

Peer-reviewed academic journal

**Innovative Issues and Approaches in
Social Sciences**

IIASS – VOL. 13, NO. 3, SEPTEMBER 2020

Innovative Issues and Approaches in Social Sciences

IIASS is a double blind peer review academic journal published 3 times yearly (January, May, September) covering different social sciences: political science, sociology, economy, public administration, law, management, communication science, psychology and education.

IIASS has started as a Sldip – Slovenian Association for Innovative Political Science journal and is being published by ERUDIO Center for Higher Education.

Typeset

This journal was typeset in 11 pt. Arial, Italic, Bold, and Bold Italic; the headlines were typeset in 14 pt. Arial, Bold

Abstracting and Indexing services

COBISS, International Political Science Abstracts, CSA Worldwide Political Science Abstracts, CSA Sociological Abstracts, PAIS International, DOAJ, Google scholar.

Publication Data:

ERUDIO Education Center

Innovative issues and approaches in social sciences, 2020,
vol. 13, no. 3

ISSN 1855-0541

Additional information: www.iiass.com

'EFFLUENT OF THE AFFLUENT': ANTHROPOLOGISTS' COMMENTS ON REMEDYING THE POLLUTION OF UMGUZA RIVER (IN ZIMBABWE)

Thebe Phillip¹ and Forzo Titang Franklin²

Abstract

People's activities of daily living continue to be central to environmental denigration. In Bulawayo, the second capital of Zimbabwe, big companies tend to deposit industrial waste in various streams that flow to the Umguza river located on the city's margins. This has caused health and livelihood threats for the people living on the riverbanks. Unfortunately, the government's remedial options have sometimes been reported to be ineffective– the reason why this river has remained subject to political and (largely scientific and quantitative) academic inquiry. This paper approaches the river from an anthropological perspective. It asks a variety of questions about management approaches and proffers a culture-centric lens towards the holistic understanding of the river. Debates on agency, ontology, perspectivism, the commodification of nature, and participation feature centrally. Despite inspiration from discussions with several people since 2012, the paper is not empirically grounded, and its content is a result of desktop and content analysis of literature, news, images, and videos related to pollution and the Anthropocene. The paper hopes to ignite and provoke further deliberations and empirical studies on the river.

Keywords: Umguza River, Anthropocene, Pollution, Anthropology, Culture-centric

DOI: <http://dx.doi.org/10.12959/issn.1855-0541.IIASS-2020-no3-art3>

¹ Thebe Phillip, Ph.D. Fellow, Anthropology, Research & Teaching Assistant, The Chinese University of Hong Kong. Email: thebephilip@gmail.com (Corresponding Author)

² Forzo Titang Franklin, Research Graduate, Cultural Anthropology & Development Studies, KU Leuven, Belgium. E-mail: franklintitang@gmail.com

An Overview of the Anthropocene Debate and Concepts

Human activities are turning the earth upside down in what has been widely referred to as the basis of the Anthropocene³ (Steffen, Broadgate, Deutsch, Gaffney and Ludwig 2015; Haraway 2015). This Anthropocene is life-changing, life-threatening, and sometimes resulting in toxic deposits into water bodies, the effects of which are sometimes unconsciously unseen (Swanson 2017; Steffen et al. 2015). Excretions into rivers and waterways are commonplace in the world Anthropocene (*Capitalocene*⁴, Moore 2017), but also the Zimbabwean Anthropocene (Mapira and Mungwini 2005). Umguza river is also a victim of deposits of toxic substances especially by industrial companies in Bulawayo city centre, what the paper calls 'an effluent of the affluent' (Dube et al. 2010). Finding solutions to this quandary is thus a preoccupation of stakeholders, especially the government.

Water Pollution is defined as the undesirable, otherwise contaminated materials that are inadvertently or purposefully introduced into aquatic areas in magnitudes that distress their capacity to provide ecosystem goods and 'services' such as household usage, agricultural purposes, leisure/scenic beauty and the sustenance of aquatic life, etc. (Dube 2014; Wenzel 2017, *Somatosphere*⁵). In the context of Umguza river, the waste from industrial activity is swept into tributaries in the urban area, flowing down into the main river, and ultimately affecting livelihoods in peri-urban areas downstream. Within anthropology, waste or toxicity is viewed as 'the accursed share' (Bataille 1991) or spatially displaced matter but not necessarily 'out of place', but which 'defines society' (Douglas 1996). This can be interpreted to mean that the waste is not being deposited in its rightful places hence questions about toxicity's wider relation to the society and its daily activities.

This paper explores remedial options such as 'fines' applied in the case of Umguza river pollution. It uses a multifarious lens to make meaning of the state of affairs. It transcends the common econometric (though a

³ Anthropocene is a way of thinking about contemporary ecological crises in the world, its genesis, and sustenance. It answers the question of where and when humans' relationship with the rest of nature began? (Moore 2012)

⁴ Capitalocene extends, if not criticizes the Anthropocene by showing how capitalism relates to nature and how these relations can be situated not only in quantifiable explanations but also in historical assemblages. See <http://www.publicseminar.org/2015/10/the-capitalocene/>

⁵ Somatosphere is a *Science, Medicine, and Anthropology* collaborative website covering the intersections of medical anthropology, science and technology studies, cultural psychiatry, psychology, and bioethics. See <http://somatosphere.net/>

part of it) to also include social, political, human and non-human spectrums to make sense of management approaches. In doing so, the paper zeros in on ecological concepts such as ontology, conservation, commodification, and sustainability all inherent in Anthropocene debates. The main objective of the paper is to unearth, even if speculatively, the complex relationships that (could) exist amongst actors as well as the problematic dynamics that (could) obtain in the case study. The following sections will unpack the background of the case and its management approaches, the methodology employed to study the case, a variety of anthropological lens for understanding the case, and lastly, a conclusion. This paper does not ethnocentrically impose a way of viewing this case, but simply asks a lot of questions about management issues. These questions, even without answers, are hopefully potent culture-centric contributions towards the better management of the river and its tributaries.

Background of Umguza River Pollution and Management Approaches

Figure 1: Khami tributary to Umguza River



Image by Author, 2018

Umguza river begins as tributaries that flow via the industrial and suburban expanses of the city of Bulawayo namely: Matshe Umhlophe, Khami, and Mazai (Chinyama et al. 2016). These tributaries are subject to disproportionate pollution due to sewer surges, industrial as well as a wide-ranging human activity. The river flows out of the city into peripheral settlements scattered along the river basin. It has two

reservoir dams, the upper and lower Umguza dams. The river has been used for consumption, commercial and subsistence agriculture, recreation, and the sustenance of the Umguza nature reserves (Chinyama et al. 2016). According to media reports, the Bulawayo City Council (BCC) and other companies are responsible for the discharge of various wastewater, which has polluted the river, hence the 'effluent of the affluent' (Dube 2014).

It is argued that these 'capitalists', have often embraced the custom of using below-average management procedures and in some occurrences, relinquishing the waste treatment processes (Dube, Zwelabo and Makaka 2010). The BCC at its Thorngrove Sewage Works, sometimes discharges raw sewage into the Mazai tributary, to escape plant blockage resulting from erratic electricity supply in the city (ibid). According to the Zimbabwe National Water Authority (ZINWA) Gwayi Catchment spokesperson "the water has high levels of faecal coliform which is from raw sewage waste; Phosphorus, Zinc, Lead, and Chromium-6 which is the most dangerous if the levels are too high" (Huni 2014: para 12). More so, affected areas, Wards 2, 7, 8, 9, 10 and 18 in Umguza, with an estimate of 11 000 households, do not have boreholes and that leaves them in a dire situation in terms of access to fresh water (ibid).

A growing body of literature documents the adverse health effects of exposure to environmental toxins. Cassady (2007) found in Arctic Alaska, 'A Tundra of Sickness': various forms of cancers resulting from contact to disposed waste. She showed the difficult correlation between effluent disposal and 'cultural survival' claiming that indigenous knowledge was insufficient to empower the locals to deal with these cancers. UN-water (2013) averred that 580 victims of aquatic pollution-related sicknesses in India were reported every single day. In 2015 it was reported that over 1.8 billion people world over, relied on water contaminated with faeces, and hence being subjected to ailments such as 'cholera, dysentery, typhoid and polio' (WHO/UNICEF 2015). The United Nations Educational, Scientific and Cultural Organization (UNESCO), argues that 80% of polluted water globally, tends to flow back into the environment untreated or unused (UNESCO 2017) and this Industrial and human activity-induced pollution, by and large, affects the availability and quality of water in its freshness (UN-Water 2011).

Furthermore, a majority of urban areas are reportedly not endowed with sufficient infrastructure and means to address water toxicity in a tenable, satisfactory and sustainable manner which affects management approaches to water pollution (UNDESA 2014). More so, the UN

(2013b) argued that while progress has been made to a certain extent towards achieving target 7c of halving by 2015, the proportion of the population without sustainable access to drinking water and basic sanitation by the MDGs has not been sufficiently met, with variances in progress based on geographic region, within countries and individual targets. UN (2013a) showed that between the years 2000 and 2011, over 2 billion people had gained access to improved drinking water in developing countries, hence somewhat a significant management achievement, but the same report also argued that 768 million people had no access to safe drinking water, while 2, 5 billion lacked sanitation facilities in 2011 alone. Another report claimed that efforts for reducing poverty were still not integrating the environmental dimension, despite significant efforts from Official Development Assistance (UN 2013d). OECD DAC claims that by 2012, USD 31 billion was being expended towards green aid. The foregoing only shows the complexity of managing water pollution in this age of the Anthropocene.

In Zimbabwe, the main legal framework for pollution management is the *Environmental Management Act (Chapter 20:27)* and *Statutory Instrument 6 of 2007* which set out the Environmental Management Agency (EMA) to be the main governmental agency charged with environmental management. Under the Polluter must Pay Principle (PPP) the fingered culprits were fined by EMA, with the Bulawayo City Council being fined USD 5000 while other companies were fined sums not exceeding USD 1000 (Harare24 2012). Dube (2014), also claims that companies in the bracket of Abattoirs and Funeral Parlours who were involved in the effluent were closed subsequently. More so, the BCC was threatened with litigation and stiffer penalties by EMA, if it failed to comply with the order to cease pollution (Harare24 2012). Huni (2014) claimed that farmers reliant on Umguza river and other aquatics nearby were directed against vegetable cropping in the area, and the boreholes close to the river were sealed upon finding out that the river was heavily contaminated and subjecting people to chronic ailments. The 'effluent of the affluent' saga was heightened to the extent that an Inter-Ministerial Taskforce was dispatched to engage the polluters to compensate the people of Umguza by providing clean water. The then responsible minister of the natural environment, Saviour Kasukuwere, even told EMA to renovate BCC's dilapidated sewage management system and forward the charges thereof to the City Council (Huni 2014; see also Ince 2001 above).

Despite these remarkable efforts, Umguza river remains highly polluted, a health threat for the community at large, and hence concern for policymaking circles. Scholars condemn some of these remedial options

such as fines (Poppe 2012) and relocation of locals (Brockington 2013 *Fortress Conservation*), and this shows that sustainable water pollution management is not only a complex and context-specific phenomenon (Viveiros de Castro 2012; UN 2013b), but also one that will continue to warrant studying, restudying, and the integration of knowledge and practices across disciplines and polities (Griggs et al 2013; UNSDSN 2013). More so, in Umguza, there are limited studies that are qualitative, from the social sciences or both socio-cultural and local premises. Most studies conducted largely fall into the quantitative disciplines such as geography and natural science disciplines (Chinyama et al. 2016; Naik et al. 2000; Nyathi 2013; Radza 2015). Furthermore, these studies somewhat, hardly focus directly on management approaches of Umguza pollution but instead concentrate largely on levels of pollution (Chinyama, Ncube, & Ela 2016), land-related planning challenges (Dube & Chirisa, 2013), and public health (Ndlovu, 2017). This background motivates the qualitative focus adopted in this paper.

Methodological Issues

Before forging ahead with analysis, it is important to understand how this paper came about. The methodology for this paper is informed by my continued observation of the management approaches of this river as a Citizen of Zimbabwe that was born and bred in Bulawayo and with keen interests in governance issues. It is based on interactions with various people around the city and even in the river areas between 2012 and present. I have interacted formally and informally with people that work for some of these organizations such as the BCC and EMA. While this paper is not exactly empirical, but theoretical, their views have also shaped the narrative in this paper.

I have also engaged with this case of Umguza river academically while doing both my Post Graduate Diploma in Development Studies and Master of Science in Development Studies at the National University of Science and Technology [Institute of Development Studies] in Zimbabwe, where some of the theoretical insights and critical stances in this paper were germinated. Credit to my classmates with whom I debated and continue to debate on issues relating to the management of this river. Credit also, to my *Natural Environment and Development* lecturer at the National University of Science and Technology, who also lectured avidly on this case study. I carried my interests, in this case, over to Europe where I continued to research on the Umguza river while doing my Advanced Master's degree in Cultural Anthropology and Development Studies at KU Leuven in Belgium. It is here that I managed to integrate anthropological theoretical insights into trying to make sense of the river. Credit to my professors who grounded me on *Culture*,

Ecology, and Development and especially to my coauthor and friend, an anthropologist and academic in his own right, who helped me in reading, proofreading, questioning and advising on the logical and analytical flow of the paper. While he is a Cameroonian, his vast reading and understanding of Zimbabwean issues are highly appreciable.

Other than the above said, this paper is a result of desktop and content analysis of multifarious textual, image and video materials that relate to pollution management, especially the Zimbabwean case of the Umguza river. We reviewed vast literature sources looking for key emerging categories on pollution management until we reached a saturation point. We used this literature to make sense of the Umguza pollution case. Several Zimbabwean specific literature sources were also consulted to outline situated and context-specific polemics surrounding the management of this river. It is with such a rich methodological background, that in the next section the paper asks questions about Umguza river from an anthropological perspective.

Culture and Umguza River: An Anthropological Analysis

This section unpacks a culture-centric approach based on a review of literature on environmental management and the Anthropocene and obtains several socio-cultural insights on pollution and ecological management that could otherwise be borrowed in understanding the river. It investigates conservation and commodification, community engagement and sustainability, ontology-culture, and cosmological perspectives as frameworks available for use in the analysis of complexities relating to the river.

The question of Agency

Agency has become fashionable in the discipline of anthropology, especially in the 1970s through to 1990s where scholars such as Sherry Ortner and Pierre Bourdieu have been concerned. Ortner argues that agency allows people to “be realistic about the ugly realities of the world and hopeful about possibilities of changing them” (Ortner 2016: 60). In her earlier articulations, she outlined how agency functions to outline individual choices, decision making, tactics and not just the rules of the game (Ortner 1984). She went on to argue that central to practices of people were their interests (both psychological and pragmatic) driving them to strive for gain even amid strain (Ortner 1984). For Bourdieu (1977:497), central to Practice Theory is “the relationship between social, economic, political, and ecological structures with which we live and agency– our ability to pursue projects of our own design based on our own life experiences”. Jamieson (2010) argues that one challenge in the Anthropocene is that there are sometimes 'unclear lines of

responsibility in this sea of agency'. It is for this reason that toxicity has been problematic to avert since bringing together many stakeholders makes it difficult to pinpoint the one to be responsible for polluting let alone averting the pollution. One of the major questions significant for management purposes is who should take centre stage and with what duties amongst different stakeholders of Umguza river. Who are the actors? What are their levels of interest, participation, and exclusion? What are their choices? Their decisions? Their tactics? What structural factors influence their agencies? Asking these questions is in the hope that mapping out actors and defining their roles and responsibilities will assist in finding informed and sustainable solutions to the pollution quandary in Umguza river.

Commodification of nature

Despite retributive measures such as fines, which arguably generate public discourse around environmental transgressions, some companies are known to be repeat offenders, such as the BCC (Harare24 2012). This shows the problematics of the Polluter Pays Principle (PPP) despite it being averred to influence behaviour change (Samuel and Aigul 2015). When instituted along with pollution permits, which allow industrial companies to pollute subject to various categorizations, PPP does not discourage pollution, but normalizes it, especially for big and profitable corporates (Kolstad 2011). Critics forward that since environmental charges do not entirely obliterate pollution, there is a need to focus on wastewater minimization, which can be carried out through internal recycling of raw materials, 'greening' of production procedures and recycling of effluent (Helmer et al. 1997). The ensuing complies with the argument by Ince (2001) and McAfee (1999) on 'green developmentalism' or the greening of waste as it were. Needless to say, that these are expensive processes that require sophisticated technologies and one wonders if they are manageable in the current economic climate in Zimbabwe (cf. Kolstad 2011). OECD (2012) maintains that most developing countries are reluctant to uptake the 'green' approaches partly because they do not directly address poverty in so far as it is a more critical issue in the global south. On the other hand, countries that have made inroads to 'green development', have done so because this field is rich with foreign aid. This leaves the political question of the 'real agenda' of these countries, between foreign aid and environmental management (Mc Afee 1999).

Anthropologists forward the question, should a value be attached to nature? (cf. Sullivan 2013); should nature be demarcated? (cf.

Brockington 2002, *The fences and fines approach*⁶; Neumann 1996), and if so, who should be responsible for setting the market prices for nature? (Sullivan 2013, 2014). Ethical questions of profit versus health/livelihoods and profit versus pollution also surface concerning the fines. One wonders if the economic/health costs incurred by the farmers and communities alongside the riverbanks equate with amounts the companies like the BCC were made to pay for polluting. In the same vein, do these fines correlate with the devastating pollution in the river? This still boils down to the bone of contention, should 'environmental crimes' like pollution be accorded an economic value? (cf. Costanza et al. 1997). The challenge for Mc Afee is that values tend to be set according to market standards with less regard for culture, hence making elites (in this case polluting companies) to be the winners while the people become losers (McAfee 1999).

On record, as was earlier shown, is that on one occasion, the companies were charged to provide potable water to these communities. The question is to what extent these companies have complied especially seeing that the BCC, for instance, has been guilty of poor and erratic water provision to residential areas in the city of Bulawayo in times of crisis (The Zimbabwean 2012). One wonders if the companies have the financial lever to provide water enough to sustain all the activities of the people along the banks of Umguza River. At what levels will hygiene be kept in such circumstances since these are communities already struggling with water and sanitation hygiene, peripheralized so much so that waste is scattered all over in their environments and bins are not regularly collected by local authorities?

Beyond Polluting Companies and Affected Communities

If holism is anything to be believed, then dealing with the conundrum in Umguza also requires an understanding of affairs from a naturalist/capitalist perspective (Descola and Sahlins 2013; Viveiros De Castro 2012). One wonders if Umguza should be (is) exempted from exploitation by companies. For instance, Moore (2017) insinuates that humans and capital (ism), whose activities have toxified nature, must withdraw from nature to bring sanity to the now expensive environment. But, should we take it from a bird's eye perspective of the old 'Limits to Growth' debates (Meadows et al. 2004) that economic pursuits are detrimental to both the environment and livelihoods? Is this not an

⁶ 'The fences and fines approach' is a concept in biodiversity conservation in which authorities secure certain places or parts of the natural environment, the so called 'protected areas', such that the general populace have no access to that place while those with a right to the protected claim absolute agency without accountability in the area.

'environmental nostalgia' that culminates in companies risking their profits and the lives of their employees just to save the lives of the people on the banks of the river? Is this not alarmism on the extent of damage caused to the river or reverse psychology to romanticize the local? Whose reality counts (Chambers 1997), people in the city sustained by polluting companies, people affected by pollution residing on the riverbanks or the river itself?

Theoretically, criticism is levelled against 'local' alarmists that stimulate "ethnochauvinism, [and] reification of both culture and locality or people" leading to ignorance of local forms of injustices and the external benefits thereof (Nederveen Pieterse 1998:366). What if these 'external' companies are employing 'local' people residing in some of these polluted areas or are employing people in the city centre that support/relate (materially and otherwise) to those at the receiving end of pollution. How do we manage pollution without causing damage also to the companies or the people that depend on these companies? This is not to mention the wider economy that depends on profits from these companies nor the possibility that locals may also be contributors of pollution into the river with their everyday life activities. Gupta and Hecht (2017: 3) connote on complexities of waste in the Anthropocene that "materials can be waste in one context, and commodities, resources, or art in another. Changes in value are never clear, unidirectional, or fixed in time and space."

More so, "It is both futile and an insult to the poor to tell them that they must remain in poverty to protect the environment" (World Commission on the Environment and Development 1987, in Hulme and Murphree 2001:1). The poor here could be the urban poor residing within the City centre and relying on these polluting companies for livelihoods in as much as it could be those that bear the brunt of pollution on the peripheral riverbanks. The effluent of the affluent sometimes images itself in binary terms (polluters versus affected) which according to scholars (Cornwall and Eade 2010; Yarrow 2008; Swanson 2017) leads to political warfare and a struggle for relevance. In this instance, the affluent are the 'rich' companies who are polluting the river the 'poor' communities depend on. Perhaps the ambiguity denoted by Gupta and Hecht (see above) helps in breaking these binaries by showing the complexity of waste beyond the people in the riverbanks and the polluting companies.

Law Enforcers and Polluters' relations

Relations between EMA and the polluting companies also warrant scrutiny. Bryant and Bailey (1997) and Bakker (2007) warn of the need

for environmental management not to be dissociated from socio-political contexts. Gupta and Hecht (2017: 3) perceived "toxic waste not only as a mirror of social, political, and economic conditions but also as an active agent shaping those conditions." In the case, the BCC, a semi-government institution, is mentioned as one of the major polluters, while EMA, another semi-government institution, is charged with environmental law enforcement. This creates a bureaucratic anomaly which when juxtaposed with the litigation processes applied leaves a lot to be desired. These organizations are naturally supposed to be 'partnering' for the same cause since the BCC also has an institutional obligation towards environmental management. It then baffles the mind to see supposed stewards of the environment being the main degraders. In fact, how do we apply of rule of law and ensure accountability in such instances? The BCC is threatened with stiffer penalties if they continue polluting, but the extent to which these threats can materialize into action is subject to empirical scrutiny. The same could be said of other companies that have a relational advantage with EMA. Umguza remedies must also look into these dynamics as well as the potential "struggles for justice within [such] politicized environments" (Loftus 2007: 43 emphasis added).

'Vultures feeding on Local Peoples' Sources of Livelihoods'?

To continue this debate on relational matters, Julie Poppe (2012) in an ethnography of Burkina Faso noted that game rangers were found lacking in reporting acts of environmental degradation. This was because they shared socio-cultural lives with local communities who sometimes were kith and kin (ibid). As a result, they just gave warnings or accepted bribery for pacifying/concealing gross environmental degradation. Other scholars also argue in light of 'corruption' labelling the environment as a 'curse' that shapes sociopolitical malpractices by communities (Bakker 2007; Duffy 2000). One wonders if the bureaucracy is staffed by 'vultures that feed on poor people's sources of livelihoods' (Poppe 2012: 331).

This paper alerts of the 'possibility' of people on the banks of the river suffering the consequences of leakages in the legal and governance system. Are there any stakeholders letting pollution crimes go unpunished due to the pocketing of benefits out of the pollution mayhem in Umguza? This is not to undermine the commendable efforts of EMA or the state at large, but this is about criticisms levelled against the states in Africa as a whole. Jean- Francois for instance, argued that the state is so corrupt that national resources are unjustly distributed to the people as politicians [with big bellies] tend to siphon these resources for their selfish aggrandizement (Jean-Francois 1993, *Politics of the Belly*).

Cain (2015) also admonishes that rent and bribe-seeking about offering or not offering a service are a commonplace among public servants in Zimbabwe. He further shows how Transparency International in 2011 gave Zimbabwe a Corruption Perceptions Index score of 2.1 out of 10 (ibid). So, if Cain is to be believed (cf. Bryant and Bailey 1997), corruption at all levels must not be counted out of the debates or initiatives towards pollution management of Umguza River. More so, this corruption must be examined from all dimensions and levels, not only at a government level.

Affected Communities' participation

There is a danger of envisioning local affected communities as 'victims' instead of seeing them as both subjects and coauthors of their intercultural encounter and change (Julie Popp 2012; Bryant and Bailey 1997). Human agency in the Anthropocene must extend beyond simply being the polluters. Polluters are not the only problem solvers. The affected groups have been represented by the media as passive victims and none of the remedial options seems to speak to their active participation. Remedying the situation needs an inquiry into the participation of locals (See Cornwall 2008; Descola and Sahlins 2013; Gaventa 2006; Bryant and Bailey 1997). A prominent anthropologist, Terrance Turner (1992) documented a case of the Kayapo people in the Amazon who successfully used their culture to oppose the building of dams along a river that went through their forests. This move by the Brazilian state authorities would have led to the flooding of the Kayapo area, destroying their forests and depriving them of their livelihoods and especially culture. A heated meeting between Kayapo chiefs and state authorities led to the recession of the decision to build dams and heritage on the efficacy of locally-based conservation methodologies.

What levels and spaces are availed to the community in setting up the fines or pegging pollution licenses under the polluter pays principle? Do those at the receiving end of pollution have a hand in the adjudication and litigation processes? Are these people in a position to organize and mobilize to advocate for environmental change and do they even agree to these 'market approaches' to environmental management. More so, one wonders if at all local communities' benefit from the fines paid by these polluting companies and if these benefits are communal or individual (Hume and Humphrey 2001). For Descola et al (2013), common ownership of ecosystems with localized structures of governance comes in handy in their protection. Bryant and Bailey (1997) note that stakeholder participation is necessary because it taps into 'local knowledge systems and practices' which promotes efficacy and commitment from the locals. The scholars outline several case studies

including in Kenya where the locals were endowed with abilities to manage and regulate their environment well without the use of scientific methodologies. What then is the scenario for the Umguza river?

Perspectives and Perspectivism

While still on participation, a Government Inter-Ministerial Taskforce was dispatched to have conversations with the polluters to change their behaviours (Huni 2012). The question is, did this taskforce also go down to those at the receiving end to understand their 'perspectives' about Umguza River Pollution? Did they even consider asking about the community-based methodologies for coping with the pollution and or conserving the river? A 'cosmological perspectives' assessment could help the remedial process by unearthing not one reality but several realities (Viveiros de Castro 2012). The reality of pollution in Umguza river has different 'aggregates' (cf. Descola and Sahlins 2013) or 'collectives' (cf. Latour 1999) broader than the societies affected, companies polluting, and humans as a species; it also includes the perspective of the river as a natural specie being polluted.

The same goes for the action by the state to close down farming activities and seal boreholes alongside the riverbanks (Dube 2014). This initiative makes health sense, but does it make sociocultural as well as economic sense? Doesn't it threaten people's livelihoods since farming activities help towards boosting people's incomes, and consequently their capacity to afford food, education and health among other developmental necessities? When the state orders for them to close shop, are these necessities not threatened? In the long run, pollution management, instead of being virtuous, becomes rather vicious. In light of the argument by Bryant and Bailey (1997) on deeply seated politics of the natural environment, one could speculate that 'closing shop' could even permeate family happiness, lead to domestic violence or promote the use of other illegal means of livelihoods such as illegal fishing and cropping on the river and its banks, prostitution, and crime. It could lead even to family separation through migration as breadwinners are forced to search for other livelihood sources in other places (ibid). When the people are deterred from using the river, resettlement may be the solution, yet it is expensive for the government and disruptive to cultural systems. People may be separated from their cultural homes, the graves of their relatives and the river which perhaps has a cultural significance to their lives. This line of thought somewhat borrows also from the critique of 'Fortress Conservation' (Brockington 2002) and 'Green Grabbing' (Fairhead et al. 2012), both of which question eviction, exclusion and alienation of people, usually without alternatives, from an environment they have traditionally survived on. This is, in fact, a

recurring problem between the Holocene and the Anthropocene (Tsing 2015). Tsing refers to this as a dilemma of 'no refuge' in the Anthropocene in which the ability for multispecies inclusive of both humans and non-humans to be reconstituted, remade or replenished after crises such as pollution or toxicity dwindles. Moore (2017) argues that 'cheap' nature is finished through human activity. The question then is what do the locals do after 'environmental exclusion' in a world of limited possibilities nor sustainability? This is the dilemma between pollution and human survival that Umguza remedies must address.

Culture Attentive Remedies

In light of the people themselves, one wonders if polluting companies understand the implication of their actions on the people in ways other than profits and health. This paper considers a case in which the BBC news (26 Sept 2017) published a story about the Bali farmers in Indonesia, living closer to a volcanic mountain threatening to erupt, who had culture-specific interpretations of the situation. This angry volcano, according to locals, needed rituals more than the eviction of people and their cattle, and the locals believed eruption threats were a sign that the 'gods' were angry and in need of appeasing. Likewise, this paper argues that culture is also intertwined with the Umguza river, and hence a need to integrate culture in remedy approaches.

For instance, the disposal of water used to wash deceased bodies and raw sewage into the tributaries by some funeral parlour companies has serious implications on ethical and cultural taboos. Borrowing from Salihns' (1976) *La Pensee Bourgeoise* and Douglas (1996), drinking faecal water and water used to wash deceased bodies (as in the case study) brings out connotations of 'self-cannibalism' or eating oneself. Furthermore, scholars of the Anthropocene claim that association with waste or being a consumer of waste leads to a stereotypical denigration locating the victim within the waste itself or seeing them as waste (Danny Hoffman 2017, *Toxicity*). What this shows is that any environmental remedies must be informed by in-depth analyses that consider cultural narratives from below. What are the society-based meanings of the river and its pollution? How do the different stakeholders relate to this river? Do we have other religious or culturally based relations, say perhaps, taboos or spiritual significance attached to the river? These non-economic perspectives give a holistic picture of the river and aid better policy formulation towards redressing pollution in the river from the bottom up.

Blindness in the Anthropocene

One wonders also, from the top down, the position and relations of the polluters to the river. Rose (2004) warns against 'blindness' in the Anthropocene that leads certain sections (for instance polluters) to act in ways that negatively affect the environment (for instance Umguza river). Descola and Sahlins (2013) see this as a dilemma emanating from the enlightenment epoch claiming that rights are due only to humans and hence also to polluting companies, such that these companies have absolute power over nature (Umguza river). If this is the case, it could perhaps explain why the companies carry the 'superhuman' tag which creates one-way exploitative relations between the polluting companies and the river (see Tsing 2015).

Haraway (2015), with a similar concern, proffers 'making kin' to be a sustainable solution that goes beyond totemism, ancestry, and genealogy. This kin making involves, in the case of Umguza river, polluting companies developing deep-seated 'non-linear' relations with the people and the river based on "commitment and collaborative work and play with other Terrans, flourishing for rich multispecies assemblages" in what she terms the "Chthulucene" (2015:160). This is an extension to Dumit (2004)'s and Haraway (2008)'s argument that the blindness in the Anthropocene, could be ameliorated by a curiosity about others other than self, as well as making connections between self, self's activities and others (both human and non-human and species). This may be a starting point in remedying the pollution problem in Umguza.

The Māori tribe of New Zealand had to endure a 140-year wait before their famous Whanganui River gained recognition and rights to be treated as a living entity (Roy 2017). Are these scenarios replicable in Zimbabwe? What role can culture play in the management of the Umguza river and have culture-specific analyses been integrated into the management approaches so far? Should the river be appropriated rights? Will a culture-sensitive approach to the river define limits of pollution and will it lead to better environmentalism? All these are questions that come in handy when moving away from blindness in the Anthropocene.

Conclusion: A Possible Future for Umguza River

This paper has explored the pollution case of Umguza river in Bulawayo, Zimbabwe intending to situate it in the Anthropocene debate, and to explore the management approaches with a socio-culture sensitive view that unearths the ontological dynamics and multi-perspective lenses prevalent in the case. The paper questions the adeptness/efficacy of management strategies. It stretches the debate to consider the fate of

the people that depend on the river while their health is compromised; prompts analyses to derive if any, socio-cultural undertones inherent in their continued use of polluted water. The paper questions the levels of community engagement and the centrality of culture in management initiatives. It questions relations that exist amongst stakeholders (including with the river as a non-human entity) and the possible effects of these relations on the progress towards averting the pollution conundrum. The paper also explores the perspectives of the polluting companies in the quest to understand the deep-seated narratives of the pollution. Ultimately, the paper hopes for narratives of Umuza Pollution that map out and problematize actors, issues, relationships, interests, and management approaches with their limitations and strengths. At an academic level, this paper has just outlined various questions and directions that warrant significant empirical attention. Future publications must be based on studies conducted to outline a holistic perspective of the river. Such studies may do well to take advantage of the benefits of longitudinal and qualitative research approaches which would ensure the observation of the river both contextually and over time. This is not to dismiss the quantitative studies, but to call for collaborative efforts that would see both quantitative and qualitative aspects of the river emphasized in looking for the best remedial options for the pollution in the river. Finally, it would be unfair to render any substantive conclusion or generalisation as the management of the river is an ongoing process that still requires more and more research going into the future. It is with this mindset that the main mandate of the paper was just to outline questions that could reignite and provoke a continued debate around the river.

References

- Bakker, K. (2007). The “Commons” Versus the “Commodity”: Alter-globalization, Anti-privatization and the Human Right to Water in the Global South. *Antipode* 39, 430–455. <https://doi.org/10.1111/j.1467-8330.2007.00534.x>
- Bataille, G. (1991). *The Accursed Share: An Essay on General Economy, Vol. 1*. New York: Zone Books.
- BBC News (2017, September 26). “Bali volcano: Indonesia fears imminent Mt Agung eruption.” Retrieved from: <http://www.bbc.com/news/world-asia-41395831>
- Behnke, R. H., Scoones, I. and Kerven, C. (eds). (1993). *Range Ecology at Disequilibrium: New Models of Natural Variability and Pastoral Adaptation in African Savannas*. Overseas Development Institute: London.
- Bourdieu, P. (1977). *Outline of a Theory of Practice* (Vol. 16). Cambridge university press.
- Brockington, D. (2002). *Fortress Conservation: The Preservation of the Mkomazi Game Reserve, Tanzania*. James Currey Publishers.
- Brockington, D., Duffy, R., Igoe, J. (2012). *Nature Unbound: “Conservation, Capitalism and the Future of Protected Areas.”* Routledge.
- Bryant, R., Bailey, S. (1997). *Third World Political Ecology: An Introduction, 1 edition*. ed. Routledge, London; New York.
- Cain, G. (2015). *Bad Governance in Zimbabwe and Its Negative Consequences*. Cleveland State University.
- Cassady, G. (2007). A Tundra of Sickness: The Uneasy Relationship between Toxic Waste, TEK, and Cultural Survival. *Arctic Anthropology*, 44 (1): pp. 87-98.
- Chambers, R. (1997). *Whose Reality Counts? Putting the first last*. Practical Action Publishing, Rugby, Warwickshire, United Kingdom. <https://doi.org/10.3362/9781780440453>
- Chinyama, A., Ncube, R., Ela, W. (2016). Critical Pollution Levels in Umguza River, Zimbabwe. *Phys. Chem. Earth Parts ABC, 15th Water Net/WARFSA/GWP-SA Symposium: IWRM for harnessing socio-economic development in Eastern and Southern Africa* 93, 76–83. <https://doi.org/10.1016/j.pce.2016.03.008>
- Cornwall, A. (2008). Unpacking ‘Participation’: Models, Meanings and Practices. *Community Development Journal* 43, 269–283.
- Cornwall, A., Eade, D. (2010). *Deconstructing Development Discourse: Buzzwords and Fuzz-words*. Practical Action Publishing.
- Costanza, R., d’Arge, R., De Groot, R., Farber, S., Grasso, M., Hannon, B., Limburg, K., Naeem, S., O’neill, R.V., and Paruelo, J. (1997). The Value of the World’s Ecosystem Services and Natural Capital. *Nature* 387, 253–260.

- Dépelteau, F., and Landini, T. (2013). *Norbert Elias and Social Theory*. Springer.
- Descola, P., Sahlins, M. (2013). *Beyond Nature and Culture*. University of Chicago Press, Chicago ; London.
- Douglas, M. (1996). *Purity and Danger: An Analysis of Concepts of Pollution and Taboo*. New York: Routledge.
- Dube, T., Makaka, C., Sibanda, Z. (2010). An Assessment of the effect of Industrial and Sewage Effluent on Aquatic Invertebrates: A case study of a southern urban stream, Zimbabwe. *Journal of Sustainable Development* 3, 210.
- Dube, V. (2014). "Umguza River still heavily polluted". Sunday News, 24 August. <http://www.sundaynews.co.zw/umguza-river-still-heavily-polluted-ema/>
- Duffy, R. (2000). *Killing for Conservation: Wildlife Policy in Zimbabwe*. James Currey Publishers.
- Dumit, J. (2014). Writing the Implosion: Teaching the World One Thing at a Time. *Cultural Anthropology* 29(2): 344–62.
- Earth Summit (1992). Rio de Janeiro: United Nations.
- Fairhead, J., Leach, M., Scoones, I. (2012). Green Grabbing: A New Appropriation of Nature? *Journal of Peasant Studies* 39, 237–261.
- Gaventa, J., (2006). Finding the Spaces for Change: A Power Analysis. *IDS Bull.* 37, 23–33. <https://doi.org/10.1111/j.1759-5436.2006.tb00320.x>
- Gupta, P, and Hecht, G. (2017, October 10). Toxicity, Waste, Detritus: An Introduction. Somatosphere retrieved from <http://somatosphere.net/2017/10/toxicity-waste-detritus-an-introduction.html>
- Harare 24 (2012) "BCC and city firms fined for crimes leading to pollution of Umguza River". Harare 24 Newspaper, 6 April. <http://www.harare24.com/index-id-news-zk-13966.html>
- Haraway, D. (2015). Anthropocene, Capitalocene, Plantationocene, Chthulucene: Making Kin. *Environmental Humanities* 6, 159–165.
- Haraway, Donna. (2008). *When Species Meet*. Minneapolis: University of Minnesota Press.
- Helmer, R., Hespanhol, I., Organization, W.H., (1997). Water pollution control: a guide to the use of water quality management principles.
- Hirst, P. (1995). "Foucault and Architecture." In *Michel Foucault: Critical Assessments*, Volume 4, edited by Barry Smart, 350–71. New York: Routledge.
- Hoffman, D. (2017, October 16). "Toxicity." Somatosphere, retrieved from <http://somatosphere.net/author/danny-hoffman>.
- Hulme, D, and Murphree, M. (2001). Community Conservation as Policy: Promise and Performance in Hulme, D, and Murphree, M. (ed.)

- African Wildlife and Livelihoods: The Promise and Performance of Community Conservation*, James Curry Limited, Oxford, 1 – 9.
- Huni, S. (2014). "EMA bans Agric use of Umguza water". Sunday News, 1 June. <http://www.sundaynews.co.zw/ema-bans-agric-use-of-umguza-water/>
- Ince, O. (2001). "Enclosing in God's Name, Accumulating for Mankind: Money, Morality, and Accumulation in John Locke's Theory of Property." *The Review of Politics* 73: pp. 29-54. DOI: 10.1017/S0034670510000859
- Jean-Francois, B. (1993). *The State in Africa: The Politics of the Belly*. London: Longman.
- Kolstad, C. (2011). *Intermediate Environmental Economics: International Edition*. OUP Cat.
- Latour, B. (1999). On recalling ANT. *Sociological Review* 47, 15–25.
- Leach, M. (1996). *The Lie of the Land: Challenging Received Wisdom on the African Environment*. International African Institute.
- Loftus, A. (2007). Working the Socio-Natural Relations of the Urban Waterscape in South Africa. *International Journal of Urban and Regional Research*, 31(1): 41-59.
- Mandizvidza, C., Ncube, S. and Sibanda, K. (2015). An investigation into the enforcement and compliance of wastewater regulation in Zimbabwe. *International Journal of Scientific & Engineering Research*, Volume 6(3): ISSN 2229-5518. <http://www.ijser.org>
- Mapira, J., Mungwini, P. (2005). River Pollution in the City of Masvingo: A Complex Issue. *Zambezia Journal of Humanities University of Zimbabwe* 32.
- McAfee, K. (1999). Selling nature to save it? Biodiversity and green developmentalism. *Environ. Plan. Soc. Space* 17, 133–154.
- Meadows, D., Randers, J., Meadows, D. (2004). *Limits to growth: The 30-year update*. Chelsea Green Publishing.
- Moore, J.W. (2017). The Capitalocene, Part I: On the Nature and Origins of our Ecological Crisis. *Journal of Peasant Studies*, 44, 594–630.
- Moore, J.W. (2017). The Capitalocene, Part I: On the Nature and Origins of our Ecological Crisis. *Journal of Peasant Studies* 44, 594–630.
- Moyo, J.N. (1989). Preface to management: Towards the development of craft-literacy and craft-competence in Africa.
- Naik, Y.S., Nyathi, C.B., Siwela, A.H. (2000). A Comparison Of Some Antioxidant Enzymes In African Catfish Collected From Umguza And Mzingwane Dams, Bulawayo, Zimbabwe.
- Nederveen, P. (1998). My Paradigm or ours? Alternative Development, Post-Development, Reflexive Development.
- Neumann, R.P. (1996). Dukes, Earls, and Ersatz Edens: Aristocratic Nature Preservationists in Colonial Africa. *Environ. Plan. Soc. Space* 14, 79–98.

- Nyathi, C.B. (2013). *Species and Sex-Related Differences in Antioxidant Enzymes in Fish Collected From Umguza and Auchmacoy Wright Dams, Bulawayo, Zimbabwe*. NuSpace Institutional Repos.
- OECD (2012). "Agenda Issues Paper. Making Green Growth Deliver", meeting of the Environment Policy Committee (EPOC) at Ministerial Level, Paris, 29-30 March, www.oecd.org/dataoecd/43/8/49998342.pdf.
- Ortner, S. B. (1984). Theory in Anthropology since the Sixties. *Comparative studies in society and history*, 26(1), 126-166.
- Ortner, S. B. (2016). Dark anthropology and its others: Theory since the eighties. *HAU: Journal of Ethnographic Theory*, 6(1), 47-73.
- Poppe, J. (2012). Conservation's Ambiguities: Rangers on the Periphery of the W Park, Burkina Faso. *Conservation and Society* 10(4): 330)343.
- Radza, E. (2015). *An Assessment of the Impact of Municipal Effluent Waste Deposal on Umguza River Water Quality: A Case of Bulawayo City, Zimbabwe*. (PhD. Thesis). Lupane State University.
- Rose, D. B. (2004). *Reports from a Wild Country: Ethics for Decolonization*. Sydney: University of New South Wales Press.
- Roy, E. A. (2017). "New Zealand river granted the same legal rights as human beings" The Guardian, 16 Marc. <https://www.theguardian.com/world/2017/mar/16/new-zealand-river-granted-same-legal-rights-as-human-being#img-1>
- Sahlins, M. (1976). *La Pensée Bourgeoise. Western Society as Culture*. In: *Culture and Practical Reason*. Chicago University Press.
- Samuel, A.-S., Aigul, M. (2015). *Polluter Pays Principle*. SA Sarkodie Publ. 1.
- Scoones, I. (1996). *Range management science and policy: politics, polemics, and pasture in southern Africa*.
- Steffen, Will, Wendy Broadgate, Lisa Deutsch, Owen Gaffney, and Cornelia Ludwig. (2015). "The Trajectory of the Anthropocene: The Great Acceleration." *Anthropocene Review* 2, no. 1: 81–98.
- Sullivan, S. (2013). Banking Nature? The Spectacular Financialisation of Environmental Conservation. *Antipode* 45, 198–217. <https://doi.org/10.1111/j.1467-8330.2012.00989.x>
- Sullivan, S. (2014). *The Natural Capital Myth; or Will Accounting Save the World*. Leverhulme Center for the Study of Value, School of Environment, Education, and Development. The University of Manchester. Oxford. The UK.
- Swanson, H. A. (2017). "The Banality of the Anthropocene." *Dispatches, Cultural Anthropology Website*, February 22, 2017. <https://culanth.org/fieldsights/1074-the-banality-of-the-anthropocene>.

- The Zimbabwean (2012, October 29). "Residents Call for BCC Browsers." Retrieved from <http://www.thezimbabwean.co/2012/10/residents-call-for-bcc-browsers/>
- Tsing, A. (2015). "Feral Biologies." *Paper for Anthropological Visions of Sustainable Futures*, University College London, February 2015
- Turner, T. (1992). Defiant Images: The Kayapo appropriation of Video. *Anthropology Today* 8, 5–16.
- UN Water (2013). *Annual Report*. UN-Water Technical Advisory Unit. Available at www.unwater.org
- Viveiros de Castro, E. (2012). *Cosmological Perspectivism in Amazonia and elsewhere: Four lectures given in the Department of Social Anthropology*. Cambridge University, February–March 1998. Hau Mastercl. Ser. 1.
- Wenzel, J. (2017, October 23). "Waste." Somatosphere. Retrieved from <http://somatosphere.net/athor/jennifer-wenzel>
- Yarrow, T. (2008). Paired Opposites: Dualism in Development and Anthropology. *Critical Anthropology* 28, 426–445. <https://doi.org/10.1177/0308275X08098260>.
- Zimbabwe Environmental Management Act, 13 of 2002.