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Namibia and Germany

Two Perspectives on Strengths and Struggles for a Sustainable Development

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ANITA GASHI, THORSTEN BRAUN

Introduction

Namibia and Germany may appear vastly different, yet they share significant connections. From a geographical point of view, the countries are connected by the 13th meridian. In addition to economic agreements, Namibia and Germany share a not-so-easy past but hopefully a brighter future. Both countries are committed at local and global levels to implementing the Sustainable Development Goals promoted by the United Nations. However, they face very different challenges due to different perspectives and priorities between the global South and North.

Based on the joint commitment to the 17 Sustainable Development Goals and an already existing cooperation between the Namibia University of Science and Technology and the University of Stuttgart, which has been recorded in a Memorandum of Understanding in 2023, a seminar was held in the summer of 2024 to bring the two universities and countries closer together. In the event titled *Namibia and Germany: Two Perspectives on Strengths and Struggles for Sustainable Development*, organized by the SDG-Campus (www.sdg-campus.de) and the Center for Higher Education and Lifelong Learning at the University of Stuttgart, students and researchers from Namibia, South Africa, the United Kingdom, and Germany engaged in an in-depth exploration of sustainability goals. Throughout the semester and on two workshop days, the students discussed the strengths and challenges of both countries in implementing the sustainability goals. They invited experts, and the students were encouraged to discuss their experiences in an open exchange.

This collection of essays thoughtfully explores the findings from some of the scholars involved and documents the effort to create a space for encounter and exchange. It provides an opportunity for individuals from Southern Africa, Germany, and the UK to reflect on the numerous gaps, potentials, and existing connections between these regions. The aim is to foster understanding and build new bridges between them.

Due to the freely designed space, we could discuss different topics from different disciplines and areas. This is evident in the contributions to the volume. Thorsten Braun's (Germany) essay, for example, addresses the gaps between Namibia and Germany, thus pointing to the complicated relationship between the two countries. Katie Finlay (UK) addresses the genocide committed in Namibia approximately 120 years ago, during which German colonialists killed the Herero and Nama people.

She wonders whether the reparations already paid by Germany to the Namibian government are sufficient. Anita Gashi (Germany) devotes her contribution to humanity studies. She addresses how we talk about nature and our environment by taking a closer look at ecocriticism and placing it in the context of African literature and criticism. The article by Suzie Shefeni and Vivian !Nou-/Gawaseb (Namibia) discusses a more technical side of Namibia. They focus on green hydrogen and the benefits of a developing green hydrogen industry in Namibia. Daliwonga Pantshwa's (South Africa) essay addresses land ownership, repairs, and indigenous knowledge, situating the text within the realm of climate justice. Clarissa D. Reuter (Germany) turns to sustainable consumption and food waste, one of Germany's major contribution to climate change, with consumption being one of the biggest issues. Her essay is followed by Calvin Seiberling's (Germany) discussion of urban gardening. He points out the differences and challenges between Namibia and Germany. Both contributions are related to the second sustainability goal, Zero Hunger.

We hope that these contributions to an Education for Sustainable Development at university level will bridge the gap between Namibia and Germany and encourage further collaborations, such as the current ASA Academia program between the Namibia University of Science and Technology and the University of Stuttgart on the topic of green hydrogen. This volume of essays is the prelude to a cultural, academic, and social exchange that will hopefully support a long-lasting and enriching partnership between the two universities and individuals from both, the Global South and North.

THORSTEN BRAUN, UNIVERSITY OF STUTTGART

Bridging Gaps

Imagine time travel. What if we would accompany two ancestors from Germany and Namibia, watching the present state of relationships between both countries? Let's assume they had reconciled about the colonial atrocities in the past,[1] which is not necessarily an unrealistic assumption. Reconciliation seems much easier to achieve between two individuals who face each other than between two nation-states. So what would they witness?

There are indeed many gaps between Namibia and Germany. However, the notion of a gap or even a deep chasm immediately implies the potential for a bridge to be built and a path to be crossed. This idea of bridging or building is not just born out of curiosity but also out of a sense of hope and optimism. The passage across these gaps and chasms holds the promise of positive encounters between those who build the bridge from both sides with positive intentions.

But again: What gaps and bridges would our ancestors see?

Technology has advanced for sure since the late 19th century. Traditional resource exploitation has continued, emerging technologies like green hydrogen[2] have been introduced, digitization has swept across almost all parts of society, and the mobility of people has multiplied.[3] Namibia has gained its independence, and Germany has been reunited. Also, considering the colonial past and apartheid era, there was a shift of sentiment towards restitution and protection of the environment that sought to bridge and heal, but many consequences of apartheid, environmental apartheid, suppression, and war remain, and their shadows extend until today.

Regarding Namibia and Germany, there is a cynical gap between many national attempts to bridge. In a globalized world, movements towards decolonization, self-empowerment, and encounters on eye level between the Global South and North seem to be inevitable, even though there are many obstacles, literal push-backs, and failed attempts. This has been recognized. However, cynicism shows itself as the difference between some bridges being built from solid materials in a high-speed

[1] Kössler 2015.
[2] Musheko 2024.
[3] Atlas of Namibia Team 2022.

neo-liberal rush. In contrast, other bridges appear fragile, unattended construction sites with big labels but limited efforts.

The most dire gap in both countries' relationship seems to be their mutual will to move towards a future of closer cooperation, benefit, and growth (especially economically, technologically, and concerning diversification of trade and political cooperation) on one side and reconciliation with a violent colonial past on the other.[4]

Every economical push made by the German Government seems to be spoiled by the lack of serious attempts to come to terms with the past in a sense of healing, and subsequently, they are spoiled by the stain of selfishness: what counts is energy diversification, access to the Southern African market in shifting international relations, access to resources, and expansion of trade relations. This gap emerges from the wish (on both sides, to some extent) to charge towards the future without coming to terms with the past.

Of course, attempts to reconcile have been made. We saw the official recognition of the genocide by the German Government.[5] We saw a negotiated reparation.[6] We saw well-intended movements toward repatriating stolen artifacts, such as the "With Namibia" initiative,[7] and the return of human remains.

But still, a huge gap exists between what is returned and restituted and what human remains and stolen heritage are withheld. This raised anger among Germans and Namibians alike about the hilarious clinging to legal constraints or plain arrogance about objects and remains that never belonged to Germany. Civil society, the arts, and literature are still putting it front and center, for example, through movies and documentaries like *Das Leere Grab* and *Der vermessene Mensch*, *Dahomey* (fosucing on France), or *Stray Flower*.

Also, both countries' governments have not yet succeeded in finding a proper way of including in the process of reconciliation the local communities who suffered most from the genocide 120 years ago.[8]

This gap between increased economic and political cooperation and the lagging behind of social reconciliation is currently being intensified by the spearheading of the green hydrogen industry.[9] Communities affected by the genocide are directly confronted with the consequences of these industrial advancements. But also on a national level, the question of neo-colonization presents itself: Has the ground

[4] Federal Republic of Germany and Republic of Namibia 2021.
[5] Ibid.
[6] Oltermann 2021.
[7] Siegenthaler et al. 2024.
[8] Teffera 2023.
[9] Tunn et al. 2025.

already been prepared for a common, reconciled history in order to carry the industrial partnership for future technologies fairly and on an equal footing?

Another gap is the considerable difference in the colonial past's perceived relevance and impact. While the media in Germany is reporting on some significant issues from Namibia (like elections, top-level meetings, and advances in the energy sector), Germany is much more present in Namibia. In a country that endured colonial atrocities, a majority of its people still experience the direct results of these misdeeds. Families, social structure, livelihoods, land ownership, and distribution of people are affected. Even on a much more trivial level, the German language is present in Namibians' daily lives, with newspapers and radio broadcasts, social media, loan words, and activities from within German-speaking communities. In Germany, in return, you barely encounter Namibian presence through people, languages, and culture.

However, another gap ironically contributes to the bridging of those mentioned above: Germans are drawn to Namibia as tourists to a significant extent. But Namibian tourists in Germany are relatively unheard of. While many political initiatives fall short of sufficiently recognizing the past while pushing toward a beneficial future, traveling to Namibia shows that individuals everywhere care. Be it tourists or residents. There is activism going on everywhere, on a local level. Sometimes, only to the extent of personal interest, curiosity, and individual relationships. Sometimes through civil society and small-scale activism.[10] Being recognized as a traveling German in Namibia sparks interest and a fruitful exchange of thoughts and ideas and seriously contributes to reconciliation. Ironically, again, bringing up the many attempts of cooperation at government levels often sparks uneasiness or outright disdainment in such personal encounters.

Bridging the global and the local level is a trope well-fitting, not only for the issue of reconciliation and respectful cooperation towards a common future. It also describes the many challenges we face concerning sustainable development goals in general. Here, the topic of this essay touches on the context where it was created: the Namibian-German relationship needs committed activities on a local level that have the potential to build a bridge between positive and wholesome individual encounters and a systematic advancement of relationships on an institutional level. This local engagement is not just important. It is crucial. It is what will make the difference in the reconciliation process. Universities play a part in that too, which inspired the seminar on sustainability challenges in Namibia and Germany in 2024 at the University of Stuttgart, of which this collection of essays is the direct result.

[10] Peringanda, Kauvee, and Hoffmann 2024.

The relationship between Namibia and Germany is one example of the sustainability challenges we face across the globe: environmental concerns, a struggle for resources, economic prosperity, energy security, political entanglement, and substantial implications for social and cultural concerns and people's identities. If we tug at one end, everything moves and shifts, and those working on technological solutions or economic betterment must not neglect social implications or historical burdens. This overcomplexity is one of the significant traits of sustainability challenges worldwide.[11]

This collection of essays reflects on that in an open-minded way, documenting the attempt to create a place of encounter and exchange where people from Southern Africa and Germany (and the UK) have the chance to reflect on the many gaps and potential and already established bridges between both countries, hopefully building one themselves.

In one of Mutwas' works, there is a somewhat archaic reference to what it means to establish peace between two nations with a murderous and violent past.[12] He describes it as an engaged ritual where everyone is involved in meaningful activities that will shape your perception and life forever. But it means total commitment, dancing, chanting, shaping, building, and even harsh punishment for any attempt to spoil the efforts. The key element is personal involvement and encounters. The power of rituals is mostly lost to us, at least in the sense of formal rites, as Mutwa describes it. But this power is still present in meaningful, conscious interactions between committed individuals and the immediate social environment they shape – including mid-level organizations like universities. This kind of power could also help to bridge past and present, descendants and time-traveling ancestry.

Bridging gaps on a national or global level is an important aspect of partnerships that contribute to the achievement of development goals. But meaning is not created by economic schemes or political treatises but through interaction that touches others' lives.

References

Atlas of Namibia Team (2022). *Atlas of Namibia. Its land, water and life*. In collab. with Martin Mendelsohn et al. Mendelsohn, Martin (Verfasser.) Mendelsohn, John M., (Verfasser.) Windhoek: Namibia Nature Foundation. 390 pp. ISBN: 978-99945-53-46-4.

[11] Wals 2015.
[12] Mutwa 1998, p. 353.

Federal Republic of Germany and Republic of Namibia (2021). *Joint Declaration by the Federal Republic of Germany and the Republic of Namibia. United in Remembrance of Our Colonial Past, United in Our Will to Reconcile, United in Our Vision of the Future*. 2021-05-15.

Kössler, Reinhart (2015). *Namibia and Germany. Negotiating the Past*. eng. Windhoek: University of Namibia Press. 402 pp. ISBN: 978-99916-42-09-3.

Musheko, Jona (Nov. 5, 2024). *Namibia Positioned to Revolutionise Green Hydrogen Production with Iron-To-Hydrogen Technology*. Ed. by Ministry of Mines and Energy. Windhoek, Namibia.

Mutwa, Vusamazulu Credo (1998). *Indaba, My Children. African Tribal History, Legends, Customs and Religious Beliefs*. London and Edinburgh: Canongate.

Oltermann, Philip (May 28, 2021). "Germany agrees to pay Namibia € 1.1bn over historical Herero-Nama genocide". In: *The Guardian*.

Peringanda, Laidlaw, Ningiree Kauvee, and Katharina Hoffmann (2024). "Das Swakopmund Genocide Museum". In: *Koloniale Kontinuitäten in Niedersachsen*. Ed. by Verband Entwicklungspolitik Niedersachsen. VEN-Positionen. Hannover, p. 17.

Siegenthaler, Fiona et al., eds. (2024). *With Namibia. Engaging the Past, Sharing the Future*. A two-part Summer School in Stuttgart and Windhoek. In collab. with Vera Brillowski et al. Stuttgart and Dresden: Sandstein Kommunikation.

Teffera, Almaz (2023). *Namibian Communities Deserve a Say in German Reparations Deal*. True Reckoning Requires Involving Descendants of Victims of Colonial Era Abuses. Human Rights Watch. URL: https://www.hrw.org/news/2023/03/30/namibian-communities-deserve-say-german-reparations-deal (visited on 04/09/2025).

Tunn, Johanna et al. (2025). "The German scramble for green hydrogen in Namibia: Colonial legacies revisited?" In: *Political Geography* 118. PII: S0962629825000253, p. 103293. ISSN: 09626298. DOI: 10.1016/j.polgeo.2025.103293.

Wals, Arjen E. J. (2015). *Beyond unreasonable doubt. Education and learning for socio-ecological sustainability in the anthropocene*. Wageningen: Wageningen University. 36 pp. ISBN: 978-94-6257-369-7.

KATIE FINLAY, UNIVERSITY OF STUTTGART

Are the German reparations paid to Namibia enough?

This essay will discuss German-Namibian relations, beginning in 1890 during the 'scramble for Africa' and continuing to current relations and postcolonialist issues. Firstly, I will be looking into the historical ties, then further into the case study of the Namibian genocide that occurred during the German rule of the country, and then at the changes in relations after the genocide. Finally, we examine the current relationship between the countries of the present day. Throughout this essay, I will present the facts to the readers to allow individuals to form their own opinions about whether the reparations given to Namibia from Germany have been sufficient for the suffering of the Herero and the Nama people. While researching for this essay, I found limited academic sources written from the Namibian point of view. Therefore, many of the materials I use come from either the German or European point of view.

Namibia is a country on the southwestern coast of Africa and was originally home to many indigenous groups, namely the San, Nama, and Herero people. Namibia underwent colonization by both Germany (19th century) and South Africa (20th century) and gained independence in 1990.[13] The first inhabitants of Namibia were the San, who had, even before the arrival of the Europeans, been struggling against other clans due to their weak military strength.[14] As more communities migrated to Namibia, the region became increasingly diverse, introducing various practices and cultures into the country; this continues to be evident today, shaping the Namibia we see today. The first contact between Africa and Europe occurred in 1484 when the Portuguese explorer Diogo Cão arrived.[15] Permanent European settlement was established in the region in the 19th century with the arrival of German settlers during the 'Scramble for Africa'; these settlers introduced trade and firearms to the country.[16] Namibia is rich in copper, gold, lead, and diamonds,[17] which were desired assets by the Europeans and catalyzed the European colonization of Africa. The

[13] Green 2025.
[14] Ibid.
[15] South African History Online n.d.
[16] Green 2025.
[17] South African History Online n.d.

most significant colonization of Namibia was initiated by Germany in 1880 when the takeover did not go smoothly due to "dubious treaties of protection and theft".[18] They also used divide and rule tactics, but this did not go well as in 1885, the first key resistance by the Herero forced German occupation to retreat to Walvis Bay. By the 1900s, the Germans had fully occupied Namibia and started investing in railways and trade, especially diamond and copper. Under German rule, Namibia became a site of intense colonial exploitation by stealing vast amounts of indigenous land, causing a mass displacement of the Herero and Nama people. But four years later, a war of resistance broke out after another Herero uprising, where the German commander-in-chief, General Lothar von Trotha, ordered the extermination of all Herero people, leading to a genocide.

Between 1904 and 1908, Germany suppressed a rebellion by the Ovaherero and Nama people with brutal violence, in which a large number of people were taken to prison camps throughout the violence.[19] After the German colonization of Namibia, there were high levels of racism and "unequal applications of the law between German and indigenous settlers," which caused tensions to rise due to the unequal treatment of indigenous people.[20] General Von Trotha's order for extermination is considered the first genocide of the 20th century. The UN Convention on the Prevention and Punishment of the Crime of Genocide's definition of genocide is that it is not only 'killing members of the group' but also 'deliberately inflicting on the group's conditions of life calculated to bring about its physical destruction'.[21] In the beginning, only the Herero people were subject to such brutality; however, when the Nama joined in the resistance against the German occupation, they faced a similar fate: killings and people forced to do hard labor in the concentration camps. With thousands of Nama and Herero people killed, the Herero population dropped from 80,000 to 15,000 by the end of the genocide, and the Nama community lost about 50% of their population. Those who weren't killed or imprisoned were driven from towns and cities to the desert, where they likely would have died of starvation or thirst.[22] The book *Mama Penee: Transcending Genocide* by Uazuvara Ewald Kapombo Katjivena speaks of the tragic fate of the Herero and Nama people. The story follows Katjivena's grandmother, Jahorora Petronella Inaavinuise, as an eleven-year-old girl during the genocidal war, as it gives insight into what life was like during the genocide. She describes how she saw her parents cruelly killed by the German

[18] Green 2025.
[19] Nebe 2024.
[20] Ibid.
[21] Kössler 2015.
[22] Becker 2020.

soldiers[23] and what she had to do to survive her several months in hiding and avoiding the German soldiers.

German rule over Namibia ended in World War I when South African forces invaded the country on behalf of the British Empire in 1915, where they ruled Namibia with suppressive policies that caused violence to flare up within the region until the 1930s. Namibia (at the time South West Africa) was also not the best colony as diamond production was low at that point - extracting metals was expensive.[24] In 1947, Namibians began petitioning the United Nations against the South African rule. This was achieved through the churches in Namibia, which created a social opinion that favored the liberation of Namibia from South African rule. In addition, trade unions became increasingly popular and focused on political issues rather than economics, leading to multiple strikes.[25] Namibia was finally given independence in 1990.[26]

As a result of the genocide, there was a significant loss of Herero and Nama's lives, which had a huge cultural impact on Namibia. At that time, all native Herero and Nama land was taken from them, resulting in the loss of their cultural roots. That leaves the legacy of German colonization truly alive within Namibia, for example, with land ownership still lying in the hands of European settlers. Following independence, Germany acknowledged a "special responsibility for Namibia and its people"[27] in 1989, which caused the German Bundestag (German Parliament) to create a special relationship with the newly independent Namibia which meant that Germany was to take responsibility for the country's colonial past and help facilitate Namibia's independence process, which both presidents validated at the time.[28]

Throughout the twentieth century, Germany received many calls from Namibia to pay reparations and take responsibility for the genocide that took place. In Namibia, there is still a heated debate about whether the reparations paid so far have been sufficient for the damage caused. Germany, in 2004, officially apologized for the events of 1904-1908, although it does not legally recognize it as a genocide, and therefore, they are not required to pay any reparations.[29] It was not until 2021 that Germany officially recognized it as a genocide. The genocide is still an issue that high-ranking German officials have to deal with, as some people are still not happy with the stance that Germany has taken on it. Since agreeing to help Namibia after

[23] Katjivena 2020.
[24] Green 2025.
[25] Ibid.
[26] UNTAG n.d.
[27] Katjavivi 2014.
[28] Ibid.
[29] Nebe 2024.

its independence, one way Germany has been helping is through German NGOs. NGOs help by supporting social, health, and environmental issues. Some specific NGOs that help in Namibia are Weltfriedensdienst eV (WFD), Solidarity Service International (SODI), and Hilfe Für Namibia eV.[30] All help to support medical and social problems in Namibia has been well received. However, more work has to be done to get NGO assistance to communities that need it. Another way that German-Namibian relations have changed after independence is that there have been more official visits by ambassadors to both countries since 1995. These visits have consisted of presidents and their advisors and charitable groups. These visits further strengthened the relations between nations and allowed for discussions. However, recently, these visits have dwindled from the German side.

Other ways that Germany provided support to Namibia after independence were through financial aid packages and development assistance. Germany has given Namibia loans of roughly twenty million euros to help pay for various infrastructure for its people and communities.[31] The loans have favorable repayment terms to prevent additional debt for the country. German aid is controlled through third-party institutions such as the German Development Bank (KfW) and the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) to make sure that the projects proposed are in line with national priorities.[32]

The Namibian community has repeatedly called for reparations. One significant event was in 2006 on Damara Day, where representatives of nine Nama traditional authorities met in Windhoek and released a statement calling for the recognition of the genocide during German colonial rule. They also wanted the government to identify the remains found in Lüderitz, which likely were from the concentration camp on Shark Island. In 2007, the German parliament first discussed the issue of genocide, which had previously been avoided.[33]

Nevertheless, in 2021, Germany agreed to pay Namibia one point and one billion euros. Since then, the Herero-Nama genocide has been officially recognized more than a decade after it occurred. However, this has been called by Angela Merkel's government a gesture and not legally binding reparations. The money will be paid to various Namibian programs over the next 30 years, with the majority being sent to aid projects in rural Namibia to help the Herero and Nama communities.[34] The reparations are significant to Herero and Nama communities, as Goab Johannes

[30] Katjavivi 2014.
[31] National Planning Commission n.d.
[32] Katjavivi 2014.
[33] Kössler 2015.
[34] Oltermann 2021.

Isaak, the chair of the Nama Traditional Leaders Association, told the Guardian: "Reparations would bring back dignity, self-worth and play a meaningful role in our development and education for the Nama people".[35] This will allow indigenous communities to invest in infrastructure that can help the community for years.

Overall, the German genocide has affected the Namibian community and Namibian mindset. Colonialism has changed Namibia significantly and has led to unequal distribution of wealth within the country as well as social inequalities due to the racism that prevailed during German rule over Namibia.[36] Economically viewed, each country can benefit from another; therefore, it is crucial to maintain positive relations and strengthen their bonds. Despite this, some people still believe that Germany's apology is not genuine, and this was shown in 2022 when the Namibian vice president, Nangolo Mbumba, called on Germany to increase the amount of money given and to shorten the payment time. Germany has also stated that legally, they do not have to pay individual reparations to descendants, which has been contested by the International Covenant on Civil and Political Rights.[37] The primary approach Germany has to take to address past issues is to place the victims at the center of the discussion, which the respective governments must support.

References

Becker, Heike (2020). *Surviving genocide: a voice from colonial Namibia at the turn of the last century*. en. The Conversation. URL: https://theconversation.com/surviving-genocide-a-voice-from-colonial-namibia-at-the-turn-of-the-last-century-130546 (visited on 04/09/2025).

ECCHR (n.d.). *Colonial repercussions: Germany and Namibia*. Copyright: ECCHR. European Center for Constitutional and Human Rights. URL: https://www.ecchr.eu/en/case/colonial-repercussions-germany-and-namibia/ (visited on 04/09/2025).

Green, Reginald Herbold (2025). *History of Namibia | Colonialism, German Colonialism, Independence, & Facts | Britannica*. Encyclopedia Britannica. URL: https://www.britannica.com/topic/history-of-Namibia (visited on 04/09/2025).

[35] Oltermann 2021.
[36] ECCHR n.d.
[37] Teffera 2023.

Katjavivi, Peter H. (2014). *Namibia's bilateral relations with Germany: A crucial relationship*. Konrad Adenauer Stiftung. URL: https://www.kas.de/documents/252038/253252/Namibias_Foreign_Relations_katjavivi.pdf/5277a5cb-3806-8822-3884-f0d2eb1d3ad0 (visited on 04/09/2025).

Katjivena, Uazuvara (2020). *Mama Penee: Transcending the Genocide*. University of Namibia Press. ISBN: 9789991642796.

Kössler, Reinhart (2015). *Namibia and Germany. Negotiating the Past*. eng. Windhoek: University of Namibia Press. 402 pp. ISBN: 978-99916-42-09-3.

National Planning Commission (n.d.). *Namibian-German Special Initiative Programme – National Planning Commission*. Namibian National Planning Commission. URL: https://www.npc.gov.na/national-plans/programmes/special-programmes-ngsip/ (visited on 04/09/2025).

Nebe, Cai (2024). *When colonial Germany committed genocide in Namibia*. DW. URL: https://www.dw.com/en/when-colonial-germany-committed-genocide-in-namibia/a-67623302 (visited on 04/09/2025).

Oltermann, Philip (May 28, 2021). "Germany agrees to pay Namibia € 1.1bn over historical Herero-Nama genocide". In: *The Guardian*.

South African History Online (n.d.). *Namibia*. URL: https://www.sahistory.org.za/place/namibia (visited on 04/09/2025).

Teffera, Almaz (2023). *Namibian Communities Deserve a Say in German Reparations Deal*. True Reckoning Requires Involving Descendants of Victims of Colonial Era Abuses. Human Rights Watch. URL: https://www.hrw.org/news/2023/03/30/namibian-communities-deserve-say-german-reparations-deal (visited on 04/09/2025).

UNTAG (n.d.). *UNTAG*. URL: https://peacekeeping.un.org/sites/default/files/past/untagFT.htm (visited on 04/09/2025).

ANITA GASHI, UNIVERSITY OF STUTTGART

Narrating the Environment: Ecocriticism and African Literature

As an essential part of literature, nature has undergone specific interpretations, stylizations, and conceptualizations depending on its cultural and historical orientation. For example, the image of the *locus amoenus* extends from antiquity through the Middle Ages to the classical period of German-language literature of the 18th and early 19th century. For poets, nature represents an idyllically harmonized place of longing embodied by an ideal that could not be found in their civilized world. Escaping into a rural, harmonious space, defined by its static character and the basic theme of love, only emphasized the dichotomous relationship between nature and culture,[38] which has always been the subject of literary works. Even when the image of an idyllic perception of nature was discarded, and the environment was depicted in its arbitrariness and destructive power, this seemingly clear separation was maintained. In German nature poetry, for example, nature is usually portrayed as sublime, pure, and mystical. Although nature poetry deals with ecological aspects, a sub-genre has only recently emerged that deals specifically with environmental issues and human interaction with nature and is now established under the term ecopoetry. In this regard, Ogaga Okuyade refers to Scott Bryson's attempt to define ecopoetry as "[a] subset of nature poetry that, while adhering to certain conventions of romanticism, also advances beyond that tradition and takes on distinctly contemporary problems and issues."[39] In contrast, in novels such as Max Frisch's Homo Faber (1957), nature is exaggeratedly juxtaposed with technology and is naturally subject to it. Due to the increasing importance of ecological issues in literature and society caused by global warming and the beginning of the Anthropocene era, among other things, a significant reorientation of the concept of nature has taken place, fundamentally questioning the separation between nature and culture.

Based on the 1960s and 1970s findings, a new interdisciplinary approach to literary and cultural studies developed, firmly established as *ecocriticism* in the 1990s. The movement, which mainly originated in American studies, English studies, and

[38] Häntzschel 2007, p. 123.
[39] Bryson 2002, p. 6.

the Anglophone language area, developed around the Western Literature Association "[sowie] der Wiederentdeckung amerikanischer Traditionen des Nature Writing in den 1990er-Jahren die *American Society for the Study of Literature and the Environment*, die sich bis heute als führende Fachgesellschaft im Bereich des Ecocriticism etabliert hat."[40] The term *ecocriticism* can be traced back to William Rueckert's essay *Literature and Ecology: An Experiment in Ecocriticism* (1978) and addresses environmental crises and values, such as the extinction of species or the dialectic between human and non-human nature. Particular attention will be paid to how the authors in the literature portray nature and non-human beings. Literary texts will be used to trace the problematic relationship between humans and the environment and to reflect on possible solutions.[41] Ogaga Okuyade understands ecocriticism as "[. . .] more of an attempt to counter an (un)conscious violence orchestrated by humans on the environment."[42] Okuyada alludes to Rob Nixon's concept of *slow violence*,[43] i.e., violence whose process and consequences are not visible at first glance. Due to increasing global warming and the increased occurrence of extreme weather events, ecocriticism helps open up and understand causal relationships on a meta-level, allowing counter-concepts to be developed. Numerous works can now be found on this topic: Laurence Buell's *The Environmental Imagination* (1995), *The Ecocriticism Reader* (1996) edited by Cheryll Glotfelty and Harold Fromm, Greg Garrard's *Oxford Handbook of Ecocriticism* (2014), Louise Westling's *The Companion to Literature and the Environment* (2014) and Hubert Zapf's *Handbook of Ecocriticism and Cultural Ecology* (2016) - are among the fundamental papers of the movement. In his treatise, *A Report Card on Ecocriticism* (2001), Simon C. Estok deals with various attempts to define *ecocriticism*, its difficulties in gaining a foothold in an academic context, and its demarcations from other environmentally-oriented reception methods.[44] According to Estok, one challenge of ecocriticism lies in the connection between global and individual lives. Furthermore, drawing on Patrick D. Murphy, he points out that the movement is sometimes too abstract: "As Murphy complains, the problem with ecocriticism is that too much of it ‚remains theoretically unsophisticated. Too often, there remains an anti-theoretical, naïve, realist attitude expressed in' the work of ecocritics."[45] Nevertheless, an ecocritical approach and production of literary works promotes a better understanding of our current situation and a rethinking of our concept of the non-human environment.

[40] Zapf 2015, p. 173.
[41] Okuyade 2016, p. 465.
[42] Ibid.
[43] Rob Nixon 2011.
[44] Estok 2001.
[45] Ibid.

While at the beginning of this field of research, all texts that generally addressed the relationship between literature and the physical world were collected, ecocriticism has changed, developed, and even focused to a certain extent in the course of its further development. Hubert Zapf, for example, describes this as follows: "Ziel der Neubewertung solcher Formen des Nature Writing war die historisch-kulturelle Rekonstruktion einer alternativen Tradition ökologischen Denkens in den USA und eine damit verbundene Reorientierung der Werte vom *Ego-Consciousness* zu einem *Eco-Consciousness*, vom radikalen Individualismus des American Dream zu einer ethisch verantwortlichen Beziehung zur nichtmenschlichen Natur."[46] Drawing on Gregory Bateson and Peter Finke, the German Americanist speaks of an analogy between ecological structures and literature and attributes environmental, regenerative, and revitalizing functions within a cultural system to literature.[47]

It should be noted that ecocriticism is one of the fastest and broadest growing branches of cultural and literary studies, the development of which, according to Gabriele Dürbeck, is divided into two waves. The first phase, which is primarily characterized by deep-ecological and politicized approaches, is, above all, a "Neubewertung der Romantik, zu 'Nature Writing' und unberührter, Wildnis'."[48] The second phase, in turn, deals intensively with sustainability and environmental justice questions and focuses on urban and suburban experiences.[49] Although such a division into phases is beneficial for an initial overview, it hinders a more intensive examination of ecocriticism, as the complexity of the movement and its interdisciplinary ramifications are not adequately addressed. For example, the expansion of ecocriticism to other literary genres and areas of cultural studies, such as gender studies, African American studies, postcolonial studies, or science studies,[50] is not captured by a heuristic phasing as reflected by Dürbeck.

Furthermore, the different global developments in ecocriticism are ignored. The movement is not an exclusive Anglophone phenomenon, as climate and environmental issues and crises affect humanity and the planet. Accordingly, ecocriticism faces sharper criticism and skepticism if one moves further away from this center, i.e., America and Europe. Paradoxically, this is the case in the countries that suffer most from climate change and where environmental issues are critical. Rob Nixon explains this muted reaction to ecocriticism in part by its inherent place-based nature. Because ecocriticism originated in America, its concept is too embedded in the

[46] Zapf 2016, p. 173.
[47] Ibid., 172 – 184.
[48] Dürbeck 2015, p. 10.
[49] Ibid., 10 ff.
[50] Zapf 2016, p. 174.

American context, so a national transfer is difficult.[51] Added to this are factors such as an abstract conceptualization of the movement, which can easily get lost in the imaginary, or the accusation that only wealthy nations have time and idleness to worry about the climate. Because the media generally refer to American activists, environmental activism and ecocriticism are subject to an unreflected provincialism,[52] ensuring that the movement is subjected to greater skepticism in other countries, if not a reorientation. For example, in African Literature and Critics, in which (post-) colonialism is the most prominent and predominant theme of literary reception, pushing ecocriticism into the background.

In his essay *Ecoing the Other(s): The Call of Global Green and Black African Responses* (2007) by Wiliam Slaymaker, the author explains to what extent and in what depth ecocriticism has been addressed in African Literature and Critics. In the course of his explanation, he notes that a large number of nature writings can be found in African literature. These are generally linked to the thematic block of colonialism and the resulting exploitation of indigenous resources.[53] All in all, Slaymaker points to a somewhat hesitant attitude and marginal interest on the part of research and production of texts about ecocriticism. "[. . .] [T]here is no rush by African literary and cultural critics to adopt ecocriticism or literature of the environment as they are promulgated from many of the world's metropolitan center. For some black African critics, ecolit and ecocrit are another attempt to 'white out' black Africa by coloring it green."[54] Although there are works here and there that can be described as ecocritical, for example, Niyi Osundare *The Eye of the Earth* (1986), Chinua Achebe's *Things Fallen Apart* (1958), and *Arrow of God* (1964), Chenjerai Hove's *Bones* (1988) and Christine Ombaka *War and Environment in African Literature* (1998) and many more, according to Slaymaker the response of African Literatures and Critics to ecocriticism is restrained.[55] Some scholars and critics see ecocriticism as another kind of colonization, which operates under the guise of environmental activism that manifests itself in imperial structures. Slaymaker merely refers to this aspect and leaves it to the reader to pursue this grave accusation's deeper political and historical levels. On the other hand, Byron Caminero-Santangelo addresses this connection in his essay *Different Shades of Green: Ecocriticism and African Literature* (2007), as it is imperative because it plays a significant role in determining the preservation of African nature. The interference of the global North in the

[51] Robert Nixon 2007, 717 ff.
[52] Ibid., 716 ff.
[53] Slaymaker 2007, p. 683.
[54] Ibid., 683 ff.
[55] Ibid., p. 690.

continent's environmental aspirations deprives Africa of its autonomy and undermines the indigenous knowledge of its people.[56] The established national parks are generally under the administration of colonial owners or white settlers, while indigenous peoples are resettled. Colonial narratives of the supposedly civilized West are evident here, but this is entirely out of place and in no way corresponds to the facts. Caminero-Santangelo thus attributes the resulting resistance and marginal interest in nature conservation efforts on the part of the African community to political backgrounds: "Furthermore, such work suggests, resistance to conservation efforts (past and present) by locals is not necessarily to be understood only as resulting from ignorance or simple self-interest; rather it can be about a political struggle over the meanings of environmental conditions and the policies and power dynamics enabled by such meanings."[57] The management of finite resources by individual countries in Africa, alongside the global North's displeasure, is a complex issue primarily related to climate justice and is considered a wicked problem.

It should be noted that ecocriticism, as we know it from America and Europe, is not acceptable in this particular way for African literature and criticism. In this regard, Byron Caminero-Santangelo points out that Slaymaker uses a primarily Anglo-American framework, whose reference points lie in British and American literature, to determine whether a work should be categorized as *ecocriticism*. This approach, however, is precisely the problem. On the one hand, ecocriticism loses its universality by limiting itself to a homogeneous area and thus cannot take up many works from different countries. On the other hand, a dichotomy will be created that almost antagonistically opposes ecocriticism and African literature and criticism. To counteract this, Caminero-Santangelo, for example, suggests examining texts by African writers about topics raised by ecocriticism, i.e., the decentralization of human beings, the attribution of subjectivity to nature, or the awareness of cultural power constructions and their relations.[58] Climate change, environmental degradation, preserving nature, and indigenous knowledge are deeply rooted in African literature and criticism, so Slaymaker's pessimistic remarks are not entirely accurate. However, Caminero-Santangelo notes that these themes are usually embedded in the context of colonialism, for example, in *A Grain of Wheat* (1967) by Ngũgĩ wa Thiong'o.[59] "For example, Ngugi was Thiong'O's classic A Grain of Wheat points to the relationship between nature conservation (and appreciation) and colonialsim."[60] Accordingly,

[56] Caminero-Santangelo 2007, 700 ff.
[57] Ibid.
[58] Okuyade 2016, 459 – 480.
[59] Caminero-Santangelo 2007, p. 702.
[60] Ibid., p. 702.

environmental activism is always to some extent related to (post-)colonialism. A notable example is Ken Saro-Wiwa (1941 - 1995), the renowned Nigerian civil rights activist. Although his written works reflect his environmental activism, his public appearances emphasized climate protection more.

As presented by Slaymaker and other researchers, the relatively negative interpretation of ecocriticism in African Literature and Critics is further denied by the literary scholar Ogaga Okuyada in his treatise *Ecocultures and the African Literary Tradition* (2016). Like Caminero-Santangelo, Okuyada refers to the somewhat negative reputation of ecocriticism in African Literature and Critics: "Quite a number of studies on the interface between African literature and the environment usually proceed from the charge of the sparse critical response of African critics to ecolit criticism or the nascence of this aspect of criticism in Africa's interpretative art."[61] The reasons for these assumptions are easy to name: "The obvious reasons for this identified gap are easy to fathom. African literature from its inception has been very utilitarian. Literature for the African writer is a sphere from which issues emerge on how the African person negotiates existence and identity within a turbulent geography – turbulence provoked by the colonial incursion into Africa, the consequences of that contact, post-independence crises and the burden of nationhood."[62] However, by continually thematizing the muted response of African Literature and Critics, the usefulness and versatility of ecocriticism as an interpretative tool is heavily overlooked. It is clear that a multitude of environmental themes characterizes African Literature and Critics, and this is reflected in the amount of nature poetry and novels, to name just a few examples: *Oil on Water* (2010) by Helon Habila, Kaine Agary's *Yellow-Yellow* (2006), Gabriel Okara's *Call of the River Nun* or J.P Clark-Bekederemo's *Night Rain*. As early as the 1930s, people were intensively concerned with environmental issues, either artistically, in writing, or orally. "This in turn brings to the fore that the environment is not just the 'other world', but the life force of human existence. The environment is therefore encapsulated within the culture of the African people since it is an integral part of what makes up the African world-view or ethos."[63] Rather than viewing the environment as an alien counterpart, as is often the case in the West, nature is an integral aspect of the worldview and identity formation of the African community and literature. Okuyada points out that what we understand by human culture has been constituted by our ecosystem and enables the relationship to a particular space and time.[64] Therefore, it is not only perceived as an ornament of an exotic and

[61] Okuyade 2016, p. 459.
[62] Ibid., 459 ff.
[63] Ibid., p. 465.
[64] Ibid., p. 461.

picturesque tourism industry but also plays an active role in literature in critically questioning global industrialism and addressing social and political grievances.

According to Okuyada, four topos stand out in African literature and criticism in a critical reassessment of the nature-human relation within the literary space. The most commonly used topos is the reconstruction of a pastoral idyll anchored in memories, thus representing an extraordinary landscape free from the influences of industrial capitalism. As these representations are based on memories, the narratives are characterized above all by their nostalgic tone.[65] "The other displays a threnodic temper with a kind of combative engagement with the systems and institutions responsible for the eco-seismic devastation of the non-human worlds."[66] The third topos, in turn, is characterized by an eco-romanticism that increasingly uses pastoral elements. At the same time, the fourth topos focuses on Eco-feminism and examines the relationship between the female body and nature.[67] The topos are not subject to clear separation and sometimes run into one another. Furthermore, the four central motifs do not cover all areas, as ecocriticism presents itself in the most diverse facets, partly because Okuyada, in contrast to Caminero-Santangelo and other scholars, consciously understands ecocriticism as a dynamic means of interpretation.

> Ecocriticism as a theoretical approach to the study of cultural art forms offers an appropriate middle ground; thereby emphasizing a vibrant relationship between the humanities and other disciplines. As an inter-disciplinary field it enables us to reassess African writings from different frameworks within a single forum. The most fundamental feature of eco-criticism is basically to theorize the unending environmental crisis humanity continues to create and invoke different strategies (which are usually interdisciplinary) as means of bridging the frightening gap between humans and the environment.[68]

Consequently, Okuyada describes the environment as a cultural construct of the text that underlies the African imagination.[69] For African literary studies, this means that all texts are, to some extent, ecocritical. Parallels to Hubert Zupf's hypothesis, he ascribes ecological, regenerative, and revitalizing functions within a cultural system to literature. One work repeatedly used as an example is Chinua Achebe's novel

[65] Okuyade 2016, p. 460.
[66] Ibid., p. 461.
[67] Ibid., p. 461.
[68] Ibid., p. 463.
[69] Ibid., p. 466.

Things Fallen Apart (1958).[70] "Although the novel gives expression to the colonial incursion into Africa and how that incursion sent Africa crashing from its vital balance, the narrative equally demonstrates how rural people use the environment, thereby foregrounding the symbiotic relationship between humanity and the environment."[71] At first glance, nature overwhelms people in the novel. For example, the setting of the forest in the fictional village of Umuofa is characterized by a gloomy and dangerous atmosphere as it makes the inhabitants aware of their mortality.

At the same time, nature is used to determine human progress, which is reflected in the traditions and thus marks the transitions in society. The novel impressively depicts how nature is closely intertwined with people to form an organic and self-sustaining ecosystem without lacking culture, education, or medical knowledge. The people living in the village made sustainable use of the resources provided by nature, giving environmental protection an almost idyllic character within the work. Okuyada also refers, for example, to the recurring components associated with the forest: "Although the iconography of the evil forest makes no overt ideological point, the theme of preservation, renewal, continuity and hope are intensely valorised because it eventually becomes a site from which a new transnational society and administration was to emerge."[72] Due to the special status of the forest, it becomes a sacred place destroyed by the missionaries, and with it, the village, life in Umuofa, and its unique culture. However, it is not only this direct violence that the novel addresses. Nixion's concept of *slow violence*, which occurs in the form of various environmental disasters due to man-made global warming, such as flooding caused by heavy rainfall or heat, also appears throughout the plot. *Things Fallen Apart* (1958) not only depicts the intrusion of a colonial power into an already functioning social system but also creates a special kind of ecological consciousness by showing the reader what a symbiotic relationship between humans and the non-human environment can look like.

In his novel *The Heart of Redness* (2000),[73] Zakes Mda addresses human ecological awareness, (post-)colonial questions of ambivalence, and power structures.[74] The reader accompanies the protagonist, Camagu, to protect his homeland, Qolorha. The narrative alternates between the tragic events of the Cattle Killing Movement in 1850 and 1998, four years after the country's first democratic elections. The people in the novel are similarly divided. While the people around Bhonco tend to turn

[70] Achebe 2001.
[71] Okuyade 2016, p. 466.
[72] Ibid., p. 467.
[73] Mda 2000.
[74] Samin 2008.

away from the tragic past and embrace modernity and capitalist developments in the form of tourism projects, the people around Zim remain loyal to their old beliefs and questionable practices. The poverty-stricken amaXhosa people around Bhonco see the hope of an economic upturn in the new tourism plans. However, they do not consider the consequences of this on the environment and, inevitably, on their lives, such as deforestation, the general destruction of fauna and flora, and biodiversity, especially the birds. Zim and his people are followers of the prophet Nongqawuse, who, in the past, made sure that the people slaughtered their cattle and destroyed their crops in the belief that they could resurrect the dead and thus protect their land from colonial invasion. They see their indigenous culture, the biodiversity of their environment, and the water supply for the community's people in danger. As a result, they are vehemently opposed to the planned tourism project. While at the beginning, the gap between the positions and the environment as a third actor seems insurmountable, in the end, everything comes together. The pros and cons of the two oppositions are discussed impressively during the plot. Both sides are discussed in detail. Hopes, wishes, and fears contribute to an ecological awareness that ultimately creates space for a concept that enables a functional tourism concept that does not destroy the environment but protects it as well as the culture and life of the indigenous people. Ecocriticism serves as both a critical examination of grievances and a presentation of potential solutions. It notably bridges humans and the non-human environment in the novel *The Heart of Redness* (2000).

This essay is a rudimentary contribution to the topic of ecocriticism in African Literature and Critics. Due to its limited scope, the essay accordingly addresses the most critical aspects necessary for a basic understanding of the subject. Hopefully, it has been shown that ecocriticism is a constitutive component of African literature, as it provides a cultural framework that allows for a reutilization of the relationship between humans and ecology, taking into account the specifications of African literature. This, in turn, allows for a significant expansion of the homogeneous ductus of Anglophone ecocriticism. A further step would be to examine which literary techniques are used in detail to depict the narratives' complex relationship between humans and non-human nature. How have these changed over different epochs, and what challenges have authors faced in capturing the non-human environment in literature? The relationship between artwork and its depicted reality is a central theme in literary studies,[75] which is also a fundamental aspect of ecocriticism that can be further investigated.

What the research literature on ecocriticism in African Literature and Critics has shown us, however, is that it is closely tied to (post-)colonialism. It is, therefore,

[75] Aristoteles 2014.

hardly surprising that an undercurrent that seeks to establish itself as *postcolonial ecocriticism* seems to be forming. Essentially, this combines the two research directions of postcolonial studies and ecocriticism: "As an emerging new field, 'postcolonial ecocriticism' combines postcolonialism's critique of colonial regimes and the workings transnational capitalism with ecocriticism's attention to the land which has been the gist of such exploitation."[76] The challenge, however, is to free the two research fields from their relatively rigid environments and bring them together. Postcolonial studies are defined by their inherent political agenda, while ecocriticism in the cultural and literary realms represents an ecological aesthetic that can quickly veer into ideological territory. However, it is undeniable that both areas are interconnected and would benefit from collaboration, as their common goal, if one may put it that way, is to reconceptualize society and the environment. For further reading on this topic, I recommend Mita Banerjee's essay, *Ecocriticism and Postcolonial Studies* (2016).

References

Achebe, Chinua (2001). *Things Fall Apart*. With an introduction by Biyi Bandele. en. London: Penguin Modern Classics. ISBN: 978-0-141-18688-7.

Aristoteles (2014). *Poetik. Griechisch/Deutsch*. Übersetzt und herausgegeben von Manfred Fuhrmann. Stuttgart: Reclam.

Banerjee, Mita (2016). "Ecocriticism and Postcolonial Studies". en. In: *Handbook of Ecocriticism and Cultural Ecology*. Ed. by Hubert Zapf. Berlin and Bosten: De Gruyter, pp. 194–207. ISBN: 978-3-11-030837-2.

Bryson, Scott (2002). *Ecopoetry. A Critical Introduction*. Salt Lake City: University of Utah Press.

Caminero-Santangelo, Byron (2007). "Different Shades of Green: Ecocriticism and African Literature". en. In: *African Literature. An Anthology of Criticism and Theory*. Ed. by Tejumola Olaniyan and Ato Quayson. Malden: Blackwell Publishing, pp. 698–706.

Dürbeck, Gabriele (2015). "Einleitung". In: *Ecocriticism. Eine Einführung*. Ed. by Gabriele Dürbeck and Urte Stobbe. Köln, Weimar, and Wien: Böhlau Verlag, pp. 9–18. ISBN: 978-3-412-50165-5.

Estok, Simon C. (2001). "A Report Card on Ecocriticism". en. In: *AUMLA: The Journal of the Australasian Universities and Literature Association* Vol. 96, pp. 220–238.

[76] Banerjee 2016, p. 194.

Häntzschel, Günter (2007). “Idylle”. In: *Reallexikon der deutschen Literaturwissenschaft. Neubearbeitung des Reallexikons der deutschen Literaturgeschichte*. Ed. by Klaus Weimar. Band 1 A - G. Berlin and New York: Walter de Gruyter, pp. 122–125.

Mda, Zakes (2000). *The Heart of Redness*. en. New York: Picador. ISBN: 978-0-312-42174-8.

Nixon, Rob (2011). *Slow Violence and the Environmentalism of the Poor*. en. Cambridge: Harvard University. Press. ISBN: 978-0-674-07234-3.

Nixon, Robert (2007). “Environmentalisim and Postcolonialism”. In: *African Literature. An Anthology of Criticism and Theory*. Ed. by Tejumola Olaniyan and Ato Quayson. Malden: Blackwell Publishing, pp. 715–723.

Okuyade, Ogaga (2016). “Ecocultures and the African Literary Tradition”. en. In: *Handbook of Ecocriticism and Cultural Ecology*. Ed. by Hubert Zapf. Berlin and Bosten: De Gruyter, pp. 459–480. ISBN: 978-3-11-030837-2.

Samin, Richard (2008). “Nongqawuse Resurrected: Legend and History in Zakes Mda’s The Heart of Redness”. In: *Commonwealth Essays and Studies* 31.1, pp. 48–58. DOI: 10.4000/ces.9012.

Slaymaker, William (2007). “Ecoing the Other(s): The call of Global Green and Black African Responses”. en. In: *African Literature. An Anthology of Criticism and Theory*. Ed. by Tejumola Olaniyan and Ato Quayson. Malden: Blackwell Publishing, pp. 683–697.

Zapf, Hubert (2015). “Kulturökologie und Literatur”. de. In: *Ecocriticism. Eine Einführung*. Ed. by Gabriele Dürbeck and Urte Stobbe. Köln, Weimar, and Wien: Böhlau Verlag, pp. 172–184. ISBN: 978-3-412-50165-5.

– (2016). “Cultural Ecology of Literature – Literature as Cultural Ecology”. en. In: *Handbook of Ecocriticism and Cultural Ecology*. Ed. by Hubert Zapf. Berlin and Bosten: De Gruyter, pp. 135–153. ISBN: 978-3-11-030837-2.

SUZIE SHEFENI AND VIVIAN NOU-GAWASEB

South Africa Can Learn from Namibia's progress in Building a Hydrogen Economy

Namibia's new growth agenda embraces the global green industrialization impulse propelled by climate awareness and the just transition. Central to this agenda is green hydrogen production, which harnesses Namibia's abundant renewable energy potential to attract global investment, build local derivatives value chains, and enhance its regional influence. However, it is not the only African country that has its eyes on green hydrogen. South Africa, amongst others, has also sought to capitalize on the need for decarbonization, lessen its dependence on hydrocarbons, and create an export market. South Africa has made headway in developing a hydrogen economy, with the cabinet greenlighting the Inter-Ministerial Committee in 2024. We opine that Namibia's progress can offer crucial policy and practical lessons for the groundwork needed to operationalize the South African Hydrogen Society Roadmap (2021) and Green Hydrogen Commercialisation Strategy (2023).

1. Fit-for-Purpose Policy must be a Priority

Emerging industries test the adaptability and robustness of existing policy frameworks. The Namibian case has shown that existing frameworks are not comprehensively equipped to handle green hydrogen's unique demands and complexities. Development in the industry has shown a need for safety legislation that appropriately regulates the production, storage, transport, and use of hydrogen and its derivatives and a need to reassess the Environmental Management Act, Standards Act of 2005, and Water Resources Management Act of 2013, amongst others, to address the offtake elements of hydrogen and its derivatives.

This is not a death sentence but a call to action. The just transition knocks at the world's door, and it would be naive to pretend that the world can halt to wait for bureaucrats and politicians to decide on policy frameworks. However, policy must evolve swiftly alongside emerging industries — this could safeguard both the state and its investors. Namibia's investment in developing a local content policy that is fit-for-purpose and beneficial for locals has been a good example of this, with a draft policy explicitly designed for oil and gas being developed in November 2023 and talks for a green hydrogen-specific one underway. Effective strategic

policy development and implementation is essential to ensuring that the investment of millions of euros yields sustainable and impactful results for the South African people.

2. Globally oriented and FDI-intensive Industries are shaped by Geopolitics

Namibia's green hydrogen sector illustrates the challenges faced by globally oriented FDI-dependent industries that are deeply entangled in geopolitical and financial forces. The Dâures Green Hydrogen project, one of the country's more well-known pilot projects, recently sought additional funding from the German government after investing N$ 232 million in developing its green hydrogen village. This reliance on external capital highlights small economies' vulnerabilities when pursuing large-scale, capital-intensive projects in an ever-shifting global energy market. However, Namibia has taken proactive steps to mitigate these risks, notably through the SDG Namibia One fund — a government-led initiative to balance foreign investment with domestic interests. A key example is Namibia's acquisition of a 24% stake in the Hyphen Hydrogen Energy project through a €23 million (N$467 million) share agreement in December 2024. This move ensures substantial national involvement and sets a precedent for leveraging international partnerships without compromising domestic sovereignty.

3. Cultivating Social Legitimacy Cannot be Underestimated

There can be an inclination to believe that if an industry can be established and show tangible positive results over time, then cultivating social legitimacy is rendered useless. This is a significant misunderstanding of democratic culture and a strategic miscalculation. The sensitivity of large-scale foreign investment in Africa cannot be understated; history witnessed resource predation without mutual benefit. To further complicate matters, green hydrogen as an emerging and highly technical industry - unlike its predecessors, mineral mining - presents significant challenges in comprehension and accessibility. Social legitimacy is what stands between a project that is widely supported and protesters rallying outside investment conferences.

To cultivate social legitimacy, a popular education project must accompany and preferably be part of the foundational aspects of new industry creation. When the late Namibian president, Dr. Hage Geingob, established the Inter-Ministerial Green Hydrogen Council in 2021, what followed was an announcement at COP27 the following year, the signing of international agreements, and the big launch of pilot projects. Namibians started hearing the term 'green-hydrogen' everywhere with little understanding of what it was outside of the fact that it included solar and wind

energy and that millions of Euros would soon be flowing into the country. Although this would change around 2023, with increasing public lectures and educational seminars, many approached the new industry suspiciously. It cannot be understood that, from a governance perspective, critical and robust analysis of new sectors is encouraged. However, investors and industry builders must learn from history – including the rise of the automobile – and recognize that emerging industries are subject to the liability of newness and lack of legitimacy. Therefore, proponents must work to demystify it and prove its value, reliability, and necessity to the public. This can be achieved with vertically integrated partnerships, which provide civil society with training and knowledge to disseminate information to the public. Civil society is the preferred actor because of its well-established networks and trust within the community.

For South Africa, Namibia's strategy offers critical lessons: diversifying funding sources, fostering government-led equity participation, and balancing geopolitical dependencies with robust national frameworks. These approaches are pivotal in safeguarding economic sovereignty while navigating the complex demands of global green energy markets. Namibia's approach to green hydrogen offers invaluable lessons for South Africa as it positions itself in the emerging global energy landscape. While Namibia navigates the complexities of policy adaptation, social legitimacy, and geopolitical dependencies, it underscores the importance of strategic foresight, diversification of funding sources, and balancing foreign investments with national interests. For South Africa, the key takeaway lies in the need for agile, fit-for-purpose policies and proactive engagement with local communities to ensure broad-based support. As both nations push for a just energy transition, embracing these lessons will be crucial for achieving sustainable, inclusive, and resilient green hydrogen industries.

DALIWONGA PANTSHWA

Land, Reparations, and Indigenous Knowledge in North-South Relations

The current global discourse on climate justice cannot meaningfully address the wicked problem of climate without confronting what I believe is the most central issue: land dispossession. Land is more than a physical resource to communities in the Global South. It is a reservoir of history, culture, and ecological wisdom. However, due to colonial histories, millions are landless and, thus, disempowered to engage in sustainable land stewardship. This essay critiques climate justice through the lens of land restitution and argues that climate reparations and traditional ecological knowledge (TEK) must define the relationships between the Global South and the Global North. Without centering land issues, all efforts to address climate justice risk perpetuating a facade that dances around the heart of the crisis.

Colonial histories in Africa are marked by the systematic dispossession of land, a practice that forcibly alienated Indigenous communities from their ancestral territories and ecological practices. South Africa and Namibia exemplify this history of land dispossession. In South Africa, urban farmers, including myself, struggle to access stable plots to grow food and provide sustainable livelihoods. These struggles are directly linked to colonial land policies that marginalized Black and Indigenous communities, pushing them onto small, insecure plots with limited resources.[77] The loss of land has almost genocidally destroyed communities and disrupted the transfer of ecological knowledge that was once passed down through generations.

Traditional ecological knowledge (TEK) encompasses practices like sustainable farming, water conservation, and biodiversity management – insights honed through time by people's long coexistence with nature.[78] For instance, the San people of Namibia, to whom I am related, historically practiced hunting and gathering methods that maintained biodiversity while adapting to the region's harsh climate. However, displacement from their ancestral lands has forced many San people into modern urban settings, where they struggle to sustain these practices. TEK is thus being eroded, as displaced communities lack access to the natural environments that

[77] Valerie Stull, Michael M. Bell, and Mpumelelo Ncwadi 2016.
[78] Berardi 2016.

maintain these practices.[79] This gradual loss of this knowledge is not just a crisis for heritage preservation. It guarantees that communities in the Global South are more vulnerable to climate change, lacking the tools for resilience once inherent in their ecological systems.

Climate reparations are essential for addressing the historical and ongoing harms that the Global North has inflicted upon the Global South. It is a well-known fact that 'developed nations' bear a disproportionate responsibility for greenhouse gas emissions, yet the impacts of climate change are felt most severely by the Global South. Countries like Namibia, whose economies and environments remain constrained by colonial legacies, experience extreme droughts, food insecurity, and water shortages exacerbated by climate change.[80] However, reparations should not be limited to money; they must include land restitution and restoration of traditional ecological knowledge systems. Land restitution is crucial because, without access to land, people find it extremely difficult, if not impossible, to practice sustainable agriculture or to recover lost TEK. For urban farmers in South Africa, secure land tenure would mean stability and the opportunity to employ agroecological practices rooted in a progressive marriage of science and local knowledge. Such practices could mitigate food insecurity, reduce environmental degradation, and foster economic resilience.[81] By not addressing land issues appropriately, the risk of becoming another of neocolonialism is immanent, where the Global North 'aids' the South without empowering it to regain control over its resources and ecological knowledge.

German and Namibian relations provide an interesting case study on the potential and pitfalls of reparative justice. Germany's recent acknowledgment of colonial-era atrocities against the Herero and Nama people marks a step toward justice. However, the reparations offered – a combination of financial aid and development assistance – have been criticized for not directly addressing land issues or adequately involving victim communities in state-led bilateral discussions and decision-making processes.[82] For climate justice to be genuine, Germany's reparations must go beyond economic assistance and facilitate land restoration, enabling Namibians to revive TEK practices that foster ecological resilience. Without a deep praxis that prioritizes land, Germany's gestures toward reparative justice risk being a pseudo-solution orchestrated for the display of inauthentic remorse.

Traditional ecological knowledge is not simply a relic of the past; it offers critical insights into sustainable environmental stewardship. In the face of climate change,

[79] Wynberg and Kepe 1999.
[80] Newsham and Thomas 2011.
[81] Altieri and Nicholls 2017.
[82] Melber 2024.

TEK could support adaptation efforts, particularly in agriculture, water management, and biodiversity conservation. For example, the San people's water harvesting methods and biodiversity management are highly relevant in drought-prone Namibia.[83] However, such knowledge cannot be effectively revived or practiced without access to land. In South Africa, urban farms and other small-scale farms, including the one I work with, represent a microcosm of the challenges faced by landless communities attempting to revive TEK. Lacking secure land tenure, our farms often struggle to implement agroecological practices that mimic natural ecosystems. Furthermore, the absence of policy support for small-scale urban agriculture perpetuates a cycle in which these farms remain under-resourced, isolated from the ecological knowledge that could enhance their resilience.[84] Without a firm commitment to integrating TEK into climate adaptation policies, the Global North's attempts to address the climate crisis risk entrenching Western scientific paradigms that disregard Indigenous knowledge systems whilst losing the historical opportunity for meaningful redress.

The potential of TEK is further proven in cases where Indigenous-led conservation efforts have had a variety of successful outcomes. For instance, Indigenous Protected Areas (IPAs) in Australia illustrate how Indigenous land management practices can enhance biodiversity and mitigate wildfire risks.[85] However, such successes require policy frameworks rooted in the holistic recognition of the authority of Indigenous communities over their lands. If the Global North is serious about climate justice, it must advocate for similar frameworks in the Global South, prioritizing Indigenous stewardship and the knowledge embedded in these practices. The call for climate justice has gained traction in recent years within international forums like the United Nations Framework Convention on Climate Change (UNFCCC). Even so, one can argue that much of this discourse has been performative, limited to financial assistance and technology transfer, without addressing the root causes of climate injustice – colonialism, land dispossession, and cultural erasure.[86] By neglecting these issues, the Global North perpetuates a superficial version of climate justice that avoids transformative change.

The relationship between Germany and Namibia exemplifies this tension. While Germany's reparations efforts acknowledge historical wrongs, there is yet to be evidence of fundamentally challenging the power dynamics that underpin land ownership and resource access in Namibia. If reparative justice does not include land restitution and TEK revitalization, it risks reinforcing the same colonial structures

[83] Biesele and Hitchcock 2011.
[84] Cock 2019.
[85] Ens et al. 2015.
[86] Bond 2012.

that facilitated environmental and social degradation in the first place. Over and above that, Germany's approach, viewed from the lens of the most vulnerable victims of historical crimes, reflects a broader trend in international climate finance, where funds are allocated to Global South countries without adequately addressing the structural inequalities that perpetuate vulnerability to climate change.[87]

Achieving genuine climate justice requires a transformative framework that centers on land restitution, climate reparations, and traditional ecological knowledge. First, land restitution must be prioritized as a central pillar of reparative justice. For dispossessed communities, the land is not only a source of livelihood but also a basis for cultural revival and ecological stewardship. Without land, people cannot engage in the practices that make TEK viable. So, climate reparations must go beyond financial compensation and include commitments to land restoration and policy frameworks that guarantee secure land tenure for Indigenous and local communities.[88] Additionally, traditional ecological knowledge should be integrated into climate adaptation and mitigation policies at all levels of governance. Governments in the Global South should also undergo a robust reassessment of internal challenges to self-governance so that they can be supported in developing policies that recognize and protect TEK as a vital resource for environmental resilience. Moreover, North-South partnerships should prioritize TEK transfer programs that enable landless communities, particularly urban farmers, to access knowledge and resources necessary for sustainable land use. Such programs could empower communities to practice regenerative agriculture, water conservation, and biodiversity preservation, which enhance local resilience to climate change.

Finally, North-South relationships must be characterized by a deep praxis that challenges colonial power dynamics, such as the small yet meaningful efforts that we experienced in the Meridian 13 seminar on Sustainable Education between the University of Stuttgart and the Namibia University of Science and Technology. In contrast to the usual tokenistic climate justice programs led by corporations, this transformative seminar was based on the curious assumption that climate justice is a wicked problem with enough room for exploring diverse questions and approaches in co-creating pathways toward possible solutions or better quality questions. This type of genuine engagement that centers TEK and members of victim communities entails not only dialogue of financial support and technology transfer but also a commitment to dismantling policies and practices that reinforce land inequities, cultural erasure, and ecological harm. True climate justice requires a transformative framework that centers on land, reparations, and Indigenous knowledge. Without this foundation,

[87] Kashwan, MacLean, and López 2018.
[88] Limb 2020.

North-South relationships run the risk of perpetuating the very colonial structures that have led to the climate crisis we now face.

References

Altieri, Miguel A. and Clara I. Nicholls, eds. (2017). *Agroecology. A Transdisciplinary, Participatory and Action-oriented Approach*.

Berardi, Andrea (2016). *Mistry, J. and Berardi, A. (2016) Bridging indigenous and scientific knowledge. Science, 10 June 2016: 1274-1275. Response to editors' comments*. 06. DOI: 10.13140/RG.2.1.2574.8083.

Biesele, Megan and Robert K. Hitchcock (2011). *The Ju/'hoan San of Nyae Nyae and Namibian independence. Development, Democracy, and Indigenous Voices in Southern Africa*. eng. Biesele, Megan (VerfasserIn) Hitchcock, Robert K. (VerfasserIn). New York: Berghahn Books. 269 pp. ISBN: 9781845459970.

Bond, Patrick (2012). *Politics of Climate Justice. Paralysis Above, Movement Below?* Pietermaritzburg: University of KwaZulu-Natal Press.

Cock, Jacklyn (2019). *Writing the Ancestral River. A Biography of the Kowie*. Johannesburg: Wits University Press.

Ens, Emilie et al. (2015). "Indigenous biocultural knowledge in ecosystem science and management: Review and insight from Australia". In: *Biological Conservation* 181. 01, pp. 133–149. DOI: 10.1016/j.biocon.2014.11.008.

Kashwan, Prakash, Lauren MacLean, and Gustavo López (2018). "Rethinking Power and Institutions in the Shadows of Neoliberalism (An Introduction to a Special Issue of World Development)". In: *World Development* 120. 05. DOI: 10.1016/j.worlddev.2018.05.026.

Limb, Peter (2020). "Land, Memory, and Justice. Contested Histories in Postcolonial South Africa". In: *African Studies Quarterly* 19.2, pp. 23–42.

Melber, Henning (2024). "Colonialism, Genocide and Reparations: The German-Namibian Case". In: *Development and Change* 55.4, pp. 773–799. DOI: 10.1111/dech.12840.

Newsham, Andrew and David Thomas (2011). "Knowing, farming and climate change adaptation in North-Central Namibia". In: *Global Environmental Change* 21. 05, pp. 761–770. DOI: 10.1016/j.gloenvcha.2010.12.003.

Valerie Stull, Michael M. Bell, and Mpumelelo Ncwadi (2016). "Environmental apartheid: Eco-health and rural marginalization in South Africa". In: *Journal of Rural Studies* 47, pp. 369–380. ISSN: 0743-0167. DOI: 10.1016/j.jrurstud.2016.04.004.

Wynberg, Rachel and Thembela Kepe (1999). *Land reform and conservation areas in South Africa : towards a mutually beneficial approach, July 1999 / Rachel Wynberg and Thembela Kepe ; on behalf of IUCN-South Africa, Dept. of Environmental Affairs and Tourism, Dept. of Land Affairs*. Pretoria, South Africa: IUCN South Africa. 79 pp. ISBN: 2831704847.

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Responsible consumption and production: How can I personally promote sustainable food consumption?

In 2015, the United Nations adopted the 17 Sustainable Development Goals of Agenda 2030, which aimed at all countries, the economy, science, and every individual.[89] The goal of sustainable consumption and production is fundamental and represents a key lever for each individual. First, we will discuss the importance of sustainable consumption. Followed by a description of what exactly is meant by the goal of "sustainable consumption and production" and the current state of development towards achieving the goals at the federal level concerning food consumption. Finally, an individual approach to sustainable food consumption will be discussed. According to data from the Global Footprint Network organization, global demand for natural resources has exceeded the supply of regenerated resources since 1971.[90] Therefore, everyone should reflect on their biological footprint. The starting point is the natural biocapacity available to humans.[91] Anyone can calculate their ecological footprint online. The ecological footprint includes, among other things, living in an energy-efficient home, mobility, traveling by plane, and nutrition. This report will focus exclusively on food consumption. Ultimately, the food industry consumes a large amount of resources. In the following paragraph, the consumption of resources will be illustrated using the example of a watermelon. Watermelons are an exotic fruit mainly grown in Spain, Italy, and South America. It takes 200 liters of water to produce one kilogram of melon.[92] In addition to this enormous consumption of resources, these crops have been treated in monocultures with pesticides and insecticides, which pollute local groundwater, and imported by airplanes, which causes high levels of CO2 emissions. Transportation by ship pollutes the waters with sulfur and metal oxides.[93] Some melons are packaged in plastic containers. Plastic

[89] Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung 2023.
[90] Bundeszentrale für politische Bildung 2017.
[91] Welt Hunger Hilfe n.d.
[92] Die Umweltberatung n.d.
[93] Zukunftsstiftung Landwirtschaft 2020.

production consumes ample resources. In the worst-case scenario, the waste enters the environment and the sea.

This example illustrates the relevance of the topic. Every individual can sustainably regulate resource consumption by reaching the supermarket. However, what does "sustainable consumption and production" of the 2030 Agenda entail? SDG 12 covers, among other things, the sustainable use of natural resources, the handling of waste, and the reduction of food waste.[94] Sustainable consumption is a lever that individuals can use to counteract climate change. For this reason, this sustainability goal is of particular importance. For this reason, we will discuss how anyone can pay attention to sustainable consumption. To this end, we will first take a closer look at the sustainability goal in question and then identify points of argumentation. In addition to sustainable consumption, this sustainability goal also includes sustainable production. Therefore, an economy that consumes resources within a circular economy must be promoted. There should be a shift from the consumption of fossil fuels to the consumption of renewable raw materials. Due to the limited resources available, it is significant to limit our consumption, as this determines the economic, social, and ecological conditions worldwide. Symbols such as the "Blue Angel" help people consume sustainably. Consumer information, as well as environmental and social labels, help to regulate one's consumption. The goal is to halve consumption-related greenhouse gas emissions per capita by 2030.[95] The following sub-goals were developed for German municipalities: These include achieving sustainable use of natural resources, reducing food waste, reducing waste, encouraging businesses to adopt sustainable practices, promoting sustainable procurement in the public sector, ensuring the dissemination of information on and awareness of sustainable development, and supporting developing countries in a transition to more sustainable consumption and production patterns.[96] Previous political initiatives on this topic are detailed in the final report: "Development of Concrete Strategies and Contributions for the National Implementation of the UN 2030 Agenda for Sustainable Development for SDG 12".[97] The goal of food consumption was to halve global food waste and reduce losses along the production and supply chain.

The following points will be listed and discussed, as well as how each individual can pay attention to their sustainable consumption. The aim is to use resources responsibly and consciously. The focus here is on the actions of private individuals, not on the actions of companies or political actions. The structure of the points is

[94] Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung 2023.
[95] Die Bundesregierung informiert | Startseite 2023.
[96] Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung 2023.
[97] Julia Olliges et al. 2021.

based on the considerations of the Federal Ministry for the Environment, Nature Conservation, and Nuclear Safety BMU.[98] The focus is on the consumption area 2: nutrition.

- Resource efficiency and circular economy
    - Conventional Agriculture vs. Organic Agriculture

Organic farming is a resource-conserving and environmentally friendly form of agriculture. Soil fertility is preserved because synthetic chemical pesticides are not used for plant protection. Soil fertility is maintained, as synthetic chemical pesticides do not provide plant protection. As a result, ground and surface water is less polluted with nutrients than conventional agriculture. The low level of fertilization also promotes the protection of species and biodiversity. Fertilizers are applied mainly using compost and manure, resulting in a virtually closed nutrient cycle.[99] Conventional agriculture is defined as the use of fertilizers that are produced industrially. Seeds come from seed companies, and animal products from factory farming. Monocultures are often cultivated. The soil is usually deficient in nutrients. Additional soil compaction leads to increased erosion. Using herbicides, fungicides, and insecticides is primarily responsible for bee mortality. Fertilizer ingredients, including nitrate, glyphosate, and pesticide residues, enter groundwater via the soil and thus contaminate water bodies. Agriculture is also the world's biggest water waster. The use of mineral fertilizers and pesticides requires higher water consumption. Therefore, it is worthwhile for private individuals to support organic farming. However, as the products are usually more expensive, it is not easy to make the switch. Now, this is where politicians should intervene more and subsidize organic agriculture.

    - Regional fruit and vegetables

The grocery shelves are full of international foods. Germany imports around eleven million tons of fruit and vegetables yearly.[100] As already described in the example above, regarding watermelons, most foodstuffs travel a long way back to Germany. This means that greenhouse gases damage the environment. Therefore, choosing regional and seasonal products entirely makes sense, as they reduce transportation costs and harmful emissions. It also promotes local agriculture.

[98] Bundesumweltministeriums n.d.
[99] BUND 2025.
[100] Statistisches Bundesamt 2023.

- Food waste

The global community is still far from halving per capita food waste and losses by 2030. Currently, 17 percent of the food produced is thrown away.[101] Some apps can help save food from going to waste. These include, for example, the "Too good to go" app. In addition, each individual should improve their awareness of their food consumption and consume it according to its shelf life. However, this also requires a certain degree of organization and self-control.

- Minimize the use of plastic in food

Minimizing plastic in food is a specific sub-goal of SDG 12: The volume and mass of packaging should decrease to lessen packaging waste. Recycling rates should increase.[102] As already mentioned, plastic leads to considerable pollution of the oceans. The ecosystem, marine life, and birds suffer as a result. Every year, 4.8 to 12.7 million pieces of plastic end up in the oceans.[103] Microplastics end up in our environment. Food packaging is designed to protect food from dirt, odors, and pathogens. Plastic is valued highly as an inexpensive, lightweight, and transparent material. However, to protect the environment, you should use your bags or reusable containers and purchase unpackaged materials wherever possible.

- Information and consumer education via observing seals

Politicians have already prescribed a large number of labels for consumer protection. Below are some labels that help reflect consumer behavior and act sustainably.

Labels	Description
	The **EU-Bio-Seal** identifies products produced in the EU and organic packaged products. The label has been mandatory since July 1, 2010, and is allowed for products with at least 95 % organic ingredients. The remaining 5 % are subject to additional strict requirements.

Continued on next page

[101] Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung 2023.
[102] Bundesumweltministeriums n.d.
[103] WWF 2024.

Labels	Description
	The **state organic label**, which is used to label food and other agricultural products in Germany, adheres to the criteria set by the EU Organic Regulation and is comparable to the requirements of the previous logo. Since 2012, the EU organic label has been mandatory for any agricultural product marketed as *organic*, *eco*, or similar terms.
	The **Fair Trade seal**000 identifies products or companies that adhere to fair trade practices, meaning they meet specific ecological and social production standards. This concept promotes social justice, aims to reduce greenhouse gas emissions through environmentally friendly and climate-neutral supply chains, and ensures fair wages for workers.
 	The **seals for vegetarian and vegan products** indicate that they are free from animal ingredients and do not contain genetically modified organisms (GMOs). Reducing the consumption of animal products helps combat factory farming and lowers the amount of water used in producing these products.

Continued on next page

Labels	Description
	The **MSC** seal labels fish and seafood from sustainable and environmentally friendly fishing practices. This seal protects fish stocks and the marine environment, making it one of the strictest environmental labels for wild fish.

All images are the property of the respective organisations.

In conclusion, everyone can contribute to SDG 12 (responsible consumption and production) and live in a more resource-conserving way. In this report, we have limited ourselves to resource-conserving food consumption. However, it is crucial to scrutinize every product that is purchased. As every product contains energy, it is an essential goal to control one's general consumption and contribute to an environmentally friendly world.

References

BUND (2025). *Klar im Vorteil: Öko-Landbau im Vergleich mit konventioneller Landwirtschaft*. de. URL: https://www.bund.net/themen/landwirtschaft/folgen-fuer-das-klima/konventionell-vs-oeko/ (visited on 04/09/2025).

Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung (2023). *SDG 12: Nachhaltiger Konsum und nachhaltige Produktion*. URL: https://www.bmz.de/de/agenda-2030/sdg-12 (visited on 04/09/2025).

Bundesumweltministeriums (n.d.). *SDG 12: Nachhaltig Produzieren und Konsumieren*. Copyright: Internetseite des Bundesumweltministeriums - BMUV. URL: https://www.bmuv.de/themen/nachhaltigkeit/nachhaltigkeitsziele-sdgs/sdg-12-nachhaltig-produzieren-und-konsumieren (visited on 04/09/2025).

Bundeszentrale für politische Bildung (2017). *Ökologischer Fußabdruck und Biokapazität*. Bundeszentrale für politische Bildung. URL: https://www.bpb.de/kurz-knapp/zahlen-und-fakten/globalisierung/255298/oekologischer-fussabdruck-und-biokapazitaet/ (visited on 04/09/2025).

Die Bundesregierung informiert | Startseite (2023). *Nachhaltig produzieren und konsumieren*. URL: https://www.bundesregierung.de/breg-de/schwerpunkte-der-bundesregierung/produzieren-konsumieren-181666 (visited on 04/09/2025).

Die Umweltberatung (n.d.). *Melonen – Wasser auf Reisen*. de. URL: https://www.umweltberatung.at/melonen-wasser-auf-reisen (visited on 04/09/2025).

Julia Olliges et al. (2021). *Erarbeitung konkreter Strategien und Beiträge für die nationale Umsetzung der UN2030-Agenda für nachhaltige Entwicklung für SDG 12*. Berlin: Umweltbundesamt. 137 pp.

Statistisches Bundesamt (2023). *26% aller Obst- und Gemüseimporte kamen 2022 aus Spanien*. Pressestelle. URL: https://www.destatis.de/DE/Presse/Pressemitteilungen/2023/07/PD23_N044_51.html# (visited on 04/09/2025).

Welt Hunger Hilfe (n.d.). *Auf großem Fuß: Was ist der ökologische Fußabdruck?* de. URL: https://www.welthungerhilfe.de/lebensmittelverschwendung/was-ist-der-oekologische-fussabdruck (visited on 04/09/2025).

WWF (2024). *Das kann kein Meer mehr schlucken: Unsere Ozeane versinken im Plastikmüll*. de. URL: https://www.wwf.de/themen-projekte/plastik/plastikmuell-im-meer (visited on 04/09/2025).

Zukunftsstiftung Landwirtschaft (2020). *Wassermelone*. de. URL: https://www.2000m2.eu/de/kultur/wassermelone/ (visited on 04/09/2025).

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Urban Gardening and Local Food Production Comparison between Stuttgart and Windhoek in the Context of the SDGs

Urban gardening has emerged as a trend in urban agriculture in recent years. It offers not only contributions to food production but also social, ecological, and economic benefits. This trend is closely linked to the United Nations Sustainable Development Goals (SDGs), particularly SDG 2 (Zero Hunger), SDG 11 (Sustainable Cities and Communities), and SDG 12 (Responsible Consumption and Production Patterns).

Zero Hunger (SDG 2) aims to end Hunger, achieve food security, improve nutrition, and promote sustainable agriculture. This goal recognizes that despite advancements in agricultural productivity, millions of people still suffer from famine and malnutrition. SDG 2 focuses on ensuring everyone has access to sufficient, safe, and nutritious food all year round, especially vulnerable populations like children and those living in poverty. It also emphasizes the importance of sustainable and resilient food production systems that can adapt to climate change and other environmental challenges. By 2030, SDG 2 seeks to double the agricultural productivity and incomes of small-scale food producers, particularly women, indigenous peoples, and family farmers, who are often most affected by Hunger and malnutrition.

SDG 11, Sustainable Cities and Communities aims to make cities and human settlements inclusive, safe, resilient, and sustainable, with over half of the world's population living in urban areas. That goal addresses the need for cities to manage rapid urbanization to provide adequate housing, transportation, and fundamental services while minimizing environmental impact. This goal promotes affordable and accessible housing, sustainable transport systems, and inclusive urban planning. It also emphasizes the importance of safeguarding cultural and natural heritage, reducing the environmental impact of cities, and ensuring that all people, regardless of their economic status, have access to safe and green public spaces. It encourages cities to develop in ways that offer a high quality of life while being resilient to natural disasters and other shocks.

SDG 12, Responsible Consumption and Production, aims to ensure sustainable

consumption and production patterns. This goal addresses the need to do more and better with less, decoupling economic growth from environmental degradation and promoting resource and energy efficiency. It emphasizes the importance of reducing waste generation through prevention, reduction, recycling, and reuse. It also encourages businesses and consumers to adopt more sustainable practices, such as using eco-friendly products and reducing their carbon footprint by promoting sustainable lifestyles and supporting sustainable companies.[104]

This essay examines the phenomenon of urban gardening in two distinct urban contexts: Stuttgart in Germany and Windhoek in Namibia. The aim is to analyze and compare the challenges, opportunities, and impacts of urban gardening on local food production in these two cities. Urban gardening refers to cultivating plants, herbs, fruits, and vegetables in urban areas. This practice can occur in community gardens, balconies, rooftops, or other suitable urban spaces. Urban gardening effectively utilizes unused urban spaces and boosts the local food supply.[105]

Stuttgart, the state capital of Baden-Württemberg, a city with approximately 630,000 residents, is located in southwestern Germany. The region features a hilly landscape with vineyards and a predominantly wooded environment. The climate in Stuttgart is temperate oceanic, with average summer temperatures around 20 - 25°C and mild winters where temperatures rarely fall below 0°C. The annual precipitation is about 700 mm, spread throughout the year, creating favorable conditions for gardening.[106] These climatic conditions make Stuttgart an ideal location for urban gardening and the establishment of community gardens.

In Stuttgart, the city government, NGOs, and community groups support various urban gardening initiatives. A notable example is the Stuttgarter Grünprogramm, which promotes the greening and de-sealing of urban spaces. This program provides up to 70% financial support for various greening measures, including de-sealing and greening parking lots, courtyards, and entrance areas. With or without climbing structures, facade greening improves the cityscape and promotes biodiversity. Intensive and extensive green roofs serve as recreational areas and contribute to summer cooling and air purification. Creation of species-rich flowering areas and meadows that provide essential habitats for insects and other animals.[107]

These initiatives contribute to ecological sustainability by improving local microclimates, enhancing air quality, and supporting biodiversity. The Stuttgart Green

[104] United Nations 2020.
[105] Židak and Bedenik 2019, 28f.
[106] Stuttgart n.d.
[107] Landeshauptstadt Stuttgart, Amt für Stadtplanung und Wohnen, and Abteilung Stadterneuerung und Wohnbauentwicklung n.d.

Program encourages the transformation of barren open spaces into green oases, thereby increasing the city's aesthetic value and improving residents' quality of life. Financial support from the city allows private and commercial property owners to make their spaces more environmentally friendly while reducing wastewater fees through decreased sealing. Additionally, the city administration supports urban gardening initiatives like the *Stadtacker* in the Stuttgart-West district, where citizens gather to grow vegetables and herbs. These community gardens provide fresh food and foster social interaction and a sense of community. The gardens serve as educational platforms where participants can learn more about sustainable agriculture and environmental protection.

Urban gardening has gained popularity and is a significant initiative for promoting sustainability, community engagement, and ecological awareness. Residents have embraced growing their food in community gardens, balconies, or small urban plots. These gardens contribute to the local food supply, encourage healthier eating habits, and provide green spaces that enhance the urban environment. They also offer educational opportunities, helping people reconnect with nature and understand food production processes. However, despite its growing importance, urban gardening in Stuttgart is not considered essential for survival. The city enjoys a stable food supply system, and most residents rely on supermarkets and other conventional food sources to meet their nutritional needs. Urban gardening is often pursued as a leisure activity or hobby rather than a necessity. Despite those advantages, urban gardening initiatives in Stuttgart also face challenges such as a lack of suitable spaces in densely populated districts and bureaucratic hurdles. Nevertheless, the growing number of community gardens and active support from the city demonstrate strong interest and commitment to urban gardening in Stuttgart.

Windhoek, the capital of Namibia, with approximately 430,000 residents, faces significant challenges due to its climate and water scarcity. The city is about 1.700 meters above sea level and experiences a semi-arid climate characterized by high temperatures and low annual rainfall. During the summer months from December to March, temperatures in Windhoek frequently exceed 30°C, with daytime highs often reaching between 30°C and 35°C. In contrast, winter temperatures can drop significantly from June to August at night, usually approaching freezing, while daytime highs generally range between 20°C and 25°C. This considerable temperature variation between day and night adds to the complexity of managing urban gardens. Windhoek receives an average annual rainfall of approximately 350 mm, which is highly irregular and primarily concentrated in summer. The rainy season extends from November to March, during which most of the year's precipitation occurs. Outside this period, the city experiences prolonged dry spells, contributing to water

scarcity and posing challenges for agricultural activities. The city's low humidity and high altitude further exacerbate the dry conditions, making it essential for urban gardening initiatives to employ water-efficient practices and adapt to the demanding environment.

These climatic conditions necessitate innovative solutions to maintain sustainable urban gardening and enhance local food production despite the severe water constraints and extreme temperature fluctuations. Despite these conditions, urban gardening initiatives are vital for promoting food security. Projects like the Namibian Gardeners Project and initiatives from the One Economy Foundation provide residents with opportunities to grow their food, thereby reducing dependence on imported foods. A significant advantage of urban gardening in Windhoek is the promotion of self-sufficiency and resilience against food scarcity. Local food production is crucial in a country heavily reliant on imports. Urban gardening initiatives offer a food source and provide training and education in sustainable agriculture, which contributes to poverty alleviation and job creation.

In addition to the urban gardening movement, traditional food production plays a significant role in Namibian culture. Arnolda Booysen, a Food Scientist and Technologist has listed several classical dishes. Some commonly consumed Indigenous foods include Mahangu, also known as pearl millet, a staple food in Namibia, especially among the Oshiwambo people, and is typically served as a solid or soft porridge. White maize is another frequent staple, often prepared as a soft breakfast porridge. Mopane worms, which are dried and then cooked with onions, tomatoes, and spinach, are traditionally served with Mahangu. Mutete, or hibiscus leaves, are another popular food item; they are cooked with tomatoes and onions, imparting a distinctive sour taste. Marula fruits produce traditional beer and Marula oil, while Omauni, a hard-shelled fruit with tangy-sweet seeds, is processed into juice and jam. These foods are integral to the traditional diets of Namibia, contributing not only to the nutritional needs of the people but also playing a crucial role in maintaining cultural identity and promoting ecological sustainability. The use of traditional food processing and storage methods, such as straw silos and clay baskets, underscores the deep connection Namibian communities have with their environment and natural resources.

Despite these cultural and traditional strengths, Namibia faces challenges regarding food security. Between July and September 2023, approximately 579,000 people, or 22% of the population, are experiencing severe food insecurity, necessitating immediate intervention to mitigate food shortages and protect livelihoods. This situation is largely attributed to climatic events such as droughts, inconsistent rainfall,

price fluctuations, economic decline, and high unemployment rates.[108] Due to high food costs, over 80% of its food is imported—this reliance on imported food results in elevated prices. In 2022, Namibia exported goods worth 57.7 million USD to Germany, mainly fish fillets, charcoal, and grapes. In contrast, it imported products valued at 96.6 million USD from Germany, including items such as malt, cars, and unpackaged medicines. This trade imbalance underscores Namibia's dependence on imported goods and makes the country susceptible to fluctuations in international market prices. Interestingly, Namibia's exports to Germany have decreased by 20.2% annually over the past five years, highlighting the need to bolster local production and consumption to enhance food security.[109] Alongside this, Namibia grapples with a high unemployment rate, at 33.4% in 2018,[110] which rises to 43,3% among youth.[111] This widespread unemployment results in low household incomes, adversely affecting nutrition.

Both cities illustrate how urban gardening is essential for enhancing food production and fostering sustainable urban development. In both cases, strong community initiatives and NGO engagement are driving this movement. Urban gardening contributes to improving food security and creating social meeting points.

The most significant differences lie in climatic conditions and resource availability. Stuttgart benefits from a temperate climate and adequate precipitation, while Windhoek struggles with extreme climatic conditions and water scarcity. These differences influence how urban gardening is implemented and what technologies and methods are required. In Stuttgart, green roofs and facade greening are possible, like the Calwer Passage, while Windhoek focuses on efficient water use and adaptation to drought conditions.

The commitment to SDG 11 is reinforced through urban gardening. In Stuttgart, municipal support for numerous initiatives enhances the city's aesthetics and strengthens social cohesion by improving residents' quality of life. Windhoek shows that urban gardening can create green spaces and foster community spirit even under challenging conditions despite limited resources and extreme climate. The connection to SDG 12 is also evident in both cities. Stuttgart uses urban gardening to promote sustainable consumption by utilizing local resources and reducing food waste. In Windhoek, urban gardening helps decrease the ecological footprint by reducing food transport and encouraging sustainable farming practices.

Urban gardening has the potential to contribute to several SDGs by enhancing

[108] Integrated Food Security Phase Classification 2023, 2ff.
[109] The Observatory of Economic Complexity n.d.
[110] Rafael 2020.
[111] Mulama and Nambinga 2017, p. 1.

food security, improving quality of life, and promoting sustainable urban environments. The comparison between Stuttgart and Windhoek illustrates that adapting to local conditions and challenges is essential for urban gardening initiatives to be successfully implemented. While Stuttgart benefits from a temperate climate, Windhoek demonstrates that urban gardening is feasible even under challenging climatic conditions and limited resources. Promoting local food production and utilizing indigenous plant species can contribute to food security, preserving cultural traditions, and enhancing biodiversity. In the long term, urban gardening and local food production can lead to more resilient and sustainable communities in both cities.

References

Integrated Food Security Phase Classification (2023). *Climatic shocks, economic decline, and rising prices are driving acute food insecurity in Namibia*. IPC Acute Food Insecurity Analysis. en. URL: https://www.ipcinfo.org/fileadmin/user_upload/ipcinfo/docs/IPC_Namibia_Acute_Food_Insecurity_Jul2023_Jun2024_report.pdf (visited on 04/09/2025).

Landeshauptstadt Stuttgart, Amt für Stadtplanung und Wohnen, and Abteilung Stadterneuerung und Wohnbauentwicklung (n.d.). *Förderprogramme Urbanes Grün*. de. Landeshauptstadt Stuttgart, Amt für Stadtplanung und Wohnen, and Abteilung Stadterneuerung und Wohnbauentwicklung. URL: https://www.stuttgart.de/leben/stadtentwicklung/stadtplanung/stadterneuerung/foerderprogramme-urbanes-gruen.php (visited on 04/08/2025).

Mulama, Lihongen and Victoria Nambinga (2017). *Namibia's untapped resource: Analysing youth unemployment*. en. National Planning Commission. URL: https://www.npc.gov.na/wp-content/uploads/2023/06/NAMIBIAS-UNTAPPED-RESOURCE-ANALYSING-YOUTH-UNEMPLOYMENT-POLICY-BRIEF-2018.pdf (visited on 04/09/2025).

Rafael, Benonia (2020). *The Root Causes of Unemployment and Possible Policy Interventions*. en. National Planning Commission. URL: https://www.npc.gov.na/wp-content/uploads/2023/06/The-Root-Causes-of-Unemployment-and-Posssible-Policy-Interventions-2020.pdf (visited on 04/09/2025).

Stuttgart (n.d.). *Stuttgart*. Stadt Stuttgart. URL: https://www.stuttgart.de/.

The Observatory of Economic Complexity (n.d.). *Namibia*. URL: https://oec.world/en/profile/country/nam.

United Nations (2020). *The 2030 Agenda for Sustainable Development's 17 Sustainable Development Goals (SDGs)*. en. United Nations. URL: https://sdgs.un.org/sites/default/files/2020-09/SDG%20Resource%20Document_Targets%20Overview.pdf (visited on 04/09/2025).

Židak, Nenad and Nidžara Osmanagić Bedenik (2019). "Urban gardening: an integrative approach". en. In: *The holistic approach to environment* 9, pp. 27–34.