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EL NINO 2014/2016



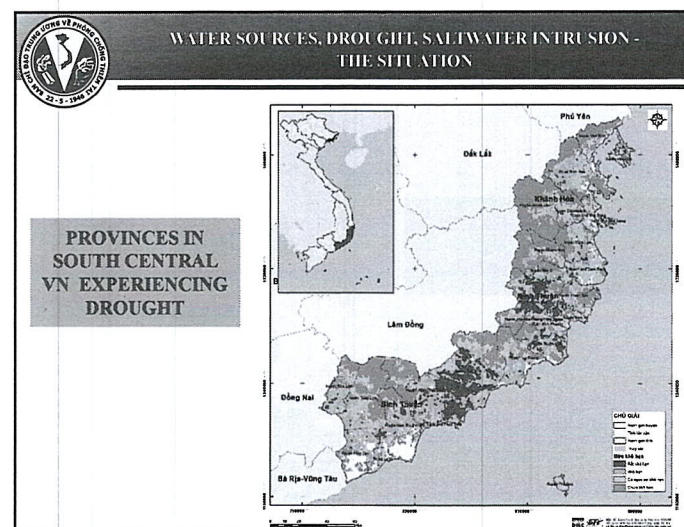
❖ Longest El Nino with severe impacts has been in Vietnam since late 2014.



2015-no crops in Ninh Thuan province

Features of severe El Nino

- ❖ Higher annual temperature average
- ❖ Extreme heat recorded at times
- ❖ Total precipitation lower (30-50% in Central, Mekong Delta and Central Highland, 80% at places)
- ❖ Unexpected weather conditions observed: rains in dry season in Central VN – March 2015, heavy rains in Quang Ninh province in August 2015.



WATER SOURCES, DROUGHT, SALTWATER INTRUSION - THE SITUATION

❖ **South Central VN**

➤ **Agriculture production & livelihoods**

No crop in 23,000 ha

Khánh Hòa: 1.800 ha
Ninh Thuận: 5.800 ha
Bình Thuận: 15.400 ha

Insufficient safe water: 31.000 households
Bình Thuận: 25.000 households
Ninh Thuận: 5.5000 households

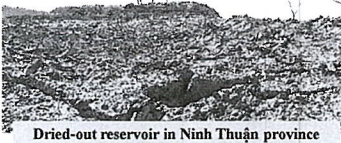
Insufficient feeding & water for livestock

➤ **Summer crop forecast**

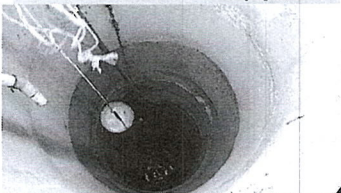
40.000 ha ceased production

Extensive drought

Severe lack of safe water



Dried-out reservoir in Ninh Thuận province



Low water table in a well in Khánh Hòa province

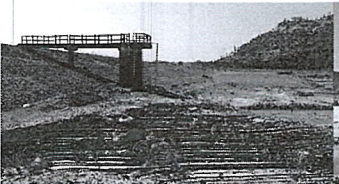
WATER SOURCES, DROUGHT, SALTWATER INTRUSION - THE SITUATION

❖ **South Central Vietnam**


➤ **Current water occupancy in Reservoirs**

From Đà Nẵng to Phú Yên: 70-80%;
Khánh Hòa, Ninh Thuận, Bình Thuận: 25-50% (15-20% at places)

➤ **Lack of Water in reservoirs causes negative impacts as early as Spring crops 2015-2016**



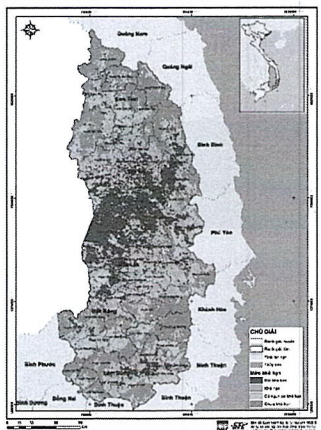
Tân Lập Reservoir (Ham Thuận Lam, B/Thuận) dried-cut in 2016



Ông Kinh Reservoir (Ninh Hải, Ninh Thuận) dried-out in 2015

WATER SOURCES, DROUGHT, SALTWATER INTRUSION - THE SITUATION

CENTRAL HIGHLAND PROVINCES EXPERIENCING DROUGHT



WATER SOURCES, DROUGHT, SALTWATER INTRUSION - THE SITUATION

❖ **Central Highland**

➤ **Water occupancy**


in irrigation reservoirs: 30-40%
in hydropower reservoirs: 25-35%

➤ **Agriculture production & livelihood**


+ No rice crops in 2.350 ha
+ 4.758ha of rice cultivation shifted to plantation with less water consumption
+ Insufficient safe water: 28.300 households
Fire warning level IV, V

➤ **Forecast by late April 2016**

170.000 ha plantation under drought
59.000 households in water shortage
(Đắc Lắc 25.000 households, Đắc Nông 10.000, Lâm Đồng 7.000)



A dried-out water source in Đắc Lắc



Dying plantation

WATER SOURCES, DROUGHT, SALTWATER INTRUSION - THE SITUATION

Mekong Delta

- Salt water intrusion
 - ✓ Vàm Cỏ estuary: 90-93 km, 10-15 km further inland than annual average;
 - ✓ Tien estuaries: 45-65 km, 20-25 km further inland than annual average;
 - ✓ Hau estuaries: 55-60km, 15-20 km further inland than annual average;
 - ✓ Westcoast estuaries: 60-65 km, 5-10 km further inland than annual average.
- Forecast: More intrusion until early June 2016

Mekong Delta Saltwater Intrusion Map

WATER SOURCES, DROUGHT, SALTWATER INTRUSION - THE SITUATION

Mekong Delta

- Agriculture production & livelihood
 - 182.700 ha of rice growing
- Insufficient safe water: 194.000 households (900.000 inhabitants)
- Forestry: Fire warning level IV, V
- Aquaculture: Prawn growing affected and infectious diseases

Rice ruined by saltwater intrusion in Mekong Delta

RESPONSE DELIVERIES

PRIME MINISTER

- ❖ Resolutions, Instructions, Public Notices issued to coordinate actions in response to prevention and control of drought and saltwater intrusion.
- ❖ Fieldtrip visits and chairing meetings to give instructions and financial supports to province in prevention and control of drought and saltwater intrusion

Prime Minister at sites

LOCAL, MINISTERIAL AND SECTORAL STEERING COMMITTEES

- ❖ Developing mechanism & policies in response to drought & saltwater intrusion
- ❖ Forecasting
- ❖ Clearing canals, moats; digging ponds and wells to hold fresh water
- ❖ Advocating shift of crops, communication & education, information dissemination

IMMEDIATE RESPONSES

SAFE WATER SUPPLY

- ❖ Tanker vehicles used to supply safe water for inhabitants in affected areas.
- ❖ Supply of water-holders for households in saltwater intrusion areas: plastic tankers, household water filters, water-treatment chemicals.
- ❖ Extending waterpipes from safewater sources to neighbourhoods under water shortages.
- ❖ Drilling deep water wells to replace surface water sources in areas under saltwater intrusion


Water delivery to people in Ninh Thuận province

IMMEDIATE RESPONSES

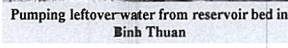
IRRIGATION

- ❖ To perform good meteor-hydro forecast, and forecast of water sources, droughts, saltwater intrusion;
- ❖ To enhance communication and dissemination of information on prevention and effective use of safe water for local people;
- ❖ To supply water as priority: people's daily use, water for livestock, for plantation of high value, aquaculture,;
- ❖ To advocate crops/livestocks shift/alteration in accordance with availability of water sources

Provisional dam to hold water for irrigation against drought in Mekong delta



Pumping leftover water from reservoir bed in Binh Thuan




IMMEDIATE RESPONSES

IRRIGATION

- ❖ To make a plan of water accumulation and control of domestic hydropower reservoirs to provide additional irrigation to downstream basin in dry season, and balance the use of water in 2016;
- ❖ To make requests to upstream Mekong countries to release water that helps drive off saltwater intrusion in Mekong downstream;
- ❖ To build coastal dike for prevention of saltwater intrusion, to clear canals & moats, to set up provisional pumping station to pump and hold fresh water;

Ponds and wells being dug in Ninh Thuan




IMMEDIATE RESPONSES

IRRIGATION

- ❖ Water works construction to speed-up progress for timely supply of fresh water for human use and agriculture production;
- ❖ To promote advanced technology in irrigation, saving water and plants consuming less-water (wet-dry intervals, spraying, dropping, ..etc); to raise common sense of saving water among individuals and organizations.


Cây trồng cạn được tưới (Ninh Thuận)



IMMEDIATE RESPONSES

FORESTRY


- ❖ To ensure availability of human resources, equipment, vehicles - especially the local availability and preps – on duty call in case of forest fire.
- ❖ To make a comprehensive 2016-plan for seedlings for well-timed reforestation in dry weather condition; and of clearing bushy vegetation to eliminate forest fire.



LONG-TERM SOLUTIONS


LONG-TERM SOLUTIONS

- ❖ To review/revise masterplans of irrigation, agriculture, aquaculture, forestry, safewater supply in situation of extreme weater condition and availability of water resource;
- ❖ To give priority to resources for construction that prevents drought and saltwater intrusion in dry areas;
- ❖ To improve quality in forecasting of water resources, drought, saltwater intrusion for better response to extreme weather;
- ❖ To better protect and reforest upstream forests.



EMERGENCY SUPPORT

1. *FROM STATE BUDGET*
 - ❖ At 2015 drought and saltwater intrusion : 1,212.7 bil VND
 - ❖ At 2015-2016 Spring crop drought and saltwater intrusion: 523.7 bil VND
2. *FROM VN CENTRAL REDCROSS*
 - ❖ As emergency for 11 provinces in Central VN : 4.235 bil VND (drinking water, water can, Aquatabs)
3. *FURTHER SUPPORT*
 - ❖ Rice to alleviate starvation: 4,656 tons
 - ❖ Safe water for 2.347.404 people at value of around 708 bil VND




RECOMMENDATIONS

- Drought, saltwater intrusion, riverbank & coastal landslide will continue to be issues in years to come.
- VN National Steering Committee on Prevention and Control of Natural Disasters requesting UN, international organizations', international donors' consideration and cooperation with the Government of Vietnam in support to people in affected areas in their response to and alleviation of disaster damages.

MOBILISATION OF RESOURCES FOR IMMEDIATE EMERGENCY SUPPORT


- ❖ Budget for food
- ❖ Budget for fresh water transportation
- ❖ Budget for water filter equipment
- ❖ Budget for other humanitarian support



RECOMMENDATIONS

TECHNICAL SUPPORT, CAPACITY ENHANCEMENT

- ❖ Identifying the immediate needs to be answered by emergency support for vulnerable groups; these solutions need to focus on people's life and health in affected areas.
- ❖ Identifying risks and natural disaster scenarios, sharing experiences and technical support in response measures to drought, saltwater intrusion and other extreme weather conditions.
- ❖ Reinforcing, monitoring, evaluating and identifying gaps that need intervention in: recovery time.



RECOMMENDATIONS

TECHNICAL SUPPORT, CAPACITY ENHANCEMENT


- ❖ Assessment, consultation, and sharing to enhance capacity in localities prone to natural disasters to update their plans in response El Nino and La Nina

- ❖ Support given to specialists in developing plans and scenarios in response to natural disaster risks; developing community communication, people's needs and accessing information

- ❖ Organizing a joint mission of natural disaster assessment (UNDAC) to support work items of priority

- ❖ Revising/adjusting ongoing and future projects that help to alleviate natural disaster consequences.

THANK YOU



RECOMMENDATIONS

TECHNICAL SUPPORT, CAPACITY ENHANCEMENT

- ❖ Integrating long-term investment programs to support provinces in recovery time

- ❖ Updating and reporting countries experiencing drought and El Nino to call for international support for the group of countries affected by El Nino, and possibly by coming La Nina

- ❖ Providing technical support and applying technology in forecasting and warning of big natural disasters

- ❖ Providing technical support and finding proper solutions to stop riverbank and coastal landslides in Central and South of Vietnam.

