

**AWCI ITT Working Session  
25 September 2006, Bangkok, Thailand**

# **Country Report (Myanmar)**

**Presented by**

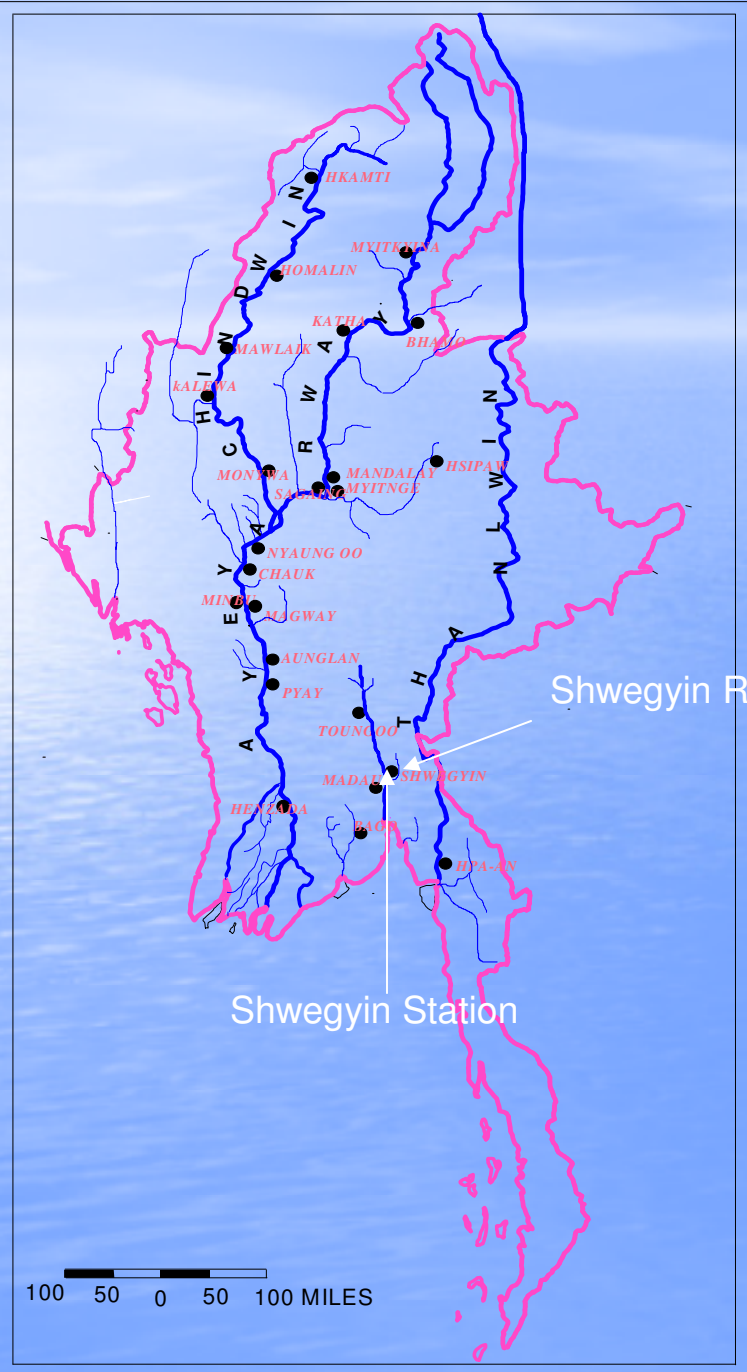
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## Major Functions of DMH

- Issue Daily Weather Forecast, Untimely Rainfall Warning, Storm Forecast, Storm Warning, Aviation Forecast, Seasonal and Dekad Weather Forecast
- Issue Daily River Stage Forecast, Flood Forecast , Flood warning and Flood Bulletin, Sesonal and Dekad River Forecast, Discharge Measurement, Sediment Discharge Measurement, Water Quality Measurement, Publish Hydro-Meteorological Annual book
- Issue Earthquake Report
- Issue Agrometeorological report

# Catchment of Shwegyin River at Shwegyin



## Shwegyin River Basin

- Tributary of Sittoung River
- Catchment Area - 1747 Km<sup>2</sup>
- Topography of basin – about 40ft-6200 ft above MSL
- The high mountain lie at the Northern part of the Catchment Area

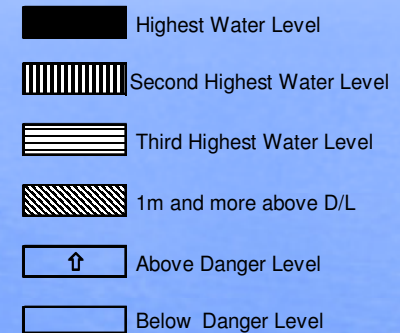
## Available Data

### Shwegyin Station

- on the mouth of the Shwegyin river
- situated at 96° 32' E and 17° 55' N
- Shwegyin Township is 42 miles long from north to south and 19 miles wide from east to west
- Only one Met. and Hydro. Station
- Rainfall, Water level, Water Temperature, Discharge and Sediment Discharge, Wind Direction, Wind Speed, Air Temperature, Humidity, Evaporation
- since 1966

### Occurrence of Floods

Rivers	Shwegyin River
Years	Shwegyin
1966	
1967	
1968	↑
1969	↑
1970	
1971	↑
1972	↑
1973	◆
1974	↑
1975	
1976	
1977	
1978	
1979	↑
1980	
1981	
1982	
1983	
1984	
1985	↑
1986	
1987	
1988	
1989	
1990	↑
1991	↑
1992	↑
1993	↑
1994	
1995	
1996	
1997	
1998	
1999	
2000	↑
2001	↑
2002	↑
2003	
2004	↑
2005	↑
Frequency of Flood above D/L	21
Frequency of Flood 1m and above D/L	5



River System : Shwegyin

Station : Shwegyin

Danger Level : 700 cm

Year	Flood Peak (cm)	Date of occuranc	Flood Duration above T.D	Start & End Date	Min W/L (cm)	Date of occurrence	Record
1966	645	11. 8.66	Below D.L		111	29.4.66	<i>First(min)</i>
1967	810	9. 8.67	2 Days12 Hrs	7. 8.67 - 10. 8.67	286	9.5.67	
1968	771	15. 8.68	2 Days 6 Hrs	14. 8.68 - 16. 8.68	268	17.4.68	
1969	764	8. 8.69	1 Days 0 Hrs	7. 8.69 - 8. 8.69	260	7.5.69	<i>Third(min)</i>
	718	1. 8.69	0 Days 6 Hrs	1. 8.69 - 1. 8.69			
	716	11. 8.69	0 Days12 Hrs	11. 8.69 - 11. 8.69			
1970	657	12. 9.70	Below D.L		263	5.5.70	
1971	749	20. 7.71	0 Days18 Hrs	19. 7.71 - 20. 7.71	283	5.5.71	
1972	733	25. 8.72	1 Days 0 Hrs	25. 8.72 - 26. 8.72	301	13.5.72	
1973	705	20.8.73	0 Days 6 Hrs	20.8.73 - 20.8.73	272	28.4.73	
1974	782	16. 8.74	2 Days 6 Hrs	16. 8.74 - 18. 8.74	289	22.4.74	
1975	692	26. 8.75	Below D.L		307	1.5.75	
1976	660	26. 7.76	Below D.L		272	27.4.76	
1977	664	27. 7.77	Below D.L		283	6.5.77	
1978	696	7. 8.78	Below D.L		289	13.5.78	
1979	712	19. 8.79	1 Days 6 Hrs	18. 8.79 - 19. 8.79	308	26.4.79	
1980	682	25. 8.80	Below D.L		299	3.5.80	
1981	667	13. 8.81	Below D.L		316	4.5.81	
1982	693	31. 7.82	Below D.L		306	3.5.82	
1983	576	27. 8.83	Below D.L		300	22.5.83	
1984	690	20. 6.84	Below D.L		308	23.4.84	
1985	700	30. 6.85	Below D.L		311	25.4.85	
1986	627	16. 8.86	Below D.L		336	7.5.86	
1987	658	26. 8.87	Below D.L		328	20.4.87	

Year	Flood Peak (cm)	Date of occuranc	Flood Duration above T.D	Start & End Date	Min WL (cm)	Date of occurrence	Record
1987	658	26. 8.87	Below D.L		328	20.4.87	
1988	645	2. 8.88	Below D.L		331	16.4.88	
1989	612	26. 9.89	Below D.L		328	9.5.89	
1990	789	30. 7.90	2 Days18 Hrs	30. 7.90 - 2. 8.90	320	27.4.90	
1991	750	13. 8.91	1 Days 0 Hrs	13. 8.91 - 14. 8.91	319	22.5.91	
	724	1. 8.91	0 Days12 Hrs	1. 8.91 - 1. 8.91			
	729	23. 8.91	0 Days12 Hrs	23. 8.91 - 23. 0.91			
1992	772	19. 8.92	2 Days18 Hrs	18. 8.92 - 21. 8.92	322	11.5.92	
1993	781	23. 8.93	4 Days 0 Hrs	21. 8.93 - 25. 8.93	315	10.5.93	
1994	812	5. 8.94	2 Days 6 Hrs	5. 8.94 - 7. 8.94	337	30.4.94	
	744	29. 7.94	3 Days 6 Hrs	28. 7.94 - 31. 7.94			
	773	2. 8.94	1 Days18 Hrs	1. 8.94 - 3. 8.94			
1995	661	2. 9.95	Below D.L		323	9.5.95	
1996	827	26. 7.96	5 Days12 Hrs	24. 7.96 - 29. 7.96	397	23.4.96	Third(max)
	727	2. 8.96	0 Days 6 Hrs	2. 8.96 - 2. 8.96			
	810	4. 8.96	2 Days 0 Hrs	4. 8.96 - 6. 8.96			
	733	24. 8.96	0 Days 6 Hrs	24. 8.96 - 24. 8.96			
1997	927	3. 8.97	4 Days12 Hrs	1. 8.97 - 6. 8.97	378	12.5.97	First(max)
	737	12. 7.97	0 Days12 Hrs	12. 7.97 - 12. 7.97			
1998	602	10. 9.98	Below D.L		333	31.12.98	
1999	902	7. 8.99	11 Days12 Hrs	5. 8.99 - 16. 8.99	303	9.4.99	Second(max)
	724	24. 6.99	0 Days 6 Hrs	24. 6.99 - 24. 6.99			
2000	791	20. 7.00	2 Days12 Hrs	19. 7.00 - 21. 7.00	357	23.3.00	
2001	790	21. 7.01	6 Days 6 Hrs	21. 7.01 - 27. 7.01	346	3.5.01	
	728	12. 8.01	0 Days12 Hrs	12. 8.01 - 12. 8.01			
2002	752	17. 8.02	2 Days12 Hrs	17. 8.02 - 19. 8.02	325	4.5.02	
	710	21. 8.02	0 Days 6 Hrs	21. 8.02 - 21. 8.02			
2003	688	29. 6.03	Below D.L		349	20.4.03	
2004	772	15. 8.04	7 Days12 Hrs	13. 8.04 - 20. 8.04	325	25.4.04	
	703	11. 9.04	6 Hrs	11. 9.04 - 11. 9.04			
2005	773	6. 8.05	3 Days 6 Hrs	6. 8.05 - 9. 8.05	370	6.5.05	

## Historical Background of the river basin

- Flood frequency and intensity is increasing since 1990
- Severe flood occurred in 1997, 1996 and 1999
- During highest flood in 1997, 504 houses washed away by flood, there were some casualties of human and livestock, 6338 acres of paddy field were affected, 3639 acres of paddy field and 288 acres of corn field were destroyed in Shwegyin Township
- During August 1997, the water level sharply rise about 2.65m within 40 hrs because of heavy rainfall in the catchment (5.51, 15.56, 9.26 inches on 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> August at Shwegyin station)) and exceeded 2.27 m above its danger level and the water level stay 4 days and 12 hrs above its D.L
- During July 2006, the water level sharply rise about 2.5 m within one day because of heavy rainfall in the upper catchment and 15.4 inches during 5 to 11 July at Shwegyin Station and exceeded about (0.83) m above its danger level and the water level stay about 4 days above its D.L

## Needs related to the water resources management in the basin

- to install two telemetering stations, and one receiving station in the basin in order to get early warning system
- to develop the flash flood forecasting technique
- to produce flood risk zone map

## Expected effects

- **Economic effects:** Damages of paddy field and properties can be reduced by accurate flash flood or flood warnings issue with sufficient lead time
- **Technical effects:** Able to apply the flash flood forecasting model  
Able to apply GIS and Remote Sensing Technologies effectively
- **Social and Environmental effects:** Able to evacuate in time by use of flood risk zone map  
Assist in environmental sustainable development



## Conclusion

- DMH have to propose the projects related to the water resources management
- the above mentioned basin is one of the basins for the proposal projects
- Myanmar (DMH) will collaborate in the data application.
- The available data in the candidate river basin will be included in the CEOP Phase 2 integrated data set.

**THANKS FOR  
YOUR ATTENTION**