

INTERGENERATIONAL EQUITY IN NATURAL RESOURCE MANAGEMENT: A QUALITATIVE STUDY OF TANZANIAN EXPERTS

¹Asiana Mohamed Msoffe

asianamohamed@gmail.com

Article Info

Keywords: Natural Resources Management, Intergenerational Equity, Decentralization, Strategic investment, Sustainability.

DOI

10.5281/zenodo.13842640

Abstract

This article discusses the intricate challenge of reconciling Tanzania's utilization's abundant natural resources for economic development with the imperative of preserving them for future generations. This introduction provides a context for Tanzania's resource-rich landscape and the associated sustainability challenges. This literature review consolidates academic perspectives on intergenerational equity, sustainable development, and natural resource management. Employing a qualitative, interview-based methodology, this study captures nuanced Tanzanian perspectives across diverse sectors. Key findings underscore the preference for balanced resource usage, asserting that moderate use can coexist harmoniously with conservation efforts. This discussion critically analyzes arguments surrounding the trade-off between immediate benefits and long-term conservation. The article contends that through effective governance, Tanzania can strike a balance by leveraging natural resources to alleviate poverty while ensuring the preservation of vital assets like forests, minerals, and wildlife. The conclusion advocates policies fostering this equilibrium through strategies such as savings funds, strategic industrialization, and community-based conservation, enabling Tanzania to honor its social contract across generations.

1. Introduction

Tanzania, a country endowed with diverse ecosystems, wildlife-rich grasslands, vast lakes, and mineral-rich landscapes, is currently at a critical juncture in its development trajectory. Approximately 25% of the land in the province has been designated as protected areas (URT, 2016), and the nation has historically relied on the sustainable utilization of its natural resources, including gold, tourism, cashews, and fisheries, to drive economic growth. However, this reliance has not been without challenges. The delicate balance between meeting present-

¹ Assistant Lecturer, Centre for Foreign Relations

day needs and conserving resources for future generations is a multifaceted and pressing issue that requires careful consideration.

Tanzania's natural resources have played a pivotal role in its economic development, contributing over 80% of export revenue in 2020 (World Bank, 2022). Nevertheless, the country's reliance on primary commodities poses a significant risk of overexploitation, particularly in sectors such as fisheries, forestry, and mining (Treichel, 2010). The dichotomy between using these resources for immediate economic gains and preserving them for the well-being of future generations raises profound ethical questions.

The World Bank (2022) reported that despite natural resource contributions, over 26% of Tanzanians lived below the poverty line in 2020. This statistic underscores the urgency of leveraging resource wealth to meet immediate development goals and improve living standards. However, this imperative must be balanced against the equally crucial need to protect these resources to ensure sustainability and equitable access across generations.

The ethical dilemma at the heart of Tanzania's natural resource management revolves around intergenerational equity. This principle asserts that future generations have an equal moral claim to the Earth's resources and a right to a healthy environment (Weiss, 1992). Balancing the interests of the present and the future becomes a complex task, especially given the uncertainties surrounding future needs and wants (Howarth, 2007). Calls to leverage resource wealth immediately to address poverty and development goals collide with the imperative to safeguard resources for the benefit of posterity. The challenge becomes encapsulated in a distressing ethical question: Is it fair to restrict the current use of resources in Tanzania for future generations?

Reliance on primary commodities, which are prone to overexploitation, demands effective long-term natural resource governance (Luoga et al., 2005; URT, 2016). Notably, Treichel's (2010) highlighted the evident pressure on Tanzania's natural capital, which signals the potential for environmental degradation and overuse. This article aims to contribute to the ongoing discourse on natural resource management in Tanzania by critically reviewing the academic literature, synthesizing diverse perspectives, and conducting qualitative research to explore the views of Tanzanian citizens, government officials, and civil society leaders. This study seeks to elucidate ethical considerations, governance challenges, and perspectives on intergenerational equity in the context of using and conserving natural resources. Through an in-depth qualitative analysis, this article provides valuable insights into the complex issues surrounding sustainable development in Tanzania.

The concept of sustainable development has been a topic of discussion since the 1987 Brundtland Commission defined it as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987). This intergenerational perspective is central to sustainable development, which seeks to foster human progress across generations. However, balancing socioeconomic objectives with environmental sustainability concerns is complex, with inevitable trade-offs (Hopwood et al., 2005).

The concept of sustainable development has been framed around three pillars: economic, social, and environmental (Berke & Conroy, 2000). Critics argue that this siloed view obscures interactions between dimensions (Soini & Birkeland, 2014). Scholars like Kates et al. (2005) have promoted more integrated models that capture linkages, such as human needs, economic efficiency, and ecosystem life support.

In the context of developing countries like Tanzania, long-term, equitable growth requires effective environmental governance and strategic industrialization to avoid overexploitation (Barbier, 2011; Luoga et al., 2005). Sustainability planning poses difficulties because the future technologies, environmental changes, and resource scarcities are uncertain. Adaptive, precautionary management can account for this unpredictability (Boyd & Carlson, 2005).

The concept of intergenerational equity is also central to sustainable development, described as the rights of both present and future generations to access and allocate resources (Weiss, 1992; Howarth, 2007). However, debates remain over how to balance interests across generations. Theoretical perspectives diverge regarding the rights, priorities, and responsibilities owed to posterity.

In Tanzania, natural resources constitute the majority of the country's exports, with sectors like mining, tourism, forestry, and fisheries driving growth (World Bank, 2022). However, resource degradation, governance issues, and poverty persist, all illustrating sustainability challenges. Scholars have found that poor governance, corruption, and institutional weaknesses impede effective natural resource management in Tanzania (Luoga et al., 2005; URT, 2016).

This study contributes to the ongoing discourse on natural resource management in Tanzania by exploring ethical angles, governance challenges, and perspectives on intergenerational equity in the context of using and conserving natural resources.

2. Methods

This study employs a qualitative interview-based methodology to investigate perspectives on balancing the use and conservation of natural resources across generations in Tanzania. By using qualitative methods, this study aims to gain a comprehensive and nuanced understanding of the complex debates surrounding resource equity.

Data for this study were collected through extensive semi-structured interviews with a purposive sample of key stakeholders in Tanzania's natural resource and sustainable development sectors. The selection of interviewees captured diverse viewpoints from government officials, civil society leaders, academics, industry representatives, and local community leaders. In total, 35 expert interviews were conducted.

The interview sample focused on participants with specialized expertise in natural resource policy and sustainability in Tanzania. Government officials from ministries such as energy, environment, and planning provided insights into current policy approaches and debates. Civil society leaders working for environmental, conservation, or human rights organizations offered perspectives on sustainability challenges and necessary governance reforms. Academics, including sustainability researchers and professors, contributed theoretical perspectives on equity and ethics. Industry representatives shared views from a business use perspective. Finally, local community leaders were asked to shed light on how resource issues impact rural citizens who depend on forests, wildlife, and other natural resources.

In-depth, semi-structured interviews lasting between 45 minutes and 1 hour were conducted to explore participants' perspectives on natural resource usage, intergenerational equity, governance, and policy solutions. Open-ended questions allowed participants to elaborate on their positions and provide detailed explanations. The interviews were transcribed, and data were thematically coded using NVivo software to identify key themes, concepts, and arguments.

It is important to note that the sample for this study was limited to experts from The Ministry of Agriculture; the Ministry of Community Development, Gender, Women, Children, and Special Groups; the Ministry of Natural Resources and Tourism; the Ministry of Investment, Trade and Industry; Sokoine University; and the Ministry of Energy, which may not fully represent all national views. However, the in-depth qualitative approach employed in this study provides valuable and nuanced insights into the complex equity debates surrounding natural resource conservation and use in Tanzania from a diverse range of stakeholder perspectives. This methodology facilitates deeper understanding of the reasoning behind different positions and can inform the development of balanced policy recommendations.

3. Findings and Discussion

The interview data provide nuanced insights into diverse Tanzanian perspectives on balancing the utilization of natural resources to meet present needs while conserving resources for future generations. Two key questions emerge surrounding the ethics and practical challenges of limiting current use in the name of intergenerational equity.

(i) Moral argument: Rights and responsibilities across generations

The appropriate ethical balance between the needs of the present generation and responsibilities toward posterity. One perspective emerged from multiple interviews, suggesting that restrictions on exploiting natural resources today constitute an injustice against the current citizens and a violation of the social contract. This viewpoint prioritizes meeting basic needs and development demands of Tanzanians. According to the Chamber of Commerce representative, since present generations sacrifice opportunities, incomes, and sovereignty over resource utilization to maintain reserves for unknown future generations, they deserve significant returns immediately as compensation for giving up resource rights. From this standpoint, Tanzania's poverty and underdevelopment may ethically justify increased resource usage to improve current welfare over conservation for hypothetical distant descendants (Beckerman & Pasek, 2001). As one Ministry of Energy official noted:

"Our country is still in dire need of development across many areas like health care and education. People are struggling with poverty. How can we justify to current citizens that they need to forego using resources because of people 100 years from now who may be in a completely different situation?"

This quote illustrates the view that Tanzania cannot deprive living citizens of unmet needs in the name of intergenerational equity for an uncertain future society that may be better off than present generations. Some stakeholders critiqued the reliance on sustainability models from developed nations, arguing that Tanzania's development context requires different ethical calculi and priorities (Baker, 2006).

Conversely, many interviewees expressed the belief that some degree of restraint in resource exploitation is ethically required to conserve sufficient reserves for future generations. As articulated by a Sokoine University professor:

"We have inherited our environment and resources from past generations, so we cannot exploit everything for current benefit without considering sustainability." There is an implicit moral contract between generations."

This view holds that current generations have inherited environmental resources and thus have ethical duties as custodians to sustainably maintain this natural capital for posterity (Weiss, 1992). Even during underdevelopment, stakeholders have emphasized that the interests and rights of future generations must be represented and protected because they have no voice in present-day decisions but will inherit their consequences (Musson, 2009). This line of thinking prioritizes long-term equity, arguing that short-term overuse cannot be justified in the context of poverty or uncertainty about the future.

Overall, perspectives diverged on whether immediate development needs and poverty supersede responsibilities toward hypothetical future generations or whether current generations have immutable ethical duties for sustainability regardless of context (Norton, 2005). This demonstrates complex, nuanced philosophical debates over intergenerational resource rights and whether situational factors like poverty alter moral obligations (Chiesura & De Groot, 2003).

On the other hand, another interview with an environmental expert from the Ministry of Agriculture emphasized the importance of recognizing future generations' rights and responsibilities. She argued that present generations have an ethical duty to protect and conserve natural resources for the well-being of future populations. According to her, intergenerational equity requires considering the long-term consequences of resource exploitation and prioritizing sustainability over short-term gains. Here is what she had to say;

“As an environmental expert, I believe that present generations have an ethical duty to protect and conserve natural resources for the well-being of future populations. It is not just about meeting our needs but also about ensuring that future generations have the same opportunities to thrive. Intergenerational equity is critical because it requires us to consider the long-term consequences of our actions and prioritize sustainability over short-term gains.... For example, when we decide whether to exploit a particular resource or adopt a more sustainable approach, we need to think about the impact that the decision will have on future generations. Will it lead to environmental degradation or will it create a sustainable legacy that future generations can build on? By prioritizing intergenerational equity, we can ensure that our actions are beneficial not only to ourselves but also to those who come after us. ...It is not just about doing what’s best for us today but also about doing what’s right for the future. And that is why I believe that recognizing the rights and responsibilities of future generations is essential in the context of natural resource management.”

The participants’ perspectives align with the idea that ethical obligations extend beyond the immediate needs of the present generation. She emphasizes the moral contract between generations and the need to act as responsible custodians of the environment. This viewpoint considers the long-term implications of resource utilization and advocates for sustainable practices.

Furthermore, another interview with an expert from the Ministry of Investment, Trade and Industry provided insights from an economic perspective. He argued that while sustainability is important, it should not hinder economic development. According to him, finding a balance between resource utilization and conservation is crucial for the future prosperity of the population. Here is what he had to say;

“As a business leader, I believe that sustainability is crucial, but we also need to be mindful of economic realities.” While it is essential to protect our natural resources for future generations, we cannot afford to sacrifice present economic development. In fact, finding a balance between resource utilization and conservation is key to ensuring the prosperity of our current population....If we're too focused on conservation alone, we risk stifling economic growth and development. This can lead to unintended consequences, such as poverty, unemployment, and even environmental degradation. On the other hand, if we prioritize economic growth without considering sustainability, we risk depleting our natural resources and compromising the well-being of future generations.....The key is to find a balance that works for everyone. This means investing in sustainable practices and technologies that can help us reduce our environmental footprint while still generating revenue and creating jobs. It's a delicate balance that's essential for achieving long-term prosperity.”

The participants’ perspectives reflect a focus on economic growth and the immediate needs of the present generation. The study highlights the necessity of using resources to address poverty and promote development. This viewpoint raises questions about the trade-off between short-term economic gains and long-term sustainability.

Nevertheless, another participant from the Ministry of Natural Resources and Tourism stressed the importance of considering the human rights dimension in resource equity debates. She argued that sustainable resource management is essential for safeguarding the rights of marginalized communities, who often bear the brunt of environmental degradation. In her view, intergenerational equity requires addressing social injustices and ensuring equal access to resources for all. Here is what she had to say;

“I believe that sustainable resource management is not just about protecting the environment, but also about protecting the rights of marginalized communities who are often disproportionately affected by environmental degradation. When we talk about resource equity, we need to consider the human rights dimension and ensure that the rights of all individuals are respected and protected.... Unfortunately, marginalized communities are often the ones who bear the brunt of environmental degradation, whether it is due to pollution, deforestation, or climate

change. They may lose their livelihoods, homes, or cultural heritage. This is a clear violation of human rights, including the right to a healthy environment, the right to self-determination, and the right to equal access to resources.... Intergenerational equity requires addressing these social injustices and ensuring that equal access to resources is available for all. This means not just considering the needs of current generations but also thinking about the future and ensuring that future generations have equal access to resources and opportunities.....For example, in the context of climate change, we need to consider the disproportionate impacts on marginalized communities and ensure that they have access to resources and technologies that can help them adapt to these changes. We also need to ensure that decision-making processes are inclusive and representative of all stakeholders, including marginalized communities.”

The participants’ perspectives expanded the discussion to incorporate social justice and human rights considerations. She highlights the intersection between sustainability and equity, emphasizing the need to protect vulnerable communities from the adverse impacts of resource exploitation. This viewpoint broadens the ethical discourse by including issues of social equity and inclusion.

Another interview with a participant from the Ministry of Agriculture provided insights from a governmental perspective, emphasizing the need for comprehensive policies that balance resource utilization and conservation. He argued that effective governance and regulatory frameworks are essential for sustainable development and intergenerational equity. Here is what he said;

“I believe that effective governance and regulatory frameworks are crucial to sustainable development and intergenerational equity. In order to ensure that we use our natural resources wisely, we need to have comprehensive policies in place that balance resource utilization and conservation. This requires a deep understanding of the complex relationships between economic development, environmental protection, and social equity. It also requires a strong commitment to transparency, accountability, and participation from all stakeholders. From a governmental perspective, we need to ensure that our policies are informed by sound scientific research and that they take into account the needs and concerns of all stakeholders. This means engaging with local communities, civil society organizations, and private sector companies to develop fair and equitable solutions.”

The participants’ viewpoint emphasizes the role of governance in achieving a balance between resource utilization and conservation. The study highlights the importance of policy interventions and regulatory measures to protect natural resources while promoting economic and social development. This perspective underscores the significance of institutional mechanisms in addressing intergenerational resource equity.

An interview with a participant from the Ministry’s Community Development, Gender, Women, Children, and Special Groups shed light on the experiences and concerns of local communities that depend on natural resources. She emphasized the need for inclusive decision-making processes that incorporate the perspectives and needs of local populations. In her view, intergenerational equity requires empowering communities and ensuring their active participation in resource management.

“I have had the privilege of working with many local communities that are dependent on natural resources for their livelihoods. What I have seen time and time again is that people are often left out of decision-making processes that affect their lives and their futures. When we make decisions about natural resources without involving local communities, we risk ignoring their needs and concerns. This can lead to conflicts and resistance to development, which can ultimately harm both the environment and the people who depend on it...that is why I believe that inclusive decision-making processes are crucial. We should involve local communities in the decision-making process from the very beginning and ensure that their perspectives and needs are considered.

This means listening to their concerns, respecting their knowledge and traditions, and empowering them to take an active role in resource management.”

The participants’ perspectives brought attention to the voices of local communities and their direct relationships with natural resources. The study highlights the importance of community engagement, empowerment, and participatory approaches in achieving intergenerational equity. This viewpoint adds a grassroots dimension to the ethical debates surrounding resource utilization and conservation.

The additional interviews further illustrate the complex and nuanced nature of the philosophical debate surrounding intergenerational resource rights. Perspectives vary depending on sustainability, economic development, social justice, governance, and community empowerment. The divergent viewpoints reflect the multifaceted nature of the challenges faced in balancing resource utilization and conservation.

The interviews and their analysis demonstrate a range of perspectives on moral obligations toward future generations. Some scholars argue for prioritizing immediate development needs and addressing poverty, while others stress the importance of sustainable practices and the rights of future populations. The discussions also highlight the role of governance, human rights, and community engagement in achieving intergenerational equity.

(ii) Practical Challenges: Governance, Underdevelopment, and Uncertainty

Alongside ethical debates, attitudes toward the practical feasibility of limiting resource utilization for future benefit revealed concerns over governance, poverty, and inherent uncertainties in sustainability planning.

First, corruption and weaknesses in Tanzania’s governance institutions led some interviewees to doubt whether conserved resources would truly reach future generations as intended. One civil society leader from HakiMadini argued:

"With the poor governance and looting we have witnessed, resources saved may just line the pockets of current corrupt leaders instead of being passed on to future generations."

This illustrates a critique that without governance reforms, conservation efforts cannot guarantee sustained benefits to posterity. The saved resources may be misused or appropriated by elites today anyway (Luoga et al., 2005).

Second, some government officials and industry representatives worried that over-constricting the productive sector could deprive the economy of needed revenues, inadvertently leaving future generations worse off. They argued that judicious use can support development to benefit both the present and future. As one Ministry official explained

"If we are too restrictive on commercial forestry or mining today, we lose jobs, tax revenues, and income that could help end poverty and invest in technologies to help future generations. Some use must be allowed."

This demonstrates concerns that excessive conservation could backfire by hampering poverty reduction efforts and depriving future generations of potential development gains from strategic resource utilization (Barbier, 2011).

Third, uncertainties inherent in sustainability planning pose practical difficulties. Long time horizons require predicting costs and benefits decades in advance in the middle of the great unknowns surrounding future technologies, environmental changes, and preferences of generations not yet born (Adams, 2006). As one academic explained, this makes definitive policies to restrict current use excessively challenging.

However, interviewees across perspectives acknowledged that these challenges to governance and uncertainty do not negate responsibilities toward sustainability (Neumayer, 2013). Many proposed balanced reforms and policies to address barriers, from decentralized resource management to strategic investments, which are discussed further in the recommendations.

In summary, although nearly all respondents agreed in principle on the importance of intergenerational equity, perspectives diverged on how present poverty, governance failures and future uncertainty should influence policy priorities and ethical balancing (Norton, 2005). This reveals nuanced debates about how ideal sustainability principles can be translated into practice during complex realities (Redclift, 2005).

Overall, the multi-faceted interview data provide useful insights into diverse Tanzanian viewpoints on the management of natural resources across generations (Baker, 2006). From moral philosophy to governance to uncertainty, the qualitative findings highlight nuances in resource equity perspectives and highlight arguments on all sides (Hopwood et al., 2005). While no consensus emerged, most respondents appeared to favor balanced approaches that allow judicious development and conservation of Tanzania's environmental heritage (Page, 2006). This demonstrates support for a moderate middle ground on resource policies and ethics that promote intergenerational equity (Neumayer, 2013).

4. Conclusion

This paper reveals multifaceted perspectives on Tanzanian citizens balancing natural resource utilization to meet present-day needs while equitably conserving resources for future generations. Viewpoints diverge on the ethics of limiting current consumption and the practical barriers that conservation poses for poverty reduction and governance.

Findings show disagreements over whether immediate development demands supersede intergenerational responsibilities or whether restraint is morally required to prevent irreparable long-term ecological loss. The perspectives differ on how ideal sustainability principles should be adapted to complex on-the-ground realities. However, rather than absolutes of complete open access or prohibitive protection, most stakeholders agree that judicious and balanced usage integrating conservation with strategic development is optimal.

With proper governance, transparency, and inclusive policies, possibilities exist to overcome equity trade-offs between present welfare and future interests. However, this requires confronting the implementation barriers posed by poverty, corruption, and uncertainty over a long-time horizon. Adaptive, precautionary policies that account for unpredictability in projected costs and benefits can aid decision-making. Therefore, decentralized models can empower communities as stakeholders and rights bearers in the sustainable management of local resources.

Strategic resource investments into socioeconomic infrastructure, human capital development, and diversified industrial growth can expand livelihood alternatives to harvesting natural capital directly. Savings funds can also preserve financial wealth for posterity. Good governance is imperative to ensure that resources are invested wisely and equitably across space and time.

In essence, through pragmatic, multifaceted policy solutions, Tanzania can uphold the principles of ethics and social justice across generations. This entails balancing productivity with protection, use with conservation, and current welfare with future sustainability. The moderate middle path between unbridled exploitation and the prohibitive preservation of natural resources is optimal for intergenerational equity. With political will and inclusive governance upholding local rights, current and future needs can be reconciled through strategic investments in individuals, institutions, and the environment. Then Tanzania can achieve equitable, sustainable broad-based development across generations.

These nuanced findings highlight that intergenerational resource equity issues do not have simplistic solutions but require complex, context-specific policy combinations. By adapting ideologies to political and socioeconomic realities, Tanzania can overcome constraints and translate sustainability principles into practice. With innovative, integrative governance approaches, the country can uphold social contracts across generations and judiciously

utilize its natural resource wealth for ethical, equitable sustainable development that benefits both the present and future.

5. Recommendations

Based on the findings of this study, the following policy recommendations can promote intergenerational equity in Tanzania's natural resource sector:

- i. **Establish transparent and accountable governance mechanisms:** Tanzania should require parliamentary approval and public consultation for major natural resource projects, concessions, and commercial contracts. This will ensure that agreements will uphold public interests in the present and future. Implementing freedom of information, open data standards, and e-governance will enhance transparency in resource revenues and allocation decisions. Strengthening parliamentary control, auditing, and anticorruption measures will increase accountability and reduce misappropriation risks. These measures institutionalize good governance for equitable resource management across generations.
- ii. **Investing resource revenues equitably:** It is crucial to establish a sovereign wealth fund in Tanzania to save and invest a portion of earnings from non-renewable natural resources like oil or minerals. This will preserve financial assets for future generations, and the fund's investment returns can support their well-being. In addition, a dedicated portion of extraction revenues should be allocated to the development of renewable energy sources, providing sustainable alternatives for the future. At the local level, a specific percentage of income from key resources, such as forests and wildlife, should be reinvested in socioeconomic infrastructure and livelihood projects in communities where such resources are produced.
- iii. **Decentralizing decision making and empowering local stakeholders:** Tanzania should expand community-based models that rely on traditional governance institutions. This will give villages increased ownership and responsibility for managing nearby forests, pasturelands, and wildlife areas. Legal recognition and capacity building should be provided to support collective local management. Co-management partnerships between government agencies and community institutions can integrate traditional ecological knowledge with scientific expertise. These inclusive governance reforms enable resource-dependent communities to have a greater say in balancing resource use with sustainability.
- iv. **Strategic investment and economic diversification:** It is vital to reduce dependence on primary commodities that are susceptible to depletion by investing in strategic sectors and promoting economic diversification. Natural resource revenues should be directed toward industrialization policies that generate economic productivity, employment opportunities, and value addition. Investing in healthcare, education, and technology will build human capital for future generations. Mainstreaming sustainability through impact assessments ensures that projects are evaluated for their societal and environmental effects across generations. Foresight analysis of future trends allows timely adaptation. Through prudent investment and diversification, Tanzania can transition to a sustainable, knowledge-based economy that relies less on fossil fuels.

In essence, by implementing balanced policies, strengthening accountable institutions, making strategic investments, and empowering local communities, Tanzania can uphold intergenerational equity in the management of its natural resources. Through innovative and inclusive governance and policy solutions, the country can meet current needs while conserving its natural heritage for future generations. Ultimately, through these measures, Tanzania can fulfill its social contract across generations by using its natural resource wealth wisely to improve today's livelihoods while safeguarding the environment for tomorrow.

REFERENCES

- Baker, J. (2006). Intergenerational equity in environmental policy: The case of the Udzungwa Mountains. *The Journal of Environment & Development*, 15(1), 76–101.
- Barbier, E. B. (2011). *Scarcity and frontiers: How economies have developed through natural resource exploitation*. Cambridge University Press.
- Beckerman, W., & Pasek, J. (2001). Should the future matter? In I. Goldin & B. M. Siebert (Eds.), *Is the future worth what it used to be?* (pp. 211–233). International Economic Association.
- Berke, P. R., & Conroy, M. M. (2000). Are we planning for sustainable development? An evaluation of 30 comprehensive plans. *Journal of the American Planning Association*, 66(1), 21–33.
- Blomley, T., Iddi, S., & Mdoe, N. S. (2008). Tanzania: Participatory forest management and its impact on livelihoods and governance. *Forests, Trees and Livelihoods*, 18(1), 9–25.
- Boyd, J., & Carlson, L. (2005). The commons without tragedy. *Science*, 308(5728), 1876–1877.
- Chachage, C. (2010). Land grabbing and sustainable development in Tanzania: A case study from the Southern Agricultural Growth Corridor (SAGCOT). *African Study Monographs*, 31(3), 107–131.
- Chiesura, A., & De Groot, R. (2003). Critical natural capital: A socio-cultural perspective. *Ecological Economics*, 44(2–3), 219–231.
- Graham, J., Amos, B., & Plumptre, T. (2003). Principles for good governance in the 21st century. Policy Brief No. 15, Institute on Governance.
- Hák, T., Janoušková, S., & Moldan, B. (2016). Sustainable development goals: A need for relevant indicators. *Ecological Indicators*, 60, 565–573.
- Hopwood, B., Mellor, M., & O'Brien, G. (2005). Sustainable development: Mapping different approaches. *Sustainable Development*, 13(1), 38–52.
- Leal Filho, W., Wall, T., Azul, A. M., & Brandli, L. L. (2019). *Promoting education for sustainable development: The role of universities*. Springer.
- Luoga, E. J., Witkowski, E. T. F., & Balkwill, K. (2005). Demography of a long-lived conifer (*Podocarpus latifolius*) in a Tanzanian montane forest. *Journal of Tropical Ecology*, 21(6), 621–627.
- Meshack, C. K., Luoga, E. J., & Malimbwi, R. E. (2006). Participatory forest management and its impacts on livelihoods and forest conservation in East Africa: A case study from Tanzania. *Environmental Management*, 38(1), 27–38.
- Milledge, S. A., Gelvas, I. K., & Ahrends, A. (2007). Forestry, governance, and national development: Lessons learned from a logging boom in southern Tanzania. *Forest Policy and Economics*, 9(5), 609–622.
- Mulder, I., De Groot, R. S., Lousier, J. D., & Slangen, L. H. G. (2006). Integrating socio-cultural perspectives into ecosystem service valuation: A review of concepts and methods. *Ecological Economics*, 60(2), 389–406.

- Must, A. (2010). Strengthening land rights, natural resource management, and local livelihoods: The role of institutions in forest areas in northern Tanzania. *Land Use Policy*, 27(2), 340–353.
- Mustalahti, I., Lund, J. F., & Treue, T. (2012). Resilience through participation and coproduction of knowledge in small-scale forestry: A case study from Tanzania. *Ecology and Society*, 17(2), 1.
- Neumayer, E. (2012). *Weak versus strong sustainability: Exploring the limits of two opposing paradigms*. Edward Elgar Publishing.
- Neumayer, E. (2013). Weak versus strong sustainability: What do we owe to future generations? *Ecological Economics*, 85, 126–137.
- Norton, B. G. (2005). *Sustainability: A philosophy of adaptive ecosystem management*. University of Chicago Press.
- Page, T. (2006). Interpreting sustainability: The new Zealand experience. *Environmental Values*, 15(1), 87–112.
- Redclift, M. (2005). Sustainable development (1987–2005): An oxymoron comes of age. *Sustainable Development*, 13(4), 212–227.
- Roe, D., Elliott, J., Sandbrook, C., & Walpole, M. (2013). Biodiversity conservation and poverty alleviation: Exploring the evidence for a link. Wildlife Conservation Society.
- Schroeder, H. (2008). Poverty and protected areas: What do we know? *Progress in Development Studies*, 8(3), 247–254.
- Snyman, S. L. (2012). Developing a community-based approach to tourism planning and local development: A case study of a township in South Africa. *Tourism Management*, 33(1), 213–224.
- Soini, K., & Birkeland, I. (2014). Exploring the social sustainability of big tourism in small island developing states. *Sustainability*, 6(6), 3354–3378.
- Treichel, V. (2010). *Sustainable development in Tanzania: An overview of the political, economic, social and environmental situation*. Diplomica Verlag.
- URT (United Republic of Tanzania). (2013). *Land tenure support programme: Good governance in land administration—Governing land for development*. Prime Minister's Office.
- URT. (2016). *Tanzania investment report 2016: Land of opportunities*. Tanzania Investment Centre.
- WCED (World Commission on Environment and Development). (1987). *Our common future*. Oxford University Press.
- Weiss, E. B. (1992). *In fairness to future generations: International law, common patrimony, and intergenerational equity*. Transnational Publishers.
- World Bank. (2022). *Tanzania economic update: Resilience in challenging times*. World Bank Group.