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Human rights and pro-active displacement: determining the appropriate balance between the duty to protect and the right to remain

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Abstract

The pro-active displacement by public authorities of populations from areas perceived to be exposed to high risk of disaster presents complex human rights challenges. The use of compulsory evacuations and relocations as policy responses to disaster risk is underpinned by the duty to protect the right to life. However, pro-active displacement in the interest of saving lives can be problematic as such measures can lead to the limitation of other human rights, resulting in a complex assessment of whether compulsory evacuation or permanent relocation is proportional in any given circumstance. Such an analysis demands critical attention to the perception on the part of the public authorities of the disaster risk in question and problematises claims to objectivity of official risk assessments, and whether less intrusive measures may be available.

Keywords: human rights law; right-based approach; natural disasters; risk assessment; displacement; relocation

1. Introduction

The pro-active displacement by public authorities of populations and the prohibition of settlement in previously settled areas can be conducted for a range of reasons. In peacetime, such reasons include the claimed need for urban redevelopment, to build large-scale infrastructure and development projects, to construct facilities for mega-events such as the Olympic Games, or to redistribute landholdings more equitably. Another set of reasons is directly related to concern for the persons temporarily evacuated or permanently evicted themselves, such as the reduction of their exposure to rising sea levels, natural hazards such as flooding or tsunamis, or the protection of their public health or hygiene (Carver 2011: 244; Ocheje 2007).

It is this latter kind of pro-active displacement with which this article is concerned, in particular the justification in international human rights law for imposing such measures. The simple rationale provided by public authorities imposing pro-active displacement is that the displacement of persons from an area of high disaster risk to an area of relatively low disaster risk safeguards lives.

Nonetheless, such displacement is usually considered only as a last resort by public authorities both during and in the aftermath of a disaster (Davis 1978; Oliver-Smith 1991; Quarantelli 1984). . Pro-active displacement can take various forms, including temporary evacuation in response to an imminent disaster or as a longer term permanent relocation measure. As a response to disaster risk, pro-active displacement is a complex option as it involves more than merely relocating persons at a location deemed to be safer than the location at which they were previously. Whether temporary or permanent, pro-active displacement often encounters resistance from those affected. Evacuation orders are often ignored and permanent relocations require by definition that homes, livelihoods, and social and political ties be newly established in the resettled area.

Thus, careful attention ought to be paid to the necessity of compulsory evacuation and relocation measures and the manner in which they are undertaken. There is an understandable reluctance to introduce human rights concepts into disaster management and practically achieving a coherent human rights-based approach to temporary evacuations, prohibitions of return and permanent relocation in the context of natural disaster is recognised as challenging.¹ A dilemma arises between the duty on public authorities to protect the right to life of those exposed to risk on the one hand and, on the other hand, the duty to respect a range of other human rights on the other, including the rights to liberty of movement and adequate housing. This dilemma is present for both temporary evacuation as well as permanent relocation. The issue of the proportionality of pro-active displacement measures become most acute where persons concerned refuse to be temporarily evacuated or to be permanently relocated.

A number of factors of relevance to international human rights law are critical to the success of such measures. Successful temporary evacuation and permanent relocation measures require the trust of affected persons in official disaster risk assessments as well as access to information concerning the risk and the measure to be introduced. Temporary evacuations must be sensitive to the varied capacity to evacuate within the affected population. Permanent relocations demand consideration of the location of the relocation site, its layout, the design of the home to be provided, if any, and the extent of participation in the resettlement process (Gaillard 2008: 33; Usamah & Haynes 2012). An understanding of the cultural factors influencing the decision to evacuate and/or relocate is also considered critical to the success of pro-active displacement measures as is an understanding of the potential for the redistribution of costs and benefits among relocated persons (Arnall 2014). During the recovery efforts that followed the 2004 earthquake and tsunami in Aceh, Indonesia, a lack of consultation, information and notice prior to eviction was widespread (ActionAid 2006; Klein 2007; Barber 2008). It has also been asserted that relocation has the potential to leave those concerned suffering from poorer mental health outcomes than those who remain in disaster-prone areas (Uscher-Pines 2009; Najaran *et al.* 2001). In response to the human rights issues raised by compulsory

evacuations and permanent ‘no-build’ zones, national human rights institutions are increasingly monitoring their implementation.²

This article firstly outlines the duty to protect persons subject to disaster risk that is placed on public authorities under international human rights law. It then outlines the key elements of the right to remain of those residents of areas deemed to be subject to disaster risk. Provisions of relevant guidance documents such as the IASC’s Operational Guidelines on the Protection of Persons in the Event of a Natural Disaster and the Guiding Principles on Internal Displacement are also drawn upon. After a discussion of the juridical tool of proportionality and the implications of the elusive nature of risk assessment for determining whether a measure is proportional and thus lawful, the article’s central argument is then grounded in a case study from Yogyakarta, Indonesia.

2. The Duty to Protect *versus* the Right to Remain

Recent developments within the jurisprudence of international human rights law suggest that the right to life imposes a duty on public authorities to protect life from foreseeable natural disasters (Kent 2001; Fisher 2010). In terms of the substantive content of the right to life, the Human Rights Committee, the treaty body established to interpret the *International Covenant on Civil and Political Rights* (ICCPR), has determined in General Comment No. 6 that the right ought not to be interpreted narrowly and that the protection of this right requires that States adopt positive measures.³

Continuing its General Comment, the Human Rights Committee states that such positive measures might entail a duty to take all possible measures to eliminate malnutrition and epidemics.⁴ Applying this interpretation to natural and technological disasters, it would be reasonable to infer that the scope of the positive obligations imposed by the right to life include a duty to take all practicable measures to safeguard life from the impacts of such disasters.

Recent developments at the regional level provide further guidance concerning the right to life and the duty placed on public authorities in natural disaster settings. The European Court of Human Rights (ECtHR) has found on several occasions that the right to life contained in Article 2 of the *European Convention on Human Rights* imposes an obligation on States to take appropriate steps to safeguard the lives of those within their jurisdiction.⁵ In its 2004 *Öneryıldız v Turkey* judgement⁶ concerning a methane explosion in a public refuse dump that caused the destruction of slum dwellings and 39 deaths, the ECtHR stated that the positive obligation on states to protect the right to life involves the establishment of a legislative and administrative framework ‘designed to provide effective deterrence against threats to the right to life.’⁷ More recently, the ECtHR’s *Budayeva and others v Russia* judgment⁸ related to the death of eight people in a mudslide that struck a town in the Caucasus Mountains in Russia. The Court found that the competent public authorities had violated the right to life contained in Article 2 of the European Convention on Human Rights through their failure to both adequately implement land-planning and emergency relief policies and develop an early warning

system in the aftermath of a mudslide.⁹ The Court further noted that by failing to take the necessary preventive measures to avert what was deemed a foreseeable hazard, there had been a ‘causal link between the serious administrative flaws’ and the death of the victims of a subsequent mudslide.¹⁰ Most recently, the ECtHR found a violation of the right to life in the *Kolyadenko* case¹¹ on the basis that the authorities had failed to establish a clear legislative and administrative framework ‘to enable them to effectively assess the risks inherent in the operation’ of a State-owned reservoir.¹² The failure to establish an emergency warning system and to inform the local population of the potential risks arising from the reservoir was deemed to contribute to the violation.¹³

Taking General Comment No. 6 of the Human Rights Committee and the ECtHR case law in conjunction, it can be reasonably claimed that the extent of the obligation to undertake positive measures to safeguard life is related to the foreseeability of disaster on the part of State authorities. Thus, the necessity to undertake positive measures to safeguard populations from the threat of a natural or technological disaster would be related to the extent to which the State or its agents perceive there to be a risk of such a disaster. It is therefore not implausible to assert that States are under a positive obligation in international human rights law to implement disaster prevention and risk reduction measures (Connolly Carmalt & Dale 2012: 66-67).¹⁴ Although the jurisprudence does not explicitly include the implementation of compulsory evacuation or permanent relocation measures as an inevitable corollary of the positive obligation, they may be necessary under certain circumstances.

. In circumstances in which compulsory evacuation and permanent relocation measures are implemented against the will of the persons concerned a composite right to remain can be derived from several sources within international human rights law (Ocheje 2007: 199). For the purposes of this article, particular attention is given to the rights to liberty of movement and adequate housing.

The general rule under Article 13 of the Universal Declaration of Human Rights and Article 12 ICCPR is that States will guarantee liberty of movement and freedom to choose one’s residence within its territory. The *Inter-Agency Standing Committee’s Operational Guidelines on the Protection of Persons in Situations of Natural Disasters*, while not legally binding, indicate that the right should be understood as ‘including the right to freely decide whether to remain in or to leave an endangered zone.’¹⁵ The Human Rights Committee, the treaty body established to interpret the ICCPR, states that there is a prohibition on forced internal displacement.¹⁶ Section II of the *Guiding Principles on Internal Displacement*, which are based on relevant international legal provisions, provide detailed guidance concerning the protection of persons from displacement.

However, liberty of movement and freedom to choose one’s residence can be limited on the basis of the limitation clause contained in Article 12 (3) ICCPR.¹⁷ In natural and technological disaster settings liberty of movement is often curtailed by the exigencies of the disaster or as part of

preventative measures adopted by law enforcement agencies. Freedom of movement and of residence may, under exceptional circumstances, thereby be restricted through the adoption of forced evacuation orders (Sommaro 2012: 327). Any such limitation of the freedom of movement must be provided for by law, be necessary to protect national security, public order (*ordre public*), public health or morals or the rights and freedoms of others, and be consistent with the other rights recognised in the ICCPR, including the right to life.¹⁸ If these requirements are not fulfilled a violation of the rights contained in Article 12 (1) and (2) can be found. Any laws authorising the application of restrictions should include precise criteria and not confer discretion without limits on their implementation.¹⁹ Furthermore, any limitation must not merely serve one of the permissible purposes; restrictive measures must be necessary to protect them. Any limitation must also be proportional. The Human Rights Committee describes what this entails in stating that limitations:

*'must be appropriate to achieve their protective function; they must be the least intrusive instrument amongst those which might achieve the desired result; and they must be proportionate to the interest to be protected.'*²⁰

The right to return to one's original place of residence can be considered a component of the right to liberty of movement and freedom to choose one's residence. While it has generally been applicable in refugee situations involving cross-border displacement, recent developments indicate that this right may also be applicable to situations of internal displacement. Several Security Council Resolutions have been adopted that support this view (Espenilla 2010). The *IASC Operational Guidelines* also indicate that this right may apply on foot of internal displacement arising from natural disasters. Section D.2 provides guidance concerning the return of displaced persons to their previous homes or places of habitual residence. The guidelines contained within this section relate to the provision to displaced persons of easily accessible information concerning their 'return, local integration at the place of displacement or settlement in another part of the country.'²¹ All sites for ultimate settlement ought to be assessed as stable and safe by the competent authorities. An emphasis is placed on meaningful participation of all sectors of the community concerning settlement operations.

The *IASC Operational Guidelines* also address the protection of persons affected by natural disasters from the dangers of potential secondary hazards and other disaster risks. Guideline D.2.4 recognises the legitimacy of limitations to the right to return on the basis of dangers arising from secondary hazards and other disaster risks. It also provides that permanent prohibitions of return should only be implemented in circumstances where there is a high and persistent risk for life and security that cannot be mitigated by available adaptation and other protective measures. It reiterates the requirements for a justified restriction of liberty of movement and the freedom to choose one's residence contained in the limitation clause of Article 12 ICCPR.²²

In addition to issues concerning liberty of movement, pro-active displacement measures, in particular permanent relocation measures, often generate considerable challenges concerning property rights and the provision of adequate shelter. The right to adequate housing is among the most recognised of the economic, social and cultural rights (Gould 2009). Its relevance to disaster has received increased academic and policy attention in recent years (Carver 2011). The right provides further guidance concerning the right to remain. It is recognised by Article 25 (1) of the *Universal Declaration of Human Rights* and a range of international human rights treaties, including most notably in Article 11 (1) of the *International Covenant on Economic, Social and Cultural Rights* (ICESCR).²³

In interpreting Article 11 ICESCR the Committee on Economic, Social and Cultural Rights (CESCR) has identified a number of criteria for determining adequacy of housing, including accessibility, affordability, habitability, legal security of tenure, cultural adequacy, suitability of location, and access to essential services such as health and education.²⁴ CESCR recognised that the right is to be achieved progressively to the maximum of its available resources.²⁵ In terms of accessibility to adequate housing, the CESCR has identified ‘victims of natural disasters’ and ‘people living in disaster prone areas’ as among those disadvantaged groups that should be ensured priority consideration in the housing sphere.²⁶ Guideline C.2.1 of the IASC Operational Guidelines recognises that the adequacy criteria outlined above ought to be fulfilled in the provision of transitional shelter and housing to those displaced by natural disaster. The Guideline also proffers an additional criterion of adequacy relating to respect for safety standards aimed at reducing damage in cases of future disasters.

Forced evictions, potentially including coercive evacuation and/or permanent relocations of populations from disaster-prone areas, are a breach of the obligations to respect the right to legal security of tenure, defined by the CESCR in its fourth General Comment as a factor to be taken into account in assessing the adequacy of housing.²⁷ Forced evictions are considered gross violations of a range of human rights in addition to the right to adequate housing.²⁸ General Comment No. 7 of the Committee on Economic, Social and Cultural Rights relates specifically to forced evictions as they relate to the right to adequate housing. A forced eviction is defined by the Committee as:

*‘the permanent or temporary removal against their will of individuals, families, and/or communities from their homes and/or lands, which they occupy without the provision of, or access to, appropriate forms of legal or other protection.’*²⁹

Governments must refrain from conducting forced evictions and must ensure that the law is enforced against its agents or against third parties who carry out forced evictions (Barber 2008: 460). Further guidance concerning forced evictions and land tenure security in the context of natural disasters is provided by regional systems for the protection of human rights. Principle 6 of the *Guiding*

Principles on Internal Displacement prohibits arbitrary displacement in cases of disasters, unless evacuation is required for health and safety reasons.

Despite the general prohibition on forced evictions contained in international human rights law, it should be noted that the CESCR recognises that forced evictions may ‘in the most exceptional circumstances’ be justified. Thus, CESCR’s General Comment provides what Gould (2009: 175-176) describes as ‘procedural protection’ to which any forced eviction ought to be subject. Such procedural protection includes:

‘genuine consultation with those affected, adequate and reasonable notice for all affected persons prior to the eviction, information on the proposed eviction and on the alternative purpose for which the land or housing is to be used, presence of government officials or their representatives during the eviction, proper identification of persons to be evicted, consideration of weather conditions and the time of day, provision of legal remedies and, where possible, provision of legal aid.’³⁰

States parties are responsible for taking ‘all appropriate measures, to the maximum of its available resources,’ to ensure alternative housing or resettlement is available. Evictions should not result in individuals being rendered homeless or vulnerable to the violations of other human rights. Where those affected are unable to provide for themselves, the State party must take all appropriate measures, to the maximum of its available resources, to ensure that adequate alternative housing, resettlement or access to productive land, as the case may be, is available.³¹

A number of other normative frameworks also provide guidance concerning how evictions may be justified in certain circumstances, including in situations of disaster risk. Principle 7 (3) of the *Guiding Principles* enumerates additional procedural safeguards to which authorities would have to adhere in undertaking a justified eviction in situations other than during the emergency stages of disasters. These safeguards approximate to the procedural protection enunciated above by CESCR. In addition, the *Guiding Principles* highlight that a specific decision shall be taken by a State authority empowered by law to order such measures and that the authorities concerned shall endeavour to involve those affected, particularly women, in the planning and management of their relocation. The *Handbook for Applying the Guiding Principles on Internal Displacement* expands on the concrete requirements of meeting these standards. A form of procedural protection that reflects that enunciated by CESCR is provided by Guideline C.2.10 of the IASC Operational Guidelines. However, no further detail is provided by the accompanying field manual.

‘However, a field manual intended to aid in the implementation of the IASC Guidelines clarifies that return should only be prohibited if homes are in areas where there are ‘real dangers;’ that such restrictions should only last as long as the dangers exist; and should only be implemented if less intrusive measures are not available. Prohibition must be necessary only ‘in the individual case’ for

‘safet, health, disaster prevention, or the implementation of reconstruction and development schemes,’ and return should be facilitated as soon as possible.

The right to remain in areas deemed exposed to disaster risk can be derived from several sources of international human rights law. Greater understanding of how such a right is balanced with the duty to protect life is adequately balanced is thus critical. A discussion of proportionality and how disaster risk is determined is thus warranted.

3. Proportionality and Disaster Risk in International Human Rights Law

Proportionality is a general principle of law and concepts deploying the term proportionality play a range of roles in international and municipal law. Proportionality regulates the extent to which countermeasures that might otherwise be unlawful in international law may be deployed by a state in response to the use of force by another state. Under international humanitarian law, the proportionality principle dictates that the harm caused to civilians or civilian property by parties to an armed conflict must not be excessive in relation to the concrete and direct military advantage anticipated by an attack on a military objective. In international human rights law a proportionality concept is also deployed to determine whether measures that would otherwise be illegal such as forced evictions may be adopted in order to pursue a higher public interest goal such as the protection of life. The UN Human Rights Committee has recognised the centrality of the proportionality principle in relation to the International Covenant on Civil and Political Rights.³² The concept of proportionality that is deployed in international human rights law is now well embedded in a range of jurisdictions and has strongly influenced the jurisprudence of regional mechanisms of human rights protection (Khosla 2010). It is this latter concept of proportionality under international human rights law that is addressed by this paper.

The proportionality test is relevant to pro-active displacement measures, including evacuations and permanent relocations. Where those participating in permanent relocations do so consensually, there is no conflict between a state’s duty to protect and the right to remain and the issue of the proportionality of the measures designed to protect life *vis-à-vis* the right to remain does not arise. However, in circumstances in which persons oppose their compulsory evacuation or permanent relocation, the duty to protect placed on governments must be reconciled with the right to remain. In other words, any measure designed to protect public safety or to uphold the right to life must be proportional to the consequences to the enjoyment of the right to remain.

The question arises as to how to determine proportionality between the two competing rights. Such a determination is generally composed of three sub-tests. The first requires a fit between the goals of

the impugned measure and the means used to adopt it. The question to be answered here is whether the measure legitimately aims to protect the right concerned. The second calls for the application of the least harmful means in such a situation. The third sub-test requires that the damage caused to an individual by the means employed must be of appropriate proportion to the benefit stemming from it.

Key to each of the sub-tests is the determination of the extent of the disaster risk posed. Such a determination allows for a *prima facie* understanding of whether there is a disaster risk present that necessitates a measure that would limit the enjoyment of human rights. An accurate disaster risk assessment also allows for the determination of whether less intrusive measures could be adopted that would achieve the same result. Finally, a holistic risk assessment would also allow for an understanding of whether the means deployed, i.e. compulsory evacuation or permanent relocation, is of appropriate proportion to the mitigation of disaster risk that is thereby achieved.

Despite the centrality of risk assessment to the determination of the proportionality of evacuation and permanent relocation measures from the perspective of international human rights law, the assessment of risk is debated widely within the disaster management sphere as well as within scholarship across the natural and social sciences. Broadly speaking, debate centres around whether risks can be understood as real with an existence independent of those assessing such risks or whether risks are better understood as socially constructed (Clapton 2011; Taylor-Gooby & Zinn 2006: 407). The former approach is primarily to be found in the fields of science and engineering and some disaster risk assessments while the latter approach has now come to dominate the social sciences with scholarship emphasising the centrality of individual and social perceptions, mediated by social norms, in the determination of risk (Cutter *et al.* 2000; Douglas & Wildavsky 1982; Oliver-Smith 1996; Taylor-Gooby & Zinn 2006). Such indeterminacy of risk as a concept complicates and potentially undermines the concrete evaluation of proportionality. This is especially the case in circumstances such as those pertaining in disaster settings in which decisions to forcibly evacuate and/or relocate must often be made within short time-frames and under pressure. Competing conceptualisations of risk can lead to contestations around the relative weight to be given to the public interest in safety and the right of those to remain in disaster-prone areas. These assertions are tested in the following case study.

4. Case Study: Mount Merapi, Special Region of Yogyakarta, Indonesia

The case study was selected on the basis of the capacity to trace the underlying dynamics of the decision-making entailed in imposing a prohibition on the return of evacuees to a disaster-prone area and permanently relocating them in areas considered less disaster-prone. It illustrates the problematic nature of risk assessment and its repercussions for ensuring a rights-based approach to pro-active displacement in the Republic of Indonesia, a country highly exposed to a range of natural hazards.

Indonesia is party to all international treaties mentioned above with the exception of the European Convention on Human Rights. In 2007 it enacted a flagship national law concerning disaster management that explicitly guarantees the human rights of those affected or potentially affected by such hazards.³³ The focus of the case study is Mount Merapi, the most active volcano in Indonesia. Straddling the border of the provinces of Special Region of Yogyakarta and Central Java, it derives its name from the Sanskrit words *meru* (mountain) and *api* (fire). Merapi has claimed thousands of lives on its fertile and densely populated slopes over recent centuries. The last major eruption occurred in 2010, resulting in at least 360 fatalities.

Rich detail concerning the competing understandings of the disaster risk posed by Mount Merapi was required in order to understand the decision-making process of the public authorities and the viewpoint of those living in disaster-prone areas. Thus, qualitative methods were deployed over a period of five months in 2012 with research assistance from Universitas Gadjah Mada. Semi-structured interviews were undertaken with key government officials responsible for decision-making in disaster management at all levels of the administrative structure in Indonesia from national disaster management agencies to chiefs of villages and sub-villages in proximity to Merapi. Responses were triangulated on the basis of semi-structured interviews with officials of NGOs and international organisations and through analysis of quality media reports. Focus group discussions were also held with those living within the disaster-prone area with the aim of determining their understanding of the risk posed by Merapi and the extent to which the measures adopted by the authorities in the aftermath of the 2010 eruption adhered to international human rights law. Legal and policy analysis was also conducted.

During the eruptions various temporary exclusion zones were created, which reached a maximum of 20 kilometres radius from the crater. However, many residents within the exclusion zones remained in their homes and police had difficulty preventing entry. Subsequently, a local government regulation was enacted in early 2011, which identified three disaster zones around the Mount Merapi volcano on the basis of a hazard map produced by the Volcanic Technology Development and Research Centre (VTDR), the statutory volcanological agency, in the aftermath of the 2010 eruption.³⁴ The legal basis for this is provided by a provincial law enacted in Special Region of Yogyakarta, which allows the provincial authorities to determine disaster-prone areas and to restrict settlement and to 'revoke or reduce some or all ownership rights.'³⁵ The hazard map is displayed in Figure 1. The disaster zones cover a combined area of 1,371 hectares and together they are known as the Red Zone. The classification was as follows:

- Disaster Zone I (coloured yellow in Figure 1) is considered to be 'potentially affected by floods/lava flows and pyroclastic flows.'³⁶ The government plans to minimise population density in this area.

- Disaster Zone II (coloured pink in Figure 1) is considered to be ‘frequently affected by pyroclastic flows, lava flows, toxic gases and growing ejected rock fragments.’³⁷ Thus, the government considers this space should be used according to area and land use planning with low housing density; and finally
- Disaster Zone III (coloured red in Figure 1) is perceived as the area most vulnerable to disaster risk. The 2011 Regulation identifies this area as being ‘frequently affected by pyroclastic flows, lava flows, rock flows, rock falls, toxic gases and glowing ejected rock fragments within a two kilometre radius [sic].’³⁸ In terms of area and land use planning, this area is zoned solely for conservation and national park development.

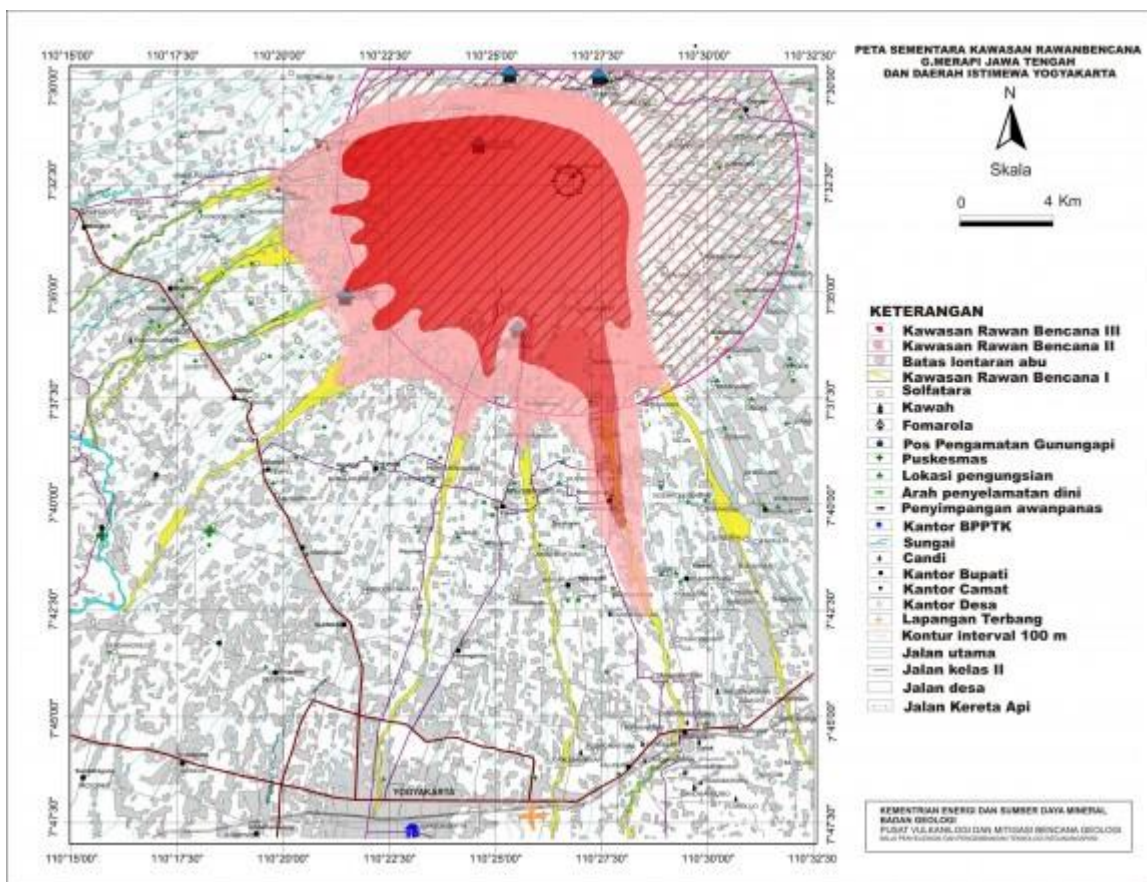


FIGURE 1: MAP OF DISASTER PRONE AREAS SURROUNDING MOUNT MERAPI (SOURCE: PUSAT VULKANOLOGI DAN MITIGASI BENCANA GEOLOGI)

On the basis of this schema, the regulation criminalised continued settlement in Disaster Zone III. Thus, the prime measure undertaken by government to ensure the protection of life was to prevent the return of residents within Disaster Zone III and permanently relocate those who had refused to relocate. This approach would involve the compulsory purchase of land located in Disaster Zone III and the resettlement of those that previously lived in the area to areas outside of the Red Zone. A declaration to this effect was made after some residents had returned to rebuild their homes and before

formalisation of the decision in the 2011 law. However, significant expense had already been incurred by those who had returned to the disaster zone in the immediate aftermath of the eruption as many invested the compensation they received for livestock lost during the eruptions in the building of new homes. Despite the above attempts to protect life through relocating Red Zone residents, 592 families refused to relocate from the disaster zones. They also refused, for the most part, to sell their lands.

The 2011 regulation confers powers on the local authorities to relocate communities from Disaster Zone III by force if necessary. The decision to relocate families as laid out in the law was based on a number of considerations. Government officials stated at interview that they weighed up different considerations in arriving at their decision to impose relocation. These considerations included: whether permanent evacuation was required; whether government could guarantee basic livelihoods in the newly settled areas; where the displaced would be moved; whether they desired to be relocated; the conditions in the relocated area including the provision of adequate housing, sanitation and clean water; the differentials in land ownership between the relocated persons and their neighbours, as well as, crucially, the risk of volcanic hazard.

As detailed in section 2 above, the procedural safeguards that must accompany any attempt to evict include the requirement that such eviction involves genuine consultation with those affected, advance notice, information, legal remedies, and legal aid. Initially, there was very little consultation of Red Zone residents concerning their settlement. The rationale for the absence of genuine input from residents may relate to the perceived urgency of the requirement to resettle people on the part of government. Similarly, no notice was given to the residents of the requirement to resettle. Information concerning the resettlement was provided only after the promulgation of the 2011 law if at all. Dissatisfaction was expressed by residents concerning the provision of adequate information to residents relocating to the relocation scheme.

The prohibition on settlement contained in the 2011 law is still in force at the time of writing. Nonetheless, the prohibition on settlement approach was progressively replaced by the concept of 'Living in Harmony with Disaster.' The Head of Indonesia's National Disaster Management Agency explained how the Living in Harmony approach was introduced in order to remove the criminalisation of the people refusing to relocate. According to him the new approach is an adaptation strategy designed to facilitate the residents in managing the risk of living within the Red Zone. Such a strategy involves an early warning system with the awareness that during the golden time (the time period between early warning of a hazard and the impact of the hazard) considerable evacuation efforts must be undertaken. The Agency Head also emphasised the importance of traditional early warning systems based on local wisdom in the implementation of the new approach.

Following the adoption of the new Living in Harmony approach the rehabilitation and reconstruction efforts placed an emphasis on boosting facilities and infrastructure in the region affected by the cold lava floods since the widespread deposit of loose ash in the aftermath of the 2010 eruptions. Concrete measures included the provision of an adequate early warning system, ensuring preparedness for evacuation and the construction of flow diversion channels in proximity to residential areas. Nonetheless, the supervision over the implementation of the land-use conservation area immediately adjacent to the crater remains the only non-structural prevention and mitigation measure adopted to address disaster risk within the Disaster Zones.

In terms of disaster preparedness, early warning systems established involved the installation of sirens at public buildings and the provision of hand transceivers to selected community members. However, according to a local government official an early warning system was requested by the three sub-villages as well as assistance with improving roads in the area, including ones used for evacuation. These requests were met with no response. Training for evacuation was another positive measure adopted by disaster management agencies at different administrative levels to ensure preparedness for Merapi eruptions and thereby safeguard the lives of those potentially subject thereto.

In addition to training, ensuring the adequate maintenance of infrastructure is critical to timely evacuation. The key infrastructure in this regard is the road network leading from the upper slopes of Merapi to the pre-identified refugee shelters located mainly in the city of Yogyakarta to the south. As the road infrastructure was completely destroyed by the 2010 eruption, a new evacuation route that was required was constructed and located in the Red Zone. Thus, despite the national and provincial policy not to provide public assistance to residents of the Red Zone, an evacuation route was nonetheless built. However, since the 2010 eruptions the road network within the Red Zone has experienced considerable use as a result of the transportation, by articulated lorry, of high-quality volcanic sand that had been deposited. This has resulted in a marked decline in road surface quality. Concerns have been raised in relation to the lack of attention to the maintenance and repair of evacuation routes as government officials are reluctant to incentivise settlement within the Red Zone.

Duty to protect v the right to remain: Proportionality in practice

The foregoing provides a framework to assess how the duty to protect and the right to remain may be reconciled throughout the disaster management cycle. This is achieved on the basis of an evaluation of the extent to which the actions of the authorities met the three sub-tests for determining the proportionality of measures that limit the right to remain. Attention is paid in particular to how the authorities understood how the risk posed by Mount Merapi was to be assessed.

The first sub-test for determining the proportionality of an impugned measure requires that there be a fit between the goals of the measure and the means used to adopt it. In other words, the measure

adopted must be objectively intended to achieve the stated goal. Applying this sub-test to our case study, the question must be posed as to whether the public authorities' temporary exclusion zones and initial prohibition on settlement and the imposition of permanent relocation objectively served the purpose of achieving the goal of protecting human life. Attention is thereby drawn to the perception on the part of the public authorities of the disaster risks posed to persons within the areas deemed to be at risk.

The high and imminent risk to public safety and to life posed by the eruption arguably justified the implementation of the temporary exclusion zones and the resultant limitation on freedom of movement despite the difficulty of the authorities to fully enforce them. In relation to the more uncertain risk concerning the next eruption and whether to introduce permanent relocation, the realist approach to risk characteristic of scientific and technical risk assessments such as those conducted by VDTRC determined categorically that those living within the 'Red Zone' were subject to considerable risk. Reliance solely on such an approach arguably led the authorities to impose permanent relocation without prior consultation with those affected. Relocation was justified on the basis of an appeal to scientific evidence provided by VTDRC in the form of hazard mapping. However, residents of many areas within the Red Zone had not incurred fatalities by the 2010 eruptions due to their elevated position and what some communities asserted was their capacity to read natural early warning signs. A more constructivist approach to understanding risk would have better accounted for such a competing view concerning the risks faced by communities. Only with the prospect of the refusal of those remaining in the Red Zone to relocate were alternative approaches considered by the public authorities.

The second sub-test for proportionality calls for the application of the least harmful means to achieve the public interest goal served by the measure in question. While the imposition of the initial temporary exclusion zone can be hardly considered intrusive given the fact that it was not fully enforced and lasted only for the duration of the eruptions, this sub-test nonetheless draws attention to the validity of the local wisdom of communities concerning whether less intrusive measures may be available than the subsequently introduced permanent relocation measure. The initial regulation passed in the aftermath of the eruption imposed forced relocation as a response to the perceived high level of disaster risk within the Red Zone. Within the regulation little regard to local wisdom concerning the cycle of Mount Merapi's activity is shown. Such local wisdom includes knowledge of the early warning signs of eruptions such as the cracking of bamboo stalks and the flight of birds and small mammals from the area. The technical approach offered by natural science cannot appreciate this local wisdom that could allow for enhanced evacuation measures. It must be recognised that the government did strive to limit the intrusiveness of the relocation scheme. It did so by ensuring that relocation sites for those willing to relocate were as close as possible to the original lands. However,

due to the high population density of the region, the identification of suitable sites was rendered difficult. Many of the sites selected were relocated just outside the Red Zone.

In adopting the Living in Harmony approach a more nuanced appraisal of risk assessment and mitigation can be identified. Risk is understood thereby to arise not only from the threat of eruption but also from the threat to livelihood that permanent relocation may entail. The capacities of locals to manage their own risk is also implicitly acknowledged, allowing for measures that are less intrusive than permanent relocation that nonetheless serve the same goal of protecting life.

The third sub-test for proportionality requires that the limitation of human rights standards caused by a measure employed must be of appropriate proportion to the benefit stemming from it. This test draws attention to whether, on balance, the benefit accruing from the temporary exclusion orders and the permanent relocation from an area perceived to be exposed to a high level of risk outweighed the cost in terms of the limitation of the enjoyment of the right to remain.

It can be clearly be argued that the limitation on the right to remain of the temporary exclusion order in proportion to the benefit. Less clear is whether the permanent relocation meets the requirements of this sub-test. In terms of compliance with the prohibition on forced eviction contained in both the right to liberty of movement and the freedom to choose one's residence and the right to adequate housing, the introduction of a law imposing forced resettlement can be directly traced to the revision of the hazard map in the aftermath of the 2010 eruptions to include new areas that had not been previously included. The perceived urgency of resettlement arising from the new risk assessment arguably led to the negation of the procedural safeguards required for the conduct of a forcible relocation in favour of the more pressing goal of mitigating risk. It is clear that the over-reliance on technical and scientific sources led to an assessment that the cost in terms of the right to liberty of movement and the right to adequate housing of this approach was not excessive in comparison to the benefit to be achieved.

As already mentioned, the passage of time allowed for greater consultation with the local communities concerning the nature of the risk faced within the Red Zone. It allowed for a more nuanced assessment of the appropriate balance between the competing goals of protecting life and respecting the right to remain. It is virtually self-evident that the positive measures taken by the authorities to ensure preparedness for disaster both within the Red Zone and at the relocation sites in pursuance of the Living in Harmony approach contribute to the fulfilment of the right to life and that these positive measures can be traced back to the perception on the part of government officials that such areas are subject to considerable risk of disaster. Any possible infringement of the right to life such as that arising from the unwillingness to ensure the maintenance of evacuation routes in the Red Zone can be related to the desire of the authorities to protect life by discouraging settlement. The same desire to protect life arguably animates the decision to withhold the provision of assistance by

government and third parties. While the latter measures may limit certain elements of the right to remain in international human rights law, such limitation may be deemed proportional.

The case study highlights how the balance between the duty to protect and the right to remain varies over time as the risk assessments of the authorities become more nuanced and holistic as the response phase ends, recovery begins and preparedness is once again emphasised. The case study also highlights how different levels of governance conceptualised risk and the need for evacuation and resettlement in diverse ways. This phenomenon is far from unique (Settles 2012). Further research ought to be undertaken concerning how different levels of governance address risk and the implications of this for the balance struck between the duty to protect and the right to remain in the formulation and implementation of compulsory evacuation and resettlement schemes..

7. Conclusion

Climate change, urbanisation and population growth are increasing exposure to disaster risk globally. Compulsory evacuation and permanent relocation, as one set of adaptation tools among many available to public authorities, is likely to be increasingly resorted to in fulfilment of public authorities' duty to protect under international human rights law. While only a single case study is provided in this article, it is clear that determining the circumstances in which permanent relocations are justified and conducting them in as humane a manner as possible demands an understanding of risk that recognises the limitations of reliance on technical assessments of risk alone. Such an understanding ought to also be reflexive and constructivist in nature and reflect the latest developments within social science approaches to risk in order to allow for more legitimate and, ultimately, more successful relocation programmes. While this approach to risk may complicate the proportionality calculation of public authorities as they consider whether or not and for how long to impose compulsory evacuation and/or permanent relocation from areas deemed to be chronically prone to disaster risk, such an approach on the part of public authorities is essential in order to ensure an appropriate balance between the competing interests of the protection of life and the safeguarding of the right to remain.

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Endnotes

¹ See Report of the Representative of the Secretary-General on the human rights of internally displaced persons, UN A64/214: 8-10

² See, for example, Commission on Human Rights of the Philippines, 'Human Rights Standards on Internally Displaced Persons (IDPs) in the Zamboanga Crisis', Human Rights Advisory CHR 2014-004; Commission on Human Rights of the Philippines, 'On the Housing, Land and Property Rights of Populations affected by tropical storm Sendong (Washi) – An Advisory from the Commission on Human Rights'; National Human Rights Commission of the Republic of Indonesia, 'Executive summary of the results of the ad hoc investigation team investigating human rights violations arising from the Lapindo mudflow'.

³ UN Human Rights Committee, General Comment 6, Article 6 (Sixteenth session, 1982), Compilation of General Comments and General Recommendations Adopted by Human Rights Treaty Bodies, U.N. Doc. HRI/GEN/1/Rev.1 at 6 (1994)

⁴ *ibid* Paragraph 5

⁵ Cf. *inter alia*, *L.C.B. v. the United Kingdom*, judgment of 9 June 1998, *Reports of Judgments and Decisions* 1998-III, p. 1403, § 36; *Calvelli and Ciglio v. Italy*, [GC], no. 32967/96, § 48, ECHR 2002-I; *Eriksson v. Italy* (dec.), no. 37900, 26 October 1999, unreported; and *Leray and Others v. France* (dec.), no. 4461/98, 16 January 2001, unreported

⁶ ECtHR, *Öneryildiz v. Turkey*, no. 48939/99 November 2004

⁷ *ibid* Paragraph 89

⁸ ECtHR, *Budayeva et al. v Russian Federation*, applications 15339/02, 21166/02, 20058/02, 11673/02 and 15343/02, Judgment of 20 March 2008

⁹ *ibid* Paragraph 155

¹⁰ *ibid* Paragraph 158

¹¹ ECtHR, *Kolyadenko and others v Russia*, applications 17423/05 and others, 28 February 2012

¹² *ibid* Paragraph 185

¹³ *ibid*

¹⁴ Interestingly, Article 11 of the Convention on the Rights of the Disabled obliges states parties to enact positive measures of protection and safety for people with disabilities in situations of risk. A duty to reduce the risk of disasters generally is also contained in Draft article 16 of the Draft Articles on the Protection of Persons in the Event of Disasters.

¹⁵ Guideline D.2.1, Operational Guidelines

¹⁶ Paragraph 7, UN Human Rights Committee (HRC), *CCPR General Comment No. 27: Article 12 (Freedom of Movement)*, 2 November 1999, CCPR/C/21/Rev.1/Add.9, available at: <http://www.refworld.org/docid/45139c394.html> [accessed 11 May 2014]

¹⁷ It is also possible for states parties to derogate from Article 12 ICCPR. This possibility has been availed of by a number of States parties to the ICCPR in whose territory a natural or technological disaster has occurred. However, the focus of this article is exclusively on limitations of human rights.

¹⁸ UN Human Rights Committee (HRC), *CCPR General Comment No. 27: Article 12 (Freedom of Movement)*, 2 November 1999, CCPR/C/21/Rev.1/Add.9, available at:

<http://www.refworld.org/docid/45139c394.html> [accessed 11 May 2014], Paragraph 1

¹⁹ *ibid* Paragraph. 13

²⁰ *ibid* Paragraph 14

²¹ Guideline D.2.3, Operational Guidelines

²² Guideline C.2.9, Operational Guidelines

²³ Office of the High Commissioner for Human Rights & UN Habitat, The right to adequate housing, fact sheet no. 21/rev.1, page 11. The right is also recognised as informing the Minimum Standards in Shelter, Settlement and Non-Food Items contained in the Sphere Project Handbook (2011).

²⁴ UN Committee on Economic, Social and Cultural Rights (CESCR), *General Comment No. 4: The Right to Adequate Housing (Art. 11 (1) of the Covenant)*, 13 December 1991, E/1992/23, available at: <http://www.refworld.org/docid/47a7079a1.html> [accessed 11 May 2014], Paragraph 8

²⁵ *ibid*

²⁶ *ibid* Paragraph 8 (e)

²⁷ *ibid* Paragraph 8 (a)

²⁸ Commission on Human Rights resolutions 1993/77 of 10 March 1993 and 2004/28 of 16 April 2004

²⁹ UN CESCR, *General Comment No. 7 , The Right to Adequate Housing (Art. 11(1) of the Covenant): Forced Evictions*, UN doc. E/1998/22, 20 May 1997 , Paragraph 3

³⁰ *ibid* Paragraph 15

³¹ *ibid* Paragraph 16

³² Human Rights Committee, *General Comment No. 31 [80], The Nature of the General Legal Obligation Imposed on States Parties to the Covenant*, Adopted on 29 March 2004 (2187th meeting), U.N. Doc.

CCPR/C/21/Rev.1/Add. 13, available at <http://daccess-dds-ny.un.org/doc/UNDOC/GEN/G04/419/56/PDF/G0441956.pdf?OpenElement>, Paragraph 6

³³ Law of the Republic of Indonesia No. 24 of 2007 concerning Disaster Management

³⁴ Sleman Regency Regulation No. 20 of 2011

³⁵ Articles 29-31, Yogyakarta Special Region Law No. 8 of 2010

³⁶ Sleman Regency Regulation No. 20 of 2010

³⁷ *ibid*

³⁸ *ibid*

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