

Report of the Primary Data Analyses Node (P-DAN)

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Contents

- Sentinel Asia coordination and value-added product generation
- PM activities to International Disaster Charter (IDC)
- Product and services improvements
- User Agencies/Sentinel Asia inputs

Product delivered in 2015

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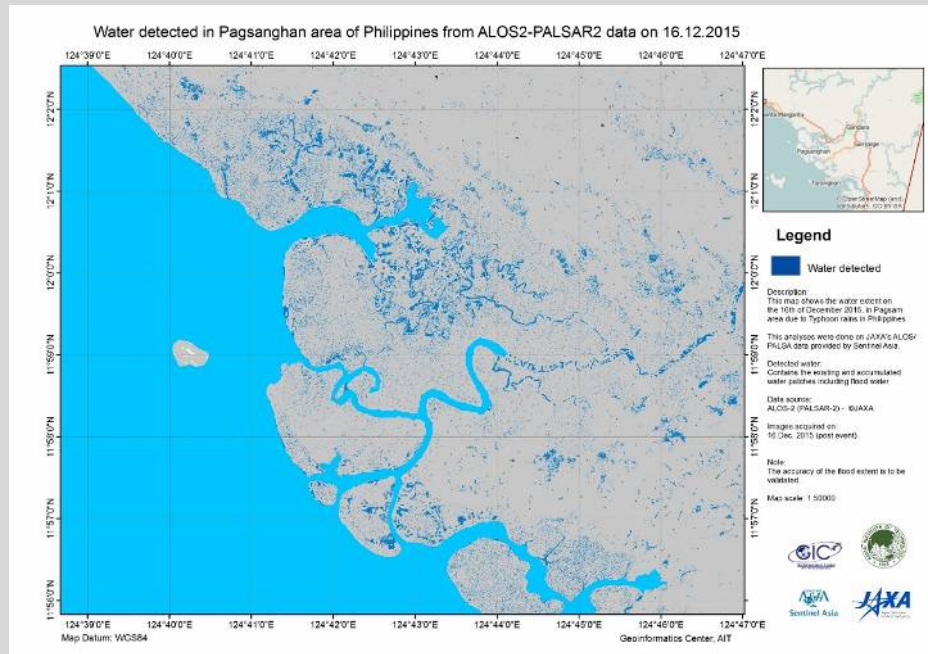


EO ID	Date Occurred	Country	Disaster Type	No. of products
ERADRC000041	14-Dec-15	Phillippine	Typhoon	7
ERADRC000040	1-Dec-15	India	Flood	9
ERADRC000037	26-Oct-15	Pakistan	Earthquake	1
ERADRC000038	18-Oct-15	Phillippine	Typhoon	2
ERADRC000036	2-Sep-15	Sri Lanka	Flood	2
ERADRC000033	4-Sep-15	Bangladesh	Flood	2
ERADRC000073	28-Jul-15	Pakistan	Flood	6
ERADRC000031	28-Jul-15	Vietnam	Flood	3
ERADRC000030	16-Jul-15	Myanmar	Flood	14
				46

Philippine typhoon flood

14 Dec.2015

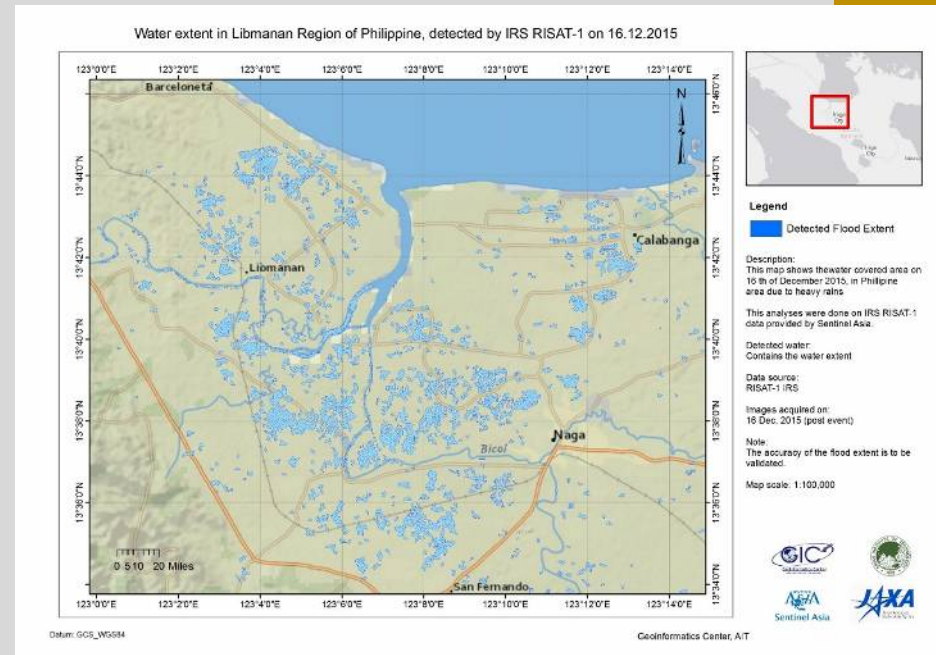
4



Pre image: NA

Scale 1 : 50,000

Post image: 16 Dec. 2015 (ALOS-2)



Pre image: NA

Scale 1 : 100,000

Post image: 16 Dec. 2015 (ALOS-2)

1. Permeant water bodies + Flood water (mixture)
2. Land-sea mask + permeant water (low resolution)
3. Not a cleaned product

What about
Scale, overlays
Map information?

5 February 2016

Sentinel Asia Activities of GIC

PM activities to IDC

Emergency ID	Date	Disaster type	Country	Remarks
ERADRC000033	04 Sep. 2015	Flood	Bangladesh	Escalate this EO to IDC

Upper left corner: 26° 30' 0" N, 88° 17' 60" E
Upper right corner: 26° 30' 0" N, 90° 24' 0" E
Lower left corner: 23° 36' 0" N, 88° 17' 60" E
Lower right corner: 23° 36' 0" N, 90° 24' 0" E



Charter Activation	Call ID
# 471	# 542

PM report was submitted on 19th Nov. 2015

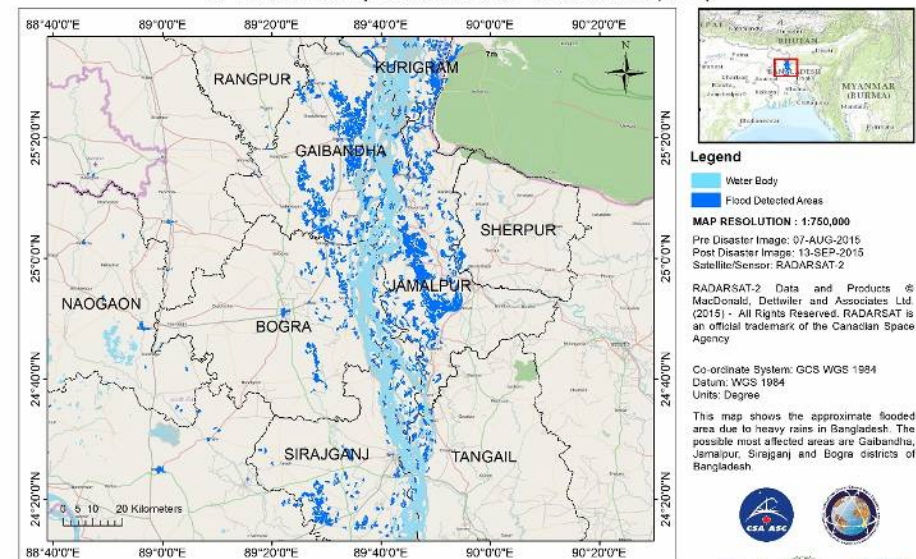
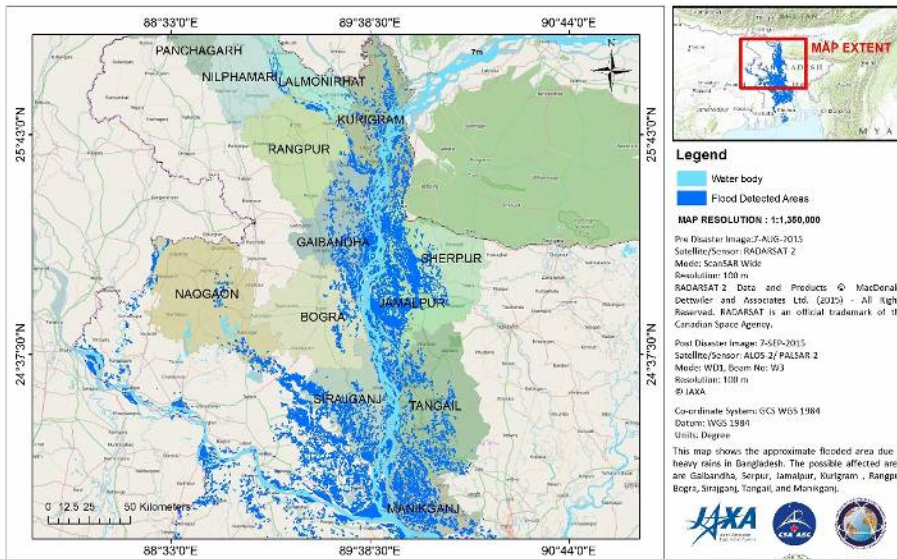
Bangladesh flood products

Northern and central Bangladesh

Gaibandha, Jamalpur Sirajganj and Bogra Districts

FLOOD AREAS IN NORTHERN AND CENTRAL OF BANGLADESH

FLOOD DETECTED AREAS OVER GAIBANDHA, JAMALPUR SIRAJGANJ AND BOGRA DISTRICTS OF BANGLADESH (AS OBSERVED ON 13 SEPTEMBER, 2015)



Pre image: 07 Aug 2015 (RADARSAT) Scale 1 : 350,000
 Post image: 07 Sep. 2015 (ALOS-2)

Pre image: 07 Aug 2015 (RADARSAT) Scale 1 : 750,000
 Post image: 13 Sep. 2015 (ALOS-2)

1. Detect mostly Flood water
2. ~~Land sea mask + permeant water~~
3. Cleaned product

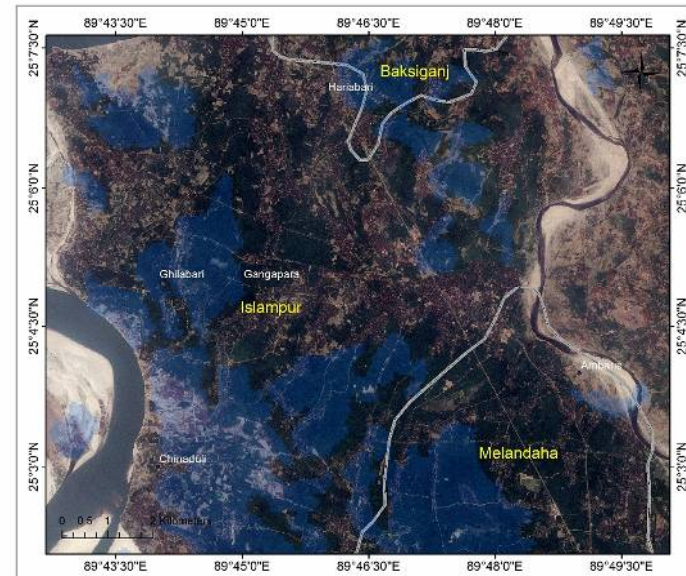
What about
 Scale, overlays
 Map information?

Bangladesh flood products cont. ...

Islampur Upazilla of Bangladesh

Melandaha Upazilla, in the lower part of Bangladesh

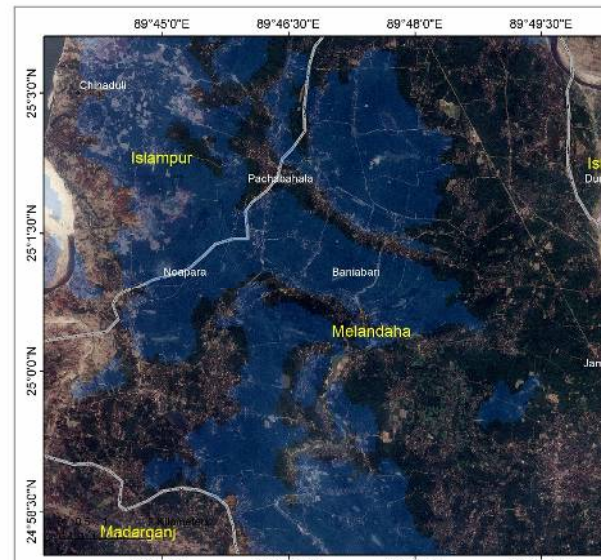
FLOOD DETECTED AREAS OVER ISLAMPUR UPAZILLA OF BANGLADESH



Legend
 ■ Flood Detected Areas
MAP RESOLUTION : 1:50,000
 Pre Disaster Image: 07-AUG-2015
 Post Disaster Image: 13-SEP-2015
 Satellite/Sensor: RADARSAT-2
 RADARSAT-2 Data and Products © MacDonald, Detwiler and Associates Ltd. (2015) - All Rights Reserved. RADARSAT is an official trademark of the Canadian Space Agency
 Background HR Image: 24-MAR-2013
 Satellite/Sensor: SPOT-6
 © CNES (2015), Distribution Spot Image S.A., all rights reserved.
 Co-ordinate System: GCS WGS 1984
 Datum: WGS 1984
 Units: Degree
 This map shows the approximate flooded area due to heavy rains in Bangladesh. Name in yellow label is upazilla, while populated places show in white label.



FLOOD DETECTED AREAS OVER MELANDAHA UPAZILLA (UPPER PART)

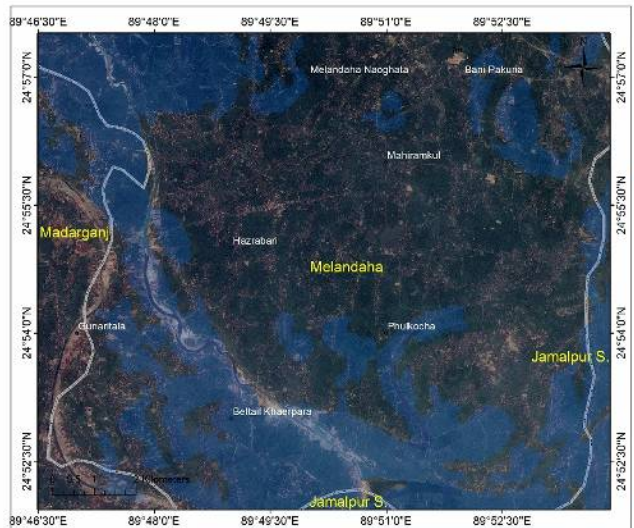


Date: 23/09/2015 Service Layer Credits: Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoEye, IGN, Kartchner N... This analysis was done by the Geoinformatics Center of Asian Institute of Technology. The accuracy of this product is not validated.

This map shows the approximate flooded area due to heavy rains in Bangladesh. Name in yellow label is upazilla, while populated places show in white label.

Pre-image: RADARSAT-2	07/08/2015
Post-image : RADARSAT-2	13/09/2015
SPOT-6	24/03/2013

FLOOD DETECTED AREAS OVER MELANDAHA UPAZILLA (LOWER PART) OF BAN



Date: 28/09/2015 Service Layer Credits: Sources: Esri, HERE, DeLorme, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoEye, IGN, Kartchner N... This analysis was done by the Geoinformatics Center of Asian Institute of Technology. The accuracy of this product is not validated.

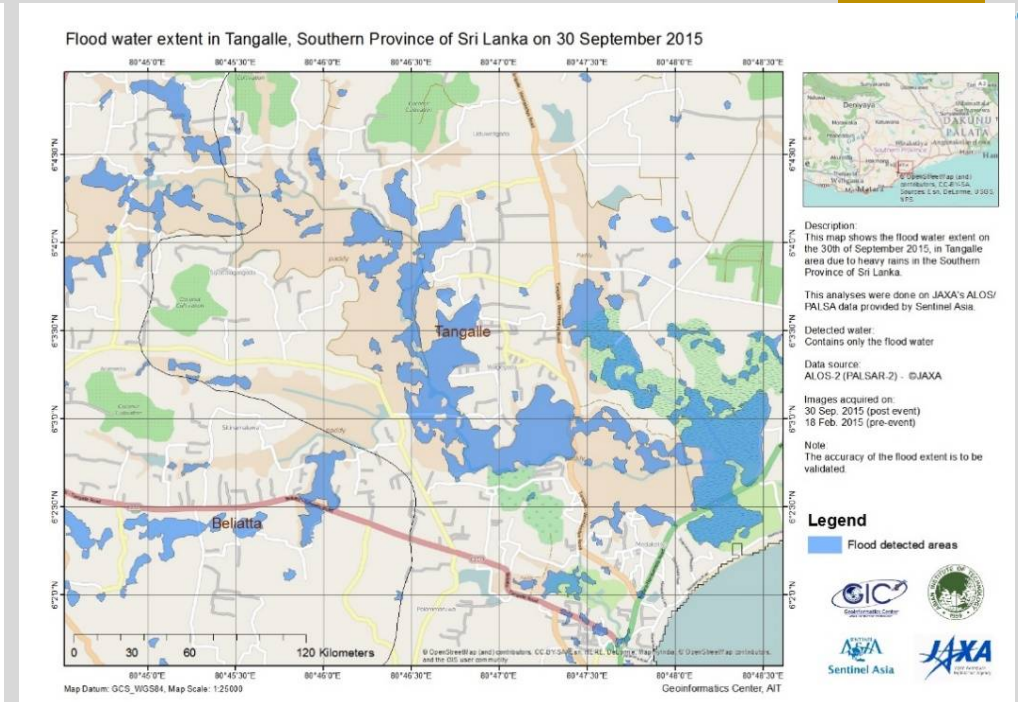
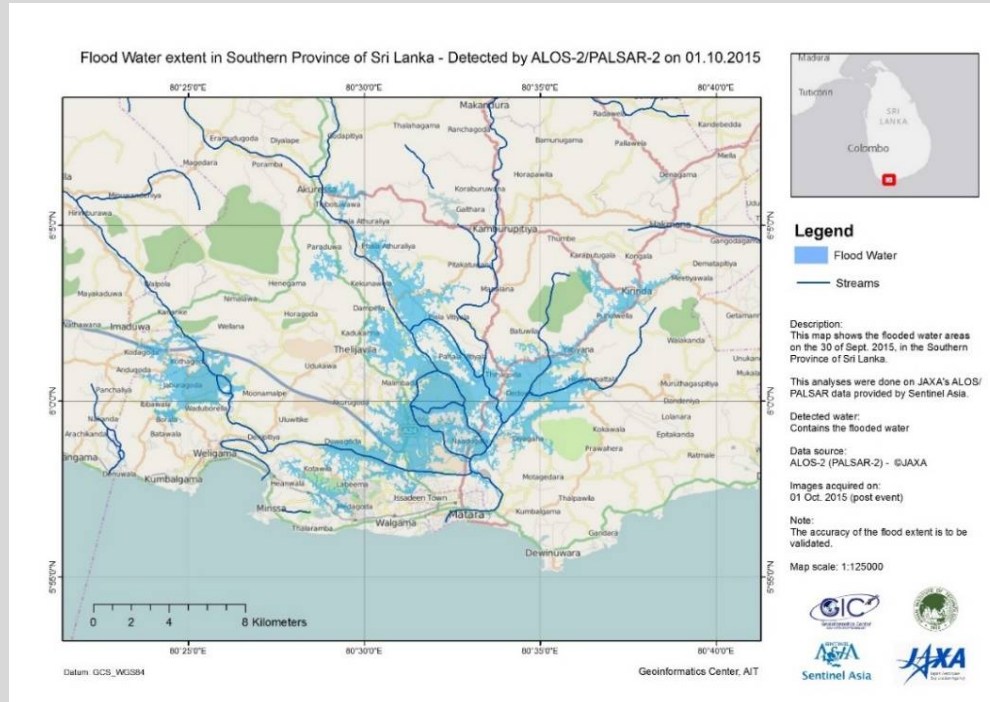
Scale 1 : 50,000

What GIS layers want to add?

Sri Lanka flood

30 Sep.2015

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Pre-image: NA
Post-image: PALSAR2 (01 Oct.2015)

Map scale: 1:125,000
Printing Res.: 200 dpi

Pre-image: PALSAR2 (18 Feb. 2015)
Post-image: PALSAR2 (30 Sep.2015)

Map scale: 1:125,000
Printing Res.: 200 dpi

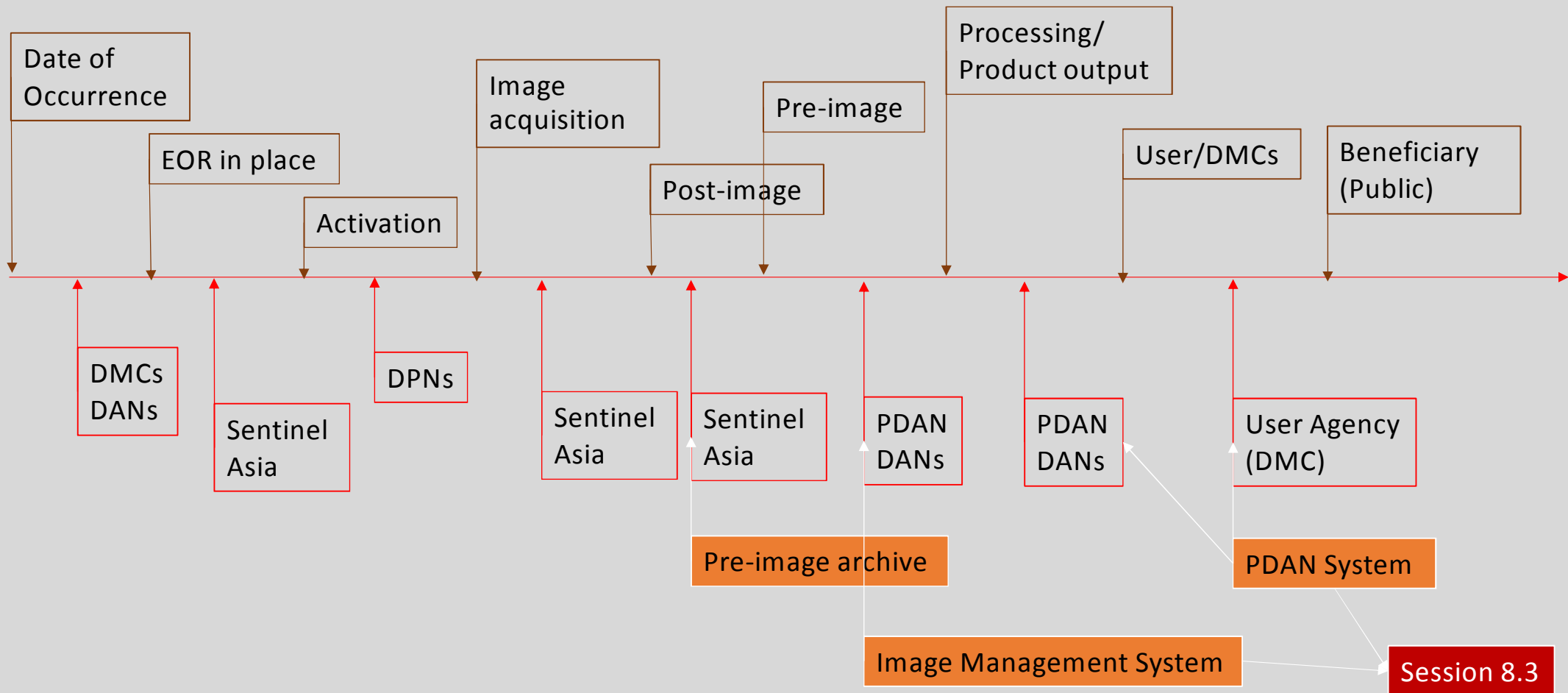
What is the printing paper size?
If then, what is the printing resolution (DPI)?
We need inputs from User Agencies

5 February 2016

Sentinel Asia Activities of GIC

Products and services improvements

Time factor



Products and services improvements

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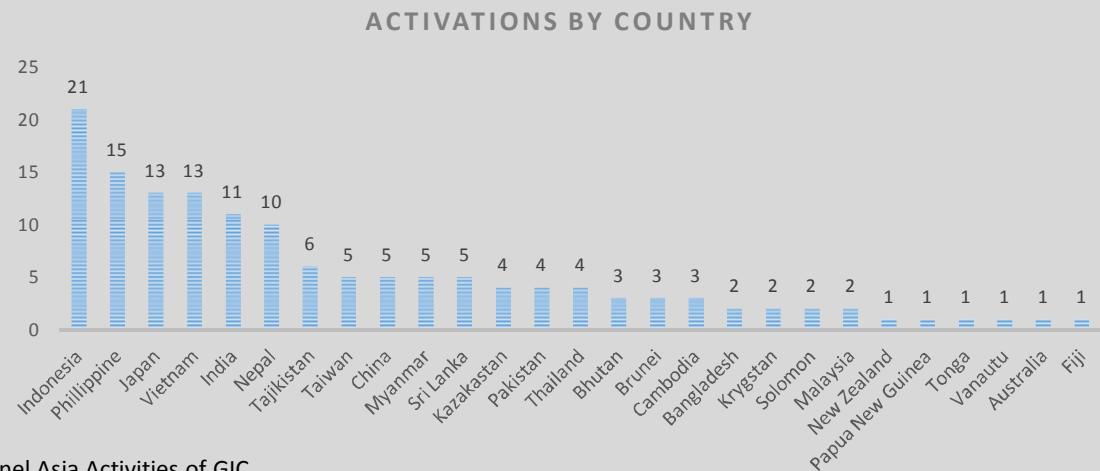
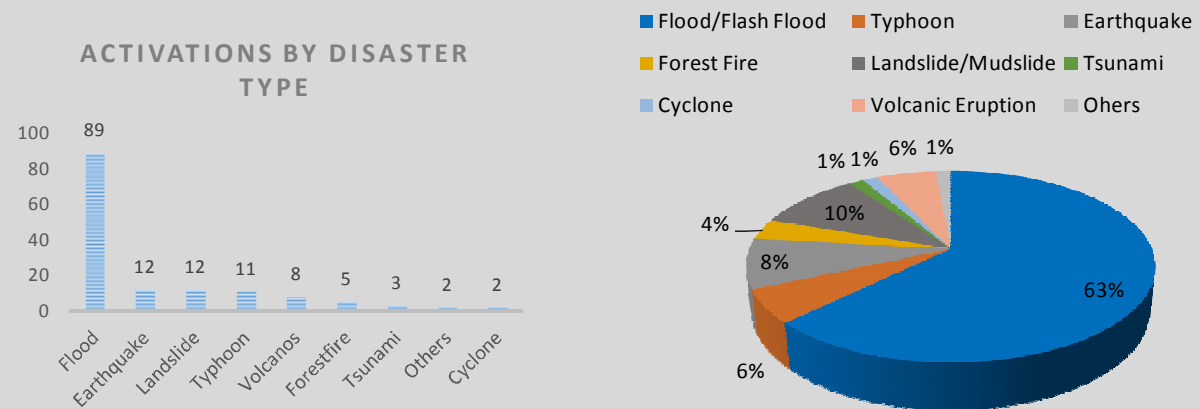


Looking at past activations

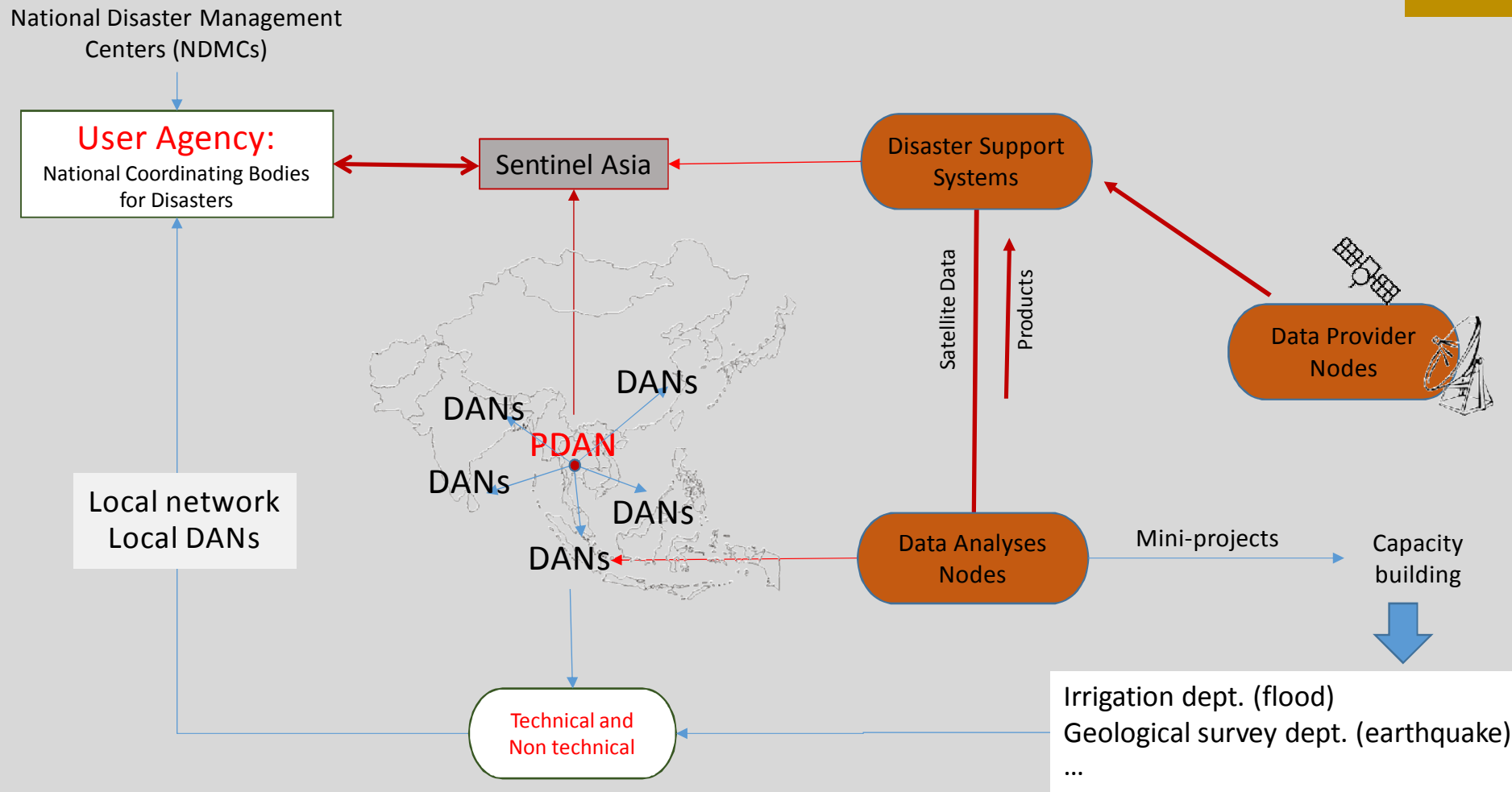
- More frequent disaster
 - Flood
- More frequent activations
 - Indonesia, Philippines, Japan, Vietnam, India, Nepal
- More priority for future developments may be for floods

SA activations (2010-2015)

Total 144 activations



Products and services improvements

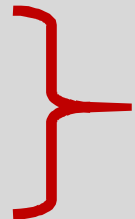


User Agency and DANs inputs

- Standards for the products
- Networking technical agencies and promote them to be DANs

SA inputs

- Special emphasis on DRR activities on flood disasters
- Image data delivery in std. (CEOS) or comprehensive meta data with LUT
- Pre-disaster image archive system
- Image management system
- System for DAN activities



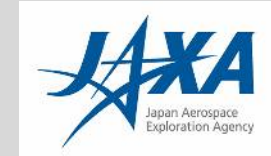
Thank you

Geoinformatics Center

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- Established in 1999 at the Asian Institute of Technology (AIT-1959)
- Non-profit entity to support the regional countries in applications of latest technologies in the field of Geoinformatics.
- Major activities are projects, consultancies and capacity buildings



Geoinformatics center

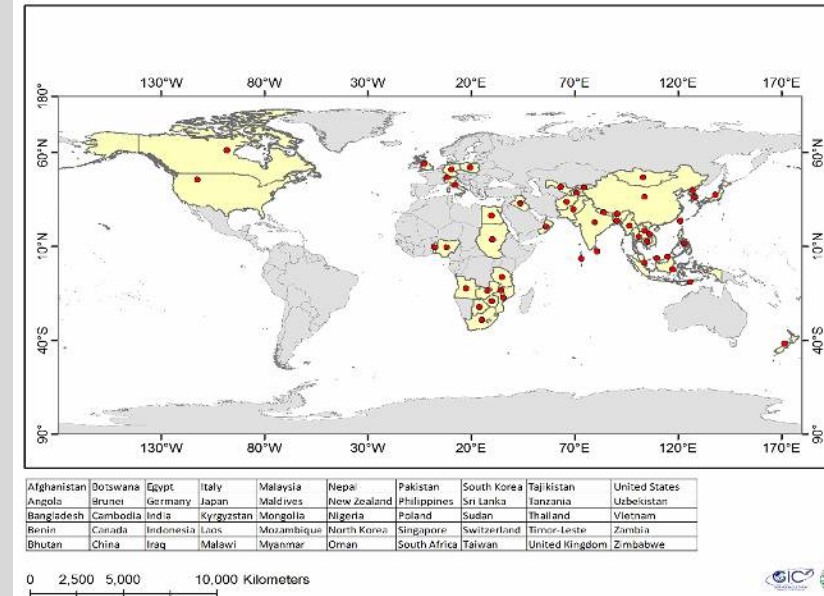
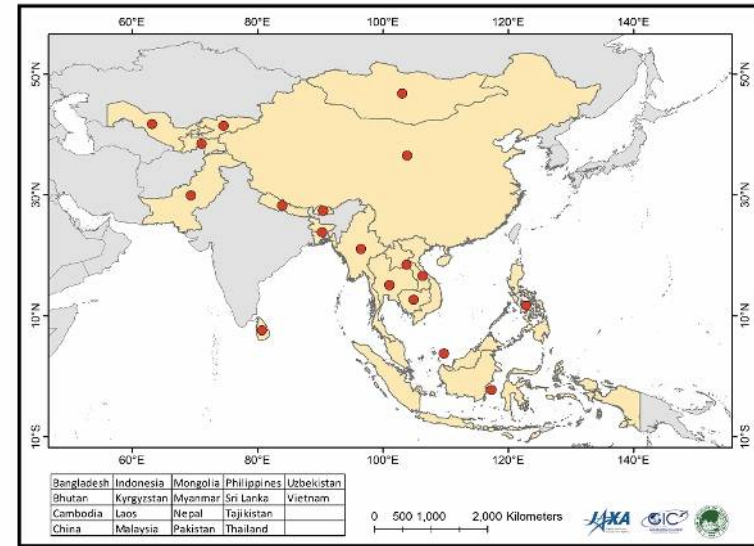
- Our activities

- Projects/consultancy

- Disaster (flood, landslide, drought, earthquake, forest fire, tsunami etc.)
 - Environmental monitoring

- Training

- RS and GIS applications on environmental monitoring, modelling and disaster analyses, damage assessment



Bangladesh
 Bhutan
 Cambodia
 China
 Indonesia
 Kyrgyzstan
 Laos
 Mongolia
 Myanmar
 Nepal
 Pakistan
 Philippines
 Sri Lanka
 Tajikistan
 Thailand
 Uzbekistan
 Vietnam