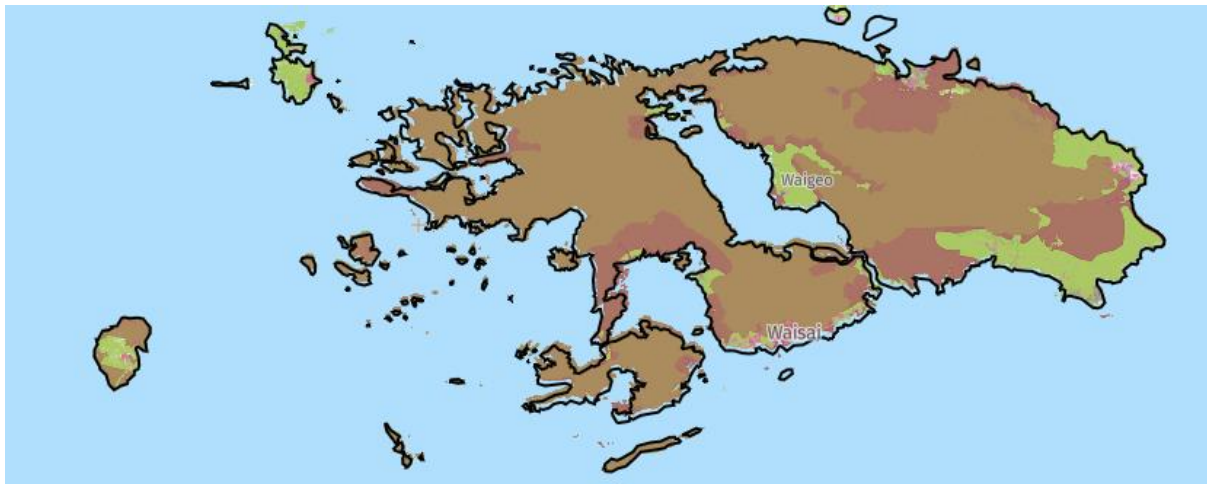


Figure 10. Indonesia forest moratorium areas in Raja Ampat region (Ministry of Environment and Forestry Indonesia, 2020)

Figure 10 shows the areas that are assigned as protected forests. Looking at Kawe island, the whole island has not be assigned as a protected forest area. For Gag island, the middle part were nickel reserves are located, are not assigned as a protected forest area. Figure 11 shows a prospect area of PT Gag Nikel where nickel reserves could be located.

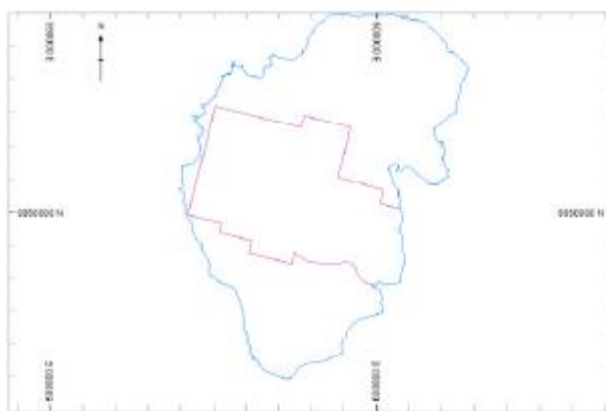


Figure 11. PT Gag Nikel prospect area (Prihasto et al., 2013)

What can be taken from this is that these straight lines that are drawn; can go through the traditional land rights systems. As Szilvia Csevár said, she sees same pattern happening with other mining locations in West Papua: making sure that companies have the full access to resources without barriers in terms of protected environment or Indigenous lands:

It fits the pattern of making sure that companies have full access to resources that mining cannot go or without any major barriers in terms of environment or indigenous lands.

Thus, despite the Moratorium law, the Indonesian government makes exceptions for nickel mining in the Raja Ampat region, especially considering the licenses that has been given to nickel mining companies. Therefore, researchers have again warned for the threats of mining activities to the palms and ecosystems on the island and in the region of Raja Ampat (Heatubun et al., 2014).

#### **5.2.10 2013: PT Kawei Mining Sejahtera license for nickel mining**

In 2013, a license has been given to PT Kawei Sejahtera for nickel production until 2033 (Geoportal Indonesian Ministry of Energy and Mineral Resources, 2022). What is going on since then, remains a big open question. On the data of Global Forest Watch, I did not saw any deforestation around the nickel mining since 2013. Given the circumstances of foreign researchers and journalists, and the remote location, I can only conclude from Global Forest Watch that there is currently no nickel extraction taking place.

#### **5.2.11 2018: PT Gag Nikel license for nickel mining**

Later on, also on Gag island, a license has been given to PT Gag Nikel from 2018 until 2047 (Geoportal Indonesian Ministry of Energy and Mineral Resources, 2022). In 2021, PT Gag Nikel had 4,12 percent of Indonesia's nickel reserves and 0,92 percent of the world's nickel reserves (USGS, 2022; PT Antam (2022a); see Appendix D). For analysing how deforestation can be continued until the end of the license in 2047 for extracting these reserves, the production schedule scheme of Prihasto et al. (2013) provided some information. This production schedule scheme shows how the mining area could be expanded in the future, including where deforestation is taking place.

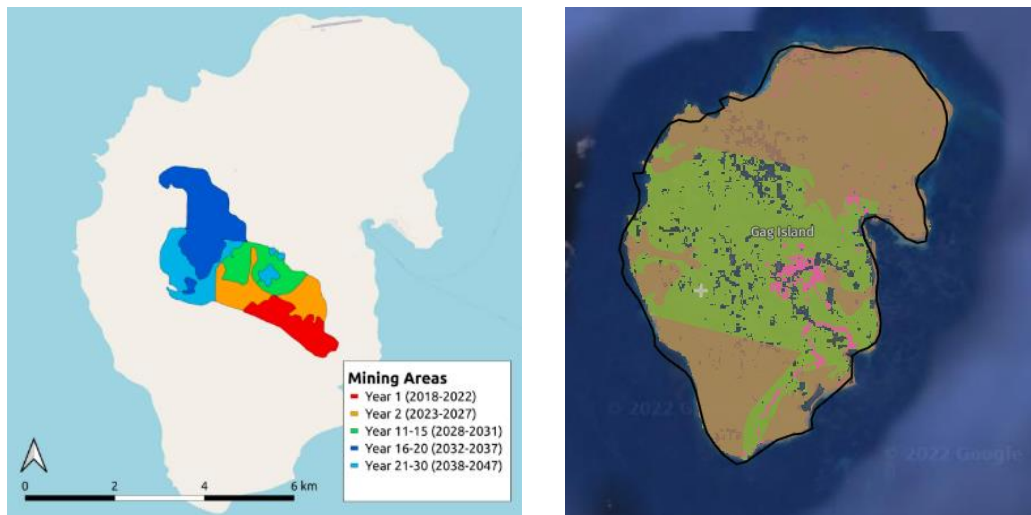


Figure 12. Production schedule scheme of Prihasto et al. (2013) adapted to the new licenses by Kamiel Verhelst, a geographic system analyst(left)

Figure 13. Forest on Gag island (green), the Moratorium area (brown), and the deforestation (pink) (Global Forest Watch, 2022) (right)

Since nickel extraction has started in 2018, some impacts can already be found. I have found some sources which gave me more insights in the environmental impacts since the nickel mining has started in 2018. Therefore, as first, I have looked at the data of Global Forest Watch (2022). As can be seen in figure 14, from 2018 to 2021, 22 ha of forests has been cut (see Appendix D). Two satellite pictures in figure 14 shows how Gag island was before the nickel mining in 2018, and how deforestation has developed throughout the middle of the island in 2022.



Figure 14. Satellite pictures of Gag island in 2017 and 2022 (Global Forest Watch, 2022)

The report of Fairphone (2017) gave an indication of the risks of nickel extraction in the Raja Ampat region, where they addressed the following risks:

1. Serious health issues, especially respiratory illness: nickel can be extracted from ores that are known to generate hazardous airborne pollutants when not managed responsibly, which cause a variety of respiratory illnesses when inhaled;
2. Water and soil pollution: nickel can occur in acidic sulphide ores, leading to risk of acidic mine discharge that causes toxic heavy metals to leach into local water and soil systems;
3. Serious impacts on biodiversity: large-scale industrial nickel mining can leave a large footprint on the surrounding environment and ecosystems. In Indonesia, nickel mining has had devastating effects on protected marine areas and coral reefs;
4. High CO<sub>2</sub> emissions: nickel is associated with high levels of CO<sub>2</sub> emissions due to its energy intensive production and refining processes;
5. Disputed claims over land use with indigenous communities: where mine interests overlap with indigenous territories or rural communities they can give rise to disputes over land use claims.

A five minute documentary, published by EcoNusa and Harian Kompas<sup>7</sup>, gave some more information about the impact of the nickel extraction for the local community and their environment. In this documentary, several local people have been interviewed on Gag island. What I can read from the translation, is that Gag island is inhabited by 1,000 people with a total area of approximately 6,060 hectares. Herein, I can make a few things out. Firstly, in the documentary, they mention how local people are very dependent on the forest and marine products, as someone explained “The sea is the goal of life.” As the Gag island is surrounded with sea, local people are mainly dependent on fish, thus the local people on Gag island are restless because the part of the island they inhabit is now in the mining concession area. Anonymous 3 indicated how mining is impacting the local fishers in two different ways: by the noise and the pollution. So, firstly, as there is more noise by the mining, which is located close to the coastal areas, fish swims farther away from the island. Therefore, fishers have to seek farther away on the oceans to find fish. Secondly, as there is pollution by sedimentation close to the coastal areas, the fish also swims further away or can be poisoned. This eventually impacts the health of the local communities, as there can be less fish to eat and they have the risk to eat poisoned fish. Secondly, the documentary showed the brown areas of water, where seaweed is covered in mud. Thus, there is a risk of destruction to coral reefs and marine ecosystems around Gag island. Also anonymous 2, said that the interviewee has seen sedimentation from the movies. Anonymous 2 mentioned that it is quite risky if you do not do it properly:

---

<sup>7</sup> Seluruh Pulau Gag di Raja Ampat Papua dikuasai konsesi tambang nikel’ which means with google translation: ‘Gag island in Raja Ampat Papua is controlled by nickel mining concession’. The documentary is in Indonesian language, so I have written out the subtitles and translate it with Google translate.

In the loading area of Gag island I see that there is already sedimentation.

Anonymous 1 can confirm this to me:

Yes, I have also driven around with a boat, and I saw directly: what a mess.

Anonymous 1 compared the situation with another island the interviewee has visited, Gebe island, where life was dead in the area because of the overloading cedement on the coral reefs:

[...] nothing left of the coral reefs for a large part of the island, and the coral reefs have been covered by so much cedement that there was just not any life left over a large area.

Thirdly, the traditional elders feel trapped by signing a letter of releasing land of the island to the mining company. Residents are also worried that they could be evicted from their homes if the mining company wants to. People mentioned that they feel that they do not have rights anymore. Lastly, coughing, dust and unhealthy environment are mentioned. Anonymous 1 (2022) said how this is caused by trucks driving over the roads:

The communities have a less and less healthy climate around them, and they live in a village, so then those trucks come crashing over the roads, and then there are whole clouds of dust and those houses and villages are covered by the dust cloud.

The website of PT Gag Nickel provided some pictures about their mining locations (see figure 15). On the left picture, it shows how the area is a high run-off area to the sea by its mountains, and nickel extraction activities are located higher in the higher areas. The right picture shows some sedimentation that occurs by close to the ways and ships where nickel is loaded.



*Figure 15. Photos of nickel mining on Gag island (PT Gag Nickel, n.d.)*

The company promotes another view of the relation with the Papuans through different videos published on their website (PT Gag Nickel 2022a; 2022b; 2022c). With these videos, the company tries to preserve a positive image of the activities the company is doing for the employees and Indigenous Papuans on the island, such as building schools and providing healthcare services. The use of imagery as ‘smiling Indigenous Papuans’, hides and effectively denies the negative impacts on the local communities. Thus, these videos documents different racialisations and colonisations, which I shortly want to reflect on.

Firstly, the statements choose to contribute to economic development, which ultimately is profit for the Indonesian company. Economic development is therefore on the company's terms, even if it claims to benefit the Indigenous Papuans, as it is only ultimately on a Western directed trajectory of growth and development.

Also, by including the oppressed people for its promotion, the industrial coloniser, PT Gag Nickel, begins to define what constitutes a society, how the indigenous groups operate within it, what constitutes progress, and how the Indonesian authorities prevent an expression of that racism being heard (Eichhorn, 2022). The question that arises here is who defines what is a 'benefit'?

The movies implicit, as Eichhorn (2022) explained, a 'parent-child' relationship established, with reference to 'vulnerable' or 'underdeveloped' people and that they 'call for collaboration'. Its 'development' builds on this continued discourse and framing of the racialised 'other' apportioned to the Papuans. This type of relationship is of many white-saviour approaches to development. Thus, the ability for Indigenous Papuans to continue practising their true culture, and their own development, is effectively controlled by PT Gag Nickel.

### 5.3 CONCLUSION

After the recolonisation by Indonesia, nickel mining has been further developed, which has led to various injustices. Through this timeline, a conclusion can be drawn which gives answer to the following question:

Which injustices related to nickel mining resulted from the Indonesian colonial period?

After the New York Agreement, the Indonesian government already started a transmigration program and opened foreign investments for mining. That a fair referendum never took place, the Papuans never have given consent to be part as a province of Indonesia. However, this 'Act of No Choice' gave the Indonesian government power over the Indigenous lands of the Papuans, as this became internationally recognised as a referendum. From this time on, the Indonesian government gained more power and control for further expanding its exploitation colonialism, by giving COWs to foreign companies for developing exploration and exploitation activities such as nickel mining in the Raja Ampat region. For expanding these resource extraction activities, more and more migrants were sent to West Papua. This settler colonialism threatened the Papuans not only by losing their lands but also their way of life, culture and identity. The assassination of Arnold Ap is an example of the wider violence against Papuans who express their cultures and sang protest songs about their concerns about mining.

Thereby, certain patterns can be seen by the Indonesian government in which an attempt is made to counter the resistance of the Papuans and to keep the human rights violations and environmental pollution out of international news. One of these patterns can be seen by the implementation of the Special Autonomy Law, which was presented to give more autonomy to the Papuans, where a few years

later foreign journalists, researchers and NGOs became systematically denied for entering West Papua. Also in the Raja Ampat region patterns can be seen to colonise Indigenous lands while preserving a positive image. For reducing deforestation, a Forestry Law has been implemented, to subsequently release licences to mining companies. The Indigenous resistance against the nickel mining company, to then implement a new forest conservation law that excluded nickel reserves areas. In the meantime, foreign research to address injustices were challenged by the denial of permits and militarised post based on nickel mining locations as on Kawe island. The close ties that mining companies often have with the Indonesian government and universities also make it difficult to address injustices. Despite the several protests, many Papuans feel oppressed for speaking out freely, given the risks it entails. Licenses have been given to mining companies on Kawe -and Gag islands, in which it is already becoming visible that the nickel exploitation activities on the Gag island lead to socio-environmental consequences, varying from the moving migrants, to deforestation, pollution and threats to the livelihood of fisheries. Colonialism is also internalised by PT Gag Nickel by profiling themselves as bringing 'development', while decades-long colonialism shows how Papuans are kept poor while many profits are made by the mining companies. As 1.8 million Papuans recently demanded a referendum through a petition, and widespread protests against racism have occurred, resistance against colonialism and racism is an ongoing issue for the Papuans.

## 6 EUROPEAN UNION

*Sustainability is an unknown word among Indigenous Peoples. Because we are part of nature. Indigenous Peoples, only 5 percent of the world's population, protect 80 percent of global biodiversity. – Raki Ap*

In this chapter, the relation between the nickel mining in West Papua and Indonesia, and the European energy transition, will be given. For this, in the first part about the European Union, different events are described which gives a better understanding how the European Green Deal relates to nickel mining. Secondly, some future prospects will be given to get a better understanding of the justice issues that occurs based on to the EGD and nickel mining plans. In this, the sub-research question is answered:

Which justice issues of nickel mining are related to the European Green Deal?

### ★ European Union

#### European Green Deal

- 2015: Paris Agreement
- 2020: European Green Deal and Indonesian nickel ore export ban
- 2021: EU Just Transition Mechanism
- 2022: Russian-Ukraine war and REPowerEU

#### Future of West Papua

- 2021: Green State Vision
- 2022: IPCC report
- 2022: PT Antam EV battery project
- 2033: End of license Kawe island and 1.5 degrees rising temperature
- 2047: End of license Gag island
- 2050: EU as first climate-neutral continent



## 6.1 EUROPEAN GREEN DEAL

### 6.1.1 2015: Paris Agreement

The Paris Agreement is a legally binding international treaty on climate change was adopted by 196 Parties at COP21 in Paris in 2015, and entered into force in 2016. 191 countries signed up to a collective aim of keeping global average temperatures to less than 2 degrees above pre-industrial levels and pursuing efforts to limit heating to 1.5 degrees. To reach these goals, one of the main focus of countries is the energy transition. A system based on renewable energy is expected to be much more mineral intensive than fossil-fuel based electricity generation (Hund et al., 2020, p. 37). Based on the scenario of limiting global temperatures below 2 degrees, Hund et al. (p. 21, 72) showed that nickel is one of the metals that will experience the strongest acceleration in demand growth, as it is estimated that the 2050 projected annual demand from energy technologies (as percent of 2018 annual production) will grow by 99 percent (p. 103). This increase in material demand, the use in EVs and battery storage is a major force, is especially due to the increasing demand for electric car production, responsible for 50 to 60 percent of the overall metal demand (Gregoir & van Acker, 2022, p. 16; IEA, 2021).

In the international nickel market, half of the global nickel supply is concentrated in top three producing countries: Indonesia, Philippines and Russia. In 2021, Indonesia was the world's largest producer of nickel (30,7 percent, see calculations in appendix) and had the largest nickel reserves (22,3 percent, calculations in appendix) (USGS, 2020), followed by the Philippines (second), and Russia (third) (USGS, 2022, p. 115). In 2030, it is expected that Indonesia will have the largest global nickel – and refined nickel supply in the international nickel market (see figure 16).

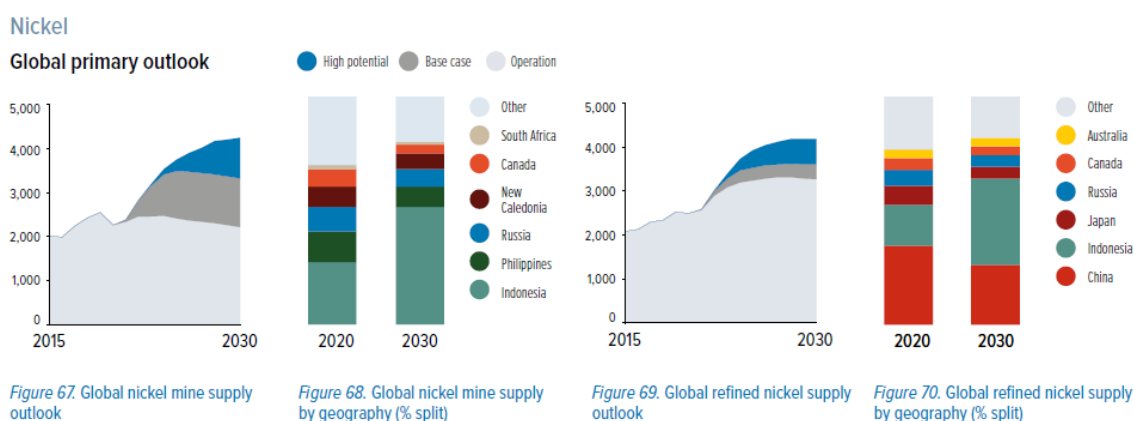


Figure 16. Global primary outlook of nickel from 2015 to 2030 (Gregoir & van Acker, 2022, p. 37)

While these percentages show a high increase in nickel demand, still this percentages are reductive and limited, which needs to be taken into account in this research. As Silvast (2017) and Sullivan (2020, p. 5) explained, models are approximations, and reduces the complex social, ecological and cultural issue in order to manufacture 'data'. Thereby, as Dunlap and Laratte (2022) indicated, it fails to address qualitative features as soil, air, water and body toxification; human rights abuses/political violence;

cultural degradation; interpersonal or ethnic conflict, etc. This means numerous socio-ecological harms, like structural racism, authoritarianism and toxic waste leakages are frequently ignored, minimised or rely on limited environmental impact assessments. Thus, the consequences may be even greater than currently estimated.

### **6.1.2 2020: European Green Deal and Indonesian nickel ore export ban**

As a response to the Paris Agreement, the EGD, is a set of policy initiatives approved by the European Commission with the overarching aim of making the EU climate neutral in 2050. The European Commissions called the EGD as a response to “commitment to tackling climate and environmental-related challenges” related to species extinction, forests and oceans “being polluted and destroyed” (EC, 2019a: 2). The EGD, moreover, is described as “a new growth strategy that aims to transform the EU into a fair and prosperous society, with a modern, resource-efficient and competitive economy where there are no net emissions of greenhouses gases in 2050 and where economic growth is decoupled from resource use” (EC, 2019a: 2). Herein, EU countries have reached deals on a package of green policies, including requiring all new cars sold from 2035 to emit zero CO<sub>2</sub>. As Dunlap and Laratte (2022) indicated, this proposed rapid and mainstream EGD ignores the extractive, land-use and economic reality behind low-carbon and so-called ‘renewable energy’ infrastructures.

For the EGD, the EU is heavily dependent on imports of nickel materials. The EU nickel demand of the global market demand can be between 33 – 50 % in 2030, and 23 – 44 % in 2050 (see appendix B). Also, the EU trade policy is characterised by large-scale imports of cheap and unprocessed raw materials and large-scale exports if finished goods. This results in the lowest possible tariffs on raw materials imports, while at the same time putting higher tariffs on processed products to incentivise processing in the EU (EEB & Friends of the Earth, 2021). As the EEB & Friends of the Earth stated, this approach restricts the sovereignty of states in countries outside the EU, mainly from countries that have roots in the colonial history, and strengthens the extractivist development model.

As nickel has become an important component in renewable energy technologies and electric batteries, Indonesia wants to develop an integrated electric vehicle (EV) supply chain and become an EV battery producer and exporter (Ministry of Energy and Mineral Resources (2020). Therefore, in 2020, the Indonesian government took action for adding value to domestic nickel products by placing a ban on raw nickel exports (Gupta, 2022). This ban aimed to become more self-sufficient and add value to the Southeast Asian country’s rich list of resources (Foster, 2022). The government of Indonesia implemented a ban on nickel ore exports, with the aim of processing its ore in domestic smelters (instead of exporting to China) and thereby nurturing a downstream industry. The EU took Indonesia to the World Trade Organisation (WTO) dispute settlement body for putting export restrictions in place on nickel and iron ores (DG Trade, 2021). Herein, the EU seek the elimination of export restrictions

imposed by Indonesia on raw materials. In the last quarter of 2022, the WTO will be issuing the final report to the parties.

### **6.1.3 2021: EU Just Transition Mechanism**

After the EGD had approved, a year later, the EU implemented the European Union's Just Transition Mechanism, which aims to "ensure that the transition towards a climate-neutral economy happens in a fair way, leaving no one behind." (EC, 2020). This fund, which is around €55 billion over the period 2021-2027, focus on regions that are the most carbon-intensive or with the most people working in fossil fuels. As Zografos and Robbins (2020) wrote, just transition highlights the need for the shift to low-carbon societies to be as equitable as possible by ensuring decent work, social inclusion, and poverty eradication together with environmental sustainability as that shift's central goals. Within the EGD proposal, just transition involves pursuing two key priorities: first, a transition of energy systems away from fossil fuels by emphasizing clean energy and massive expansion of renewable power resources; second, the impulse to avoid transferring the costs of transition to workers (e.g., those losing their jobs from the closure of carbon-intensive industries) and their communities or to communities that are vulnerable and at "the frontline" of climate change impacts. Thereby, the policies for a just energy transition stays within the borders of the European Union, which can be called 'green nationalism', which springs from pre-existing attitudes of environmental protection of national territories (Conversi and Hau, 2021, Ridanpää, 2021).

Thus, for the Papuans, justice issues are not taken into account. As a result, the EU has made a choice who include and exclude for a 'just energy transition'. This, while the supply chains also take place outside the borders of the EU. As Raki Ap mentioned, justice for him means means to care for each other:

That you care about other people. If someone is hurt, you do something. [...]

Several initiatives are underway to tackle the beginning of the chain, such as the Sustainable Batteries regulation and the due diligence law, but it is not yet clear when these laws will enter into force and in how far justice for nickel mining in West Papua will be achieved. Especially given the growing demand for nickel from Europe for the EGD, it will be a challenge in the case of nickel, as Indonesia has the largest nickel reserves and production in the world, and is known for many risks of human rights violations, carbon footprints, biodiversity and environmental impacts and environmental pollution (Gregoir & van Acker, 2022, p. 75).

### **6.1.4 2022: Russian-Ukraine war and REPowerEU**

In the international nickel market, the nickel supply has been more irregular than other metals (Gregoir & van Acker, 2022, p. 37). Since the war between Russia and Ukraine this year, nickel prices have highly increased. The nickel price was especially volatile during March, with rising concerns that Russia's invasion of Ukraine could result in sanctions on nickel exports from major primary producer

Russia, according to the report (Holman, 2022). In 2021, Russia has a share of 9,3% of the global nickel production, and 8% of the world's nickel reserves (see Appendix A) Russia is currently Europe's main supplier of nickel (Gregoir & van Acker, 2022, p. 62).

At the same time, to end the EU's dependence on Russian gas, in the EU, there has been an increase in investments in low carbon technologies through 'REPowerEU'. However, for accelerating the energy transition, nickel is needed. Europe currently mostly imports high grade Class 1 nickel, and therefore does not take Class 2 material from Indonesia and the Philippines which are dominant suppliers on the global market.

At the time of writing, the sixth package of EU sanctions came into effect on 4 June 2022 and did not include nickel from Russia. However, since the wider geopolitical concerns in this context of the invasion of Ukraine, new geopolitical roles in the international nickel market can follow. According to the IEA (2021), the domination of Indonesia and Philippines of nickel production is set to intensify in the coming years, as they are responsible for around 70% of global nickel production growth over the period to 2025 (IEA, 2021). Herein, Indonesia alone accounts for around half of the growth. Future nickel demand is also predominantly for class 1 nickel, but Indonesia and Philippines may play an increasing role here through conversion of their laterite deposits to class 1 material (Gregoir & van Acker, 2022, p..).

In this manner, Indonesia plays an important role in the production of nickel for the EGD. Research of Gregoir & van Acker (2022) shows the prospected growth of the both the global nickel ore and refined nickel supply by Indonesia from 2020 to 2030, where the share of Indonesia is expected to grow strongly by 2030 and will be the biggest exporter of both categories. While, the Europe's nickel mine output, which supplies 20% of domestic demand, is expected to decline in the next decade, as there is a lack of base case projects (Gregoir & van Acker, 2022, p. 37). Thus, this increased the chance that the EU will be more dependent on the (refined) nickel supply from Indonesia for the EGD, and therefore, the EU is challenged to form new trading relationships (Gregoir & van Acker, 2022, p. 62).

## **6.2 FUTURE OF WEST PAPUA**

### **6.2.1 2021: Green State Vision**

In 2021, the UN Climate Change Conference (COP26) summit brought parties together to accelerate actions towards the goals of the Paris Agreement and the UN Framework Convention on Climate Change. As Sultana (2022) writes, since the COP26 is mainly led by powerful governments, corporations and elites, the COP26 can be seen as one of the theatres of climate colonialism. Indigenous and environmental activists have called various climate solutions to be false and a form of perpetuating colonialism through land grabs, extraction, displacement, and dispossession.

For a just energy transition, as Zografos and Robbins (2020) suggested, exposing and seeking to address the highly unequal effects of past policies and climate change are fundamental. For this, frontline and vulnerable communities as Indigenous peoples can be climate pioneers with numerous just-transition initiatives, which is already happening under their leadership. During this event, the COP26 Coalition has been held outside the COP26 venue, which is a site of decolonial, anti-colonial, anti-racist, and feminist politics (led primarily by activists, youth, Indigenous groups, academics, unions). Against the injustices that are going on in West Papuan, the ULMWP combined their struggle against Indonesian occupation with the fight against ecological destruction – and pointing the way towards a radical green future. At the People’s Summit for Climate Justice, the ULMWP has launched their ‘Green State Vision’, aiming to be the “Earth’s First Green State”, if West Papua would be independent of Indonesia. This Green State Vision was drafted with the assistance of international lawyers, where it sets out commitments from West Papua’s ‘government-in-waiting’, for instances of making Ecocide a criminal offence. This Green State Vision, as Jason Macleod mentioned can be a way to give a voice to local communities and space to articulate and develop their own visions, which is sometimes missing, as the COP26:

I think that this is sometimes missing, you do not get the voice of local communities and there is not some space for people to articulate and develop their own visions.

So, this can be seen as an initiative where Papuans voices are represented for their vision on the future, where they highlight the potential for non-Eurocentric knowledge, practices, and value systems to successfully shape climate action.

### 6.2.2 2022: IPCC report

The role of colonialism in creating the climate crisis has been a part of the climate justice movement’s narrative for decades (Sultana, 2022). Protecting indigenous rights and recognising colonialism as a climate cause has been mentioned for the first time by the IPCC, an international authority on climate science, in the sixth assessment report in 2022. The Panel’s working group two report, which looks at the impacts of climate change on people, listed colonialism not only as a driver of the climate crisis but also as an ongoing issue that is exacerbating communities’ vulnerability to it, for instance:

*Regions and people with considerable development constraints have high vulnerability to climatic hazards. Vulnerability at different spatial levels is exacerbated by inequity and marginalization linked to gender, ethnicity, low income or combinations thereof, especially for many Indigenous Peoples and local communities. Present development challenges causing high vulnerability are influenced by historical and ongoing patterns of inequity such as colonialism, especially for many Indigenous Peoples and local communities. (IPCC for policy makers, 2022, p. 14)*

Fadjar-Schouten Korwa explained about how over the world Indigenous Peoples still do not have control over their lands and often experiences the consequences for extraction practices:

You see that Indigenous peoples have the same problems. Indigenous peoples live in balance with nature, only take what they need that keeps everything in balance, and they see their lands being destroyed, often by extractions as mining.

**What kind of parallels do you see coming back?**

Mainly that there is actually no control over the use of traditional land. [...] rivers are poisoned [...] driven out of their own land because it is no longer liveable.

Also Szilvia Csevár indicated this:

West Papua is just one example. You see the same pattern within indigenous communities, especially women, when they are trying to defend their lands against extractive companies, when they try to defend their families, communities, their resources.. They are being arrested or murdered, sexual violence is used, or they disappear and no one ever hears anymore about them. And that is also impacting men who are trying to defend their environment, their lands and their communities.

This recognition in the IPCC report happens in a year where United Nations (UN) experts announced concerns of deteriorating human rights situation and abuses against Indigenous Papuans, including child killings, disappearances, torture and mass displacement (UN, 2022). These experts warned that these cases are just a little part of what is happening, as it is difficult to monitor events on the ground. Therefore, they call for humanitarian access and investigations, which has still not been the case for the UN.

These ongoing injustices of colonialism leads to traumas throughout generations. Traumatic events can be one off or involve a series of distressing experiences over time. Historical and intergenerational traumas are said to be the enduring legacies of colonialisms and the continued dispossession and oppression of Indigenous Papuans. Therefore, trauma healing is an important aspect for striving for restorative justice for Indigenous communities. Here, trauma healing can be a way to celebrate the Papuan identity, as Julia Jouwe explained. She doubts whether a government can ensure more justice of healing traumas. To achieve more justice for healing for the communities and ancestors, Julia indicated that it is important to come together and celebrating their identities:

I think that as communities we would do justice to each other and to our ancestors if we come together. Instead of being ashamed, we have to celebrate that we are Papuans.

Trauma healing can also be powerful in the way that it reconnects and strengthens Papuan generations, as Fadjar Schouten-Korwa explained:

You hear that you can be traumatised over generations. But I think this also has a positive sense: that you get a connection through generations, and can get strength from it, and do things in your power.

Here, storytelling plays an important role, as it keeps the resistance against colonialism of the Papuans going on. Traditional storytelling is a significant way of expressing Indigenous knowledge, culture, and oral traditions. Traditional storytelling privileges holistic interconnectedness, collaboration, reciprocity, spirituality, and humility; more importantly, it impacts positively on practice (Kovach, 2009). When I asked Julia Jouwe what she experienced from the culture when she visited West Papua. She explained to me the importance of storytelling in her family, and how this is often about other family members and their ancestors. This philosophical spirituality gives her a lot of strength, as there is a lot of ancestors who are standing on her shoulders and encourage her:

Storytelling [...] talking about other family members and ancestors. [...] spirituality. [...] honour your ancestors. This philosophy gives you a lot of strength, as you have a whole army of ancestors behind you on whose shoulders you stand, who encourage you, who give you strength and show you the way.

### **6.2.3 2022: PT Antam EV battery project**

In the meantime, different investments has been made to develop the electrical vehicle battery industry in Indonesia, where the mining company Antam also signed agreements for new project. In April 2022, Antam signed two agreements to invest in EV battery projects (PT Antam, 2022b). In the framework agreement, the synergy on the EV Battery project development is a response to the rising demand of EV batteries. This is also becomes clear in the press release of the signed framework. For instance, the Coordinating Minister for Maritime Affairs and Investment Luhut Binsar Pandjaitan said in the remarks: “The signing is an important milestone for Indonesia to become one of the leaders in the global EV battery industry.” Also, it has been mentioned that the battery agreement is a response to the Paris Agreement, for instance as Minister of Energy and Mineral Resources Arifin Tasrif mentioned in his written remarks: “the Ministry is highly appreciating and supports the cooperation [...] on the development of the electric vehicles batteries industry in Indonesia as part of one initiative to fulfil Indonesia's commitments to the Paris Agreement and COP 26 in reducing greenhouse gases based [...].” Also PT ANTAM’s president director, Nico Kanter, refers to the development of the EV battery industry in Indonesia to add economic profits on nickel ores: “The framework agreement signing marks the first stage of the EV Battery ecosystem development in Indonesia. ANTAM supports the Government’s initiatives on the development of integrated EV Battery industry in Indonesia to elevate the national's mineral added value into the more strategic stage.” So, these remarks shows how the energy transition plans stimulates the investments of the EV battery industry in Indonesia.

Therefore, nickel smelters will be build, Looking at the situation of Gag island, the framework agreement signment of the EV Battery Integrated project has also led to an investment to build a nickel smelter in Sorong in West Papua, with a contractor of a Chinese company, PT. Hanseng (Chaw, 2022). The contractor will be PT. Hanseng, a company from China, that operates in the nickel smelter sector. As PT Gag Nikel is a company of PT Antam, in the future, the nickel ores can be shipped to this new nickel smelter company. One of the consequences of the development of nickel smelters in Indonesia, is that the production of nickel is highly energy intensive, as it generates high CO<sub>2</sub> emissions arising from the use of coal-based electricity and tailings disposal (IEA, 2021, p. 148, SOMO et al., 2020).

The developments in nickel mining in Indonesia also leads to challenges in the waste disposal due to, for example, the high precipitation and frequent seismic activities (IEA, 2021, p. 148). In the past, nickel mining companies were seeking permission for DST (Morse, 2020), however the criticisms on the threats to the marine environment has led the Indonesian government decide to no longer permit DST. However, since the Indonesian government has not officially banned deep sea mining disposal (Desk, 2021), tthe IEA (2021, p. 148) warns that the Indonesian government could issuing new permits in the future, as that there is a risk that DST placement will be considered as an option in Indonesia.

#### **6.2.4 2033: End of license Kawe island and 1.5 degrees rising temperature**

Then, looking at the future, in 2033, the license nickel mining on Kawe island will be stopped. In how far nickel mining is taking place and will be further expanded in the future, and thereby the forest and reef habits of Kawe island will be damaged, remains a questions. But what does become a certain threat to the Raja Ampat in which Kawe island is located, is the worldwide rising temperature due to climate change and the threat to the coral reefs. With 1.5 degrees warming, which is pretty much inevitable to reach in the early 2030s (IPCC, 202). More than 90 percent of the world's reefs will experience heatwaves that are too frequent for them to recover (Dixon et al., 2022). At 2°C of warming, safe havens from heat for coral reefs will no longer exist (A. Dixon et al., 2022).

#### **6.2.5 2047: End of license Gag island**

For the future of Gag island, nickel extraction will continue for another fifteen years. Considering the project plan until 2047, nickel extraction will be expanded, and thus more deforestation and pollution in the marine environment to follow. Companies and the migrants may be able to leave after the licenses expire, however, the local communities will be left behind, is anonymous 3 concern:

[...] They will never think about what will happen by the year of 2047 [...]. Those people who own the nickel mining are not the local people! When the contract close, they will take all the equipment, all the facilities, and they will go out from the island. And they leave the local and Indigenous peoples with the environmental disasters. This kind of story always happen in West Papua.



Also Jason Macleod indicated this issue:

So what I see is that it will end up enriching a few individuals, but it will at the cost of indigenous communities and as well the migrants communities in West Papua. I do not see them benefiting from this at all.

Also, Jason Macleod is concerned that in the end, these Indigenous communities will suffer the worst impacts of the nickel mining, where they are forced to flee or risk human rights violations or forced displacement:

My concern for Raja Ampat is, with the rising commodity prices and demand for green energy, nickel will accelerate exploitation. The Indigenous landowners will not have the benefits of that, and they will suffer the worst impacts of that mining [...] in losing connection with the sea and fishing, and also the destruction of the land environments. [...] it is so environmentally destructive. Many of those islands become uninhabitable, and that indigenous communities will be forced to flee, and if they resist, they will experience human rights violations or forced displacement.

Importantly to address is that, as Csevár explained, Indigenous women are disproportionately affected by environmental degradation, caused by resource extraction and increasingly compounded by climate changes. She argues, by referencing to the situation in West Papua, that unfettered resource extraction not only amplifies vulnerabilities and exacerbates pre-existing inequalities stemming from colonial times, it also gives rise to gendered consequences flowing from the damage wreaked on the natural environment and thus poses a danger to international peace and security. She mentioned how you experience environmental degradation or a conflict, is very much dependent on different factors of your positionality, as gender and race. Especially gender is an important factor in West Papua, by their communities' role:

How you experience environmental insecurity, or how you experience environmental conflict, is very much dependent on different factors such as your gender, race, age, religion. Especially gender makes it different how you experience the form of insecurity linked to the environment.

This in turn exacerbates other vulnerabilities, including sexual and gender-based violence and other forms of marginalisation. Also, when women are trying to defend their lands against extractive companies for their families, communities, resources and lands, the violence is more extreme against female human rights defenders, especially from Indigenous communities. Szilvia Csevár's research showed how military violence against indigenous Papua women is intrinsically linked to resource extraction and the territory's colonial origins. In the interview she mentioned that in every conflict, she sees the pattern of gender-based violence is used to achieve a military or political goal in the conflict, and thus become a tool of war:

[...] this gender-based violence, where these women trying to defend their lands against extractive companies, [...] it is an attack against the community. Because sexual violence always comes at a very high stigma. [...] As soon as the family in the community leaves, the community is somehow disrupted, it is not able to function anymore in its own traditional ways. Then, the community becomes available and we can even extract more gold and nickel.

So, gender-based violence on Papua women thus becomes interlinked with political violence and the economic need to acquire and maintain positions of control over natural resources. In how far these are the cases of the nickel mining on Gag – and Kawe island, I could not find. However, given the military involved at the mining companies in these islands, there is a risk that gender-based violence is used for resource extraction.

Next to that, according to Sonter et al. (2020), mining metals for renewable energy production is creating new threats for biodiversity, now and in the future. For an island as Gag in the Raja Ampat, the nickel extraction is a threat for the forests and marine environments. As Jason Macleod mentioned, the runoff into the ocean could be devastating for the coral reefs and its marine environment:

Raja Ampat is really a global heritage: in terms of biodiversity loss, it will be devastating. [...] it will cause a lot of runoff into the ocean, which will fell into the coral reefs, and that will affect all the species in the ocean. And in that, it will have an incredible effect globally, in all sorts of ways.

Therefore, it is important that those people who are most affected, having the most to say, as Jason Macleod mentioned. For instance, in the case of Gag island, this is something that cannot be looked in isolation, as it is connected to a wider struggle of liberation. What justice means for those communities, needs to be at the forefront in those things that affects them:

A fundamental point of view is that the people that are most affected, have the most to say: that needs to go right down to the local level. [...] Who does get to speak about Gag? [...] you cannot look to Gag island in isolation. It is connected to other islands, to the histories that intersect with that island, and to the wider struggle of liberation. [...] That needs to be anchored in indigenous values around respect, protection, equality. The Papuans are doing that: those values and vision is embedded in Papuan culture. [...] it is ultimately for the Papuans to decide on the question what justice means for them.

#### **6.2.6 2050: EU as first climate-neutral continent**

It is not directly related that three years later, Europe wants to have reached being the first climate neutral state in the world (EC 2018), but there is an indirect connection with the growing demand for nickel from Europe and the nickel extraction in the Raja Ampat as Gag Island. Around 2050, if

emissions remain at their current high level, it is expected to reach 2 degrees above pre-industrial levels by mid-century (Ravillious, 2022).

Therefore, as the pressure on the energy transition is growing, it makes it even more important to take a critical look at the growing pressure on the energy transition. Climate change and resource extraction will lead to displacement of Indigenous communities, which will change their identity, cultures and ability to retain and form links to the land and resources upon which they rely, and have historically relied upon. Sophie Kwizera raised some justice issues by focusing on these climate goals of becoming climate neutral. At its core, it is about avoiding getting into a destructive system again, which is now also the case with the fossil fuels system. Therefore, it is important to raise questions as: what does this energy transition actually mean for those mining locations?

For the energy transition, the key is: we have to get the minerals and metals from somewhere and we want to have this quickly. [...] Thus, the conflict continues for Congo and West Papua. There is now a lot of focus on: we have to achieve climate goals, instead of: how well can we do this?

Also Raki Ap indicated the justice issue of extracting resources from conflict countries for renewable energy technologies. For reaching climate justice, reduction in consumption is needed, as colonialism is still going on today:

[...] we need batteries for our Tesla's and other electric cars, but those materials are accompanied by a lot of human rights violations. Whether in Congo, or West Papua, we are still confronted with colonialism every day. If we want to make a transition, which means that even more materials are needed, but we do not want to let consumption decrease, we will even work harder towards the problem.

Also Sophie Kwizera addressed the issue of the rising consumption of materials instead of a system change of decreasing consumption. Instead, critical questions needs to be asked what an energy transition actually means and how to avoid another destructive system as now has been the case with fossil fuels:

Specifically in my work I use the word 'just transition'. [...] system change. So we see the energy transition as an opportunity for the mistakes that were made before of 'more, more, more', and the mistakes we made in the past. [...] we should look at: what does such an energy transition mean? [...] How accessible is other energy? Who decides when energy is transferred? [...] how are we getting sustainable energy? [...] how are we going to achieve that [electric driving, windmills] without ending up in a destructive system that we have actually been in with fossil fuels? [...]

As Jason Macleod mentioned, the energy transition can be seen as an opportunity to promote critical conversation around its mining that is needed for it, and pushing forward indigenous control over natural resources and its right of self-determination as a solution to protect the biodiversity. For Jason Macleod, the biodiversity – and climate crisis, and indigenous rights movement, needs to be linked, to avoid more damage in the future:

[...] I think there is an opportunity to promote a critical conversation around materials for batteries [...]. What is needed is a reorientation of the conversation around growth, and questioning continuing unlimited growth [...]. And pushing forward indigenous control over natural resources and their right of self-determination as a solution to protect biodiversity. So, part of the biodiversity crisis, climate change, and indigenous rights movement, need to be linked. Otherwise the solutions that are created are just going to do more damage.

Consequences can go much further than is calculated at the moment with the energy transition. For instance, cutting forests for nickel mining is not only cutting down trees, but cultures of Indigenous communities who are intertwined with these forests. This is what, for example, Vera Wesseling explained:

If you compare with the palm oil plantations, the consequences really go further than just depleted land or people losing their jobs. This is really a threat to a culture. [...] it is so much part of who they are, so that threat affects a part of their identity.

And, Fako Kluiving , mentioned that to have justice is to have their own cultural expression and worldviews, and live in the way they want to live, with a say about their own country and lives:

That the Papuans have something to say about their own country, about their own lives. And that they at least have their expressions of culture, their expressions of how they see the world, that they can live by that. And not have to live like some kind of second-class citizens in their own country. It is really terrible that they cannot live the way they want to live.

As anonymous 3 mentioned, for justice, is having freedom:

For me justice is when you have freedom to say and to decide whatever you want to do, to build your life, to secure your culture and identity, and to build your future, without any pressure or intimidation from the government or other actors.

making spaces for their own living practices and spirituality is important for the Papuans, as Julia Jouwe indicated:

[...] to grow spiritually too, instead of being concerned with survival. [...] being able to practice their way of life, and have space for it, and protect their rights [...]

In the end, raising these questions is a discussion about human rights, as Julia Jouwe indicated:

In the end, it is all about the basic human rights. We can talk about struggle and climate change and so on, but in the end, if you have bad health care and you cannot really get into school, things like that, you are just going to survive.

Thus, for aiming to be a climate-neutral state leads to some conflicting situations of what the EU can be causing. The rising demand of nickel threatens the most biodiverse coral reef region in the world. According to Fadjat Schouten-Korwa, it is a shared responsibility to tackle human rights violations and environmental pollution from the beginning to the end in these supply chains of renewable energy technologies:

While the Raja Ampat is still the most intact compared to the Great Barrier Reef already affected by climate change. [...] This globalisation gives a common responsibility for what happens in the Raja Ampat. [...] Then, the question is: if we want to have cheap green energy here, what will be the consequence? [...] So that also raises the question: who owns the problem? [...] If we need nickel for our energy transition, do we want it in this way too?

This contradiction is also partly due to how sustainability is viewed and approached, as Raki Ap pointed out, for Indigenous peoples, sustainability is an unknown word:

Sustainability is an unknown word among indigenous peoples. Because we are part of nature. That's why Indigenous Peoples, only 5 percent of the world's population, protect 80 percent of global biodiversity. [...] That is a completely different approach or starting point than here in the West. [...] And in that way of life we respect the fish and the tree. [...] And now there is the word 'sustainability', where the West tells people who have lived that way for thousands of years what sustainability is.

Also, anonymous 3 indicated that there are more than 250 Indigenous tribes and languages in West Papua, where the values and philosophies are connected to their environments:

[...] our lives and forests always relate to our cultural lives. Because all the values and philosophies of Indigenous people's life and cultures is always depend on the nature. [...] But when you clear all the forest [...] you are killing Papuans slowly and softly by the name of development and investment in West Papua.

### 6.3 CONCLUSION

By setting out a timeline from the Paris agreement to future prospects related to the EGD and nickel mining in the Raja Ampat in West Papua, through this timeline, a conclusion can be drawn which gives answer to the following question:

Which justice issues of nickel mining are related to the European Green Deal?

The EGD, which implemented plans based on ‘green’ growth, also leads to a rising nickel demand to meet the energy transition plans. In the case of nickel, it leads to certain conflicts in meeting these demands, as Europe itself has a few nickel mining locations, which is expected to decrease in the future. This makes the EU dependent on nickel mining exploitation outside European countries. The export ban of nickel ores from the Indonesian nickel market, and the war between Russia and Ukraine, show how the EU puts nickel import as a priority from the human rights violations and environmental pollution it is associated with. In the meantime, Indonesia is also responding to the growing nickel demand, which can also be seen in the Raja Ampat area. The Kawe and Gag Island licenses have been issued for decades, and PT Antam has also signed plans for nickel smelter – and battery industries. As a consequence, allows nickel mining companies to operate for its so-called development of ‘green energy transitions. It can therefore be questioned how far the EGD is taking into account that colonialism is a historical and ongoing driver of the climate crisis, as has been mentioned in the last published IPCC report. As long as these voices remain marginalized within the Paris climate accords and thus the EGD, plans will remain based on reducing CO<sub>2</sub> emissions to mitigating climate change effects. How the Papuans view justice, and also the nickel mining, may then have a completely different meaning than what Europe currently imposes for the so-called need for nickel for mitigating climate change. The ULMWP movement continue committing to the right to self-determination for the Papuans, with the aim of becoming the world's first 'green state', which shows that what is understood by ‘green’ has a completely different meaning for many Papuans than the ‘green’ mining of the EGD.

How the future will look like for the Raja Ampat, remains an open question. Next to the threat of rising temperatures, by the rising demand for nickel for ‘green’ technologies, a new threat has arisen for the Indigenous peoples and environments in the Raja Ampat. As long as the EGD is based on economic growth, a rising nickel demand will be expected in the future. That the EU aims to be climate-neutral in 2050, where it’s Just Transition Mechanism’ focuses on striving for justice within European, shows a certain form of climate nationalism, where it disregards injustices that take place for nickel mining outside the EU. As a consequence, there is a high chance that the Indonesian government and mining companies will expand further nickel mining activities to meet the rising nickel demand, in which the Indonesian government can continue colonialism under a new form of power, for the 'greening' of energy transitions. For the Papuans, green colonialism will not reduce injustices, as long as their voices are not taken into account in energy transition plans.

## 7 CONCLUSION

---

*Sometimes, you have people who ask: "Do you think West Papua is going to become independent?" Then, I always think: yes, of course, justice is on our side. – Julia Jouwe*

The conclusions of the three research questions together answers this main research questions. During this research an answer was sought to the following question:

How is nickel mining in West Papua related to colonial injustices?

Throughout history, there are general continuities that have been developed which have caused injustices. The colonial line that was once drawn on the island of New Guinea has led to history and ongoing colonisation of the lands of Indigenous communities in West Papua. The findings of minerals and metals such as nickel ores have partly influenced the unfulfilled decolonisation process by the New York Agreement, and for the Papuans, it meant the start of a long struggle for its right to self-determination. The colonial and racist structures that the Dutch set out at the time, such as the transmigration program, racial hierarchies, and mining exploration activities, have been taken over by Indonesia and expanded further, with the result that the Papuans are still treated as third-class citizens to this day.

Since the colonisation of Indonesia, marginalisation against the Papuans has increased by its exploitation – and settler colonialism. With the growing demand for nickel for energy transitions, nickel mining in West Papua can also be legitimised in a new way, for its so-called ‘green’ energy transitions. As long as the Papuan voices are oppressed and underrepresented, this nickel mining will operate under this green colonialism. As a consequence, Papuans will continue facing their struggle against colonial injustices of not having their right to self-determination, freedom of culture and identity expression, and ongoing traumatisation. Therefore, I conclude that for a just energy transition, the rights of the Indigenous Papuans and their knowledge must be taken into account. Only in this way we can have decolonial and just solutions which preserves the most biodiverse coral reef region in the world.

## 8 DISCUSSION

---

*I always say thank you to the people who are interested to write down something that is happening in West Papua to recognise, understand and know what is going on here. To people from the Papuan community, or other people, in the other side of the world. –*

*Anonymous 3*

As the research has its limitations and implications, it is important to reflect more deeply and discuss the research's findings. Firstly, I critically reflect on the study limitations, so that readers can judge the appropriate weight to give this study's conclusions and recommendations. Secondly, this chapter zooms out and shows the study's implications. Lastly, I provide recommendations for further research.

### 8.1 STUDY LIMITATIONS

#### 8.1.1 Application of theory

Colonialism can be defined in many forms, thus this research was limited by choosing to research injustices from these three forms. For as a researcher, these abstract concepts helped me to get an understanding of how different forms of colonialism occur in West Papua. To not just have an abstract analysis of the racialisation of difference, but of accounting for local, embodied, material, lived experiences of Papuans, I have attempted to do this by doing interviews. In the end, these abstract words are about pain and suffering throughout generations. However, as I did my research in The Netherlands, I also had to make an abstract analysis of events that could be related to nickel mining and its colonial injustices. Therefore, I made a lot of assumptions about what could be occurred and occurring. This also shows the conflict of colonialism; as there is colonialism, voices are marginalised, people are oppressed, and it is harder to address these issues to the outside world.

#### 8.1.2 Subjectivity

With this research, I have addressed colonial injustices. However, what justice means can be very different on who you ask – therefore also my view and personal background have influenced the outcomes of this research. By making this explicit, and being transparent about my positionality and my subjectivity in the Methods section above, it is up to the readers to give meaning to this. Thus, further research could perform this investigation again as it sheds light from a new perspective, defining the injustices more clearly, from new angles.

Also, the storyline of this research has been based on the information I gained from my interviews. However, this has been analysed from my perspective as well, which has influenced all steps of the research. For instance, events were selected where probably colonialism and nickel mining could be linked. This subjectivity was limited by checking my results with my supervisors. However, I did not strive for objectivity, as I think this is not possible. Moreover, my research process has even benefited



from having a personal perspective and motivation. For instance, the explorative research based on personal interactions with the interviewees allows for insights into the situation in West Papua and the Papuan perspectives. It allowed me to be flexible in my research and to change directions when interviews indicate new topics that could be of importance. So this personal motivation has worked out to its advantage for this research.

### **8.1.3 Results tensions**

Researching injustices and justice issues also led to some tensions in what justice means for Papuans – in the way that it is among the Papuans themselves to define this. Based on my research, I had to make assumptions about what this could be for the Papuans in the Raja Ampat region. It may be the case that other perspectives of justice emerge if fieldwork would be done. But this is too challenging, given the circumstances of the Papuans that have been shown in this research.

What makes this even more complex and leads to tensions, is the internalised colonialism that can occur in nickel mining; there is a chance that Papuan elites could also have played a role in causing injustices. Despite this, it is important to always take the historical context into account and to show the patterns and structures; in the end, today's colonial power relations are an effect of history.

Also, in my research, I have distinct groups based on geopolitical border lines: Indonesia (migrants) Papuans, and the Dutch people. In reality, it is much more complex of the different identities that exist and generations of migrants and Indigenous Papuans that have lived together for decades. However, in order to clarify colonial structures and to do justice to the indigenous communities of West Papua, I still had to refer to these groups to be able to do this research.

Therefore, I also need to address the tensions of writing about the conflict in West Papua, as this conflict and violence continue to the present day in varying degrees of intensity (Macleod, 2015). As Macleod (p. 86) indicated, resolutions to the conflict have been made more complex because of the presence of structural violence in the form of economic exploitation led by the resource extractive industries, the symbiotic economic relationship between business and the military, and the exclusion of Papuans from many of the decision-making processes that affect their daily lives. So, although the Papua conflict is complex, it became clear that the common cause goes back centuries ago by the Dutch colonisation. Because I tried to write my research from the point of view of marginalised groups, I also indicated developments such as the 1.8 million signatures collected for a referendum and the 'Green State Vision' of the ULMWP. This does not mean that all Papuans are for independence; of course, there are different ideas about the future of West Papua. However, since the signatures show that a large part of the Papuans wants a new referendum, I decide to also write about both the internal – and external right to self-determination.

Also, it was a challenge to trace the supply chains of the nickel mining of Gag island, since I did not have the resources to track supply chains. Therefore, assumptions had to be made in relating justice issues to the EGD. I have based the connections between the nickel mining in West Papua and the European energy transition based on some reports I could find. At the moment, Russia is the main producer of nickel for Europe. Based on future prospects of the reports, there is a big chance that nickel from Indonesia will in the end come in energy technologies for the European energy transition.

Practising decoloniality within Western universities also led to some tensions. In the history of Dutch colonialism, a university such as TU Delft also produced the necessary knowledge with the aim of being able to colonise (Ekkelenkamp, 2019). This raised me to question, how far a Dutch university such as the TU Delft and Leiden University can truly be a space for engaging in decolonial work. As a student doing a thesis on these universities, it is an ongoing learning process of recognising my blind spots; and this has also affected my research of not being able to fully write from the viewpoint of the marginalised groups.

## 8.2 IMPLICATIONS

### 8.2.1 Research

In the field of energy transitions and energy justice, this study addresses the shortcomings of the energy justice framework by expanding the idea of recognitional justice to recognise the right of self-determination and linking energy injustices to other forms of justice struggles such as colonialism. The research shows the tensions of the energy justice frameworks based on western philosophies; thereby many justice issues are left out of consideration. The case of nickel mining in West Papua also shows what kind of problems the so-called renewable technological solutions can be based on; as long as marginalised groups are underrepresented in the academic fields, it will also lead to frameworks based on Western philosophies.

Also, this study has further elaborated on the concept of ‘green colonialism’ and shows the importance of researching historical context for understanding how green colonialism has formed. In the field of climate science as the IPCC, by taking the viewpoint that colonialism has caused climate change and is an ongoing issue that is exacerbating communities’ vulnerability, it is important that within climate science, solutions for mitigating climate change are being based on the viewpoint of marginalised communities.

And, a researcher that reproduces the positive frame of ‘green’ and ‘renewable’ and ‘environmentally friendly’ energy technologies, which is now still dominant within these fields in the academia, can cause a reproduction of coloniality and blind spots of justice issues. Without a critical reflection on these concepts, it contributes to a reproduction that the high-technological solutions for energy transitions are needed for mitigating climate change.

### 8.2.2 Policy

For policymakers, this study addresses the tensions between the energy transition plans as the EGD and the rising threats to Indigenous communities and biodiversity needed for mining these materials. As long as there is a growing demand for materials, biodiversity threats will increase and leads to further exclusion, dispossession and destruction of lands of Indigenous communities. Of course, this is a challenge, as current energy systems are based on fossil fuels. Therefore, more critical conversations need to be made around growth, to prevent to end up in a destructive energy system as is now the case with fossil fuels.

Therefore, this study's findings can be important to get a broader understanding of the impacts and injustices related to energy transition plans as the EGD. Also, it follows from the viewpoint that colonialism is a historical and ongoing driver of the climate crisis, as the IPCC (2022) report has mentioned. This study can be important for getting a better understanding of the impact of colonialism and how this is an ongoing issue for Papuans.

Also, this research challenges the concept of 'just transitions' in a world where energy technologies are based on global supply chains. For politicians that work for the 'Just Transition Mechanism' framework of the EGD, this study can lead to new insights into the exclusion of people in this 'just transition'. And for green policymakers who are committed to 'green' energy transitions, I hope that the findings of this study of its consequences and injustices will be taken into account in further decisions that will be made.

### 8.2.3 Societal

For society, this study can lead to more awareness of the threat to Indigenous communities and biodiversity, such as the forests and coral reefs in the Raja Ampat region, to the rising demand for materials for renewable energy technologies. This awareness can lead to a 'dice' effect if more and more people become aware and have critical conversations around energy transitions and what justice actually means for whom.

Also, this study hopes to create more awareness among people who did not have or rarely have knowledge about the shared colonial history between The Netherlands and West Papua and the ongoing colonisation by Indonesia. I hope more people will pay attention to the struggles of Papuans by the unfulfilled decolonisation of the Dutch government and the impacts Papuans face.

Papuans are resisting colonialism for centuries, so the struggle of resisting colonialism is not something new. This study can be important to show why a more intersectional approach is needed for to strive for justice in practice, and speaking out more critically against the human rights violations and environmental pollution of mining of energy transitions. Therefore, showing international solidarity for the struggle of Papuans is important. This can lead to new narratives, such as pushing forward indigenous rights of self-determination as a solution to protect biodiversity.

## 8.3 RECOMMENDATIONS

### 8.3.1 Fieldwork research in Raja Ampat

Although this research has addressed some colonial injustices, fieldwork research is needed to get more understanding of the impact of nickel mining exploitation activities on the Indigenous and local communities and the environments and its colonial injustices. It is important that the marginalised peoples are central in the research. In this, much more research can be done on the local perspectives on mining, and justice, but also the local histories, cultures and knowledge of the communities.

Important to mention is that doing fieldwork to address human rights violations and environmental pollution is not without risks for both researchers and the interviewees. It is therefore important to take this into account and always ensure the safety of the interviewees and the people who are involved in the research. Also, the fieldwork of Jason Macleod has shown that it can be a challenge to collect perspectives and stories, as people can be suspicious of speaking out or just mention the positive developments of mining. Also, for a foreign researcher it is important that research will be done through a partnership with local researchers, local NGOs and local community members to avoid producing coloniality.

For this research, I have focused on the western part of the Raja Ampat where the islands Gag and Kawe are located. In the eastern part of the Raja Ampat, nickel reserves and nickel mining locations are located, on the island of Manuran and Waigeo. However, as I could find rarely information through doing desk research, I decided not to do research on the eastern part of the Raja Ampat. Therefore, when doing research in the Raja Ampat, the eastern part can also be taken into account.

### 8.3.2 Other minerals or metals needed for energy transitions

As West Papua is part of the island of New Guinea, which has the world's richest island flora (Cámara-Leret et al., 2020), there is a high probability that the threats of mining to biodiversity will be the case for West Papua. West Papua contains a lot of minerals and metals, so more research can also be done on other metals and minerals needed for the energy transition and its mining locations.

On the website of the Indonesian Ministry of Energy & Mineral Resources, I have found different projects for doing exploration research on the cobalt reserves. Since cobalt is another metal that is critical for energy transitions, mainly for batteries, it is also important to research the development of cobalt mining projects and how far this is related to the battery industry.

Another metal in West Papua that could be related to the energy transitions is copper, as West Papua has the world's second-largest copper reserve mine located at the Grasberg mine. In my research, I have shortly described that the gold and copper reserves found in the Ertsberg mountain also played a role during the New York Agreement. Later on, Freeport signed a COW with the Indonesian government to explore the mining of copper and gold, where its mining activities had and still have huge negative

consequences for the Indigenous communities and environment. Doing research on the Grasberg mine could provide more insights into how far the copper mining and its developments in West Papua are related to the increasing demand for copper for the energy transitions.

### **8.3.3 Non-colonial EGD**

As last, to avoid colonial injustices in the energy transitions, more research needs to be done in exploring conditions that would make a non-colonial EGD possible. Different researchers, such as Siamanta (2021), Lennon (2021) and Laduke and Cowen (2020) have already indicated important first steps to decolonising energy transitions and creating renewable energy. Further development in researching this will offer promising pathways to develop decolonial energy ecologies. Herein, exploring Indigenous Papuan knowledge and stories can help to envision and walk a different path.

## EPILOGUE

---

*Hidup ini suatu misteri*

Dit leven is een mysterie

*Tak terbayang juga tak terduga*

Ik en mijn volk leven zonder vrijheid en ook zonder overzicht

*Begini lah kenyataan hidup*

Zo is de werkelijkheid op dit moment van het leven

*Aku terkurun di dalam dunya ku*

Ik en mijn volk zitten gevangen in ons eigen leefwereld

*Yang ku damba, yang kun anti, diada lain, hanya kebebasan*

Mijn wens en hoop is niets anders dan de vrijheid

*Andai sadja aku burun elang*

Was ik maar een vogel, een adelaar

*Terbang tingi, mata meyelusur*

Die hoog kon vliegen en overzicht had

*Tapi sayang, nasib burung sial*

Maar helaas, mijn lot is dat ik een gekooide vogel ben

*Jadi terkurun, di dalam dunya ku*

Vervolgd, gevangen en gekortwiekt

- Arnold Ap

Even though they killed my father, his spirit lives on. Because his identity never only belonged to him. It belongs to the entire nation. – Raki Ap

This thesis started with a story written by Raki Ap in a book of Extinction Rebellion, ‘Nu het nog kan’ (now it is still possible). I am very grateful that in the same week, we met each other in Café Utopie. Our first conversation showed me how listening and sharing each other's feelings is the key to change. More than two years later, our conversation of that night has resulted in being able to do this research. I want to thank you for all the trust and support you have given me in these two years. Your storytelling and positivity keep me going on every day to strive for justice.

The topic of this thesis is written with a serious concern for the future of the Papuans. By the driving needs of the energy transition, it is hard not to see the same abuses of power associated with resource extraction being continually replicated. Therefore, as an activist, which means for me actively contributing to justice, I saw my thesis as an opportunity to make space for the stories of the Papuans. By doing interviews, I hope I could open up power to others. The people who informed my thesis, entrusting me with their stories on the premise that I would provide an academic platform for amplification, I hope will relieve some of the burdens that falls on the shoulder of the Papuans, who have to stand up for their rights every day to create awareness of their struggle.

While it is positive to see that the world is embarking on a transition to a greener future, we must do so responsibly, by respecting the rights of and involving indigenous communities and other marginalised groups in these transition plans. If not, we are not only threatening these communities but threatening worldwide biodiversity. Therefore, more critical reflection on demanding an energy transition is needed and making space for the stories and knowledge of indigenous peoples who are at the forefront of this climate crisis. As Jason Macleod described it beautifully, there is a lot of hope for bringing a more soulful approach to environmental justice movements:

There is a new generation of activists that can make the connections between indigenous rights, specifically the rights of self-determination, biodiversity loss, and climate change. They come together in a new kind of politics that challenges economic growth, and really thinking: who makes the decisions? And who pays the cost of people's lifestyles? I think there is a lot of hope in that, things are shifting much more to struggles being led by indigenous peoples, for bringing a more soulful approach to environmental justice movements.

And here lies a hopeful story for a more loving, peaceful and greener future. As raki says:

The big changes, that is science, do not come from the centre of power. It comes from individuals who believe in what is right. That we can end slavery together, end apartheid, liberate East Timor: for me, there is no reason not to believe that people cannot liberate the Papuans. We are in the middle of that process.

## BIBLIOGRAPHY

---

- Agarwal, A., & Narain, S. (2012). Global warming in an unequal world: A case of environmental colonialism (selected excerpts). *Handbook of Climate Change and India*, 105–112.  
<https://doi.org/10.4324/9780203153284-16>
- Allard, T. J. (2011, July 1). *Sea of trouble*. Sydney Morning Herald. Retrieved 22 August 2022, from <https://amp.smh.com.au/environment/sea-of-trouble-20110701-1gv49.html>
- Allen, G. R. (2007). Conservation hotspots of biodiversity and endemism for Indo-Pacific coral reef fishes. *Aquatic Conservation: Marine and Freshwater Ecosystems*, 18(5), 541–556.  
<https://doi.org/10.1002/aqc.880>
- Alonzo, M., van den Hoek, J., & Ahmed, N. (2016). Capturing coupled riparian and coastal disturbance from industrial mining using cloud-resilient satellite time series analysis. *Scientific Reports*, 6(1). <https://doi.org/10.1038/srep35129>
- Álvarez, L., & Coolsaet, B. (2018). Decolonizing Environmental Justice Studies: A Latin American Perspective. *Capitalism Nature Socialism*, 31(2), 50–69.  
<https://doi.org/10.1080/10455752.2018.1558272>
- Amnesty International Indonesia. (2018, July). Indonesia: ‘Don’t bother, just let him die’: Killing with impunity in Papua (ASA 21/8198/2018).  
<https://www.amnesty.org/en/documents/asa21/8198/2018/en/>
- Andaya, L. Y. (1993). *The World of Maluku: Eastern Indonesia in the Early Modern Period*. University of Hawaii Press.
- Arfan, A., Ariks, J., Jouwe, N., & Kaisiepo, M. W. (1950, December 4). *Dutch-Indonesian relations 1950–1963* [Letter]. Huygens Instituut.  
<http://resources.huygens.knaw.nl/indonesischebetrekkingen1945-1969/Nederlands-indonesischeBetrekkingen1950-1963/Document/17460>
- Arrobas, D. L. P., Hund, K. L., McCormick, M. S., Ningthoujam, J., & Drexhage, J. R. (2017, June). *The Growing Role of Minerals and Metals for a Low Carbon Future* (No. 1). Washington, D.C. : World Bank Group. <http://documents.worldbank.org/curated/en/207371500386458722/The-Growing-Role-of-Minerals-and-Metals-for-a-Low-Carbon-Future>
- Auciello, B. H., Krill, J., McLaughlin, B., Sampat, P., & Earthworks. (2021, March). *Reducing new mining for electric vehicle battery metals: responsible sourcing through demand reduction strategies and recycling*. EARTHWORKS, Washington. <https://earthworks.org/publications/recharge-responsibly/>



Ballard, C. 2008. "Oceanic Negroes": British Anthropology of Papuans, 1820–1869." In *Foreign Bodies: Oceania and the Science of Race 1750–1940*, edited by Chris Ballard and Bronwen Douglas, 157–201. Canberra: ANU Press.

Bijlmer, H. J. T. 1935. Mededeeling betreffende de anthropologische expeditie van Dr H.J.T. Bijlmer naar de Mimika-rivier, Nieuw-Guinea. [S.l.]: [s.n.].

Bufacchi, Vittorio. 2017. "Colonialism, Injustice, and Arbitrariness." *Journal of Social Philosophy* 48(2): 197–211.

Butt, D., & LaFollette, H. (2013). The International Encyclopedia of Ethics. In *Colonialism and postcolonialism* (pp. 892–898). Wiley.

C. Howe, The winds of Oaxaca: renewable energy, climate change mitigation, and the ethics of transition, in: E. Berry, R. Albro (Eds.), *Church, Cosmovision and the Environment*, Routledge, Oxon, 2018, pp. 173–194

Cámara-Leret, R., Frodin, D. G., Adema, F., Anderson, C., Appelhans, M. S., Argent, G., Arias Guerrero, S., Ashton, P., Baker, W. J., Barfod, A. S., Barrington, D., Borosova, R., Bramley, G. L. C., Briggs, M., Buerki, S., Cahen, D., Callmander, M. W., Cheek, M., Chen, C. W., . . . van Welzen, P. C. (2020). New Guinea has the world's richest island flora. *Nature*, 584(7822), 579–583.  
<https://doi.org/10.1038/s41586-020-2549-5>

Castán Broto, V., Baptista, I., Kirshner, J., Smith, S., & Neves Alves, S. (2018). Energy justice and sustainability transitions in Mozambique. *Applied Energy*, 228, 645–655.  
<https://doi.org/10.1016/j.apenergy.2018.06.057>

Castillo Jara, E., & Bruns, A. (2022). Contested notions of energy justice and energy futures in struggles over tar sands development in British Columbia, Canada. *Futures*, 138, 102921.  
<https://doi.org/10.1016/j.futures.2022.102921>

Chambers, M, "BHP writes off Gag Island laterite resource ", The Australian, 14 November 2008  
<http://www.minesandcommunities.org/article.php?a=8921>

Chao, S. (2021). We are (not) monkeys. *American Ethnologist*, 48(3), 274–287.  
<https://doi.org/10.1111/amet.13023>

Chaw, A. (2022, April 28). *Kerja Sama Bangun Smelter Nikel, Sino Konsultan Teken MoU dengan Pemkab Sorong*. <https://www.idxchannel.com/>. Retrieved 22 August 2022, from <https://www.idxchannel.com/economics/kerja-sama-bangun-smelter-nikel-sino-konsultan-teken-mou-dengan-pemkab-sorong>

Chidley, L. & Mines and Communities. (2001, December 15). *Gag Island Nickel Project*. Mines and Communities. Retrieved 25 January 2022, from <http://www.minesandcommunities.org/article.php?a=544>

*Colonial Exploitation and Economic Development: The Belgian Congo and the Netherlands Indies Compared*. (2015). Routledge.

Coulthard, Glen Sean. 2014. *Red Skin, White Masks: Rejecting the Colonial Politics of Recognition*. Minnesota: University of Minnesota Press.

Coulthard, Glen Sean. 2014. *Red Skin, White Masks: Rejecting the Colonial Politics of Recognition*. Minnesota: University of Minnesota Press.

Crenshaw, K. (1991). Mapping the Margins: Intersectionality, Identity Politics, and Violence against Women of Color. *Stanford Law Review*, 43(6), 1241. <https://doi.org/10.2307/1229039>

Crenshaw, K. (2015). *On Intersectionality*. Amsterdam University Press.

Crocombe, R. G. & University of the South Pacific. Institute of Pacific Studies. (2007). *Asia in the Pacific Islands*. Amsterdam University Press.

Crocombe, R. G. (2007). *Asia in the Pacific Islands: Replacing the West*. Suva, Fiji: IPS Publications, University of the South Pacific. p. 287. ISBN 9789820203884.

Crook, M., Short, D., & South, N. (2018a). Ecocide, genocide, capitalism and colonialism: Consequences for indigenous peoples and glocal ecosystems environments. *Theoretical Criminology*, 22(3), 298–317. <https://doi.org/10.1177/1362480618787176>

Crook, M., Short, D., & South, N. (2018b). Ecocide, genocide, capitalism and colonialism: Consequences for indigenous peoples and glocal ecosystems environments. *Theoretical Criminology*, 22(3), 298–317. <https://doi.org/10.1177/1362480618787176>

Csevár, S. (2021). Voices in the Background: Environmental Degradation and Climate Change as Driving Forces of Violence Against Indigenous Women. *Global Studies Quarterly*, 1(3). <https://doi.org/10.1093/isagsq/ksab018>

D'Audretsch, F. C., Kluiving, R. B., & Oudemans, W. (1966). *Report on an economic geological investigation of NE Vogelkop, carried out by the 'Foundation Geological Investigation Netherlands New Guinea' 1959–1962*. Staatsdrukkerij.

Delina, L., & Janetos, A. (2018). Cosmopolitan, dynamic, and contested energy futures: Navigating the pluralities and polarities in the energy systems of tomorrow. *Energy Research & Social Science*, 35, 1–10. <https://doi.org/10.1016/j.erss.2017.11.031>

Desk, I. (2021, February 9). *Indonesia halts deep-sea mining disposal of nickel for environment concerns*. IndoAsian Commodities. Retrieved 22 August 2022, from <https://www.indoasiancommodities.com/2021/02/09/indonesia-halts-deep-sea-mining-disposal-of-nickel-for-environment-concerns/>

Devantier, L. (2009). Lyndon DeVantier, Emre Turak and Gerry Allen (2009) Reef-scapes, reef habitats and coral communities of Raja Ampat, Bird's Head Seascape, Papua, Indonesia.. 10.13140/RG.2.1.4668.5521.

DG Trade (Directorate General for Trade of the European Commission) (2021), EU files WTO panel request against illegal export restrictions by Indonesia on raw materials for stainless steel, [https://ec.europa.eu/commission/presscorner/detail/en/IP\\_21\\_105](https://ec.europa.eu/commission/presscorner/detail/en/IP_21_105)

Dixon, A. M., Forster, P. M., Heron, S. F., Stoner, A. M. K., & Beger, M. (2022). Future loss of local-scale thermal refugia in coral reef ecosystems. *PLOS Climate*, 1(2), e0000004. <https://doi.org/10.1371/journal.pclm.0000004>

Dixon, A., Beger, M., Kalmus, P., & Heron, S. F. (2022, February 1). *Safe havens for coral reefs will be almost non-existent at 1.5°C of global warming – new study*. The Conversation. Retrieved 22 August 2022, from <https://theconversation.com/safe-havens-for-coral-reefs-will-be-almost-non-existent-at-1-5-c-of-global-warming-new-study-176084>

Drooglever, P. J. (2005). *Een Daad Van Vrije Keuze* (1st ed.). Boom Lemma.

Dunlap, A. (2017). The 'solution' is now the 'problem:' wind energy, colonisation and the 'genocide-ecocide nexus' in the Isthmus of Tehuantepec, Oaxaca. *The International Journal of Human Rights*, 22(4), 550–573. <https://doi.org/10.1080/13642987.2017.1397633>

Dunlap, A., & Laratte, L. (2022). European Green Deal necropolitics: Exploring 'green' energy transition, degrowth & infrastructural colonization. *Political Geography*, 97, 102640. <https://doi.org/10.1016/j.polgeo.2022.102640>

EC. (2018, November 28). *The Commission calls for a climate neutral Europe by 2050\** [Press release]. [https://ec.europa.eu/commission/presscorner/detail/en/IP\\_18\\_6543](https://ec.europa.eu/commission/presscorner/detail/en/IP_18_6543)

EC. (2019a). The European green deal. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1576150542719&uri=COM%3A2019%3A640%3AFIN>

EC. (2020, March 6). *The Just Transition Mechanism: making sure no one is left behind*. European Commission. Retrieved 22 August 2022, from [https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal/finance-and-green-deal/just-transition-mechanism\\_en](https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal/finance-and-green-deal/just-transition-mechanism_en)

- EEB & Friends of the Earth Europe. (2021, October). *'Green mining' is a myth: the case for cutting EU resource consumption*. <https://friendsoftheearth.eu/publication/green-mining-myth-report/>
- Eichhorn, S. J. (2022). Resource extraction as a tool of racism in West Papua. *The International Journal of Human Rights*, 1–23. <https://doi.org/10.1080/13642987.2022.2036722>
- Ekkelenkamp, H. (2019). *Indonesië op de kaart* (eerste editie, een proefschrift ed.). Delft University of Technology.
- Elmslie, J. (2017). The great divide: West Papuan demographics revisited; settlers dominate coastal regions but the highlands still overwhelmingly Papuan. *The Asia-Pacific Journal*, 15(2), 1–12. <https://apjif.org/2017/02/Elmslie.html>
- Erickson, B. (2018). Anthropocene futures: Linking colonialism and environmentalism in an age of crisis. *Environment and Planning D: Society and Space*, 38(1), 111–128. <https://doi.org/10.1177/0263775818806514>
- Fairphone. (2017, May). *Smartphone Material Profiles - Opportunities for improvement in ten supply chains*. <https://www.fairphone.com/nl/2017/05/04/zooming-in-10-materials-and-their-supply-chains/>
- Fathoni, H. S., Setyowati, A. B., & Prest, J. (2021). Is community renewable energy always just? Examining energy injustices and inequalities in rural Indonesia. *Energy Research & Social Science*, 71, 101825. <https://doi.org/10.1016/j.erss.2020.101825>
- Fenner, D. (2019). Western New Guinea: Papua and West Papua Provinces of Indonesia. *World Seas: An Environmental Evaluation*, 875–888. <https://doi.org/10.1016/b978-0-08-100853-9.00048-8>
- Ferdinand, M., Smith, A. P., & Davis, A. Y. (2022). *Decolonial Ecology: Thinking from the Caribbean World (Critical South)* (1st ed.). Polity.
- Folkersma, B. (Producer), & De Geus, M. (Producer & Director). (2002). *Andere Tijden: Het einde van Nieuw-Guinea: een prins in de wereldpolitiek* [documentary]. Hilversum, The Netherlands: VPRO.
- Foster, S. (2022, February 24). *Indonesia bans mineral exports to move up value chain*. Asia Times. Retrieved 22 August 2022, from <https://asiatimes.com/2022/02/indonesia-bans-mineral-exports-to-move-up-value-chain/>
- Gayatri Spivak, 'Can the Subaltern Speak?', in *Marxism and the Interpretation of Culture*, ed. Carl Nelson and Lawrence Grossberg (Urbana: University of Illinois Press, 1988), 271–313; Michel Foucault, *Madness and Civilization: A History of Insanity* (New York: Random House, 1989 [1961]); Michael Marker, 'Indigenous Voice, Community, and Epistemic Violence: The Ethnographer's

“Interests” and What “Interests” the Ethnographer’, *International Journal of Qualitative Studies in Education* 16, no. 3 (2003): 361–75

*Geen ‘ontwikkelingsland’, maar wat dan wel?* (2021, November 1). OneWorld. Retrieved 7 August 2022, from <https://www.oneworld.nl/lezen/discriminatie/sociaal-onrecht/geen-ontwikkelingsland-maar-wat-dan-wel/>

Geoportal Indonesian Ministry of Energy and Mineral Resources. (2022). *ESDM Map* (2.22.1) [Mineral dan Batubara]. <https://geoportal.esdm.go.id/minerba/>

Giay, B. (2016, May 6). *Finding a dignified resolution for West Papua*. The Conversation. Retrieved 22 August 2022, from <https://theconversation.com/finding-a-dignified-resolution-for-west-papua-58805>

Giay, B. 2000, Menuju Papua Baru [‘Towards a New Papua’]: Beberapa Pokok Pikiran Sekitar Emansipasi Orang Papua: Deiyai with ELSHAM Papua.

Gillman, L. N., & Wright, S. D. (2020). Restoring indigenous names in taxonomy. *Communications Biology*, 3(1). <https://doi.org/10.1038/s42003-020-01344-y>

Global Forest Watch. “Tree cover loss in [Indonesia, Papua Barat, Raja Ampat]”. Accessed on 22/02/2022 from <https://gfw.global/3HnKruV>

Gregoir, L., & van Acker, K. (2022, April). *Metals for Clean Energy: Pathways to solving Europe’s raw materials challenge*. KU Leuven and Eurometaux. <https://drive.google.com/file/d/1Ds0qyiQ4EgaseC3d2BH17sxHtj60hZeh/view>

Gupta, K. (2022, March 30). *Indonesia’s claim that banning nickel exports spurs downstreaming is questionable*. The Conversation. Retrieved 22 August 2022, from <https://theconversation.com/indonesias-claim-that-banning-nickel-exports-spurs-downstreaming-is-questionable-180229>

Haraway, D. J. (1990). *Primate Visions: Gender, Race, and Nature in the World of Modern Science* (1st ed.). Routledge.

Hastanti, B. W., & Triantoro, G. N. (2012). Social Economic and Culture Conditions Of Community Around Conservation Area: Case Study at Gag Island, Raja Ampat, West Papua. *JPK Wallacea*, 1(2), 149–164. <https://doi.org/10.18330/jwallacea.2012.vol1iss2pp149-164>

Heatubun, C. D., Lekitoo, K., & Matani, O. P. (2014). Palms on the nickel island: An expedition to Gag island, Western New Guinea. *PALMS*, 58(3), 115–134. [https://www.researchgate.net/publication/265846580\\_Palms\\_in\\_the\\_Nickel\\_Island\\_An\\_expedition\\_to\\_Gag\\_Island\\_Western\\_New\\_Guinea](https://www.researchgate.net/publication/265846580_Palms_in_the_Nickel_Island_An_expedition_to_Gag_Island_Western_New_Guinea)

- Heatubun, C. D., Zona, S., & Baker, W. J. (2014). Three new genera of arecoid palm (Arecaceae) from eastern Malesia. *Kew Bulletin*, 69(3). <https://doi.org/10.1007/s12225-014-9525-x>
- Henry, M. S., Bazilian, M. D., & Markuson, C. (2020). Just transitions: Histories and futures in a post-COVID world. *Energy Research & Social Science*, 68, 101668. <https://doi.org/10.1016/j.erss.2020.101668>
- Himley, M., Havice, E., & Valdivia, G. (2021). Resources is just another word for colonialism. In *The Routledge Handbook of Critical Resource Geography* (pp. 79–88). Taylor & Francis.
- Holman, J. (2022, March 31). *S&P Global Commodity Insights*. S&P Global. Retrieved 22 August 2022, from <https://www.spglobal.com/commodityinsights/en/market-insights/latest-news/energy-transition/033122-nickel-market-remains-at-risk-of-further-short-squeezes-s-p-global>
- Hornborg, A. (2019). Colonialism in the Anthropocene: the political ecology of the money-energy-technology complex. *Journal of Human Rights and the Environment*, 10(1), 7–21. <https://doi.org/10.4337/jhre.2019.01.01>
- Horowitz, L. S., Keeling, A., Lévesque, F., Rodon, T., Schott, S., & Thériault, S. (2018). Indigenous peoples' relationships to large-scale mining in post/colonial contexts: Toward multidisciplinary comparative perspectives. *The Extractive Industries and Society*, 5(3), 404–414. <https://doi.org/10.1016/j.exis.2018.05.004>
- HRC. (2018, August). *Report of the Special Rapporteur on the Rights of Indigenous Peoples* (UN Doc. A/HRC/39/17). United Nations. <https://www.ohchr.org/en/hr-bodies/hrc/regular-sessions/session39/list-reports>
- HRW. (2015, November). *Something to Hide? Indonesia's Restrictions on Media Freedom and Rights Monitoring in Papua*. <https://www.refworld.org/docid/56436c794.html>
- Huggan, G., & Tiffin, H. (2007). GREEN POSTCOLONIALISM. *Interventions*, 9(1), 1–11. <https://doi.org/10.1080/13698010601173783>
- Human Rights Watch (HRW). (2015, November 10). *Indonesia: End Access Restrictions to Papua*. Human Rights Watch. Retrieved 15 February 2022, from <https://www.hrw.org/news/2015/11/10/indonesia-end-access-restrictions-papua>
- Hund, K., La Porta, D., Fabregas, T. P., Laing, T., & Drexhage, J. (2020). *Minerals for Climate Action: "The Mineral Intensity of the Clean Energy Transition*. Washington, D.C. : World Bank Group. <https://www.worldbank.org/en/topic/extractiveindustries/brief/climate-smart-mining-minerals-for-climate-action>

- IEA (2021), *The Role of Critical Minerals in Clean Energy Transitions*, IEA, Paris  
<https://www.iea.org/reports/the-role-of-critical-minerals-in-clean-energy-transitions>
- Indrawan, M., Sumule, A., Wijaya, A., Kapisa, N., Wanggai, F., Ahmad, M., Mambai, B. V., & Heatubun, C. D. (2019a). A time for locally driven development in Papua and West Papua. *Development in Practice*, 29(6), 817–823. <https://doi.org/10.1080/09614524.2019.1609907>
- Indrawan, M., Sumule, A., Wijaya, A., Kapisa, N., Wanggai, F., Ahmad, M., Mambai, B. V., & Heatubun, C. D. (2019b). A time for locally driven development in Papua and West Papua. *Development in Practice*, 29(6), 817–823. <https://doi.org/10.1080/09614524.2019.1609907>
- IPCC, 2021: *Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*[Masson-Delmotte, V., P. Zhai, A. Pirani, S.L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M.I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T.K. Maycock, T. Waterfield, O. Yelekçi, R. Yu, and B. Zhou (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, In press, doi:10.1017/9781009157896
- IWGIA. (2017, June 29). *Countries*. IWGIA - International Work Group for Indigenous Affairs. Retrieved 17 February 2021, from <https://www.iwgia.org/en/indigenous-world.html>
- J. E. Loth (1924) ‘Verslag van Geologische en mijnbouwkundige verkenningen in het Noordelijk en Oostelijk deel der Vogelkop. Jaarb. Mijnwezen in Ned. Indië, 1924.
- Jaffré, T., Munzinger, J., & Lowry, P. P. (2010). Threats to the conifer species found on New Caledonia’s ultramafic massifs and proposals for urgently needed measures to improve their protection. *Biodiversity and Conservation*, 19(5), 1485–1502. <https://doi.org/10.1007/s10531-010-9780-6>
- JATAM. (2019, March 27). *Threatened Islands*. Retrieved 25 January 2022, from <https://www.jatam.org/pulau-pulau-yang-terancam/>
- Jenkins, K. (2018). Setting energy justice apart from the crowd: Lessons from environmental and climate justice. *Energy Research & Social Science*, 39, 117–121. <https://doi.org/10.1016/j.erss.2017.11.015>
- Jerez, B., Garcés, I., & Torres, R. (2021a). Lithium extractivism and water injustices in the Salar de Atacama, Chile: The colonial shadow of green electromobility. *Political Geography*, 87, 102382. <https://doi.org/10.1016/j.polgeo.2021.102382>

- Jerez, B., Garcés, I., & Torres, R. (2021b). Lithium extractivism and water injustices in the Salar de Atacama, Chile: The colonial shadow of green electromobility. *Political Geography*, 87, 102382. <https://doi.org/10.1016/j.polgeo.2021.102382>
- Jong, H. N. (2022, April 18). *Plan to carve up Indonesian Papua rings alarm over fate of people and forests*. Mongabay Environmental News. Retrieved 22 August 2022, from <https://news.mongabay.com/2022/04/plan-to-carve-up-indonesian-papua-rings-alarm-over-fate-of-people-and-forests/>
- Jouwe, J. (2021, August). *Frames en narratieven rondom de onafhankelijkheidsstrijd van West Papua* (Thesis). Vrije Universiteit Amsterdam.
- Jouwe, J., Ap, R., & Machielsen, A. L. (2022, February 21). *Gas halen uit West-Papua is kolonisatie 2.0*. Joop BNN. Retrieved 22 August 2022, from <https://www.bnnvara.nl/joop/artikelen/gas-halen-uit-west-papua-is-kolonisatie-2-0>
- Karma, F. 2014, *Seakan Kitorang Setengah Binatang: Rasialisme Indonesia di Tanah Papua*, Deiyai, Jayapura.
- King, P 2004, *West Papua and Indonesia since Suharto: Independence, autonomy or chaos?*, University of New South Wales Press, Sydney.
- Kirsch, S. (2010). Ethnographic Representation and the Politics of Violence in West Papua. *Critique of Anthropology*, 30(1), 3-22.
- Kohn, M. and Reddy, K. (2017). 'Colonialism'. The Stanford Encyclopedia of Philosophy, (Fall 2017 Edition), Edward N. Zalta (ed.). Retrieved from <https://plato.stanford.edu/archives/fall2>
- Kusumaryati, V. (2021a). Freeport and the States: Politics of Corporations and Contemporary Colonialism in West Papua. *Comparative Studies in Society and History*, 63(4), 881–910. <https://doi.org/10.1017/s0010417521000281>
- Kusumaryati, V. (2021b). #Papuanlivesmatter: black consciousness and political movements in West Papua. *Critical Asian Studies*, 53(4), 453–475. <https://doi.org/10.1080/14672715.2021.1963794>
- Lamb, K., & Doherty, B. (2017, September 27). *Banned West Papua independence petition handed to UN*. The Guardian. Retrieved 22 August 2022, from <https://www.theguardian.com/world/2017/sep/27/banned-west-papua-independence-petition-un>
- Lea. 2013. "What's Wrong With Colonialism." *Philosophy & Public Affairs* 41(2): 158–91.
- Levang, P., & Sevin, O. (1989). 80 years of transmigration in Indonesia 1905 - 1985. *Annales de Géographie*, 98(549), 538–566. <https://doi.org/10.3406/geo.1989.20927>



- Lim, D. (2021). Colonial injustice and racial exploitation. *Journal of Social Philosophy*.  
<https://doi.org/10.1111/josp.12450>
- Longley, R. (2021). “What Is Colonialism? Definition and Examples”.  
<https://www.thoughtco.com/colonialism-definition-and-examples-5112779>
- Lu, C. (2017). History and Structural Injustice. *Justice and Reconciliation in World Politics*, 144–181.  
<https://doi.org/10.1017/cbo9781108329491.007>
- Lu, C. (2018). Redressing and addressing colonial injustice. *Ethics & Global Politics*, 11(1), 1–5.  
<https://doi.org/10.1080/16544951.2018.1507386>
- Luckeneder, S., Giljum, S., Schaffartzik, A., Maus, V., & Tost, M. (2021). Surge in global metal mining threatens vulnerable ecosystems. *Global Environmental Change*, 69, 102303.  
<https://doi.org/10.1016/j.gloenvcha.2021.102303>
- MAC. (n.d.). *MAC: West Papua / Papua*. Mines and Communities. Retrieved 20 August 2022, from  
<http://www.minesandcommunities.org/list.php?r=1017>
- MacKinnon, C. A. (2013). Intersectionality as Method: A Note. *Signs: Journal of Women in Culture and Society*, 38(4), 1019–1030. <http://www.jstor.org/stable/10.1086/669570>
- Macleod, J. (2003, December). *Gagged – Arena*. ARENA. Retrieved 22 August 2022, from  
<https://arena.org.au/gagged/>
- Macleod, J. (2007a). Security and Development in the Pacific Islands: Social Resilience in Emerging States. In A. M. Browne (Ed.), *Self-Determination and Autonomy: The Meanings of Freedom in West Papua In Security and Development in the Pacific Islands: Social Resilience in Emerging States Edited by M. Anne Brown A Project of the International Peace Academy and Australian Institute for Peace and Conflict Studies The University of Queensland Published by* (pp. 139–167). Boulder, CO, Lynne Rienner Publishers.
- Macleod, J. (2007b). Self-determination and autonomy: The meanings of freedom in West Papua. In A. M. Browne (Ed.), *Security and Development in the Pacific Islands: Social Resilience in Emerging States* (pp. 139–167). Lynne Rienner Publishers, London.
- Macleod, J. (2015). *Merdeka & the Morning Star: Civil Resistance in West Papua* (1st ed.). Amsterdam University Press.
- Mandavi. (2006, May 28). *A large black world map with oceans marked in blue* [Map]. Wikimedia.  
<https://commons.wikimedia.org/w/index.php?curid=2169414>
- Martinkus, J. (2020). *The Road: Uprising in West Papua*. Black Inc.

- McCauley, D., Ramasar, V., Heffron, R. J., Sovacool, B. K., Mebratu, D., & Mundaca, L. (2018). Energy justice in the transition to low carbon energy systems: Exploring key themes in interdisciplinary research. *Applied Energy*, 233–234, 916–921. <https://doi.org/10.1016/j.apenergy.2018.10.005>
- McNamee, L. (2020). Indonesian Settler Colonialism in West Papua. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3601528>
- Meyers, N., Mittermeier, R., & Mittermeier, C. (2000). Biodiversity hotspots for conservation priorities. *Nature*, 403, 853–858. <https://doi.org/10.1038/3500250>
- Michel Foucault, ‘Society Must Be Defended’: Lectures at the College De France 1975–1976 (New York: Picador, 2003 [1997]); Carolyn Merchant, *The Death of Nature* (New York: Harper & Row 1983); S. Federici, *Caliban and the Witch* (New York: Autonomedia, 2009 [2004]).
- Ministry of Energy and Mineral Resources (Kementerian Energi Dan Sumber Daya Mineral). (2020). *Booklet Tambang Nikel 2020*. Republik Indonesia. <https://www.esdm.go.id/id/booklet/booklet-tambang-nikel-2020>
- Ministry of Environment and Forestry Indonesia (Kementerian Lingkungan Hidup dan Kehutanan). PIPPIB\_2020\_Periode1. Accessed from <http://geoportal.menlhk.go.id/arcgis/rest/services/KLHK> on August 2020.
- Mitrana, R., Tampubolon, M., & Panjaitan, E. (2021). The Dispute between Indonesia and the European Union Concerning the Export Ban on Nickel Ore under the International Trade Law. *Proceedings from the 1st International Conference on Law and Human Rights, ICLHR 2021, 14–15 April 2021, Jakarta, Indonesia*. <https://doi.org/10.4108/eai.14-4-2021.2312876>
- Mittermeier, R. A. (1998). Biodiversity. In E. O. Wilson (Ed.), *Primate diversity and the tropical forest* (pp. 54–145). Washington DC: National Academy Press.
- Mohamed, S., Png, M. T., & Isaac, W. (2020). Decolonial AI: Decolonial Theory as Sociotechnical Foresight in Artificial Intelligence. *Philosophy & Technology*, 33(4), 659–684. <https://doi.org/10.1007/s13347-020-00405-8>
- Molengraaff, G. J. H., 1957: Rapport over het onderzoek van de nikkel- en cobalt-houdende laterietdeklagen van de Waigeo terreinen.
- Molengraaff, G. J. H., Technische Hogeschool Delft. Afdeling der Mijnbouwkunde, & Stichting Geologisch Onderzoek Nederlands Nieuw-Guinea. (1959). Economisch-geologisch rapport over west-waigeo (Ser. Rapporten onderzoekingen in nederlands nieuw guinea).

Molengraaff, G. J. H.; Hermans, G. A. en Kapitein, J. A. J., 1960; Rapport over het geologisch mijnbouwkundig onderzoek van het eiland Slaawati in 1958, Rapport s. 784/NNG, (Ministerie van Binnenlandse Zaken, 's-Gravenhage).

Molengraaff, G. J. H.; Technische Hogeschool Delft. Afdeling der Mijnbouwkunde. (1957). Rapport over het onderzoek van de nikkel- en cobalthoudende laterietdeklagen van de waigeo terreinen (Ser. Rapporten onderzoekingen in nederlands nieuw guinea). TH Delft.

Moran, D., Petersone, M., & Verones, F. (2016). On the suitability of input–output analysis for calculating product-specific biodiversity footprints. *Ecological Indicators*, 60, 192–201.

<https://doi.org/10.1016/j.ecolind.2015.06.015>

Morgan, J. (2012). *Resource extraction in West Papua*. Maptia. Retrieved 22 February 2021, from <https://maptia.com/jamesmorgan/stories/resource-extraction-in-west-papua>

Morse, I. (2020, May 25). *Indonesian miners eyeing EV nickel boom seek to dump waste into the sea*. Mongabay Environmental News. Retrieved 22 August 2022, from <https://news.mongabay.com/2020/05/indonesian-miners-eyeing-ev-nickel-boom-seek-to-dump-waste-into-the-sea/>

Mudd, G. M. (2010). Global trends and environmental issues in nickel mining: Sulfides versus laterites. *Ore Geology Reviews*, 38(1–2), 9–26. <https://doi.org/10.1016/j.oregeorev.2010.05.003>

Mudd, G. M., & Jowitt, S. M. (in press). The New Century for Nickel Resources, Reserves, and Mining: Reassessing the Sustainability of the Devil's Metal. *Economic Geology*.

Myers, N., Mittermeier, R. A., Mittermeier, C. G., da Fonseca, G. A. B., & Kent, J. (2000). Biodiversity hotspots for conservation priorities. *Nature*, 403(6772), 853–858. <https://doi.org/10.1038/35002501>

Nakajima, K., Nansai, K., Matsubae, K., Tomita, M., Takayanagi, W., & Nagasaka, T. (2017). Global land-use change hidden behind nickel consumption. *Science of The Total Environment*, 586, 730–737. <https://doi.org/10.1016/j.scitotenv.2017.02.049>

Normann, S. (2020). Green colonialism in the Nordic context: Exploring Southern Saami representations of wind energy development. *Journal of Community Psychology*, 49(1), 77–94. <https://doi.org/10.1002/jcop.22422>

Okereke, C., & Coventry, P. (2016). Climate justice and the international regime: before, during, and after Paris. *WIREs Climate Change*, 7(6), 834–851. <https://doi.org/10.1002/wcc.419>

Pascal, M., de Forges, B. R., le Guyader, H., & Simberloff, D. (2008). Mining and Other Threats to the New Caledonia Biodiversity Hotspot. *Conservation Biology*, 22(2), 498–499.

<https://doi.org/10.1111/j.1523-1739.2008.00889.x>

Penders, C. L. M. (2002). *The West New Guinea Debacle*. Amsterdam University Press.

Pörtner, H. O., Roberts, D. C., Tignor, M., Poloczabsja, E. S., Mintenbeck, K., Alegría, A., Craig, M., Langsdorf, S., Löschke, S., Möller, V., & Okem, A. (2022, February). *Climate Change 2022: Impacts, Adaptation, and Vulnerability* (B. Rama, Ed.; Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change). Cambridge University Press.

<https://www.ipcc.ch/report/ar6/wg2/>

Pouwer, J. (1999). The colonisation, decolonisation and recolonisation of West New Guinea. *The Journal of Pacific History*, 34(2), 157–179. <https://doi.org/10.1080/00223349908572900>

Prihasto, F. E., Suseno, S., Susanto, Y. A., Rusiana, D. N., & Sugiyo. (2013). Backfiling Strategy at Gag Island, PT Gag Nickel, Subsidiary of PT ANTAM (Persero) Tbk. *Procedia Earth and Planetary Science*, 6, 319–325. <https://doi.org/10.1016/j.proeps.2013.01.042>

PT Antam. (2022a, April). *PT Antam annual report 2021*. PT Aneka Tambang Tbk.

<https://antam.com/en/reports/annual-reports>

PT Antam. (2022b, April 19). *The Framework Agreement Signing of The EV Battery Integrated Project* [Press release]. <https://www.antam.com/404>

PT Gag Nickel. (2022a, June 23). *Video company profile PT Gag Nickel* [Video]. YouTube.

<https://www.youtube.com/watch?v=xQGczfgaLG4>

PT Gag Nickel. (2022b, June 23). *Video documentary PT Gag Nickel* [Video]. YouTube.

<https://www.youtube.com/watch?v=xAtJZX9CAKs>

PT Gag Nickel. (2022c, June 23). *Video Indonesia Raya PT Gag Nickel* [Video]. YouTube.

<https://www.youtube.com/watch?v=2BpAd50PDA0>

PT Gag Nickel. (n.d.). *Galeri – PT Gag Nickel*. Gag Nickel. Retrieved 9 June 2022, from

<https://gagnikel.com/galeri/>

Ramirez, J., & Böhm, S. (2021). Transactional colonialism in wind energy investments: Energy injustices against vulnerable people in the Isthmus of Tehuantepec. *Energy Research & Social Science*, 78, 102135. <https://doi.org/10.1016/j.erss.2021.102135>

Ravilious, K. (2022, April 6). *When will the world reach 1.5C of global heating?* The Guardian.

Retrieved 22 August 2022, from <https://www.theguardian.com/environment/2022/apr/05/when-will-world-reach-global-heating-limit-ipcc-climate-crisis>

- Reynolds, C.D., Havryluk, L., Bastaman, S., & Atmowidjojo, S. (1973). The Exploration of the Nickel Laterite Deposits in Irian Barat, Indonesia.
- Robinson, J. (2010). Self-determination and the limits of justice: West Papua and East Timor. *Future Justice*, 174.
- Robinson, J. (2012, March 21). *The UN's chequered record in West Papua*. Opinions - Al Jazeera. Retrieved 20 January 2022, from <https://www.aljazeera.com/opinions/2012/3/21/the-uns-chequered-record-in-west-papua>
- Rodney, W. (1981). *How Europe Underdeveloped Africa: Vol. 2009 edition* (Rev. ed.). Howard University Press, Washington, D.C.
- Rodney, W. A., Rodney, W. A., Babu, A. M., Harding, V., Hill, R. W., & Strickland, W. (1972). *How Europe Underdeveloped Africa*. Bogle-L'Ouverture Publications.
- Rodriguez, I. (2017). Linking well-being with cultural revitalization for greater cognitive justice in conservation: lessons from Venezuela in Canaima National Park. *Ecology and Society*, 22(4). <https://doi.org/10.5751/es-09758-220424>
- Rutherford, D. 2019. *Living in the Stone Age: Reflections on the Origins of a Colonial Fantasy*. Chicago: The University of Chicago Press.
- Santos, B. D. S. (2014). *Epistemologies of the South: Justice Against Epistemicide* (1st ed.). Routledge.
- Schell, C. J., Guy, C., Shelton, D. S., Campbell-Staton, S. C., Sealey, B. A., Lee, D. N., & Harris, N. C. (2020). Recreating Wakanda by promoting Black excellence in ecology and evolution. *Nature Ecology & Evolution*, 4(10), 1285–1287. <https://doi.org/10.1038/s41559-020-1266-7>
- Schultze-Westrum, T. (2001). West-Papua: Only the village people can save their reefs and rainforests. *Biodiversity*, 2(1), 15–19. <https://doi.org/10.1080/14888386.2001.9712531>
- Shelton, T., & Wibawa, T. (2019, September 5). *Why West Papua's latest protests are different from the ones before*. ABC News. Retrieved 22 August 2022, from <https://www.abc.net.au/news/2019-09-04/west-papua-latest-protest-over-referendum-for-independence/11471016>
- Silvast, A., Laes, E., Abram, S., et al. (2020). What do energy modellers know? An ethnography of epistemic values and knowledge models. *Energy Research & Social Science*, 66, 101495.
- Simpson, N. P., Clarke, J., Orr, S. A., Cundill, G., Orlove, B., Fatorić, S., Sabour, S., Khalaf, N., Rockman, M., Pinho, P., Maharaj, S. S., Mascarenhas, P. V., Shepherd, N., Sithole, P. M., Ngaruiya, G. W., Roberts, D. C., & Trisos, C. H. (2022). Decolonizing climate change–heritage research. *Nature Climate Change*, 12(3), 210–213. <https://doi.org/10.1038/s41558-022-01279-8>

- Slama, M., and Munro, J. 2015. From ‘Stone-Age’ to ‘Real-Time’: Exploring Papuan Temporalities, Mobilities, and Religiosities. Canberra, ACT, Australia: Australian National University Press.
- Smythe, J. (2013). The Living Symbol of Song in West Papua: A Soul Force to be Reckoned With. *Indonesia*, 95, 73–91. <https://doi.org/10.5728/indonesia.95.0073>
- Sobrevila, C. (2008, May). *The Role of Indigenous Peoples in Biodiversity Conservation* (No. 44300). Washington, D.C. : World Bank Group. <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/995271468177530126/the-role-of-indigenous-peoples-in-biodiversity-conservation-the-natural-but-often-forgotten-partners>
- SOMO, González, A., & de Haan, E. (2020, December). *The Battery Paradox*. <https://www.somo.nl/nl/the-battery-paradox/>
- Sonter, L. J., Dade, M. C., Watson, J. E. M., & Valenta, R. K. (2020). Renewable energy production will exacerbate mining threats to biodiversity. *Nature Communications*, 11(1). <https://doi.org/10.1038/s41467-020-17928-5>
- Sovacool, B. K., & Dworkin, M. H. (2015). Energy justice: Conceptual insights and practical applications. *Applied Energy*, 142, 435–444. <https://doi.org/10.1016/j.apenergy.2015.01.002>
- Sovacool, B. K., Burke, M., Baker, L., Kotikalapudi, C. K., & Wlokas, H. (2017). New frontiers and conceptual frameworks for energy justice. *Energy Policy*, 105, 677–691. <https://doi.org/10.1016/j.enpol.2017.03.005>
- Sovacool, B. K., Hook, A., Martiskainen, M., Brock, A., & Turnheim, B. (2020). The decarbonisation divide: Contextualizing landscapes of low-carbon exploitation and toxicity in Africa. *Global Environmental Change*, 60, 102028. <https://doi.org/10.1016/j.gloenvcha.2019.102028>
- Stichting Hapin. (2022, May 16). ‘Het verleden kan ik niet veranderen, wel het verhaal delen met anderen’. Papua Dalam Hatiku. Retrieved 22 August 2022, from <https://www.papuadalamhatiku.nl/verhalen/het-verleden-kan-ik-niet-veranderen-wel-het-verhaal-delen-met-anderen/>
- Stirling, M. W. 1943. The Native Peoples of New Guinea. Washington, DC: Smithsonian Institution.
- Stratenus, R. J. (1952). *Een voorlopig onderzoek naar de economische vooruitzichten in Nederlands Nieuw Guinea*. H. J. Paris.
- Sullivan, S. (2017). What’s ontology got to do with it? On nature and knowledge in a political ecology of the ‘green economy’. *Journal of Political Ecology*, 24, 217–242.
- Sultana, F. (2021). Critical climate justice. *The Geographical Journal*, 188(1), 118–124. <https://doi.org/10.1111/geoj.12417>

- Sultana, F. (2022). The unbearable heaviness of climate coloniality. *Political Geography*, 102638. <https://doi.org/10.1016/j.polgeo.2022.102638>
- Táíwò, O. O. (2019, February 25). *How a Green New Deal could exploit developing countries*. The Conversation. Retrieved 22 August 2022, from <https://theconversation.com/how-a-green-new-deal-could-exploit-developing-countries-111726>
- Tan, Kok-Chor. 2007. “Colonialism, Reparations, and Global Justice.” In *Reparations: Interdisciplinary Inquiries*, edited by Jon Miller and Rahul Kumar, 280–306. Oxford: Oxford University Press.
- The Dutch government. (1960, September 20). Troonrede 1960. Retrieved June 5, 2022, from <https://www.parlement.com>.
- Timmer, J. 2000a, ‘Living with Intricate Futures: Order and confusion in Imyan worlds, Irian Jaya, Indonesia’, PhD thesis, Centre for Pacific and Asian Studies, University of Nijmegen, Netherlands.
- Trisos, C. H., Auerbach, J., & Katti, M. (2021). Decoloniality and anti-oppressive practices for a more ethical ecology. *Nature Ecology & Evolution*, 5(9), 1205–1212. <https://doi.org/10.1038/s41559-021-01460-w>
- Turak E, Souhoka J (2003) Coral diversity and the status of coral reefs in the Raja Ampat Islands. In: Donnelly R, Neville D, Mous P (eds) Report on a rapid ecological assessment of the Raja Ampat Islands, Papua, Eastern Indonesia, held October 30 – November 22, 2002. The Nature Conservancy Southeast Asia Center for Marine Protected Areas, Sanur, Bali Indonesia
- UN. (2022, March 3). *Indonesia: Shocking abuses against indigenous Papuans, rights experts*. UN News. Retrieved 22 August 2022, from <https://news.un.org/en/story/2022/03/1113062>
- UNESCO. (2005, February 7). *Raja Ampat Islands - UNESCO World Heritage Centre*. UNESCO World Heritage Centre. Retrieved 8 June 2022, from <https://whc.unesco.org/en/tentativelists/2003>
- Unfala. (2019, June 28). *Raja Ampat locator map* [Map]. Wikimedia. [https://commons.wikimedia.org/wiki/File:Raja\\_Ampat\\_locator\\_map\\_%28blank%29.svg](https://commons.wikimedia.org/wiki/File:Raja_Ampat_locator_map_%28blank%29.svg)
- UNFCCC. (2017, August 9). *Indigenous empowerment is vital for climate action*. United Nations Framework Convention on Climate Change. Retrieved 21 January 2021, from <https://unfccc.int/news/indigenous-empowerment-is-vital-for-climate-action>
- USGS. (2020, February). *Mineral Commodity Summaries 2020*. U.S. Geological Survey. <https://doi.org/10.3133/mcs2020>
- USGS. (2021, February). *Mineral Commodity Summaries 2021*. U.S. Geological Survey. <https://doi.org/10.3133/mcs2021>

USGS. (2022, January). *Mineral commodity summaries 2022* (No. 202). U.S. Geological Survey. <https://doi.org/10.3133/mcs2022>

Valdivieso, J. (2012). El climatismo. *Revista Laguna*, 30, 75–94.

van Bemmelen, R. W. (1953). Mijnbouw. In W. C. Klein (Ed.), *Nieuw Guinea - De ontwikkeling op economisch, sociaal en cultureel gebied, in Nederlands en Australisch Nieuw Guinea* (Deel 1 ed., pp. 285–310). Staatsdrukkerij en uitgeverijbedrijf 's-Gravenhage.

van der Ent, A., Baker, A., van Balgooy, M., & Tjoa, A. (2013). Ultramafic nickel laterites in Indonesia (Sulawesi, Halmahera): Mining, nickel hyperaccumulators and opportunities for phytomining. *Journal of Geochemical Exploration*, 128, 72–79. <https://doi.org/10.1016/j.gexplo.2013.01.009>

van Leeuwen, T. M. (1994). 25 years of mineral exploration and discovery in Indonesia. *Journal of Geochemical Exploration*, 50(1–3), 13–90. [https://doi.org/10.1016/0375-6742\(94\)90021-3](https://doi.org/10.1016/0375-6742(94)90021-3)

van Reybrouck, D. (2020). *Revolusi* (1st ed.). De Bezige Bij.

Veron, J., Devantier, L. M., Turak, E., Green, A. L., Kininmonth, S., Stafford-Smith, M., & Peterson, N. (2009). Delineating the Coral Triangle. *Galaxea, Journal of Coral Reef Studies*, 11(2), 91–100. <https://doi.org/10.3755/galaxea.11.91>

Wangge, H. R., & Webb-Gannon, C. (2020). Civilian Resistance and the Failure of the Indonesian Counterinsurgency Campaign in Nduga, West Papua. *Contemporary Southeast Asia*, 42(2), 276–301. <https://doi.org/10.1355/cs42-2f>

Warner, E. A. K. (2015). Working to protect the seventh generation: indigenous peoples as agents of change. *Santa Clara J Int Law*, 13(1), 273–291. <https://digitalcommons.law.scu.edu/scujil/vol13/iss1/11>

Wayar, A., & Blades, J. (2022, July 19). *Indonesia's New Plans for Papua Can't Hide Its Decades of Failures*. The Diplomat. Retrieved 22 August 2022, from <https://thediplomat.com/2022/06/indonesias-new-plans-for-papua-cant-hide-its-decades-of-failures/>

Webb-Gannon, C. (2021). *Morning Star Rising*. Amsterdam University Press.

Webster, D. (2001). 'Already Sovereign as a People': A Foundational Moment in West Papuan Nationalism. *Pacific Affairs*, 74(4), 507. <https://doi.org/10.2307/3557804>

Wenda, B. (2017, November 14). *Message of condolence after the death of Pieter Drooglever*. Office of Benny Wenda. Retrieved 22 August 2022, from <https://www.bennywenda.org/2017/message-condolence-death-pieter-drooglever/>



- Whyte, K. (2017). Indigenous Climate Change Studies: Indigenizing Futures, Decolonizing the Anthropocene. *English Language Notes*, 55(1–2), 153–162. <https://doi.org/10.1215/00138282-55.1-2.153>
- Whyte, K. (2018). Settler Colonialism, Ecology, and Environmental Injustice. *Environment and Society*, 9(1), 125–144. <https://doi.org/10.3167/ares.2018.090109>
- Whyte, K. (2019). Too late for indigenous climate justice: Ecological and relational tipping points. *WIREs Climate Change*, 11(1). <https://doi.org/10.1002/wcc.603>
- Wibawa, T. (2019, August 30). *Why nearly 2 million people are demanding an independence vote for West Papua province*. ABC News. Retrieved 22 August 2022, from <https://www.abc.net.au/news/2019-01-30/west-papuans-fight-for-another-independence-referendum/10584336>
- Wollaston, A. F. R. 1912. Pygmies and Papuans: The Stone Age Today in Dutch New Guinea; with Illustrations and Maps. London: Smith, Elder.
- Zehner, O. (2012). *Green Illusions: The Dirty Secrets of Clean Energy and the Future of Environmentalism (Our Sustainable Future)* (Illustrated ed.). University of Nebraska Press.
- Zografos, C., & Robbins, P. (2020). Green Sacrifice Zones, or Why a Green New Deal Cannot Ignore the Cost Shifts of Just Transitions. *One Earth*, 3(5), 543–546. <https://doi.org/10.1016/j.oneear.2020.10.012>
- Zonder Indonesië geen TU Delft. (2019, April 9). TU Delft. Retrieved 3 May 2022, from <https://www.tudelft.nl/2019/citg/grs/zonder-indonesie-geen-tu-delft>

## APPENDIX

---

### A. CALCULATIONS NICKEL RESERVES AND PRODUCTION

#### USGS (2022)

Calculations Indonesia nickel production and reserves 2020:

Indonesia mine production 2020: 771,000

World total production: 2,510,000

$$\rightarrow (771,000 : 2,510,000) \times 100 = 30,7 \%$$

Calculation Russia nickel production 2021:

World total production (estimated): 2,700,000

Russia mine production 2021 (estimated): 250,000

$$\rightarrow (250,000 : 2,700,000) \times 100 \% = 9,3 \%$$

Indonesia reserves: 21,000,000

World total reserves (rounded): 94,000,000

$$\rightarrow (21,000,000 : 94,000,000) \times 100 = 22,3 \%$$

Russia nickel reserves:

World total reserves (rounded): 94,000,000

$$\rightarrow (7,500,000 : 94,000,000) \times 100 = 8 \%$$

## B. CALCULATION EU NICKEL MARKET DEMAND

- The European nickel market has the potential to grow to 500- 600 kt in 2030 and 800-900 kt in 2050, depending on the battery cathode capacity that Europe develops (Gregoir & van Acker, 2022, p. 23);
- The world's energy transition requirements for nickel are projected to range from 1,000-1,800 kt in 2030, up to 1,800-4,000 kt in 2050;
- Share of the EU nickel market demand of the global market demand:

2030:

$$500 / 1000 = 50 \%;$$

$$600 / 1000 = 60 \%;$$

$$500 / 1800 = 28 \%;$$

$$600 / 1800 = 33 \%;$$

$$28 - 60 \%$$

2050:

$$800 / 1800 = 44 \%;$$

$$900 / 1800 = 50\%;$$

$$800 / 4000 = 20\%;$$

$$900 / 4000 = 23 \%;$$

$$23 - 50 \%$$

## C. CALCULATION PT GAG NIKEL RESERVES

PT Antam (2022a):

**Sumberdaya Nikel Entitas Anak Usaha ANTAM, PT Gag Nikel 2021**  
ANTAM Subsidiary Entity, PT Gag Nickel's Nickel Resources 2021

Lokasi Location	Prospek Prospect	Zona Zone	Klasifikasi Sumberdaya Resources Classification	Tonase (Juta wmt) Tonage (Million wmt)	Tonase (Juta dmt) Tonage (Million dmt)	Kadar Rate-Rata   Average Grade (%)				
						Ni	Fe	SiO <sub>2</sub>	MgO	Co
PT Gag Nikel	Pulau Gag Gag Island	Limonite	Terukur/Measured	11,07	7,25	1,47	41,78	11,61	1,91	0,15
			Terindikasi/Indicated	40,22	26,35	1,44	42,38	11,17	1,68	0,14
			Tereka/Inferred	106,30	69,63	1,49	40,92	11,59	1,63	0,14
		Saprolite	Terukur/Measured	11,51	8,44	1,95	14,77	38,57	20,17	0,04
			Terindikasi/Indicated	48,70	35,70	1,98	14,71	38,94	21,11	0,04
			Tereka/Inferred	102,22	74,93	1,87	16,21	39,15	21,05	0,04

**Cadangan Nikel Entitas Anak Usaha ANTAM, PT Gag Nikel, 2021**  
ANTAM Subsidiary Entity, PT Gag Nickel's Nickel Reserves 2021

Lokasi Location	Prospek Prospect	Zona Zone	Klasifikasi Cadangan Reserves Classification	Tonase (Juta wmt) Tonage (Million wmt)	Tonase (Juta dmt) Tonage (Million dmt)	Kadar Rate-Rata   Average Grade (%)				
						Ni	Fe	SiO <sub>2</sub>	MgO	Co
PT Gag Nikel	Pulau Gag Gag Island	Limonite	Terbukti/Proved	2,74	1,80	1,62	39,65	14,05	2,34	0,15
			Terkira/Probable	12,07	7,90	1,61	40,73	12,37	2,15	0,15
		Saprolite	Terbukti/Proved	6,69	4,91	1,86	14,78	38,71	19,95	0,04
			Terkira/Probable	44,81	32,84	1,92	14,71	38,98	21,13	0,04

Limonite reserves:  $(1,80 + 7,90) \times ((1,62 + 1,61) : 2) = 0,157$  rounded MT limonites

Saprolite reserves:  $(4,91 + 32,84) \times ((1,86 + 1,92) : 2) = 0,713$  rounded MT Saprolites

This is a total of  $0,157 + 0,713 = 0,87$  Mt of contained Ni

Then,

1. Reserves Indonesia are 21,000,000  $\rightarrow (0,87 : 21) \times 100 = 4,14\%$   $\rightarrow$  PT Gag Nikel has 4,14 % of Indonesia's Ni reserves in 2021
2. World total reserves are > 95,000,000  $\rightarrow (0,87 : 95) \times 100 = 0,92\%$   $\rightarrow$  PT Gag Nikel has 0,92 % of the world's Ni reserves in 2021

## D. CALCULATION DEFORESTATION GAG ISLAND

### Global Forest Watch (2022)

Deforestation:

From 2017 to 2020, the forest on Gag island lost 12 ha+30 ha+ 60 ha + 9 ha = 111 ha of forest.

The years of 2018 and 2019 shows a forest cover loss of 90 ha. In 2020 and 2021, forest cover loss has a total of 22 ha.

