

VIETNAM

Drought and saltwater intrusion



Anticipatory briefing note – 11 February 2020

Anticipated crisis impact

- The Mekong Delta is the most important food production area in Vietnam. The region, lying in the coastal area, is naturally prone to saltwater intrusion, a problem aggravated by the recently more frequent droughts occurring during the dry season (December-April). (Natural Hazard and Health System Science, Sept.2019)
- According to the Vietnam Disaster Management Authority (VNDMA) and the Ministry of Agricultural and Rural Development (MARD), since December 2019 saltwater intrusion in the Mekong Delta is deeper and occurring earlier compared to the strong salinity intrusion of 2015-2016, which caused widespread crop losses throughout the delta and 2 million people in humanitarian need. (IFRC, 05/02/2020;FAO 2016)
- Eight of 12 provinces in the Mekong Delta region are reported to be at risk: Long An, Tien Giang, Ben Tre, Tra Vinh, Soc Trang, Bac Lieu, Kien Giang, Ca Mau. In January 2020 the province of Ben Tre has declared an environmental emergency due to the degree of the intrusion. (IFRC, 05/02/2020 ; NHNS, Sept.2019) Damages to farming areas are expected to be less serious than those that occurred in 2015-2016, as authorities and farmers have taken measures to cope with the situation in the 2019-2020 dry season, such as early rice plantation, embankments to store irrigation water, new water pipes and upgraded irrigation systems. (Reliefweb, 11/02/2020)
- According to a joint assessment conducted 14-15 January 2020, led by UNICEF and UNDP, more than 680,000 people living in the above mentioned provinces would be exposed to the negative effects of the saltwater intrusion by a limit access to water, food insecurity, exposure to water born and skin diseases and economic repercussions caused by the reduction in food production. (IFRC, 05/02/2020)

Key figures



680,000

estimated people who may face disrupted livelihoods and limited access to basic services



460,000

hectares estimated to be at risk of being lost due to saltwater intrusion

National response capacity

Vietnam Disaster Management Authority (VNDMA) and the Ministry of Agricultural and Rural Development (MARD)

International response capacity

UN agencies (UNDP, UNICEF, FAO, WHO) and several INGO are assessing the situation and preparing an action plan in WASH, food security and livelihood

Anticipated scope and scale

- With insufficient upstream water flow to push back seawater, salinity intrusion is expected to continue to increase in concentration and duration throughout 2020. (IFRC, 05/02/2020; MARD, 07/01/2020)
- In case of increase of of the degree of saltwater intrusion in the exposed areas, food security will be at high risk and a severe loss of income might affect the rice producers in the coming months. (IFRC, 05/02/2020)

Humanitarian constraints



The provincial capitals of the region are connected by primary roads and therefore easy to access. The innermost areas have many rivers so they can be reached only by waterways depending on the tide. Connection between roads and waterways is still very limited. (Logistic Cluster map, 2011; Vietnam News, 17/07/2019)

Vulnerable group

Highly vulnerable subsistence farming families with little resilience will likely be the most affected

Sectoral needs



WASH

- According to MARD, communities living in the exposed areas will may face a greater risk of disease outbreaks due to water scarcity and lack of appropriate sanitation facilities. (VDMA, 25/01/2020)
- Weaknesses in the potentially affected people in WASH knowledge and skills, as on how to respond to the situation of drought and saline intrusion have been reported. (IFRC, 05/02/2020)



Health

- Lack of knowledge on risks of saltwater intrusion and limited access to water, together with shortage of skilled health personnel and poor community hygiene practices could increase the risk of water born and skin diseases. (VDMA, 25/01/2020)



Food and livelihoods

- With a forecasted reduction in food production, especially for rice paddies, vegetables and fruits, households' income may drastically decline, leading to a high risk of food insecurity. (VDMA, 25/01/2020; IFRC, 05/02/2020)
- Crop production, livestock, fisheries and aquaculture sectors may be damaged by the drought and saltwater intrusion. Installation of pump stations to keep watering crops are reportedly needed. (Vietnam News, 04/01/2020; FAO 2016)
- Food production costs, due to the use of connection pumps, is expected to increase and aquaculture production to be either reduced or damaged due to the shortage of freshwater supply. (IFRC, 05/02/2020)
- Improved agricultural practices, extended irrigation systems (construction and rehabilitation of channels and dams), crop diversification, application of climate smart agriculture and adaptation technology such as water saving systems, improved access to markets and low interest rate credit were assessed as needs during the dry season of 2015-2016. (FAO 2016)



Protection

- During the intrusion of 2015-2016, an increasing migration of men to urban areas in search of work and a consequent growing trend of women remaining in rural areas and leading on cultivation and childrearing or caring for the elderly have been reported. This double burden of agricultural and household workloads has represented a significantly increased challenge. (UNDP Vietnam, 06/10/2016)

Aggravating factors

Climate change: sea level rise, improper usage of water resources and a decreased flow of the Mekong River caused by reduced rainfall have led to extreme climatic events in Vietnam, resulting in adverse impacts on socioeconomic development, livelihoods and human lives. As a result of the magnitude of climate change, in the Mekong Delta Region drought and saline intrusion phenomena will occur more frequently. (Natural Hazard and Health System Science, Sept 2019)

Resource exploitation: almost 60% of total water resources are generated outside the country, making Vietnam subject to decisions made about water resources in upstream countries. Groundwater resources are abundant; however, overexploitation results in falling water tables and salinity intrusion, especially in the Mekong River Delta. Local shortages can occur during the dry season (December – April). In particularly dry years, supply of drinking water competes with agricultural uses that exceed water availability. Irrigated agriculture uses about 94.8% of total water withdrawals and places the largest burden on water resources in the country. Moreover, the construction of hydropower dams and consequent exploitation of water resources across the country has changed the flows of water, reduced sediment and fisheries resources, causing more serious saltwater intrusion in recent years. This has negatively affected socioeconomic development, especially in Mekong Delta Region. (Government Resolution 120, November 2017; FAO 2016)

Lessons learned

During the dry season of 2015-2016, the negative effects of the strong salinity intrusion, which affected approximately 400,000 ha in the Mekong Delta, are largely attributed to the lack of appropriate mitigation plans and timely early warning system necessary to prepare and adapt agricultural practices to reduce damage. (Natural Hazard and Health System Science, Sept 2019)

Map of provinces affected by drought and saline intrusion, 24 January 2020



Source: IFRC, 05/02/2020