United Nations Development Programme

(UNDP)

Research in Geospatial Data Analytics and OpenAI for DiCRA Digital Public Good for Climate Resilience

Deliverable #2

REFERENCE: RFP-136-IND-2022

Date of Submission: 16-03-2023

Submitted by

ICRISAT
INTERNATIONAL CROPS RESEARCH
INSTITUTE FOR THE SEMI-ARID TROPICS

Spatial Products

- Six layers for Telangana, Odisha and Jharkhand states were prepared using satellite imagery and ground data with the help of Machine learning algorithms and Spectral Matching Techniques as explained in Deliverable #1
- The deliverable #2 the "Deliverable -2" in the following link.

https://cgiar-my.sharepoint.com/:f:/g/personal/pranay_panjala_cgiar_org/EgiUzZll8YBMhVqrZ6H_1WQBrM3ZHZT0tDU6iUMp4X28VA?e=GrnEh7

- Croplands & Non-Croplands
- Irrigated and Rainfed Croplands
- Crop Intensity
- Crop Stress
- Length of Growing Periods
- Crop Type

Included Raw files (.img), Maps (.jpeg) and Metadata.
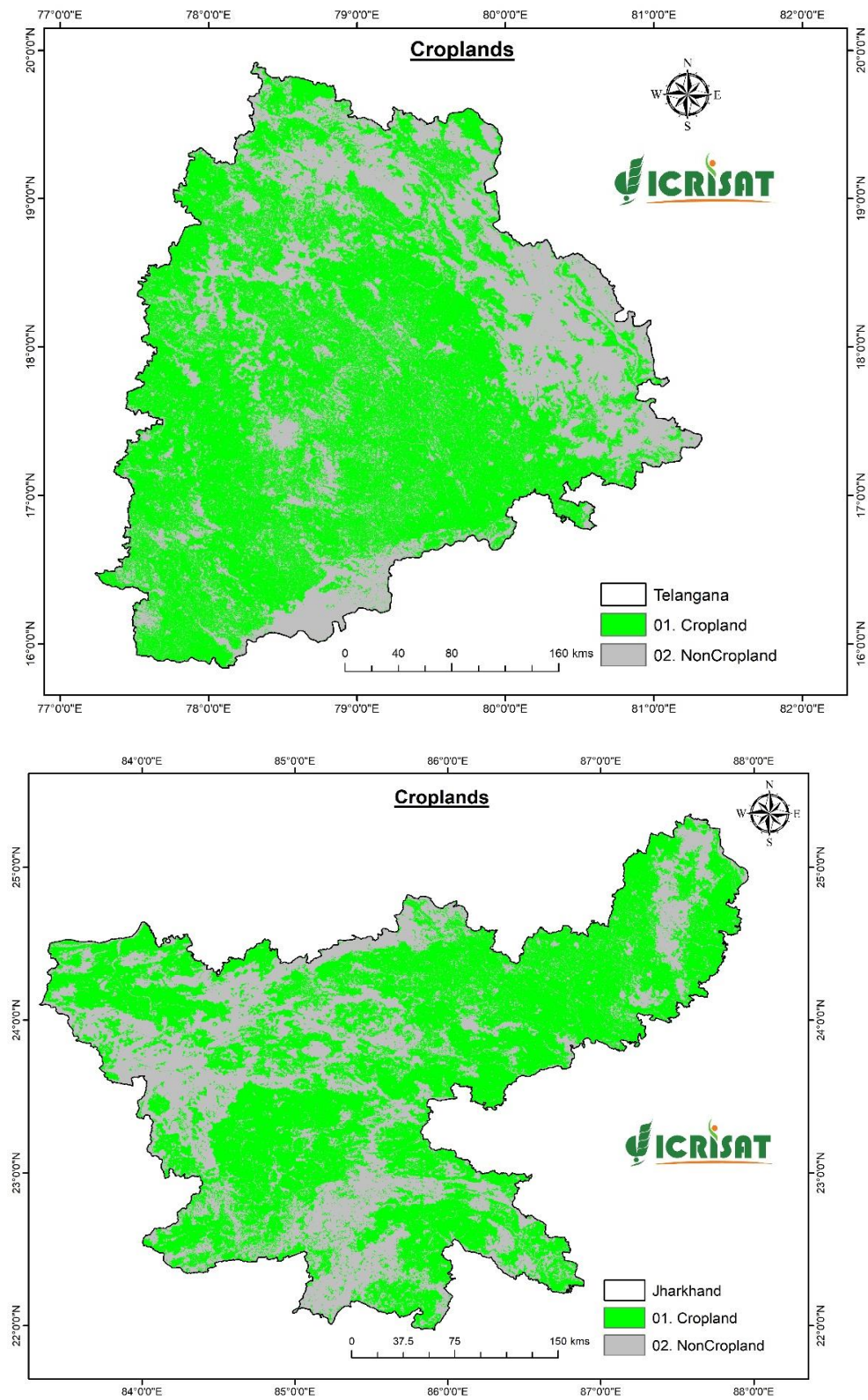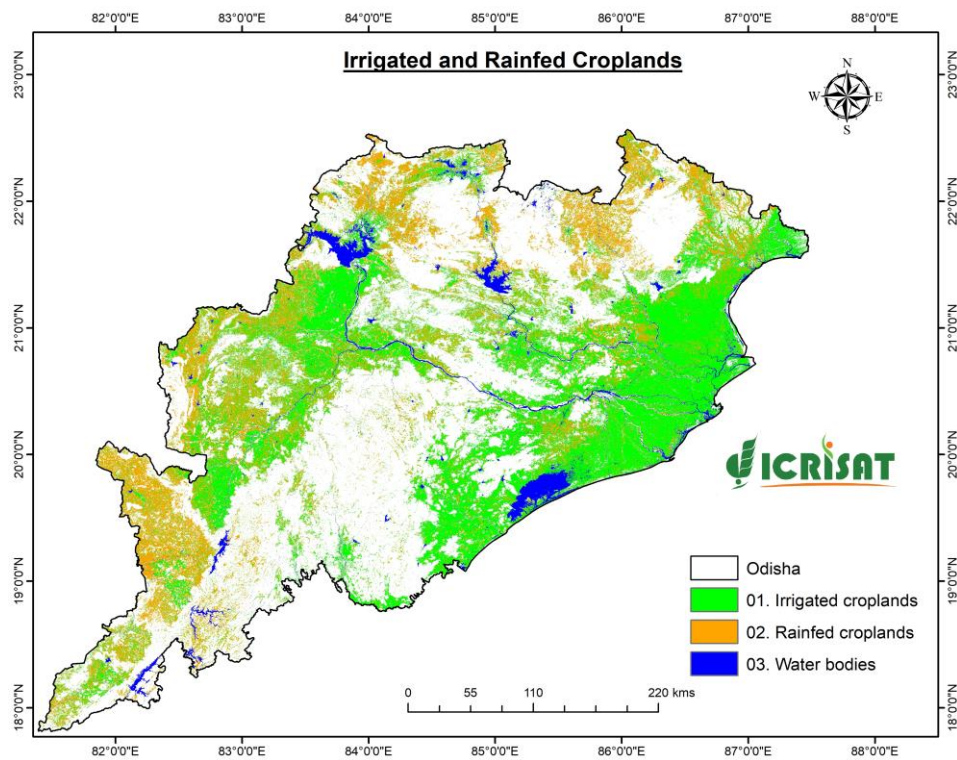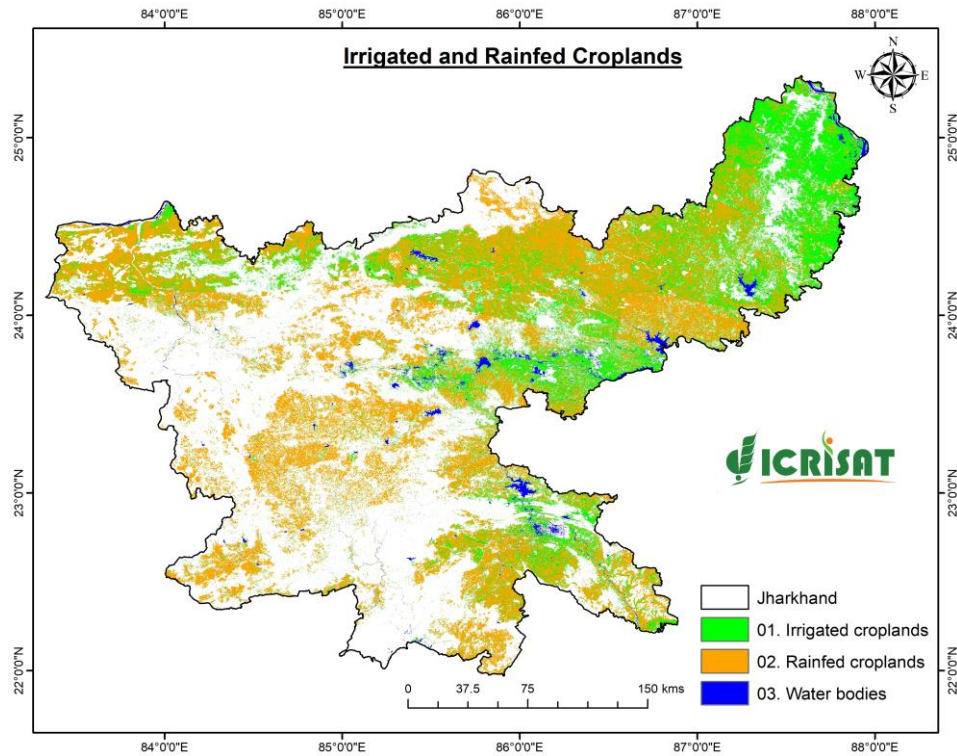
1. **Croplands & Non-Croplands**
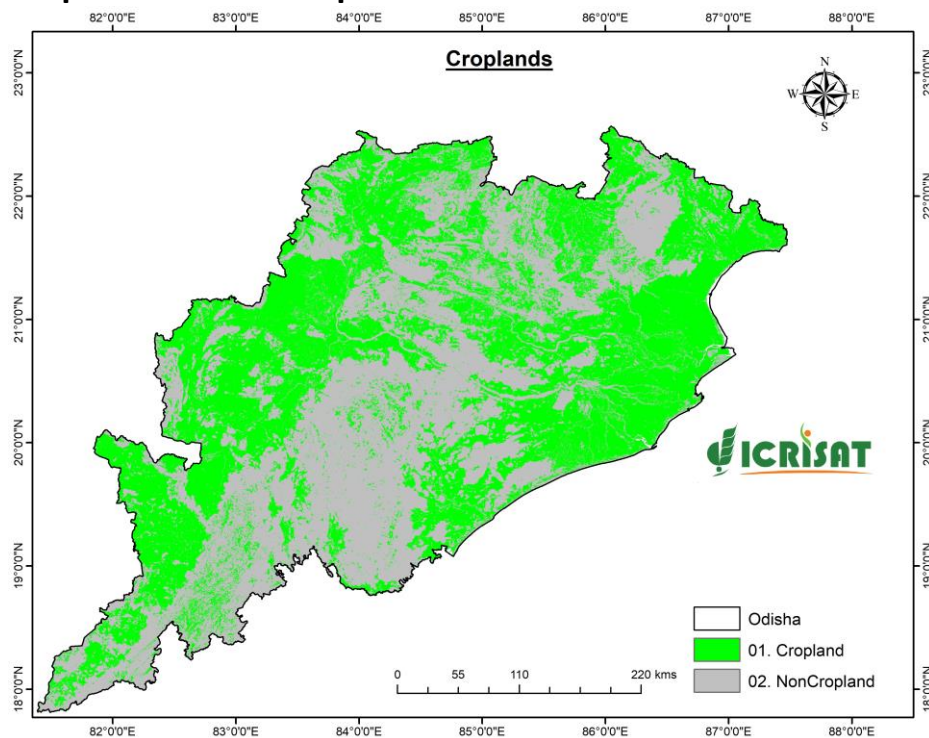
Figure 1: Maps of Croplands and Non-Croplands

2. Irrigated and Rainfed Croplands

Irrigated and Rainfed Croplands

Jharkhand
01. Irrigated croplands
02. Rainfed croplands
03. Water bodies

Irrigated and Rainfed Croplands

Odisha
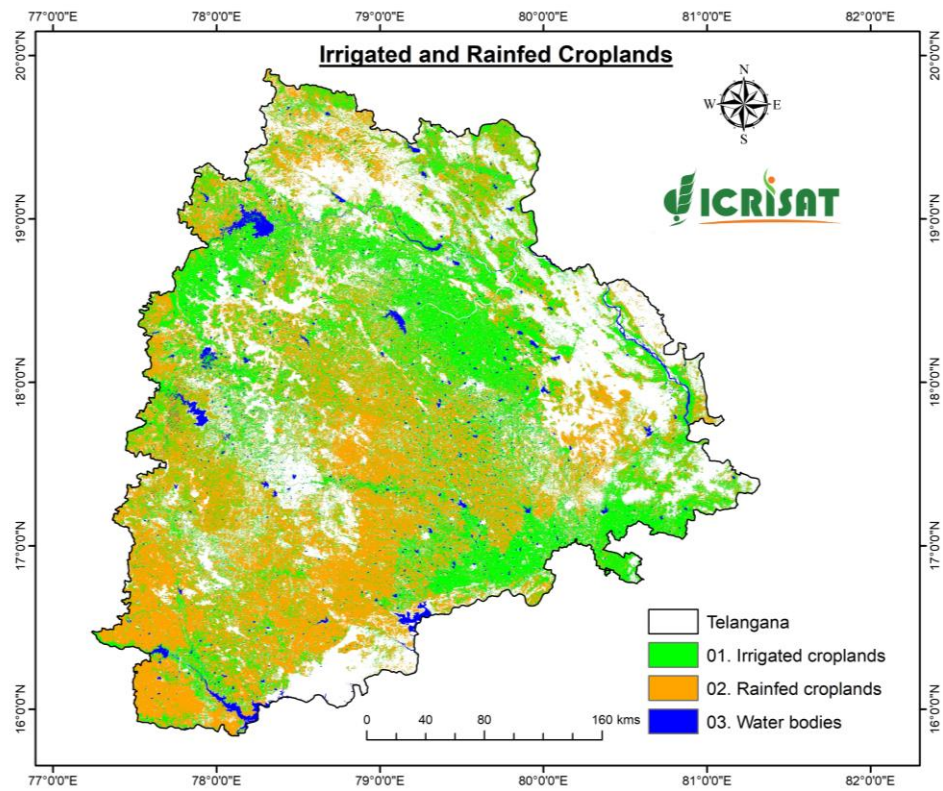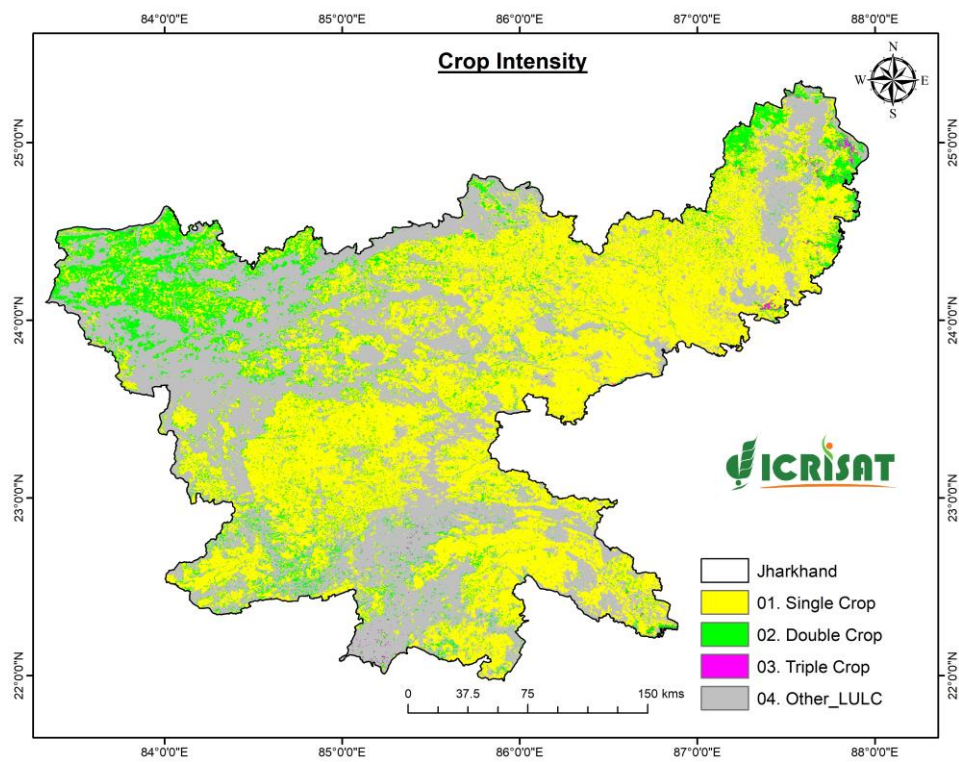01. Irrigated croplands
02. Rainfed croplands
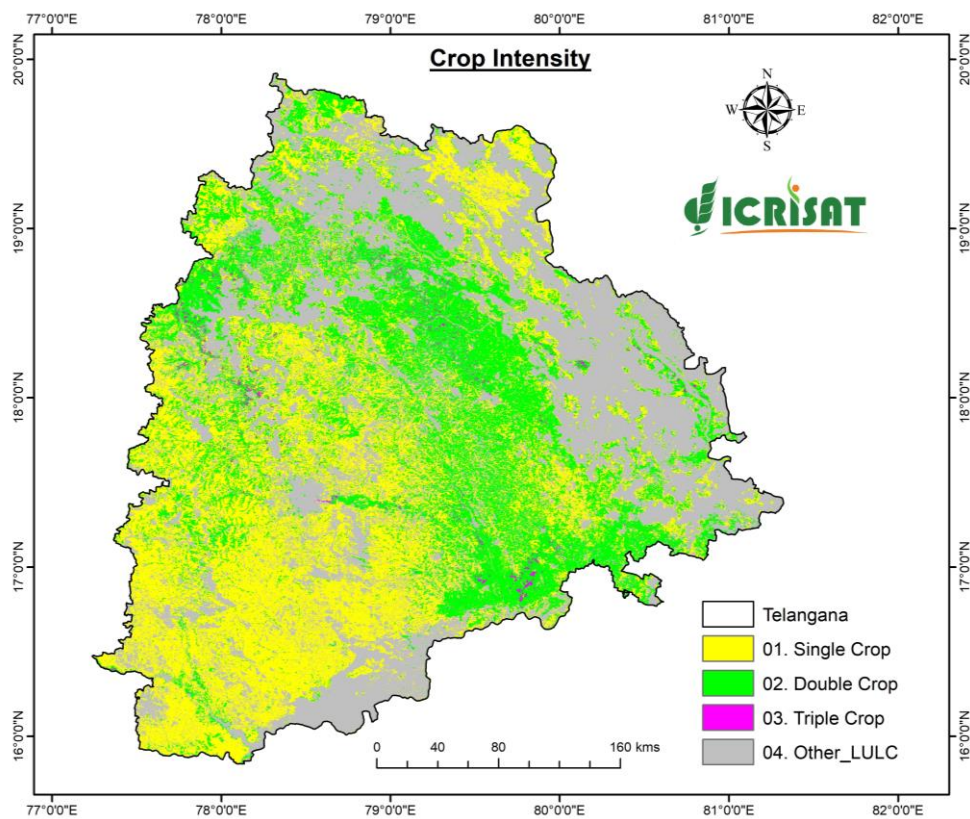03. Water bodies

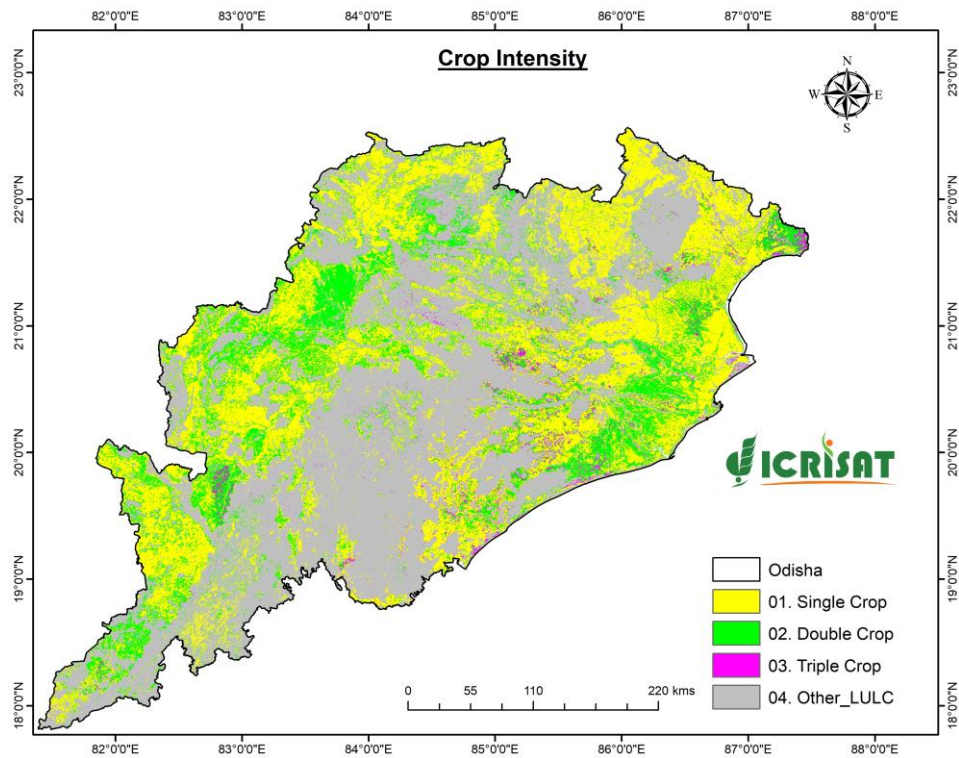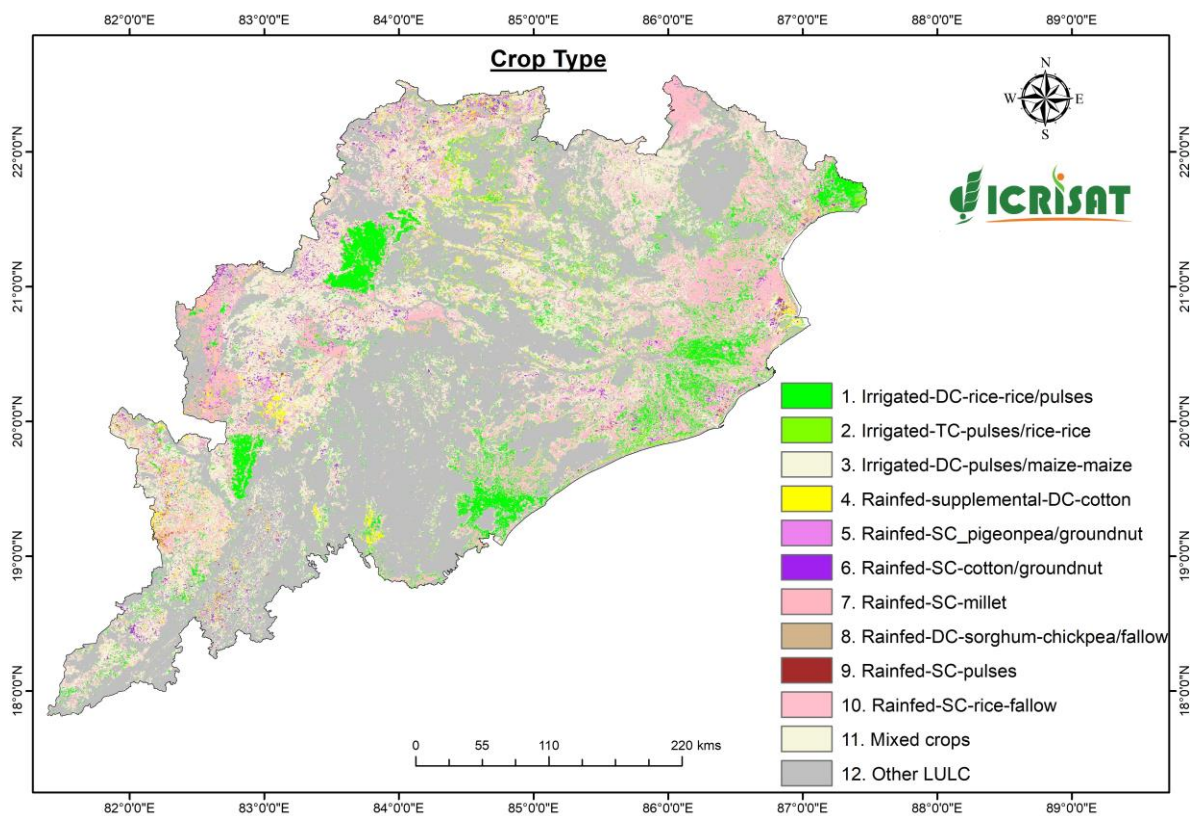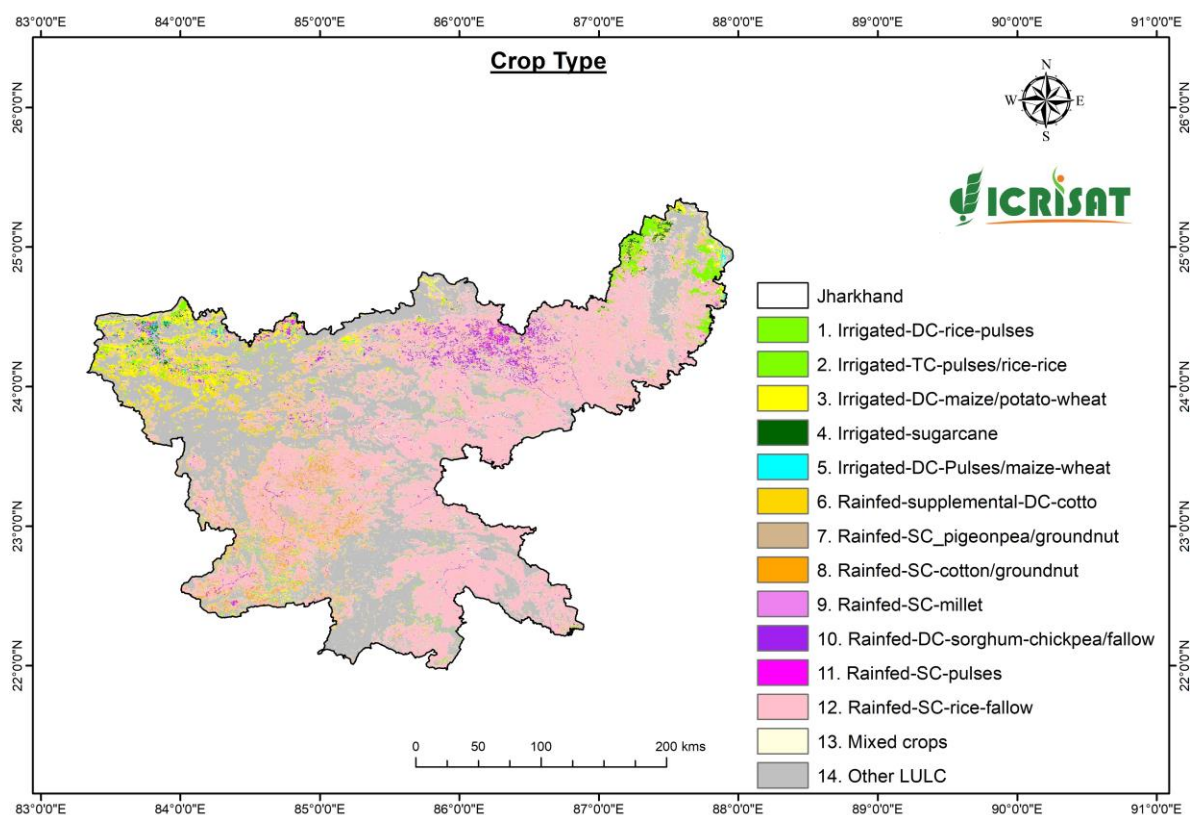**Figure 2:** Maps of Irrigated and Rainfed Croplands

3. Crop Intensity

Figure 3: Maps of Crop Intensity

4. Crop Type

Crop Type (Jharkhand)

Legend:
- Jharkhand
- 1. Irrigated-DC-rice-pulses
- 2. Irrigated-TC-pulses/rice-rice
- 3. Irrigated-DC-maize/potato-wheat
- 4. Irrigated-sugarcane
- 5. Irrigated-DC-Pulses/maize-wheat
- 6. Rainfed-supplemental-DC-cotto
- 7. Rainfed-SC_pigeonpea/groundnut
- 8. Rainfed-SC-cotton/groundnut
- 9. Rainfed-SC-millet
- 10. Rainfed-DC-sorghum-chickpea/fallow
- 11. Rainfed-SC-pulses
- 12. Rainfed-SC-rice-fallow
- 13. Mixed crops
- 14. Other LULC

Crop Type (Odisha)

Legend:
- 1. Irrigated-DC-rice-rice/pulses
- 2. Irrigated-TC-pulses/rice-rice
- 3. Irrigated-DC-pulses/maize-maize
- 4. Rainfed-supplemental-DC-cotton
- 5. Rainfed-SC_pigeonpea/groundnut
- 6. Rainfed-SC-cotton/groundnut
- 7. Rainfed-SC-millet
- 8. Rainfed-DC-sorghum-chickpea/fallow
- 9. Rainfed-SC-pulses
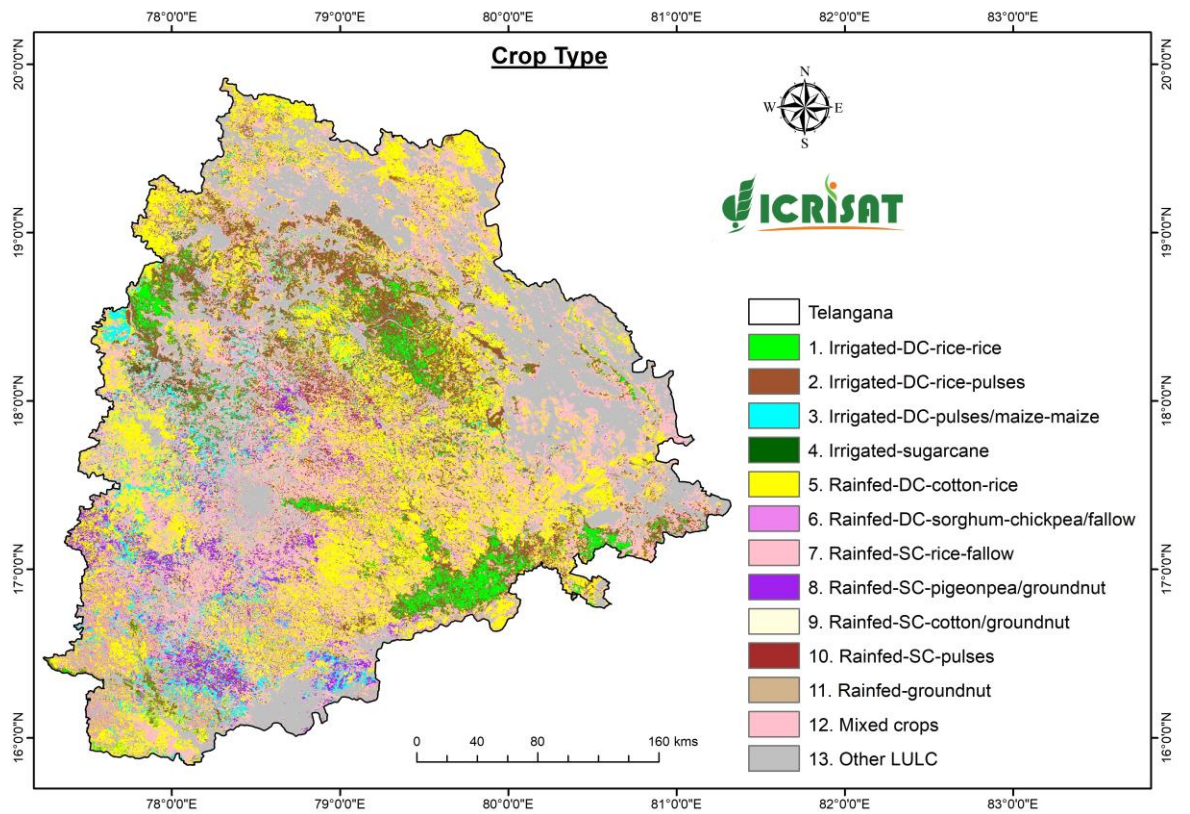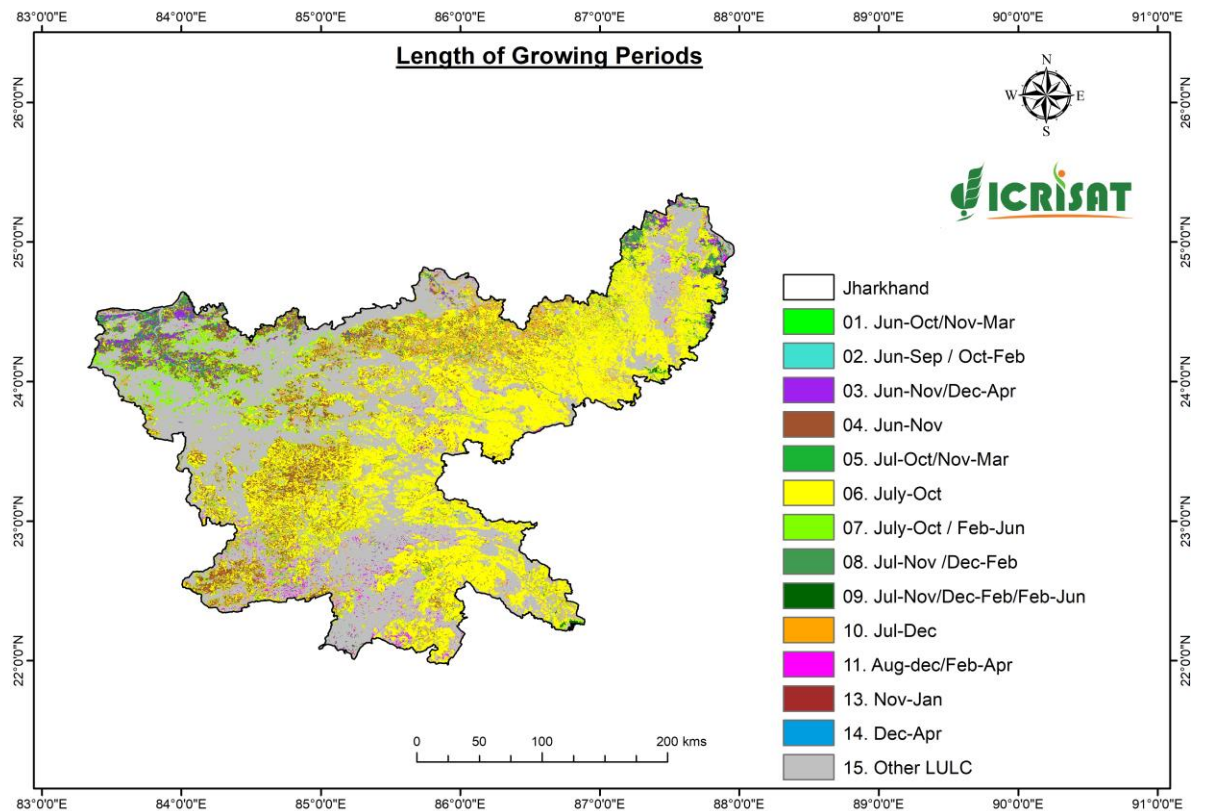- 10. Rainfed-SC-rice-fallow
- 11. Mixed crops
- 12. Other LULC
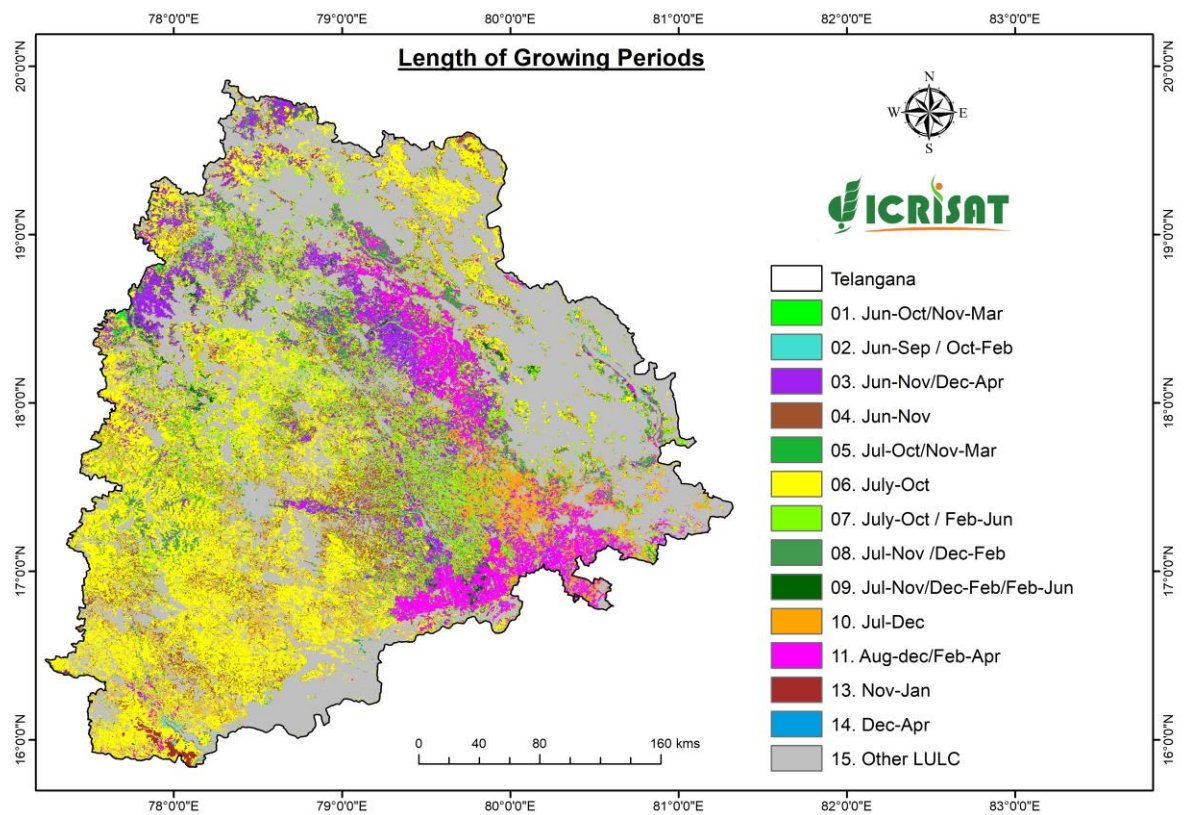
Figure 4: Maps of Crop Types
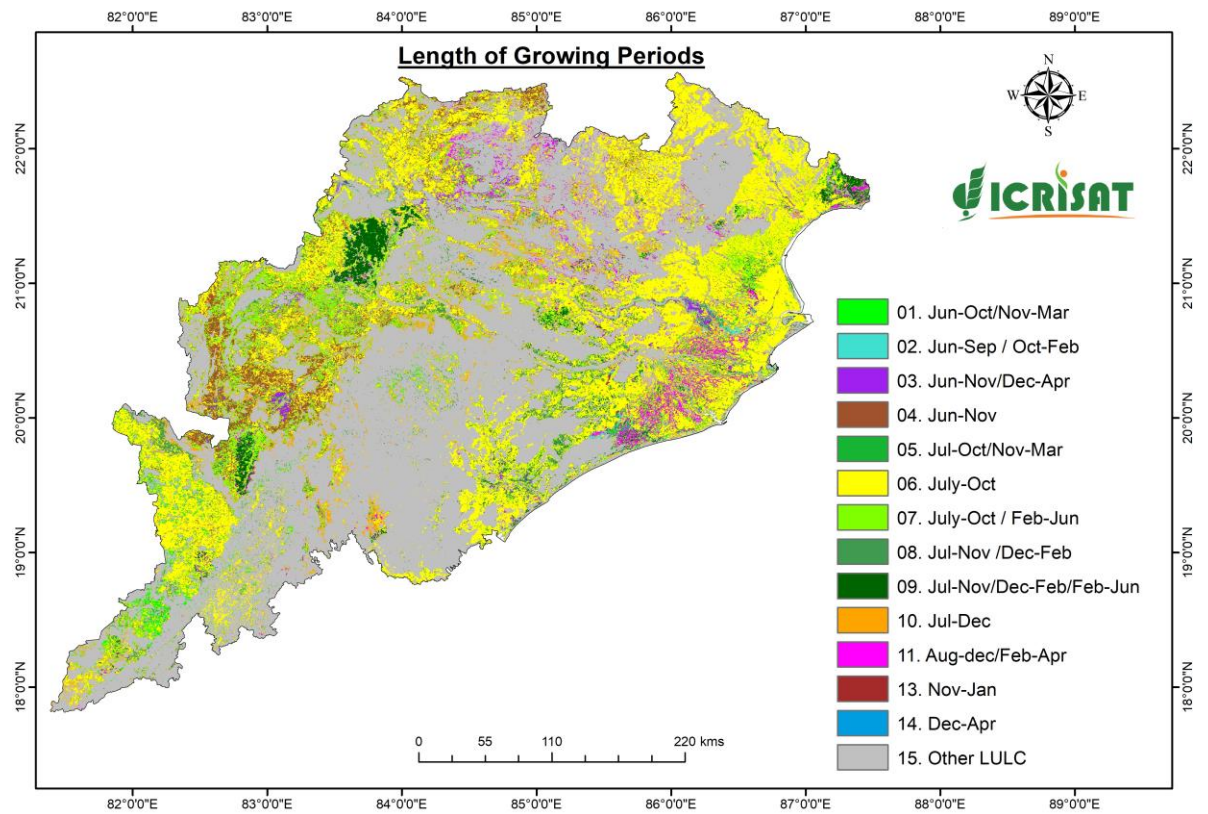
5. Length of Growing Periods

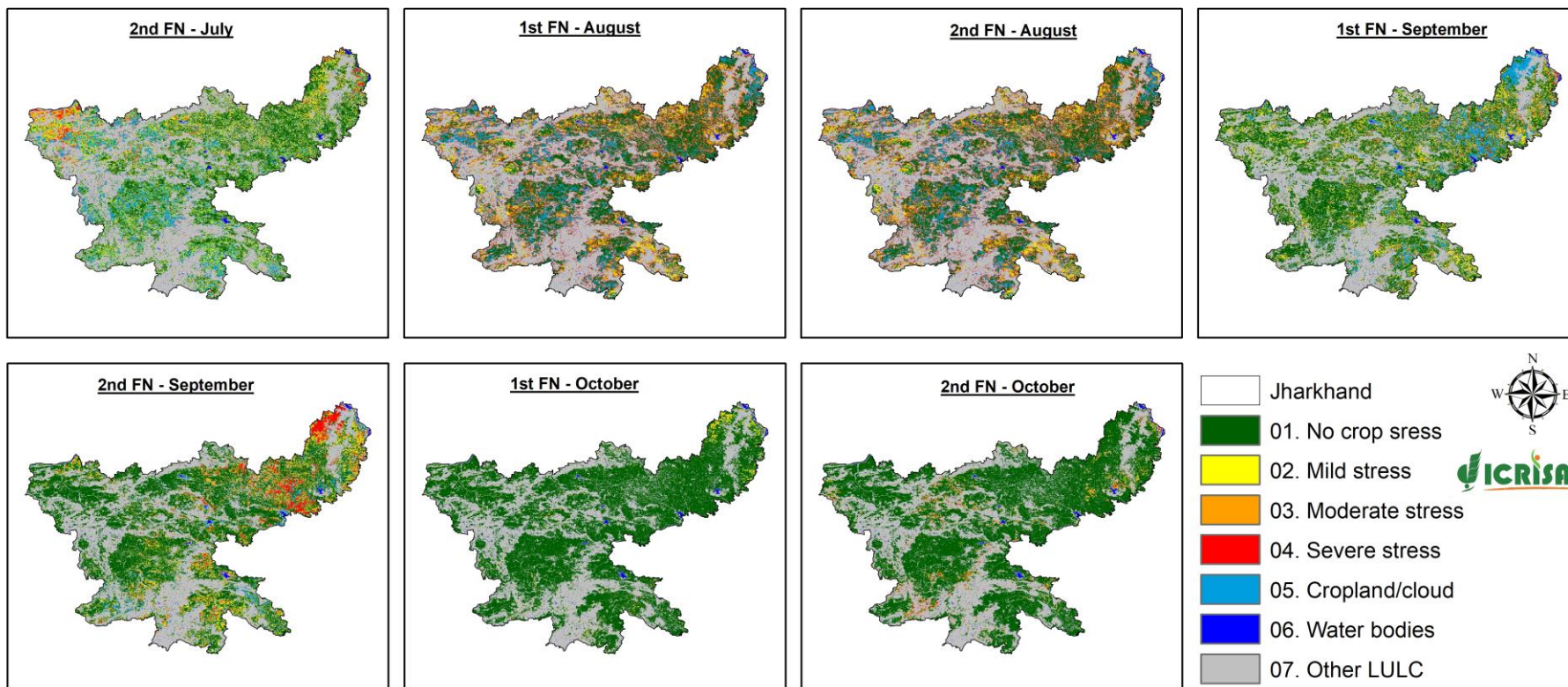**Figure 5:** Maps of Length of Growing Periods

6. Crop Stress

Crop Stress (2nd FN July to 2nd FN October)

	Jharkhand
🟩	01. No crop sress
🟨	02. Mild stress
🟧	03. Moderate stress
🟥	04. Severe stress
🟦	05. Cropland/cloud
🟦	06. Water bodies
⬜	07. Other LULC

Crop Stress (2nd FN July to 2nd FN October)

2nd FN - July

1st FN - August

2nd FN - August

1st FN - September

2nd FN - September

1st FN - October

2nd FN - October

Odisha

01. No crop sress

02. Mild stress

03. Moderate stress

04. Severe stress

05. Cropland/cloud

06. Water bodies

07. Other LULC

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Crop Stress (2nd FN July to 2nd FN October)

2nd FN - July

1st FN - August

2nd FN - August

1st FN - September

2nd FN - September

1st FN - October

2nd FN - October

Telangana

01. No crop sress

02. Mild stress

03. Moderate stress

04. Severe stress

05. Cropland/cloud

06. Water bodies

07. Other LULC

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About

ICRISAT works in agricultural research for development across the drylands of Africa and Asia, making farming profitable for smallholder farmers while reducing malnutrition and environmental degradation. We work across the entire value chain from developing new varieties to agribusiness and linking farmers to markets.

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