Environmental School Clubs in Tanzania: Learning to blame the "poor" and "uneducated"

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Abstract

In East Africa, environmental school clubs play an important role as an extension of conservation efforts, and have done so since the beginning of the post-colonial period. There is a lack of critical research on what students are taught at these clubs. Based on fieldwork at two clubs in northern Tanzania, this article reveals how students highlight narratives of poverty and low levels of education as the main reasons for environmental degradation. Drawing on political ecology and the emerging sub-field of the political ecology of education, I discuss what these narratives reveal about the environmental subjects formed through environmental school clubs. I examine the coloniality of these clubs, and I reveal how students learn to blame the 'poor' and 'uneducated' through the education system. It reproduces an apolitical development narrative that limits students' critical engagement with broader environmental issues.

Key words: Education, conservation, development, political ecology of education, narratives, Tanzania, Africa

Résumé

En Afrique de l'Est, les clubs scolaires environnementaux jouent un rôle important dans le prolongement des efforts de conservation, et ce depuis le début de la période post-coloniale. Il y a un manque de recherche critique sur ce qui est enseigné aux étudiants ces clubs. Basé sur un travail de terrain dans deux clubs scolaires environnementaux du nord de la Tanzanie, cet article révèle comment les étudiants mettent en avant les récits de la pauvreté et du faible niveau d'éducation comme les principales raisons de la dégradation de l'environnement. En s'appuyant sur l'écologie politique et le sous-domaine émergent de l'écologie politique de l'éducation, je discute de ce que ces récits révèlent sur les "sujets environnementaux" formés par les clubs scolaires environnementaux. J'examine la colonialité qui sous-tend les clubs scolaires environnementaux et révèle comment les étudiants apprennent à blâmer les "pauvres" et les "non éduqués" par le biais du système éducatif. Un récit de développement apolitique limite l'engagement critique des élèves vis-à-vis de questions environnementales plus larges.

Mots clés: Éducation, conservation, développement, écologie politique de l'éducation, récits, Tanzanie, Afrique

Resumen

En África Oriental, los clubes escolares medioambientales desempeñan un papel importante como prolongación de los esfuerzos de conservación, y lo han hecho desde el principio del periodo poscolonial. Faltan investigaciones críticas sobre lo que se enseña a los alumnos en estos clubes. A partir de un trabajo de campo realizado en dos clubes del norte de Tanzania, este artículo revela cómo los estudiantes destacan las narrativas de la pobreza y los bajos niveles de educación como las principales razones de la degradación medioambiental. Basándome en la ecología política y en el subcampo emergente de la "ecología política de la educación", analizo lo que estas narrativas revelan sobre los sujetos medioambientales que se forman a través

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de los clubes escolares medioambientales. Examino la colonialidad de estos clubes y revelo cómo los estudiantes aprenden a culpar a los "pobres" y a los "incultos" a través del sistema educativo formal. El sistema reproduce una narrativa apolítica del desarrollo que limita el compromiso crítico de los estudiantes con cuestiones medioambientales más amplias.

Palabras clave: Educación, conservación, desarrollo, ecología política de la educación, narrativas, Tanzania, África

1. Introduction

Environmental school clubs in Tanzania offer extracurricular activities at secondary schools, where students meet once a week to engage in different environmental activities. Environmental education at these clubs provides an extension of the environmental education embedded in the curriculum as well as an emphasis on conservation (Kimaryo, 2011). The environmental school clubs in East Africa play an important role in moulding students into environmental subjects through the curriculum, their textbooks, and environmental activities such as clean-ups, farming, nurturing tree nurseries, gardening etc. (Kimaryo, 2011). Environmental clubs were initially established as an extension of conservation initiatives in East Africa in the post-independence period, and were first known as wildlife clubs. However, the process of establishing national parks in Tanzania included a forceful separation of people from their ancestral lands, histories and identities (Brockington, 2002; Mbaria & Ogada, 2016; Neumann, 1998). According to Neumann (1998) educating young people about the environment through wildlife clubs was therefore an attempt at maintaining the existing colonial structures and boundaries of conservation.

Today, these clubs emphasize the importance of conservation and are funded by various stakeholders, including the Tanzania Wildlife Authority (TAWA), as well as international conservation NGOs such as the Jane Goodall Institute. International conservation organisations play an important role in knowledge creation and the production of certain images of Africa and the African landscape (Brockington & Scholfield, 2010). The role of environmental school clubs and their activities in East Africa have been studied before (Allen & Downie, 1999; Johnson-Pynn & Johnson, 2005; McDuff, 2000). However, there is a lack of critical research on the narratives students are taught at these clubs about people and the environment.

The study's main objective is to contribute to a critical study of environmental clubs by examining the dominant narratives club members have on environmental degradation. Based on fieldwork at environmental school clubs at two secondary schools in northern Tanzania, this article provides my findings related to two research questions:

1. What are the dominant environmental narratives at environmental school clubs in Tanzania?
2. What may be the impacts of students' learning these narratives?

I found that the dominant environmental narratives were those that identified poverty and the poor as a problem leading to environmental degradation, and formal education was presented as the solution to this problem. An impact of these narratives is their contribution to moulding students into environmental subjects focused on educating others.

In the next section, I present the background and context of environmental clubs in Tanzania. I then provide my theoretical framework that first draws on the field of political ecology and the emerging sub-field of political ecology of education. Thereafter I describe the methods I have used in this research, before presenting the findings and discussion.

2. Background and context to environmental clubs in Tanzania

In Tanzania, conservation was introduced under the colonial government, first by the Germans during the gradual takeover of Tanganyika from 1885-1891 and later enforced by the British, when Tanganyika became a British protectorate after World War I (Nelson *et al*., 2007). After independence, Tanzanian leaders

embraced the inherited model of conservation, despite it being a foreign concept to most Tanzanians. The first president Julius K. Nyerere admitted that he was not very interested in animals himself, but he saw the financial potential of wild animals (Lekan, 2019; Neumann, 1998). According to Weiskopf (2015), wildlife was promoted in three key ways: as a *natural* heritage, as *national* heritage and as government *property*. As a national heritage, *urithi* (in Swahili), wildlife was promoted alongside traditional dances and other symbolically unifying components used to imagine the new nation. Wildlife was promoted through educational campaigns among school children, through the media, and even with the establishment of zoos (Weiskopf, 2015). Conservation education therefore became a key strategy in ensuring the protection of wildlife across the country (IUCN, 1963; Neumann, 1998; Weiskopf, 2015). Educating people about the importance of wildlife and conservation had been neglected during colonial rule, and in order to ensure that the animals were protected primarily for the global community, mass education was identified as a key priority (Neumann, 1998).

In the first post-colonial decades of the 1960s and 1970s, wildlife clubs were established across East Africa as an extension of conservation initiatives influenced by environmental organisations in the Global North. In Tanzania, Malihai clubs were established through the assistance of the African Wildlife Foundation (AWF) which had successfully collaborated with Kenyan students in establishing the Wildlife Clubs of Kenya in 1969 (Mukera, 2021). *Malihai*, which means 'living wealth' in Swahili, was founded under the Public Relations Department of Tanzania National Parks in 1979 (GreenCOM, 2000; Voordouw, 1987). The clubs received funding from various international institutions such as the African Wildlife Fund (AWF), Tanzania Wildlife Protection Fund, World Wildlife Fund (WWF), Global Environmental Facility (GEF) and Danish International Development Assistance (DANIDA) (GreenCOM, 2000). According to a 1972-1975 progress report, the clubs' aim through conservation education was to ensure "the proper use and value of wildlife" among local villagers (Allen & Downie, 1999; Neumann, 1998: 8).

Today, Malihai clubs are no longer limited to communities around National Parks, but they are still an extension of government wildlife initiatives under the Tanzania Wildlife Management Authority (TAWA), within the Ministry of Natural Resources and Tourism. TAWA is responsible for conserving and sustainably utilizing the wildlife resources in protected areas, by collaborating with local communities and different stakeholders (TAWA, 2021). They provide conservation education through conservation clubs at schools, colleges, and universities as well as education through the media (television, radio etc.). In 2019, there were 1,620 registered Malihai school clubs located in three zones: the northern zone, lake zone and southern zone (Malihai, 2019).

The second key environmental club network in Tanzania that I will be examining in this article are Roots and Shoots clubs. Roots and Shoots was established in Dar es Salaam in 1990, by British conservationist Jane Goodall and a small group of students (Mwanangombe, 2019). Jane Goodall arrived in Tanganyika in 1960, when the country was still under British colonial rule. Her research on chimpanzees was an extension of British conservationist efforts in the region, recommended by fellow British conservationist Louis Leakey in Kenya (LeakeyFoundation, 2014). Today, there are over 5,000 Roots and Shoots clubs across the country, and an international network of these clubs in 130 countries. The clubs aim at addressing issues about the environment, animals, and human community at the grass root level (Shoots, 2019). Roots and Shoots clubs are under the Jane Goodall Institute, which relies primarily on grants and funding from USAID (USAID, 2022). The Jane Goodall Institute is the sixth largest conservation NGO in sub-Saharan Africa, relying on the celebrity of its founder, Jane Goodall to mobilize funds (Brockington & Scholfield, 2010).

3. Theoretical framework

In this section, I will present the theoretical framework I used to analyse the empirical material on environmental narratives that I gathered at school clubs in Tanzania. I start out by drawing from theories of power to discuss environmentality and the creation of environmental subjects through education. Then I provide theory on narratives and the approach I apply to identify dominant environmental narratives in my material. Finally, I present work on decolonising environmental education and apply it to conservation education in Tanzania. I show how power dynamics impact which discourses, and how narratives become dominant and what potential impacts this may have on students.

Power theories and the creation of environmental subjects through education

Paul Robbins defines political ecology as "empirical, researched-based explorations to explain linkages in the condition and change of social/environmental systems, with explicit consideration of relations of power" (Robbins, 2004: 12). Power plays a central role in political ecology, and Svarstad *et al*. (2018) highlight three key theoretical approaches to power within the field: actor-oriented power perspectives, neo-Marxist power perspectives, and poststructuralist power perspectives. These three overlap and vary, depending on the empirical situation.

I focus on poststructuralist power perspectives, which highlight Michel Foucault's concept of governmentality, defining a mode of governing that ensures the subjects "conduct of conduct" (Foucault, 2008). According to Foucault "government is the attempt to shape human conduct by calculated means" (Li, 2007: 275). This has been influential in understanding environmental governance (Svarstad *et al*., 2018). Applying governmentality to conservation, Fletcher (2010) provides a helpful framework outlining four environmentalities, which bring together environmental governance and Foucault's governmentality: *market-based* neoliberal environmentality, *disciplinary* environmentality aimed at creating environmental subjects, *sovereign* environmentality through protected areas and, *truth* environmentality through deep ecology and indigenous knowledge.

According to Arun Agrawal (2005) disciplinary environmentality, within the context of conservation, contributes to the creation of environmental subjects. Agrawal examines how some community members have become 'converted' to environmental subjects over time, by vehemently protecting their forests, while others remain indifferent. He defines environmental subjects as "people who have come to think and act in new ways in relation to the environment" (Agrawal & Bauer, 2005: xiv). In this article, I examine how students think and act in relation to the environment through environmental clubs.

Political ecologists have long been interested in the "production, circulation, and application of environmental knowledge", but have not adequately examined pedagogical processes involved in the access and control of resources and land (Meek & Lloro-Bidart, 2017: 213). In their special issue, Meek and Lloro-Bidart (2017) examine what environmental education and political ecology can learn from each other, as they both engage with power dynamics and the nature-human interactions. Environmental education has been criticized for being apolitical and acultural in its approach, focusing solely on changing individual behaviors to address ecological issues (Henderson & Zarger, 2017: 287). A political ecology perspective goes further, contributing not only to perspectives on the production of knowledge about the environment but recognizing the structuring effects of politics and culture.

Meek and Lloro-Bidart (2017) define the political ecology of education as:

> … attuned to how the distribution of power and resources among interconnected political and cultural entities in interrelated places mediates pedagogical processes – from tacit to formal learning – and related knowledge systems, affecting how gendered bodies of multiple species struggle over access and control to natural resources, interact with the cultural landscape, and conceive of nature-society relationships. (Meek & Lloro-Bidart, 2017: 217)

Through disciplinary governmentality, values and norms are internalized (Foucault, 2008). Environmental education aims at creating environmental subjects who have internalized norms and values around the preservation of nature through schools, NGOs and international organisations (Fletcher, 2010). Political ecologies of education therefore tend to examine pedagogical processes in which environmental subjects are created. Through such processes, hierarchies of knowledge are established and influenced by factors including power, resources, politics and culture. All of these need to be critically examined (Henderson & Zarger, 2017; Meek & Lloro-Bidart, 2017). An educational focus can highlight how these knowledges and narratives become dominant, and offer critical readings on the landscape and its history (Meek & Lloro-Bidart, 2017). Meek and Lloro-Bidart (2017) identify four potentially overlapping thematic trends occurring between political ecology and environmental education;

1. degradation and marginalization,
2. conservation and control,
3. scale,
4. gender and posthumanism.

From my engagement with students in northern Tanzania, I found that their narratives reflected two overlapping themes in political ecology, namely, degradation and marginalization and conservation and control. The degradation and marginalization theme sees poor people and communities as the reason for environmental degradation, frequently disregarding the complexities of natural resource extraction that they face (Robbins, 2012). Political ecologists have shown that this theme is often apolitical, and scholars within environmental education have highlighted that these problematic narratives are often included in the curricula (Fletcher & Peters, 2016; Meek & Lloro-Bidart, 2017).

The conservation and control theme focuses on the problems of conserving and protecting of landscapes in the name of 'nature', often with minimal to no engagement with the local communities (Robbins, 2012). Apolitical narratives focus on maintaining control along park boundaries, and they pinpoint local community members (e.g greedy herders, firewood-collecting women) as a threat to the collective good (Neumann, 1998; Robbins, 2012).

Identifying narratives

Paul Robbins explains how the construction of the environment entails both what people say and do: "a construction of the environment (or more generally a 'discourse') represents a 'combination of narratives, concepts, ideologies, and signifying practices' (Barnes & Duncan 1992: 8), including the things people say and do" (Robbins, 2012: 134). According to Benjaminsen and Svarstad (2021) discourses are constructed socially by several people, however, power influences who has the 'discursive power' to determine which discourses become dominant and ultimately hegemonic. A discursive narrative, therefore, is a story related specifically to the related discourse (Benjaminsen & Svarstad, 2021).

To identify the dominant discourse on the environment and the narratives used to explain this discourse, I use Carol Bacchi's approach of WPR, "What's the Problem Represented to be?" According to Carol Bacchi it is important to understand how problems are constituted, because it is the problematization that goes on to govern us, influencing both policies and actions. Therefore, both the notion of a 'problem' and a 'solution' are steeped in meaning (Bacchi, 2012). During our focus group discussions, I asked students what they perceived to be the main environmental 'problem' and 'solution.'

To answer research question two, on the impacts of these narratives on the students, I use Christian Hansen's (2022) overview of Foucault's governmentality. Hansen (2022), highlights four key interconnected government practices: problematization, knowledge production, intervention and subjectification (Foucault, 2008; Hansen, 2022). By discussing the students identified 'problems' and 'solutions', as well as the proposed interventions, "rendering technical" as Tania Li (2007) terms it, we can gain insight into the environmental subjects created through the process of identifying and attempting to solve environmental challenges.

Dominant discourses and narratives are discussed within the broader framework of development. In her book, *The Development State*, Maia Green (2014) argues that Tanzania is one. This means that the organizational and categorical forms initially created to manage efforts of development during colonialism and later socialism, have now become part of the social organization of Tanzanian society (Green, 2014: 18). Development in this context means aspiring to go from poverty to economic growth, from low levels of education to higher ones, and from 'traditional' occupations to 'employment' (Varley, 2013 in Green, 2014: 158). Development fosters "a way of conceiving of social life as a technical problem" (Escobar, 2011: 52). In the discussion section of the article, I will discuss how the conservation and development agendas influence students' narratives of the environment.

Theory on decolonizing environmental education

The key approaches in the emerging political ecology of education literature have focused on the need to decolonize environmental education and the need to critically examine the nature-culture dichotomy (Meek & Lloro-Bidart, 2017). Environmental education has been criticised for often neglecting "the fundamental social and ecological conflicts inherent in the economic system" (Gruenewald, 2004: 79). Moreover, Haluza-DeLay (2013) argues that environmental education needs to address larger issues, such as poverty, overconsumption, environmental racism, and injustice. Recent contributions made towards a political ecology of education attempt to address these issues. Within environmental education literature, the underpinning coloniality and settler perceptions around nature, wildlife and environmental education have been clearly established (Tuck *et al*., 2014, Nxumalo & Ross, 2019).

In Tanzania, conservation efforts separated people forcefully from nature and animals to establish 'fortress' conservation (Brockington, 2002). People were separated from their ancestral homes with the aim of preserving a Western notion of pristine and untouched African landscapes (Neumann, 1998). As Neumann (1998) highlights, this separation of people from their landscapes was also a separation from their history and identity. Among the Meru, in northern Tanzania, the land "not only represents their history and their links with ancestral kin, but the mountain landscape itself is the physical manifestation of their history" (Neumann, 1998: 178). Conservation is therefore more than the physical removal and demarcation of land, it also has long-term effects on peoples' ties to their heritage, culture, language and beliefs (Ogada, 2019: 3). Today, borders are still being drawn and re-drawn within Tanzania in the name of conservation (Noe, 2019).

Within conservation science, there have been calls for an alternative approach, that goes beyond the nature-culture dichotomy. Mabele *et al*. (2022) argue for a return 'back to the roots' by drawing on *ubuntu* philosophy as a decolonial option to conservation in Africa. They define *ubuntu* "as an ethic of care predicated on the practices of mutuality and sharing between humans and nonhumans." Their idea is therefore to promote nature "for, to and by humans rather than protecting it from humans" (Mabele *et al*., 2022: 96). *Ubuntu* can also contribute towards an alternative environmental pedagogy and to ecological sciences that approach nature and people in a more holistic and inclusive way (Mabele *et al*., 2022). Indigenous knowledge and ways of conserving the environment have been undervalued (Goldman, 2011).

There has been an increased awareness on the importance of incorporating indigenous knowledge systems into the curriculum. Indigenous knowledge systems are rooted in relationality, and in sub-Saharan Africa, *Ubuntu* (or *uMunthu* in Chewa, *Utu* in Swahili), which means to become more fully human in community with others, can be understood as an ecophilosophy (Grange, 2015; Kayira, 2015; Maina-Okori *et al*., 2018). The relationality of *Ubuntu* is broad, incorporating relatedness to the larger cosmos (*ukama*), as well as having ties to past, present and future generations (Grange, 2015). An individuals' place is therefore in a web of "social, spiritual and ecological togetherness"(Grange, 2015: 306). In Tanzania, more specifically Moshi, R. Sambuli Mosha writes about *Ipvunda* as a holistic indigenous education system that existed in Moshi prior to the Western education system. He argues that the current education system solely focuses on the mind, while *ipvunda* focuses on the body, mind and spirit (Mosha, 2000).

In their research on forestry education in Tanzania, Eliezeri Sungusia *et al*. (2020) argue that there is a need to decolonize environmental knowledge production within the education system in Tanzania. Through their research on forestry education, they critically examine the production of knowledge shaping environmental management professionals. Scientific forestry was introduced through colonialism, and these forestry principles persist today. Sungusia *et al*. (2020) show how local and indigenous knowledges are largely absent from the present curriculum. Moreover, people are also absent and mainly identifed as being destructive, often blamed for the country's ongoing deforestation (Sungusia *et al*., 2020). The narrative of local people as destructive was also used by students in the environmental clubs I visited. This narrative is in line with the marginalization and degradation thesis in political ecology which challenges the notion of those marginalized as responsible for degradation (Robbins, 2012). The narrative of local people as destructive was also reproduced by the students I engaged with.

4. Methods

I first show how I adhered to legal and ethical requirements for my fieldwork, and how I proceeded with the data collection in order to address my two research questions about dominant environmental narratives at environmental school clubs in Tanzania (RQ1) and what the impacts are of students' learning of them (RQ2).

Prior to conducting fieldwork at schools in Kilimanjaro, I acquired the necessary research permission, by first obtaining a research permit from COSTECH (Tanzania Commission for Science and Technology) in Dar es Salaam. I travelled to Moshi and approached the Moshi Municipal Council to acquire permission to conduct fieldwork at schools within the Municipality. The Municipal Council provided me with a list of ten public secondary schools which they identified as potentially having active environmental school clubs. After visiting several of these schools, I decided to focus on two of them, one which had Malihai clubs and another which had Roots and Shoots clubs. My aim was to find out what narratives were produced at each environmental school club and to compare the two. I acquired permission from the principals at the two schools to engage with students and teachers at the environmental school clubs.

I decided to focus on upper secondary school (Form 3 – Form 6), solely interviewing students aged 16 and above. According to the NSD (Norwegian Centre for Research Data) guidelines, youth below the ages of 16 need parental consent to partake in research. I acquired permission from the principal, teachers, and the students themselves to conduct focus group discussions and semi-structured interviews. Prior to the interviews, I presented my research to the students and acquired their permission to record the interviews through consent forms. I later transcribed and anonymized these interviews. All the interviews and engagements with the students were conducted in Swahili, which I speak fluently, having grown up in Tanzania and being from the region where I conducted my fieldwork. In the findings section of the article, I have used excerpts from the interviews which I have translated from Swahili to English. These excerpts offer insights into the students' narratives and reflections around environmental degradation.

I conducted two focus group discussions, one at each environmental club, with students aged between 16 and 19 years old. There were 15 students that attended the Malihai focus group discussion and 13 that attended the Roots and Shoots focus group. Based on the discussion at these focus groups, I followed up with semi-structured interviews with eight students, five from the Roots and Shoots club and three from the Malihai club discussion. I also interviewed the club coordinators (teachers) at both schools and conducted interviews at the Malihai headquarters in Arusha and at the Roots and Shoots headquarters at the Jane Goodall Institute in Dar es Salaam. I read through Malihai newsletters that are distributed annually to clubs across the country, and the Roots and Shoots club manual. Since one of the schools bordered a forest and engaged in activities with the local community, I interviewed forestry officials, community members and the eco-tours company engaged in activities at the school. I also interviewed Environmental Municipal Officers, to gain an understanding of the role of environmental clubs and engagements in the municipality. In this article, however I will primarily focus on the students' narratives from the focus group discussions and the individual semi-structured interviews.

The questions I asked the students during the focus group discussion were centred around three key questions. First, I asked what they thought were the main environmental challenges. Second, I asked who they thought were responsible for these. And lastly, I asked what they thought were the solutions. These questions aimed at identifying environmental narratives by problematizing environmental issues and discussing solutions. The student's reflections on the environmental challenges were impacted by their club engagements, their school environment, and their home environment.

5. Findings from Environmental School Clubs

In this section, I will present the different activities at the Roots and Shoots and Malihai clubs I visited. I will then answer RQ1 by presenting the findings on the poverty narratives used to explain environmental degradation and the emphasis on education as the solution.

Club activities

At the Roots and Shoots club, students shared with me the different environmental activities that they partake in. The school has a flower garden and a vegetable garden that the club members tend to. The vegetables contribute towards healthy school meals and are harvested by the school chef. The club also has a 'paper coal' project, where students make coal from paper waste found at the school and mix it with casava flour. They explained that this project is an attempt to make environmentally friendly fuelwood, since access to fuelwood is a local challenge.

According to the students, their most important project was their tree nursery, due to the numerous benefits of trees. They told me that trees produce oxygen, fresh air, shade, fruit, and furniture. At the nursery, students plant seeds in small plastic tubes with soil and take care of the seedlings until they are large enough to be planted elsewhere. They either sell the seedlings to the neighbouring community, or they plant them themselves on the school grounds or in the neighbouring forest. The students emphasised the importance of planting indigenous species, because these were believed to be more beneficial to the environment than foreign ones. Students also engaged in environmental clean-ups in the local community and in the forest.

At the Malihai club, the club coordinator explained that their activities are centred around the school grounds, and they therefore do not engage much with the neighbouring community. Since it is a boarding school, environmental club members meet on Saturdays, to partake in different environmental activities. Students are divided into groups and are responsible for keeping the school grounds clean and for planting trees around the school boundaries. To motivate the students to plant trees and to ensure their survival, the club coordinator rewards students with a certificate if their seedling survives the whole school year. He explained that over the previous year students planted 700 trees, however, but not all of them survived. At a focus group discussion students emphasized the importance of being good environmental role models to fellow students on campus. They spoke about picking up trash and holding other students accountable. Students were also enthusiastic about an excursion with the environmental club to Kilimanjaro National Park, since many of the students were from different parts of the country, and few had visited Kilimanjaro. Visiting national parks and arranging excursions are an important part of environmental club activities. However, as discussed by McDuff (2000), raising funds for these excursions can be a challenge.

Poverty narratives

During the focus group discussions, I started by asking the students what they thought were the main environmental challenges in their communities. My intention was to identify what the problem is perceived to be, before going on to discuss possible solutions (Bacchi, 2012). At both environmental clubs, they highlighted environmental degradation primarily through pollution and deforestation as the main challenges. When asked why they thought this, their main explanation was poverty and a lack of education.

The students believed that deforestation occurs primarily through the collection of firewood, the making of charcoal and the selling of timber. They said that villagers are unable to afford energy sources that are environmentally friendly, such as gas, electricity, and solar panels. Instead, fuelwood (firewood and charcoal) is used, which the students believed would lead to the cutting down of trees and ultimately environmental degradation. People use fuelwood either for their own consumption or to sell and make an income. The students argued that even though people might be aware of the harmful effects of firewood and charcoal on deforestation, they do this due to poverty.

Talking to three Form 4 students during separate semi-structured interviews, the students reflected on the financial challenges that people face as one of the main reasons for selling firewood. These three students were all Roots and Shoots club members, living in the same community neighbouring a forest. The students who I have called 'Victor', 'Julius' and 'Esther' said that villagers entered the forest to collect firewood despite the risks of being caught. All three students saw this as a major challenge, both as community members and as club members.

> Because there is no work to do. That's why people decide to go cut firewood so they can go sell it and make an income. (Victor, form 4)

> You know, right now, for someone to even think that they're destroying the environment, life sometimes plays a role, and they just look at the money. Like "I don't care", the forest is not mine, at least let me make some money…They're looking for money, that's the big thing. Money that they can use at home, to eat, to live and that's it. Or let me sell, make some money, so that we can live, and that's it! (Julius, form 4)

The above excerpts show that both Julius and Victor highlighted firewood as a source of income. Victor pointed to unemployment as a key challenge causing people to cut down trees and sell firewood in pursuit of an income. Julius expanded on this, by pointing out ambivalent attitudes towards the forest. He said that people see it as a resource available to them, and they do not feel any sense of responsibility or guilt for their actions. Their priority is to have money to eat and live, to focus on their daily sustenance and not the future consequences. In the quote below, Esther also highlighted the availability of the forest as a resource when there is a need for income. She thought that people are willing to take the risk of entering the forest, despite the consequences that they may face of being caught. I asked Esther whether she thought people were aware of the consequences of their actions and she replied:

> Yes, they know. But they see that, ok, maybe today I don't have any money, or I haven't made anything, and they think "ah, but there's a forest right there at home", the forest is my neighbour, so they think it's better that they just go in the forest and cut some firewood. There are times where you really hear them walking around in there. If they get caught with firewood and they're asked, "where did you take it from?", then that's on them. (Esther, form 4)

Students at the Malihai focus group discussion also highlighted deforestation as a key challenge. In an interview with 'Philip', a student from inland Tanzania, he shared the challenge of charcoal production in his home region of Mara. He saw the greenery of Kilimanjaro as a sign of stricter laws and more law enforcement against deforestation. In his home region, he said, deforestation was an even bigger challenge than in Kilimanjaro, compared to other places in the country. He considered Kilimanjaro to be the most successful region in conserving its environment.

> Yes, it's very different. So first of all, the planting of trees, compared to there [his region]. Here they don't cut down trees carelessly compared to there where they make charcoal. Here you cut down a tree, you plant another one. (Philip, Form 3)

According to a forestry official I spoke to, not all collection of firewood in that forest is illegal.[2] Community members are permitted to collect firewood found on the ground, but they are not permitted to enter the forest reserve with a machete and cut off branches. Patrolling the forest boundaries is a challenge and on occasion people would get caught cutting down trees and branches in the forest. I witnessed an incident where 19 people were being rounded up by the police and put in a police truck due to their activities in the forest. I later learned that they had been caught collecting firewood and grass in the forest and that they each had to pay a fine of 150,000 Tanzanian Shillings (approximately US$60 in 2019[3])

When I asked Victor how he felt about the challenge of people collecting firewood through measures he considered environmentally destructive, he expressed his frustrations and explained that the only solution he saw was increased policing and stricter enforcement of laws.

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[2] This was at the forest reserve located opposite the school I visited.

[3] https://www.exchangerates.org.uk/TZS-USD-spot-exchange-rates-history-2019.html (6/3/2023)

> Victor: I feel bad, but it's difficult to control them. It's very difficult to control them. Because a lot of those who get involved in these activities, have a stubbornness and aggressiveness. For example, I am a child, I can't tell off an elder. There are others who end up fighting with them in the forest, even the police sometimes get beat up.
>
> Me: So that's a big challenge. So, then what do you see as the solution to this?
>
> Victor: Solution? Just to put into place strict laws. The government needs to find ways of just suppressing them, because I think there are some people who have now stopped cutting down trees. But it's the women that are continuing with most of the cutting. (Victor, form 4)

Victor expressed a belief in increasing the policing of forest reserve boundaries and to ensure that people are penalized for collecting firewood. As a child (16 years old), he also expressed his frustration of being unable to reprimand an elder for actions that he considered to be environmentally destructive. The solution of stricter laws has also been used within conservation in various parts of Tanzania. Neumann wrote about Arusha national park, and the increased policing of park boundaries, where local community members who had previously been able to collect firewood and allow their cattle to graze within the park, were afraid of being arrested (Neumann, 1998). Similarly, in Mkomazi National Park, the grazing of livestock within the park boundaries by pastoralists has been seen by park officials as contributing towards the degradation of a fragile environment. However, Brockington (2012) questions this fragility and argues instead that the national park used this narrative to its own advantage for generating funds.

The student's perspective is in line with a recent report by the World Bank, that described the deforestation rates in Tanzania as alarming and ranking Tanzania among the top five countries in the world with the highest annual forest net loss (World Bank, 2019: 17). According to the World Bank, this is primarily due to agricultural expansion and a high demand for fuelwood and charcoal (World Bank, 2019). Within political ecology, reports of high deforestation rates in Africa have been widely criticised as they do not accurately depict the reality on the ground, but rather produce an alarmist agenda (Benjaminsen & Svarstad, 2021; Fairhead & Leach, 1996; Robbins, 2012).

Mathew Mabele and Thaddeus Sunseri write about the complex debates and histories around charcoal and firewood collection in Tanzania. After a century of state forestry, where forests were exploited for domestic use and export, Sunseri argues that Tanzanian forest policy today has become more like wildlife conservation, increasingly aimed at excluding peasants and pastoralists from the reserved areas (Sunseri, 2005). "While there are many causes of deforestation and forest degradation in Tanzania, conservationists and the Tanzanian state tend to depict peasants and pastoralists as the gravest threat to Tanzania's forests" (Sunseri, 2005: 611). According to Mabele the 'War on Charcoal', does not address the complexities of the relationship between forests, charcoal and development (Mabele, 2020). Despite "public condemnation and bans on production" charcoal sales contribute to important government revenues (Mabele, 2020: 2). The importance of charcoal, however, is not admitted publicly, and the narrative of charcoal usage as environmentally destructive primarily due to rural people's livelihoods is reproduced through education today (Sungusia *et al*., 2020).

This shows that students' narratives of poverty leading to environmental destruction are not only highlighted by environmental club members but are narratives that are produced both nationally and internationally. Highlighting poverty and blaming the poor for environmental degradation are established concerns within political ecology. The marginalized, who are also the most vulnerable to state interventions and global markets are the easiest to point to when addressing degradation (Robbins, 2012). According to Robbins, these narratives tend to be apolitical, by hiding the structural causes and complexities leading to the challenges faced by the marginalized in society. In Tanzania, narratives highlighting the marginalized as the culprits of degradation have justified conservation initiatives, leading to fortress conservation, and also the enclosure of forests (Brockington, 2002; Mabele, 2020). The political ecology thesis of conservation and control emphasizes that the enforcement of park boundaries to ensure that the local community are kept out, is a denial of access (Robbins, 2012).

Education as the solution to environmental degradation

In the previous section, I examined how students highlighted poverty as one of the key contributors towards destructive behaviour. Students explained that due to poverty, people were more concerned about making an income rather than considering the consequences of their actions on the environment. However, a lack of education and awareness was seen by the students as another key reason for destructive environmental behaviour. Students argued that there was also a lack of knowledge around the consequences of cutting down trees for firewood, making charcoal, and air pollution. In this section, I will highlight students' narratives on the importance of environmental education and examine the hierarchy of environmental knowledge by drawing on an example of an indigenous plant known as 'sale'. I will then examine where the narratives of poverty and education are coming from and discuss their subjectification through environmental clubs.

In the quote below, a participant at the focus group discussion explained how a lack of education was why people were throwing away plastics and cutting down trees. According to him, people are unaware of the consequences their actions have both for the present and for the future:

> A big challenge that I see when it comes to caring for the environment is education, there is still not enough education. For example, people have a limited understanding, so that becomes a challenge. People don't understand that it is important to take care of the environment and that's why you find people throwing away plastics. It means that they don't know the consequences of throwing that plastic there and the consequences it has for the future. You find people cutting down trees, but they don't know what the consequences of this are. It shows that their education level is low, or that they are lacking education, so this becomes a big challenge. (Focus group with Roots and Shoots members)

Faced with this "challenge", the students explained that it was their responsibility as club members to ensure that people become aware of the negative consequences of their actions through conducting clean-up activities, tree planting and educational campaigns in the community. Similarly, at the Malihai focus group discussion, students described their responsibilities to plant trees and clean the school grounds. They highlighted the importance of education especially around sanitation and pollution, to ensure that people do not live in unsanitary conditions increasing the risk of contracting disease. In this quote below students emphasised the importance of education and sanitation.

> Because by caring for the environment that is also how you'll protect your own health, because you can't surround yourself with dirt. So, if you are educated on how to care for the environment you will avoid diseases such as cholera, so education is very important. If we receive education, then we will know how to care for the environment. (Focus group with Malihai members)

As club members, students considered it their responsibility to create awareness around environmental issues and to educate others. They emphasised that they should lead by example and be environmental models.

> As Malihai club or Fema [another student club] let's be examples to the people surrounding us. When we say the environment can be protected in a certain way, well then let's be the first people to do that. (Malihai member)

Both Malihai and Roots and Shoots members showed a strong moral obligation in educating others. Johnson-Pynn and Johnson (2005) highlight this obligation in their research on Roots and Shoots club members in Tanzania and Wildlife club members in Uganda. They explain that club members had a strong sense of moral obligation and civic responsibility to steward their environment. The clubs play an important role in shaping young people's perception of their role as stewards of the environment and what this means. Their strong sense of responsibility in creating awareness and educating local community members is a key

component of being a good environmental citizen (Kimaryo, 2011). However, the education that the students provide is primarily what they have learnt through the environmental clubs and school curriculum, namely, to ensure the environment is kept clean, to plant trees, to create awareness through environmental campaigns, and to be a good environmental role models to others.

6. Discussion

Throughout this article, I have focused on students' narratives at environmental clubs and the extension of these clubs as conservation initiatives. I have examined how students problematize environmental issues and discuss their solutions. In this section, I discuss what these narratives reveal and why they are important in forming environmental subjects.

Through the first step of problematizing the environment, I asked students to identify key environmental challenges. By identifying these challenges students drew on existing environmental knowledges, but where power dynamics determined what was relevant to be applied as environmental interventions. The process of identifying interventions or "rendering technical" as Tania Li writes, draws on expert solutions to solve problems. However, the "questions that are rendered technical are simultaneously rendered nonpolitical" (Li, 2007: 7). These apolitical interventions can be seen in the interventions suggested by students, interventions that do not address the complexities of the environmental challenges, but that offer simple solutions that students can partake in, such as clean-ups, tree planting and providing awareness to others.

Although the students highlighted poverty as the main challenge leading to environmental degradation due to firewood collection and charcoal production, I have examined how these narratives are problematic, since they do not address the complexities of fuelwood production, and rather than assuming local knowledge of forest processes or querying the reasons for it, instead it is dismissed as inherently destructive. Students therefore reproduce dominant narratives that have become hegemonic both through policies and the school curriculums (Mabele, 2020; Sungusia *et al*., 2020; Sunseri, 2005). Solutions to address the challenge of poverty were not mentioned by the students, instead, the emphasis was on providing education and implementing stricter laws. According to Li the nonpolitical process of rendering technical focuses "more on the capacities of the poor than on the practices through which one social group impoverishes another" (Li, 2007: 7). The poor's practices as environmentally destructive become the focal point, and the emphasis therefore becomes on the need to change their practices. The belief that the right knowledge will change behaviors is central within development discourse more generally (Green, 2014: 40).

The last key practice of government highlighted by Hansen (2022) is subjectification (Agrawal & Bauer, 2005; Li, 2007). What do the students' narratives reveal about the environmental subjects they become through their engagement in environmental clubs? They reflect hegemonic development and conservation narratives. Development narratives highlight the need for education as a solution to environmental degradation and poverty as a problem, where economic growth is the solution. The conservation narrative sees the poor as destructive and emphasizes the importance of keeping people separate from nature by enforcing reserve boundaries. The environmental subjects formed through schools are therefore students who learn that it is their obligation to take care of the environment, that environmental knowledge is taught primarily through schools and that the poor are the main culprits of degradation.

7. Conclusion

In this article, I have aimed to contribute to a critical study of environmental school clubs by examining dominant environmental narratives among students in northern Tanzania. Through focus group discussions and semi-structured interviews, I asked students to identify the main environmental challenges as they saw them, the reasons for these challenges, and how to address them. Drawing on Carol Bacchi's (2012) "What is the Problem Represented to be?", I discussed how students problematized environmental degradation and what they identified as its problems and solutions. Students highlighted poverty as the main challenge leading to activities that are environmentally destructive, and the solution to this being education. The impact of students learning these narratives is that they do not think critically about broader environmental challenges and impacts.

By examining the history of conservation in Tanzania and the extension of environmental school clubs as conservation initiatives, I argue that conservation influences how environmental knowledge is taught today. Students learn to view people as separate from nature and they learn to see the poor as environmentally destructive (Sungusia *et al*., 2020). The public discourse of development is also embedded in environmental education, where students also learn that destructive behaviour is due to a lack of education. As club members, students learn that they have a moral obligation to ensure that others receive the correct environmental education.

Applying political ecology to the students' narratives, they embody commonly held ones, those of degradation and marginalization, and conservation and control (Robbins, 2012). By pinpointing the poor as the culprits, causing environmental degradation, and by not addressing the broader structural issues responsible for poverty, students effectively blame degradation on the marginalized rather than on the structural forces political ecologists commonly identify. The conservation and control theme is emphasised through the narrative of education, as it aims to control the population through environmental knowledge provided through schools, as well as having an emphasis on enforcing reserve boundaries. The political ecology of education can play an important role in contributing to a critical analysis of environmental narratives and environmental subject formation through schools. By working with educational institutions and environmental clubs, political ecologists can also contribute towards students receiving critical environmental knowledge on topics such as land grabbing, climate colonialism and conservation.

However, I do want to emphasize the importance of environmental clubs as a platform for students to engage in environmental activities outside of the classroom. I acknowledge the many restrictions clubs face across the country due to finances and limited teacher availability, but the clubs also provide an opportunity to discuss environmental knowledges outside of the school curriculum, potentially contributing towards decolonizing environmental knowledges.

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