Questions & Answers Session 2

Question 1: How often are the socioeconomic data in SEDAC updated?
Answer 1: It depends on the dataset. Population is every 5 years. Impervious is less than every 5 years. Many are static datasets (dams, roads, etc). Each dataset has information on how often.

Question 2: What is resolution of SRTM DEM available?
Answer 2: The highest resolution available is 1 arc second (~ 30 meter resolution) for the global product.

Question 3: What characteristics of the SMAP microwave sensor? radar band
Answer 3: You can find details on the instruments here:
https://smap.jpl.nasa.gov/observatory/specifications/
It is a passive radiometer operating at the L-Band (1.41 GHz). SMAP has global coverage every 3 days.

Question 4: How to use MODIS data for cases that the area was not previously dry (not flooded but saturated soil)?
Answer 4: There is no clear answer to that. When you look at the difference of reference soil, after a certain amount to saturation it may show as flooded. Optical (MODIS) will not be as sensitive to that.

Question 5: What kind of NASA products or bi-products can be used for medium to small scale watersheds that mainly produce flash flood events?
Answer 5: GPM IMERG is updated every 30 minutes. Precip. Can be used to force hydro models. The resolution is ~ 10 km so it will depend on the size of the watershed in which you reference here.

Question 6: Can we download tiles from NRT Global Flood Mapping?
Answer 6: Yes, in GEOTIFF and PNG.

Question 7: Are there any resources to find such satellite based flood inundation products going into past events apart real time use?
Answer 7: Yes, GFMS and MODIS NRT have 2013 onwards. DFO will also have a catalog of past events. It will list the satellite data used.

Question 8: Is there any dataset that will give depth of standing water - i.e. flood depth?
Answer 8: GFMS has flood depth as a parameter. 12 km resolution based off of the VIC model.

Question 9: Is there any source from where I can download monthly accumulated flood with it respective high?
Answer 9: You can download monthly precipitation but not flood depth monthly. You may have to do that calculation yourself.

Question 10: How is the Financial loss is analyzed/measured in such cases of disasters? Is it post-hoc case to case basis or a general analysis is made (WRI Flood risk map-affected GDP for example).
Answer 10: Case by case basis. This is information based on past disasters and the loss from those events.

Question 11: Can we download the tiles for droughts as well?
Answer 11: For the US, there is the US Drought Monitor that can be downloaded.

Question 12: which products can I use for assessing landslide susceptibility?
Answer 12: We will cover that in detail in Session 3, next week (April 30th).

Question 13: When making a flood risk assessment map how are different parameters like elevation, soil moisture and impervious weighed?
Answer 13: WRI may have references on weight.

Question 14: Since SAR has the capacity to be utilized regardless of clouds, what is the limitation on its usage for it not being utilized more compared to other types of remote sensing techniques?
Answer 14: The temporal repeats and lack of free data (until recently with Sentinel 1). There is a 12 repeat for Sentinel-1 and given that there are two satellites with the same radar sensor (Sentinel-1 A and B) the repeat pass between both of them is 6 days.

Question 15: For Pakistan, where can I find soil moisture data?
Answer 15: Worldview and NSIDC will have global data on Soil Moisture.

Question 16: Can we get database satellite from America Central?
Answer 16: The products presented today are global so yes.

Question 17: How can we get the rainfall time series data for countries other than USA?
Answer 17: TRMM is between 50 N and 50 S and GPM is between 65 N and 65 S (global data)

Question 18: Are there any plans for new global elevation dataset at NASA or other organisations? With better resolution / hydrological corrections?
Answer 18: LiDAR based and commercial data are higher resolution