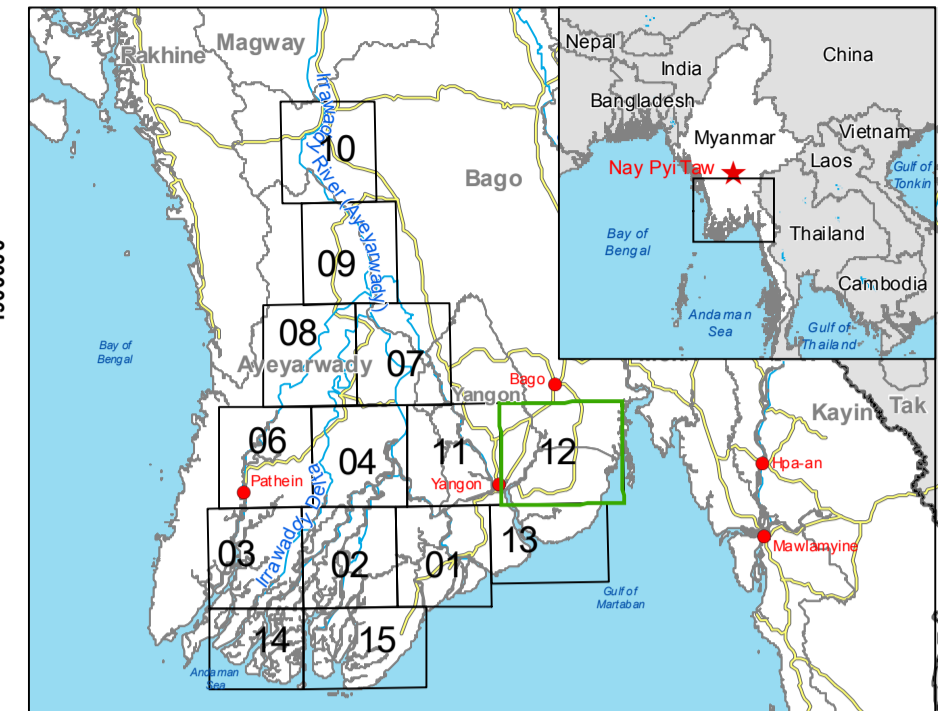


Yangon East - Myanmar Flood - 01/08/2015 Delineation Map



Cartographic Information
 1:115000 Full color ISO A1, low resolution (100 dpi)

0 2.5 5 10 km
 Grid: WGS 1984 UTM Zone 47N map coordinate system
 Tick marks: WGS 84 geographical coordinate system

- Legend**
- | | | |
|-------------------------------------|------------------|-----------------------|
| Crisis Information | Hydrology | Transportation |
| Flooded Area (04/09/2015 11:46 UTC) | Lake | Bridge |
| General Information | Reservoir | Railway |
| Area of Interest | River | Motorway |
| Administrative boundaries | Dam | Primary Road |
| Region | River | Secondary Road |
| Settlements | | Local Road |
| Populated Place | | |
| Built-Up Area | | |

Consequences within the AOI on 04/09/2015

	Affected	Total in AOI	
Flooded area	ha 4427		
Estimated population	Inhabitants 6036	217745	
Settlements	Built-up area ha 0.5	33679	
Transportation	Bridge	No. 0	32
	Motorway	km 0	21
	Primary road	km 0	68
	Secondary road	km 0	256
	Local road	km 0	459
Railway	km 0	208	

Map Information
 Unusual heavy monsoon rains have been affecting Myanmar since 16 July causing river overflows and floods. In the past few days, torrential rains damaged farmland, roads, rail tracks, bridges and houses. Reservoir are seasonal inundated areas and water bodies probably due to agricultural practices (paddy fields).
 The core users of the map is Emergency Response Coordination Centre (ERCC)

Relevant date and time records (UTC)			
Event	01/08/2015 00:00	Last crisis status	04/09/2015 11:46
Activation	07/08/2015 10:00	Map production	05/09/2015

Data Sources
 Sentinel-1A (acquired on 04/09/2015 11:46 UTC, GSD 20 m) provided by European Space Agency.
 Landsat-8 © U.S. Geological Survey (acquired on 26/02/2015, GSD 15 m, 1 % cloud coverage)
 Base vector layers based on GAUL © UN 2008, OpenStreetMap © OpenStreetMap contributors, Wikimapia.org, GeoNames (approx. 1:10000, extracted on 08/08/2015), refined by ITHACA. Source information is included in vector data.
 Elevation data: SRTM (90 m posting). Height in meters above mean sea level.
 Population data: Landscan 2010 © UT BATTELLE, LLC.
 All data sources are complete and with no gaps.
 Inset maps based on: Administrative boundaries (JRC 2013), Hydrology, Transportation (Natural Earth, 2012), Settlements (GeoNames, 2013).

Dissemination/Publication
 Delivery formats are GeoTIFF, GeoPDF, GeoJPEG and vectors (shapefile and KML formats).
 Map products available in the Copernicus EMS Portal at the following URL:
<http://emergency.copernicus.eu/mapping/list-of-components/EMSR130>
 All products are © of the European Union.

Disclaimer
 The products elaborated in the framework of current mapping in rush mode activation are realized to the best of our ability, within a very short time frame during a crisis, optimising the available data and information. All geographic information has limitations due to scale, resolution, date and interpretation of the original data sources. The products are compliant with Copernicus EMS Rapid Mapping Product Portfolio specifications.

Map Production
 The present map shows the flood delineation in the area of Yangon East (MYANMAR). The basic topographic features are derived from public datasets, refined by means of visual interpretation of pre-event image Landsat-8.
 The thematic layer, assessing the delineation of the event, has been derived from post-event image Sentinel-1A.
 All satellite images have been radiometrically enhanced, orthorectified with RPC approach (using SRTM elevation data).
 The estimated geometric accuracy of this product is 40 m CE90 or better, from native positional accuracy of the background satellite image.
 The estimated thematic accuracy of this product is 85 % or better, based on previous experience in using high-resolution SAR for flood extent delineation. Please be aware that the thematic accuracy might be lower in urban and forested areas due to known limitations of the analysis technique.
 Only the area enclosed by the Area of Interest has been analyzed.

Contact
 Map produced by ITHACA under contract 259736 with the European Union.
 Name of the release inspector (quality control): e-GEOS (ODO).
 E-mail: rapidmapping@ems-copernicus.eu

