

# Vietnam

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Juhi Amodwala

*Strauss Center Brumley Next Generation Undergraduate Scholar*

## Introduction

Located on the Mekong River Delta, Vietnam is a one-party Communist state with one of southeast Asia's fastest-growing economies. Since 1986, the country has undergone a massive economic transformation from a Soviet-style centrally planned economy to a market economy and hopes to become a developed nation by 2020.<sup>1</sup> Vietnam is the world's second-largest exporter of rice; however, this production is increasingly at risk because of climate change. Vietnam is vulnerable to the effects of climate change through strong and frequent floods, storms, and sea-level rise. Climate change represents a significant threat to economic and human development, and the environment in Vietnam.

As Figures 1 through 5 highlight, the country is highly exposed to the impacts of climate change on the southern side and near the capital Hanoi. These areas have higher vulnerability because of population pressures (see figure 3), exposure to cyclones, floods, and rainfall deviations (see figure 2). In addition, Vietnam's overall poor governance (see figure 5) puts populations more at risk.<sup>2</sup> Calculations under the CEPASA program indicate that approximately 63% (i.e., 58 million people) of the country's population faces above average exposure. Further, roughly 48% (i.e., 44 million) and 34% (i.e., 32 million) face exposure 1 and 2 standard deviation above the regional mean respectively.<sup>3</sup>

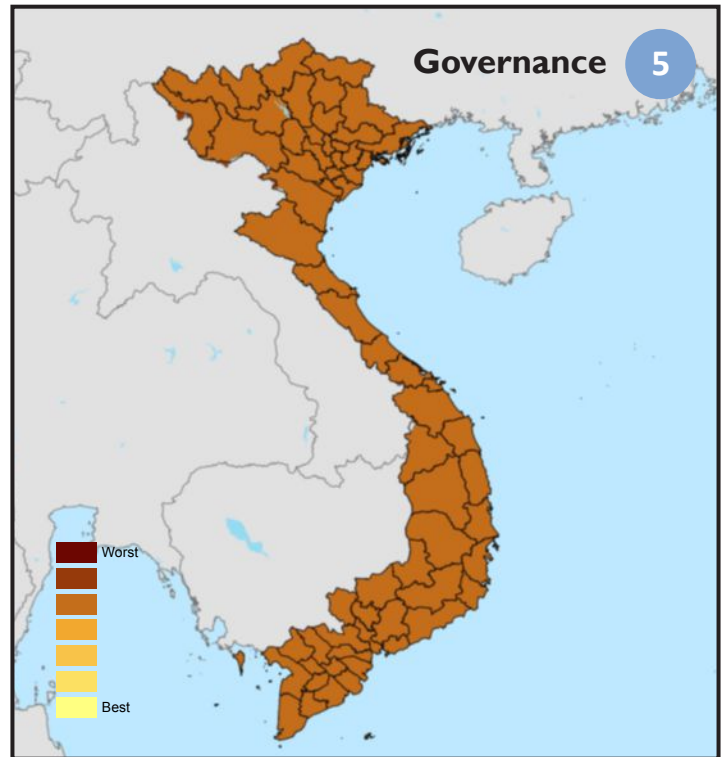
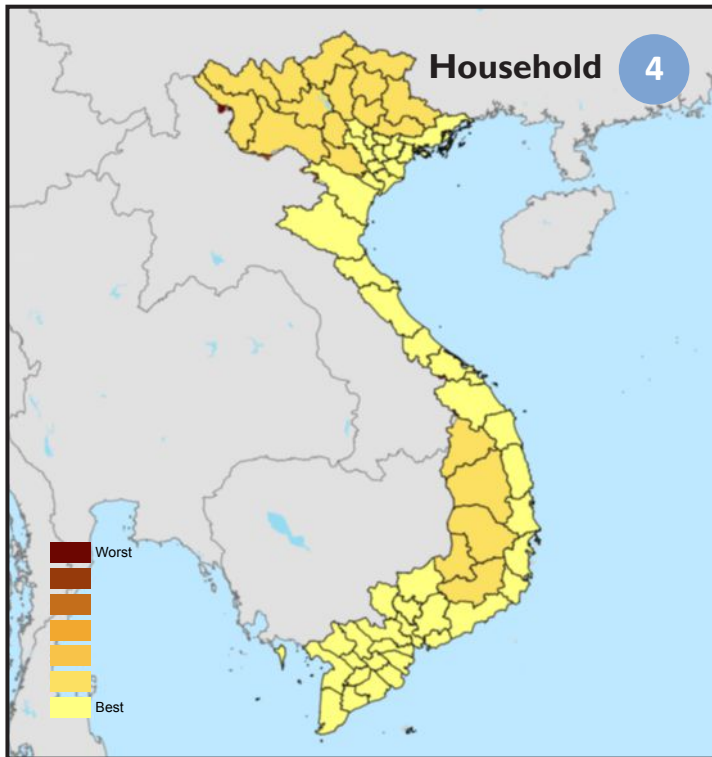
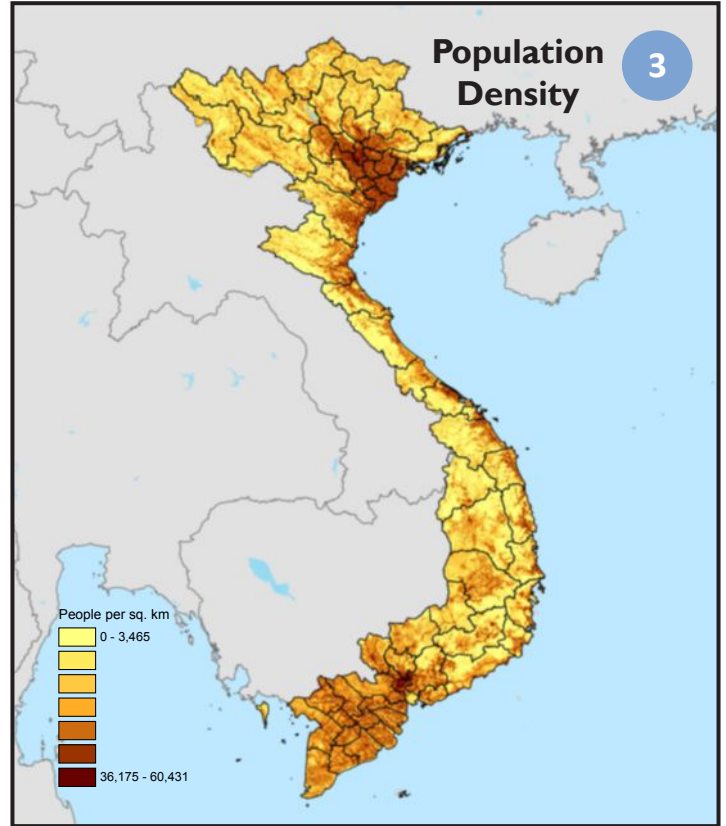
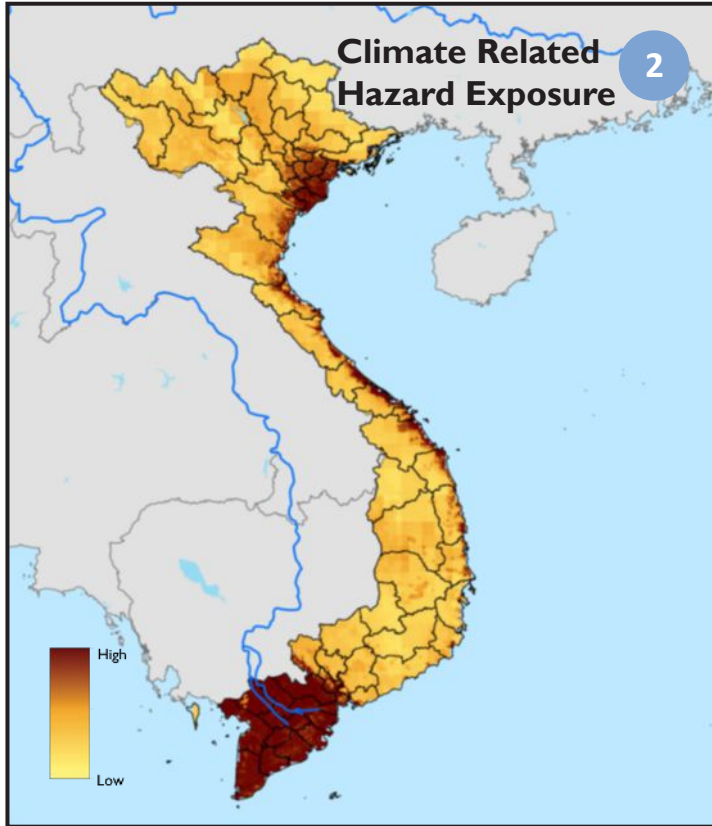
## Natural Disasters and Climate Change Vulnerability

Over the 2000-2013 period, Vietnam experienced 45 separate disasters including storms, floods, droughts, and wildfires.<sup>4</sup> In addition Vietnam's sea levels have been rising 2.5-3.0 centimeters per year and the temperature has risen 0.1 degree Celsius. These developments have contributed to altered weather patterns, including increasingly severe storms along the coast, intrusion of saline water into the Mekong Delta, extremes of heat and cold, and the onset of desertification further inland.<sup>5</sup>

For a country with 2,000 miles of coastline, rising sea-levels present a major environmental and food security challenge, especially in the Mekong River Delta region where 22 percent of the population lives and about half of the country's food is produced.<sup>6</sup> A United Nations Human Development Report found that "sea-level rise projected for 2030 would expose around 45 percent of the Mekong Delta's land area to extreme salinization and crop damage through flooding."<sup>7</sup> Climate change will predominantly affect Vietnam's rural poor who are heavily reliant on agriculture, aquaculture, and fisheries for income and food security: all industries that are vulnerable to sea level rise and climate related disasters such as drought, floods or typhoons.<sup>7</sup>



Data Sources: KOF Index of Globalization; World Bank World Governance Indicators; Political Instability Task Force (PITF); Polity IV Project; World Bank World Development Indicators; USAID Demographic and Health Surveys; UNICEF Multiple Indicator Cluster Surveys; Center for International Earth Science Information Network; UNEP/GRID-Europe; Viewfinder Panoramas; LandScan; Princeton University Terrestrial Hydrology Research Group



In addition to sea-level rise, Vietnam is also susceptible to flooding and landslides. In 2007, Typhoon Lekima killed nearly 500 people due to flooding and landslides. Thanh Hoa and Nghe An provinces in north-central Vietnam were hit hardest by torrential rains and strong winds. Low-lying fields were inundated with salt water submerging 515,000 hectares of agricultural land and destroying about 100,000 homes, mainly in central provinces.<sup>8</sup>

In 2016, months of below-average rainfall resulted in the country's worst drought in a century, leaving the Mekong River at its lowest level since 1926. Neighboring countries Laos and Cambodia have further exacerbated problems by building 11 hydroelectric dams, further up the Mekong, which added to current water shortages. Climate change's effects on the Mekong Delta pose a significant threat to Vietnam's economy as the area is responsible for 20 percent of the country's GDP.<sup>9</sup>

As a response to these climate change related issues, in 2008 Vietnam created a National Goal Program on Climate Change with the support of international donors.<sup>10</sup> The country's current leadership has also established a Central Committee for Storm and Flood Control that is responsible for natural disaster preparedness and mitigation. The Central Committee has been quick to mobilize government resources in response to natural disasters. The present regime has given priority to developing the state's capacity to respond to such natural disasters as tropical storms, flooding, and forest fires and to mitigating their impact.<sup>11</sup>

## External Assistance

Vietnam receives a significant amount of foreign aid. Between 2000-2013, Vietnam received \$72.5 billion in foreign aid, with the top 5 donors giving \$52.9 billion (i.e., 72%) of the total aid Vietnam received. Of the total aid received, \$663.8 million in aid went towards climate change adaption and disaster risk reduction to fund over 3,000 projects.<sup>12</sup> Since 2000, Vietnam ranks as the tenth highest recipient of foreign aid, with net official development assistance constituting 1.7 percent of total gross national income.<sup>13</sup>

Currently, 17 international organizations (e.g. Asian Disaster Reduction Center, Asian Disaster Preparedness Center, ASEAN, United Nations International Strategy for Disaster Reduction) have funded and implemented disaster risk reduction projects in several provinces cooperating with local nonprofits and government agencies. In 2013, the World Bank led a \$450 million community-based disaster risk management project in 12 provinces across Vietnam to build 11 flood and storm mitigation infrastructure projects, including river dikes, evacuation routes, and drainage systems.<sup>14</sup>

## Regional Issues

The stability of the Mekong River Delta in Vietnam faces the threat of increasing numbers of hydropower dams being built upstream in Cambodia and Laos.<sup>15</sup> Vietnam is a member of the Laos-based Mekong River Commission, an organization established by the 1995 Mekong Agreement among Cambodia, Laos, Thailand, and Vietnam to coordinate and oversee major projects and river resources (see articles on Cambodia, Laos and Thailand). Although each of the four countries in the Lower Mekong Delta have national climate change adaptation plans, there is not collective adaptation across these countries that share water resources.<sup>16,17</sup>

## Governance

After three decades of conflict in Vietnam first against the French and then against South Vietnam and its US backers, armed forces of the Communist north seized the south in 1975. Since the end of the cold war, Vietnam has been free of civil and state conflicts. The current communist regime in Vietnam actively suppresses political dissent and religious freedom. The human rights advocacy group Amnesty International says in a 2011 report that “more than a dozen activists were convicted in faulty trials simply because they had voiced criticism of the government.”<sup>18</sup> Despite the suppression of civil rights, the regime has been able to achieve various economic and development advancements, sustaining some of the highest economic growth rates in East Asia.<sup>19</sup> In conclusion, climate change could pose as a major challenge to Vietnam’s goal of becoming a modern and industrialized country; however, the government has already prioritized developing the state’s capacity to respond to natural disasters.

## Endnotes

- <sup>1</sup> BBC (2016). Vietnam profile- Overview. Available at: <http://www.bbc.com/news/world-asia-pacific-16567315>
- <sup>2</sup> Further explanation of our approach can be found in Busby et al. (2016)'s Climate Security Vulnerability in Asia v1.0. Available at: <https://www.strausscenter.org/cepsa-research-briefs?download=627:climate-security-vulnerability-in-asia-1-0>
- <sup>3</sup> These estimates were calculated using LandScan (2014) and our overall exposure layer.
- <sup>4</sup> CRED (2017). EM-DAT The International Disaster Database. Available at: [http://www.emdat.be/advanced\\_search/index.html](http://www.emdat.be/advanced_search/index.html)
- <sup>5</sup> Carlyle Thayer, "Vietnam" in Climate Change and National Security- A Country-Level Analysis (2011), ed. Daniel Moran, 27-41.
- <sup>6</sup> Cornell Chronicle (2016). Rising seas puts Vietnam in climate change 'bull's-eye. Available at: <http://www.news.cornell.edu/stories/2016/04/rising-seas-puts-vietnam-climate-change-bull-s-eye>
- <sup>7</sup> United Nations Development Report (2008). Climate Change and Human Development in Viet Nam. Available at: [http://hdr.undp.org/sites/default/files/chaudhry\\_peter\\_and\\_ryysschaert\\_greet.pdf](http://hdr.undp.org/sites/default/files/chaudhry_peter_and_ryysschaert_greet.pdf)
- <sup>8</sup> Reuters (2007). Dozens killed in worst Vietnam floods in decades. Available at: <http://www.reuters.com/article/us-vietnam-floods-idUSHAN2657120071007>
- <sup>9</sup> ABC (2016). Vietnam's lowlands to go under with climate change, bank report says. Available at: <http://www.abc.net.au/news/2016-04-13/vietnams-low-lands-to-go-under-with-climate-change,-report-says/7321970>
- <sup>10</sup> The World Bank (2017). Vietnam Overview. Available at: <http://www.worldbank.org/en/country/vietnam/overview>
- <sup>11</sup> Carlyle Thayer, "Vietnam" in Climate Change and National Security- A Country-Level Analysis (2011), ed. Daniel Moran, 27-41.
- <sup>12</sup> AidData. Available at: [www.aiddata.org](http://www.aiddata.org)
- <sup>13</sup> World Bank. Net ODA received (% of GNI). Available at: <http://data.worldbank.org/indicator/DT.ODA.ODAT.GN.ZS>
- <sup>14</sup> The World Bank (2014). Vietnam: Disaster Risk Management Project. Available at: <http://www.worldbank.org/en/results/2013/04/09/vietnam-disaster-risk-management-project>
- <sup>15</sup> VOA News (2016). Vietnam Rice Industry Faces Threat From Climate Change, Mekong Dams. Available at: <http://www.voanews.com/a/vietnam-rice-industry-faces-threat-from-climate-change-mekong-dams/3574158.html>
- <sup>16</sup> National Geographic (2014). Dam Projects Ignite a Legal Battle Over Mekong River's Future. Available at: <http://news.nationalgeographic.com/news/special-features/2014/07/140711-mekong-river-laos-thailand-dams-environment/>
- <sup>17</sup> BBC (2015). Climate Change: Mekong Delta heads for troubled waters. Available at: <http://www.bbc.com/news/science-environment-34407061>
- <sup>18</sup> BBC (2016). Vietnam Profile- Overview. Available at: <http://www.bbc.com/news/world-asia-pacific-16567834>
- <sup>19</sup> Ibid.

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