

Published by the University of KwaZulu-Natal
<https://journals.ukzn.ac.za/index.php/JICBE>
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Journal of Inclusive cities and Built environment. Vol. 2 Issue 3

How to cite: S. Mntambo and P. Adebayo 2022. Disaster Management in South Africa's Informal Settlements: Policy, Practice and COVID-19 Implications. *Journal of Inclusive cities and Built environment*. Vol. 2 Issue 3, Pg 87-100.

DISASTER MANAGEMENT IN SOUTH AFRICA'S INFORMAL SETTLEMENTS: POLICY, PRACTICE AND COVID-19 IMPLICATIONS

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Published 11 July 2022

ABSTRACT

The rise of informal settlements in the global south during the latter part of the twentieth century led to the role of disaster management being recognized as a crucial aspect of urban planning. As a result of this, the United Nations called for all the world's governments to develop and integrate proactive and preventative disaster management policies into their respective countries' development plans while integrating informal settlements in their urban planning initiatives in a bid to create inclusive cities. South Africa, being one of the countries that are heavily impacted by informal settlements, was swift to embrace these international recommendations, especially from a policy making perspective. The implementation of these policies has however been overshadowed by lacklustre government performance with respect to reducing the disaster risks associated with informal settlements or the inclusion of these areas in urban development. (hazards and lack of services aggravating disaster vulnerability) This article, therefore, explores the policy-practice realities that have given birth to the challenges faced by South Africa's post-apartheid disaster management initiatives, especially with regard to the disaster vulnerability of informal settlement dwellers. By assessing how international best practice recommendations have influenced the country's disaster management policy, the article proceeds to analyse the implementation inadequacies that have induced the existing policy-practice disjuncture, and the resultant safety and socio-economic concerns that arise for the country's informal settlement dwellers. Also, with the outbreak of the Covid-19 pandemic triggering a state of national disaster in the country, the article analyses the aggravated vulnerability of contacting and spreading of the virus amongst informal settlement residents, along with the socio-economic implications that the national lockdown restrictions have had on these areas. The findings of this article suggest that, although South Africa's disaster management policy and legislation has comprehensively developed the necessary guidelines for all the spheres of government to play their respective roles in the country's disaster reduction and recovery initiatives, Information from the government's databases suggests that the implementation of risk preventative disaster management approaches has been extremely sporadic in informal settlements, despite these areas accounting for 75 per cent of where the country's disasters events take place. Findings also suggest that South Africa's informal settlement dwellers have been the hardest hit by the Covid-19 disaster, intensifying the levels of exclusion in these areas.

KEY WORDS Informal settlements; Covid-19; Housing; Policy

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<https://doi.org/doi/10.54030/2788-564X/2022/v2s3a7> | e-ISSN 2788-564X

1. INTRODUCTION

There is a general agreement in disaster literature that cities are particularly vulnerable to natural disasters and hazards, and that within the urban population, the poor, residing in informal settlements, are generally at greater risk than anyone else (Fay et. al, 2003). This, according to Abunyewah (2019) is mainly because these settlements are often situated in peripheral, undevelopable locations that are hotspots for disasters such as floods, fires, landslides, earthquakes and tsunamis. This vulnerability also tends to be aggravated by the questionable building materials and construction methods that usually characterise these dwellings. Often erected with materials such as tin, cardboard, plastics and shoddy metals, informal dwelling offer very little resistance to harsh weather conditions (Wekesa & Steyn, 2011). Other issues such as overcrowding, illegal electrical connections and the daily use of flammable household materials are all common contributors to the disaster vulnerabilities of informal settlement communities.

In the last two decades of the twentieth century, the phenomenon of informal settlement disasters experienced a rapid spike around the world. As a result, the field of disaster management started to gain much attention from the international community and state governments. From an international standpoint, this is evidenced by the United Nations designating the 1990s as the International Decade for Natural Disaster Reduction (IDNDR). This was aimed at promoting preventative and risk reducing approaches to mitigating the human, social, economic and environmental losses that occur due to natural hazards and related

technological and environmental disasters (Zentel & Glade, 2013). The work done in this decade produced the International Strategy for Disaster Reduction (ISDR), along with the United Nations Office for Disaster Reduction (UNDRR). Over and above this, the main undertaking of this period was the United Nations' plan of integrating these disaster risk reduction strategies into its overarching vision of creating an equal and sustainable global community where all its inhabitants have equal access to all their basic rights (Coppola, 2006), thereby linking disaster management with urban inclusion.

This integration was achieved through the United Nations' adoption of the Millennium Development Goals (MDGs) in September 2000. According to Lemaire & Kerr (2017), the MDGs were centred around the concept of inclusivity, where governments had to ensure that the rights of marginalised, of which informal settlement dwellers are a part, were accounted for in a country's planning policies. 189 countries signed the Millennium Declaration, committing their respective governments to the targets set out by these goals.

South Africa was one of the nations to embrace disaster the integration of disaster management policy into its development agenda, and fittingly so as the country was also embarking on redressing and transforming the socioeconomic and spatial inequalities that had been created by the apartheid governing system that ended in 1994. The International Decade for Disaster Reduction and the MDGs were, therefore, very instrumental in shaping South Africa's overall post-apartheid policy and legislative framework, including the Disaster Management Act of 2002 and the National Disaster

Management Framework of 2005 (Van Riet, 2009). These legislations gave clear mandate on the responsibilities and powers of all spheres of government, and the funding arrangements for disaster recovery and rehabilitation. They echoed the United Nations' call for sustainable and inclusive development by providing a coherent, transparent and inclusive policy framework on disaster management that is appropriate for the country as a whole (DMA, 2002; NDMF, 2005).

Despite these developments, evidence overwhelmingly shows that the transformation of these policies into effective, implementable programmes has been very stagnant across South Africa's landscape (Van Riet, 2009; Van Niekerk, 2014; Faling & Tempelhoff, 2012). Hindered by the consequences of the country's apartheid history of racial segregation and space economics, South Africa's post-apartheid development outcomes have often been counter to what the country's policy seeks to deliver. This is evidenced by the high levels of poverty, inequality and the exclusion of those living in ever increasing informal settlements in country's cities. Akin to other developing countries in the global south, South Africa's informal settlements are vulnerable to an array of disaster threats that annually cause the loss of lives and property across all the country's major cities.

It is this paradoxical relationship, between South Africa's disaster management policy and its implementation realities that this article discusses. Placing particular focus on the country's urban informal settlements, the article explores the different factors that contribute to the perpetuation of disaster events in these areas. It then

analyses the country's disaster management policy, the comprehensiveness of resultant disaster management plans and the implications of this on the disaster vulnerabilities of informal settlement dwellers. With the global outbreak of the Coronavirus (Covid-19) in 2019, the article further assesses the implications of the pandemic on the country's informal settlements, and how disaster management practices have fared in addressing this disaster.

2. DISASTERS AND INFORMAL SETTLEMENTS IN URBAN AREAS: A GLOBAL CONTEXT

About 3.4 billion people currently live in the urban centres of what the United Nations terms "less developed regions" (Satterthwaite et. al, 2020). Projections show that urbanization, combined with the overall growth of the world's population could add another 2.5 billion people to urban areas by 2050, with close to ninety per cent of this increase taking place in Asia and Africa (United Nations, 2018). While urbanization has generally been a positive force for economic growth, poverty reduction and human development around the world, it has also become synonymous with challenges of inequality, marginalization, poor government performance and other social difficulties in some parts of the world (Henderson, 2002). Its rapid acceleration since the 1980s has also induced worsened societal disparities both among and within countries (Stewart, 1995). According to Lerch (2017), this is caused by unplanned urbanization trends, which in combination with other factors such as unsustainable production and consumption patterns, and a lack of capacity of public institutions to manage these city populations, tend to produce adverse implications such as urban

sprawl, pollution and environmental degradation, which impair development.

According to Fass (2016), these conditions are for the most part a consistent characteristic of developing countries in the global south.¹ These countries are often suffused by high levels of poverty, unemployment and a very shallow reconstruction of the social landscape (Prashad, 2013). A vivid depiction of this is reflected in the human settlement sector of these countries, where extreme mushrooming of informal settlements in and around these countries' urban areas is commonplace (Nsonfon, 2015; 5). In most cases, these informal settlements are formed through self-organization, without any formal building and urban planning permission from the state or land-owner (Fard, 2018). Although the living conditions in these areas differ in accordance with the specific context of different countries, the major commonalities in these communities are poverty, high density population, crime, poor housing construction and unplanned control (Tilaki et. al, 2011; Satterthwaite et. al, 2020). According to the United Nations (2003), inhabitants of settlements that meet any of the following criteria are considered to be living in an informal settlement:

- No security of tenure vis-à-vis the land or dwellings they inhabit, with modalities ranging from squatting to informal rental housing.
- The neighbourhoods usually lack, or are cut off from, basic services and city infrastructure.
- The housing may not comply with current planning and building regulations and is often situated in geographically and environmentally hazardous areas.

Informal settlement dwellers are, therefore, most often the poorest of the urban community, while ever growing backlogs in public housing delivery from

states often relegates these communities to the most undesirable land that is not suitable for development, including river-banks, steep slopes, marsh lands, wastelands and dry sparse lands (United Nations 2005). As a consequence, informal settlement areas are frequently prone to natural disasters such as floods, landslides, earthquakes, hurricanes and many other hazards that pose deadly threats and risks of property loss to these communities (Williams et. al, 2019). These exposures to natural disasters are further compounded by the internal characteristics that are endemic to most of these areas around the world. Issues of overcrowding and uncontrolled growth, piling and littering of waste and filth, substandard construction, ground water contamination, air pollution, poverty and unemployment not only exacerbate the disaster vulnerability in these areas, but they also introduce different variants of disasters such as fire hazards and communicable diseases (Jones, 2017).

While informal settlements date back to the mid-twentieth century, they and the development challenges that often accompany them, have since the 1950s, demanded more attention from both international community and state governments across the world (Huchzermeyer & Karam, 2006). Their perception has undergone major evolution from initially being regarded as eye sores infringing on the formal standards and regulations of urban development that governments had put in place, and therefore in need of eradication (Berrisford & Kihato, 2006; Betancur, 2007). Eradication however did little to curb the growth of these areas with evicted informal settlement dwellers opting to constantly relocate themselves within the city area (Lombard, 2018).

The shift in government perceptions of these areas started in the 1960s, driven by the influential work of researchers such as John Turner, Peter Marris and Anthony Leeds (Drakakis-Smith, 1995),

¹ The global south is a term used to identify lower income countries on one side of the so-called global North-South divide (Rigg, 2007). The phrase refers broadly to the regions of Latin

America, Asia, Africa and Oceania (Dados, Connell, 2012). The distinction between countries of the global south and global north are not based on the geographical location of these

states but is rather categorized by the level of economic development of these countries (Rigg (2007).

who collectively drew attention to the positive aspects of informal settlements including responsiveness to the urban housing problem (Sheng, 1998). This alternative view emanated from the realization that the neglect and forced evictions of informal settlement dwellers are both a cause and consequence of poverty, which in itself is a contributing factor to slum proliferation (Roberts & Okanya, 2020). As a result of this, during the United Nations Conference on Human Settlements in Vancouver (Canada) in 1976, The General Assembly² embraced this new outlook and adopted the Vancouver Plan of Action (Taylor, 2007; Sheng, 1998). This was the first global policy framework which recommended that governments should concentrate on the provision of urban services and infrastructure for informal settlements (Tremblay, 2005).

This framework further advocated for the spatial reorganization of these areas in ways that both encourage community initiative and link marginal groups to the national development process (Sheng, 1998).

Appositely, this period of dynamic shift on how informal settlements were being perceived, also corresponds with the growing recognition of disaster management as an imperative aspect of both urban planning and human settlements. Although the United Nation's focus on disaster management also dates back to the 1950s, it was in the latter part of the twentieth century that risk reductive disaster management approaches came to the fore of the global development arena (Henstra & McBean, 2005). Prior to this, the United Nations focus was mainly based on disaster relief measures such as the provision of medical supplies, tents, food etc. to affected areas (Verstappen, 1993; 310). However, with the 1980s being plagued by unexampled rises in global floods, volcanic and seismic activities, and other disasters, the necessity to

review disaster management approaches started to become a pressing matter (Stenchion, 1997). The United Nations duly obliged, with the General Assembly, in December 1987, deciding to designate the 1990s as the International Decade for Natural Disaster Reduction (Verstappen, 1993). In this decade, the United Nations would seek to provoke the recognition that risk reducing disaster management practices were a social and economic imperative in the development of nations. It further invited governments around the world, under the auspices of the United Nations, to pay special attention to fostering international co-operation in the field of disaster reduction and called for the integration of disaster management in the development plans

of all countries around the world (Lechat, 1990). This call was further reiterated in 1994 when the United Nations formulated the International Strategy for Disaster Reduction (ISDR). This was a global framework established to promote international action in reducing the social vulnerability associated with natural hazards and other related technological and environmental disasters (Steiner & Twigg, 2001). The international community went further to establish the United Nations Office for Disaster Risk Reduction (UNDRR) which would work cooperatively with governments to ensure that the mandate of the ISDR was integrated into their overall development initiatives (Pelling & Wisner, 2012).

Having already realized its objective of incorporating informal settlements into its development plans, through the Vancouver Action Plan, the integration of disaster management into the United Nations' broader development plans was realized at the commencement of the twenty first century, as it adopted the Millennium Development Goals³ (MDGs) in 2000 (del Prado, 2007). The MDGs subsume strategies linked to the ISDR, encouraging governments to incorporate disaster reduction into national planning

processes and building codes through developing early warning systems, vulnerability mapping and supporting interdisciplinary and intersectoral partnerships (Weber et. al, 2012). Goal 7, Target 11 of the MDGs goes beyond this and explicitly makes the connection between informal settlements and their vulnerability to disaster (Nassar, 2018). It states that governments should address the problems created by unsustainable urbanisation and the location of settlements in high risk areas (United Nations, 2000). It further advocates the formalisation of informal settlements through providing their inhabitants with security of tenure and basic urban services (Meth, 2013). Target 7 also exhorts governments to collectively improve the lives of 100 million informal settlement dwellers by the year 2020 (WHO, 2005). To ensure that disaster management fulfilled its role in this regard, the UNDRR was tasked to formulate a framework of action that would serve as a global blueprint for disaster reduction efforts during the implementation of the MDGs. This culminated into the Hyogo Framework for Action which was adopted by the United Nations in 2005 (UNDRR, 2005). This framework was the global roadmap for disaster reduction efforts between 2005 and 2015 (Wisner, 2020). It offered world governments the guiding principles, priorities of action and practical means of disaster resilience for vulnerable communities (UNISDR, 2005).

Following the closeout of the MDGs, the United Nations, again renewed its commitment to global development through its formulation of the Sustainable Development Goals (SDGs) in 2015. These SDGs were endorsed as part of the United Nations' 2030 Agenda for Sustainable Development (Battersby, 2017). Instead of pursuing novelty, the goals encompassed in the SDGs are directly aligned to those espoused by the MDGs that preceded it. However, the

² The General Assembly is the main deliberative, policymaking and representative organ of the United Nations (UN). Comprising of all the 193-member states of the UN, it provides a unique forum for multilateral discussion of international development issues.

³ The Millennium Development Goals (MDGs) were eight international development targets, set by the United Nations to foster in a human rights-based approach to world development. The MDGs place particular focus on decreasing the rising rates of extreme poverty, child and

maternal mortality, diseases, disaster impacts and environmental degradation (Spiliotopoulou, 2020).

SDGs further expanded on these targets, consisting of seventeen goals, and sought to put more emphasis into issues of environmental sustainability and equitable economic growth (Verma, 2020). Heavily influenced by the perceived worldwide impacts of global warming, the core objectives of the SDGs are invested in facilitating the development abetted in the MDGs, whilst simultaneously curbing the dangers of human-induced climate change. This framework, therefore, like its predecessor, is heavily bounded by the concepts of inclusivity and sustainability. It proposes that the realization of its goals is only possible through the, "making of cities and human settlements more safe, equal, resilient and sustainable." (United Nations, 2015; 07).

This shift from the MDGs to the SDGs also necessitated a renewal of the disaster management framework to address the challenges of disaster risks and impacts until 2030. The UNDRR was again swift in its development of this international policy, leading to the birth of the Sendia Framework for Disaster Risk Reduction (Nhamo & Mjimba, 2020). Working hand in hand with the 2030 Agenda, this framework provided an updated roadmap for how countries should coordinate themselves in order to build safer communities that are more resilient to disasters.

According to the United Nations, the aforementioned approaches to development are imperative to achieving universal equality of all genders and races, the inclusion of marginalised communities in development planning and the utilization of development methods that prioritize the environmental wellbeing and preservation of nonrenewable resources (Daniel, 2015). The United Nations also continues to assist countries to put these policies in practice and convert them into effective programmes and projects that

progressively work towards realising the 2030 Agenda for Sustainable Development (Lee et. al, 2020).

However, realising the objectives set out by the SDGs has proved to be easier said than done for many countries around the world, especially those in the global south. Although it has been seven years since the SDGs were adopted, conditions in the urban housing and disaster management arenas of developing countries very much still resemble those that prompted action from the international community in the 1990s (Fernandez & Aalbers, 2020). Furthermore, government capacities in these countries is often compromised when responding to these issues, caused by activities such as political manipulation, corruption, lack of community participation and the poor application of management practices (Allen, 2010; Jones et. al, 2014; Resnick, 2014). Informal communities are, therefore, often characterized by high levels of poverty, homelessness, marginalisation and vulnerability to various hazards that continue to exclude informal settlement dwellers from accessing their basic human rights. It is also often the case that challenges of insecurity of land tenure, threat of evictions and inadequate services continue in these areas, despite these issues being earmarked as the focal points that development needs to address in solving the issues that informal settlement communities face (Sikder et. al, 2015).

3. INFORMAL SETTLEMENTS IN SOUTH AFRICA- VULNERABILITY TO DISASTER

Informal settlements are not a new phenomenon in South Africa. In Cape Town, for example, informal settlement became a feature of the urban environment after ex-slaves set up shacks on the fringes of the town

following their emancipation as far back as 1834 (Harris, 1992). However, the spatial and socio-economic shaping of South Africa's urban spaces, as we know them today, really began at the turn of the twentieth century.

In the early 1900s, the United Party led South African government embarked on the eradication of the urban informal settlements that had emerged in the nineteenth century. Racially mixed innercity informal settlements were branded as health hazards by the authorities and this was followed by a mass removal of urban informal settlements in many parts of the country (Ndinda & Ndhlovu, 2020). Examples of this occurred in Cape Town, where slums were destroyed after an outbreak of bubonic plague in 1902 and blacks were moved out of the city to the new township of Ndabeni (Harris, 1992). In Johannesburg an outbreak of the plague in 1904 resulted in slums being burnt to the ground and blacks being moved to Klipspruit, twenty kilometres out of town (Harris, 1992). Despite there being health issues linked to these informal settlement evictions, the above-mentioned incidents were just a fractional aspect of a much bigger plan, from the all-white South African government, to remove black urban dwellers from cities. The time of these developments, therefore, also coincided with the introduction of South Africa's originating pieces of segregation and land dispossession legislation (Gibbs, 2019), including the Natives Land Act of 1913⁴ and the 1923 Native Urban Areas Act respectively. The first of these Acts was responsible for the of the country's racially driven division of land, which concluded with 80 per cent of South Africa's land being given to white people even though they made up only 20 per cent of the country's population (Walker, 2017). Walker further states that the total land area designated for the rural native reserves and peripheral urban townships which black people (accounting for over

⁴ The Natives Land Act (No.27 of 1913) was passed by the South African government on 16 June 1913 as an instrument to, "make further provision as to the purchase of land by Natives (blacks)

and other persons (Union of South Africa, 1913). This Act created reserves the black population, areas mainly in rural outskirts of the country. It

further sanctioned the right of black people to purchase.

75 per cent of the national population) were meant to reside, only made up 7 per cent of the country's land. The latter of these Acts was legislated, on a broad front, to regulate the presence of Africans in urban areas. Needing to impose control over the employed urban township dwellers that did live in and around the city areas, the Native Urban Areas Act segregated the country's urban residential spaces and created influx controls to reduce black access to the city (Parnell, 1998).

With the majority of the country's population forced out of the urban areas, South African cities in this period were relatively free of any starkly observable informal settlements. This did, however, briefly change in 1939, as a result of the country's involvement in the second world war ⁵ (Harris, 1992). Having suffered major economic losses in its financing of the war, the recovery strategy adopted by the government prioritized the expansion of the mining and manufacturing industries.

This would require a sizeable quantity of unskilled labour, and realising this, the government ease the influx control laws (Huchzermeyer, 2002). This saw a significant rise in the urbanization of black people, with the employment of the African population, mostly men, increasing by more than 60 per cent between 1939 and 1945. This reintroduced the challenge of spontaneous informal settlement emergence in the country's urban peripheries, occurring mainly in the form of backyard shacks within existing townships and free-standing dwellings on the outskirts of all major cities (Harris, 1992).

The acceptance of black urbanization and the emergence of informal settlements in South African cities was, however, very short-lived as the National Party came into governing power in 1948 (Turok, 2012), introducing the apartheid system, which sought to reinforce the ideology of separate development between the different racial groups in

South Africa. In principle, apartheid did not differ much from the segregationist policies that existed in early twentieth century, with the only difference being that apartheid made racial segregation part of the country's law (Smith, 2003). Its aim was to reverse the inflow of blacks into the urban areas and restore social control and orderly urbanisation, which informal settlements were perceived to counter. The led to the mass removal of African people from the city, achieved through the passing of the Group Areas Act of 1950 and the Prevention of Illegal Squatting Act of 1951 (Huchzermeyer, 2010). The latter of these Acts was a very harsh law that was used to forcibly remove squatting communities in the township areas. It afforded landowners, local authorities and government officials many ways of evicting people or demolishing their houses to get them off land (Oliphant, 2004), after which desirable land would be then be prepared for white suburban occupation or otherwise left as buffers, intended to be neutral territory which would function to keep races groups apart (Ballard, 2004). By the mid-1960s, informal settlement within and around South Africa's towns and cities had, again, been largely eradicated (Bonner, 2009). The remaining black urban dwellers, employed to serve the white's interests, were forced to live in formal townships and hostels (Popke, 2000).

In the early 1960s, there were various protests by the black population against the National Party's apartheid policies, however this was countered by deadly violence from the government (Geyer, 2003), which condemnation and sanctions from the international community did little to avert. Despite various economic and political pushbacks against the apartheid policies, the enforcement of influx control and intolerance of any form of informal settlement continued until the late 1980s (Ozlak & Beasley, 2003). By the late 1980s however, the resistance against apartheid started to trigger some significant changes in the country's political and socio-spatial spaces. (Little,

2020). By 1984, sustained pressures had forced the apartheid government to consider attempts to negotiate the dismantling of influx control laws. This was formally set in motion by the 1985 report by the President's Council on "An Urbanisation Strategy for the Republic of South Africa", which suggested the control laws be replaced by a new policy of orderly urbanisation which would be the instrument used to oversee the steady ingress of the black population into the country's urban spaces (Ogura, 1996). Adopted in 1986 and coined the White Paper on Orderly Urbanisation, this policy signified the complete repeal of the country's influx control laws. Unlike previous urban planning approaches, this policy conceded that black urbanization could not be reversed (Harris, 1992).

However, from the inception of influx control repeal, the migration of black people from the native homelands to the cities, became the biggest challenge to the country's urban development (Cranshaw & Parnell, 2003). The impact that the implementation of the White Paper on Orderly Urbanisation policy had on the urbanisation patterns that ensued in the late 1980s was negligible, with all of the country's major cities experiencing rapid increases of black rural-urban migration. By 1990 it was estimated that South African cities were home to more than seven million black people (Beavon, 2003; 234). This number significantly exceeded the government's capacity to absorb all these into the job market, resulting to increasingly intensified levels of poverty in some parts of the country (Cranshaw & Parnell, 2003). These developments are also the most significant turning point in the shaping of South Africa's informal settlements as the large numbers of unemployed urban migrants induced unprecedented mushrooming of informal settlements in and around all the country's major cities.

This manifestation of informal settlements was happening parallel to the peak of political negotiations to end

⁵ During World War 2, South Africa fought major battles in North Africa, Ethiopia, Madagascar and

Italy (Van der Waag, 2015). The war had a huge social and economic effect in the country, with an

estimated 600 million pounds being spent by the government (Lanham, 1996).

apartheid. This made it necessary for the agreements made in these engagements to address the informal settlement crisis and the overall urban housing backlog that was manifesting itself at full tilt. The passing of the White Paper on Land Reform, the scrapping of the Group Areas Act and the creation of the Independent Development Trust (IDT)⁶ are reflective of this objective (Harris, 1992; 19). Released early in 1991, the White Paper on Land Reform reflected the government's increasing concern over the problems posed by squatting and uncontrolled informal settlement in the country's cities (Rugege, 2004). Although it took the stance that any informal settlement that emerged in the form of trespassing, or taking over of the property of another, could not be tolerated in an orderly society, it accepted that the government had a responsibility towards the homeless who sought a livelihood in urban areas, and that informal settlements are part of the urbanization process (Harris, 1992). The formation of IDT was thus in response to this imperative. Given the mandate to respond to the housing backlogs, the IDT programme managed to provide approximately 100 000 serviced sites in its rollout (Vardy, 2005).

Despite these efforts, Adebayo (2010) notes that the IDT programme was too limited in scale to impact both the housing backlog and the urban structure that had been decades in the making. The programme, therefore, had no remedial bearing in the expeditious propagation of urban informal settlements. According to Edwards (1995) approximately half of the black population (over 15 million), were already residing in and around the urban environment by 1994. The most recent South African Census at that time suggested that over seven million of those people lived in informal settlements, with forty per cent of them having no access to clean water and over half of this population being illiterate

(Hunter & Posel, 2012), evidencing their urban exclusion. The economic inequalities were still defined by racial lines, with estimations that the white population had an average income about nine times more than that of blacks (Tomlinson, 2017).

This was the reality in South Africa when the demise of apartheid was finally realized in 1994, and the start point of the country's journey of redressing the socio-economic and spatial exclusion of apartheid. With the African National Congress (ANC) coming into power in the post-apartheid era, the party assumed responsibility for the major urban development challenges including informal settlements. Observing the prevalent exclusion of blacks, demonstrated by their poverty, unemployment, landlessness and marginalisation from basic urban services, the post-apartheid government sought to address these issues. This essentially gave birth to the Reconstruction and Development Programme (RDP), which was adopted by the government to serve as the primary socio-economic policy to guide the rebuilding and transformation of South African society (Adelzadeh & Padayachee, 1994). This policy framework was aimed at redressing the gross inequalities of apartheid from a social, economic and spatial context (Turok, 2012). First on the agenda of the RDP's key programmes was meeting the basic needs for all the country's people, including land, housing and basic services, (Corder, 1997; 185).

In terms of the urban housing crisis in the country, the government drafted the White Paper on Housing, in alignment with the RDP, which would serve as a broad policy framework to facilitate significant increases in housing delivery (Department of Housing, 1995). By linking the housing sector and the macroeconomy, the White Paper on Housing emphasized the need for the housing strategy to align with the socio-

economic and spatial integration objectives of the RDP. The vision of the country's housing delivery, as outlined in the White Paper, was therefore pitched at two levels, the one addressing the delivery of adequate housing and security of tenure to the needy, and the other addressing the nature and location of the settlements so created (Napier, 2005). The need to create more inclusive cities in South Africa was a central objective in the government's housing policy framework as it advocated for urban restructuring that is founded on providing the poor with enhanced access to economic opportunities, infrastructure and social facilities (Adebayo, 2010). The government's commitments to inclusive urban restructuring were further emphasized in the Urban Development Framework, adopted in 1997,

On analysis of these policies, the implications for informal settlements would be that they would finally receive the necessary attention to realize their inclusion in the housing development programmes. This, however, did not materialize. Despite the impressive quantitative delivery achievements in the first five post-apartheid years, the urbanisation trends that were simultaneously taking place in the country meant that the housing backlog was growing substantially faster than the rate of public housing delivery (Motlhabane, 2017). This facilitated further growth of informal settlements in the country, erected on the undevelopable, disaster prone buffer strips that were purposefully left as a means of segregating the race groups in the apartheid era (Turok, 2012). According to Bank and Mlomo (1996), informal dwellings were also deficient in water, sanitation, electricity, ventilation, food preparation and storage, which factors have been associated with a range of health risks including diarrhoeal and respiratory diseases. In addition, the Nelson Mandela/HSRC study of HIV and AIDS showed that that residents of

⁶ The Independent Development Trust is an organisation that is responsible for delivering social infrastructure and social development

programmes on behalf of the South African government. The social infrastructure that it

delivers include public schools, clinics, community centres.

informal settlements were more prone to these diseases (Richards et. al, 2007).

3.1. Disaster Management in South Africa- Policy and Reality in the Post-Apartheid Era

In light of the continuously growing informal settlements and the correlating disaster events that accompanied them, the necessity for disaster management as a key aspect of policy making became patently clear to the South African government. The need to dedicate some of the state's resources and capacity towards disaster reduction was also founded in Part A of Schedule 4 of the country's Constitution, which identifies disaster management and related issues as areas of concurrent national and provincial legislative competencies (Van Niekerk, 2014). Responding to these calls, the government drafted the Green Paper on Disaster Management in 1998 (van Riet, 2009). The Green Paper invited the government to develop a national strategy for disaster risk reduction that was to be integrated into the country's development initiatives (South Africa, 1998). This then culminated into the Disaster Management Act No. 57 of 2002 (Sarkar & Sarma, 2006). This Act provides for an integrated and coordinated disaster management policy in which the main emphasis is on disaster risk reduction and certain aspects of post-disaster recovery (van Niekerk, 2011). It further gives guidance on the responsibilities and powers of the national, provincial and local spheres of government in this regard, and funding solutions for post-disaster recovery and rehabilitation. Consolidating the state's commitment to a solid, proactive disaster management policy, the South African government adopted the National Disaster Management Policy Framework (NDMF) in 2005 (van Niekerk, 2014). Fittingly, the NDMF was developed in accordance with the Hyogo Framework for Action that had taken place earlier in the year. It essentially builds on the country's Disaster Management Act of 2002 and calls for various additional disaster risk management structures to be

established within the tiers of government. It also seeks to promote the involvement of local communities, the private sector, NGOs and traditional leaders in the reduction of disaster vulnerability (Pelling & Holloway, 2006). Both the DMA and NDMF placed South Africa at the forefront of disaster risk management policy, with the country being one of the first developing countries to legislate the decentralisation of disaster risk management activities across all the government's spheres (Roth and Becker, 2011). So robust were these policy frameworks considered to be, in fact, that they have been ascribed with significant influence in the development of the legislation and policies of other countries on disaster risk reduction, including Botswana, India, Malawi, Namibia and Zambia (van Niekerk, 2014). Owing to this, many South African practitioners and academics alike have asserted that it would be safe to argue that, from an international standpoint, the contents of the DMA and NDMF are sound in terms of contemporary disaster risk reduction (Pelling & Holloway, 2006; Wisner et al., 2011; van Niekerk, 2014).

Whilst the policy framework guiding South Africa's disaster management was commended for its comprehensiveness, its effectiveness in reducing the vulnerabilities that South Africans face, from an implementation point of view, was also heavily dependent on the efficacy of the country's housing policy.

Upon this realization, the housing policy was accordingly reviewed and amended in 2004. This resulted in the formulation of the Comprehensive Plan for the Development of Sustainable Human Settlements (Turok, 2012). Titled the Breaking New Ground policy, this framework was a refinement of the country's Housing White Paper of 1994. It therefore was still very heavily grounded in reinforcing the government's vision of promoting the achievement of a non-racial, integrated society through the development of sustainable human settlements and quality housing (BNG, 2004). In addition to this, the BNG aligns itself with the

United Nations' MDGs which, if nothing else, serve to buttress the calls for inclusion of marginalized disadvantaged communities in development processes. It also shifts its focus from the mass delivery of core housing and introduces a variety of housing responses that seek to address the different housing crises reflected in South African society.

Among these is the Upgrading of Informal Settlements Programme, which sought to cater for special development needs of informal settlements. The programme was designed to facilitate in situ upgrading of informal settlement and included the possibility of relocation and resettlement of informal settlement dwellers on a voluntary and co-operative basis (BNG, 2004). This programme also emphasized the necessity of providing tenure security to these settlements as this was seen to enhance the sense of community citizenship and also ensure protection against forced evictions, which constitute a disaster for affected households. Through these strategies, the BNG earmarked the total eradication of the country's informal settlements by the year 2014 (BNG, 2004). This was to be the country's contribution to the target of improving of 100 million informal settlement dwellers by 2014, as set out by the MDGs. Effective implementation of the BNG's objectives, especially pertaining to informal settlements, was anticipated to drastically reduce the probability of disaster phenomena and increased these communities' resilience through the provision of more solid structures and disaster reducing urban infrastructure

At the turn of 2014, however, the outcome of the BNG's targets pertaining to informal settlements reflected the polar opposite of what the policy set out to achieve. Compared to the target of complete informal settlement eradication, this period laid bare the lacklustre performance of the South African government when it comes to the implementation of the country's housing policy. According to Msindo (2017), the country's housing backlog at the beginning of 2014 stood at 2.3 million and was continuing to grow at the considerable rate of 178 000 units per

year. This failure in housing delivery had a major impact on both the country's vulnerability to disaster and the capacity of the disaster management policy.

Over and above these housing failures, the implementation of country's disaster management policy, when analysed as a stand-alone plan of action, also displayed a disjointed reality from what the policy espouses. According to Botha et. al, (2011), South African municipalities, who are responsible for the proactive, risk reduction approaches to disaster management, were still very much focusing on a reactive approach towards disasters and risks. Furthermore, Van Riet and Diedericks (2009) suggests that many district municipalities came stuck in the development of the disaster management structures called for by the relevant policy. This was the biggest obstacle in the provision of disaster management services in the country, hindering the necessary provisions of skilled and trained staff and the formulation of capacity building programmes, risk reductive projects and post recovery strategies. Issues of community participation were also prevalent in South Africa's disaster management practice. This despite the DMA and the NDMF highlighting community participation as an instrument of understanding local context and needs.

The failure to do this also offends the call for inclusivity, with the value of the communities' voices being depreciated and marginalized in disaster management processes. These issues have entrenched themselves into South Africa's disaster management arena since the inception of the country's disaster management policy in 2002 (Van Niekerk, 2014).

The government's most recent attempt to address these implementation challenges, again, manifested itself in the policymaking domain. Through the

country's National Planning Commission's (NPC)⁷ diagnostic report released in 2011, key challenges and obstacles hindering the social and economic development of the country were identified (Drewes and Aswegen, 2013). The NPC's report further developed a vision statement for 2030 and produced a development plan for how this vision can be achieved. This resulted in the adoption of the National Development Plan (NDP) in 2012 (NPC, 2013). Still heavily grounded on reversing the impacts of apartheid, the NDP is seen as the extant guiding document for South Africa's development, aiming to eliminate poverty and reduce inequality by 2030 (Zarenda, 2013). Advocating for the creation of safer, spatially integrated communities that will be driven by an inclusive economy that creates more jobs, the NDP both invites the government to review and make any necessary amendments to all its development policies and encourages all the different spheres of government to be more proactive in their delivery of public services (Fourie, 2018).

However, it has been more than 9 years since the adoption of the NDP and not much has changed in South Africa's landscape. The housing backlog in South Africa is still estimated to be approximately 2.3 million housing units (Chenwi, 2021). An even more pessimistic reality in this regard is the fact that the current delivery rate of housing only sits at 136 000 units per annum, meaning that the NDP is only likely to produce 1.5 million units by 2030 (Stigligh & Van Wyk, 2020). The implications that these housing figures have had on the country's public disaster management domain has played itself out on a yearly basis in the country's urban spaces, with informal settlements dwellers overwhelmingly accounting for the majority of disaster-affected communities. This has been evidenced by annually occurring events of flash floods fires, landslides and droughts that

have mostly concentrated the consequences of their fatalities and loss of property to informal settlement dwellers (Manyaka et. al, 2021). With 66.8 per cent of the South African population already living in urban areas, the foreseeable end, or impactful reduction, of the country's disaster threats is still very much a bleak prospect. According to Le Roux (2021) by the fifth month of 2021, all nine provinces in the country had already experienced a disaster event of some kind, notably the Table Mountain fire, and flooding in KwaZulu Natal, Gauteng and Limpopo. For the country's informal settlement communities, the increasing rate at which these disaster events are occurring, and the implementation inadequacies of the country's disaster management policy, has heightened the vulnerability of disaster in these areas, whilst the country's capacity for disaster prevention and response has remained relatively weak throughout the postapartheid era.

3.2. The Implications of Covid-19 on South Africa's Informal Settlements

Most recently, the focus on the country's disaster management systems has been augmented by the global spread of the Coronavirus disease. South Africa, like the large majority of other countries, has been heavily impacted by the direct and indirect devastations of the coronavirus (Covid-19) pandemic that ensued in late 2019. The Covid-19 virus has stretched South Africa's socio-economic capacity to its extreme despite the government's competent formulation of thoroughly articulated proposed plans to alleviate the global crisis. Having only recorded 8 881 cases, the South African government declared a state of disaster under Section 27(1) and 27(2) of the Disaster Management Act, 2002 (Act 57 of 2002) on the 15th of March 2020, sending the country on a nationwide lockdown (Egbe and Ngobese, 2020). Along with this, the government also

⁷ The National Planning Commission (NPC) is a government established agency. It was established in May 2010 with the mandate of

developing a long term vision and strategic plan for South Africa. The Commission further advise the government on cross-cutting issues

that influence the long term development of the country.

developed various efforts aimed at minimising and mitigating the rate of infection in vulnerable households and communities. With focus on informal settlements, hostels and backyard dwellings, these government initiatives included the provision of personal and household personal protective equipment (PPE) and hygiene support, mass sanitization programmes and disinfection of common areas within these areas (Centre for Human Rights, 2021). Also, the country's department of Human Settlements was tasked with the decongestion and resettlement of overcrowded informal settlements in order to enable these households to observe physical and social distancing, and self-isolation public health requirements. This would mainly be achieved through re-blocking and augmentation of basic services or the relocation of households to Temporary Relocation Units (TRUs) where urgent health or safety threats are identified (Department of Human Settlements, 2020). Over and above this, the government introduced food relief and social grant assistance programmes to ensure food security and stabilized welfare for the most impoverished households in the country.

Despite the government's Covid-19 responses often being applauded as an early and effective reaction to the pandemic, the rate at which the virus spread across the country has suggested the contrary. South Africa has had by far the highest cases of Covid-19 cases in Africa, with Tegally et. al (2021) stating that over 785 000 people in the country had been infected by November 2020, accounting for approximately 50 per cent of all known cases in Africa. This resulted in the extension of the national lockdown period as the prioritization of saving lives became the core determining factor dictating government planning. This imposed a severe negative shock to the country's economy, with immediate loss of economic activity and livelihoods, followed by medium-term and long-term economic effects such as unemployment and the proliferation of poverty (Mahlala & Netswera, 2020).

These developments, once again, have conceivably posed the greatest threat to informal settlement communities more than any other group. With scholars and urban practitioners asserting that the livelihood means of informal settlement households are derived from the informal economy (Nwaka, 2005; Amao, 2012; La Ferrara, 2002), the shutdown of these markets has left these households restricted to staying indoors without the basic necessities required to adequately sustain themselves. Managing Covid-19 in informal settlements has moreover proven to be a difficult challenge. This is because the overcrowded nature of these areas makes it near impossible to enforce the public health regulations and social distancing protocols put in place to prevent the spread of infection (Nyashanu et. al, 2020; Parke & Adebayo, 2021). The requirement for inordinate amounts of water to maintain the hand hygiene needed to prevent the spread of the virus, the finances needed for the mandatory personal protective equipment (PPE) and the already existing risks of disaster have created additional challenges that have disproportionately exposed informal settlement dwellers to the impacts of the pandemic (Dintsi et. al, 2020).

Furthermore, the internal challenges that informal settlement dwellers endure due to the Covid-19 pandemic have also been compounded by issues of incompetency and questionable political will in the government's execution of the disaster management policy mandate. With great attention being placed on the urgent need for government to effectively and efficiently allocate state resources towards much needed disaster relief initiatives, the pandemic has highlighted an element of corruption amongst the country's government officials, which has been one of the major obstacles to the realization of meaningful service delivery to disadvantaged communities. The embezzlement of public funds that are supposed to be utilized for the repair of infrastructure, provision of healthcare services, water and sanitation, education, adequate housing and other basic social services has undoubtedly diluted the government's capacity to fulfil

the goals set out by the country's development and disaster management strategies (Sabake, 2020). According to Mantzaris and Ngcamu (2020), the government's maladministration and corruption in public departments have adversely impacted the welfare of the vulnerable groups who live in informal settlements. As a result, the Covid-19 pandemic has laid bare the South African government's inadequacies related to its ability to ensure adequate provision of housing, water, sanitation and other basic services required by informal settlement dwellers to adequately protect themselves from the disease and sustain their livelihoods.

4. CONCLUSION

Observations by many South African scholars since the inception of the country's post 1994 policy suggest the robustness and comprehensiveness of South African policies have made the country a forerunner in policy making amongst the nations of the global south (Ncholo, 2000; Kanyane, 2014; Matshabaphala, 2007). This, however, has not set the country apart from other developing countries in terms of public service delivery, reduction of inequality amongst its citizens and effective disaster management practices. Consequently, societal ills such as informal settlement proliferation, poverty and marginalization from basic services have continued to mark South African society despite over twenty-eight years since the country's post-apartheid government came into power. This article also finds that it is these policy-practice disparities that the country's disaster challenges arise, as it establishes the correlation between the high rates of informal settlements and increasing disaster events in the country. Over and above the fact that these areas often being situated in undevelopable land that is prone to various disasters, this article has shown that the lack of adequate water and sanitation, poor shelter and overcrowding associated with these settlements all intersect to create particularly complex burdens of disease and disaster vulnerability.

The findings of this paper have been asserted through discussions of the Covid-19 pandemic and its disproportionate impact of informal settlements communities. By assessing the implications that the virus has had on the country' the article finds that informal settlement dwellers are particularly vulnerable to contacting the disease. These communities are also more susceptible to the economic shocks caused by the Covid-19 lockdowns and restrictions. It is, therefore, through these findings that this paper proposes that government authorities rethink their engagement with the people and challenges of the country's informal settlements. There exists an urgent need for government to speed up the provision of services in informal settlement areas, but moreover, the need to develop effective implementation strategies that will bridge the policy practice disjuncture is key to the actualization of any disaster management mandate.

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