

**The Republic of the Union of Myanmar**  
**Ministry of Transport**  
**Department of Meteorology and Hydrology**  
**Review of the Hydrological Impacts of Myanmar**  
**in 2010 and 2011**

*Presented*  
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# *Objectives of DMH*

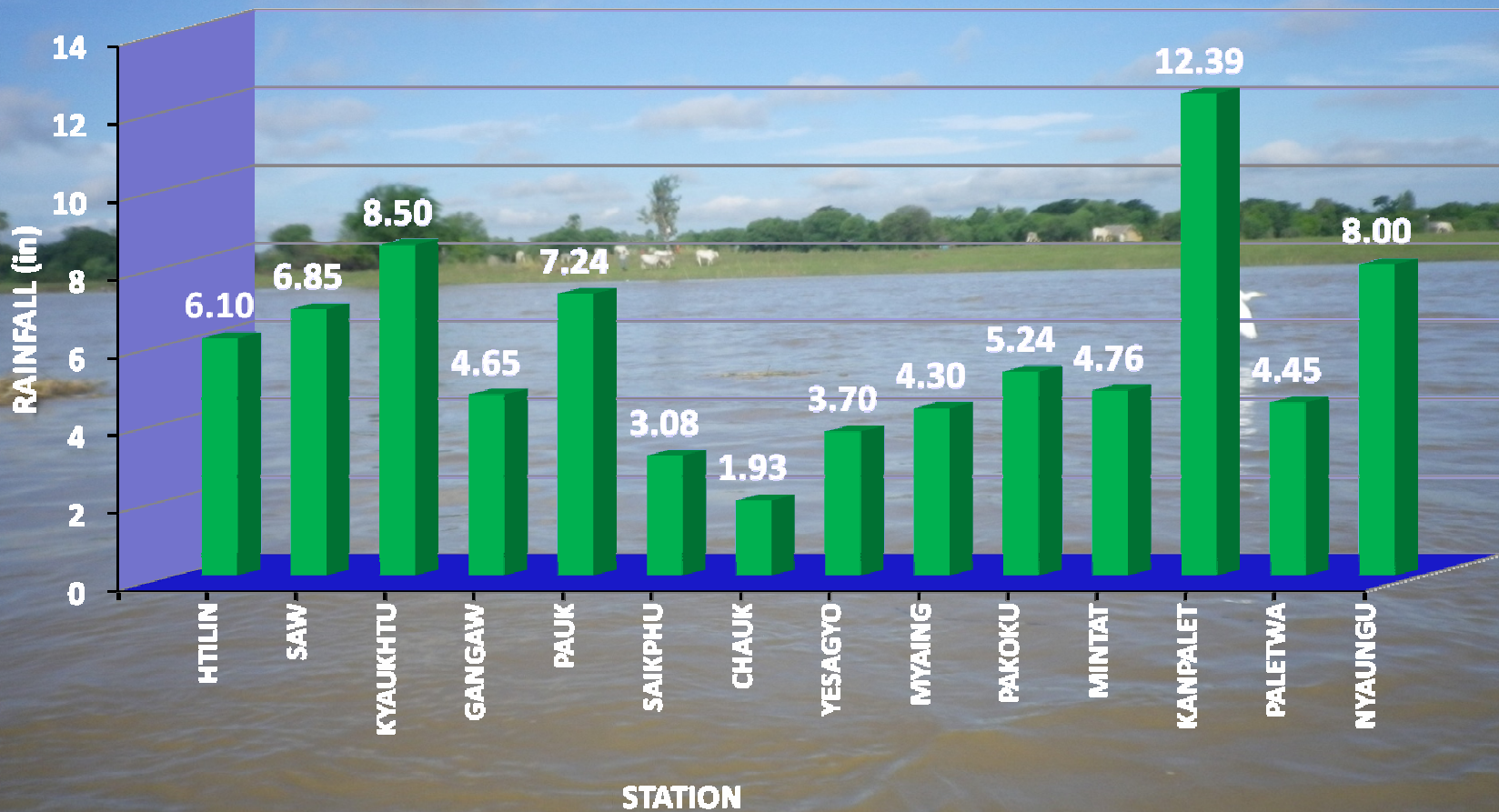
- 1. To exchange Information with other centers on Weather , Water and Earthquakes.**
- 2. To safeguard the people from losing their lives and property by issuing the Early Warnings and Bulletins for all Weather, Water and Geological related hazards.**
- 3. To expand the Public Awareness and Education programmes on Natural Disasters, Natural Hazards and Environmental Issues.**
- 4. To monitor on Climate Change, underground water resources, air and water quality of Myanmar.**
- 5. To assist to all authorities from Transport,Health,Agriculture, Construction and tourism by providing weather , hydrological and Seismological information.**
- 6. To assist in all National projects.**

## *Causes of Shwechaung Flash Flood*

The causes of Shwechaung flash flood on 20<sup>th</sup> October 2011 are as following:-

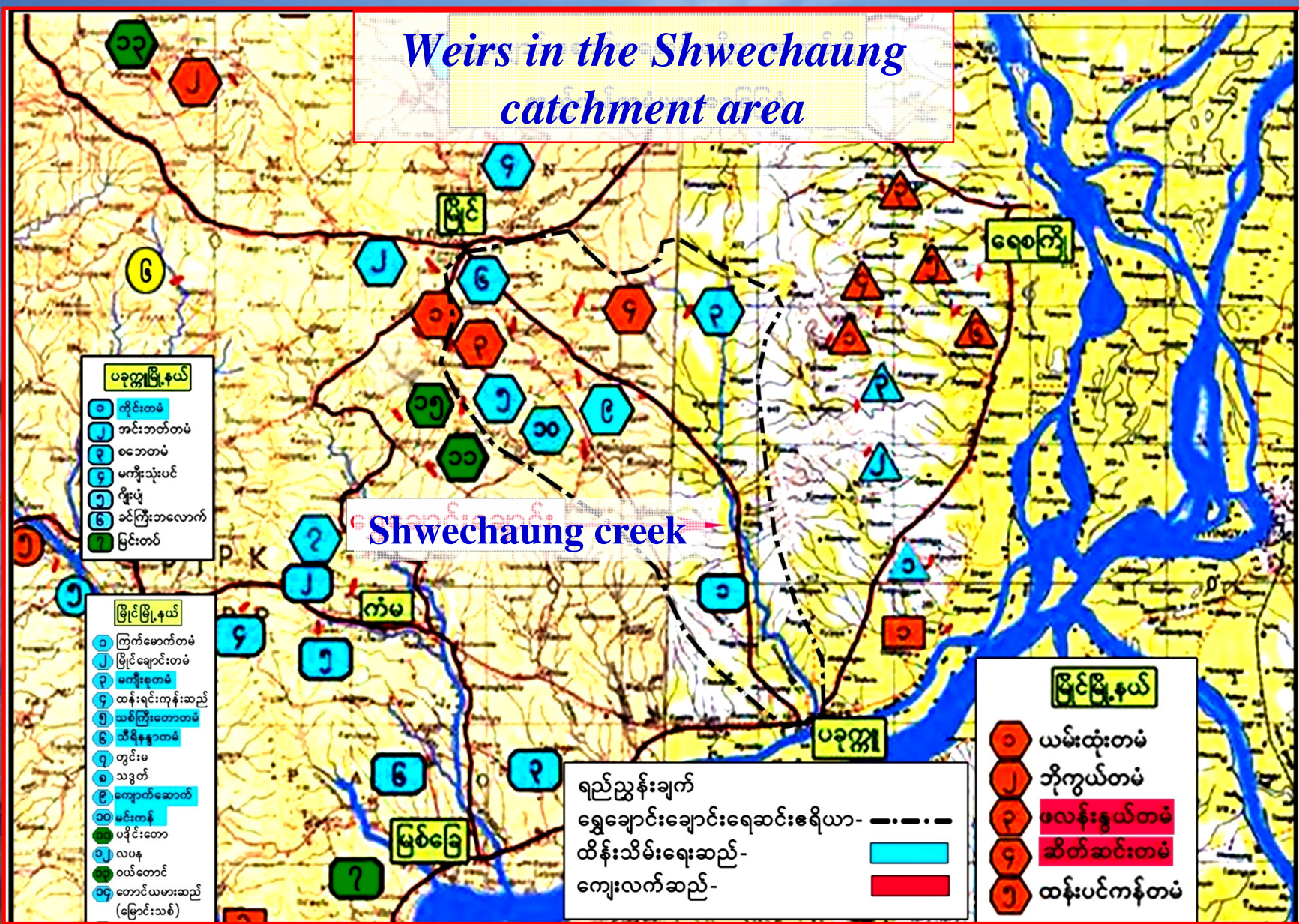
- The effect of heavy rainfall
- Soil erosion
- Topography
- Channel storage capacity and
- Bank erosion

*MAXIMUM RAINFALL OF THE STATIONS IN THE SHWECHAUNG  
CATCHMENT AREA  
DURING THE PERIOD OF FLASH FLOOD OCCURRANCE (20-10-2011)*



■ Rainfall(in)

# Weirs in the Shwechaung catchment area



- ပခုက္ကူမြို့နယ်**
- ၁ ကိုင်းတမံ
  - ၂ အင်းဘက်တမံ
  - ၃ စောတမံ
  - ၄ မက်ဒိုးသုံးပင်
  - ၅ ဂျိုးပျံ
  - ၆ ခင်ကြီးဘလောက်
  - ၇ မြင်းတပ်

- မြိုင်မြို့နယ်**
- ၁ ကြက်မောက်တမံ
  - ၂ မြိုင်ချောင်းတမံ
  - ၃ မတီးရတမံ
  - ၄ ထန်းရင်းကုန်းဆည်
  - ၅ သစ်ကြီးတောတမံ
  - ၆ သီရိနန္ဒာတမံ
  - ၇ တွင်းမ
  - ၈ သဒ္ဓတ်
  - ၉ တျောက်ဆောက်
  - ၁၀ မင်းတန်
  - ၁၁ ပဒိုင်းတော
  - ၁၂ လပန
  - ၁၃ ဝယ်တောင်
  - ၁၄ တောင်ယမားဆည် (မြောင်းသစ်)

- ရည်ညွှန်းချက်
- ရွှေချောင်းချောင်းရေဆင်းဧရိယာ- - - - -
  - ထိန်းသိမ်းရေးဆည်- [Blue Box]
  - ကျေးလက်ဆည်- [Red Box]

- မြိုင်မြို့နယ်**
- ၁ ယမ်းထုံးတမံ
  - ၂ ဘိုကွယ်တမံ
  - ၃ ဖလန်းနွယ်တမံ
  - ၄ ဆိတ်ဆင်းတမံ
  - ၅ ထန်းပင်ကန်တမံ

## *Flash Flood*



• No. of affected village-tract	=	217
• No. of Kwin	=	365
• No. of farmers	=	6805
• Acre affected	=	8376
• Acre destroyed	=	3253
– Flood	=	1840
– Sand covered	=	752
– Eroded	=	661

# *Shwechaung Flash Flood at Pakokku (20-10-2011)*



*Damages caused by heavy Rainfall at Nyaung U and Bagan (20.10.2011)*

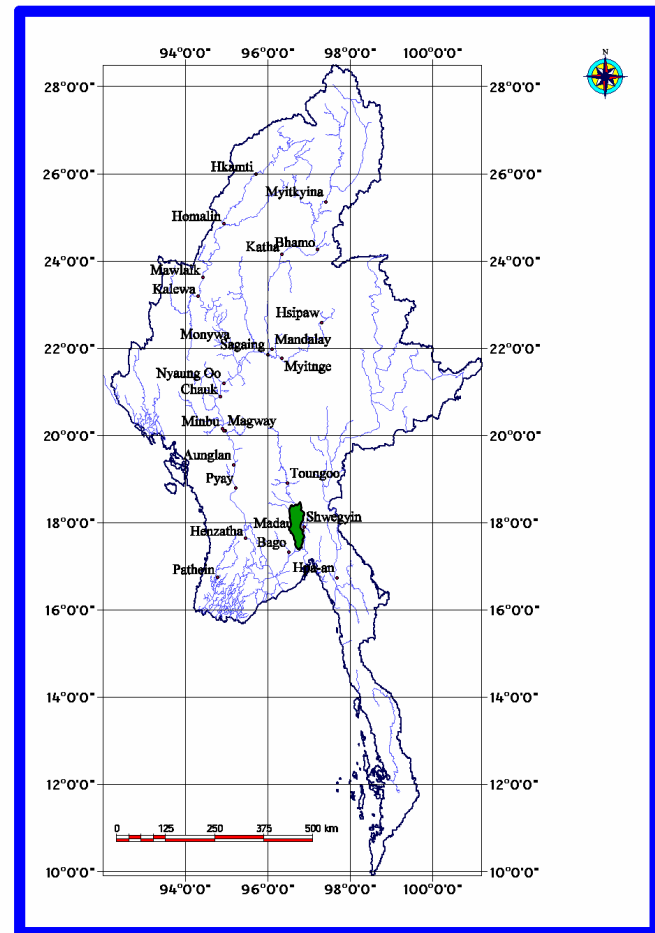




# DP(Shwegyin Basin) in Myanmar

- Shwegyin township in Bago division is geographically located between  $17^{\circ} 44'$  to  $18^{\circ} 14'$  N and  $96^{\circ} 44'$  to  $97^{\circ} 14'$  E.
- It stretches for about 42 miles from North to South and 19 miles from east to west
- Outlet of the Shwegyin catchment is located at  $17^{\circ} 55'$  N and  $96^{\circ} 52'$  E and Shwegyin town is situated on the mouth of shwegyin river
- Shwegyin catchment is about  $1697.9 \text{ km}^2$
- Topography of the basin is varying from 10 m to 1827 m above m.s.l
- The high mountains are formed in northern and eastern part with plain areas in western and southern part of the basin.
- There are 5 rivers which flowing through the township including shwegyin river.
- There is one Met and Hydro station (rf, wl, ds, sediment ds, wt, evp., wind speed/ direction, RH )

Hydrological Forecasting Stations



## *Pilot project Benefits*

- **According to do this DP project of Myanmar, the some research works and capacity buildings were done to upgrade the flood forecasting system for the basin**
- **Impacts of Climate change and also Elnino and Lanina events on this basin will be analyzed. Climate change assessment and adaptation in this basin will also be studied.**
- **Cooperate and contribute to the next stage of AWCI.**



*THANKS FOR YOUR KIND ATTENTION*

*<http://www.moezala.gov.mm>*