WFP Operations

Emergency Preparedness and Response

Weather Forecasting for Humanitarian Response

What is needed?

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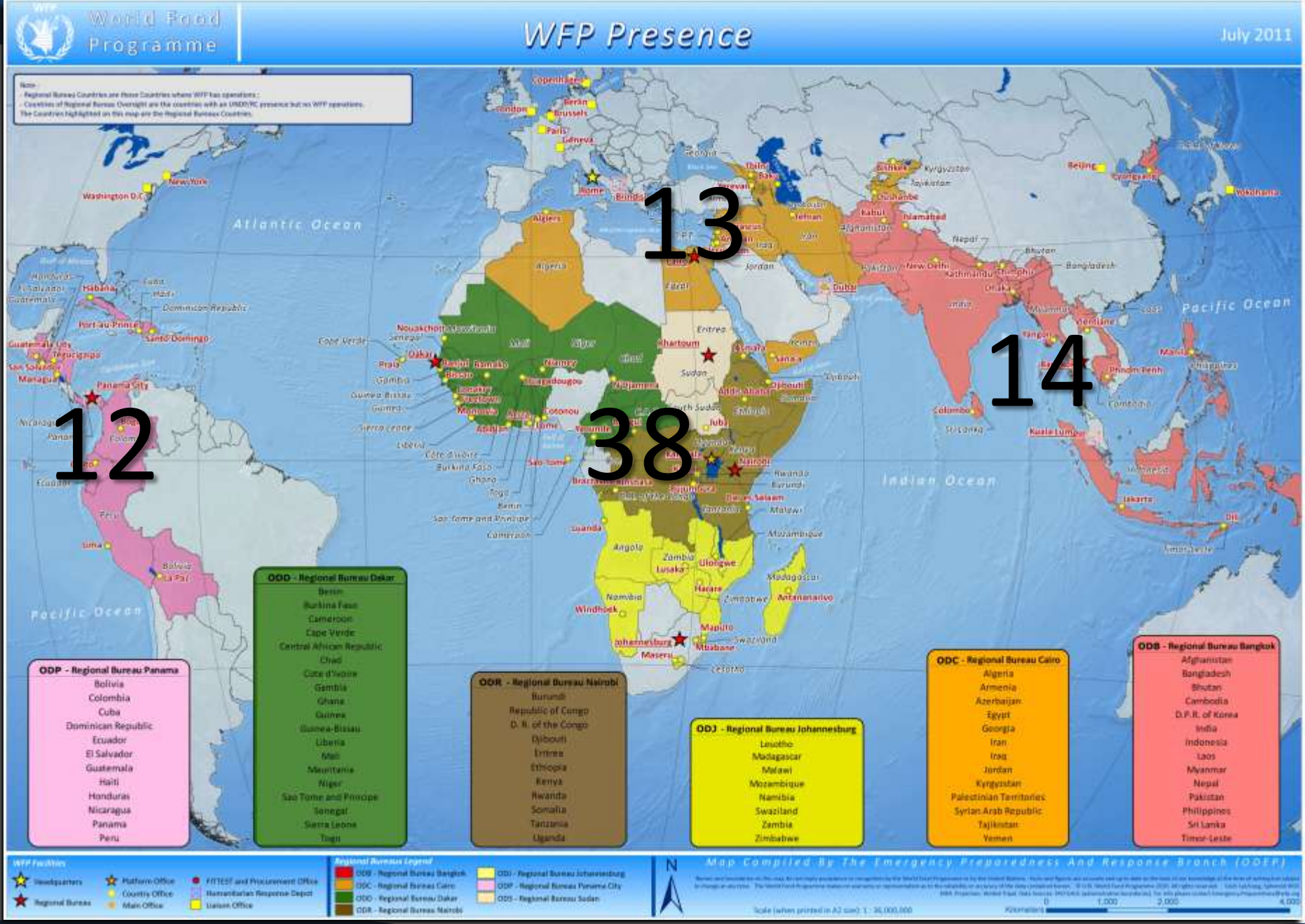
Emergency Preparedness and Response Branch

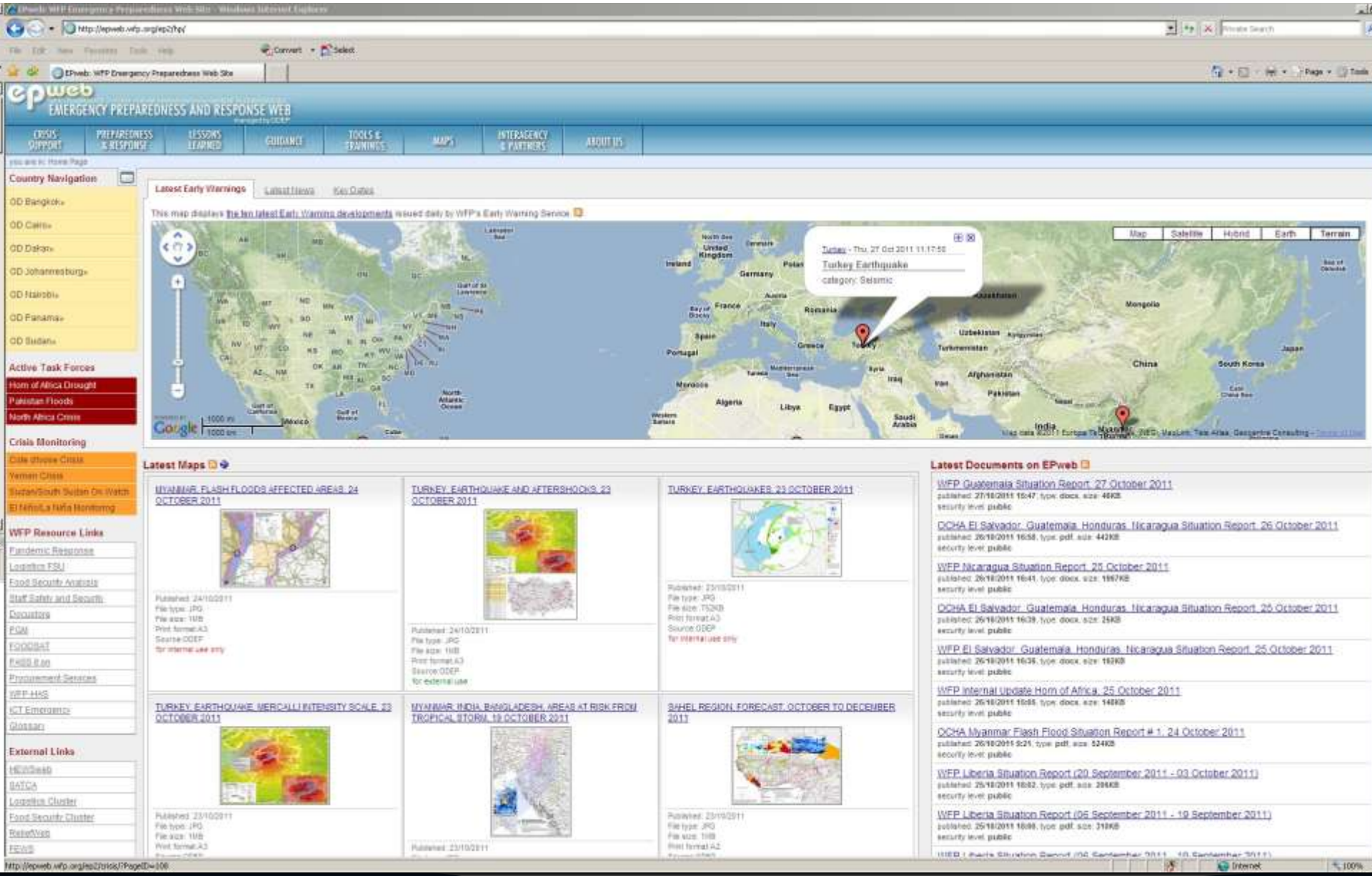

World Food Programme
WFP Presence
July 2011
13
14
12
38
ODP - Regional Bureau Panama
Bolivia
Colombia
Cuba
Dominican Republic
Ecuador
El Salvador
Guatemala
Haiti
Honduras
Nicaragua
Panama
Peru
OOD - Regional Bureau Dakar
Benin
Burkina Faso
Cameroon
Cape Verde
Central African Republic
Chad
Cote d'Ivoire
Gambia
Ghana
Guinea
Guinea-Bissau
Liberia
Mali
Mauritania
Niger
Sao Tome and Principe
Senegal
Sierra Leone
Togo
OOR - Regional Bureau Nairobi
Burundi
Republic of Congo
D. R. of the Congo
Djibouti
Eritrea
Ethiopia
Kenya
Rwanda
Somalia
Tanzania
Uganda
ODJ - Regional Bureau Johannesburg
Lesotho
Madagascar
Malawi
Mozambique
Namibia
Swaziland
Zambia
Zimbabwe
ODC - Regional Bureau Cairo
Algeria
Armenia
Azerbaijan
Egypt
Georgia
Iran
Iraq
Jordan
Kyrgyzstan
Palestinian Territories
Syrian Arab Republic
Tajikistan
Yemen
ODB - Regional Bureau Bangkok
Afghanistan
Bangladesh
Bhutan
Cambodia
D.P.R. of Korea
India
Indonesia
Laos
Myanmar
Nepal
Pakistan
Philippines
Sri Lanka
Timor-Leste
Atlantic Ocean
Pacific Ocean
Indian Ocean
Map Compiled By The Emergency Preparedness And Response Branch (ODEP)

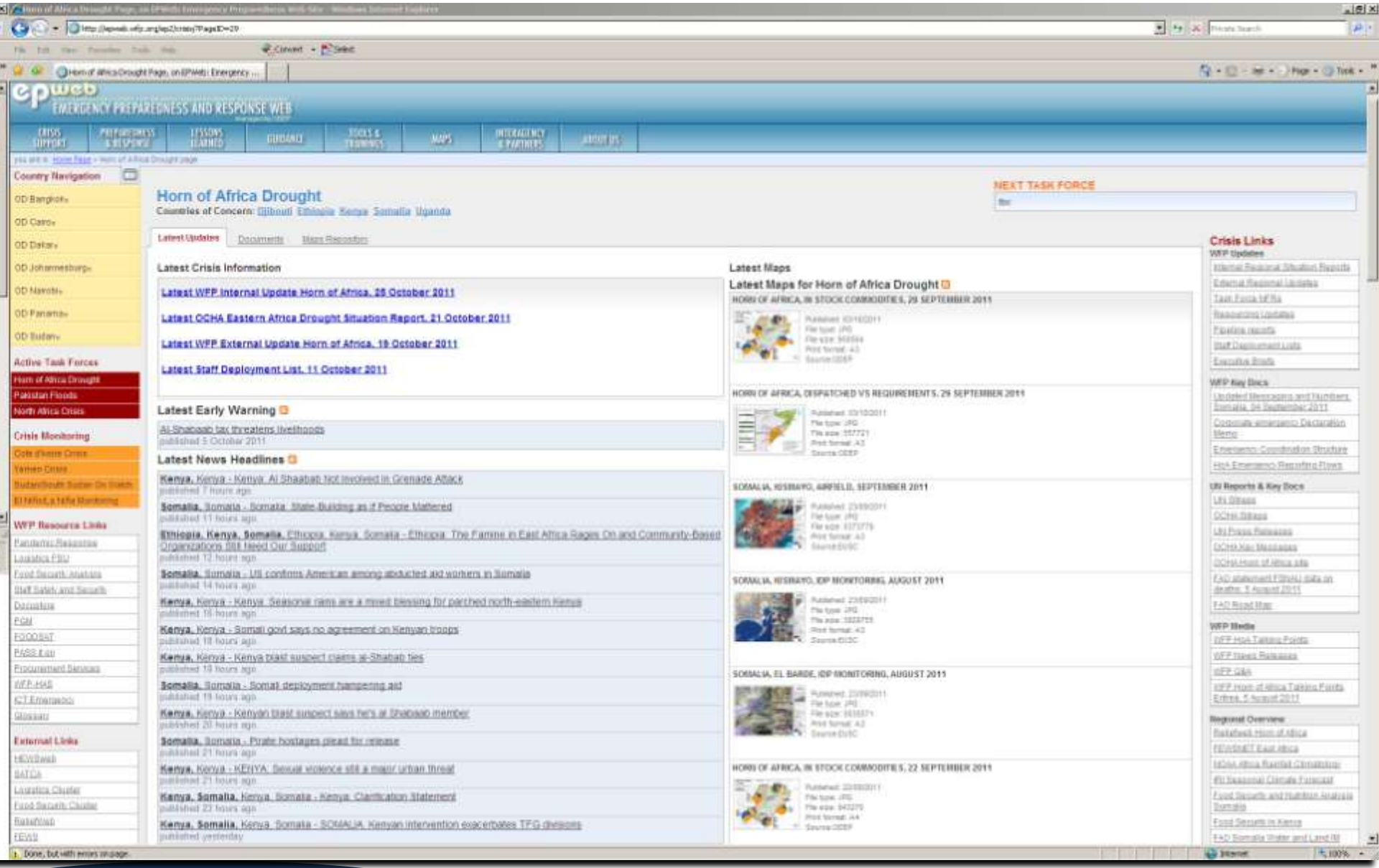
Emergency Preparedness and Response Branch

Time is very limited

Information is critical

Situational Awareness Overview for Operational Planning


epweb
EMERGENCY PREPAREDNESS AND RESPONSE WEB
CRISIS SUPPORT
PREPAREDNESS & RESPONSE
LESSONS LEARNED
GUIDANCE
TOOLS & TRAININGS
MAPS
INTERAGENCY & PARTNERS
ABOUT US
Country Navigation
OD Bangkok
OD Cairo
OD Dakar
OD Johannesburg
OD Nairobi
OD Panama
OD Sudan
Active Task Forces
Horn of Africa Drought
Pakistan Floods
North Africa Crisis
Crisis Monitoring
Cote d'Ivoire Crisis
Yemen Crisis
Sudan/South Sudan On Watch
El Nino/La Nina Monitoring
WFP Resource Links
Pandemic Response
Logistics FSU
Food Security Analysis
Staff Safety and Security
Donortrac
FSM
FOODSAT
Field Exp
Procurement Services
WFP-HAS
ICT Emergency
Glossary
External Links
HEWSweb
SATCA
Logistics Cluster
Food Security Cluster
ReliefWeb
FEWS
Latest Early Warnings
Latest News
Key Dates
This map displays the ten latest Early Warning developments issued daily by WFP's Early Warning Service
Turkey Earthquake
category: Seismic
Latest Maps
MYANMAR: FLASH FLOODS AFFECTED AREAS, 24 OCTOBER 2011
TURKEY: EARTHQUAKE AND AFTERSHOCKS, 23 OCTOBER 2011
TURKEY: EARTHQUAKES, 23 OCTOBER 2011
TURKEY: EARTHQUAKE, MERCALLI INTENSITY SCALE, 23 OCTOBER 2011
MYANMAR, INDIA, BANGLADESH: AREAS AT RISK FROM TROPICAL STORM, 19 OCTOBER 2011
SAHEL REGION: FORECAST: OCTOBER TO DECEMBER 2011
Latest Documents on EPweb
WFP Guatemala Situation Report, 27 October 2011
OCHA El Salvador, Guatemala, Honduras, Nicaragua Situation Report, 26 October 2011
WFP Nicaragua Situation Report, 25 October 2011
OCHA El Salvador, Guatemala, Honduras, Nicaragua Situation Report, 25 October 2011
WFP El Salvador, Guatemala, Honduras, Nicaragua Situation Report, 25 October 2011
WFP Internal Update Horn of Africa, 25 October 2011
OCHA Myanmar Flash Flood Situation Report # 1, 24 October 2011
WFP Liberia Situation Report (20 September 2011 - 03 October 2011)
WFP Liberia Situation Report (06 September 2011 - 19 September 2011)


epweb
EMERGENCY PREPAREDNESS AND RESPONSE WEB
Horn of Africa Drought
Countries of Concern: Djibouti Ethiopia Kenya Somalia Uganda
Latest Updates
Documents
Latest Crisis Information
Latest WFP Internal Update Horn of Africa, 25 October 2011
Latest OCHA Eastern Africa Drought Situation Report, 21 October 2011
Latest WFP External Update Horn of Africa, 19 October 2011
Latest Staff Deployment List, 11 October 2011
Latest Early Warning
Al-Shabaab tax threatens livelihoods
published 5 October 2011
Latest News Headlines
Kenya, Kenya - Kenya: Al Shaabab Not Involved in Grenade Attack
published 7 hours ago
Somalia, Somalia - Somalia: State Building as if People Mattered
published 11 hours ago
Ethiopia, Kenya, Somalia, Ethiopia, Kenya, Somalia - Ethiopia: The Famine in East Africa Rages On and Community-Based Organizations Still Need Our Support
published 12 hours ago
Somalia, Somalia - US confirms American among abducted aid workers in Somalia
published 14 hours ago
Kenya, Kenya - Kenya: Seasonal rains are a mixed blessing for parched north-eastern Kenya
published 16 hours ago
Kenya, Kenya - Somali govt says no agreement on Kenyan troops
published 18 hours ago
Kenya, Kenya - Kenya blast suspect claims al-Shabab ties
published 19 hours ago
Somalia, Somalia - Somali deployment hampering aid
published 19 hours ago
Kenya, Kenya - Kenyan blast suspect says he's al Shabaab member
published 20 hours ago
Somalia, Somalia - Pirate hostages plead for release
published 21 hours ago
Kenya, Kenya - KENYA: Sexual violence still a major urban threat
published 21 hours ago
Kenya, Somalia, Kenya, Somalia - Kenya: Clarification Statement
published 22 hours ago
Kenya, Somalia, Kenya, Somalia - SOMALIA: Kenyan intervention exacerbates TFG divisions
published yesterday
Latest Maps
Latest Maps for Horn of Africa Drought
HORN OF AFRICA, IN STOCK COMMODITIES, 29 SEPTEMBER 2011
HORN OF AFRICA, DISPATCHED VS REQUIREMENTS, 29 SEPTEMBER 2011
SOMALIA, KISMAYO, AIRFIELD, SEPTEMBER 2011
SOMALIA, KISMAYO, IDP MONITORING, AUGUST 2011
SOMALIA, EL BARDE, IDP MONITORING, AUGUST 2011
HORN OF AFRICA, IN STOCK COMMODITIES, 22 SEPTEMBER 2011
Crisis Links
Country Navigation
OD Bangkok
OD Cairo
OD Dakar
OD Johannesburg
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Active Task Forces
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Pakistan Floods
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PASS Extra
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ICT Emergency
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HEWSweb
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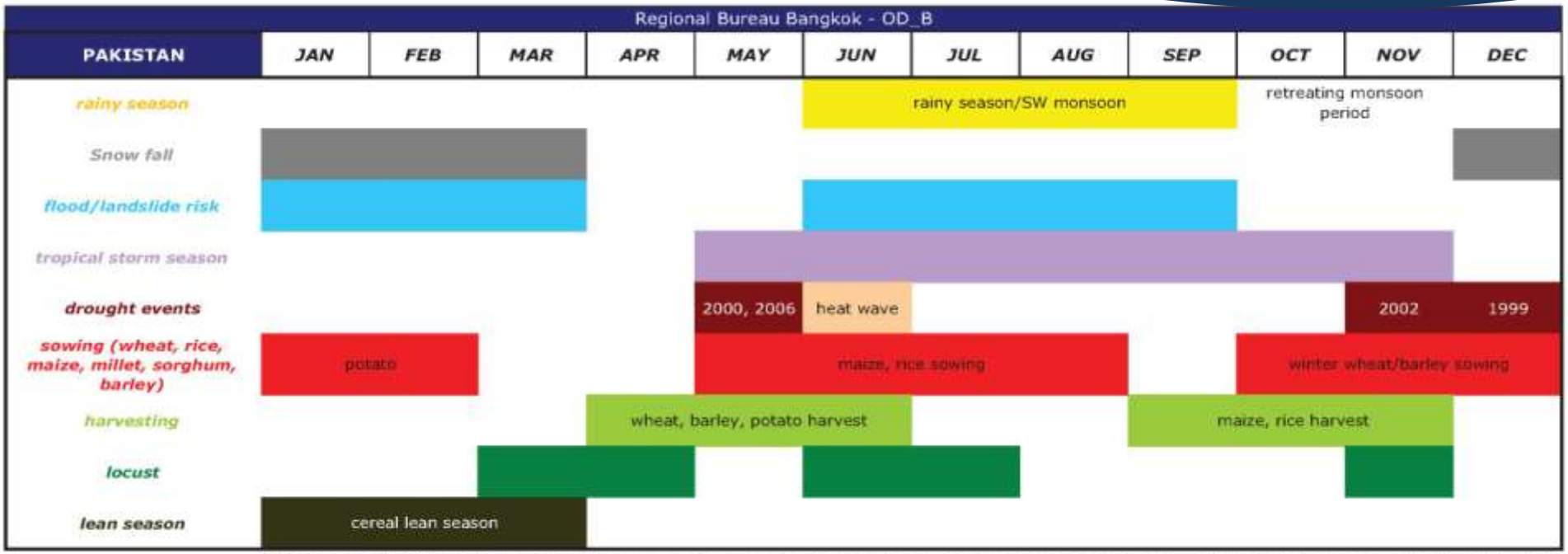
Food Security Cluster
ReliefWeb
FEWS
NEXT TASK FORCE

Regional Bureau Bangkok - OD_B



Climate/Terrain	**Climate**: cold winters and hot summers in the north and a mild climate in the south, moderated by the influence of the ocean. The central area has a continental climate. Four seasons: a cool, dry winter from December through February; a hot, dry spring from March through May; the summer rainy season, or southwest monsoon period, from June through September; and the retreating monsoon period of October and November. The onset and duration of these seasons vary somewhat according to location. **Terrain**: plains in the South, mountains in the North, to the West of the Indus river are the dry, hilly deserts of Balochistan; to the East the rolling sand dunes of the Thar Desert (eastern Sindh province and the southeastern portion of Punjab)

LATEST FLOODS EVENTS with AFFECTED AREAS

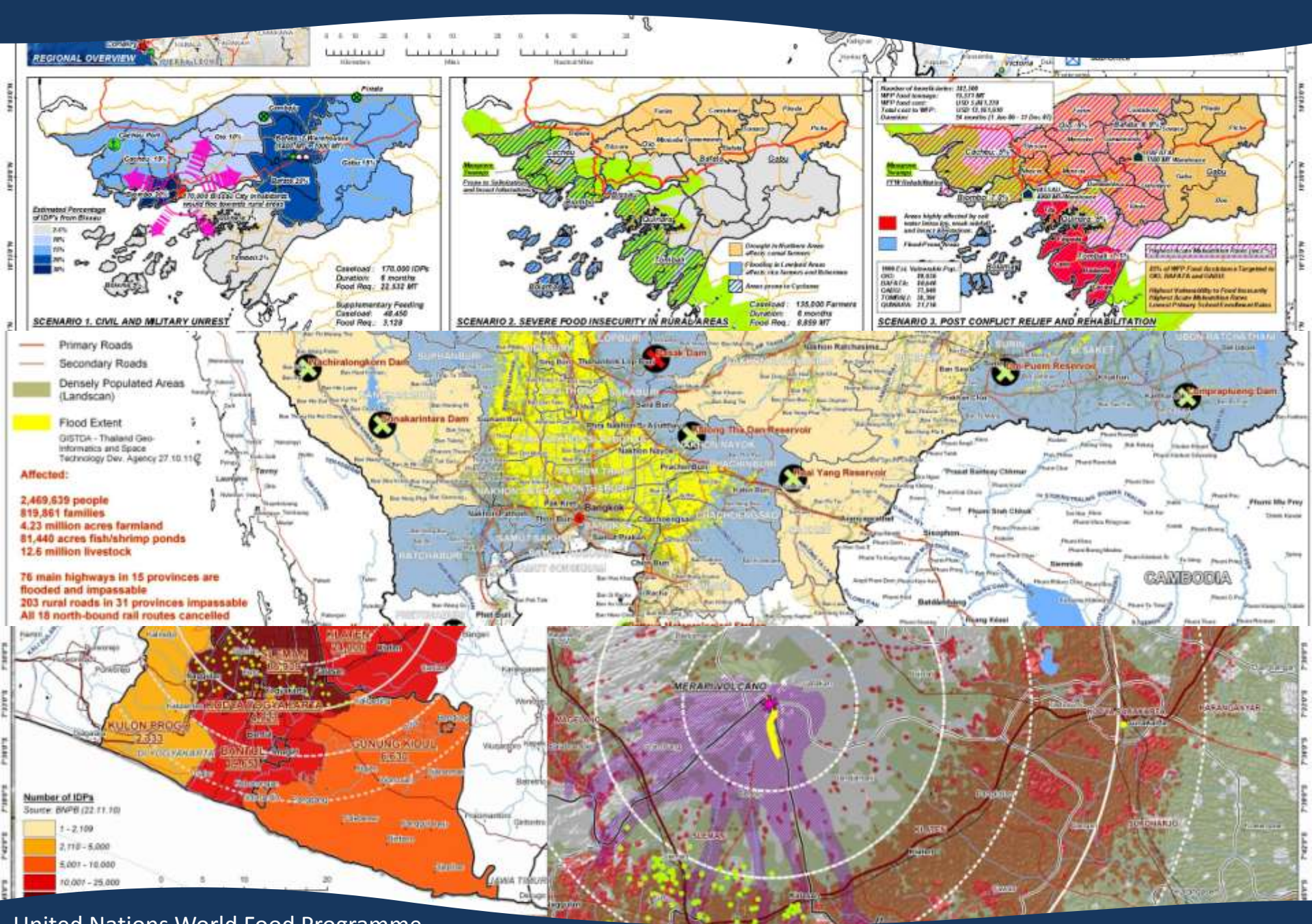
February	**2010** - a massive landslide-snow avalanche hit a remote village in mountainous northern areas; **2005** - Heavy rain and snow affected 7,000,450 peoople; **2003** - torrential rains and flash floods in most part of the country
March	**2007** - landslide in Kashmiri village; **1998** - 1,000 people killed
June	**2007** - Sindh and Balochistan provinces in southern Pakistan, till July; Karachi due to monsoon storm;
July	**2009** - Karachi and Thatha; **2006** - Punjab province, northern and central parts + landslide in Kashmir, in the Chela Bandi district of the capital Muzaffarabad; **2005** - Northern Areas, North West Frontier Province (NWFP), Punjab and Sindh
August	**2009** - 55 villages in central Pakistan; FF in NorthWestern province, Swabi and Mardan district; ate July-early Aug **2008** - particularly affecting the Peshawar District in the North West Frontier Province (NWFP) and Rajanpur District in Punjab Province; **2007** - border with India; **2006** - North West Frontier Province and Sindh; Punjab and Balochistan provinces; **1996** - 1,300,000 affected
September	**2009** - Karachi; **2005** - Karachi; **1992** - 1,334 people killed and 6 million affected

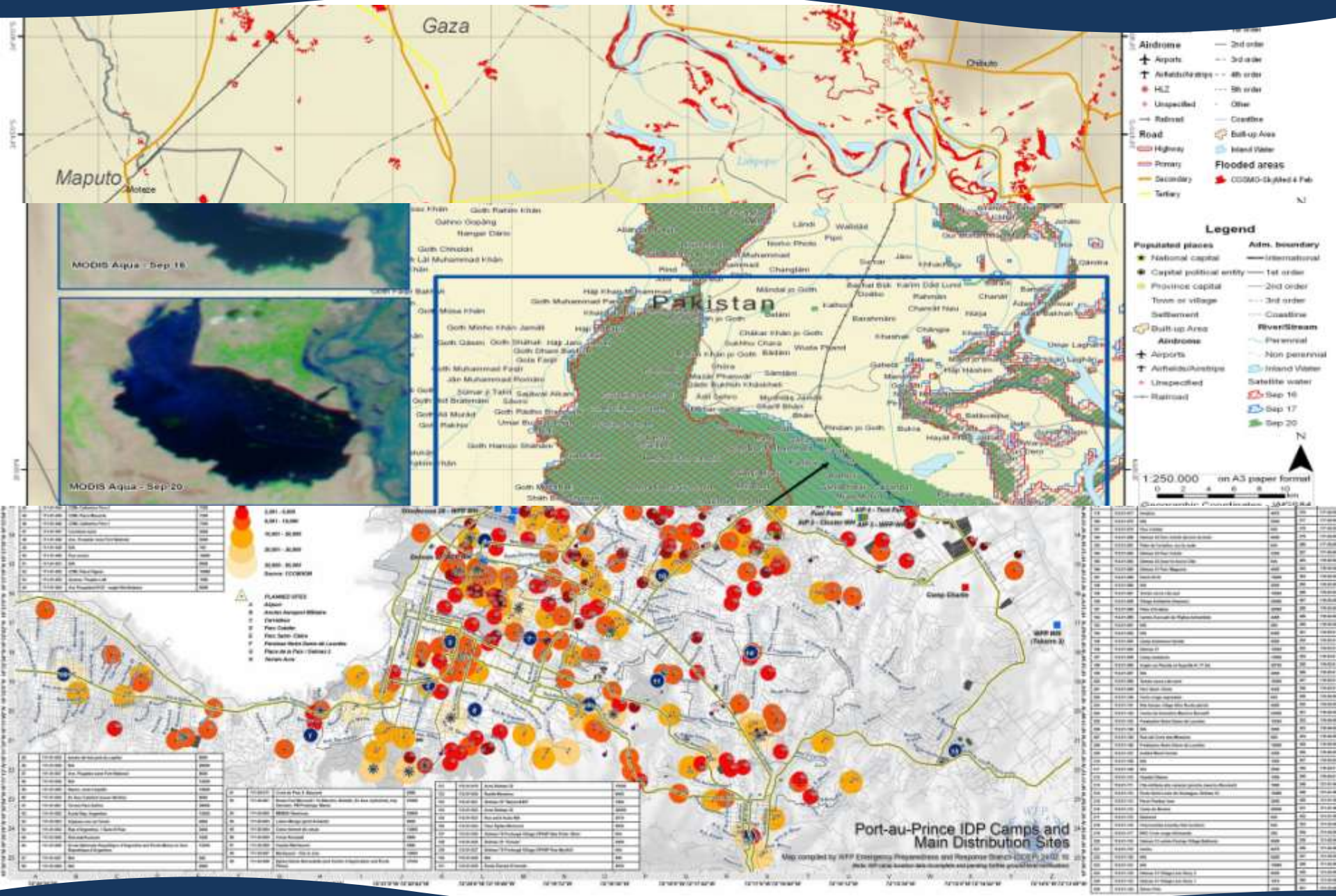
TROPICAL STORM with AFFECTED AREAS

Tropical season typical of the Arabian Sea is from May to Nov with peak in June. June **2007** - Cyclone Yemyin, Balochistan and Sindh worst affected; May **1999** - southern towns; storm in Nov **1993** - 609 killed

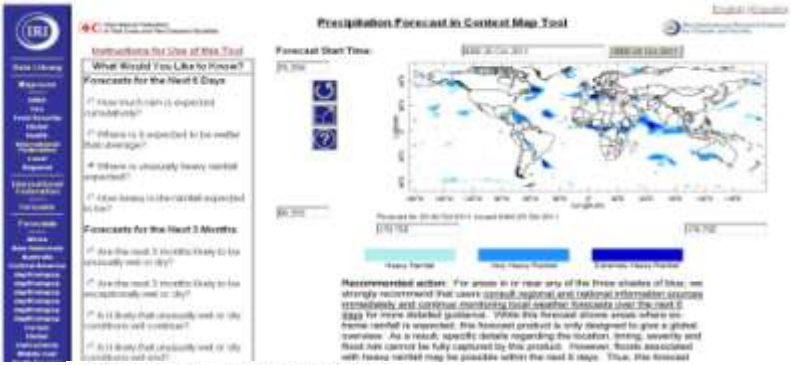
LATEST DROUGHT EVENTS with AFFECTED AREAS

People at risk of drought estimated to be about 11,872,500. **2006** - Moderate drought conditions developed in Balochistan and lower Sindh; **2002** - Pishin district in Balochistan; **2000** - Balochistan province, 1.2 million people affected; since Nov 1999 - 2,200,000 people affected

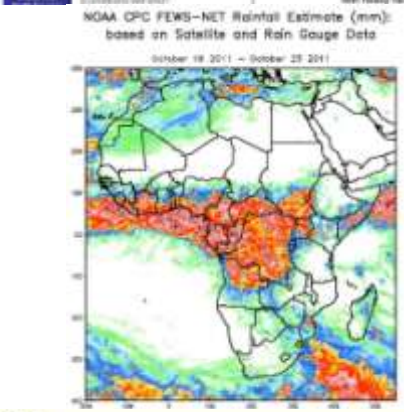

REGIONAL OVERVIEW
SCENARIO 1. CIVIL AND MILITARY UNREST
SCENARIO 2. SEVERE FOOD INSECURITY IN RURAL AREAS
SCENARIO 3. POST CONFLICT RELIEF AND REHABILITATION
Primary Roads
Secondary Roads
Densely Populated Areas (Landscan)
Flood Extent
GISTDA - Thailand Geo-Informatics and Space Technology Dev. Agency 27.10.11
Affected:
2,469,639 people
819,861 families
4.23 million acres farmland
81,440 acres fish/shrimp ponds
12.6 million livestock
76 main highways in 15 provinces are flooded and impassable
203 rural roads in 31 provinces impassable
All 18 north-bound rail routes cancelled
Bangkok
CAMBODIA
Number of IDPs
Source: BNPB (22.11.10)
1 - 2,109
2,110 - 5,000
5,001 - 10,000
10,001 - 25,000
MERAPI VOLCANO


Gaza
Maputo
Airdrome
Road
Flooded areas
Legend
Populated places
Adm. boundary
Pakistan
MODIS Aqua - Sep 16
MODIS Aqua - Sep 20
Satellite water
Sep 16
Sep 17
Sep 20
1:250.000
Port-au-Prince IDP Camps and
Main Distribution Sites

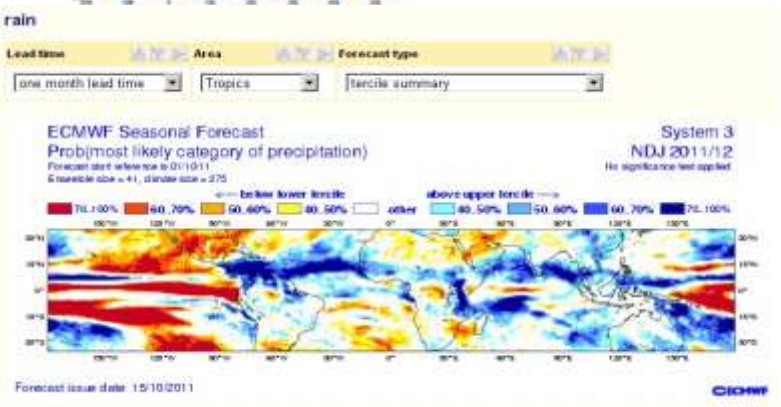
Weather Forecasting for Humanitarian Response



IRI



NOAA CPC



ECMWF

No access to high resolution data

Data is difficult to interpret – how to characterize uncertainty?

Many models – which is the most appropriate?
(eg Sahel rainfall during ENSO, HoA drought, snowfall in Afghanistan)

What is the critical threshold for a forecast before we can implement a potentially costly operational reaction?

Pakistan:
Over the next few days it will be a little cooler than normal over most of Pakistan, especially in southern and eastern parts with temperatures ranging from the low 20s Celsius overnight to the low 30s Celsius during the daytimes. There will be large daily temperature range, especially further north with minimums dropping to below 10C in the mountains but still rising into the high 20s during the daytimes. It will be fairly windy to start, but the wind should ease through the week. A mainly dry period is expected over the next week or two with mainly sunny conditions and just a few scattered showers developing in places.

road conditions (impassable to what types of vehicles)
airstrip deterioration
backlog at port operations
strategic locations of humanitarian hubs
IDP/refugee camp sites
warehousing sites
costs and time required to reroute/replan aid

National Met and Disaster Management Services (WMO Survey)

majority are limited by inadequate training of forecasters

majority either do not have adequate observation stations, telecommunication systems or cannot maintain 24/7 operational forecasting capacities/databases

majority feel the need to improve forecasting and warning capabilities, and most of them want better partnerships with other agencies involved in disaster risk reduction

many services collaborate to some extent, particularly for hazard warnings; but most require better coordination to issue warnings

Proactive in Disaster Management

pre-positioning relief items

improving disaster relief capacity through trainings

help decision makers plan agricultural strategy

development of disaster contingency plans

improve lead time for timely appropriate intervention

initiating pre-emergency funding requests

What do we need?

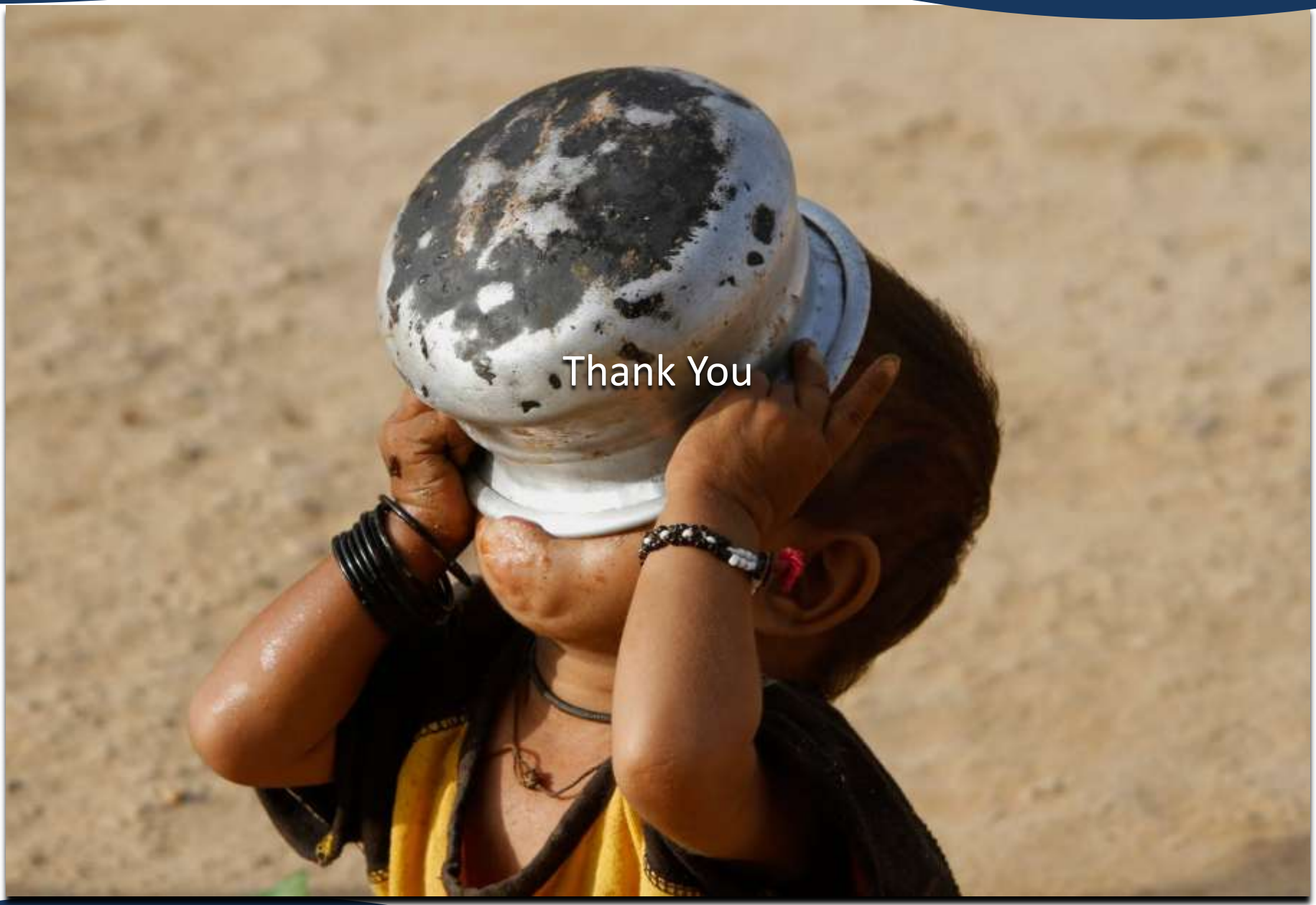
easy access to global models and data

data downloadable in a format (ie kml, shapefile, geotiff) which can be quickly used on sit/ops maps

higher resolution data which can be used at sub-national scales

easy to interpret information/guidance on use

improved and continued collaboration between the science of forecasting and operational reaction at ground level


Thank You