FFS and Dashboard

IITB

12th August 2020

Issues with FFS database and solutions proposed

Issues with table 1 which contains only plot details

1. Many physical plots which were present in 2019 are changed in 2020 but plot_code is same.

   Observations :-

   1. For the years 2018-2019, we have 1282 plot_codes which exist in both 2018 and 2019. Out of which, 944 plot_codes have same farmer_id and 338 have different farmer_id.

   1. For the years 2019-2020, we have 9291 plot_codes which exist in both 2019 and 2020. Out of which, 7963 plot_codes have same farmer_id and 1328 have different farmer_id.

   1. For the year 2018, we have 1574 unique plot_code
   2. For the year 2019, we have 9303 unique plot_code
   3. For the year 2020, we have 9302 unique plot_code

   Solution :- we will be taking Plot code+season_name+Farmer id as primary key

2 . plot_code for 2020 does have different naming system e.g. 530426_02(kharif)

   To make plot code consistent rajkumar will be removing kharif/rabi from the plot code and updating it in ODS_FFS database

3. Lot of lat/lon values does have NULL value.

   NULL value of lat/lon will be updated with previous year lat/lon for the plots in ods database

Issues with table 2 of FFS database

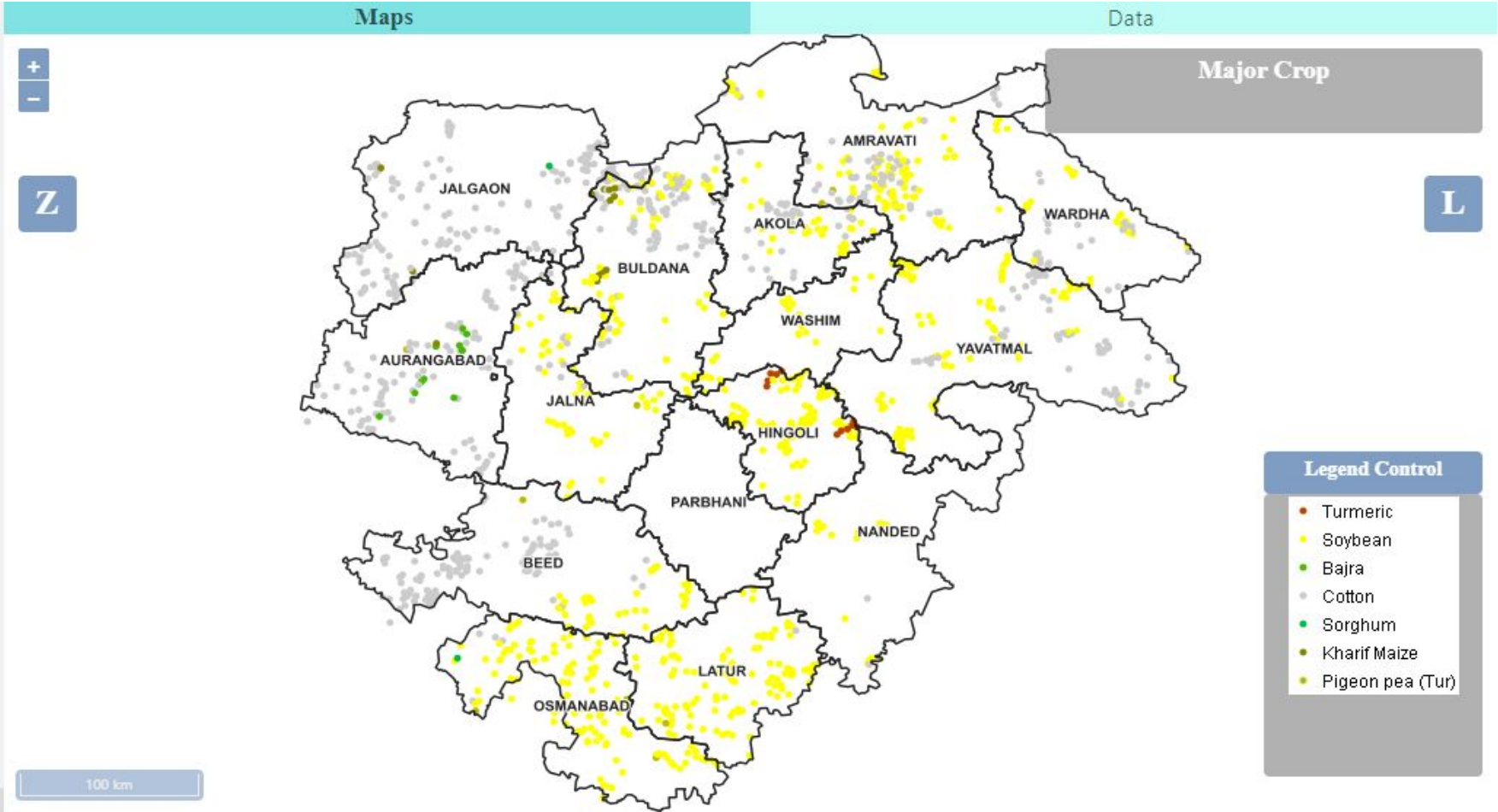
1. Date of sowing is inconsistent as some of then have dates like 1970
   Such plots will get dropped or date a common date of sowing can be chosen

1. Control plots lat/lon not taken so taking control plot as separate entity
   As control plots lat/lon is not recorded control plots data will be an entity in rows of FFS plots

1. Many control plot data is missing so that need to be filled
   Missing control plot data columns are empty that need to be resolved by my runtime

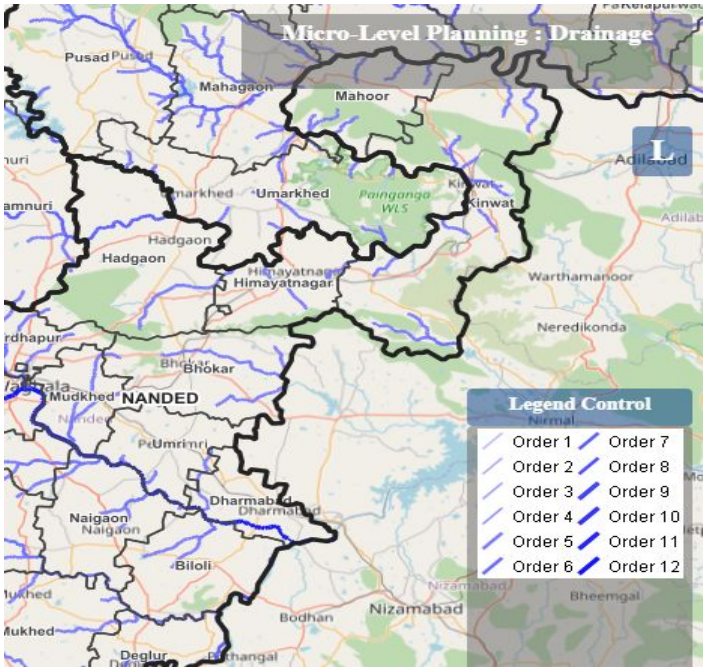
Table	Public key	Update frequency
Plot_details	Plot_code+season_name +Farmer id	Yearly
crop cycle details	Plot_code + Year + Season_name +Cropping system + Farmer_id + Major_crop_name	Seasonally
Visit details	Plot_code+Year+Season_name +Visit_number+Farmer_id	On every visit

Dashboard - FFS static data - crops



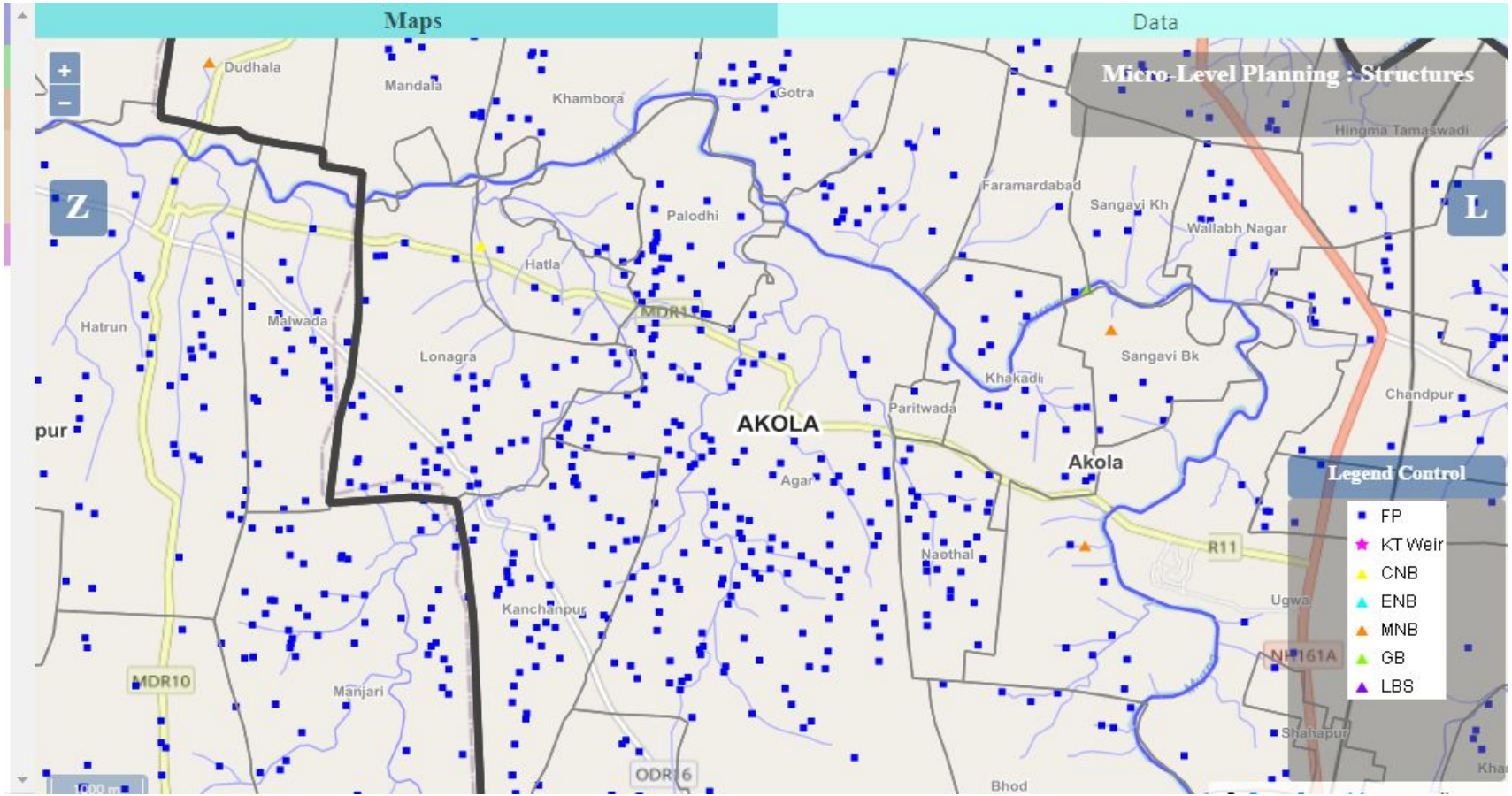
Dashboard -

drainage:



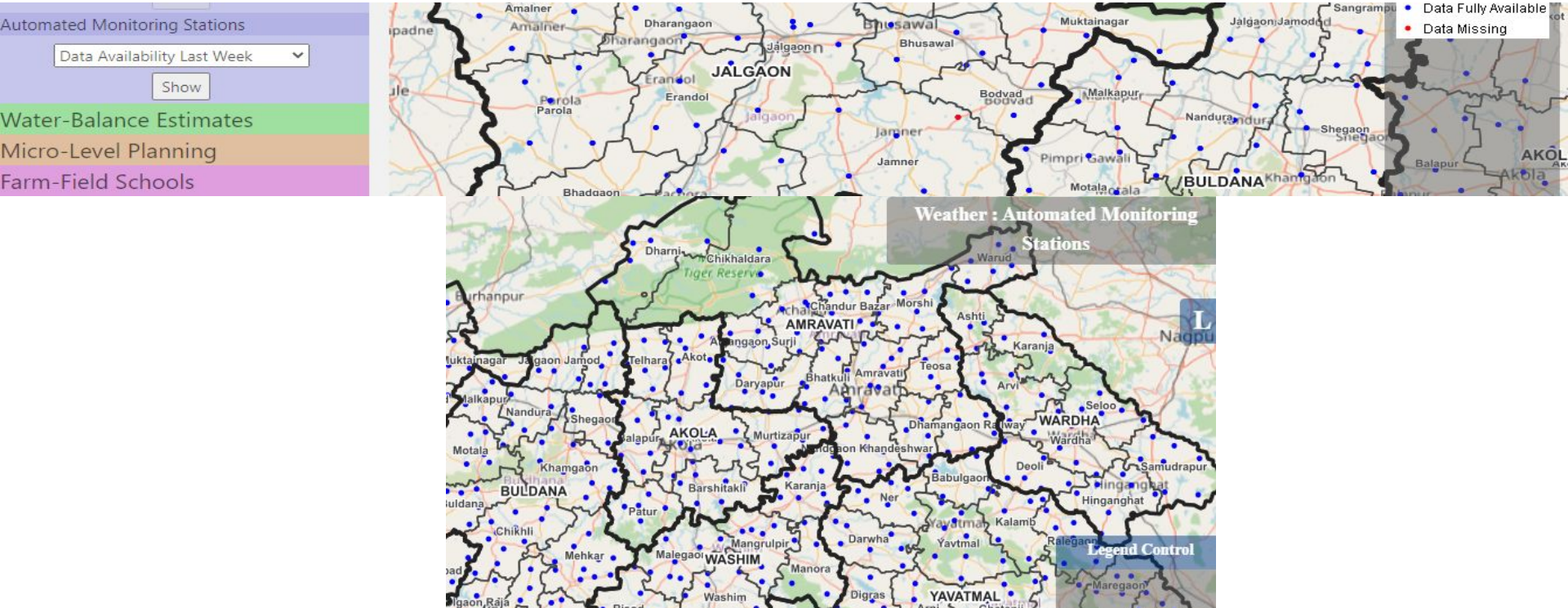
Drainage + Structures layer

AKOLA / Akola / Agar(529995)



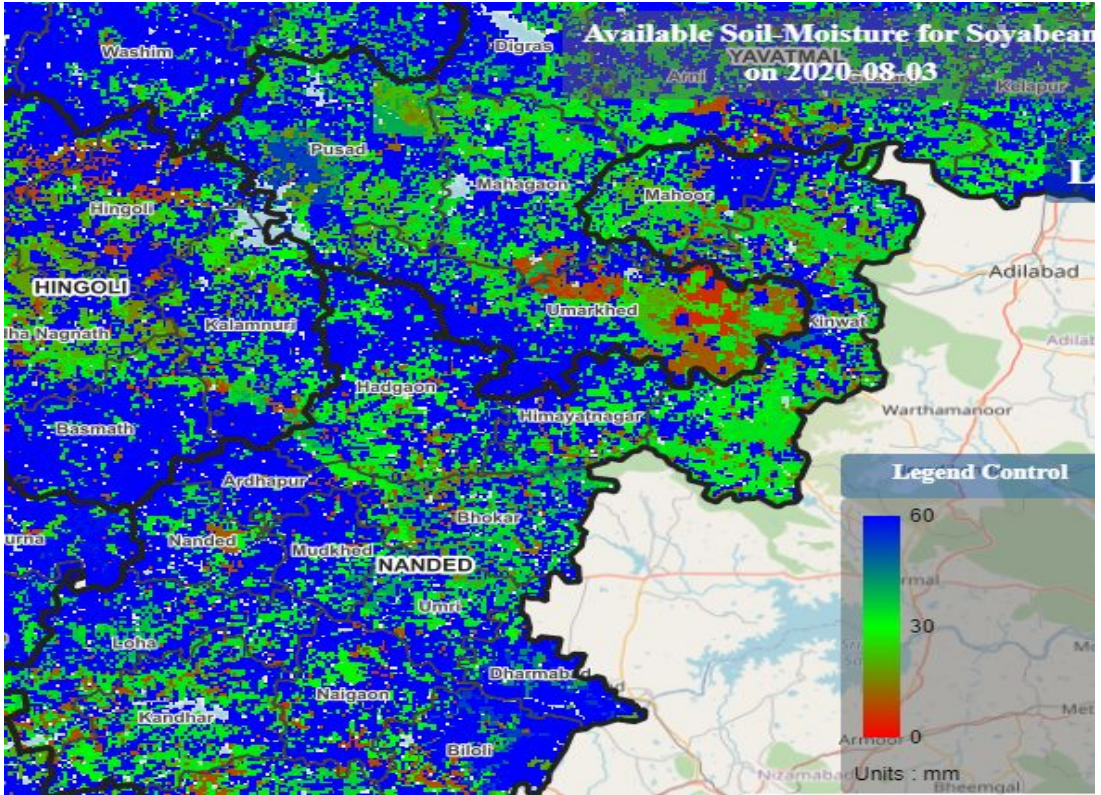
Dashboard - Incorporate changes - Layout

Data-availability-map and automated monitoring stations



Dashboard -

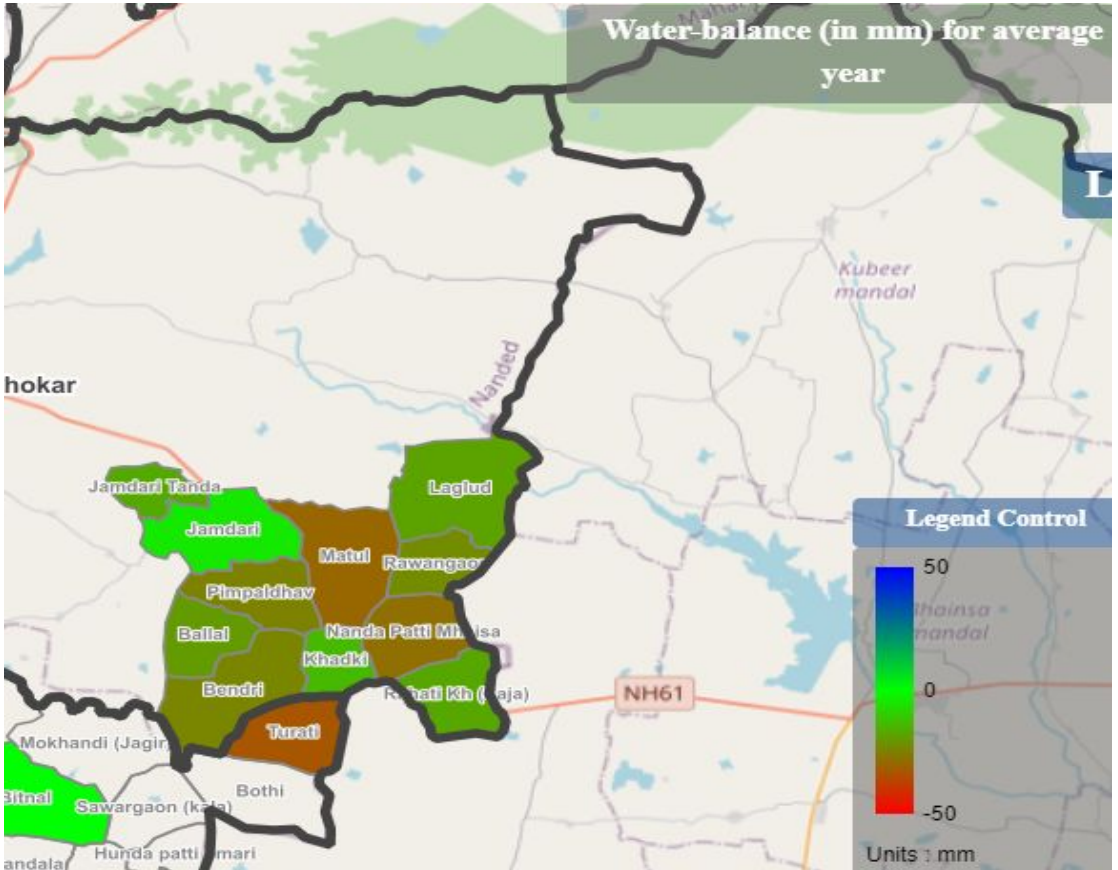
Water balance estimates-



Dashboard -

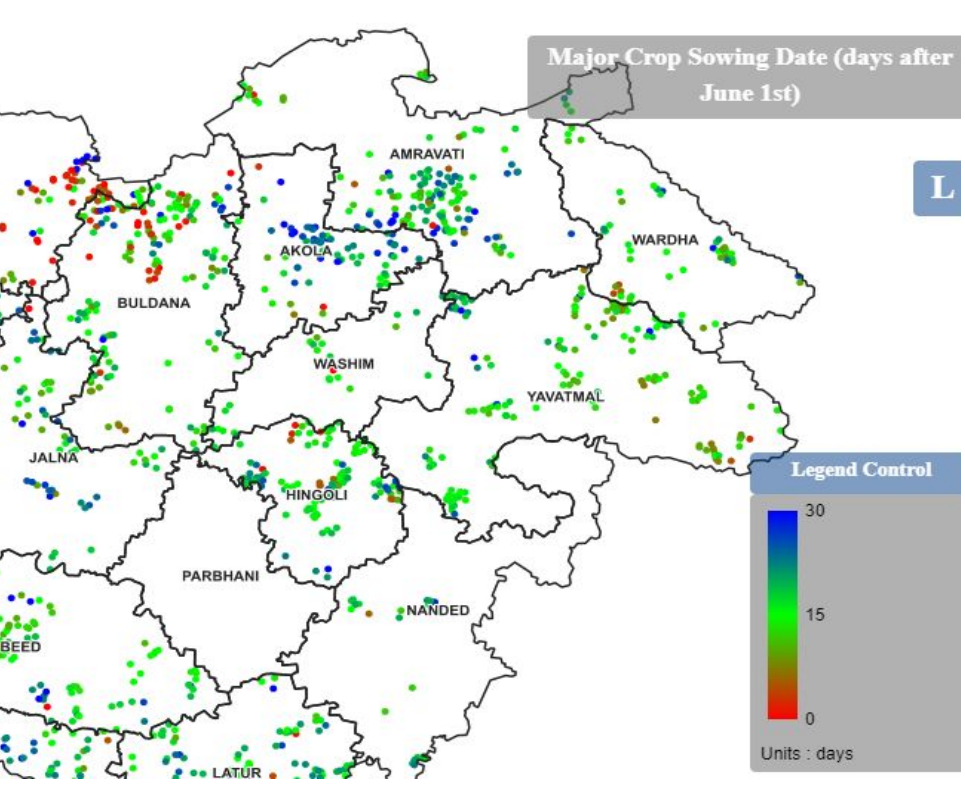
Micro-level-planning

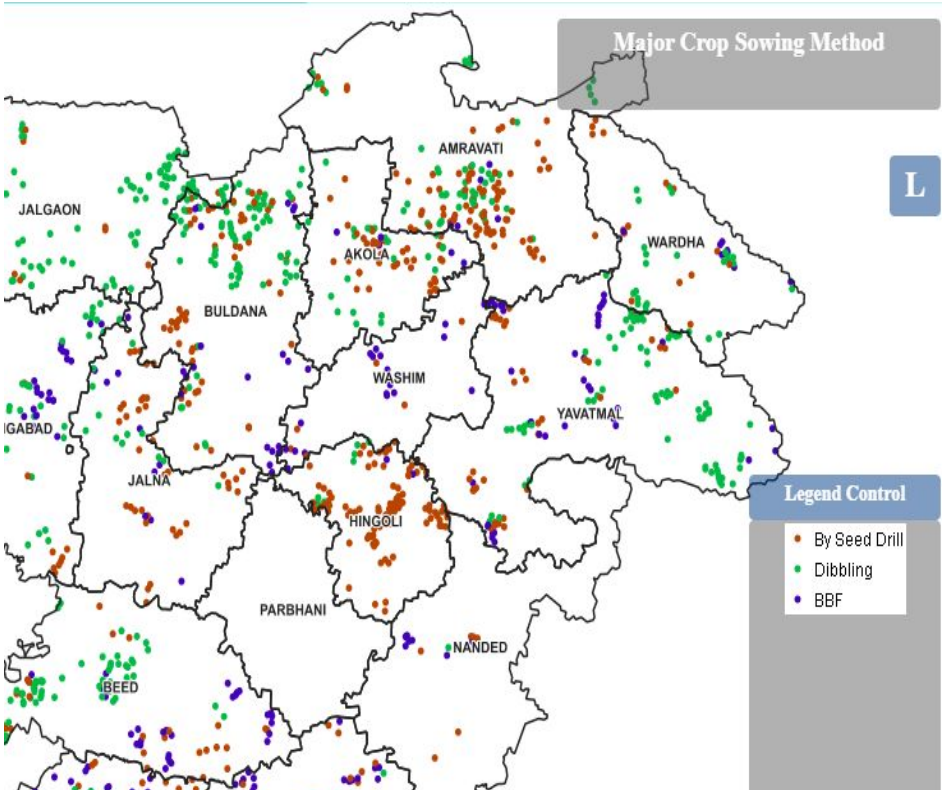
water-balance:



Dashboard - FFS static data

Major crop sowing date and major sowing method(ffs)

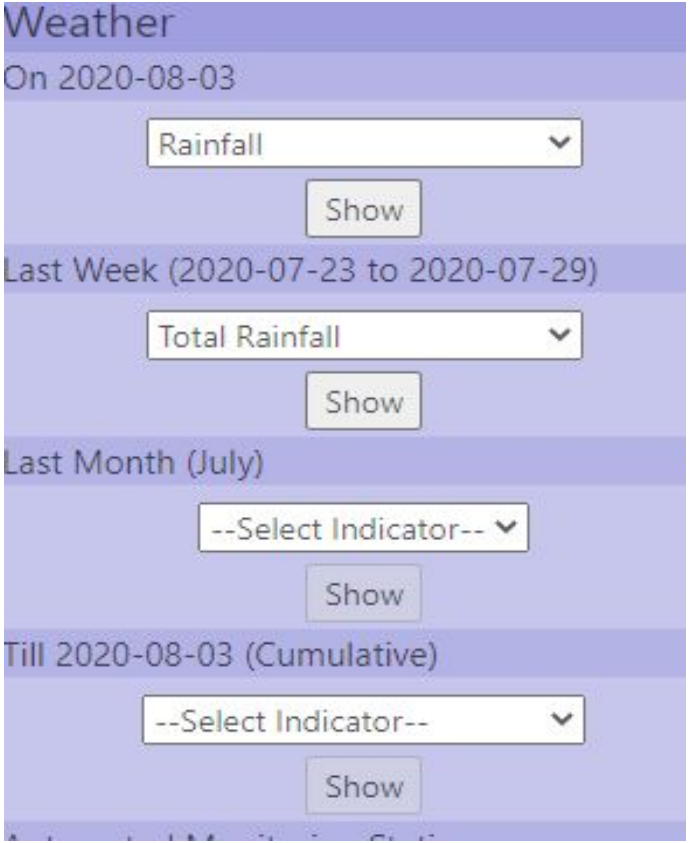




Dashboard - Updated Left panel

Daily-weekly-monthly-cumulative climate

indicators



Overall changes

1. All major layout changes - colours, logo, left panel, pop ups with data on clicking an AWS point made visible within window
2. Datasets - Structures, drainage, MLP, Water Balance, AWS, FFS
3. Layer sequence - Districts-Taluka-Cluster villages-Project Villages updated for better visibility
4. AWS data errors - previous data updated through skymet API resulting in reduced errors.

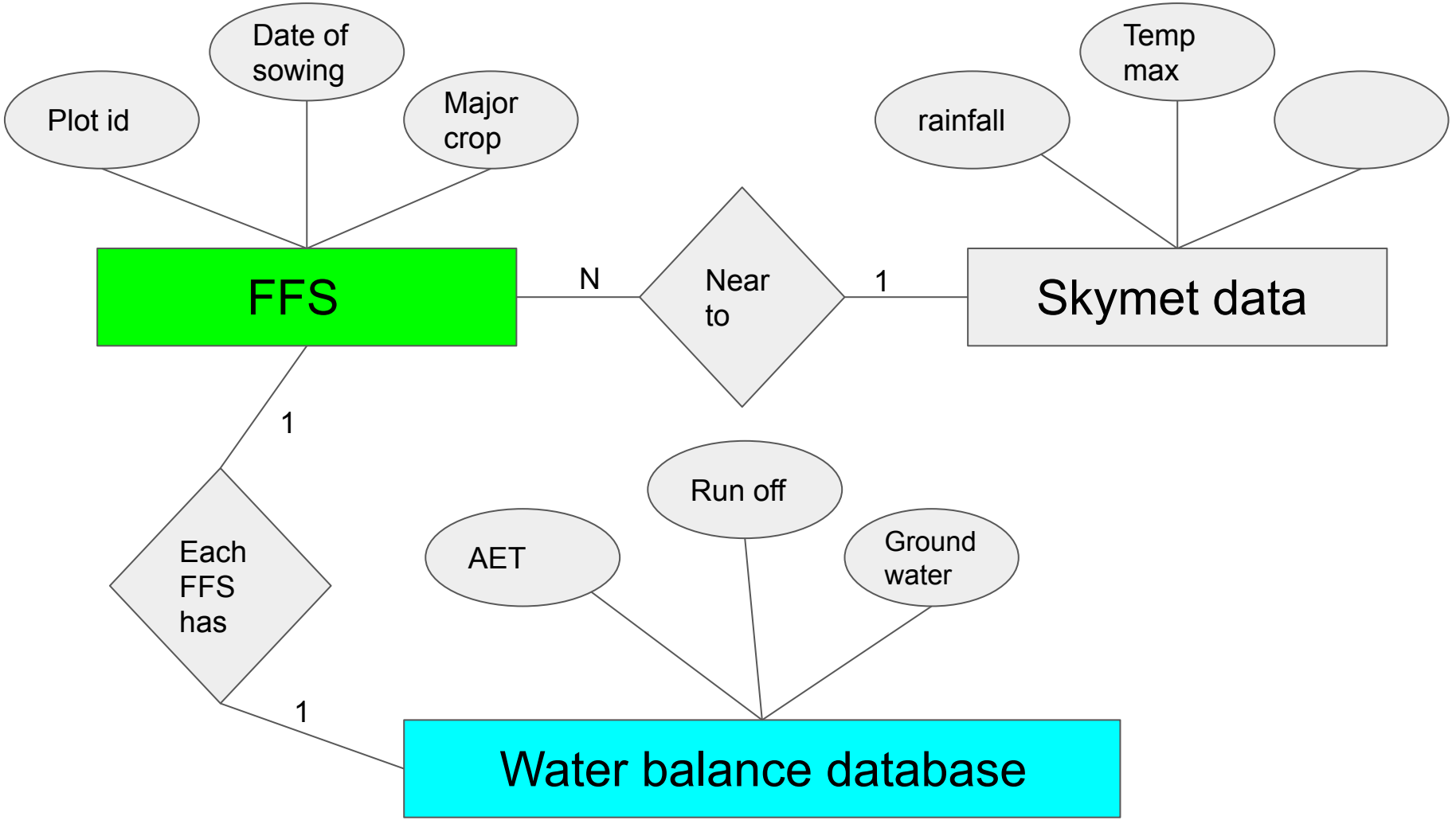
--Inputs required from PMU on when the data update should be done from skymet- for 1 day lag and no errors - as station data is updated multiple times within day. Sometimes even after 5 pm.

IT framework for contingency planning

In contingency planning we do require databases FFS,water budget and skymet.

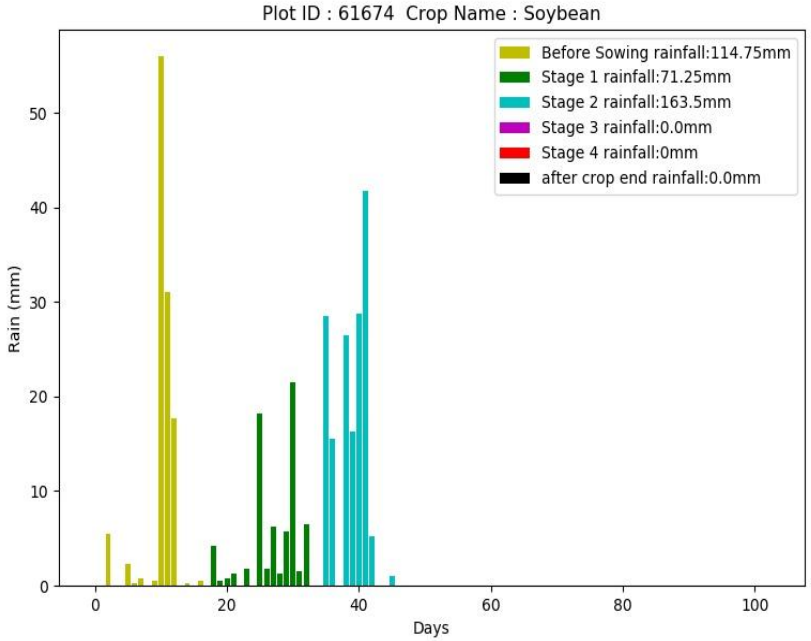
- FFS plots will provide data such as major crop and date of sowing.

  For each plot there will be a contingency planning.
- For each plot a nearest skymet circle will be assigned to it and rainfall and other parameters will be updated from there only for that plot.
- Front-end of contingency planning will be a map contingency wise for entire pocra region

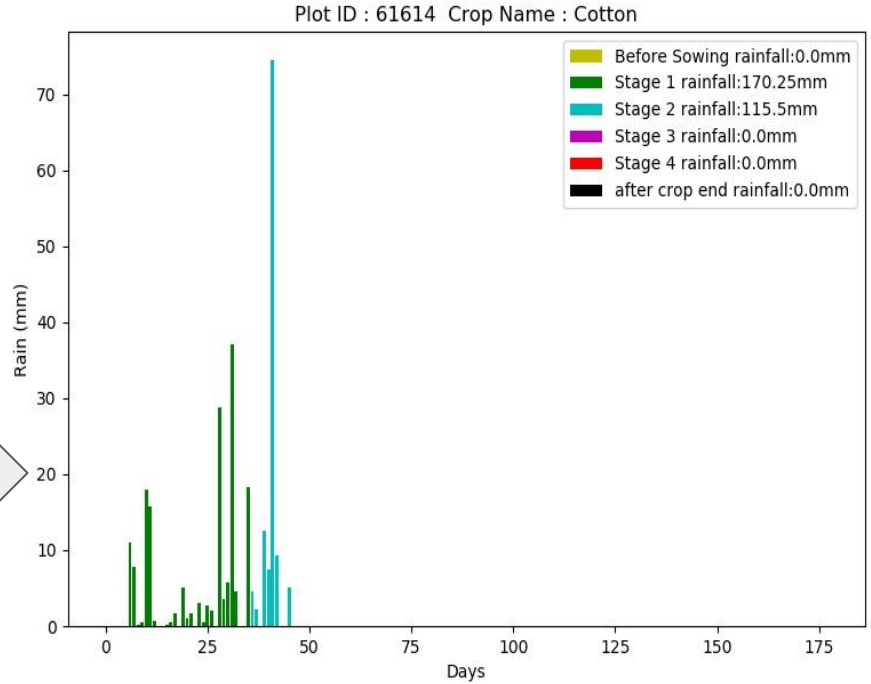

Date of sowing
Plot id
Major crop
Temp max
rainfall
FFS
N
Near to
1
Skymet data
1
Each FFS has
Run off
AET
Ground water
1
Water balance database

Previous slides ER diagram explains how various databases will be used in contingency planning .

- For every village there will be a contingency plan for that village crop wise on the basis of crop sowing date and skymet data of nearest circle to it.
- On clicking/on search for a particular village map a chart will be shown for water balance and rainfall for a particular crop

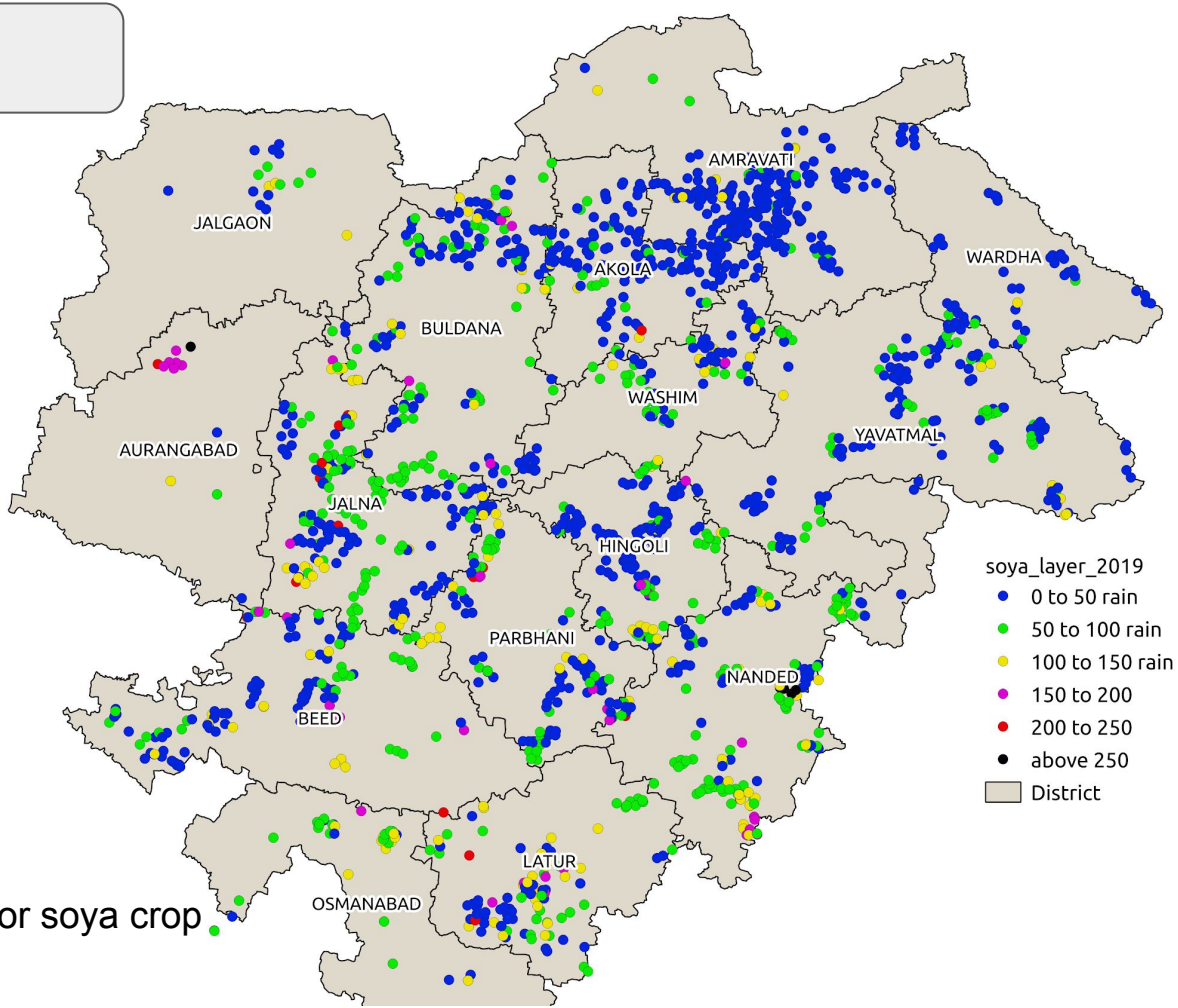


District :-Wardha subdivision:-Wardha
Taluka :- Seloo village : - Dahegaon (gosai)
Major _crop:- Soybean
Cropping_system :- intercropping



District :-Yavatmal
subdivision:-Pandharkawada
Taluka :- Zari jamani village : - Bhendala
Major _crop:-Cotton
Cropping_system :- intercropping

Sample MAP



Total rain in harvesting phase for soya crop 2019