PLATFORM ON DISASTER DISPLACEMENT
FOLLOW-UP TO THE NANSEN INITIATIVE

# UNPACKING SPATIAL COMPLEXITY:

## CASE STUDIES OF PLANNED RELOCATION WITH MULTIPLE ORIGIN AND DESTINATION SITES

By Sanjula Weerasinghe
& Erica Bower
August 2021

german cooperation
DEUTSCHE ZUSAMMENARBEIT

Implemented by
giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

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A global dataset of identified planned relocation cases is available from the PDD website, www.disasterdisplacement.org. If you have cases to contribute, please share them with info@disasterdisplacement.org.

The views expressed in this paper are those of the authors and do not necessarily reflect those of GIZ.

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# 1 Executive Summary

Planned relocation is used as an adaptation and risk reduction strategy for communities or groups of households exposed to hazards, disasters and climate change. Yet little is known about the diversity in spatial patterns of planned relocation cases. The most familiar pattern involves moving people from a single site of origin to a single site of destination. Global data shows States and communities have used other configurations of relocations between origin and destination sites to move people out of harm's way. These have involved three types of cases: multiple origin sites to a single destination; a single origin to multiple destinations; or multiple origins to multiple destinations (together referred to as "spatially complex" cases). Planned relocation cases tend to be presented as homogeneous phenomena without sufficient attention to the particularities of different spatial patterns and their implications for policy and practice. This narrative and visual compilation of nine case studies from Ethiopia, Guatemala, Indonesia, Mozambique, Papua New Guinea, the Philippines, Somalia and Viet Nam sheds light on the complexity of less familiar patterns of planned relocation. It offers preliminary insights for policy and practice on characteristics, approaches to implementation and associated challenges.

This compilation and analysis of nine planned relocation cases that involve multiple origins or multiple destinations provide the following, non-representative insights:

- Spatially complex planned relocation processes have been implemented following large-scale displacement associated with disasters that impact large geographic areas.
- Government actors have initiated almost all of the spatially complex planned relocation cases.
- Multiple government authorities have been engaged in spatially complex relocation processes and multi-sectoral bodies have been established to oversee implementation.
- Multiple motivations – environmental, economic and socio-political – have underpinned decisions to initiate spatially complex relocation processes.

- Overarching or project-specific frameworks have been adopted to underpin spatially complex cases.

- Participation processes take on different forms in spatially complex cases.

- Spatially complex planned relocation cases have varying distances between origin and destination sites, ranging from 2 to hundreds of kilometers.

- Planned relocation cases with complex spatial patterns may face land availability challenges related to destination sites, including in urban areas.

**The expertise of local actors affected by or engaged in implementing spatially complex planned relocation processes is essential to better understand unique features, opportunities and challenges.** This analysis has reinforced the importance of research that extends beyond desk review of secondary sources to capture primary insights from actors affected by or deeply engaged in the implementation of spatially complex planned relocation processes. More in-depth analysis is needed to inform government and community decisions about planned relocation with multiple origin or destination sites. Such insights and experience may offer opportunities to further refine the typology of planned relocation cases identified in *Leaving Place, Restoring Home*,[1] and more importantly, to promote processes and practices that safeguard human rights and dignity.



[1] Bower, E. & Weerasinghe, S. (2021). Leaving Place, Restoring Home: Enhancing the Evidence Base on Planned Relocation Cases in the Context of Hazards, Disasters, and Climate Change. Platform on Disaster Displacement (PDD) and Andrew & Renata Kaldor Centre for International Refugee Law.

# 2

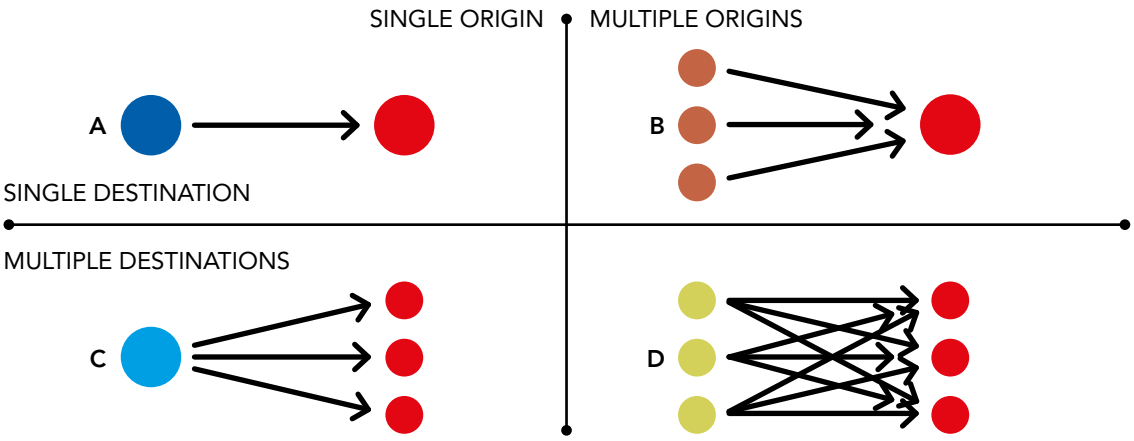
# Introduction

In March 2021, the Platform on Disaster Displacement (PDD) and the Andrew & Renata Kaldor Centre for International Refugee Law at the University of New South Wales published the report *Leaving Place, Restoring Home: Enhancing the Evidence Base on Planned Relocation in the Context of Hazards, Disasters and Climate Impacts* (Leaving Place, Restoring Home). Prepared to augment knowledge and data gaps on planned relocation within countries, the report established a foundational evidence base of over 300 cases across the world. It conceptualized planned relocation as: *the planned, permanent movement of a group of people from identifiable origin(s) to identifiable destination(s), predominantly in association with one or more hydrometeorological, geophysical/geological, or environmental hazard(s).*

As a complement to that body of work, this compilation of case studies commissioned by GIZ provides an overview of nine planned relocation cases comprising diverse spatial patterns. The cases are located in the following countries: Ethiopia, Guatemala, Indonesia, Mozambique, Papua New Guinea, the Philippines, Somalia and Viet Nam (two cases). Alongside two regional snapshots on Asia and the Pacific, also commissioned by GIZ, this compilation of nine case studies is part of a series of research efforts aligned with the goal to deepen knowledge and evidence on planned relocation.

*Leaving Place, Restoring Home* offered a typology of spatial patterns of planned relocation, which reflected archetypes of cases identified in English-language literature. Specifically, the report identified four different spatial patterns based on whether they relate to single or multiple origin sites and single or multiple destination sites. The following figure 1 is a diagrammatic representation of the different spatial patterns.

**Figure 1.** Typology of Spatial Patterns. Source: Bower and Weerasinghe 2021




Type A cases – those that have a single origin and a single destination – were found to be the most prevalent among the 308 cases identified in the global dataset and were analyzed in detail in *Leaving Place, Restoring Home*. These cases are perhaps the most straightforward spatial pattern conceptually, and most familiar among policymakers and researchers. In that report, less emphasis was placed on analyzing the characteristics of the other three types of cases, which involve multiple origins and/or multiple destination sites. These others, together referred to as "spatially complex" patterns, can be described as: cases involving multiple origins to a single destination (type B); cases involving a single origin to multiple destinations (type C); and cases involving multiple origins to multiple destinations (type D). This typology is discussed in greater detail in section 2 of *Leaving Place, Restoring Home*.

This compilation of nine case studies seeks to augment knowledge on planned relocation case types B, C and D employed by States and communities in the context of hazards, disasters and climate change. It offers preliminary insights on characteristics, approaches to implementation and associated challenges. Planned relocation cases with different spatial patterns tend to be presented as homogeneous phenomena, yet different configurations of origin and destination sites have important implications for policy and practice. Therefore, this report may be of particular interest to practitioners and policymakers who want to better understand the diversity in spatial patterns and potential implications of relocation design decisions, such as site selection, government and multi-stakeholder engagement, participation mechanisms and legal frameworks.

# 3

# Approach, methods and limitations

The nine cases used for this compilation were selected from the 308 cases of planned relocation identified in *Leaving Place, Restoring Home*. A shortlist of 20 cases comprising spatial patterns with multiple origins and/or destinations (type B, C and D) initiated in the context of climate-related hazards was identified from the global set of 308 cases. The shortlist was compiled based on which cases had sufficient information documented in available literature. Nine cases were ultimately selected for further review and deeper analysis based on criteria such as geographic and hazard diversity. They relate to floods, storms, droughts and sea level rise.

Because the nine cases are based on the evidence gathered in *Leaving Place, Restoring Home*, this compilation does not revisit the methodological approach and conceptualization of planned relocation used to identify cases across the globe. More comprehensive and detailed information on the definitions, methodology and limitations can be found in sections 3 and 4 of *Leaving Place, Restoring Home*. Nonetheless, for the purposes of this compilation, it is important to recognize that the methodology was based on research to identify cases initiated after 1970, from English-language peer-reviewed scholarly and grey literature that met the elements of the conceptualization noted in the introduction.[2]

The synopse of each of the nine case studies are presented in both narrative and visual formats. For each case study, several context characteristics are presented as background. These include the climate-related hazard(s) relevant to initiating planned relocation, whether relocated persons were displaced by hazards prior to relocation, the approximate location, rural or urban status, year of initiation, and the physical distance from sites of origin to sites of destination, when such information was available in the literature. In addition, the synopses also discuss a range of selective design features with an emphasis on highlighting institutional and policy frameworks, participation, site selection and other process-related characteristics that

[2] The literature review was undertaken between June and September 2020. This means that any literature published after September 2020 was not included in this analysis.

promote understanding of the complexity in the spatial patterns and challenges associated with implementing them. In general, the case studies do not provide information on outcomes associated with each case. The infographic accompanying each case aims to visually depict the spatial pattern based on information in the consulted literature. Dashed lines represent lower levels of confidence in the configuration of the spatial pattern than a solid line.

As noted, the case studies discussed in this compilation have been selected purposefully based on criteria mentioned above and are not representative. Therefore, insights regarding different spatial patterns cannot be extrapolated to all cases embodying similar patterns. In addition, the narrative discussion of each case relies predominantly on up to three sources of scholarly or grey literature and the information presented in them at the time of publication, as summarized in Annex A. As such, the synopses may not necessarily reflect the status of the discussed cases as at the publication date of this report. This means the discussion of characteristics, processes and challenges are based on how they are presented in literature, rather than on a primary and independent assessment.[3] Given the complexity of type B, C and D spatial patterns, and limited information on communities of origin and destination, it is not possible to code these cases consistently without a detailed literature review and the development of targeted coding methodologies.

With this background in mind, the next section provides a narrative synopsis of each of the nine planned relocation cases. This is complemented by a visual infographic that highlights which category the case represents under the typology, and where relevant, maps to provide additional context. The following section draws together several observations and implications relevant to policy and practice, as they relate to the complexity in spatial patterns, ahead of a brief conclusion.

[3] Consequently, diverse perspectives and understandings in relation to a given case are not necessarily presented.

# 4

# Case studies of complex spatial patterns of planned relocation

This section provides a narrative and visual overview of the nine planned relocation cases selected for deeper analysis, presented in reverse chronological order.

## TACLOBAN, THE PHILIPPINES

In November 2013, Typhoon Haiyan (known locally as Yolanda) and the powerful storm surge it prompted devastated Tacloban City and the surrounding areas of the province of Leyte.[4] Among the hardest hit were residents with low income and informal land tenure, whose homes were in low-lying areas near the coast. In the early stages of recovery, the national government declared a no-build zone of 40 meters from the coastline. This designation was based on a provision from the 1976 Water Code, which initially aimed to protect water resources but was adapted to reduce exposure to future coastal hazards. Months later, the no-build zone was revised to a no-dwelling zone, and an unsafe and a safe zone, and then re-drawn based on more in-depth risk assessment and hazard maps of the coastlines.

Aligned with this policy to reduce exposure to future coastal hazards and with broader disaster recovery objectives, the city government decided to relocate affected communities inland to areas less at risk of coastal hazards. A wide range of actors engaged in the process of relocation site selection, design and construction, and provided temporary and permanent housing support. The Tacloban City Housing and Development Office coordinated this complex and large-scale relocation process, with varying levels of oversight of decisions made in different relocation projects. As of October 2017, at least 29 relocation projects existed, as tracked by the Tacloban City Housing and Community Development Office. Led by the National Housing Authority, the government's socialized housing program committed to building more than 13,000 houses in relocation sites alone. Numerous non-governmental actors also supported construction of over 2,600 houses in relocation sites, including on land provided by the government or on land acquired directly.

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4 This narrative is drawn from: Ong, J. M. *et al.* (2016). Challenges in Build-Back-Better Housing Reconstruction Programs for Coastal Disaster Management: Case of Tacloban City, Philippines. *Coastal Engineering Journal,* 58(1), 1640010-1-1640010-32; Maly, E. (2018). Building back better with people centered housing recovery. *International Journal of Disaster Risk Reduction,* 29, 84-93.

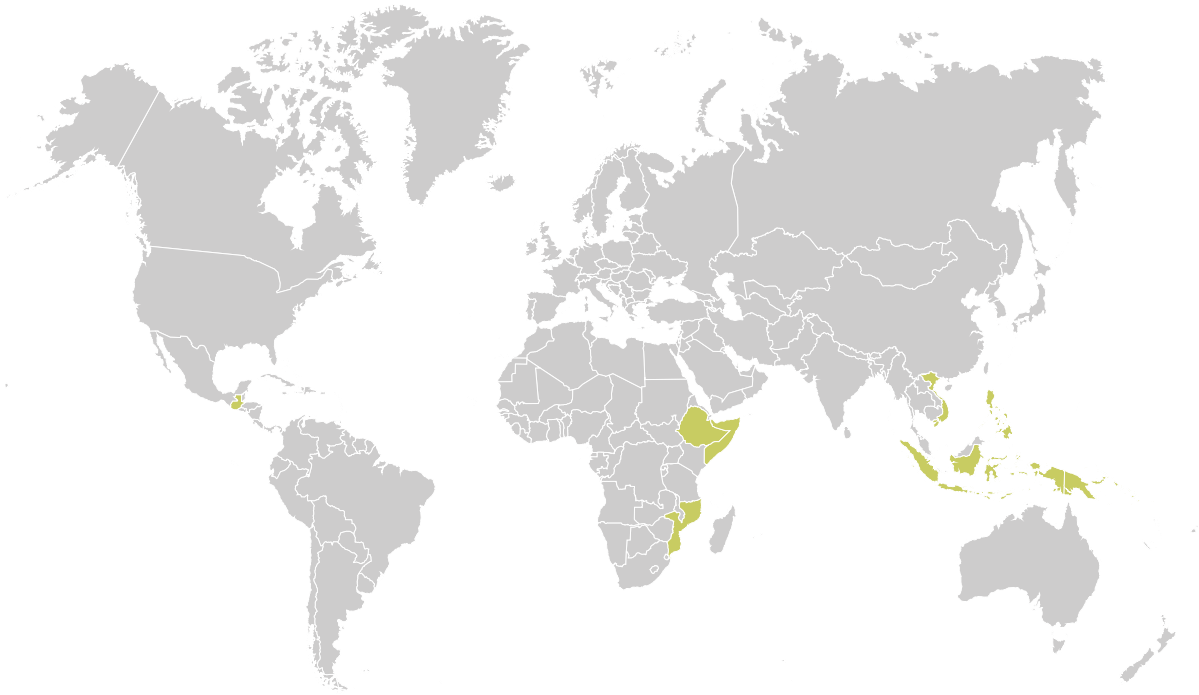
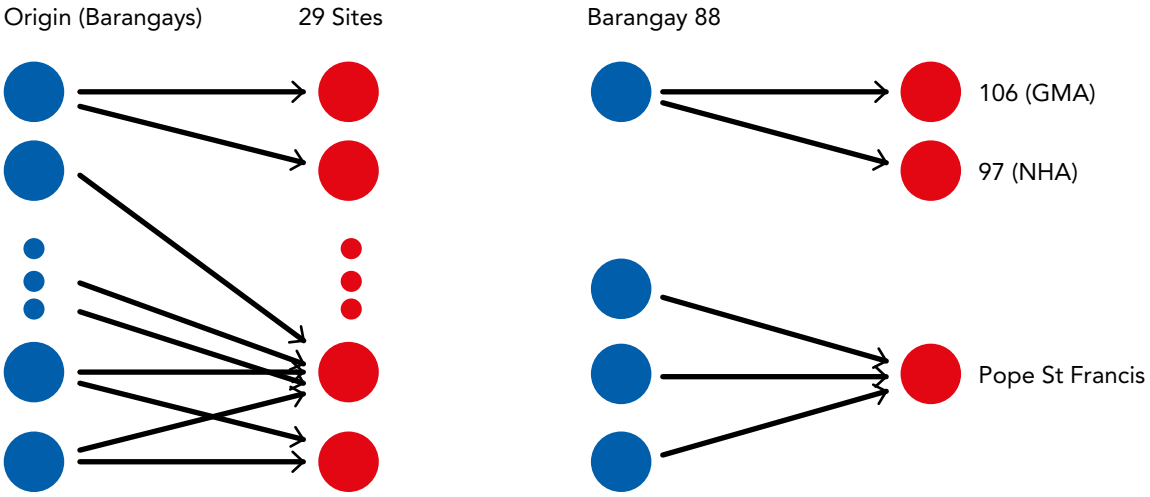


**Table 1.** Planned Relocation Cases Background Information

| Location | Approx. year of Initiation | Hazard | Prior Displacement | Rural or Urban | Distance (range) | Initiating Actor | Legal or Policy Framework | Participation Mechanism |
|---|---|---|---|---|---|---|---|---|
| **PHILIPPINES** Tacloban City | 2013 | Storm, storm surge | Yes | Urban | 5-24 km | Government | Yes | Varied across sites |
| **NORTHERN VIETNAM** Hoa Binh Province | 2009 | Landslide, flood, storm | Unclear (presumably) | Rural | 90-150 km | Government | Yes | Yes (limited) |
| **VIETNAM** An Giang Province, Mekong Delta | 2007 | Flood, sea level rise | Unclear (presumably) | Rural | 2-3 km | Government | Yes | Yes (limited) |
| **MOZAMBIQUE** Zambezi River | 2007 | Flood | Yes | Rural | Unclear | Government | Yes | Unclear |
| **INDONESIA** Surakarta City | 2007 | Flood | Unclear (presumably) | Urban | 5-8 km | Government | No | Yes |
| **PAPUA NEW GUINEA** Carterets Atoll, Autonomous Region of Bougainville | 2006 | Sea level rise, high tides, storm surge, coastal erosion | No | Rural | 80-90 km | Community (separate Government) | Unclear | Yes |
| **GUATEMALA** Panabaj and Tz'anchaj Districts | 2005 | Storm | Yes | Rural to Urban | Unclear (close) | Government | Yes | Yes |
| **ETHIOPIA** Oromia Region | 2003 | Drought | Unclear | Rural | Unclear (likely hundreds of kilometers) | Government | Yes | Unclear |
| **SOMALIA** (whole country) | 1975 | Drought | Yes | Rural origins (some rural, some urban destinations) | Unclear (likely hundreds of kilometers) | Government | No | Unclear |

**Figure 2.** Spatial pattern of planned relocation in Tacloban, Philippines




Tacloban is a highly urbanized area with a daytime population of almost a quarter of a million people. It has limited land availability; therefore, destination sites were identified further inland to the north of the city, in areas that are largely undeveloped. Even though the decision to undertake relocation was applied at a broad scale, the experience of relocation differed dramatically for communities depending on the dynamics of initiation and support at the local level. While overall this planned relocation case is a type D (multiple origins to multiple destinations), it contains at least one type C case (single origin to multiple destinations) and one type B case (multiple origins to one destination) within it, as noted in figure 2. This analysis considers two destination sites in the far north with residents relocated from a common community of origin, Barangay 88 (San Jose), and an additional site closer to the city center (Pope St. Francis Village) whose residents originated from across typhoon affected areas.

Some residents from Barangay 88 (San Jose) were relocated to a site called Ridgeview in Barangay 97 (Cabalawan), located 21 kilometers to the north of their site of origin as shown in figure 3. This relocation was funded by the government through the National Housing Authority's socialized housing program, which has an established method for housing developments used across the Philippines, whereby private contractors are hired for site development and housing construction. The Ridgeview site faced numerous delays in construction, in part because of subcontracting challenges and complexity of land acquisition. In contrast to the other relocation sites discussed, residents were not meaningfully involved in decisions related to design and construction of the relocation site or housing. Beneficiaries did not receive any livelihood or construction skills training assistance as part of the relocation process. Access to livelihoods was a noted challenge for some residents, as the Ridgeview site is far from downtown Tacloban where they used to work as market vendors or domestic service providers.

Other residents from Barangay 88 (San Jose) relocated to a site constructed in Barangay 106 (Santo Nino), around 24 kilometers north of their original homes as seen in figure 3. Funding and support for this relocation came from a national non-governmental actor – one of the largest TV networks in the Philippines – which explains the site's name, Global Media Arts Kapuso Foundation Housing. This case also faced challenges and delays around land acquisition, due to complicated negotiations with previous landowners. The approach to relocation in this site was comparatively "community-driven" and involved participation of beneficiaries throughout the relocation site development process. Some beneficiaries were trained in construction skills and worked in the construction of the site through a "sweat equity" agreement, which provided temporary employment and increased sense of ownership over the relocation. Evidence suggests that the provision of construction skills training positively affected interviewees' level of satisfaction with the relocation.

**Figure 3.** Map of Barangays 88, 97, and 106. Source: Ong et al. 2016

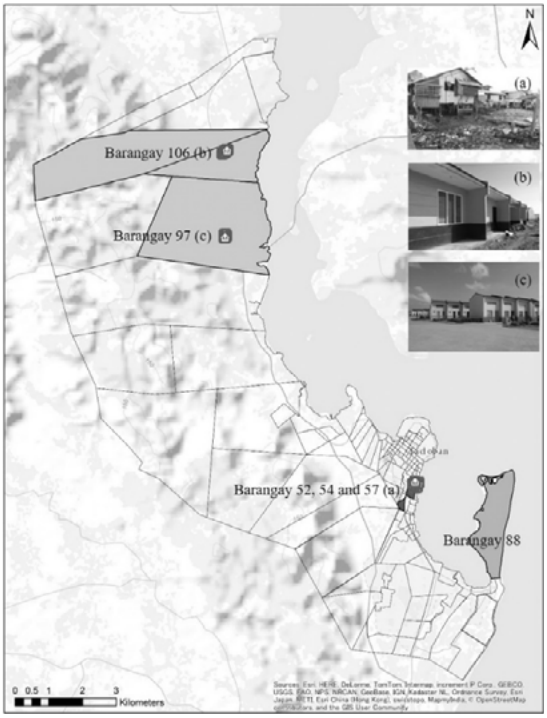
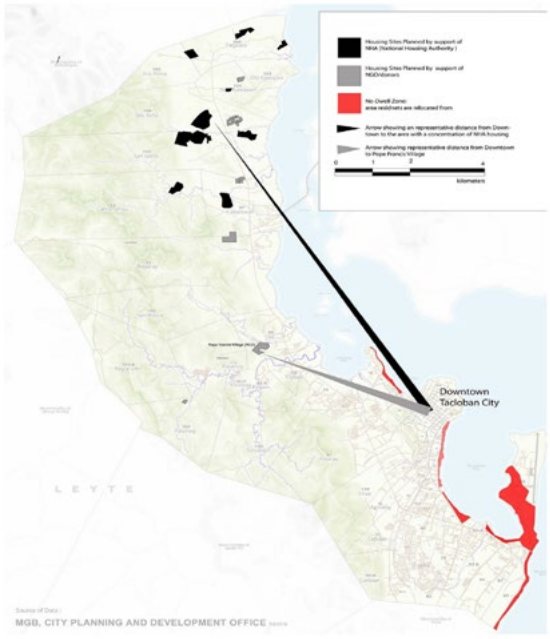



**Figure 4.** Map of Pope Saint Francis destination site. Source: Maly 2018




In contrast to the two sites in the north, the Pope St Francis Village planned relocation may represent a more people-centered approach. At all stages from conception to land acquisition to construction, this relocation project was supported by a consortium of local and international religious non-governmental organizations.[5] The destination site is located on privately acquired land selected intentionally because of its closer proximity to downtown Tacloban, and to the sites of origin of relocated persons. As seen in figure 4, this shorter distance enabled relocated persons to have greater continuity of their lives and livelihoods. As integrated livelihood opportunities were an important feature of the approach, the site also includes a farm and a community garden. Future residents were included in site planning, housing design and building construction, and the relocation process sought to embody so-called "People-Centered Housing Recovery" principles. However, in contrast to other sites where households from the same origin area relocated together to one – or in the case of Barangay 88, two destinations – the beneficiaries at the Pope Saint Francis Village relocation site were selected by local homeowners associations from throughout the typhoon affected areas. Since residents came from multiple communities of origin, no prior community cohesion or structures existed, and residents engaged with one another for the first time at the stage of relocation site development. The complex spatial pattern of this relocation therefore had important implications for participation and consultation mechanisms. To address the need for resident engagement, a Community Council of 20 elected leaders was created to ensure that beneficiaries could provide inputs throughout the relocation process, including around housing design that considered community culture and traditions.

5 The consortium, known as FRANCESCO (Pope Francis for Resilient and Co-Empowered, Sustainable Communities) included the following organizations: Urban Poor Associates (UPA), Canadian Catholic Organization for Development and Peace (CCO-DP), Catholic Bishops Conference of the Philippines-National Secretariat for Social Action (CBCP- NASSA), the Congregation of the Most Holy Redeemer (Redemptorist Community of Tacloban) and Roman Catholic Archdiocese of Palo, Leyte (RCAP).

## HOA BINH PROVINCE, NORTHERN VIET NAM

Government-supported planned relocation is embedded in a number of national policy frameworks in Viet Nam.[6] These include disaster risk reduction, disaster risk management, climate change, rural development and poverty reduction. In this sense, a range of objectives may be pursued through relocation, such as disaster risk and poverty reduction, climate change adaptation and development goals. Consequently, multiple sources of funding may be mobilized to support relocation programs. The approach to relocation may be "collective" or "concentrated" where a community is relocated as a group to a single, newly developed relocation site or relocation may be "dispersed" meaning households are settled among communities in existing residential areas.

Legal and policy frameworks and detailed project-specific decision instruments outline relocation implementation processes. They specify the support, assistance and infrastructure to be provided to relocated households. In contrast to relocation cases driven by development objectives, relocation programs related to environmental factors do not address land acquisition and compensation for loss of origin land. This means relocated households may continue to use their land in areas of origin, when this is feasible. Some government relocation decisions detail objectives to relocate tens of thousands of households, and provinces and cities have formulated plans identifying populations for relocation away from areas of disaster risk.

The mountainous Hoa Binh province, located in the northwest of Viet Nam, is one such area. It has suffered damage and destruction from landslides, flooding and typhoons and is at risk of such events. A government project decision was adopted in 2009 to initiate relocation and then extended through subsequent policy instruments. They discuss the relocation of about 300 households living around the Hoa Binh lake to a newly established collective relocation site, and another 900 households into existing residential areas through dispersed relocation. The instruments set out the budget for the relocation and benefits applicable to each relocated household. Benefits include relocation expenses, house construction costs, residential land, agricultural land, and subject to certain conditions, food support and training. The relocation has encountered delays and people in the dispersed program had not physically relocated as of 2017.[7] Funding constraints, including the capital-intensive nature of the collective relocation component has presented challenges. The total investment in the relocation project is shared between central and local government authorities; however, available funding has not met the required budget.

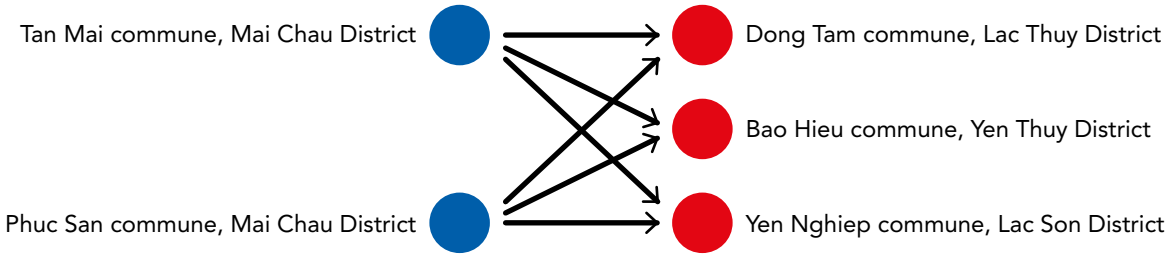
Research conducted in two communes of origin targeted for relocation (Tan Mai and Phuc San communes in Mai Chau district) and at three relocation sites (Dong Tam commune, Lac Thuy district; Bao Hieu commune, Yen Thuy district; and Yen Nghiep commune, Lac Son district) shed light on a range of dimensions relevant to spatial patterns (see figures 5 and 6). Between 2010 and 2014, 148 households from Tan Mai and 98 households from Phuc San had moved to relocation sites at the three sites noted above. Specifically, 60 households were relocated to Yen Nghiep, establishing Mai Son village, 75 households were relocated to Bao Hieu, establishing Tan Phuc village, and 50 households were relocated to Dong Tam, establishing Dong Mai village. The three relocation sites are between 90 and 150 kilometers from the communes of origin.

In general, the institutional architecture to support relocation projects encompasses a range of national, provincial and community actors. These include the Ministry of Agriculture and Rural Development, the Ministry of Planning and Development and the Ministry of Finance. Provincial people's committees review and approve relocation projects, in coordination with the aforementioned ministries. For each project, a project management committee is established, consisting of provincial representatives of some of the earlier mentioned ministries,

6 This narrative is drawn from: Ahn, D. *et al.* (2017). Planned Relocation in the Context of Environmental Change in Hoa Binh Province, Northern Vietnam: An analysis of household decision-making and relocation outcomes. International Organization for Migration and Institute of Sociology, Ha Noi.

7 This is the date of publication of the source article. *Ibid.*

**Figure 5.** Spatial pattern of planned relocation in Hoa Binh province, Vietnam




other agencies and representatives of provincial and district people's committees. The project management committee is responsible for a range of activities, including developing the implementation plan, implementation, assessing relocation sites and budgetary oversight and coordination. The role of commune-level authorities largely relates to facilitating communication between project management committees and community members.

The relocation of the communes in the Hoa Binh province highlights challenges related to participation and understanding of the relocation process among affected people. For instance, while many households received information on the announcement of the project and notification of being identified for relocation from the village head, others received information from newspapers, radio, TV and loudspeakers. This information was not necessarily received from the project committee charged with implementation. While the process involved the submission of a relocation application, opportunities to actively participate in planning and to contribute to implementation may have also been limited. Some people were able to provide comments during community and village meetings held with affected households, however, such meetings may have served primarily to communicate and disseminate information regarding the relocation process and related assistance and benefits. Consequently, questions have arisen about the extent to which all the people identified for relocation were genuinely consulted and were able to contribute to planning and implementation. Moreover, commune authorities, including those at destination sites directly responsible for the well-being of relocated households, may have had limited opportunities to participate in planning and implementation.

This case also suggests that relatives, friends and other social networks are an important source of information for people at sites of origin grappling with the decision to relocate. Networks in sites of destination provide information on the process and conditions at settlement, including infrastructure, services and livelihoods, enabling people to make more informed decisions about the tradeoff between the challenges and benefits of relocation. The experience of others may strengthen or alleviate concerns related to the relocation experience.[8]

**Figure 6.** Map of origin and destination sites in Hoa Binh province. Source: IOM 2007

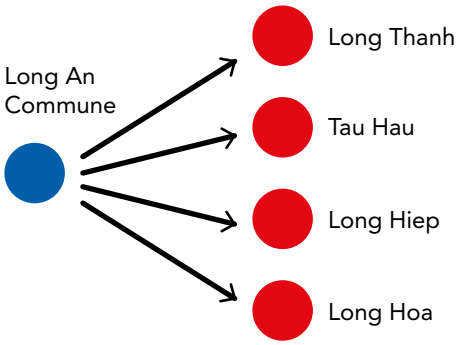

[8] The literature on this case study also provides information regarding the factors that people consider in the decision to relocate or stay at places of origin, including experience of harm, risk awareness, government support and other social and economic factors. The literature also includes information on outcomes for the communities engaged in this particular relocation.

## MEKONG DELTA, VIET NAM

Flooding, inundation and sea-level rise present threats to the lives and livelihoods of the people who live in the densely populated, low-lying Vietnamese Mekong Delta.[9] As a consequence, and consistent with the policy context elaborated in the earlier case from Viet Nam, the planned relocation of communities living in the Mekong Delta also aims to promote disaster risk reduction, development and poverty reduction goals. Through an approach and policy framework known as "living with floods", which began in the 1990s, large scale planned relocation, complemented by other adaptation measures such as dykes, have been implemented to mitigate the intensity of exposure to flooding and inundation. The "living with floods" policy and approach also recognize that flooding can be beneficial for the livelihoods of people living in the Mekong Delta and therefore, adaptation is also necessary. Under the policy framework, "resettlement clusters", which are destination sites of approximately 300 hectares located within communes, have been developed to provide for the permanent relocation of people living in "deeply flooded" areas. A regulatory framework of decisions sets out requirements for establishing resettlement clusters, including infrastructure and services.

Each year, flooding from the Tien and Hau rivers inundate the An Giang province, located on the upstream limit of the Vietnamese Mekong Delta. Past floods and inundation have caused extensive damage and destruction in Tan Chau district, home to over 150,000 people. The relocation program in the district concerned the establishment of 34 resettlement clusters in 11 communes with between 2 and 5 resettlement clusters in most communes (see number in brackets): Tan Chau (1); Long Phu (4); Phu Vinh (2); Le Chanh (3); Chau Phong (5); Long An (4); Tan An (3); Tan Thanh (3); Vinh Hoa (4); Vinh Xuong (3) and Phu Loc (2).

**Figure 7.** Spatial pattern of planned relocation in Long An Commune, Vietnam.




In the Long An commune, for example, four resettlement clusters were established: Long Thanh, Tau Hau, Long Hiep and Long Hoa.[10] See figure 7 above. Of the approximately 3,202 households affected by flooding in the commune, about 1,404 households were targeted for relocation. At the end of November 2007, about 480 households had relocated to their new destination sites and the need for a further six resettlement clusters was identified to accommodate the outstanding 924 households. People living in the commune may have had little interest in relocation while infrastructure remained incomplete in the resettlement clusters, and when improvements in living conditions and options for income generation were not apparent. Once houses and infrastructure were built, however, and cluster sites were mostly complete, there was greater agreement to participate in the program. For all the clusters, at least a majority of the houses were provided on a subsidized basis funded through preferential loans, while the remaining houses were offered at market price to the general public.

From an institutional perspective, three types of stakeholders are identified as particularly relevant to relocation processes. Provincial authorities receive funding from the central government and their role relates to directing district authorities to implement policies, including planning the resettlement clusters and selecting the target groups for relocation. District authorities are responsible for design-

[9] This narrative is drawn from: Danh, V. T. & Mushtaq, S. (2011). Living with Floods: An Evaluation of the Resettlement Program of the Mekong Delta of Vietnam. In: M. Stewart & P. Coclanis (eds.). *Environmental Change and Agricultural Sustainability in the Mekong Delta.* Advances in Global Change Research, vol 45. Springer, Dordrecht, 181-204.

[10] The literature also refers to two of these clusters as "resettlement paths" and explains that resettlement clusters are built at one place, while the paths are built along the inter-commune roads. *Ibid.*

ing the resettlement clusters, selecting their location and determining their size, as well as managing the investment capital allocated to establishing the cluster. The commune's people's committee is responsible for the allocation of plots within the resettlement cluster and for monitoring. An administrative unit, established once a cluster is completed, falls under the management of the commune authority.[11]

## CENTRAL MOZAMBIQUE

Due to heavy rains, the Zambezi River in central Mozambique flooded in early 2007. The floods destroyed homes and crops and displaced up to 107,000 people.[12] This disaster occurred in the context of ongoing recovery from floods along the Zambezi in 2000 and 2001, which had previously displaced tens of thousands of people. In response to these floods, the Government of Mozambique evacuated people to accommodation centers with basic services, including food and health assistance. However, these sites were intended to be temporary and lacked resources to support displaced people over time.

Soon after the 2007 flood the government launched a plan for Post-Disaster Resettlement and Reconstruction, which among other measures, intended to relocate 140,000 people[13] or 56,000 households[14] out of flood affected areas.[15] The process was led by the National Disasters Management Institute, the government agency responsible for disaster management and risk reduction. Debate emerged between the Government of Mozambique and several international donors who instead advocated for an alternative strategy of flood management practices to take advantage of post-flood fertile soils, alongside enhanced evacuation and awareness raising activities. Nonetheless, the relocation process proceeded, and multiple international humanitarian actors from many United Nations agencies and non-governmental organizations provided assistance in the resettlement process.

The government planned for permanent resettlement centers in areas that are considered to be safe from floods, and that have access to agricultural land, schools and health facilities. As shown in figure 8 below, 52 such resettlement centers were constructed, which included plots for 30,944 households.[16] This case follows the type D spatial pattern, as there were many origin and destination sites without consistent efforts to ensure that communities or groups of households remained together upon relocation (figure 9). Indeed, some relocated chiefs found themselves without status to govern land or their community, and preferred to return to their sites of origin.[17] As all land belongs to the State pursuant to Law 19 in 1997 and hence individual household land ownership is not permissible, the government aimed to encourage relocated persons to remain in the sites through modern permanent brick-built housing, potable water, health care, schools and other development benefits such as agricultural seed vouchers and fairs to stimulate livelihoods. Living in the floodplains was discouraged through reducing basic services such as primary education, as teachers were no longer allowed to live in the areas.[18]

While these relocation sites are safe from floods, they face other hazards, including water scarcity and drought which threaten agricultural livelihood strategies.[19] In interviews with resettled people following the 2007 floods, many prefer to travel to fertile low-lying river areas to grow their crops. Translocal migratory existences are common: some return to sites of origin daily, while others pursue circular movements with return to sites of origin for a few days or even months at a time. Prior to relocation, some farmers minimized flood risk

11 The literature also identifies factors influencing decisions on relocation and discusses outcomes specific to this case.

12 This narrative is drawn from: Stal, M. (2011). Flooding and Relocation: The Zambezi River Valley in Mozambique. *International Migration,* 49, e125–145; Artur, L. & Hilhorst, D. (2012). Everyday realities of climate change adaptation in Mozambique. *Global Environmental Change,* 22(2), 529–536; Arnall, A. (2014). A climate of control: flooding, displacement and planned resettlement in the Lower Zambezi River valley, Mozambique. *The Geographical Journal,* 180(2), 141–150.

13 140,000 people according to Arnall 2014, 56,000 households according to Artur & Hilhurst 2014.

14 Artur & Hilhorst 2014 (footnote 12).

15 Arnall 2014 (footnote 12).

16 Stal 2011 (footnote 12).

17 Artur & Hillhorst 2014 (footnote 12).

18 Artur & Hillhorst 2014 (footnote 12).

19 After an earlier relocation attempt in 2001, many people permanently returned to their places of origin along the river because crop production was challenging in the dry resettlement centers.

**Figure 8.** Spatial pattern of planned relocation along the Zambezi River, Mozambique.

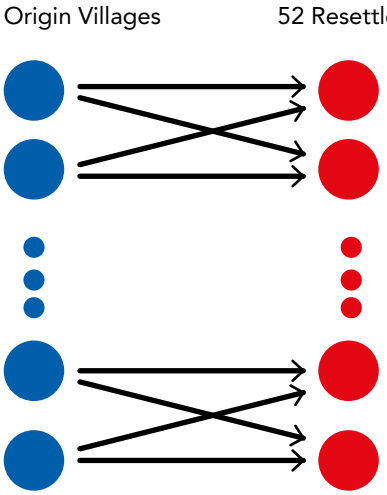
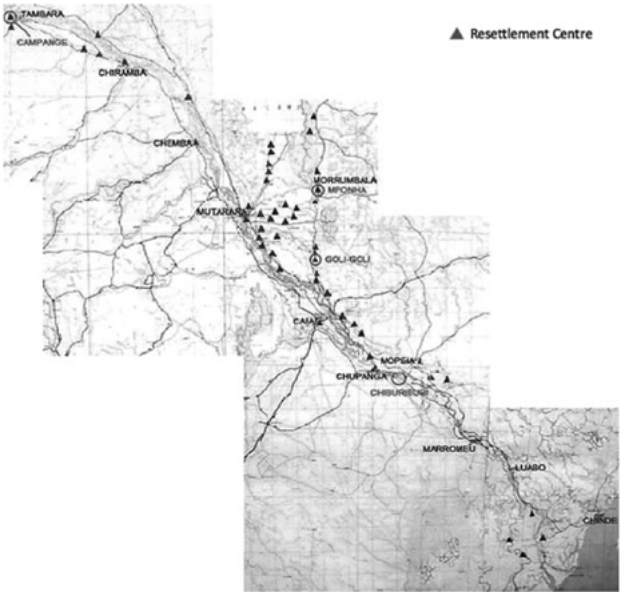



**Figure 9.** Map of destination sites in Mozambique. Source: Stal 2001






by diversifying locations of agricultural plots so some were safe each year, and by constructing small and portable homes that could be transferred during flood season.[20]

Government and donor actors have led efforts for livelihood diversification in destination sites. However, critics have pointed out that they are short term, and face challenges once agencies withdraw their support. Furthermore, initiatives like production of hand-made mud bricks for new homes require wood fire burning, which has led to an increase in deforestation and soil erosion in some places, demonstrating the environmental impact that planned relocation cases can have on destination sites.[21]

## SURAKARTA CITY, INDONESIA

In Surakarta city, also known as Solo, located in the Central Java province of Indonesia, large-scale seasonal flooding destroyed more than 6,000 houses in 2007.[22] Many of the houses were located along the flood-prone banks of the Bengawan Solo river, occupied by poor residents – many of whom did not have legal land tenure – renters and migrants from outside the city. Repeated flooding had previously caused damage and harm to the communities that lived along the riverbank. Following the 2007 flooding, a relocation program was initiated by the local government through the leadership of the Mayor of Surakarta. Relocation was seen as one strategy to reduce disaster risks. Other objectives included a desire to mitigate the dense and "illegal" buildup of settlements in the hazard-prone area along the riverbank, and promote urban and ecological development.

Approximately 1,571 households from six villages – Jebres, Pucang Sawit, Sewu, Sangkrah,

20 Arnall 2014 (footnote 12).

21 Stal 2011 (footnote 12).

22 This narrative is drawn from Haryanto, A. T. et al. (2020). Resettlement Program as a Mitigation Strategy for Flood in Surakarta. *TEST Engineering & Management,* 83 (ISSN: 0193-4120), 6430-6441; Obermayr, C. & Sandholz, S. (2017). Participatory Resettlements in Surakarta, Indonesia – Changing Livelihoods for the Better or the Worse?. *Trialog,* 126-127 (3-4/2016), 43-50; Taylor, J. (2015) A tale of two cities: comparing alternative approaches to reducing the vulnerability of riverbank communities in two Indonesian cities. *Environment and Urbanization,* 27(2), 621-623.

Semanggi and Joyosuran – located along the riverbank were offered financial support to relocate. Most of these households, almost 1,300, occupied State-owned land, while the rest occupied privately-owned land. The local government provided financial support to purchase new land and to construct public facilities in the settlement location.[23] The central government, through the Ministry of People's Welfare, provided funding for housing construction. Legal and policy instruments were adopted to allocate funds, implement the program and enable multi-stakeholder inputs. This included a local government decree that established a multi-agency, multi-level committee to oversee the implementation of the relocation program. The literature highlights aspects of the relocation process, which included the following phases:

1. **Data collection:** to gather information on affected residents, which was carried out by the local, central and district authorities, village chiefs and community leaders. The focus was on identifying residents who had lived at the location rather than migrants from outside the city.

2. **Socialization:** which involved a significant number of meetings between the local government, heads of the affected communities and affected residents from the riverbank settlements to build trust and identify concerns.

3. **Formation of working groups in affected communities and villages:** these were developed to provide space for participation and engagement in the relocation process. The members of the village working group were elected by affected people.

4. **Beneficiary verification:** was undertaken jointly by the relocation committee and working groups. People who were renting homes in the hazard-prone area, however, were not provided compensation or financial support, and may have remained in at risk areas.

5. **Relocation site selection:** involved affected communities and working group meetings to identify and agree upon the location of the settlement site and the availability and legality of the land.

6. **Land purchase and development of site plan and housing construction:** working groups were supported to purchase new land and to obtain legal land certificates. The local government planning office assisted the residents to design the residential site and integrate it into the city through investments in roads and extension of services, such as electricity, water and sewer age. Support was provided to villagers who were unable to build their own houses in the new location.

As reflected above, the residents were empowered to choose their settlement location and were extensively engaged in the planning and implementation of the process. The vast majority of the 1,571 households appear to have physically relocated to several villages in the northern parts of Mojosongo district, also in Surakarta, by the end of 2010. At the time, the district may have been sparsely populated with limited services, which meant affordable land was available. It is unclear however whether people from each of the six origin villages were relocated within six separate villages at the destination site (maintaining pre-existing cohesion at the village level) or whether relocated people settled in a more dispersed fashion within the Mojosongo destination area and within less than six villages (see figures 10, 11 and 12). Literature specifically concerning the relocation of people from the Pucang Sawit village suggests that communities were encouraged to move together to the new site in order to keep communities' ties intact and that social ties were maintained and improved. However, the reviewed literature does not provide a definitive answer to the configuration of this particular spatial pattern.[24]



23 Some of the residents, those with legal land tenure, demanded higher compensation.

24 The literature also includes some information on outcomes for the communities engaged in this particular relocation.

**Figure 10.** Spatial pattern of planned relocation in Surakata, Indonesia

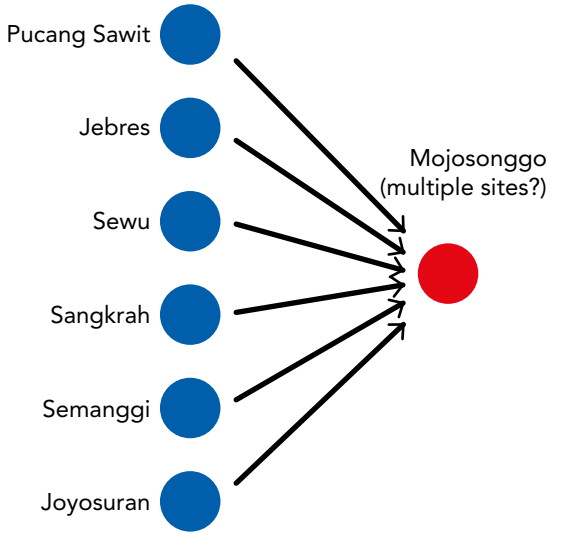



**Figure 11.** Map of destination site in Surakarta. Source: Obermayr and Sandholz 2017

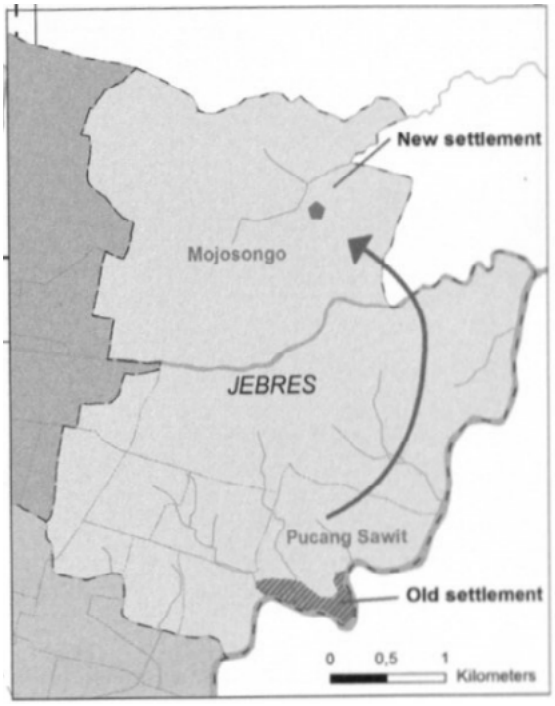



**Figure 12.** Map of origins and destination sites in Surakarta. Source: Haryanto et al 2020

## CARTERETS ATOLL, AUTONOMOUS REGION OF BOUGAINVILLE, PAPUA NEW GUINEA

Six low-lying islands make up the Carterets atoll, located in the Autonomous Region of Bougainville, which is part of Papua New Guinea.[25] The six islands have a combined population of about 3,000 people, spread across a land area of 0.6 kilometers, as shown in figure 14. The atoll is vulnerable to sea-level rise, high tides, king tides and storm surges. Together with saltwater intrusion and salinization, these hazards have compromised the subsistence economy and threaten food and water security, with people increasingly dependent on food aid. These dynamics and future risks associated with climate change have prompted a plan to relocate to Bougainville island, the main island within the Autonomous Region of Bougainville and the seat of government, located approximately 86 kilometers away.

In 2006, through the leadership of the Carterets Council of Elders, the local governing body established Tulele Peisa (Sailing the Waves on Our Own), an NGO, to organize the relocation. Tulele Peisa has developed the Carterets Integrated Relocation Program, a 20-step relocation plan to voluntarily relocate about 1,700 islanders from the Carterets atoll to multiple locations on Bougainville island. Land in the envisaged settlement locations of Tinputz, Tearouki and Keriak was gifted by the Catholic Diocese of Bougainville on humanitarian grounds, and land in Wakunai and Tenapo, privately owned by two Carteret families, is being legally acquired. Other settlement sites include Mabiri and Tsimba, also offered through the Roman Catholic Church. Securing financial resources for the relocation process has presented significant challenges. The availability of and access to destination land sites have also raised complications, including due to traditional and customary land tenure arrangements. The combined land area in five sites – Tinputz, Tearouki, Keriaka, Wakunai and Tenapo – is considered to be insufficient to accommodate the families that intend to move.

Tinputz, which comprises 71 hectares of church land, has become the first relocation site (see figure 13). A relocation task force was established with representatives from the Carteret islanders, Tuele Peisa, the Catholic Church and the host community, to oversee the process. Ahead of the physical relocation, sensitization activities were conducted, which included counselling, community meetings and awareness raising. In 2009, the heads of five families moved to Tinputz and were tasked with clearing the land, setting up gardens and homes and paving the way for others. The same year, however, three of the five moved back to the Carterets.

As at 2018, 10 families or a little over 100 people live in Woroav village at the Tinputz site, which is seen as a pilot and learning project for the other sites. The site has been cleared, food gardens have been established and houses have been built by settlers with support from laborers in host communities. It has not been possible to determine conclusively whether the people that have relocated to Woroav have originated from different islands of the Carterets atoll or from within the same island. However, the literature seems to suggest that, given the voluntary nature of the relocation program, people from different islands may relocate to the settlement sites of their choosing. The Tearouki settlement site is also advancing with a relocation committee set up in 2013 and other preparatory activities conducted. However, local Tearouki settlers have moved into the settlement site, which has necessitated further negotiations and clarification of legal land arrangements.



[25] This narrative is drawn from: Boege, V. & Rakova, U. (2019). Climate Change-Induced Relocation: Problems and Achievements—the Carterets Case. *Policy Brief No. 33.* Toda Peace Institute; Connell, J. & Lutkehaus, N. (2017). Environmental Refugees? A tale of two resettlement projects in coastal Papua New Guinea. *Australian Geographer.* 48(1), 79-95; Edwards, J. B. (2013). The Logistics of Climate-Induced Resettlement: Lessons from the Carteret Islands, Papua New Guinea. *Refugee Survey Quarterly,* 32(3), 52-78.

**Figure 13.** Spatial pattern of planned relocation in Papua New Guinea

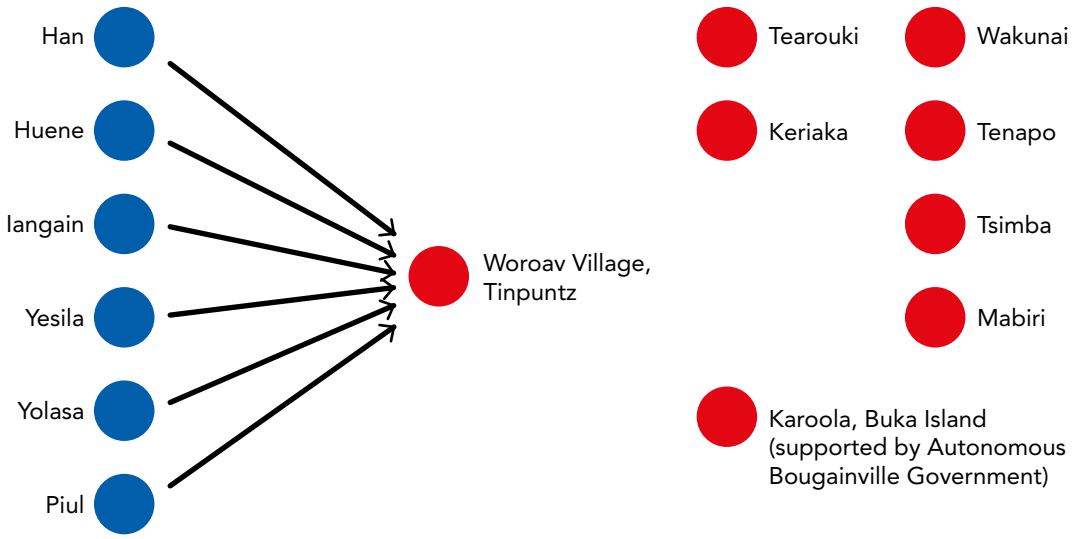
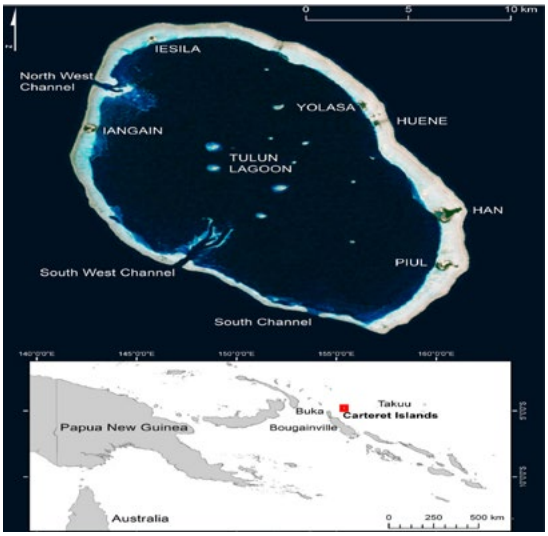



**Figure 14.** Map of Carteret Islands atoll. Source: Connell & Lutkehaus 2017




The 20-step relocation plan created by Tulele Peisa addresses construction of houses and infrastructure, implementation of agriculture and income-generation projects, development or improvements to existing facilities such as health and education centers and community development and training programs. Research indicates that the plan pays attention to inclusivity and equity dimensions and envisages exchange programs among chiefs, women and youth for establishing relationships and understanding. Tulele Peisa also promotes intermarriages to foster relationships, although there appears to be some opposition to this approach. Its board includes representatives from the local governing bodies of Carteret Islands and Tinputz.[26]

In what appears to be a parallel process, the Autonomous Bougainville Government has also initiated a relocation program with plans to relocate 40 to 60 families from the Carteret islands as well as people living on other atolls such as Mortlocks, Tasman and Nuguria. A specific office responsible for relocation has been established and an atoll integrated development policy, together with a multi-sectoral steering committee, have been adopted. Land has been secured in Buka at the Karoola plantation. Surveys, social impact studies, workshops and focus group discussions have also been undertaken. While the land at the plantation is regarded as freehold, the government has had to negotiate access with neighboring communities who may have long-established customary rights of usage. While these parallel programs may have created tensions between the Autonomous Bougainville Government and Tulele Peisa and strained relationships between the leadership of the NGO and Cartarets

[26] The literature also presents a range of decision making and outcome related dimensions, including in relation to cultural, psychological and spiritual aspects, which are not the focus of this case study discussion.

Islanders who work as civil servants within the government, literature indicates reconciliation processes have occurred.

Notably, these relocations are also taking place amidst less positive historical precedents. Two previous State-led relocation efforts from the Carteret islands to Bougainville in the early 1980s and late 1990s failed in the context of tensions and disputes, including over land and resources between the relocated and host communities. The majority of the relocated people returned back to their places of origin.

## PANABAJ AND TZ'ANCHAJ DISTRICTS, GUATEMALA

In 2005, Tropical Storm Stan wreaked havoc across Guatemala and led to a government declaration of a state of public emergency.[27] Across the country, 17,000 houses were either destroyed or determined to be unfit for habitation. The consequences of this disaster were particularly acute in Panabaj and Tz'anchaj districts of the Department of Solalá, where the majority of the population is Tzútujil, an ethnic group descended from the Mayans. In these rural districts alone, over 600 people were killed, and over 205 houses were destroyed.

In the immediate aftermath of the storm, displaced families of Panabaj and Tz'anchaj districts moved temporarily to shelters on land donated by the Catholic Church. An initial "inadequately planned" relocation was attempted on this donated land, however, soon both authorities and community members raised concerns about the safety of the site due to ongoing landslide risk. After an assessment commissioned by the National Coordination for Disaster Reduction of Guatemala in 2006, the site was deemed hazardous and thus inappropriate for permanent relocation. The study further established criteria for identification of a future site and outlined necessary disaster mitigation measures.

This relocation process was initiated and undertaken within the context of a "National Reconstruction with Transformation" plan. This plan was developed by the Guatemalan Government after the effects of Tropical Storm Stan promoted an inclusive and comprehensive approach to disaster recovery aligned with broader goals of sustainability and development. The National Coordinator for Reconstruction of the Office of the President was responsible for coordinating the plan across Guatemala, but each Department established a Reconstruction Commission to implement the plans at a more local scale. Therefore, after the initial church land was deemed inappropriate, the Solalá Department's Reconstruction Commission, together with municipal authorities and traditional community leaders, jointly determined that housing construction i/on the initial site could not continue and identification of a new site was needed.

Despite several consultations held to review proposals of potential sites, all were rejected by community members: "the Tz'utujil indigenous people were born, had grown, and wished to die on its land" and refused to move far away. This feedback led to the creation of a Land Procurement Commission, which aimed to find land located in a close-by area, determined to be safe from hazards, and that had access to roads, services, urban facilities and the administrative center. The Commission's objectives were aligned with urban development trends and housing plans for the area.

Eventually the Chuk Muk site, a symbolic location where Mayan ancestors lived prior to conquest by Spain, was selected for the relocation. However, even once land was identified, acquisition was challenging because prior landowners did not have formal deeds or were reluctant to sell their land. As a result, the single destination site of Chuk Muk was in reality "a veritable jigsaw puzzle of lots", spanning four close-by clusters of "micro lots" and a community services center (see figures 15 and 16). While technically one destination site, it consists of multiple lots in close proximity, underscoring the complexity of designating spatial patterns of planned relocation cases.



[27] This narrative is drawn from: Correa, E. (2011). Preventive Resettlement of Populations at Risk of Disaster: Experiences from Latin America. The World Bank, 1-122.

**Figure 15.** Spatial patterns of planned relocation in Guatemala

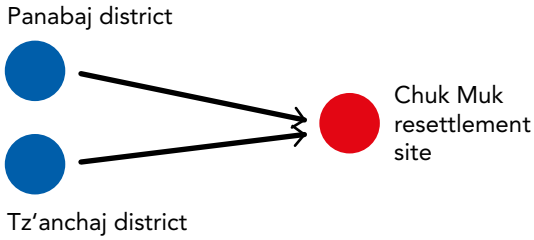
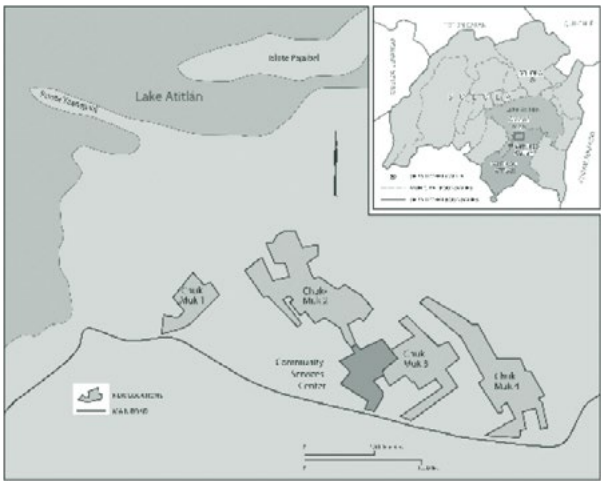



**Figure 16.** Map of Chuk Muk destination site (Source: Correa 2011)




While the relocation was initially intended for the 230 households displaced by Tropical Storm Stan, the criteria for eligibility was later expanded by the government to include those living in "at risk areas" in Panabaj and Tz'anchaj districts. The final relocation site was constructed to accommodate a total of 915 households. This is an example of a case where both preventive risk reduction and responsive disaster recovery objectives are explicitly acknowledged and integrated in the same planned relocation process.

The "National Reconstruction with Transformation" plan adopted a model of reconstruction that emphasized engagement of affected community members, incorporating cultural and gender perspectives, and rehabilitation of the social fabric of disaster affected communities, among other priorities. Aligned with this national plan, participation of affected community members and efforts to rebuild trust in the government were central to the planned relocation process. This involved facilitation of access to public information without restriction, public events held to enhance accountability and transparency, and mechanisms for auditing to ensure complaints were heard and addressed.[28]

The new destination site had a number of notable characteristics and came to be called "the first Tz'utujil city of the 21st century". The participatory design process aimed to integrate indigenous traditions and culture alongside urban development and Western technology. This resulted in spatial planning that allowed extended family networks to share common areas, a modular and expandable housing concept, income generation activities, risk management planning, and construction of a regional museum to strengthen cultural identity and attract tourists.

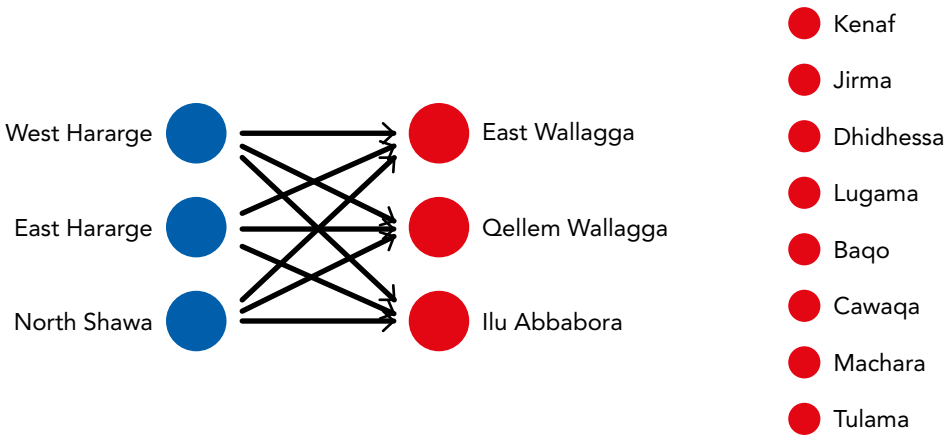
## OROMIA REGION, ETHIOPIA

In Ethiopia's western Oromia region, rural communities have been relocated in the context of environmental factors, which have intertwined with socio-political reasons.[29] Since 2003, the government has resettled hundreds of thousands of Oromo smallholders – people who depend on land for their livelihoods – "to sites which varied considerably in terms of land availability, soil quality, access to water and proximity to host populations". This has included people from West Hararge and East Hararge (eastern Oromia) and North Shawa

[28] A diverse range of lessons learned during the relocation process are documented. This includes the importance of: 1) adequate financial resources for timely completion of a relocation plan, and retraining trust of affected families in government institutions; 2) creating inter-agency mechanisms to help existing ministries cooperate rather than adding new institutions to support relocation; 3) including social and cultural considerations in the relocation plans; 4) community participation in the housing design stage; and 5) transparency and accountability mechanisms throughout the process.

[29] This narrative is drawn from: Nygren, A. & Wayessa, G. (2018). At the intersections of multiple marginalisations: displacements and environmental justice in Mexico and Ethiopia. *Environmental Sociology,* 4(1), 148-161.

**Figure 17.** Spatial pattern of planned relocation in Ethiopia




(central Oromia) to East Wallagga, Qellem Wallagga and Ilu Abbabora (western Oromia), as shown in figure 17. For instance, in a study that carried out interviews and surveys among relocated people and hosts in eight settlement sites – namely, Kenaf, Jirma, Dhidhessa, Lugama, Baqo, Cawaqa, Machara and Tulama – several insights can be identified regarding the complexity of underlying motivations to initiate relocation and the impacts on relocated and host populations.

Relocation to the eight settlement sites was initiated and driven by government actors. Rainfall shortage, drought, land shortages and environmental degradation are noted as important reasons prompting the decision to undertake relocation. The literature also highlights underlying socio-political motivations, including government plans to establish conservation enclosures, drawing links to environmental justice concerns. In Oromia, regional guidelines may also present such movements as a "development-orientated, state-sponsored endeavor producing food security and livelihood improvement".

The relocation was a federally planned scheme, which was to be implemented by regional states largely through state-based food security coordination offices. In this context of multiple-level government actors jointly responsible for planned relocation, the literature highlights grievances regarding discrepancies between high-level directives and promised benefits, and implemented realities, including in relation to the quality of land, livelihoods, services and infrastructure. Notably, such grievances have stemmed both from relocated persons *and* from host populations. For instance, relocated persons were "promised improved living conditions, yet resettled in low-value fringes, far from their previous homes and sources of subsistence", while host communities may have lost farming and grazing land and had to contend with compromised access to services. These dynamics may have also influenced competition and tension over land and other resources.

Grievances also relate to limited or lack of genuine consultation and participation in the decision-making processes. Indeed, the literature presents the movements as largely coercive, highlighting for example differences in the information presented through go-see visits and subsequent realities following physical relocation to the settlement sites. Visitors did not necessarily have formal contact with host communities. Coercive elements are also noted with respect to persuading host populations to accept the relocation schemes and host communities have identified unequal treatment vis-a-vis relocated populations. The literature critiques the extent of government engagement and service and infrastructure provision in the relocation sites. In this context, some relocated persons have returned to their former settlements either immediately or in the months following the physical relocation, while others have moved to different settlement sites considered more "promising".

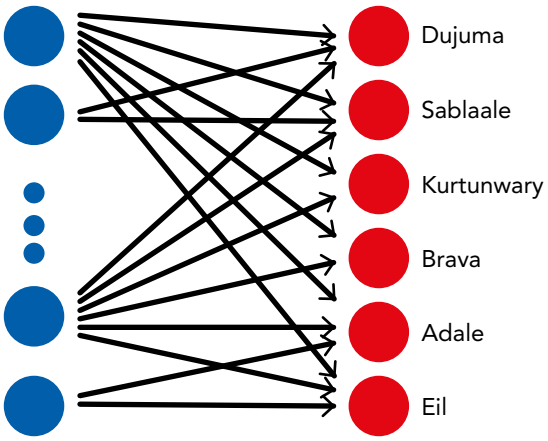
## SOMALIA

From April 1973 to June 1975, the Dabadheer, or "long-tailed drought" devastated areas of North Africa, including Somalia.[30] Almost half of the country's sheep and goats, and a third of its cattle, were estimated to have died. Thousands of nomadic pastoralists came to towns in search of food and relief aid. Amidst the context of this severe drought, as well as other socio-economic and political considerations, the Government of Somalia decided to permanently relocate nomadic pastoralists to specific sites. In addition to the aim of reducing impacts of the drought, this relocation decision aligned with the government's development objectives to achieve self-sufficiency in food production, and the humanitarian aim to ensure that social services (education, healthcare) are provided to the nomadic population.

The sites were developed by two independent agencies: the Settlement Development Agency and the Coastal Development project. Over 100,000 people were relocated to sites where livelihoods focused on agriculture – Dujuma, Sablaale, and Kurtunwary – while 14,000 people were relocated to sites with fishing focus – Brava, Adale and Eil (see figure 18). The agricultural sites were designed to be larger, with between 17,000 to 25,000 people per site. In each site, irrigated and rain-fed fields surrounded clusters of traditional homes in family compounds, and a large central village of administrative and service-oriented buildings. In contrast, the fishing-focused relocation sites were smaller, with only 3,000 to 5,000 people per site. These sites were located by old coastal towns, which enabled access to existing education and healthcare services.

This is a type D case of planned relocation, in that there were multiple origin and multiple destination sites. As in figure 19, formerly nomadic people from across many districts were relocated to all six farming and fishing sites. The literature does not give any indication as to whether nomadic groups remained together in destination sites. However, in this case the notion of a location of origin is made complicated by the nomadic nature of pastoral communities who formerly roamed across district boundaries for their livelihoods.

**Figure 18.** Spatial pattern of planned relocation in Somalia

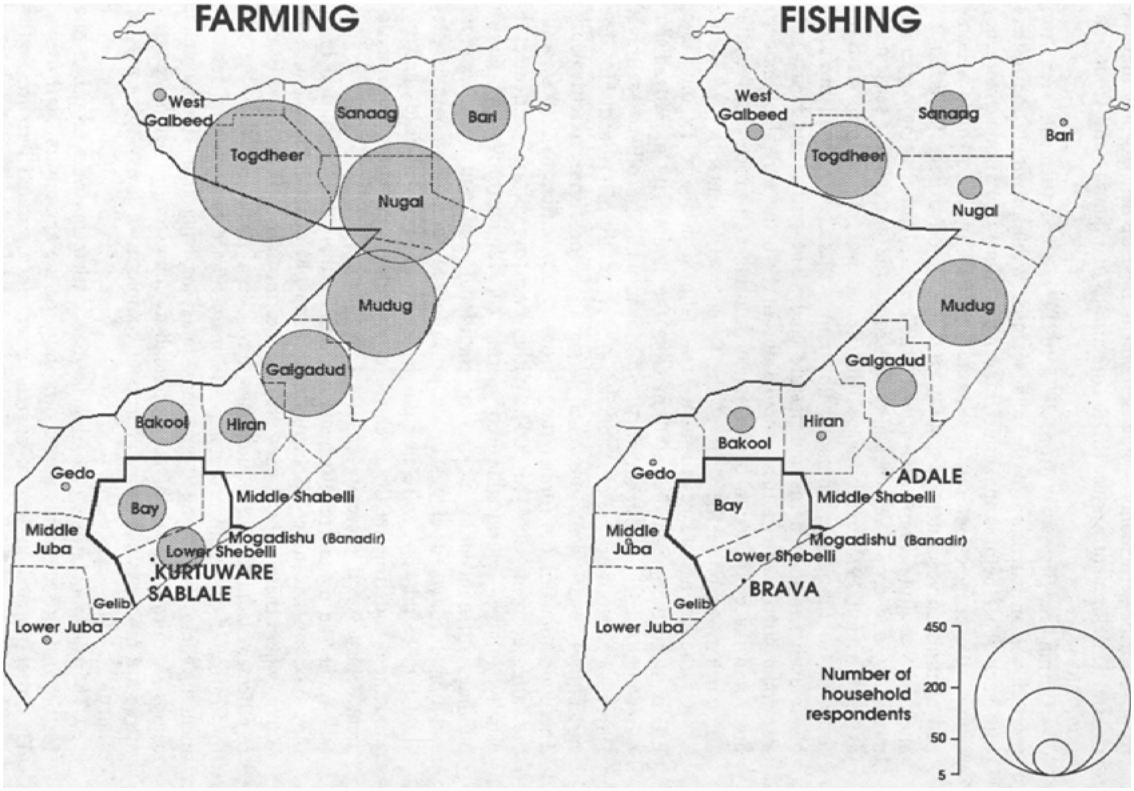



Host communities existed in both the agricultural and fishing destination sites. In the agricultural contexts, the rural population that previously lived in the areas were integrated into the relocation schemes and had access to similar services and livelihood opportunities as the formerly nomadic relocated persons. In contrast, people living around the more urban fishing sites were not formally integrated with the relocated persons but maintained close connections including through intermarriage.

In the destination sites, relocated persons were trained and expected to engage in either agricultural or fishing livelihoods. However, from 1975-1977, the infrastructure needed to enable crop production and fish processing was not yet in place. During these early adjustment years, many relocated persons (up to 40 per cent of the total number across all sites) chose to leave the sites and return to nomadic livelihoods. For those who remained in relocation sites, the adjustment from nomadic pastoral to sedentary lifestyles presented considerable challenges, according to consulted literature.

30 This narrative is drawn from: Tsui, A. O. *et al.* (1991). The settlement of Somali nomads. *Genus,* 47(1/2), 131-152.

**Figure 19.** Map of origin sites for a relocation in Somalia. Source : Tsui et al 1991



# 5

# Observations for Policy and Practice on Complex Spatial Patterns of Planned Relocation

This case study compilation provides an entry point to the complexity associated with different spatial patterns of planned relocation. It provides a narrative and visual discussion of cases, many of which are considered to represent the type D spatial pattern (and to a lesser extent the type B and C patterns). In *Leaving Place, Restoring Home*, a series of possible future research themes related to spatial patterns was identified. Drawing on those themes and the brief synopses of the cases discussed in this report, this section highlights observations and insights related to multiple origin or multiple destination site planned relocation cases. The focus is on characteristics of cases and processes of implementation, rather than on outcomes. These observations and insights are not intended to be representative; they aim to highlight the diversity and complexity in characteristics and processes of implementation and to illuminate themes and issues relevant for policy, practice and further research.

1. **The expertise of local actors affected by or engaged in implementing spatially complex planned relocation processes is essential to better understand unique features, opportunities and challenges.** This review of literature on type B, C, and D cases reinforces the complexity of planned relocation cases implemented in practice. It highlights the challenges of identifying, *with specificity and across a comparable geographic unit of analysis*, the locations from which people were relocated and their ultimate settlement sites. For instance, in the case in Indonesia, it has been challenging to determine whether people from origin villages relocated to similarly constituted villages at the destination settlement district, or were dispersed across a single geographically expansive settlement area within the district. Consequently, this analysis reinforces the importance of research that extends beyond secondary desk review to capture primary insights from actors affected by or deeply engaged in implementing planned relocation processes with many origin or destination sites. Such knowledge and experience may offer opportunities to further refine the typology of planned relocation cases identified in *Leaving Place, Restoring Home,* and more importantly, to promote processes and practices that safeguard human rights and dignity.

❷ **Spatially complex planned relocation processes have been implemented following large-scale displacement associated with disasters.** The cases from the Philippines and Mozambique show that when disasters have resulted in large-scale displacement, the relocation processes initiated involved multiple origins and multiple destination sites. For example, after Typhoon Haiyan in 2013, the Government of the Philippines relocated displaced persons from no-dwelling zones across coastal Barangays to many sites in the north of Tacloban City. Similarly, after the 2007 floods displaced over 100,000 people, the Government of Mozambique relocated households from flood plain villages to 52 permanent "Resettlement Centers" at higher elevation. In these two cases, prior to relocation, displacement became protracted, and return to sites of origin was prohibited by government policy or not possible due to destruction. Further research on planned relocation cases implemented post-disaster displacement may provide insights on any linkage between large-scale displacement, potential for return, and associated spatial patterns. Further analysis may also consider the relationship between protracted displacement and the pursuit of relocation as a durable solution.

❸ **Disasters that impact large geographic areas have prompted planned relocation cases with complex spatial patterns.** Many of the cases analyzed involve disasters that impacted large geographies. For example, the floods in Mozambique, typhoon Haiyan in the Philippines, and drought in Somalia all impacted large geographic regions and large numbers of households. The living with floods policy in the Vietnamese Mekong Delta addresses pervasive disaster risks that affect millions of people living across vast areas of the country. Future research may investigate whether there is a relationship between the geographic scope of a disaster, associated exposure, and the spatial pattern of the relocation. For instance, it may be beneficial to understand if disasters that affect large geographic areas with many exposed households correlate with spatial patterns involving multiple origins and multiple destinations.

❹ **Government actors have initiated almost all of the spatially complex planned relocation cases.** Government actors have initiated most of the planned relocation cases discussed in this compilation. The case from Papua New Guinea presents a unique exception where a government-led process and a community-led process implemented through a community-established NGO appear to be proceeding in parallel. Further research may provide insights on whether spatially complex planned relocation cases are more often initiated by government actors, and with what outcomes.

❺ **Multiple government authorities have been engaged and invested in spatially complex relocation processes and multi-sectoral bodies have been established to oversee implementation.** The reviewed case studies show that both national and subnational authorities are engaged in complex planned relocation processes. In some cases, such as in Viet Nam, central, provincial and district authorities have differentiated roles with commune authorities, as the actors who are directly engaged with affected and relocated communities, perhaps ascribed the least responsibility. In the cases relating to Viet Nam and Indonesia, specific implementation or oversight bodies were established to manage the relocation process. In Indonesia, funding was demarcated between government actors based on the type of assistance, with the local government funding the purchase of new land and the construction of public facilities at the settlement location, and national authorities providing funding for housing construction. In Ethiopia, relocation was federally planned, while the process was implemented by regional states through state-based coordination offices. In Guatemala, multi-stakeholder reconstruction commissions were developed at the department level, which oversaw implementation in the Chuk Muk site. Further research may shine a spotlight on the roles and governance structures of oversight and coordination mechanisms in spatially complex relocation cases. Further research may also highlight if such cases generally involve multi-level government

actors, and if multi-level government oversight, coordination and implementation create discrepancies between commitments and reality.

6. **Multiple motivations -- environmental, economic and socio-political -- have underpinned decisions to initiate spatially complex relocation processes.** In many of the cases discussed in this paper, the literature has presented multiple motivations on the part of government actors initiating relocation processes. For instance, in Viet Nam, relocation is implemented to address disaster risk reduction goals, alongside objectives related to rural development and poverty reduction. Similar motivations are also noted in the case in Indonesia, although other objectives, including a desire to mitigate the dense, "illegal" buildup of settlements in hazard-prone areas along riverbanks also operated in concert. In Ethiopia and Somalia, the literature highlights environmental as well as socio-political motivations. With respect to the case in Ethiopia, environmental justice concerns were raised, while the Somalia case involved efforts to make formerly nomadic pastoral populations become sedentary. Further research on planned relocation cases with multiple origins and destinations may provide insights on any connection between such spatial patterns and multiple motivations of initiating actors.

7. **Overarching or project-specific frameworks have been adopted to underpin spatially complex planned relocation processes.** A notable number of the cases reviewed detailed legal or policy frameworks relevant to planned relocation. In Viet Nam, an extensive architecture of legal, policy and other regulatory frameworks underpin planned relocation cases carried out within the country. They set out roles and responsibilities, specifications of settlement sites and the entitlements of beneficiaries. In Viet Nam and Indonesia project-specific frameworks were also adopted to implement planned relocation within the context of an overarching policy framework. In Papua New Guinea, a specific office has been established and is responsible for the government-led relocation process. In Ethiopia, literature implies the relevance of regional-level guidelines. In Guatemala, the "National Reconstruction with Transformation" plan underpinned the planned relocation initiative and provided a model for a participatory and inclusive approach. In the Philippines, a "No Dwelling Zone" (NDZ) policy prohibiting living near the coastline led to the relocation projects. Further research on complex planned relocation cases may provide insights on whether such processes are often underpinned by normative frameworks and what provisions such instruments entail.

8. **Participation processes take on different forms in spatially complex cases.** Some of the cases analyzed have participation mechanisms. For instance, Indonesia established coordinating structures and working groups for different communities to participate and engage throughout the decision making and implementation processes. In the Philippines, the Pope St Francis Village relocation had elaborate participation mechanisms, which took into consideration the needs of beneficiaries from across multiple sites of origin. In Guatemala, the reconstruction commission ensured that relocating persons were actively engaged at multiple stages, including to review proposals for potential sites, to design the parameters for a "model house" in the relocation site, and to include measures that preserve cultural identity. However, the Guatemala case involved only one destination site. In other cases where a government actor is coordinating relocation to multiple destination sites, such as Somalia and Mozambique, there was limited to no evidence of participation mechanisms. In the cases from Viet Nam, participation may relate to whether communities choose or apply to relocate, with limited opportunities to genuinely engage and influence planning, design and implementation. Relatives, friends and other social networks who have relocated to the destination site previously may also be a source of information for those grappling with the decision to relocate. In Ethiopia, more coercive elements were noted in the literature, including limited opportunities

for affected and host populations to raise concerns. Additional research may be useful to uncover the mechanisms used to promote participation in complex spatial patterns and how they affect outcomes.

9. **Spatially complex planned relocation cases have varying distances between origin and destination sites:** In the Carteret Islands relocation case in Papua New Guinea, the distance between the islands of origin and the settlement sites on Bougainville island is around 80-90 kilometers. In Viet Nam, the Hao Binh relocation sites are 90-150 kilometers away from communes of origin, while in the Mekong Delta, by contrast, many relocation sites are only 2-3 kilometers away and within the same commune. In the Philippines, there is also a range of distances: while Ridgeview and Global Media Arts Kapuso Foundation Housing sites are 24 and 21 kilometers away from the Barangay where inhabitants lived before, the Pope St Francis site was less than 5 kilometers away. It may be important to understand if, on average, more complex spatial patterns of relocation involve further distances between origin and destination sites than relocation cases with a single origin and single destination site, and with what implications of access to origin sites for livelihood and cultural importance.[31]

10. **Planned relocation cases with complex spatial patterns may face land availability challenges related to destination sites, including in urban areas.** Many cases analyzed in this compilation involve relocation to areas that are urban or peri-urban. For instance, Tacloban City, where many planned relocation cases took place after Typhoon Haiyan, has a daytime population of almost a quarter of a million people and limited space for relocation site construction in the city center; this is one reason why sites to the north were selected by the National Housing Authority, although Pope St Francis Village was more centrally located. In Guatemala, the limited land availability in a more urban area led to a patchwork of "micro lots" that became the Chuk Muk site. In Viet Nam, the geographic scope of flooding risks has perhaps also influenced the policy framework that embodies objectives to adapt in resettlement clusters within communes of origin. By contrast, in Papua New Guinea, customary land tenure and long-established customary rights of usage have presented complications for accessing suitable land for settlements. Further research may help to determine whether multiple origin and multiple destination spatial patterns are more common in urban areas, and what land-related challenges arise regarding destination sites.



31 In an analysis of 34 cases with single origin and single destination sites, most cases were under 2 kilometers apart.

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# Conclusion

This compilation provides preliminary insights on what planned relocation cases involving multiple origin and destination sites look like. The analysis highlighted diverse issues that emerge from a narrative and visual summary of nine, non-representative cases that follow more complex spatial patterns of planned relocation. These include that many reviewed cases are initiated by government actors for reasons that may relate to environmental as well as socio-political factors. Some reviewed cases were initiated following large-scale displacement or in the context of disasters that span vast geographic areas. Multi-level government actors have been involved in implementing the spatially complex planned relocation cases analyzed, within the context of more detailed normative and policy frameworks. There is also evidence of a range of approaches to community engagement, with some cases involving substantive and others more limited opportunities for affected communities to genuinely participate in planning, design and implementation.

These insights and observations also present important operational questions that require further evaluative research and analysis. For instance, how does government initiation of spatially complex cases in the context of multiple motivations affect community engagement, livelihoods and outcomes for affected populations? How does multilevel government engagement and the development of detailed legal and policy frameworks facilitate or create obstacles for the effective planning and implementation of complex relocation cases? Further, in what ways does land availability and access influence the complex spatial patterns of planned relocation?

Notably, the complexity in the cases and identified questions highlight the critical need for the expertise and knowledge of local actors affected by, or engaged in, implementing spatially complex planned relocation processes. Desk research needs to be complemented by further in-depth evaluative analysis to understand the many unique features, opportunities and challenges particular to planned relocation cases with multiple origins and destinations. Nonetheless, this report provides a preliminary foundation upon which to develop further insights on the spatial complexity of planned relocation practice. More in-depth analysis of these and other cases is essential to inform government and community decisions about whether, under what conditions, and with what measures in place, to undertake relocation with multiple origin and or destination sites. Ultimately, all planned relocation processes and practices must safeguard human rights and human dignity.

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Annex

# ANNEX 1.

## PRIMARY ARTICLES FOR EACH CASE STUDY

| Location | Source |
|---|---|
| **PHILIPPINES**<br>Tacloban City | Ong, J. M. *et al.* (2016). Challenges in Build-Back-Better Housing Reconstruction Programs for Coastal Disaster Management: Case of Tacloban City, Philippines. *Coastal Engineering Journal,* 58(1), 1640010-1-1640010-32.<br><br>Maly, E. (2018). Building back better with people centered housing recovery. *International Journal of Disaster Risk Reduction, 29*, 84-93. |
| **NORTHERN VIET NAM**<br>Hoa Binh province | Ahn, D. *et al.* (2017). Planned Relocation in the Context of Environmental Change in Hoa Binh Province, Northern Vietnam: An analysis of household decision-making and relocation outcomes. International Organization for Migration and Institute of Sociology, Ha Noi. |
| **VIETNAM**<br>Mekong Delta | Danh, V. T. & Mushtaq, S. (2011). Living with Floods: An Evaluation of the Resettlement Program of the Mekong Delta of Vietnam. In: M. Stewart & P. Coclanis (eds.). *Environmental Change and Agricultural Sustainability in the Mekong Delta.* Advances in Global Change Research, vol 45. Springer, Dordrecht, 181-204. |
| **MOZAMBIQUE**<br>Zambezi River | Stal, M. (2011). Flooding and Relocation: The Zambezi River Valley in Mozambique. *International Migration,* 49, e125–145.<br><br>Artur, L. & Hilhorst, D. (2012). Everyday realities of climate change adaptation in Mozambique. *Global Environmental Change,* 22(2), 529–536.<br><br>Arnall, A. (2014). A climate of control: flooding, displacement and planned resettlement in the Lower Zambezi River valley, Mozambique. *The Geographical Journal,* 180(2), 141–150. |
| **INDONESIA**<br>Surakarta City | Haryanto, A. T. *et al.* (2020). Resettlement Program as a Mitigation Strategy for Flood in Surakarta. *TEST Engineering & Management,* 83 (ISSN: 0193-4120), 6430-6441.<br><br>Obermayr, C. & Sandholz, S. (2017). Participatory Resettlements in Surakarta, Indonesia – Changing Livelihoods for the Better or the Worse?. *Trialog,* 126-127 (3-4/2016), 43-50.<br><br>Taylor, J. (2015) A tale of two cities: comparing alternative approaches to reducing the vulnerability of riverbank communities in two Indonesian cities. *Environment and Urbanization,* 27(2), 621-623. |
| **PAPUA NEW GUINEA**<br>Carterets Atoll, Autonomous Region of Bougainville | Boege, V. & Rakova, U. (2019). Climate Change-Induced Relocation: Problems and Achievements – the Carterets Case. *Policy Brief No. 33.* Toda Peace Institute.<br><br>Connell, J. & Lutkehaus, N. (2017). Environmental Refugees? A tale of two resettlement projects in coastal Papua New Guinea. *Australian Geographer.* 48(1), 79-95.<br><br>Edwards, J. B. (2013). The Logistics of Climate-Induced Resettlement: Lessons from the Carteret Islands, Papua New Guinea. *Refugee Survey Quarterly,* 32(3), 52-78. |
| **GUATEMALA**<br>Panabaj and Tz'anchaj districts | Correa, E. (2011). Preventive Resettlement of Populations at Risk of Disaster: Experiences from Latin America. The World Bank, 1-122. |
| **ETHIOPIA**<br>Oromia region | Nygren, A. & Wayessa, G. (2018). At the intersections of multiple marginalisations: displacements and environmental justice in Mexico and Ethiopia. *Environmental Sociology,* 4(1), 148-161. |
| **SOMALIA** | Tsui, A. O. *et al.* (1991). The settlement of Somali nomads. *Genus,* 47(1/2), 131-152. |

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