



Environmental Justice Education in Nepal: Policies and Practices

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ABSTRACT

Environmental justice is fundamental to education and policy, ensuring clean environments and sustainable development. The curriculum and constitution of Nepal focus on this, addressing global gaps and encouraging comprehensive wellbeing measures for educational resilience. This paper analyzes how environmental justice is reflected through equitable treatment and meaningful participation of all people in the creation, implementation, and enforcement of environmental laws, regardless of their race, culture, education, and socioeconomic status. To analyze how environmental justice has been enforced in educational policies, interviews were conducted with five policymakers who have long experience in policymaking in the educational sector. The findings revealed that indigenous knowledge, cultural thought, and belief in environmental justice areas were considered major issues in education policies and practices. This study emphasizes the interconnectedness of local and global environmental issues and the need to bridge the gap. The integration of environmental justice in the national curriculum framework highlights the role of local expertise, indigenous knowledge, and practical application. The study recognizes the significance of environmental consciousness, sustainable development, and equal access to education. This study acknowledges constitutional provisions in Nepal supporting environmentally friendly and sustainable development. It emphasizes the importance of environmental education, equitable treatment, and compensation for environmental injustices to safeguard the environment for future generations.

KEYWORDS: Curriculum, education policies, environmental justice education, sustainable development

INTRODUCTION

Equitable treatment of all people in the creation, implementation and enforcement of environmental laws and policies is crucial for upholding the ecological oneness of all species and ensuring freedom from ecological impairment (Environmental Protection Agency [EPA], 2008). It is essential that public policy be founded on justice and respect for all individuals, without prejudice (Mohai et al., 2009). This justice encompasses the right to equitable and responsible uses of land and renewable resources, protection from nuclear testing, and safeguarding the fundamental right to a clean environment, including access to food, water, and air (Ministry of Environment and Forests, 2019).

Environmental justice (EJ) is an integral part of social justice education (Teixeira & Krings, 2015). Consequently, it prompts us to examine the incorporation of EJ within school curricula and textbooks. In line with the prominence of EJ, the Constitution of Nepal-2015 guarantees the right of Nepali citizens to live in a clean environment and emphasizes the need to balance environmental concerns and development programme (Government of Nepal, 2015). To ensure EJ, the National Curriculum Framework 2019 of Nepal educates conscientious individuals who support sustainable development and protect the natural world and cultural heritage (Curriculum Development Center, 2019). Similarly, global environmental injustice has received less attention, despite numerous cases. Developing countries like Nepal bear the burden of hazardous waste disposal, exacerbating public health issues due to limited resources (Sharma, 2018). Minorities face additional risks like air pollution and nuclear testing, which have severe effects.

EJ upholds the inherent right of all people to exercise political, economic, cultural, and environmental self-determination (Otubu, 2012). The School Sector Development Plan (SSDP) in Nepal emphasizes comprehensive school safety as a crucial aspect of enhancing the educational system's resilience to threats and disasters (Ministry of Education, 2016). The enhancement of environmental preservation knowledge within local communities contributes to environmental justice. Therefore, it is necessary to address issues related to the existing curriculum, formulate policies and engage in public advocacy regarding climate change mitigation, natural resource management, biodiversity support, protection of endangered species, and reduction of human impact on the environment. However, EJ seeks to regulate waste trade, chemical testing, and pollution exposure while educating recipients on prevention measures.

In order to understand the diverse perspectives of experts, it is essential to explore the ways in which EJ is perceived within different contexts. Additionally, the experts explore how teachers and students negotiate and actively participate in addressing EJ issues within their classroom interactions. Therefore, this study primarily focuses on understanding how policymakers perceive the inclusion of EJ in school curricula, textbooks, and other policy documents. Its aim is to gain insights into EJ policies and practices from the perspective of experts. By examining both expert perceptions and policy documents, this research seeks to understand the alignment or gaps between policy intentions and their implementation in practice.

LITERATURE REVIEW

EJ education is an approach to teaching that seeks to promote social and environmental equity (Reddy, 2021). It involves teaching students about the social and economic factors that contribute to environmental problems, as well as ways to address these issues through community action and policy change. The goal of EJ education is to empower students to become advocates for EJ in their communities (Martusewicz et al., 2014). Several studies have examined the effectiveness of EJ education in promoting

environmental literacy and social action among students. A study found that an EJ education programme for high school students in South Korea increased their knowledge of environmental issues and their willingness to engage in environmental activism (Lee & Kim, 2017). It was found that an EJ education programme for middle school students in the United States led to increased knowledge of EJ and a greater commitment to social action (Jorgenson et al., 2019). Literature suggests the role of EJ education in promoting equity and justice through education. Sampson (2019) found that an EJ curriculum in an elementary school promoted students' understanding of their local environment and encouraged them to take action to improve it. Low-income and minority students may face additional barriers to accessing EJ education due to factors like lack of resources and opportunities for engagement in environmental advocacy (Ulibarri et al., 2022).

The EJ movement, fueled by grassroots activists and educators, aims to address the worst effects of climate change, which disproportionately impact low-income communities. It strives to ensure access to safe housing, wholesome food, and unpolluted air and water (Mauleon, 2010). EJ in schools is a complex issue with various potential solutions. One optimistic recommendation is a major restructuring of education funding to redistribute resources more equitably among all schools, addressing not only environmental health disparities but also other inequities (Sampson, 2019). While teachers play a significant role in encouraging the next generation's active involvement in environmental protection, community-wide engagement is also crucial (Peloso, 2007). The subsistence needs of Nepal's rural people are largely met by natural resources. The energy needs are met to a greater than 75 percent extent by fuel wood (Bhattarai, 2017). With the establishment of the National Conservation Strategy twenty years ago, the process of incorporating environmental education into the school-level curriculum in Nepal got underway (Tome et al., 2021). The mainstreaming of environmental education in formal and non-formal education programme has received support from the Nepali government, particularly through the National Planning Commission and the Ministry of Education (Pande, 2017).

The Constitution of Nepal recognizes the right to live in a clean environment and states that the government is responsible for protecting the environment and promoting sustainable development (Government of Nepal, 2015). Article 30 of the constitution explicitly states that every person shall have the right to live in a clean and healthy environment and that the state has to make environmental protection and conservation a priority (Government of Nepal, 2015). Here, the constitution enshrines the policies of the state and prioritizes environment-friendly and sustainable infrastructure and development, protection, and sustainable use of natural resources, and the adoption of appropriate measures to abolish or mitigate existing or possible adverse environmental impacts on nature, environment, and biological diversity (Government of Nepal, 2015).

The National Curriculum Framework (NCF) of Nepal also emphasizes the importance of EJ education. The NCF was developed in 2010 and revised in 2016, to guide the development of curricula at all levels of education in Nepal (Curriculum Development Center, 2019). The framework recognizes the role of education in promoting sustainable development and EJ and emphasizes the need for education that is inclusive and culturally sensitive. The NCF includes several specific references to EJ (Ministry of Education, Science and Technology, 2017). It states that education should help students understand the causes and consequences of environmental problems, and encourage them to take action to address these issues (Government of Nepal, 2015). The National Curriculum Framework 2019 aims at ensuring EJ prepares conscious citizens who contribute to sustainable development by conserving, promoting, and utilizing natural and national heritage and the environment. The secondary level science and

health, population and environment (HPE) curriculum as well as textbooks covered contents such as health awareness, environmental protection and enrichment, with active participation in biodiversity management and analysis of natural and social phenomena that harm the environmental balance (Curriculum Development Center, 2019). The Local Government Act has also covered environmental aspects such as preserving the ecology and maintaining biodiversity (Nepal Law Commission, 2020). EJ education is a powerful approach that promotes equity and social action. It is recognized globally and in Nepal's educational framework as a means to address environmental problems, empower students, and foster sustainable development. Efforts are needed to overcome barriers and ensure inclusive access to EJ education for all. The potential gap is the lack of focus on evaluating the long-term impact of EJ education programme and their effectiveness in creating lasting behavioral change and systemic transformations in addressing environmental injustices.

There is ample discussion about environmental issues in various policies and documents, such as the constitution of Nepal, NCF, SSDP, etc. However, the linkage with justice remains elusive. It is imperative to conduct in-depth studies with policymakers regarding their insights into EJ education. Hence, addressing this crucial issue is paramount for ensuring EJ education.

RESEARCH METHODS

This study is based on an analysis of various documents, such as the SSDP 2016/2017-2022/23, the Constitution of Nepal 2015, the NCF for school education in Nepal 2019, the Local Government Operation Act 2017, the Environment Protection Act 2019 and in-depth interviews with policymakers. The concept of EJ served as a theoretical foundation, while the opinions of experts and the review of documents provided the data related to EJ education. The data were subsequently transcribed and translated into English and validated after member checks for data ensurity and confirmability. The data has been organized thematically and connected to policy documents to ensure consistency and credibility. Table 1 presents the identities of the participating policymakers.

Table 1

Policymakers and Their Contribution to Policy Making

Policy Makers	Experience and Involvement of Policymakers/Experts
E1	He worked for approximately five years in the department of education and also engaged with the CDC. His contributions were influential in planning and developing the NCF. Additionally, he played a crucial role in implementing and monitoring activities related to the letter grading system and integrated curriculum at the district level. He holds the position of section head in the planning and budget section under the planning and monitoring division of the ministry of education, science, and technology. His expertise is in macro-level planning and budgeting, encompassing early childhood development through higher education. He is actively involved in capacity development, educational planning, and monitoring of school education and higher education programme. With an extensive experience of 30 years, he has effectively fulfilled the aforementioned responsibilities.
E2	He worked at the Faculty of Education, Tribhuvan University, for 38 years. Even after his retirement, he continued to contribute as a faculty member for the M.Phil. and PhD programme at the Graduate School of Education.

- Throughout his career, he actively participated in numerous research and development programme, including his involvement in the SSRP evaluation in 2015. Additionally, he served as a member of the national education commission, where he gained valuable experience working on the SSRP evaluation, as well as various other research projects. In 2054, he held the role of a member of the higher-level national education commission. Presently, he holds a position as a member of the National Education Commission 2019, focusing specifically on the early childhood development (ECD) sector. Furthermore, he has also contributed his expertise at the CDC. Currently, he serves as the vice chancellor, where he continues to make significant contributions in the field of education.
- E3 He began his career as a school teacher in Kathmandu for a short period of time. Later on, he dedicated five years of his professional life to being a mathematics teacher at the Prithvi Narayan Campus Pokhara. Subsequently, he progressed in his career, assuming roles such as assistant research officer, deputy research officer, and professor. Notably, he taught at the Central Campus in Kirtipur. Throughout his journey, he actively engaged in research and development, participating in various projects. Moreover, he made valuable contributions as a curriculum developer and evaluator. His extensive experience encompasses working on significant initiatives such as the NCF, SSDP and CERID.
- E4 He played an active role in formulating and implementing the NCF policy throughout his career. After retiring, he served as the deputy director at the CEHRD during the development of the NCF and the SSDP. Specifically, he worked in the school administration section under the Ministry of Education (MOE), holding positions as a district education officer in Rasuwa and Baitadi, as well as a regional education officer in Hetauda. He also served as the education chief at the local level. Within the MOE, he was responsible for school mapping based on the recommendations of the Department of Education. Notably, he actively contributed to the implementation of education policies in Shankarapur Municipality, situated in the Kathmandu district. Furthermore, he made valuable contributions to the formulation of policies such as the Distance Education Policy and other significant policies related to education.
- E5 He holds the position of professor of economic education and has dedicated 33 years of service to the Department of Economic Education within the Central Department of Education at Tribhuvan University. Throughout his career, he has served as an expert in education policy formulation and programme implementation, contributing to significant developments such as the NCF, SSDP, SDG and other pivotal education policies. Notably, he actively engages in activities such as research, thematic paper writing, and more. His involvement extends to the revision and feedback processes of NCF development, showcasing his commitment to the improvement of educational frameworks. Moreover, he has served as the chairperson of the Social Studies Subject Committee at the CDC under the Ministry of Education, Science, and Technology. In addition, he plays a vital role in designing the national integrated curriculum and grade-wise curriculum, ensuring the highest standards of education. Furthermore, his expertise has led to his membership in a committee focused on sustainable forest development, established by the Government of Nepal.

To collect data necessary for analysis, five policymakers (coded as E1, E2, E3, E4, and E5 for confidentiality guarantee of them) were purposefully selected for in-depth interviews, chosen based on their extensive experience in policymaking within the education sector. These participants were approached through various channels, including professional networking and academic institutions. They work in the planning and budget section under the Ministry of Education's Planning and Monitoring Division and have contributed significantly to various educational initiatives, such as the NCF, SSDP, etc. Additionally, they have been involved in projects like the SSRP evaluation and the national education commission. Throughout the three-year period from October 2020 to September 2023, the project unfolded. Despite the challenges of the COVID-19 pandemic, interviews were consistently conducted via online platforms, continuing until data saturation occurred during the project period. Confidentiality measures were maintained, including anonymizing identities and secure data storage, in line with ethical standards and study protocols approved by the social science research ethics committee.

RESULTS AND DISCUSSION

Experts' opinions and policy document reviews are crucial to generating the themes. By analyzing the information, key ideas, concepts, and challenges are identified, which then support the selection of a relevant and engaging theme for discussions. This result primarily focused on expert interviews rather than policy document reviews to explore the integration of EJ education into educational contexts. While policy documents such as the SSDP 2016/2017-2022/23, the Constitution of Nepal 2015, the NCF for School Education in Nepal 2019, the Local Government Operation Act 2017, and the Environment Protection Act 2019 and others were utilized for contextual understanding, the core focus remained on insights gathered from expert in-depth interviews. These interviews served as a rich source of qualitative data, offering valuable perspectives and diverse insights into the challenges and opportunities surrounding EJ education in Nepal. But this study's dependence on a limited sample size of policymakers and reviewed documents may constrain the generalizability of findings to broader populations or contexts, highlighting the need for caution in generalizing results beyond the study's scope.

Glocalization of Environmental Justice

The issue of EJ garners attention and concern not only at the local level but also on a global scale (Martinez-Alier et al., 2016). E1 opines that it signifies the need to address fairness and equity in environmental decision-making and resource distribution worldwide. However, discussions about fair environmental outcomes are often categorized into two groups: those addressing local issues such as climate justice, and those dealing with global policy challenges like climate security (Environmental Protection Agency [EPA], 2021). A noteworthy example of how global policies can impact EJ and security locally and internationally is the war and its associated consequences, such as the reliance on fossil fuels and mineral extraction (Mohai et al., 2009). These issues demonstrate the interconnectedness of domestic and global spheres in establishing environmental justice. E2 justifies that the need to bridge the divide between them in discourse and knowledge.

Educational policies and programme are primarily established at the central level in Nepal, while the constitution assigns certain rights and responsibilities to provincial and local governments (Government of Nepal, 2015). E2 said that, to effectively implement national policies, all stakeholders, including local, state, and federal governments, have their respective responsibilities. He further added that achieving EJ

for all in the national education system requires the government to involve all citizens. According to policymakers (E1 and E3), EJ in education can be achieved by providing support to children with learning difficulties and integrating subject matter into the curriculum through inclusion, which promotes environmental justice. E3 further shares that, glocalization can be a new approach to promoting environmental justice, emphasizing the need for internationally accepted education for students.

It suggests that by combining global and local influences, glocalization can offer a new approach that takes into account the need for internationally accepted education (Roudometof, 2016). E1 shares that, promoting EJ requires considering both global principles and local contexts, ensuring that students receive an education that is relevant and applicable to both local and international environmental issues. E3 highlights the importance of addressing EJ seriously and considers it to be part of the implementation phase rather than just conceptualization. E4 focuses on incorporating national and international commitments into the national context, guiding values, norms, guiding principles, and future actions. By incorporating these principles, such as equity, social justice, and intergenerational equity, EJ becomes embedded in the national agenda. This ensures that actions taken to address environmental issues consider the impacts on marginalized communities, vulnerable populations, and future generations.

From a global perspective, the National Curriculum Framework (NCF) in Nepal also addresses the issue of EJ in school curricula. E5 claims that the framework includes learning competencies related to EJ, such as understanding the interrelation between population, environmental conservation, sustainable development, and their management. The secondary level learning competencies include active participation in environmental protection, promotion, population management, and health awareness to ensure EJ (Curriculum Development Center, 2019). The School Sector Development Plan (SSDP) emphasizes the content related to EJ and aims to ensure equitable access to education for all students (MOEST, 2017). E1 said, it is considered an important plan for achieving sustainable development goals. He noted that the legacy of previous projects, policies, and programme related to EJ is still in practice within the SSDP framework, which builds upon selected practices from the SSRP and incorporates policy changes determined by the constitution.

The issue of EJ has garnered global attention, highlighting the need for fairness and equity in decision-making and resource distribution. The interconnectedness of local and global spheres is evident, with examples such as war and its consequences impacting EJ and security. Achieving EJ in the national education system requires involvement from all stakeholders, including governments at different levels. Glocalization, combining global and local influences, offers a new approach to promoting EJ in education. By incorporating global principles and local contexts, EJ becomes embedded in the national agenda, considering the impacts on marginalized communities and future generations. The NCF and the SSDP in Nepal address EJ in school curricula, aiming for equitable access to education and sustainable development goals.

Promoting Environmental Justice through Education

Educational policy aims for free and compulsory basic education, including secondary education, in Nepal (MOEST, 2022). In line with School Education Sector Plan 2022, E1 emphasizes addressing accessibility barriers for marginalized students and incorporating their voices to achieve inclusivity. E2 highlights the role of local governments in developing educational policies that promote EJ and cater to local needs and knowledge. The policy recognizes the significance of local expertise in formulating

strategies for environmental preservation and promoting the preservation of local knowledge and culture (Nepal Law Commission, 2020).

The Government of Nepal envisions the active involvement of local-level experts in the development of education policies that incorporate EJ, as outlined in the Federal Act 2019 (Ministry of Environment and Forests, 2019). E1 shares that the engagement of local experts is expected to facilitate the preparation of localized policies, identification of local needs, formulation of strategies for environmental preservation, promotion of local language, and preservation of indigenous knowledge and culture. By making policies implementable, their positive impact on society can be realized. E2 emphasizes the importance of proper forest resource management, with the goal of ensuring the sustainability of forests and harnessing their potential for commercial purposes.

EJ encompasses specific notions, thoughts, perceptions, and beliefs that actors express or associate with the concept of justice (United Nations Department of Global Communications, 2020). These notions include the rights of nature, plants, and animals to be protected, utilized, and flourish. E2 opines that teachers can impart knowledge to students on various environmental issues, including environmental degradation, which refers to the deterioration of ecosystems; climate change; long-term alteration, deforestation, pollution, harmful substances into the environment and more. Next policymakers (E1) share that the present curriculum addresses various topics such as sanitation, hygiene, waste disposal, social discrimination, abuse, human rights, and untouchability. However, they note that environmental consciousness among students and teachers is still unsatisfactory. The Constitution of Nepal ensures the right to awareness about justice and local governments have also implemented and established constitutional provisions related to EJ in practice (Government of Nepal, 2015).

Similarly, E3 opines that students are conscious towards environmental protection, tree planting, clean maintenance of natural resources, and the protection of living things, considering them part of environmental justice. Conversely, environmental destruction and resource overexploitation are seen as contrary to EJ (Ministry of Environment and Forests, 2019). E4 suggests conducting an awareness programme through audio and video platforms to provide knowledge about the benefits and drawbacks of EJ education. E4 further shares that students and teachers perceive EJ as encompassing the preservation of the environment, tree planting, landslide prevention, maintaining clean rivers and lakes, preventing sewage water from entering rivers, and safeguarding plants and animals (Ministry of Environment and Forests, 2019). E5 appreciates the comprehensive approach of the curriculum to tackling diverse environmental issues. It effectively covers critical topics such as climate change, biodiversity preservation, and the protection of endangered species, fostering environmental awareness and stewardship among learners.

Educational policies in Nepal aim to provide free and compulsory education, with a focus on promoting EJ. Local governments play a crucial role in developing policies that cater to local needs. The engagement of local experts and the preservation of indigenous knowledge and culture are recognized as significant in policy formulation. Proper forest resource management and environmental consciousness are essential for sustainable development. The curriculum covers various environmental topics, but efforts are needed to improve environmental awareness. The Constitution of Nepal ensures rights to awareness about justice and local governments have implemented provisions. EJ encompasses the preservation of the environment and the protection of living things. The comprehensive curriculum effectively addresses diverse environmental issues, fostering environmental awareness among learners.

Equity and Sustainability

To address the disproportionate health, population, and environmental repercussions that have been experienced predominantly by communities of different areas that are all too frequently left-behind, it is necessary to make EJ the focus of this work. E1 shares that fairness, social equity, and environmental preservation are the three main tenets of the national EJ movement. This emerging movement supports the idea that all communities have a right to equal protection and enforcement of laws and regulations that have an impact on quality of life in the areas of the environment, health, population, and employment (Bluard et al., 1996). He further clarified that the foundation of the EJ framework is the creation of tactics for the abolition of unfair and unequal judgments.

E2 states his idea: “children are diverted to the concepts of mitigating climate change, improving natural resource management, supporting biodiversity, protecting endangered species, and reducing human impact on the environment.” Here, he emphasized EJ with biodiversity and climate change and the local curriculum is practiced for the promotion of local and indigenous knowledge. The NCF 2019 also aims at ensuring EJ prepare conscious citizens who contribute to sustainable development by conserving, promoting, and utilizing natural and national heritage and the environment.

The emphasis was given to the plantation so that greenery could be maintained in the school. E4 said that the Ministry of Education prepares many more thematic groups for policy development and formulation but teachers argue this policy is yet to be productive in Nepal. E5 said, it is better to teach about environmental issues through local language linking with EJ. Teachers should prepare for the different medium, in many situations (National Academy of Sciences, 2010), even teachers cannot deliver in the local languages. Then, the questions arise: how can they teach students in such a language? E2 opines that the teacher has to only facilitate; they have to help where necessary. Likewise, climate change is one of the major topic that almost every student can talk about. But unfortunately, the consequences of climate change cannot be realized. In such cases, local languages and observations are productive.

From the perspective of the environment, the current curriculum in Nepal acknowledges various environmental issues. Like the content of science, it extensively covers current environmental issues. It encompasses a wide range of topics such as air, water, soil pollution, and the effects of radiation (Curriculum Development Center, 2019). The curriculum addresses the environmental consequences of radiation in various settings, including villages, homes, cities, and other societal aspects. This comprehensive discussion on environmental pollution serves as an important basis for the debates surrounding laws and regulations formulated by local and state governments (Nepal Law Commission, 2020). However, E3 says that a significant problem lies in the transfer of learned knowledge into practical actions. He further highlights a positive trend observed in some schools, where the essence of environmental education is being embraced. Students are actively encouraged to participate in tree planting initiatives and take daily care of the trees they have planted. This technique of teaching that emphasizes the practical application of knowledge should be adopted universally.

E4 opine that, to bridge the gap between knowledge and practice, it is imperative to integrate the principles of EJ into the curriculum. This involves actively involving teachers, students, policymakers, and environmental experts to ensure that environmental issues are not limited to theoretical understanding but are integrated into practical actions. By cultivating environmental consciousness among all stakeholders, a generation of environmentally aware citizens can be nurtured who actively contribute to the preservation and sustainability (National Trust for Nature Conservation, 2019). E5

further mentioned that educational justice is to make education accessible to all in the same manner with equal access for everyone. The Constitution of Nepal 2015 declares the right to live in a clean environment as one of the basic rights of the people. It establishes a balanced approach between environmental and development initiatives within the broader context of national development. Moreover, E4 shares that, the constitution emphasizes environmentally friendly and sustainable infrastructure and development, the protection and sustainable utilization of natural resources, and the implementation of appropriate measures to prevent or mitigate adverse environmental impacts on nature. These constitutional provisions not only enable but also encourage governments to integrate environmental considerations into both present and future development plans (Government of Nepal, 2015).

The focus on EJ is crucial to address the disproportionate impacts on marginalized communities. The EJ movement emphasizes fairness, social equity and environmental preservation, aiming to abolish unfair judgments. The education system plays a vital role in promoting EJ by educating children on natural resource management and biodiversity conservation. The NCF and local curricula incorporate EJ principles and aim to prepare conscious citizens who contribute to sustainable development. Challenges include the need for productive policies, language barriers in teaching, and translating knowledge into practical actions. Bridging the gap between knowledge and practice requires integrating the EJ principles into the curriculum and involving stakeholders. The Constitution of Nepal recognizes the right to a hygienic environment and emphasizes environmentally friendly and sustainable development. These constitutional provisions encourage the integration of environmental considerations into development plans.

Safeguarding the Environment for Future Generations

EJ ensures that those affected by environmental injustice are entitled to full compensation for harm and access to excellent healthcare (Ministry of Environment and Forests, 2019). It aims to rectify past damage caused by environmental issues and promote equitable treatment for all communities, regardless of their socioeconomic status or background. E1 opines that Nepal has recognized the importance of environmental conservation and sustainability in its education system. He further clarified that the government has made efforts to incorporate environmental education into the curriculum at various levels, including secondary education. The goal is to raise awareness about environmental issues, promote sustainable practices, and develop a sense of environmental responsibility among students. In the secondary level curriculum, subjects such as HPE, Science, Social Studies, and Environmental Science usually cover topics related to the environment and EJ (Curriculum Development Center, 2019). The curriculum aims to provide students with a basic understanding of ecological concepts, environmental challenges, and the importance of sustainable development. Environmental education is consolidated and promoted in the education system and integrated into corresponding national programme (Government of Nepal, 2015). Policymakers agreed that it should become an integral part of general education in the social sciences, humanities, and science and technology at both the basic and secondary levels. In the context of Nepal, school education should focus on environmental education and management at the local level, which supports saving nature (Government of Nepal, 2017). It carries the slogan ‘Save nature, make the future’.

E2 shares that, in Nepal's school curriculum, efforts have been made to incorporate EJ principles and awareness through various subjects. The National Curriculum Framework (NCF) 2019 aims to cultivate conscientious individuals who support sustainable development by preserving, promoting, and utilizing the

environment, natural heritage, and culture, thus striving to ensure EJ. While environmental science is offered as a secondary-level elective, environmental-related topics are also covered in subjects like science, social studies and HPE. While there are health awareness, environmental protection and enrichment, biodiversity management and analysis of natural and social phenomena affecting the environment as EJ related contents (Curriculum Development Center, 2019). However, E3 points out that there is still a disconnect between these environmental topics and EJ in the teaching process and daily life. The content and depth of coverage may vary across schools and specific curriculum guidelines, but students generally learn about various environmental issues such as deforestation, pollution, climate change, and biodiversity loss. The curriculum may emphasize conservation measures and sustainable practices like waste management, water conservation, renewable energy, and sustainable agriculture. Additionally, it may encourage students to recognize their role in protecting the environment and promoting EJ through individual actions, community involvement, and collective efforts (Curriculum Development Center, 2019).

Despite these efforts, E4 highlights a concern that the recent curriculum has shifted the focus to environmental education. The earlier subject of HPE, which incorporated environmental content, has been removed from the core subject category. Instead, 'Environment Science' has been introduced as a separate elective subject at the secondary level. This change potentially reduces the emphasis on environmental education within the curriculum (Curriculum Development Center, 2019). While the curriculum includes environmental topics and strives to promote sustainability, there is a need for stronger integration of EJ principles and a more consistent approach to linking environmental content with EJ in both teaching and students' daily lives. E2 shares that it is important to note that the actual implementation and effectiveness of environmental education in Nepal's secondary curriculum can vary. Factors such as teacher training, the availability of resources and the commitment to incorporating environmental topics can influence the quality and extent of coverage. E5 further added that at every level of decision-making, including needs analysis, planning, implementation, enforcement, and evaluation, EJ demands the right to take part as equal partners.

The policymaker (E4) shared that environmental issues are included in science subjects, but the educational systems and curricula should address the needs of the public rather than being influenced by donor agencies and focusing more on the private sector. He complained, lack of monitoring and supervision has led to deviations from the prescribed curriculum in private sector textbooks. E5 emphasized that learning should be linked not only with knowledge but also with attitudes, behaviors, and skills. Some teachers and schools have recognized the essence of education. E4 mentioned that they prepared a local-level curriculum in their municipality, but the justice committee under the chairmanship of the deputy mayor, to which they send their curriculum for discussion and suggestions, has not functioned effectively. This situation calls for a rethinking of their working strategy. Regarding environmental justice, E5 shared that cutting trees within 10-20 years, replanting them, and selling them for community development can guarantee inclusiveness, protect the forest, and generate income. Trees play a significant role in addressing climate change, protecting species, and supporting the growing global population. However, widespread tree cutting and deforestation prioritize short-term gains in fuel and building materials over the long-term benefits of standing trees (Environmental Protection Agency [EPA], 2021).

In regard to EJ, the practice of community forestry is popular in Nepal because it enables localities to use what was formerly national forestland for building and roofing materials, animal feed, and fuel wood (Ministry of Environment and Forests, 2019). E4

said that students are also familiar with the fact that for their daily needs, many people rely on non-timber forest products like leaves, fruits, and herbs regarding EJ education. The campaign aims to involve local communities that depend on forests for their livelihoods. E4 connected with EJ, the proposed approach involves cutting and replanting trees within a 10 to 20-year cycle, allowing for local development through the sale of trees while preserving the forest ecosystem. This approach ensures inclusiveness for forest-dependent families, safeguards the forest, and maintains their income. The NCF envisions the integration of EJ as part of its educational objectives, aiming to produce environmentally conscious citizens who contribute to sustainable development and the conservation of natural and national heritage (Curriculum Development Center, 2019).

E3 highlights climate change as a crucial topic in the NCF; however, it is necessary to bridge the gap between theoretical knowledge and practical understanding. Regarding EJ, unplanned development, including uncontrolled road building in hilly places and the expansion of unplanned residential developments in Terai regions, has worsened environmental threats by causing more pollution, deforestation, global warming, the climate crisis, etc. He explores the fact that leaders are not aware of the possibility of considering such uncontrolled expansion and environmental deterioration from a just perspective. Similarly, EJ and urban and rural ecological policies are necessary to clean up and rebuild our cities and rural areas in harmony with nature, uphold the cultural integrity of every community and ensure equitable access to the full range of resources for everyone (Ministry of Environment and Forests, 2019). E2 shares that the issue of biodiversity is a very important issue for education and learning, and that increasing biodiversity is more important not only for individuals but also for nations as a whole. Knowledge of biodiversity and its conservation is, therefore, very important. Another expert (E1) said that environmental problems are increasing worldwide and that the Nepali government is also including these issues in its courses to solve these growing problems. This is very impressive. Looking at the current state of the world, the environment is changing and many animals and plants are dying (National Trust for Nature Conservation, 2019). E1 shares that, EJ alarms every employee has the right to a safe and healthy workplace.

It is suggested that the pedagogical approaches that include real exposure and experiences, showcasing events such as landslides, floods, deforestation, and afforestation to students. E4 advocates for education to extend beyond textbooks and incorporate real-life exposure and experiences. They emphasize the need to raise awareness and consciousness about justice within the community to effectively incorporate it into education. Despite justice being mentioned in various educational policies and curricula (Government of Nepal, 2015). E5 observes a lack of implementation due to individual interests within different political parties. Additionally, policies related to the environment address the impact of human activities on ecosystems and aim to prevent or reduce adverse effects through actions undertaken by governments or other public or private organizations.

Prioritisation of Environmental Justice Education

Policymakers share that, even existing Nepali traditional educational institutions taught students the importance of preserving cultural heritage and using natural resources (Pradhan, 2017). But they have less practice to teach students linking with EJ and relating the practical concern. Concerning the classroom practice, the environmental justice-related content is linked with NCF and other documents (Curriculum Development Center, 2019). E2 shares, the plans and documents are connected with the

environment and they are specially linked with SSDP (Ministry of Education, 2017). The periodic plan also includes some indicators related to the environment (MOEST, 2016). As a result, a Green School plan, dust-free environment, and other activities related to the curriculum are included. The health and hygiene, toilet facility, drinking water facility, plantation, and other extracurricular activities are included. E3 shares that the emphasis was given to the plantation so that greenery could be maintained in the school. The emphasis was given to implementing what the learners have learned from the school in their communities.

National education policy could not incorporate or contribute to environmental issues at present (Centre for Education and Human Resource Development, Ministry of Education, 2019). E5 opines that, provincial educational policies are gradually formed in our context but these educational policies are unable to contribute towards environmental justice (Government of Nepal, 2017). Therefore, it is necessary to environmental preservation knowledge to the local community people and it helped to contribute to environmental justice. For these tasks, it is better to change the existing curriculum about mitigating climate change, improving natural resource management, supporting biodiversity and protecting endangered species, and reducing human impact on the environment. Equally important, everyone should prepare the local curriculum to address the local environmental need of the nation but this type of curriculum is not prepared yet. E4 shares, environmental policies are not prepared at the national level to preserve the environment in the Nepali context. He further shares, "Local curriculum is easy to implement in the single community but it is very difficult to implement the local curriculum in mixed community or society." Similarly, E1 says, "We should prepare our school curriculum by addressing the demands of the targeted group like women, disabled, marginalized, street children, labor, disaster victims, conflict victims, sexually violated victims, prisoner's disadvantages and backward group."

The current educational system in Nepal is less effective integration of EJ principles and practical application. Traditional institutions have emphasized cultural preservation but they have not focused on EJ. While plans and documents are connected to the environment, they do not sufficiently contribute to EJ. Central and provincial educational policies have also fallen short in addressing environmental justice concerns. It is crucial to revise the curriculum and develop localized approaches that can address the specific EJ of different sectors.

CONCLUSION AND IMPLICATIONS

Several environmental issues, like cleaning up and rebuilding cities and rural areas in harmony with nature and respecting the EJ, emphasize the necessity for urban and rural ecological policies. EJ educates current and future generations about environmental challenges while valuing their unique cultural viewpoints. The subject matter related to EJ is abundant in science and health, population, and environment. There are topics in the textbook emphasizing EJ topics like the effects of climate change, manmade hazards, greenhouse effects, environmental pollution, etc. in science from a naturalistic and anthropocentric perspective. Similarly, in HPE, EJ-related topics presented from a biodiversity and naturalistic perspective. Policymakers, curriculum designers, administrators, teachers, and school management are key factors to integrate students' experiences with curriculum and instruction to combat injustice. Moreover, EJ education is a vital approach that promotes social and environmental equity. It empowers students to understand and address EJ through community action and policy change. Studies have shown the effectiveness of EJ education in increasing knowledge and inspiring social action among students. The EJ movement addresses climate change's

disproportionate impact on marginalized communities and ensures access to basic necessities. Restructuring education funding and fostering community-wide engagement are key solutions. Nepal recognizes the importance of environmental education through its constitution and curriculum framework, emphasizing the need for inclusive and culturally sensitive education that promotes sustainable development and EJ. It is recommended to explore integrating EJ education into urban and rural environmental policies, while policymakers should prioritize EJ in curricula with input from curriculum designers and educators. Teachers and administrators are decisive to effectively addressing environmental injustices by integrating students' lived experiences into classroom teaching and instruction.

AUTHOR CONTRIBUTIONS

Sushil Sharma: Study conception and design, analysis and interpretation of data, draft manuscript preparation, approved the final version of the manuscript.

Mohan Paudel: Study conception and design, acquisition, review the manuscript critically, approved the final version of the manuscript.

Ashik Singh: Study conception and design, analysis and interpretation of data, review the manuscript critically, approved the final version of the manuscript.

Prof. Lizzi Milligan, PhD: Study conception and design, review the manuscript critically, approved the final version of the manuscript.

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