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THE CHALLENGES OF CLIMATE PROOFING LOCAL PLANS FOR SUSTAINABLE DEVELOPMENT IN GHANA

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ABSTRACT

This paper discusses the challenges of climate proofing local development plans from the adverse impacts of climate change for sustainable development in Ghana. It argues that climate change impacts affect development interventions and adversely affect economic development and poverty reduction efforts. Consequently, there is a growing concern for development plans to be climate proofed to ensure their sustainability in a changing climate. Within a case study framework, data for the study was collected through in-depth interviews and content analysis of institutional reports. The study revealed a number of challenges that affect the climate proofing of local plans in Ghana; weak institutional capacity, poor coordination of interventions, weak collaboration, lack of statutory support, short planning and political cycles, lack of climate change champions/advocates, neglect of indigenous knowledge to adaptation among others. The paper recommends that, local institutional capacities be strengthened, statutory planning and financial arrangements at the local authority levels be provided and collaborations across scales established to make climate proofing effective as a tool for achieving sustainable development in Northern Ghana.

KEY WORDS: *Climate proofing, Local plans, Sustainable development, Challenges, Climate change*

INTRODUCTION

The pervasiveness of climate change induced-disasters and their associated impacts make climate change a development risk for which sustainable planning processes cannot ignore (UNDP-UNEP, 2011). Consequently, the argument for planning and integrating climate change and disaster risk management into local plans has been widely upheld. CARE (2010) indicated that sustainable development outcomes will largely depend on climate proofing plans, a phenomenon it described as making development plans climate resilient. Füssel and Klein (2004) in furtherance of this argument pointed out that climate proofing of local plans ensures that development interventions do not inadvertently leave people even more vulnerable than before to worsening droughts and floods, changing rainfall patterns, sea-level rise and other impacts of climate change but ensures that, well-designed development projects increase people's resilience to the risk of climate change. In similar manner, Laplante et al (2016) perceived climate proofing as the process of identifying risks that an investment project may face as a result of climate change and to reduce those risks to levels considered as acceptable. This process of climate proofing however, may not necessarily lead to complete mitigation of the potential risk of

climate change on an investment (Laplante et al, 2016), but rather a process of adapting to unavoidable risks associated with climate change.

The process of climate proofing local plans involves taking climate change into account when planning for development projects such as designing and siting roads, dams, buildings and other infrastructure at the local level. The process may also consider the implications of climate change on a variety of issues including poverty reduction, sectorial development and natural resource management (Füssel and Klein, 2004). Climate proofing - analyses the risks that climate change poses to the sustainability of development projects and identifies adaptation strategies for adjusting projects. Climate proofing has increasingly become a popular approach for development planning and has been widely applied in international donor circles over the past few decades (OECD, 2009; Oates, Conway and Calow, 2011). In these areas, climate proofing is viewed as a 'holistic' or 'development-first' approach through which adaptation and mitigation objectives are integrated into development agendas (Oates, Conway and Calow, 2011). In other words, climate change risks are not considered and addressed through separate initiatives but incorporated into on-going development policy-making, planning and activities across all sectors (Klein et al., 2007; Huq and Kaur, 2009; Olhoff and Schaer, 2010).

Two levels of climate proofing have been identified; the strategic mainstreaming level and the operational mainstreaming level (Dazé, Ambrose and Ehrhart, 2009; Olhoff and Schaer, 2010; Oates, Conway and Calow,2011; Downing, 2012). Strategic mainstreaming level, addresses the organizational environment within which policies and programmes are planned and implemented (Dazé, Ambrose and Ehrhart (2009). This involves activities such as creating awareness and capacity building of staff, building institutional structures and procedures, and identifying entry points for adaptation action (Huq and Ayers, 2008; Huq and Kaur, 2009). Downing (2012) indicates that, these activities (awareness, capacity building and building institutional structures) constitute entry points for adaptation action in themselves. Operational mainstreaming level on the other hand, has two objectives, namely climate proofing and building adaptive capacity (Dazé, Ambrose and Ehrhart, 2009). Climate proofing in operational mainstreaming ensures that development interventions are resilient over the long term as well as reducing climate-related risks to acceptable levels (Dazé, Ambrose and Ehrhart, 2009; Olhoff and Schaer, 2010).Building adaptive capacity on the other hand, refers to processes aimed at enhancing the ability of individuals, communities or institutions to respond to climate change (Dazé, Ambrose and Ehrhart, 2009). These two levels, strategic and operational, constitute the framework for identifying and analysing the challenges affecting the climate proofing of local plans in Ghana.

In Ghana, processes and programmes aimed at mainstreaming climate change into development planning are nascent (Atanga, Inkoom and Derbile, 2017). These involves training local government staff, staff of decentralized departments and other stakeholders at the local level and strengthening their capacity to integrate climate change and disaster risk into plans and budgets (MEST, 2010; Chibeze, 2015; NDPC, 2016;Atanga, Inkoom and Derbile, 2017). At the policy level, climate change has been mainstreamed into policy documents such as the Ghana Shared Growth and Development Agenda (GSGDA) (Atanga, Inkoom and Derbile, 2017). In addition, the National Climate Change Policy (NCCP),(MEST, 2012; Chibeze, 2015; NDPC,

2016), National Climate Change Adaptation Strategy (NCCAS), National Climate Change Committee (NCCC), Functional Organisational Assessment Tool (FOAT), Ghana National Climate Change Master Plan Action Programmes for Implementation: 2015 – 2020 among others (MEST, 2012;
Chibeze, 2015; MESTI, 2015; NDPC, 2016). Despite all these efforts, planning for climate change and disaster risk reduction at the local level in Ghana has been described as reactionary (Atanga, Inkoom and Derbile, 2017). The United Nations Development Programme (UNDP) Ghana in its Policy Advice Series 1, has also noted that local responses to the impacts of Climate Change are not targeted and efforts to ensure a climate proof economy has not quite been materialised. Furthermore, the UNDP-UNEP (2010) have noted that, the capacity of local authorities to enforce land use plans, standards and guidelines and other approaches have been generally weak. This study will explore the challenges accounting for this phenomenon in four selected districts in Ghana namely Bongo District, Builsa North District, Kassena-Nankana East Municipal and Kassena-Nankana West District.

STUDY AREA AND METHODOLOGY

The study was conducted in four districts in Northern Ghana. In Ghana, climate change assessments indicate that vulnerability to climate change is highest in the poverty stricken (savannah) ecological zones that is, the Guinea and Sudan savannah zones of Northern Ghana (Nelson and Agbey, 2005; Yaro, 2010, The World Bank Group, 2011; Inkoom, 2011; Stanturf, et al, 2011). Dovie (2010) reports that perennial drought and floods resulting from climate change have eroded the livelihoods of many poor resource-dependent households in Northern Ghana. A typical example is the 2007 and 2010 flood disasters in Northern Ghana which killed and displaced scores of people, destroyed hectares of crops as well as social and economic infrastructure. It is for these reasons that the Northern Ghana was selected for this study. The four (4) districts chosen for the study include; Kassena-Nankana East Municipal, Builsa North District, Bongo District and Kassena-Nankana West District of the Upper East Region. These districts are located within the White Volta Basin and are disproportionately affected by flood and drought disasters (Dovie, 2010).

A cross-sectional case study design was adopted for the study. The case study method provides a systematic way of observing events, collecting data, analyzing information and reporting the results (Schel, 1992; Kumekpor, 2002). Case study enabled the researchers to search deeper into the problem being studied and encouraged the use of participatory rural appraisal (PRA) tools (in-depth interviews) that have the advantage of facilitating participation and dialogue between researchers and respondents (Kumar, 1999; Owuor, 2010). The case study research design is ideal for studies that require in-depth information about a phenomenon within a limited period where a large-scale survey may not produce the true results (Bell, 2004). These unique qualities of the case study design make it ideal for the analysis of climate change adaptation issues.

The purpose of cross-sectional case study design is to provide the basis for analytic generalization, that is, to extend knowledge and draw implications to guide policy. However, the problem about the case study design is that it provides little basis for scientific generalization. So to improve upon the reliability and validity of findings which may affect generalization as a result of personal biases, data was collected from the field and documentary sources such as reports

and publications as well as through interviews. These multiple sources of data were useful to provide the means for triangulating the findings. In addition, the use of the case study design provided the flexibility required to capture opinions, experiences, knowledge and worldviews of respondents (Kumekpor, 2002) concerning the use of climate proofing as a development approach for local development in Ghana.

The respondents of the study were planning officers, budget officers, finance officers, coordinating directors, building inspectorate officers, and heads of decentralised departments/agencies in the municipal and district level. These respondents were purposively selected because of their knowledge and experiences about local plans and climate change programmes. The purpose of selecting diverse respondents was to obtain multiple perspectives about local plans and climate change at the local and sectorial levels.

In-depth interviews (IDIs) were the main methods of data collection in this study. In all, twenty-four (24) IDIs were conducted. Five (5) IDIs were conducted in Builsa North, seven (7) in Bongo District, seven (7) in Kassena-Nankana West District, five (5) in Kassena-Nankana East Municipal. IDIs have some advantages over other methods such as Focus Group Discussions (FGDs) albeit both demand effective dialogue and a deeper interaction with respondents. IDIs are more conversational and allows for verbal account of social reality and therefore ideal for exploratory studies such as this study. IDIs are also easier to organise in terms of resources and interviews with respondents can take place at the comfort and convenience of the respondent and/or researcher. In addition, IDIs guarantees confidentiality and privacy for respondents. However, if not managed well IDIs may be relatively time consuming and requires highly-skilled and experienced personnel for effective delivery.

The study also made use of secondary data. This included review of documents and reports such as the Medium Term Development Plan documents, Composite Budgets and Annual Reports.

Data collected from the IDIs and secondary sources were analysed using content analysis. The analysis of IDIs began with the transcription and editing of scripts, searching the scripts for manifest content, deriving themes from the content and finally editing the thematic content to create final results which were then presented in the form of discussion text and direct quotations. In similar manner, data obtained from reports and documents were subjected to word and phrase search to identify relevant content relating to key themes of the study.

RESULTS AND DISCUSSION

Results of the study are presented under the main themes that emerged from the IDIs and the secondary data. These themes constitute the main challenges affecting the climate proofing of local plans in Ghana. These themes/challenges are limited access to climate change finance, lack of reliable data and information for climate change planning, lack of climate change leadership and advocacy, institutional and legal gaps, lack of collaborative frameworks, and relatively short-medium term planning and political cycles.

Limited access to climate change finance

Financing climate change projects within the existing district financing framework was identified as a major challenge affecting the climate proofing of local plans in the four (4) study districts. In Builsa North, KassenaNankana West and Bongo districts, Ghana Social Opportunities Projects (GSOP) and the District

Development Facility (DDF) were the main sources of finance for climate change related projects. GSOP was not accessible to Kassena-Nankana East Municipal because it is not a deprived district, thus, DDF was their only source of finance for climate change initiatives. A review of past and current development plans of the study districts revealed that there were no climate change adaptation projects funded directly by the District Assemblies. It was also revealed that the study districts were yet to access any international source of finance for pursuing climate change initiatives.

Therefore, existing financing arrangement for climate change was perceived as inadequate for tackling the climate change challenge at the district level.

The challenge of climate change financing is not peculiar to this study. Brown and Bird (2009), Cameron (2011), Asante et al (2015) and Cuevas (2015) have identified similar challenges in financing climate change initiatives particularly in poor countries and communities. This situation of limited access to climate change finance implies that local plans are likely to suffer from the adverse effects of climate change and therefore their sustainability under climate change is uncertain. From the review of literature, bilateral and multilateral financing schemes at the international level appears to be increasing for climate change (IPCC, 2014). However, as shown in this study, these international financing schemes are yet to be made accessible for local level action against climate change. This finding supports the IPCC (2014) observation that, there is a gap between adaptation needs and the available funds for adaptation at the global level. It further explains the lack of synergies between international finance for disaster risk management and adaptation to climate change at the national and sub-national levels (IPCC, 2014). A fundamental problem about local financing is the competing priorities of local authorities (Measham et al, 2011) and the tendency to commit resources to projects that yield tangible and immediate dividends for political capital. Consequently, local financing arrangements will hardly cater for typically long term initiatives for climate change adaptation.

Lack of reliable data and information for planning for climate change

Scientific information about the levels of vulnerability to climate change was virtually unavailable in all the four (4) study districts. In Kassena-Nankana West, Bongo and Builsa North Districts, it was revealed that scientific data on climatic stressors and their impacts; local vulnerability assessments and mapping, among others were lacking. Though, the Ghana Meteorological Agency (GMA) has a climate data system called MAP-ROOM which could be accessed for planning purposes as was revealed by a District Planning Officer in Kassena-Nankana East Municipal, local staff were unaware of this system. Only one (1) out of the 24 respondents had knowledge of it. Overall, none of the four districts had climate change vulnerability profiles of their districts and communities. The situation was even worse for newly created districts such as the Kassena-Nankana West which was yet to create downscaled socioeconomic and climatic data of their own. The lack of sufficient and spatially detailed data on local vulnerabilities and adaptive capacity to climate change was therefore perceived as a major challenge to climate proofing local plans.

Globally, the lack of reliable and sufficient data on climate change impacts and vulnerabilities has been described by the IPCC (2014) as well as Geneletti and Zardo (2016) as a challenge affecting the climate change adaptation planning

at the local level in developing countries. Existing data has been described as being too general, thus lacking local peculiarities and are often characterized by shortcomings in data methods and coverage (Geneletti and Zardo, 2016). This constraint is largely caused by insufficient research, monitoring, and observation as well as the resources to maintain them (IPCC, 2014:19).

Reliable and sufficient data affects climate proofing of local plans in many ways. Development planning is an information driven activity - without reliable data, planning is reduced to a heuristic activity exercised by trial and error. Planning for climate change adaptation is effective if grounded in data (Lorenz et al, 2017) and the lack of or insufficient data constrains local efforts to climate proof development plans.

Lack of Leadership and Advocacy

This theme emerged from the interviews as one of the most interesting challenges affecting the climate proofing of local plans. The point was first raised in the KassenaNankana West District and confirmed by respondents in Bongo and Builsa North districts. It was argued that climate change, though a national catastrophe has not been given adequate attention by prominent personalities at the local and national levels. In the Kassena-Nankana West District, a District Planning Officer opinionated that there was a lack of leadership and advocacy against the climate change menace in Ghana and that climate change was yet to receive the attention of politicians and important personalities across all levels. A District Budget Officer in Bongo District supported this view and cited the example of the fight against illegal mining (galamsey) which received a significant boost when prominent Ghanaians (political leaders, artistes, religious leaders, the media, organisations etc.) led the campaign as champions against the menace. He further argued that Ghana is playing a major role at the international level as an advocate against climate change with former President John Dramani Mahama having co-chaired the UN Sustainable Development Goals particularly on climate change and his successor, Nana Addo Dankwa Akuffo-Addo continuing in that role, yet both presidents are not visible champions against climate change in Ghana. Apparently, respondents perceived the lack of anti-climate change champions at the local and national levels as a challenge for achieving progress in the fight against climate change. Cuevas (2015) reports that the works of climate change 'champions' has engendered awareness and positive adaptation outcomes in Philippines.

Activities of champions have the ability to push the climate change agenda further through policy changes and local actions.

Institutional and legal gaps

Institutional and legal gaps were raised in all the four (4) study districts. Two areas of statutory vacuum that affects climate proofing were identified. The first is the lack of institutional structures for dealing with a cross-cutting issue such as climate change at the District Assembly level. It was suggested that institutional reform is required to accommodate the new agenda of climate change describing the 'business as usual approach' as unworkable in terms of real action against climate change. In the Kassena-Nankana West District for instance, a District Planning Officer argued that there is the need to create climate change desk officers or coordinators at the District level to enhance the mainstreaming of climate change into existing planning structures and to facilitate the coordination of climate change activities at the district level.

This finding strongly supports the World Bank (2011) assertion that, adaptation to climate change cannot occur in an institutional vacuum and that there is a direct link between the success of adaptation and the performance of local institutional structures. Consequently, establishing and strengthening appropriate local institutions to tackle climate change has been perceived as an important strategy for fighting the climate change menace (Lorenz et al., 2017). Cuevas (2015) reports that, the institutionalisation of climate change into local structures has triggered local adaptation planning in the Philippines. However, institutional reforms should aim at strengthening existing structures rather than creating completely new ones (Fröde-Thierfelder et al, 2011). Another aspect of the institutional and legal challenge to climate proofing is the statutory vacuum. This was described mainly as statutory funding. As discussed earlier, financing climate change adaptation projects in the study districts was a great challenge. It was widely (21 out of 24 respondents) argued that, unless statutory arrangements are put in place for climate change financing, local authorities will not give adequate attention to it. A respondent in Bongo District insinuated that, although the National Development Planning Commission's guidelines requires local authorities to plan for climate change adaptation as a cross-cutting issue alongside gender and disability, without statutory funding, there is no motivation to meet that requirement. He explained his reasons as follows;

"The only way we can protect our plans and local development from the effects of climate change is to make statutory provisions for it just like disability. Climate change is a crosscutting issue that affects infrastructure, livelihoods etc. We need to be serious about it as a nation ..... if we need to protect local development from climate change, then we have to set funds aside to deal with it. We have done it for disability ..... from 2% of DACF now to 3%. We have also done with education! That's the GETFund! So, what prevents us from doing same for climate change adaptation? It's only when we provide the resources for it that we can plan for and manage it. The MP [Builsa North] when he was the Minister for Interior, revealed in one of his meetings with the assembly that government was planning to establish a fund for dealing with disasters. I feel that's the way to go."

Other respondents expressed similar views, arguing for the need to provide statutory funding for climate change adaptation activities at the local level.

Weak institutional collaboration across scales

Climate change risks and impacts are multiscale and multi-sectorial in nature which requires a cross-scale and cross-sectorial approach to address issues relating to adaptation. However, results from the study indicate that a multi-scale and multi-sectorial collaboration on climate change at the local level was lacking. This was succinctly expressed by a respondent in Builsa North District as follows;

"It's true that we have to come together to tackle climate change effectively. You can imagine that there is no collaboration between my district and its neighbours on climate change. Meanwhile, when the flooding comes, we are all affected. When the storms come, our school infrastructure and homes are ripped-off. I strongly feel that Kassena-Nankana East Municipal, Builsa North and South, Bongo and Bolgatanga assemblies should have joint plans on climate change. I feel that's the way to go. Just look at this, we are surrounded by Burkina Faso.....what they do there affect us, especially when they open the

notorious Bagre Dam, we are in trouble - we can't go out. So what prevents us from planning with them about our shared risks and disasters? We all face a common enemy which is climate change, so we can propose common solutions, isn't it?

The above view expressed by the respondent raises critical concerns about the lack of collaboration regarding climate change adaptation at different levels; district, regional and national. . Inter-district level planning could serve as a platform for knowledge sharing, co-financing, resource pooling and drawing synergies against what appears as a 'common enemy'; climate change. An example is the case of the study districts which share common characteristics in terms of climate risks and vulnerabilities.

The District Budget Officers of Bongo and Builsa North districts revealed that within the framework of the composite budgeting and programme-based planning, some districts have been meeting to discuss their districts' plans and budgets. They therefore suggested that, similar platforms should be created for districts to have joint discussions on issues of climate change that are common to them.

Concerns were raised in Kassena-Nankana West and Builsa North Districts about the potential adaptation measures in some districts that could produce negative externalities in other districts. In particular, the Deputy Coordinating Director talked about bushfires from adjoining districts which were perceived as threats to on-going alternative livelihood projects such as bee keeping in Kassena-Nankana West and Builsa North Districts.

It was also revealed that there is a lack of regional or transboundary level collaboration. This regional or transboundary level collaboration was explained as paradiplomatic involving districts and municipalities in neighbouring countries particularly, Burkina Faso. For instance, in Bongo District, a District Coordinating Director (DCD) pointed out that the provinces of the Centre South and South East Regions of Burkina Faso that share boundaries with most districts in Upper East Region have virtually the same climatic conditions and challenges and should form coalitions to adapt to climate change. He further indicated that, activities such the opening of the Bagre Dam in Burkina Faso have always had negative consequences on downstream communities in his district and the entire Upper East Region. Yet, there was no collaborative planning between his district and its counterparts in Burkina Faso.

A transboundary approach has been proposed as a viable means for managing climate change disasters such as flooding (Carter et al., 2015). In this case, collaborations should also involve the exchange of vital data with neighbouring states (Nuttall and Ouarzazi, 2009; Fröde-Thierfelder et al, 2011).

Unfortunately, the National Development Planning Commission (NDPC) planning guidelines seems to be silent about collaborative and para-diplomatic planning at the community, district and regional levels. Consequently, there is the need for agenda expansion in the existing planning framework to accommodate the growing concern for climate change adaptation planning at all levels especially across national boundaries.

Short-to-medium term political and planning cycles

The study also identified inconsistencies between long-term processes of climate change and the short to medium term cycles of planning and governance in Ghana. The planning cycle in Ghana is four years. Under the legal framework of the National Development Planning Systems

Act 1994 (Act 480), the District Assembly plays its planning functions by preparing local development plans to reflect guidelines proposed by the National Development Planning Commission. The guidelines are prepared every four years to reflect the political manifesto of the party in government. Presidential and parliamentary elections are also held every four years. Local planning takes place in the year preceding the national elections. Also, at the local governance level, elections of local representatives are non-partisan and takes place a year before the national election year for a period of four years. It was argued in all the four (4) districts that the relatively short-cycles of planning and governance does not promote planning for climate change adaptation. In their view, climate change is largely a long-term issue and the policies, strategies, programmes and projects aimed at addressing climate change must bear a long-term perspective to be sustainable. An interview with a District Planning Officer expresses this succinctly; "*Climate change is not a short term event, it occurs overtime. Therefore, it needs a longterm strategy to successfully tackle it. If you look at climate change events such as flooding, drought, windstorms etc. from the short to medium term perspective, then you will only be window-dressing the issue. The difficulty is that while planning is a continuous process, politics is somewhat terminal. I mean when power changes hands from one party to another there is always a new agenda, new priorities and in some cases, projects initiated by political opponents are often abandoned for political reasons. That apart, the short political cycle makes politicians quite myopic - politicians strive to implement policies that will yield immediate results to gain the attention of voters instead of searching for long-term sustainable solutions. Twenty, thirty years ago, if we had planned for climate change, perhaps, we wouldn't have been at this level as a country. Just imagine the National Perspective Plan currently under consideration by the NDPC. It started, with previous NDC government ……. But the NPP leader who is president now says he doesn't believe in long-term plans. So, will he support it? Well, we wait to see."*

To address the above issue, it was suggested that a national perspective plan on climate change is required to mitigate and adapt to climate change in a sustainable manner.

Currently, the country has National Climate Change Adaptation Strategy (NCCAS), National Climate Change Policy (NCCP), and National Climate Change Master Plan Action Programmes for Implementation (2015 – 2020). All these policies and strategies are short to medium term in focus and therefore does not adequately address the long-term challenges of climate change. Unfortunately, most climate change projections are modelled for the long-term and needs corresponding plans that accommodate medium to long-term concerns.

CONCLUSION AND RECOMMENDATION

Climate-proofing development plans at the local level is essential for building resilience and promoting sustainable development. It offers the "twin" benefits of protecting development investments from the adverse impacts of climate change while ensuring that development interventions do not inadvertently increase the vulnerability of target populations to the impact of climate change. However, several constraints interact to impede adaptation planning, implementation and climate proofing for sustainable development in Ghana. Statutory and capacity gaps at the district assembly affect local planning and/or financing of climate change adaptation. In addition, there is lack of collaboration among stakeholders across sectors.

Also, inadequate political will to support climate change adaptation planning; due to the short planning and political cycles. Furthermore, reliable data on climate change stressors and their impacts, disaster risk vulnerabilities were lacking at the district levels, thus, further hampering the capacity to climate proof local plans against the impact of climate change.

For climate proofing of local plans to be effective in facilitating sustainable development at the local level, a number of measures need to be taken. Firstly, government strategies for climate change mitigation and adaptation should include institutional and legal reforms in existing planning at the local governance level. The institutionalization process of climate change at the national level should include the creation of a national authority for climate change which will promote climate change planning and coordination beyond the normal political and planning cycles. In addition, existing awareness and capacity building programmes on climate change needs to be scaled-up to cover the local government, community authorities and community-based organizations to enhance their ability to understand and plan for climate change. Climate change champions at the national, regional and community levels should be identified and motivated to promote climate change advocacy at all levels. Furthermore, international organisations in-charge of climate change such as IPCC, the United Nations Framework Convention on Climate Change (UNFCCC) and the government should invest in climate change information systems to generate reliable data on climate change for early warning, disaster risk planning and management at the local level.

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