



DEPARTMENT OF SURVEY AND MAPPING OF VIETNAM

The contribution of Department of Survey and Mapping of Viet Nam in socio-economic development and coping with climate change

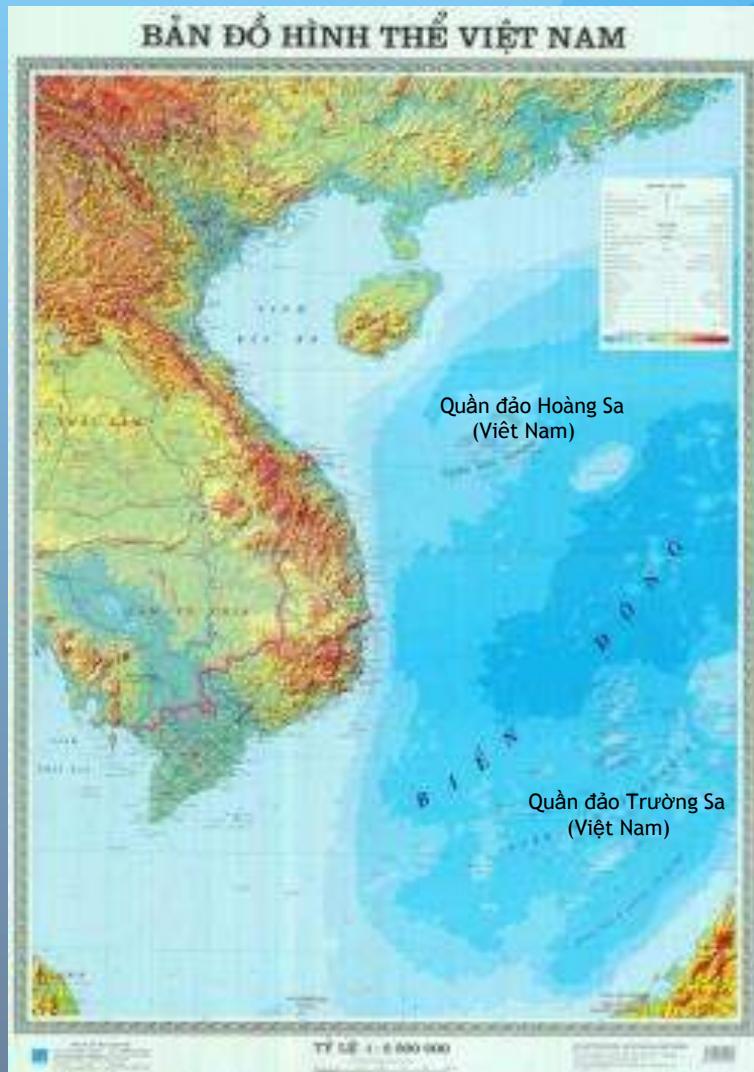
Rotterdam, Netherlands, 26th May 2016

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Deputy Director General
Department of Survey and Mapping Viet Nam**

CONTENT

1. Effect of natural disasters in Viet Nam
2. The scenarios of climate change in Viet Nam
3. Contribution of DOSMVN for sustainable socio-economic development and respond to climate change
4. Conclusion

1. Effect of natural disasters in Viet Nam



- More than 3260 kilometers of coastline.
- Terrain: mostly mountains
- The Delta covered 25% the country.

1. Effect of natural disasters in Viet Nam



- Disaster types include: landslides, flash floods, droughts, saltwater intrusion, typhoon, sea level rise.
- From 2010 to 2015, total disaster damages in Vietnam were nearly \$ 3.3 billion, 1 128 people dead and missing.

2. Climate change scenarios of Viet Nam

Climate change scenarios in 2009 of Viet Nam based:

- Reports of Inter-governmental Panel on Climate change in 2007.
- National data collection.

2. Climate change scenarios

The content of the scenarios climate change, SLR in period 2010-2100:

- The average temperature in the country increase from 2 to 3 °C.
- Increase average rainfall from 2 to 7%.
- Sea-level rise from 65 cm to 1 meter.

Climate change already caused severe natural disaster, especially typhoons, floods and droughts

3. Contribution of Department Survey and Mapping Viet Nam

Main project of MONRE in period 2010-2020

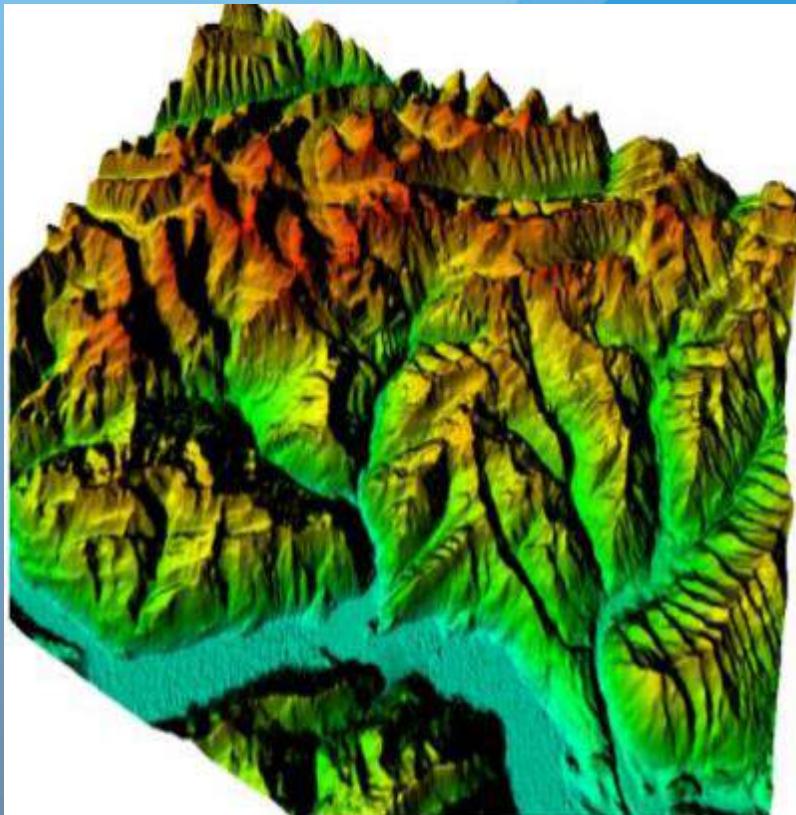
- Warning map of high risk zones on flash flood and landslide in mountainous provinces implement by Institute of Meteorology, Hydrology and Geological Institute in period 2012-2016.
- Update climate change scenarios, especially sea level rise, in Viet Nam implement by Institute of Meteorology, Hydrology in period 2015-2020

3. Contribution of Department Survey and Mapping Viet Nam

In 2012, DOSMVN established topographic maps by using the aerial photo:

- Topographic maps scale 1:2,000 and 1:5,000 on urban areas and focal economic zones.
- Topographic maps scale 1:10,000 covering the whole country.

3. Contribution of Department survey and mapping Viet Nam

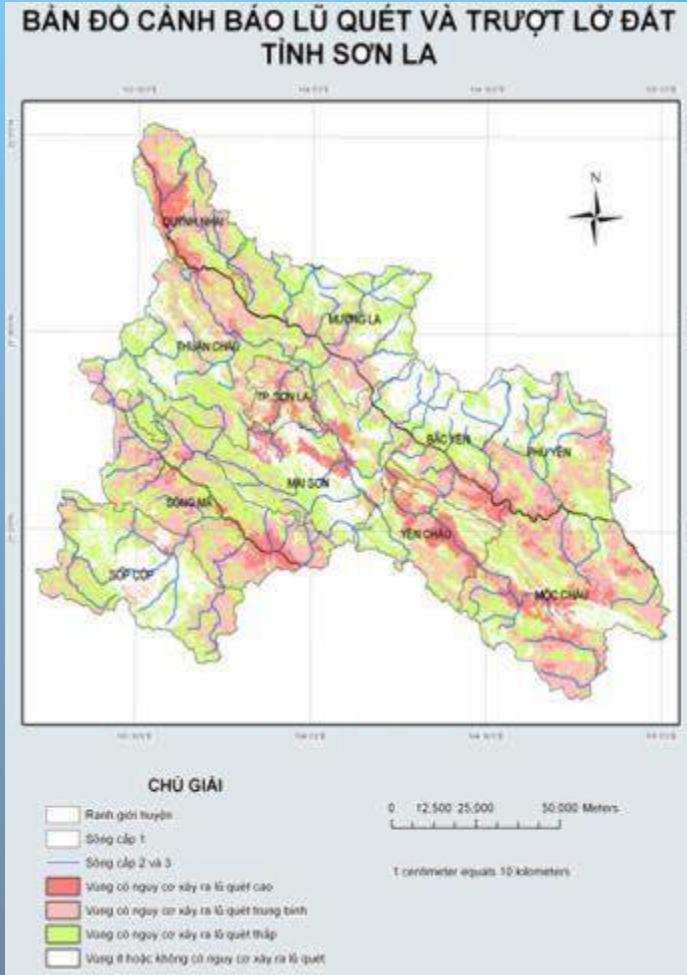


For establishing warning map of flood risk and landslide, used topographic maps scale 1:10000 included layers:

- Land cover
- Hydrology
- Orthophoto
- DEM



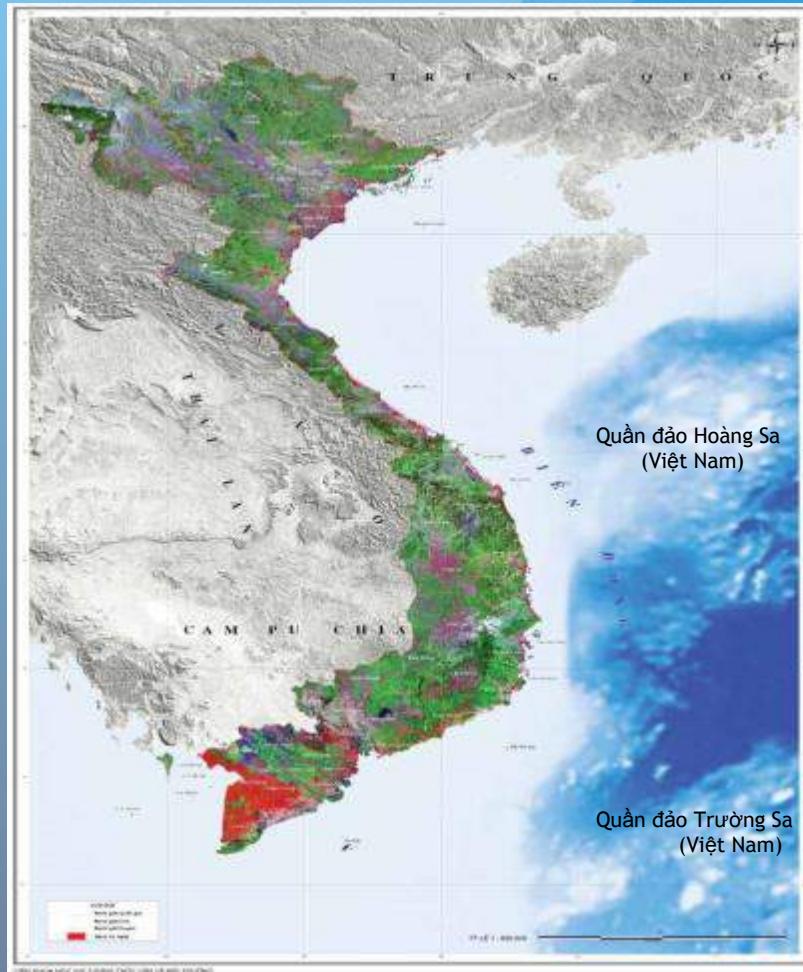
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In 2014, warning map of flood risk and landslide scale 1:50000 for 14 provinces in north Viet Nam were established. Those maps serve for:

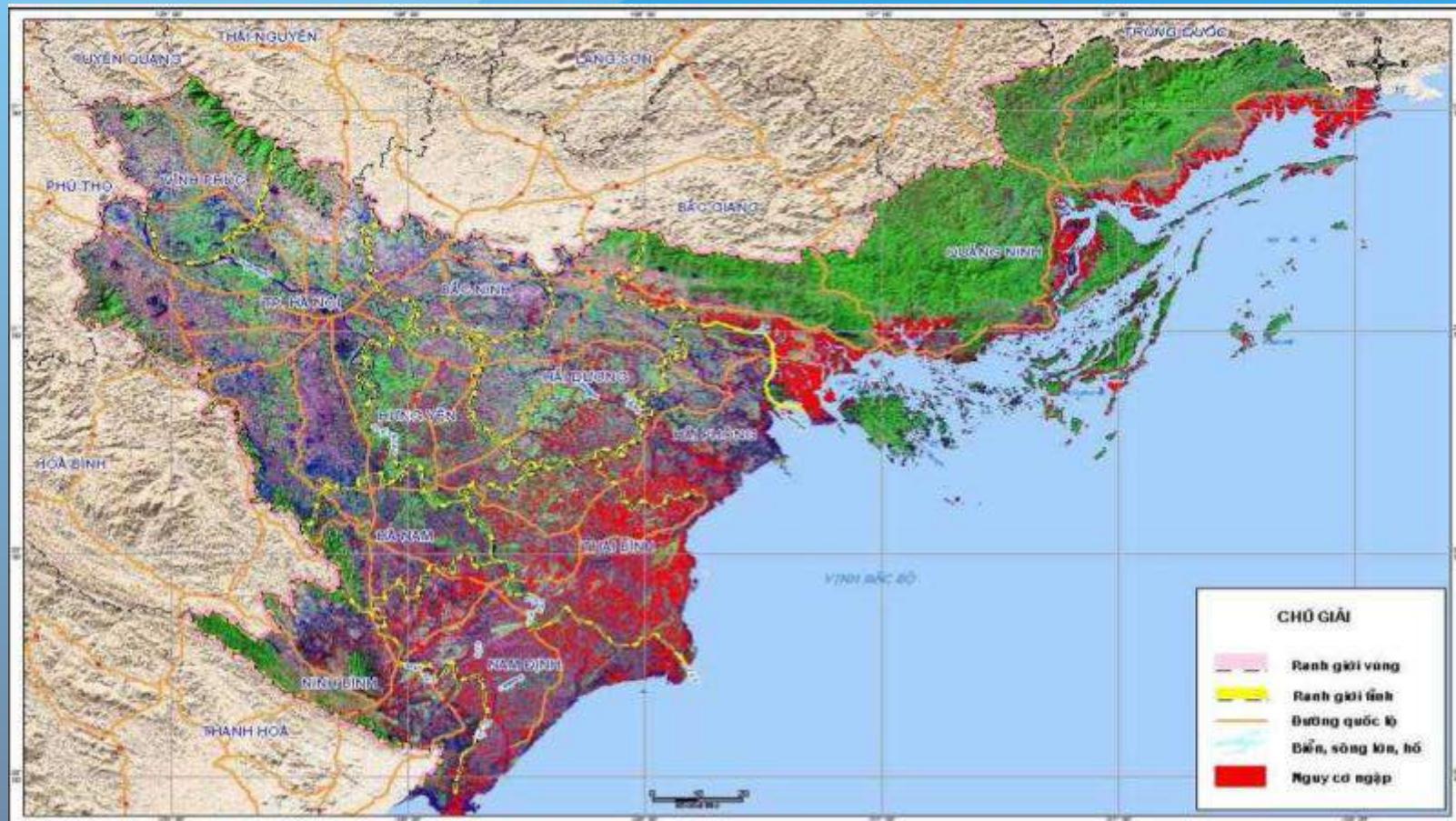
- Development planning of socio-economic
- Moving the people to safe areas thereby improve early warning of risks
- Direct prevention timely evacuate and minimize the damages caused by natural disasters .

3. Contribution of Department Survey and Mapping Viet Nam



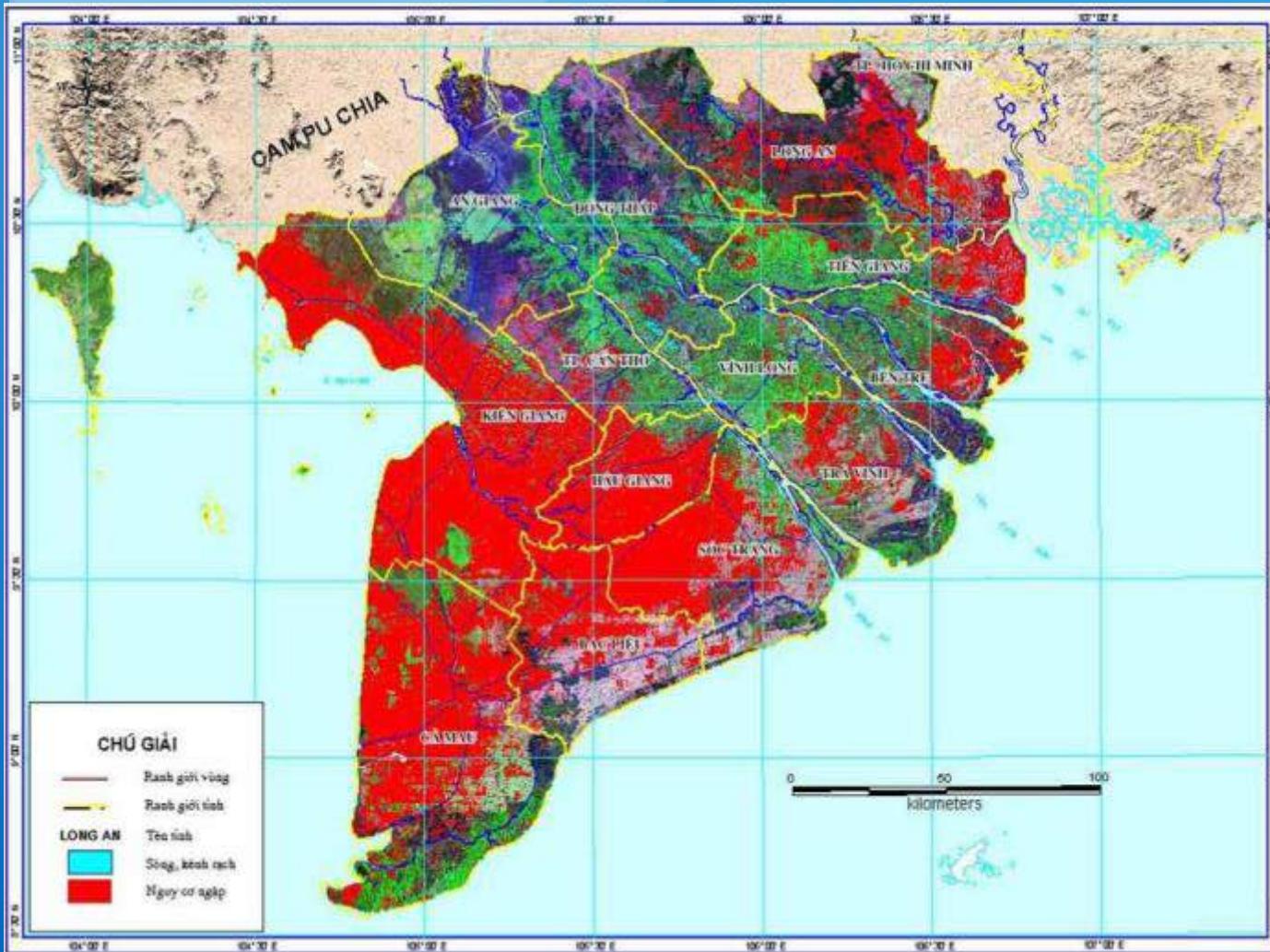
Project update climate change
and sea level rise for Viet Nam:
In 2012 used DEM 5x5m for
establishing Inundation map,
SLR 1m

3. Contribution of Department Survey and Mapping Viet Nam



Inundation map of North VN, SLR 1m - inundation area covered 10,5%

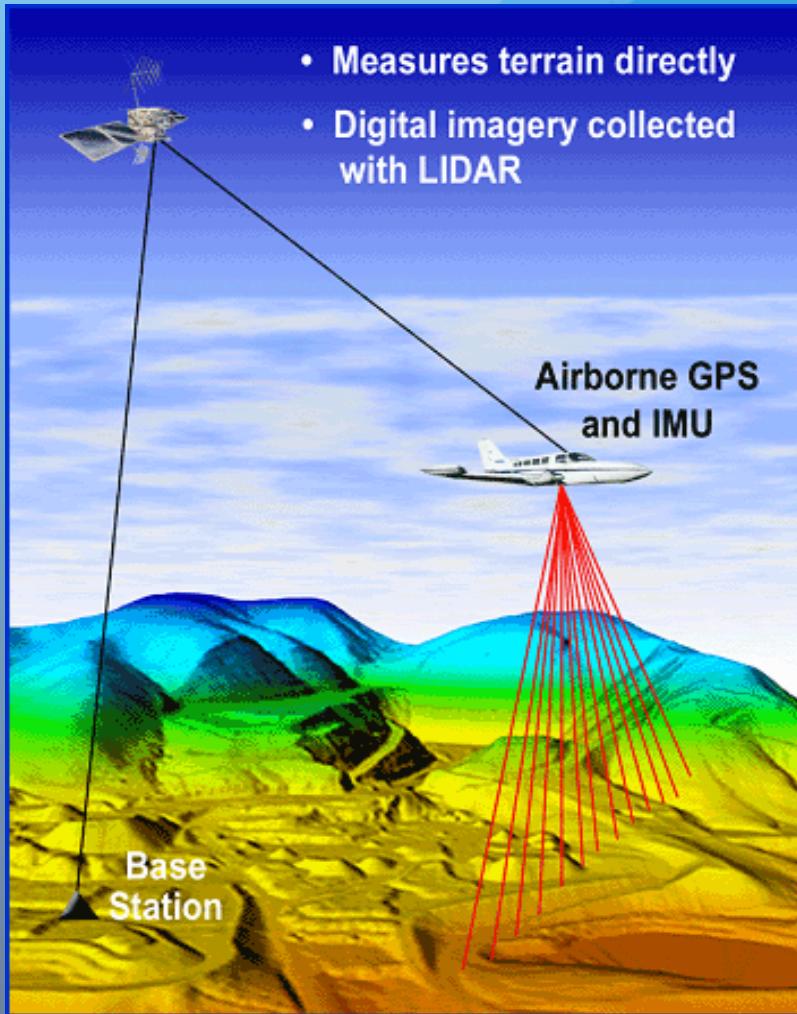
3. Contribution of Department Survey and Mapping Viet Nam



Inundation map of Mekong river Delta, SLR 1m

Inundation covered area 39%

3. Contribution of Department Survey and Mapping Viet Nam



Lidar scan Mekong river delta, Red river delta and some place of coastline Viet Nam for researching and assessing the effect of climate change and sea level rise

- Accuracy DEM 0.2m
- Period 2012-2016

3. Contribution of Department survey end mapping

In the period 2016-2020, DOSM will implement projects:

- Upgrade topographic maps scale 1:10000
- Establish warning flood maps

4. Conclusion

- In the period of 2010 - 2015, DOSMVN participated in updating the climate change scenarios, SLR 2012, built warning maps of flash floods and landslides for 14 North provinces.
- In the period of 2016-2020, DOSMVN will be continue to participate in building the flood warning map for mountainous and coastal provinces, participate in updating climate change and sea level rise scenarios, which could contribute in making the plan for sustainable socio-economic development.

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THANK YOU