*Journal of Internal Displacement* **ARTICLE**
Volume 14, Number 2, July 2024, pp 02-17

DOI: https://dx.doi.org/10.4314/jid.v14i2.1
: *https://orcid.org/0000-0002-0003-0555*

# Mining-induced Displacement: Experiences of Internally Displaced Persons in Arda Transau, Zimbabwe

***Robson Mandishekwa****

## *Abstract*

*Development-induced displacement has attracted intense attention. Recently, mining-induced displacement has been incorporated as an interesting area of research in development-induced displacement studies. In Zimbabwe, Chiadzwa diamond field, in Chief Chiadzwa's area, has become a hotspot for discussion about displacement. This study concentrated on the challenges people displaced from Chiadzwa to Arda Transau faced, with the aim of understanding these challenges and how displaced persons have tried to overcome them. A triangulation of data from self-administered questionnaires and documentary analysis was done. Descriptive statistics are also used to report the results. From a sample of 274 household questionnaires, research findings indicate that water, food insecurity and living conditions are among the major challenges in the host area. Internally Displaced Persons engage in renting farms to mitigate some of these challenges. Zimbabwe Consolidated Diamond Company and Anjin Investments should consider owning up to the promises made when people were displaced. Zimbabwean government, Anjin investments and Zimbabwe Consolidated Diamond Company may also consider building schools in surrounding areas to reduce pressure on the existing two schools.*

## Keywords

Zimbabwe, mining-induced displacement, Scudder-Colson model, Impoverishment Risk and Reconstruction Model, internal displacement challenges

The Journal of Internal Displacement (JID), established July 2009, is the only scholarly journal committed to all displacement concerns worldwide. Thanks to the generous voluntary contribution from the advisory board and editorial team - manuscript submission, peer-review and publication of the JID is **FREE OF CHARGE**. The JID does not charge authors to submit articles.
**Email Alerts/Reprints/Permission:**internaldisplacement@gmail.com
**Subscription:** JID is a Free Open Access Journal.
**Archives:** http://www.journalofinternaldisplacement.com/apps/auth/login?why=pw&try=1&wp=1&next=archive
**Submission (July 2024 Edition):** http://journalofinternaldisplacement.com
First received 10 February 2023, accepted 22 June 2024, Published 26 July 2024
DOI: https://dx.doi.org/10.4314/jid.v14i2.1

## Author's Institutional Affiliation and Correspondence

* Senior Lecturer, Economic Sciences Department, Midlands State University
Correspondence email: rmandishekwa@gmail.com or mandishekwar@staff.msu.ac.zw

## Acknowledgments

I would like to thank Dr Enard Mutenheri for assisting me a lot with academic writing. I am also grateful to the anonymous reviewers for their suggestions. Midlands State University deserves words of appreciation for the funding provided to gather some of the research data.

# Mining-induced Displacement: Experiences of Internally Displaced Persons in Arda Transau, Zimbabwe

*Robson Mandishekwa*

## Introduction

Research in Development-Induced Displacement and Resettlement (DIDR) has gathered momentum, especially starting in the late 1980s. Prominent studies that come into mind are Cernea (1997, 2000). Major focus during the infancy of DIDR was on hydropower power projects such as the Kariba Dam (Cernea, 1997, Hughes, 2006). However, because of the uniqueness of mining-induced displacement and resettlement (MIDR), focus has recently shifted to MIDR. Current research on MIDR remains scarce (Terminski, 2012; Mandishekwa & Mutenheri, 2020b). Simply put, MIDR is whereby people are forced to relocate from their place of habitual residence to pave way for mining activities on the said place. It can also refer to a situation where people are displaced as a result of pollution from mining activities. This study, however, operationalises the first definition. Therefore, this paper adds to the scarce literature on DIDR citing specific examples from MIDR among Zimbabweans displaced from Chiadzwa to Arda Transau.

Mining-Induced Displacement and Resettlement is unique in various ways. For example, Owen and Kemp (2015) noted several unique characteristics of MIDR, including that MIDR sometimes results in the mining companies and the displaced people being hosted within the proximity. This poses externalities such as pollution to those displaced where an externality is defined as where the '… actions of one agent directly affect the environment of another …' (Varian, 1982: 432). Again, because of the nature of the mining business, there is room for expansion requiring more land, meaning displacement can occur during exploration until the mine closes. Also, the effects of MIDR can be felt several years after the mine has been closed, for instance, there may be no room for land reclamation.

With all the unique characteristics of MIDR highlighted above, it is surprising that MIDR has not attracted much attention. Despite being unique and understudied, MIDR has displaced a significant number of people. In Mozambique, mining displaced more than 2 000 families between 2009 and 2014 (Adeola, 2017) while in Ghana 30 000 people were displaced by mining activities (Aboagye, 2014, Terminiski, 2013, Adeola, 2017).

Among the few to study issues of MIDR are Wilson (2019), Mandishekwa and Mutenheri (2020a) and Mandishekwa and Mutenheri (2020b). Using political ecology perspectives combined with the IRR model, Wilson (2019) found that chiefs in Sierra Leone actually benefited from displacement. Mandishekwa and Mutenheri (2020a) concentrated on literature review to identify existing gaps in MIDR. They found that MIDR still lags behind other DIDR in terms of research. While Mandishekwa and Mutenheri (2020b) concentrated on economic consequences of MIDR in Chiadzwa, and Gukurume and Nhodo (2020) studied the politics behind the displacements, this study focuses on the socio-economic challenges and difficulties faced by displaced people in Arda Transau. It aims to characterise, analyse and understand the unique challenges faced by internally displaced persons in Arda Transau as well as the ways the displaced persons have tried to overcome the challenges. To attain this objective, the study used documentary evidence and data gathered through questionnaires. The key research questions the study aims to answer are:

i. What are the challenges that displaced persons in Arda Transau are facing after displacement from Chiadzwa?

ii. How have the displaced persons tried to mitigate these challenges?

Several scholars, Cernea (1997) included, concur that each displacement has unique risks and challenges to the people displaced, despite the generic risks expounded by Cernea (1995; 1997). Cernea (1997) cites eight risks associated with DIDR. They are 1) landlessness, 2) joblessness, 3) food insecurity, 4) marginalisation, 5) social disintegration, 6) loss of access to common property resources, 7) loss of access to community services, and 8) homelessness. The eight risks are discussed later. Unlike previous authors, such as Cernea (1997) and Mandishekwa and Mutenheri (2020a), the current study considers challenges beyond the eight listed above to include livelihood changes as important in discussions of risks associated with DIDR. Regarding the specific challenges faced by displaced persons in Arda Transau, the study affirms IDPs' ability to endure and overcome difficulties posed by displacement. Furthermore, the study highlights some important observations which are unique to Arda Transau displaced persons such as having to do with rusty water from boreholes.

Of interest to the broader context of DIDR is this case study is in Zimbabwe. Zimbabwe is a mining country (Ericcson & Lof, 2019) in Sub-Sahara Africa where a significant number of IDPs are hosted (Norwegian Refugee Council, 2017). Arda Transau has unique features which possibly makes it a suitable study area in Zimbabwe and beyond. For example, unlike other displacement situations, where there is probability for IDPs to return to their homes, it is unlikely for Arda Transau. One possible reason is that the displaced persons have already been allocated houses and are not in an IDP camp. Terminiski (2012) argues that in Zimbabwe, mining has displaced a significant number of families. This justifies Arda Transau as a suitable study area for understanding challenges faced by mining-induced IDPs.

Findings indicate that water supply is a significant challenge faced by displaced families. The majority of families have lost boreholes due to displacement. In the new location, some families now resort to using the Odzi river as a source of water. Livelihoods have also changed for the worse after displacement. This has been exacerbated by loss of employment. These issues and more will be discussed in subsequent sections. Following the introduction, the paper starts with the background which highlights the history leading to displacements of households from Chiadzwa to Arda Transau. Review of related theoretical and empirical literature follows the background with the literature review, in turn, being followed by the methods. Results from the study are reported next with the conclusions coming after.

**Background**

In Zimbabwe, internal displacement is critical to the country's history. This can be traced from the pre-colonial era to the coming of the Second Republic in 2017. From the pre-colonial era, displacements were initiated by inter-ethnic wars—for example, wars between the Ndebele and Shona people (Beach, 2009). In those ethnic wars, certain groups of individuals were pushed away from their native places of residence, thereby being displaced. Compounding this forced displacement, colonial masters brought another wave of displacements where natives were dispossessed of the fertile and arable lands for the white settlers' use.

Land dispossession can also be traced to be one of the sources of the so-called struggles for liberation, one of which ended in 1980. To promote the development agenda of the colonialists, displacements also occurred when the giant Kariba dam was constructed. The Gwembe-Tonga people from Zambia and Zimbabwe were dispossessed of their land during the construction of the Kariba Dam in 1952 (Cernea, 1997, Hughes, 2006). Cernea (1997) states that about 57 000 people

were affected by this process. Post-independence Zimbabwe did not spare people from displacement. Recent cases in point include the construction of Tokwe-Mukosi and Osborne dams, Operation Murambatsvina and Fast Track Land Reform Programme, and mining and biofuel projects (Mutopo, 2011, Gukurume & Nhodo, 2020, Nhodo, Basure, Rukuni & Mago 2021). The Fast Track Land Reform Program is a program that the Government of Zimbabwe engaged in an effort to sanitize the disorganised way land was being grabbed from the white settlers by liberation war veterans.

Operation Murambatsvina translated to "operation clean the filth", is a state led slum clearance; houses and other buildings were demolished by state authorities under the auspices of having been built illegally. Operation Murambatsvina has gripped Zimbabwe such that, even though initiated in 2005, it still persists, with the City of Harare continuing this act under the auspices of houses being built illegally. For example, on 08 December 2020, the City of Harare demolished at least 190 houses in Budiriro under these auspices of cleaning the filth and illegal construction (Chidakwa, 2020). Some form of displacement *in situ* has also occurred amid the coronavirus pandemic, where vendors' places of business were demolished in cities like Gweru (Musiiwa, 2020). This worsened the already dire situation regarding income and livelihoods in such towns and cities.

For mining-induced displacement, Zimbabwe is a classic example. Although there are several cases of mining-induced displacements in Zimbabwe, the two main cases normally cited are the Murowa diamond displacement and the Chiadzwa diamond displacement. While Murowa diamond case has been considered a case of successful resettlement (Terminski, 2012), the Chiadzwa diamond resettlement remains marred with irregularities.

Diamonds were discovered in Chiadzwa a long time ago. It is believed that residents of the area did not know the value of the stones on which they resided. Madebwe et al. (2011) noted that De Beers discovered diamonds in Chiadzwa in 2002, however it only came to light in 2006 when De Beers staff constantly visited Chiadzwa (Chimonyo, Mungure & Scott, 2012). Chimonyo, Mungure and Scott (2012) state that after being granted a prospecting licence by the Government of Zimbabwe, De Beers did not disclose the presence of diamonds in Chiadzwa, but its staff repeatedly visited the area prompting the residents of Chiadzwa to suspect the presence of the precious mineral. According to Chimonyo, Mungure and Scott (2012), March 2006 marked the beginning of illegal mining in Chiadzwa. The three authors report that at the onset of the activity, the Government of Zimbabwe seemed not to realise the illegal activity in Chiadzwa. However, when it realized the presence of the precious mineral and then intervened, several community members who were engaged in illegal mining suffered from harassment and arrests.

In 2009, the Zimbabwean government announced the plan to displace 4700 villagers (Terminski, 2012). By 2017, 930 households had been displaced from Chiadzwa to Arda Transau (Mandishekwa & Mutenheri, 2020b). Further displacements can still be expected since the return of Anjin investments to Chiadzwa after it had suspended operations for some time.

Before displacement, 3-bedroom houses were built for the displacees (Madebwe et al., 2011; Terminski, 2012). These houses were built on the one-hectare piece of land allocated to each household. Selected villagers, including village heads, were taken to the host site before the mining companies brought the rest of the IDPs to Arda Transau. This fact-finding mission was meant for the IDPs to be assured that houses were built for them by the companies displacing them. This somehow minimised the resistance from the villagers. Despite the mission, the whole system was marred with secrecy since villagers were never consulted before any plans for their

displacement were made. Thus, the displacement and resettlement lacked consultation with villagers (Madebwe, Madebwe and Mavusa, 2011).

The five companies (Anjin Investments, DMC, Jin An, Marange Resources and Mbada Diamonds) that displaced the households made several pledges to encourage households to move to Arda Transau (Madebwe, Madebwe & Mavusa, 2011). For example, they were promised compensation, food hampers and irrigation land and system, among others. Reticulated water to homes was also promised to be free of charge. Nevertheless, the companies only gave households a paltry $1000 US as a disturbance allowance. On the one hand, DMC is one such company that, at least, for some time provided food handouts as promised. In addition, DMC installed solar power in IDPs' homes. On the other hand, Anjin investments provided tarred roads and piped water. It also built a school and a clinic. However, given the size of the population, the school and clinic are overwhelmed because of being overcrowded as indicated by school and the clinic authorities.

The actual displacement of people started in 2011 (Madebwe, Madebwe and Mavusa, 2011). The villagers were ferried by lorries hired/owned by the respective companies. In the host community, each company allocated its displaced persons houses irrespective of their previous proximities. This approach affected social capital in some way. Worse still, some people decided not to relocate to the site, thereby affecting social ties with their friends and relatives.

On allegations of looting diamonds, the mining companies were ordered to discontinue operations in 2016. It is alleged that $15 billion US went missing (www.africanews.com) and only $2 billion US was accounted for. The government ordered that these companies be replaced by a government-owned entity, the Zimbabwe Consolidated Diamond Company (ZCDC). However, in a surprising turn of events, Anjin investments returned to Chiadzwa sometime in 2019. This did not augur well with the surrounding villagers whose neighbours were relocated to Arda Transau.

**Theoretical Framework**

In literature on development-induced displacement and resettlement, two foundational models explaining consequences of displacement have emerged: the Scudder-Colson four stages model and the Impoverishment Risks and Reconstruction (IRR) model by Cernea (Vivoda, Owen and Kemp (2017). While the two models help in understanding displacement consequences, as will be illustrated shortly, the IRR model is more applicable as it is able to predict these risks at various stages of displacement unlike the Scudder-Colson model which uses a stages approach. The current study is therefore mostly hinged on the IRR model.

The Scudder-Colson (1982) model has greatly influenced resettlement literature (Asthana, 1996). Scudder is credited for the four stages model of development-induced displacement. The four stages can be summarised as planning, transition, development and handing over. These stages mimic those of refugee movement which are pre-migration, in-transit and post-migration as explained in Keltner (2014).

In the planning stage of the Scudder-Colson model, those responsible for displacing residents plan the resettlement. They, in most cases, do not involve the people to be displaced. Thus, no consultations are made with those to be displaced. During the transition stage, people are informed of the resettlement and moved from their habitual residence to the new site. Scudder (1985) argues that transition starts from the period one is moved to the period immediately after relocation. However, Scudder (1985) also noted that the transition duration differs from one person or household to the other. In this phase, IDPs try to transfer their economic activities to the new resettlement area. Thus, Scudder (1985) classifies IDPs in transition as being risk averse.

In the economic and social development stage, displaced persons try to rebuild their economy within the new site (Panigrahi, 2018). Unlike in the transition stage, where displacees are risk-averse, in the economic and social development stage, displacees are risk-takers (Scudder, 1985). Finally, the handing-over stage occurs mostly in the second generation (Panigrahi, 2018). Displacees will now have accepted their relocation, and the second generation will accept the new site as their home. Although there may be elements of foreignness, these will be minimal such that it becomes insignificant during the handing-over stage. Therefore, Scudder (1985:167) says at this stage, "... the project is incorporated within the encompassing region".

Scudder (1985) and Vivoda, Owen and Kemp (2017) concur that the Scudder-Colson model was only applied to successful development-induced displacement and resettlement that passed through its four stages. Although presented as stages, most resettlements do not pass through these stages sequentially as presented thereby making the model sometimes inapplicable. Stages three and four may be reversed. Some resettlements do not even reach stage three. Successful resettlement entails a number of issues such as land tenure on occupied land, flexibility of land size according to individual's ability and skills (Kinsey & Binswanger, 1993). These characteristics enables one to invest fully in the land occupied. For example, if the land tenure includes ownership of the land, one will put all their effort towards developing that land in the process of recovering from the shocks of displacement.

Cernea (1997) developed the impoverishment risks and reconstruction (IRR) model as a result of extensive work done from the mid-1980s into the 1990s. Cernea (1997) relied on the Scudder-Colson (1982) model to build his model. Instead of suggesting phases in which resettlement projects pass through, he outlined the risks resulting from displacement. He suggested that risks from DIDR can be grouped into eight parts, even though there could be more. As proposed by Cernea (1997), the eight risks are landlessness, homelessness, joblessness, marginalisation, food insecurity, loss of access to common property resources, social disintegration and loss of access to community services or increased morbidity and mortality.

Research findings consistently show that displacement leads to landlessness and homelessness. In simple terms, landlessness is defined as expropriation of land. Wickeri (2011) identifies land as life and power. Contrastingly, landlessness is then the absence of life and power. With almost 25% of the world's poor people being landless, displacement exacerbates this proportion. Cernea (1997) argued that, because rural residents rely mostly on land for their economic activities, loss of land leads to decapitalization of displaced households. That is, once displaced, IDPs lose natural capital. In addition, homelessness is common among displacees.

Homelessness occurs when displaced persons lose their homes as a result of displacement. IDMC (2018) indicate that when people are forced to relocate, one of their first needs is shelter. While in some instances, DIDR allows people to be relocated and be given houses, these houses may not be enough to accommodate the people displaced. Therefore, overcrowdedness results. In addition to being overcrowded, the quality of these homes is an issue of concern, possibly affecting IDPs' health (IDMC, 2018).

Marginalisation is equally a risk identified under the IRR model. Marginalisation in displacement contexts is defined as relegating someone to a certain status, usually lower than the others. Usoro and Etukudo (2018) noted that once marginalised, a displaced person will reach a point beyond which recovery will be difficult. Marginalisation and impoverishment are, therefore, not exclusive. Marginalisation can be classified as both economic and social marginalisation.

For economic marginalisation, displacees are marginalised in the allocation of economic resources such as credit (Mandishekwa and Mutenheri, 2020b). Marginalisation of displaced

persons starts well before physical displacement. For instance, given the probability of displacement, someone might be denied access to, say, credit because of the likelihood of getting displaced before repaying the loan.

Loss of wage employment cannot be spared among the risks associated with displacement. Cernea (2000, 2004) defined loss of wage employment as joblessness. When displaced, people lose their jobs because either the company they worked for has been displaced or the company remains while the people it employed are physically displaced. Farm work is at times also lost as a result of displacement. The end result of loss of employment is loss of employment income.

When people are displaced, they are sometimes placed in different areas. Those who remain lose their connections with those who are relocated. In the IRR model, these losses are collectively termed social disintegration. This means the social networks people built over time will be suddenly lost. The benefits derived from social networks, such as social integration, are lost as well.

The IRR model identifies common property resources as key to poor rural people's livelihoods (Cernea, 2003). From the common property resources, people get fruits, grazing land, firewood and, at times, herbs. Also, some benefits are derived from indigenous knowledge systems. When forced to relocate, the people lose these goods. For example, they may not know the herbs used to heal certain ailments, yet they knew other plants or herbs in the previous location. Because the plants are not found in the new location, increased morbidity and mortality from curable ailments may occur. This is exacerbated by the fact that in most displacement cases, displacees are relocated to areas without necessary healthcare services, as in Mozambique (Adeola, 2017). As a result of loss of common grazing land, competition for the small existing land in the host community may lead to the popular tragedy of the commons (refer to Hardin, 1968 for more on the tragedy of the commons).

Empirically, development-induced displacement has been found to cause the aforementioned risks. Various authors concur that the risks identified in the IRR model are prominent among displacees. For example, Mburugu (1994), Megento (2013), Wilson (2019) and Mandishekwa and Mutenheri (2020b) all found that most, if not all, of the risks identified by Cernea (1997), were present among their study participants.

As already discussed, the four stages model by Scudder and Colson (1982) has provided the background information. Scudder (1985) indicates that the four stages model was developed from the three stages model by Robert Chambers. Cernea (1997) further developed the model by Scudder and Colson (1982) into the IRR Model. He highlighted, from the experiences of several countries, the eight generic risks of development-induced displacement. The model by Cernea (1997) has several functions, including the predictive function. Nevertheless, Cernea indicated that these risks are not the only ones, but several others can be given.

## Methods

This study is descriptive and qualitative in nature. Some of the data used was gathered in 2016 and 2017. Nine hundred and thirty households had been allocated houses during data gathering time. This acted as the population size, and the sample size, as determined by Krejcie and Morgan (1970) method of sample size determination. With 274 households, where one person per household (the household head) responded to the questions. Data was gathered using interviewer-administered questionnaires. Open-ended questions relating to the identified challenges were used.

Prior to investigation, a stratified sampling technique was used. Households were stratified according to area of residence which are Anjin, Diamond Mining Company (DMC), Jin An,

Marange Resources and Mbada Diamonds. Succeeding stratified sampling, a systematic random sample of household heads was used to get study participants. In the event that the household head was not present during the time of interview, their representative was interviewed. For ethical reasons, anyone below the age of 18 years was not interviewed. An ethical clearance to gather data was obtained from Midland State University and the permission was granted by the Ministry of Rural Development, Promotion and Preservation of National Culture and Heritage.

Given that internally displaced persons were relocated by five mining companies: Anjin, Jin An, Marange Resources, Mbada Diamonds and Diamond Mining Company, and that each company relocated the IDPs to a certain part of the ARDA Transau farm, proportional sampling of participants was used with Anjin being represented by the largest number of households since it has the largest population. By not requesting participants to indicate their names on the questionnaires, anonymity of respondents was ensured. Informed consent was sought before requesting responses from respondents.

Also, a documentary analysis research design was employed to arrive at the results reported in this study. Bowen (2009) states that the researcher needs to get evidence from at least two sources in documentary analysis. The sources give the researcher room to seek convergence and corroboration. By using more than one source, the researcher triangulates evidence. Thus, De Andrade et al. (2018) and Wood et al. (2020) noted that documentary analysis complements other techniques. De Andrade et al. (2018) also indicated that the technique helps formulate empirical evidence. This study then used documentary analysis to complement the data gathered in 2016 and 2017. Refereed journals, textbooks, grey literature and conference papers are the main documents used for documentary analysis.

**Results and analysis**

This study aimed to highlight the experiences of IDPs in Arda Transau, focusing on the socio-economic challenges. The data gathered using questionnaires between 2016 and 2017 was used to attain that goal. Out of the 274 questionnaires distributed, 248 were usable translating to about 91% response rate. The number of successful responses per residential area are DMC (14), Anjin (128), Jin An (47), Marange Resources (31) and Mbada Diamonds (28). Of these households, 40% were female headed while 60% were male headed households. Most (31%) of the household heads were within the 31 to 40 years age range.

Documentary analysis was also used to complement these observations. Having outlined the risks of displacement identified by Cernea (1997), the current study then reports the specific challenges that IDPs in Arda Transau are experiencing. Since Cernea (1996) acknowledges that displacement risks are project-specific, the challenges can also be considered project-specific. Therefore, the challenges IDPs face in Arda Transau may differ from those experienced by displaced persons in the Shashe area who were displaced by Murowa Diamonds or any other project-induced resettlement.

While many challenges exist, this study focuses on just a few of them, as explained in this section. For the purposes of this study, only eight challenges, as indicated by the majority of respondents, are considered.

***Water supply***

Most households in Arda Transau previously had their own wells in Chiadzwa (Mandishekwa & Mutenheri, 2020a) of which 50% of them lost the boreholes due to displacement (Madebwe, Madebwe & Mavusa, 2011). After displacement to Arda Transau, households in Anjin, who make up about 52% of respondents, and part of Jin An have piped water, whose usage is paid for. While

the supply of reticulated water could be considered a positive development, it is also costly. On the one hand, it can be considered a positive development because the water, other things being equal, is treated before delivery to homes. On the other hand, it is a cost in that households are now required to pay for the reticulated water. The amounts paid are ostensibly meant for electricity and water treatment. However, because the households were not used to pay for water, paying for its use is a challenge they are experiencing, as they used to get it freely from their wells. Also, even if they want to pay, they cannot afford and sometimes go for months without water in their homes. Therefore, they resort to getting water from nearby boreholes or the Odzi River. The failure by IDPs to pay for some services rendered is not peculiar to IDPs in Arda Transau since Arnall, Thomas, Twyman, and Liverman (2013) found similar results among IDPs in Mozambique. Thus, despite having been promised not to pay for the water, the displacees in Arda Transau are now required to pay. This constitutes breach of agreements made prior to displacement.

Again, since water is a source of life, cutting the water supply marginalises households without the money to pay for this essential service. This again reverses progress towards attaining SDG number six (clean water and sanitation). Being denied access to safe water increases households' vulnerability to water-borne diseases in line with Cernea's (1997) predictions of loss of access to social amenities leading to morbidity. Thus, with the coronavirus pandemic, in addition to the cases of cholera outbreak in Zimbabwe, the situation will likely worsen without water services.

Residents get water from community boreholes for areas like DMC, Mbada diamonds, and Marange Resources. However, the main challenge is that some boreholes have broken down. Some boreholes which still functioned were pumping rusty water. This poses a health hazard, especially from bathing with and drinking the water. Households have, therefore, resorted to walking long distances to get water. The same applies to watering their animals, especially cattle. Those with cattle must take them almost daily to the Odzi River to get water. This poses a challenge on time usage again. Productive time is wasted travelling to fetch water and to water animals.

***Overcrowdedness***

While homelessness might seem too far-fetched for Arda Transau IDPs, overcrowdedness seems more appropriate. Homelessness, in its ordinary meaning implies having no home at all. In development-induced displacement situations, this is rare but overcrowding seems common. While in Chiadzwa, households had built their homes in such a way as to accommodate the size of the household. In Arda Transau, it is one size fits all. Every household was allocated the same number of rooms on its one hectare. In some instances, some households were combined. For example, a married son with his own home in Chiadzwa might be combined with his parents on the same one-hectare with a 3-bedroom house.

Additionally, some polygamous husbands were allocated one 3-bedroom house each. This, for example, would mean that two or more wives will be sharing the house. These families have to devise a method of allocating the rooms. Another unique scenario is when one polygamous man was allocated several round houses built around the 3-bedroom house. Although typical of the usual Zimbabwean set-up among polygamous families, the man refused to occupy the home. As of 2017, he was said to be outside the designated location. Another scenario illustrating over crowdedness is when a grandfather had to accommodate his three married grandsons and their parents.

***Access to community services***

Overcrowdedness has even extended to schools and clinics. With only one school, Chirasika School, within Anjin's jurisdiction, there is a high demand for enrolment. The nearby school, Wellington primary, is equally overwhelmed. Therefore, the situation called for hot sitting as a recourse to mitigate the challenge, whereby some learners come to school after break time and start their lessons. Although evidence shows that after displacement, a large proportion of school-going children drop out of school, the situation is not that dire in Arda Transau. Study findings show that only 25% of children dropped out of school. Although this may sound like a small proportion, it has significant long-term effects. For example, there will come a time when these dropouts become parents. With the current demand for skilled labour, their marketability is reduced, and they may end up being unemployed for life. That being the case, it means they may not afford to send their children to school, worse to better schools, other things being held constant.

Overcrowdedness has also extended to the single clinic in the area. Only one clinic was built by Anjin Investments, and it serves all the five areas. As such, all displacees flock to the clinic for medical attention, unless if one travels to Mutare town. With the meagre earnings the displacees get from some petty-trading activities, travelling to Mutare is unlikely unless upon referral. The clinic also does not have an ambulance, worsening the situation even if a referral is made

***Food insecurity***

Cernea (1997) argued that after displacement, IDPs become food insecure. Regarding food security, Mandishekwa and Mutenheri (2020b) found that more than 70% of households in Arda Transau became food insecure after displacement. This study identifies income as one of the major challenges leading to food insecurity in Arda Transau. The loss of income made households unable to access food through purchases. Again, landlessness must be addressed as a possible cause of food insecurity. About 98% of IDP households indicated having lost land. Also, 92% of the displacees indicated that the land allocated was inadequate for their needs. This has the potential to cause food insecurity among displacees given that they rely on peasant agricultural activities for food. For example, Yankson et al. (2017) also found that the loss of land by peasants leads to food insecurity.

As a mitigatory measure, households resorted to changing economic activities. For example, some households resorted to tobacco cultivation so that they would be able to sell the tobacco and buy food. Possibly, the shift to tobacco cultivation is because tobacco has a higher market price compared to food crops like maize. Again, to mitigate the inadequacy of land, 42% of IDPs had to find alternative pieces of land to farm from nearby areas. Because of the scarcity of land, not all IDPs could access these pieces of land. Also, because of the distance travelled, some IDPs need help to travel long distances to get to the fields. Again, because of social marginalisation, some owners of these lands will not be willing to lease their land to IDPs. All these challenges could negatively affect households' food security status.

Another potential cause of food insecurity is the loss of animals. In rural communities of Zimbabwe, animals are a source of food, income, draught power and input, among other uses. All the benefits from these animals have the potential to bring about food security. For example, as input, cow dung manure can improve soil fertility, thereby possibly increasing food production and improving food security. Also, given the cost of labour and scarce resources, animals are a source of draught power used in farming. Ox-drawn ploughs are prominent in rural Zimbabwe. Given that households have lost animals, this critical factor in household production reduces output of various crops and may have led to food insecurity.

***Animal losses***

During displacement, households are prone to the loss of animals. One household in this study indicated a loss of 3 herds of cattle in transit, while another indicated a loss of goats. Mandishekwa and Mutenheri (2020b) found that animal ownership significantly reduced to about half after displacement compared to before displacement. Households in Arda Transau have also lost a significant number of animals to poachers. The IDPs indicated that there have been cases of snares that trap their cattle, leading to further animal losses. This exacerbates the already dire situation. Before displacement, households were ordered to dispose of their animals. These animals used to be one major source of livelihood. For example, households would sell animals to complement their income. Thus, animals played the role of providing manure and draught power.

The FAO (2010) noted that animals are very useful in smallholder farmer production since they provide draught power for ploughing, planting and weeding, thus reducing drudgery. Therefore, the loss of animals reduces the size of land tilled both from the power and input sides. The result is reduced productivity, possibly yielding food insecurity. The FAO (2010) noted that animals also help carry water and fuel wood as well as used as a source of food. Products such as eggs, meat, and milk obtained from animals are also lost with reduced animal herds. This exacerbates the likelihood of nutrient deficiency and hence food insecurity. Therefore, animal losses experienced by households in Arda Transau are detrimental to both the IDPs' productivity and health.

Added to the loss of animals, market prices for the animals were comparatively lower than in Chiadzwa. Given the low prices, internal displacees needed more animals to dispose of to meet the same need they had before displacement. However, they have lost animals due to displacement. This means that livelihoods were made worse off than before because, before displacement, these displacees could dispose of their animals, again at high prices, to meet certain demands that may have arisen.

A possible explanation for the lower prices may be low effective demand as a result of low incomes. Given the low incomes prevailing in the area, buyers may bargain for lower prices. Because of the dire need for the money to meet household needs, the internal displacees may be forced to accept lower prices. Again, a potential explanation, particularly for cattle, might be the possible problem of ill health. In Arda Transau, there is not even a single dip tank. This subjects cattle to possible hazards associated with skin diseases from ticks and so forth. Again, directly and indirectly, ticks affect meat and milk production. Therefore, the effects of ticks extend beyond the market price of animals. For example, the direct effects stretch from retarded animal growth due to wounds which become an ideal site for screwworms (South African Department of Agriculture, 2008). All these effects can reduce the market price of the animals and, therefore, negatively affect livelihoods. Given the small livestock herds, households are likely to remain poor since previously, these animals were a form of risk management strategy against shocks. Therefore, resilience is under threat.

***Livelihoods***

Literature suggests that after displacement, livelihoods change. For example, Wilson (2019) found that rutile mining in Sierra Leone led households to lose their livelihoods. Several economic activities that households used to do in Chiadzwa are also no longer possible in Arda Transau, such as fruit vending. While in Chiadzwa, the IDPs used to sell bird plums, baobabs and jackal berries as petty trading activities. However, in Arda Transau, this kind of sale is impossible because the fruits are not found there. Another activity that was common among IDP households

is basket weaving for sale. This is also no longer possible because the raw materials are unavailable locally in Arda Transau. Gardening activities have also been negatively impacted by relocation. While this could have been a viable economic activity in some areas like Anjin, given the water supply, it has been hindered because of the payments needed for water usage.

Unlike in Chiadzwa, where households used to do gardening along the Odzi River, in Arda Transau, space and water does not allow for such activities. Hence one can, where possible, only undertake the activity on the allocated one hectare of land, of which water charges and land size become impediments. Restricted by the land size, water scarcity, and costs, most households cannot engage in gardening, forcing them to buy vegetables daily, something they did not need to do while in Chiadzwa. Given that urban Mutare is closer to Arda Transau, a distance of 40km, compared to Chiadzwa which is 120km from Mutare, market gardening can be more viable because of access to a large market. The financial restraints, because of lower incomes resulting from displacement, therefore cost the households in terms of lost revenue.

Development-induced displacement has also resulted in unemployment among IDPs in Arda Transau. While in Chiadzwa, some IDPs used to undertake artisanal diamond mining, in Arda Transau, they cannot do that. The displacement led to loss of access to the mineral deposits and hence unemployment. While the companies promised to employ the majority of displacees within the active working age groups, this has yet to happen. Instead, employees from other regions are argued to have secured jobs, even those that do not necessarily need qualifications or skills. From the social standpoint, unemployed people are given a lower status thereby exacerbating the marginalisation risk.

The implication of unemployment is loss of income, as reported by Mandishekwa and Mutenheri (2020b) who viewed unemployment from an economic perspective. Given reduced incomes, households resort to the hand-to-mouth survival approach. Hand-to-mouth reduces the probability of livelihood recovery. Households, therefore, cannot invest, affecting future consumption since investment is an input into future consumption. Given the marginalisation experienced by IDPs in Arda Transau, IDPs cannot access credit (Mandishekwa and Mutenheri, 2020b), meaning their consumption levels will likely remain below that required for normal survival. Among IDPs, credit comes for various reasons, for example, consumption. Among Zimbabweans, it is a normal practice to lend to someone known to the lender based on past experiences. One such reason is that there are no credit rating agencies for households. Results from Arda Transau indicate that to get to someone whom you are used to borrowing from may involve travelling a relatively longer distance yet in Chiadzwa, this was not so.

***Land productivity***

Empirical data from the current study shows that the majority (56%) of IDPs concur that the land in Arda Transau is comparatively more fertile than that in Chiadzwa. However, they cannot afford the necessary inputs to improve their productivity. While in Chiadzwa, the displaced persons used organic manure from their animals, in Arda Transau, animal losses have possibly reduced productivity because of lack of organic manure, among other factors. One of the main challenges, as reported by respondents, is the source of income. Economic activities have been disturbed due to displacement, thereby reducing income levels. If IDPs had income, they would have probably gone for inorganic fertiliser which could be bought at a relatively cheaper price from neighbouring areas.

Given social marginalisation from surrounding area residents, some households cannot rent farms to improve output using extensive agriculture. If they could access these pieces of land from

surrounding areas, they may engage in diversified agriculture and improve agricultural output. This possibly will improve food security.

***The area set up***

While some consider the urban set-up in Arda Transau a move in the right direction, it may differ for some. For Arda Transau displacees, there are mixed views. Because the location is closer to Mutare City, this is a benefit because the displacees have easy access to markets for their products. They also can access better health care within a 40km radius of urban Mutare. However, the residential area set-up in Arda Transau may need to be more conducive for the internal displacees. The urban set up where households are arranged in lines to allow for water reticulation as well as the haphazard way of allocating houses to the IDPs seems not to be the pattern preferred by IDPs.

One other reason is the requirement for IDPs to pay for water services while in pre-displacement location they did not pay for water services. For internal displacees in Arda Transau, this worsens the situation, which is already dire. For example, charging user fees to someone already starving may yield negative results.

Furthermore, the set-up may need to be more conducive for the IDPs to stay and, thus, support social cohesion. While being close to relatives and friends, by being in Arda Transau, is considered good by the IDPs, the distance between relatives may count. Whilst in Chiadzwa, households were arranged in their preferred order, in Arda Transau, it is different. Research findings indicate that IDPs were more comfortable with being placed next to their pre-displacement neighbours. The distance between houses in Arda Transau is the same unlike in Chiadzwa. Because of the closeness between houses, there may be squabbles between neighbours. There is limited privacy where a neighbour can see what is happening in his or her neighbour's home. In Zimbabwean rural areas, this is not usually so. These densely populated homes are common in Arda Transau, just like in urban high-density areas. Rural dwellers may feel uncomfortable in such setups because their privacy will have been encroached on.

**Conclusions**

The study revealed several challenges faced by IDPs in Arda Transau. Challenges of food insecurity, marginalisation, water supply and livelihoods emerge as prominent. The land allocated to IDPs was also found to need to be increased for their needs. Some of the identified challenges, for example, food security and water supply can be found to be interlinked with the United Nations' Sustainable Development Goals (SDGs e.g., SDG 6) in one way or another.

Given the challenges, IDPs have devised several ways to mitigate the challenges. For example, some households have resorted to renting farms to mitigate the food insecurity challenge. This has, however, remained a challenge for others who can only walk short distances to access a field. Also, issues of social marginalisation emerge with some natives not being willing to lease land to IDPs. With no other ways of accessing food, displaced households remain subjected to food insecurity, especially given that the land is inadequate and requires artificial fertiliser that the households cannot afford.

One recommendation is for ZCDC to own up to the promises made by the former mining companies. Since Anjin investments has returned, it is also recommended to own its pledges. For example, ZCDC and Anjin may consider paying for the water services on behalf of displaced households. Since ZCDC is owned by the government, it is plausible to suggest that another government-owned farm be identified for allocation to IDPs. This reduces the effects of overcrowdedness by depopulating Arda Transau. By having another farm allocated to IDPs, food

security may be improved because the IDPs will have larger pieces of land to till, thereby potentially producing enough food for their households and possibly some excess for sale.

To reduce overcrowdedness of the school and clinic, the government may consider building another school and clinic in surrounding areas within walking distance from Arda Transau. The school and clinic will serve both the IDPs community as well as the surrounding areas. In conclusion, this study managed to answer the two main research questions investigated. It identified eight main challenges as indicated by the majority of research participants. The study also found certain ways that IDPs use in mitigating these challenges, among the ways being hiring of farms.

Given the increasing demand for lithium and its ongoing explorations and mining in Zimbabwe, this study provides important results on potential challenges that the displaced persons will face. The same applies to gas mining along the Zambezi valley. While the results are based on MIDR, they can also be generalized and/or extended to DIDR in general. For example, the once proposed displacement of Chilonga residents is likely to face similar challenges, taking note of the fact that each displacement has its unique challenges.

**References**

Aboagye, S. (2014). Mining and resettlement of communities in Ghana: Exposing the harm caused by forced displacement and relocation. www.miningwatch.ca, (Accessed on 13/2/2020)

Adeola, R. (2017). The responsibility of businesses to prevent development-induced displacement in Africa, *African Human Rights Journal, 17,* 244–264*,* http://dx.doi.org/10.17159/1996-2096/2017/v17n1a11Africa News: Mugabe to explain missing $15bn revenue, whether he likes it or not: Zimbabwean MP. www.africanews.com

Arnall, A, Thomas, D S G, Twyman, C., and Liverman, D. (2013). Flooding, resettlement, and change in livelihoods: Evidence from rural Mozambique, *Disasters, 37(3),* 468−488*,* DOI:10.1111/disa.12003

Asthana, R. (1996). Involuntary Resettlement: Survey of international experience, *Economic and Political Weekly, 31(24),* 1468–1475

Beach, D. (1974). Ndebele raiders and Shona power. *The Journal of African History*, *15(1)*, 633–651. DOI: 10.1017/S0021853700013918

Bowen, G. A. (2009). Document analysis as a qualitative research method. *Qualitative Research Journal*, *9(2)*, 27–40. https://doi.org/10.3316/QRJ0902027

Cernea, M.M. (1991). *Putting People First : Sociological Variables in Rural Develpoment* (M. Cernea, Michael (ed.); 2nd ed. Oxford University Press.

Cernea, M.M (1995). Understanding and preventing impoverishment from displacement: Reflections on the state of knowledge. *Journal of Refugee Studies, 8(5),* 245–264

Cernea, M. M. (1997). The risks and reconstruction model for resettling displaced populations, *World Development, 25(10),* 1569–1587

Cernea, M. M. (1999). Introduction: Mutual reinforcement: Linking economic and social knowledge about resettlement. In M.M. Cernea, (Ed): *The Economics of Involuntary Resettlement: Questions and Challenges*, *pp. 1–4*, Washington D.C, World Bank

Cernea, Michael M. (2000). Impoverishment Risks, Risk Management, and Reconstruction: A Model of Population Displacement and Resettlement. *UN Symposium on Hydropower and Sustainable Development*, 1–61. https://www-jstor

org.myaccess.library.utoronto.ca/stable/pdf/4409836.pdf?refreqid=excelsior%3Ac7e80990ef508427c11106c158d78a2
Cernea, M. M (2004). Social impacts and social risks in high hydropower programs: Preemptive planning and counter-risk measures. Key note address: Session on social aspects of hydropower development, United Nations Symposium on hydropower and sustainable development, Beijing, China, 27–29 October, 2004.
Chikadwa, B. (2020) Council demolishes 190 houses. *The Herald (Zimbabwe)*. https://www.herald.co.zw/council-demolishes-190-houses/ (Accessed 12/ 07/2023)
Chimonyo, G R, Mungure, S, Scott, P. (2012). The social, economic and environmental implications of diamond mining in Chiadzwa. *Centrer for Research and Development*, 1 44. http://www.crdzim.com/Implications of diamond mining in Chiadzwa pdf.pdf
De Andrade, S. R., Schmitt, M. D., Storck, B. C., Piccoli, T., and Ruoff, A. B. (2018). Documentary analysis in nursing theses: Data collection techniques and research methods. *Cogitare Enfermagem*, *23(1)*. https://doi.org/10.5380/ce.v23i1.53598
Ericcson M and Lof O (2019). Mining's contribution to national economies between 1996 and 2016. *Miner Econ 32,* 223–250
Gukurume, S and Nhodo, L (2020). Forced displacements in mining communities: politics in Chiadzwa diamond area, Zimbabwe. Journal of Contemporary African Studies *38(4)*, 39–54. DOI: 10.1080/02589001.2020.1746749
Hardin, G. (1968). The tragedy of the commons, *Science, New Series, 162(3859)*, 1243–1248
Health, R, Hidrobo, M., and Roy, S. (2020). Cash transfers, polygamy, and intimate partner violence: Experimental evidence from Mali, *Journal of Development Economics,* 143 (2020), https://doi.org/10.1016/j.jdeveco.2019.102410
Hughes, D. M. (2006). Whites and water: How Euro-Africans made nature at Kariba Dam, *Journal of Southern African Studies, 32(4)*, pp. 823–838.
IDMC (2018). Thematic series: The ripple effect: Economic impacts of internal displacement: Multidimensional impacts of intenal displacement Full report, www.internal displacement.org (Accessed on 27/04/2022)
Keltner, WW. (2014). The refugee experience: Involving pre-migration, in transit, and post migration issues in social sciences, https://sophia.stkate.edu/msw_papers/409 (Accessed 13/03/2023)
Kinsey, B. H and Binswanger, H.P (1993). Characteristics and performance of resettlement programs: A review. *World Development, 21(9)*, 1477–1494
Madebwe, C., Madebwe, V., & Mavusa, S. (2011). Involuntary displacement and resettlement to make way for diamond mining: The case of Chiadzwa villagers in Marange, Zimbabwe. *Journal of Research in Peace, Gender and Development*, *1(10)* (November 2011), 292–301. http://www.interesjournals.org/JRPGD
Mandishekwa R. (2022). Development-induced internal displacement: A sustainable livelihoods framework perspective, Researching Internal Displacement Working Paper No. 27, 2022.
Mandishekwa, R, and Mutenheri, E. (2020a). Mining-Induced Displacement and Resettlement : An analytical Review. *Ghana Journalof Development Studies*, *17(1)*, 114–140. https://doi.org/DOI//http://dx.doi.org/10.4314/gjds.v17i1.6
Mandishekwa, R, and Mutenheri, E. (2020b). The economic consequences of internal displacement in Zimbabwe. *International Journal of Migration and Boarder Studies*, *6(3)*, 206–233.

Mburugu, E. K. (1994). Dislocation of settled communities in the development process: The case of Kiambere Hydroelectric Project. In C. C Cook (Ed), Involuntary Resettlement in Africa World Bank Technical Paper No. 227 (pp.49–58). Washington D.C: World Bank.

Megento, T. L. (2013). Inner city housing and urban development-induced displacement: Impact on poor female-headed households in Arada sub city of Addis Ababa, Ethiopia, *Journal of Sustainable Development in Africa, 15(2)*, 131–141

Musiiwa, M (2020). Gweru demolishes illegal structures. Chronicle (Zimbabwe), www.chronicle.co.zw. (Accessed 26/06/2024)

Mutopo, P. (2011). Gendered dimensions of land and rural livelihoods: The case of new settler farmer displacement at Nuanetsi Ranch, Mwenenezi District, Zimbabwe, Paper Presented at the International Conference on Global Land Grabbing, 6–8 April 2011, University of Sussex

Nhodo, L, Basure, HS, Rukuni, T, and Mago, D (2021). Forced displacements and violence: Experiences from the Tokwe Mukosi displacement in Masvingo, Zimbabwe. *Ikoro Journal of Contemporary African Studies, 14(1),* 229–245

Norwegian Refugee Council. (2017). Off the agenda: The need to refocus the world's attention on internal displacement, Briefing Paper 2017, Norway, www.nrc.no (Accessed 03/06/2020)

Owen, J. R. and Kemp, D. (2015). Mining-induced displacement and resettlement: A critical appraisal. *Journal of Cleaner Production*, *87*, 478–488. https://doi.org/10.1016/j.jclepro.2014.09.087

Terminski, B. (2013). Development-induced displacement and resettlement: Theoretical frameworks and current challenges, http://dlc.dlib.indiana.edu/dlc/bitstream/handle/10535/8833/Bogumil%20Terminski%2c%20developmentInduced%20Displacement%20and%20Resettlement.%20%20Theoretical%20frameworks%20%20and%20current%20challenges.pdf?sequence=1 (Accessed 27/04/ 2020)

Terminski, B. (2012). Mining-Induced Displacement and Resettlement: Social Problem and Human Rights Issue (a Global Perspective). *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.2028490

Usoro, N.A and Etukudo, I.W (2018). Models for resettlement of displaced persons in Nigeria: The anthropological perspective. *International Journal of Social Sciences and Conflict Management, 3(2),* 126–141

Wilson, S A. (2019). Mining-induced displacement and resettlement: The case of rutile mining communities in Sierra Leone. *Journal of Sustainable Mining 18(2019),* 67–76

Wood, L. M., Sebar, B., & Vecchio, N. (2020). Application of rigour and credibility in qualitative document analysis: Lessons learnt from a case study. *Qualitative Report*, *25(2)*, 456–470.

Varian, H.R (1992). *Microeconomic analysis*, 3rd. New York, W.W Norton & Company Inc.

Vivoda, V., Owen, J., and Kemp, D. (2017). Applying the impoverishment risks and reconstruction (IRR) model to involuntary resettlement in the global mining sector (Workbook), www.miningresettlement.org (Accessed 29/11/2019)

Yankson, P. W. K., Asiedu, A. B., Owusu, K., Urban, F., and Siciliano, G. (2017). The livelihood challenges of resettled communities of the Bui dam project in Ghana and the role of Chinese dam-builders, *Dev. Policy Rev, 36*, 0476–0494 DOI: 10.1111/dpr.12259