First steering committee meeting (SCM 1)
South Asia Flood Guidance (SAsiaFFG) PROJECT
New Delhi, India
26-28 April 2016

Afghanistan Civil Aviation Authority (ACAA)
Afghanistan Meteorological Department (AMD)

PREPARED BY: Eng. Moh. Nasim MURADI  Head of Forecast
& Eng. Mustafa Ali JAGHORI
AFGHANISTAN

- Afghanistan is a landlocked country that is bordered by Turkmenistan, Uzbekistan and Tajikistan to the north, China to the east, Pakistan to the east and south and Iran to the west.
- Kabul is the capital and largest city in Afghanistan, located in the Kabul Province;
- Afghanistan is made up of 34 provinces.
- With an estimated population of Afghanistan about 30 millions.
CLIMATE OF AFGHANISTAN:

- Afghanistan is a mountainous country in a dry part of the world which experiences extremes of climate and weather. Winters are cold and snowy, summers hot and dry. The wet season generally runs from winter through early spring, but the country on the whole is dry. The climate is typical of an arid or semiarid steppe, with cold winters and dry summers. The Hindu Kush mountain range reaches a high of 7,492 meters (24,580 ft) at Noshaq, Afghanistan’s highest peak.
Afghanistan has a dry continental climate with a large diurnal temperature range. However, the country is mountainous affected mainly by Mediterranean, Indian Monsoon cyclones, Gulf and seldom by Siberian cyclones. The average rain precipitation in desert areas is less than 250 mm, in plain areas 300 mm and in highlands 700-950 and even 1212 mm/annum had been recorded. Mainly the country is affected by seasonal rain precipitation and snowfall.
EFFECT OF INDIAN MONSOON ON AFGHANISTAN:

- The main source of Indian monsoon is the upstream of Tibetan plateau. Indian monsoon bring tropical air masses that determine the climate between July and September at that times these air masses advance in to central and southern Afghanistan bringing increased humidity and some rain, but the snow season averages roughly October - April in the mountains and varies considerably with elevation.
Fig. 1. Consensus outlook for 2015 Southwest Monsoon Rainfall over South Asia.
HOW TO FLOOD HAPPEN:

- A flood happens when a river overflows its banks. Too much rain or melted snow can cause.

- Flooding is one of the most widespread of climatic hazards.

Flood hazards may increase as a result of climate change.
FLOOD AND AVALANCHE IN AFGHANISTAN

People suffer from natural disasters every year in Afghanistan province, people lost their properties and lives. The most critical disasters are earthquake, landslides, drought, and floods which cause enormous loss, humanitarian, and financial resources.
In recent year, more investment on reconstruction project have been done in Afghanistan but unfortunately, in the natural disaster risk reduction, very less investment and assessment.
AREA EFFECTED BY HEAVY RAINFALL AND FLOOD
GFS MEDIUM RANGE FORECASTS OF VERTICAL VELOCITY AND PRECIPITATION
METEOROLOGICAL MODELS USED FOR FORECAST

Daily Total Precipitation (mm) 17–APR–2016

Civil Aviation Authority
Islamic Republic of Afghanistan
اداره مستقل هوا نوردی ملکی
ریاست هوا شناسی
CIVIL AVIATION AUTHORITY
DEPARTMENT OF METEOROLOGY

پیشگویی اوضاع جوی طی سه روز آینده

شماره: 1147
تاریخ: 27 مه 1395

سطحی وضع جوی طی سه روز آینده: هنگام 14 ساعت اندکی اکثر مناطق کشور به دلیل بارش کاملاً و سریع گردد و بعد از انتهای اکثر مناطق پایین بارندگی خواهد بود. حجم‌های مخادم مناطق پایین بارندگی که باعث پذیرش آب و سیالی شده و تغییرات پیشنهاد می‌شود استریم‌های از این مناطق به جنوب، شرق و غرب کشور بروند.

زیست‌محیطی: اکثر مناطق کشور به دلیل بارش کاملاً و سریع گردد و بعد از انتهای اکثر مناطق پایین بارندگی خواهد بود. حجم‌های مخادم مناطق پایین بارندگی که باعث پذیرش آب و سیالی شده و تغییرات پیشنهاد می‌شود استریم‌های از این مناطق به جنوب، شرق و غرب کشور بروند.

CIVIL Aviation Authority
Islamic Republic of Afghanistan
FLOOD KILLS 23 PEOPLE IN QALA-E-NAW PROVIDENCE IN AFGHANISTAN:

QALA-E-NAW, Afghanistan April 17-Heavy rainfall and floods claimed the lives of 23 people including women and children in the western Badghis province with Qala-e-Naw as its capital 555 km northwest of Kabul on Saturday night and Sunday morning, province.

"Based on the reports we have received so far, 23 people including women and children have confirmed dead due to downpour and flooding in Jawand, Balamurghab and Abkamari districts.

Rainstorms and flooding hit several parts of Afghanistan including the capital city Kabul on Saturday night and parts of the country is still raining.

18 April 2016

Flash waters killed six people, three women and three children, and damaged about 20 houses and at least five area of agricultural land in Samangan Province.
According to News in Afghanistan at least 31 people have been killed in flash floods that struck in northern parts of the country between 16 and 17 April, 2016. Several people are also reported to be missing in the floods.

At least 5 of the deaths occurred in a village near Taloqan in Takhar province. The Chinese news agency, say that in Badghis province, the districts of Jawand, Murghab and Ab Kamari were the worst hit. As many as 23 people deaths have been reported in those 3 districts alone.

Khaama Press say that Afghanistan is often “hit by heavy rainfalls as the weather gets warm across the country which mainly contributes to flash floods that leave hundreds of people dead every year.
SOME FLOOD PICTURES IN DIFFERENT PARTS OF AFGHANISTAN
SOME FLOOD PICTURES IN DIFFERENT PART OF AFGHANISTAN
GAPS AND CHALLENGES

- Lack of sufficient Meteorological stations and equipment
- Security problems
- Shortage of technical staff
- Lack of trainings in the section of climate and forecasting
- Lack of cooperation between the hydromet sectors in the national and international levels
- Lack of flood forecasting software and modeling for flood forecasting
Thank you