



中国科学院空天信息研究院

Aerospace Information Research Institute(AIR)
Chinese Academy of Sciences(CAS)

Regional Workshop on CropWatch Innovative Cooperation Programme
“Advancing satellite-based crop monitoring to increase resilience in the face of global food insecurity”

CropWatch Cloud introduction and demonstration

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Aug 7th, 2023





Outline

- CropWatch Cloud
- Demonstration: Registration & Configuration
- Practice

CropWatch Cloud



Cropwatch **Pro**

Enter

CropWatch-Pro

- An online tool for people to produce crop monitoring products at any time and anywhere.



CropWatch **Explorer**

Enter

CropWatch-Explorer

- An online interface for people to explore and analysis all the crop information data easily.



Cropwatch **Project**

Enter

CropWatch-Project

- An online platform for people to create and write the crop bulletin.



Cropwatch **Bulletin**

Enter

CropWatch-Bulletin

- An webpage for people to read CropWatch bulletin.



[Home](#)

[About](#)

[Update](#)

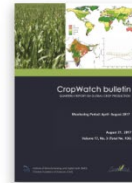
[Bulletin](#)

[Methodology](#)

[Publications](#)

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[En](#) [中文](#)



August 2017 CropWatch bulletin (Vol. 17, No. 3)

August 2017 CropWatch bulletin. The August 2017 CropWatch bulletin reports on agroclimatic conditions and the condition of crops that were growing or harvested between April and July this year. CropWatch analyses are done on various scales (particularly including 148 sub-national regions for 31 key countries), with special attention paid to the major worldwide producers of maize, rice, wheat, and soybean. The bulletin also describes current crop condition and prospects in China nationwide and by region and presents an updated estimate for global and national production of crops to be harvested throughout 2017. The focus section highlights the dire situation in the Horn of Africa and presents an update on El Niño events.

[Bulletin](#) →

CropWatch Sub System



CropWatch **Pro** dev

Enter >



CropWatch **Explore**

Enter >



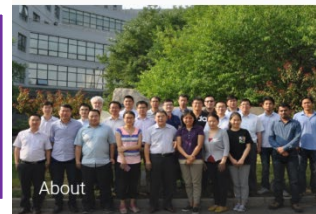
CropWatch **Analysis**

Enter >



CropWatch **Bulletin**

Old Webpage >



About



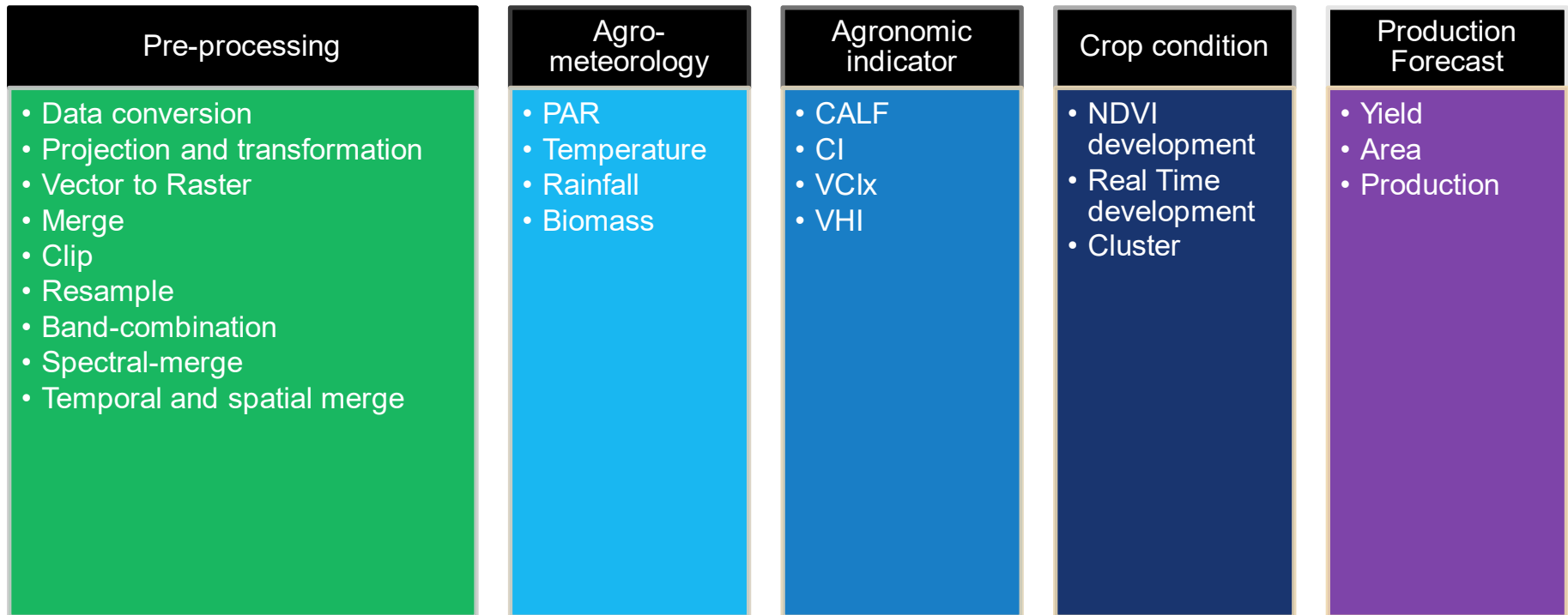
Bulletin



Publications

Component 1: CropWatch Processing

CropWatch Processing offers an auto-processing chain from pre-processing of raw data to production outlook



CropWatch Processing



CropWatch Pro

English Login

Agro-climatic Index

Rainfall index

Temperature Index

PAR Index

Biomass

Agronomic Indicators

Maximum VCI

Minimum Vegetation health Index

Cropped arable land classification

Cropping intensity

Crop Condition

Crop Condition based on NDVI anomaly

Crop Condition Classification

Crop condition clustering

Minimum Vegetation health Index (China)

Popular models

Remote Sensing Index Model

Area Estimation based on CALF

Statistics

Produce Thematic Map

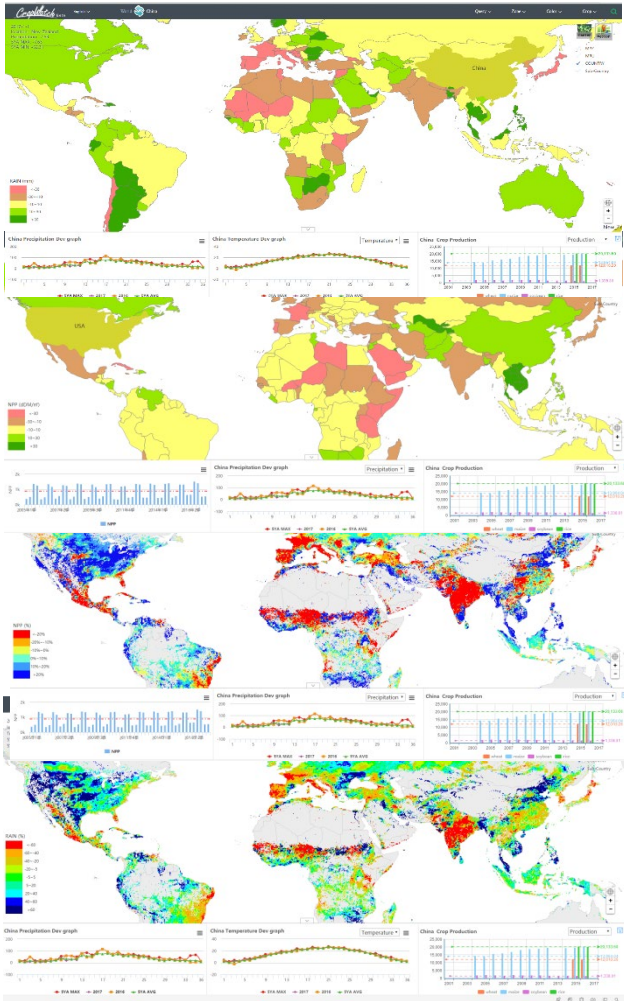
The screenshot displays several key components of the CropWatch Pro interface:

- Cropped arable land classification:** A settings panel with fields for Starting Time (2018), End Time (2018), and a checkbox for "Simulate the data for next year".
- Model description:** A sidebar showing a world map and details for the "Cropped arable land classification" model.
- Task Center:** A table listing processing tasks with columns for No., User, Model, Cropping Time, Starting Time, Progress, Status, and Operation.

No.	User	Model	Cropping Time	Starting Time	Progress	Status	Operation
1	langlang	Cropped Arable Land Classification	2017-05-11 07:52:13	2017-05-11 07:52:13	<div style="width: 100%;"></div>	Finished	Task Log
2	alan	Index Statistics	2017-05-11 08:24:36	2017-05-11 08:24:36	<div style="width: 100%;"></div>	Finished	Task Log
3	alan	Index Statistics	2017-05-11 08:25:17	2017-05-11 08:25:17	<div style="width: 100%;"></div>	Finished	Task Log
4	alan	Index Statistics	2017-05-11 08:25:47	2017-05-11 08:25:47	<div style="width: 100%;"></div>	Cancelled	Task Log
5	alan	Index Statistics	2017-05-11 08:26:21	2017-05-11 08:26:21	<div style="width: 100%;"></div>	Finished	Task Log
6	alan	Index Statistics	2017-05-11 08:26:51	2017-05-11 08:26:51	<div style="width: 100%;"></div>	Finished	Task Log
7	alan	Index Statistics	2017-05-11 08:27:24	2017-05-11 08:27:24	<div style="width: 100%;"></div>	Finished	Task Log
8	alan	Index Statistics	2017-05-11 08:27:52	2017-05-11 08:27:52	<div style="width: 100%;"></div>	Finished	Task Log
9	alan	Index Statistics	2017-05-11 08:28:22	2017-05-11 08:28:22	<div style="width: 100%;"></div>	Finished	Task Log
10	alan	Index Statistics	2017-05-11 08:28:52	2017-05-11 08:28:52	<div style="width: 100%;"></div>	Finished	Task Log
- Preview Thematic Map:** A panel showing a map of China with a legend for "Cropped arable land classification" and a "Simulate the data for next year" checkbox.
- System Management:** A sidebar with various system settings and user management options.

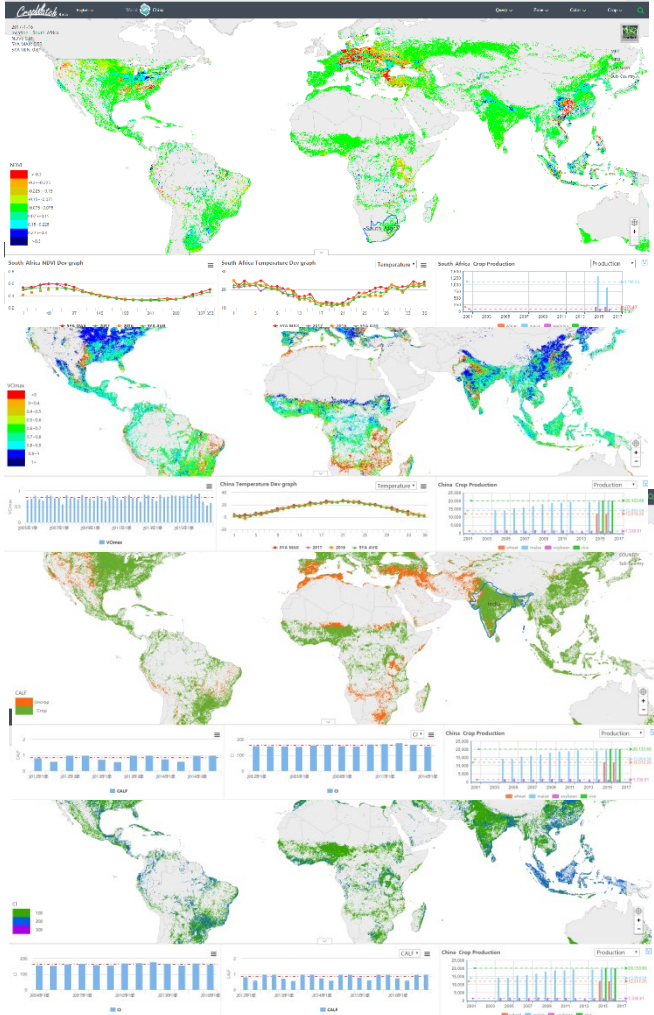
Component 2: CropWatch-Explorer

CropWatch-Explorer provide a web service for users to conveniently explore and visualize our data.



CropWatch-Explorer

Visual Type	Scale Type	Crop Type
Vector	MPZ	Wheat
Raster	MRU	Maize
Cluster	Country	Rice
	Sub-Country	Soybean
RAIN	TEMP	PAR
		BIOMASS
NDVI	VCix	VHI
		CALF
		CI
Area	Yield	Production
		Early warning



Component 3: CropWatch-Analysis

The screenshot displays the CropWatch-Analysis web application interface. On the left is a dark sidebar with navigation options: Reports, Report, Work, Settings, Auth, and Tag. The main content area shows a report titled "November 2017 CropWatch bulletin" with a status of "Created". Below this, there are four panels, each representing a chapter of the report:

- Chapter 1. Executive summary**: Contains one section, "Executive summary", authored by "rene", with a status of "Submitted".
- Chapter 2. Global agroclimatic patterns**: Contains one section, "Overview", authored by "rene" and "zhiliang", with a status of "Submitted".
- Chapter 4. Crop and environmental conditions in major production zones**: Contains seven sections: "Overview", "West Africa", "North America", "South America", "South and Southeast Asia", "Western Europe", and "Central Europe to Western Russia". Each section is authored by different individuals and has a "Submitted" status.
- Chapter 9. Main producing and exporting countries**: Contains fourteen sections, each representing a country: "Overview", "Country analysis", "Argentina", "Australia", "Bangladesh", "Brazil", "Canada", "Germany", "Egypt", "Ethiopia", "France", "United Kingdom", "Indonesia", and "India". Each section is authored by different individuals and has a "Submitted" status.

At the bottom right of the interface, there is a circular progress indicator showing 37% completion, with a small "0.01/6" label next to it.

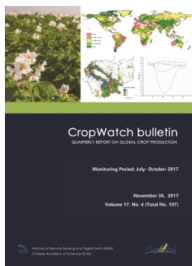
Component 4: CropWatch-Bulletin



Home >> Bulletin >> November 2017 CropWatch bulletin (Vol. 17, No. 4)

November 2017 CropWatch bulletin (Vol. 17, No. 4)

[All bulletins >>](#)



November 2017 CropWatch bulletin. This bulletin features the latest and final CropWatch estimates for 2017 production of maize, rice, wheat, and soybean. Focusing on the months of July-October, chapters cover global, national, and regional-level agroclimatic conditions and the condition of crops that were growing or harvested during this time. For China, the bulletin presents 2017 crop production and crop conditions for each of seven key agro-ecological areas, as well as regional impacts of pests and diseases. The focus section reports on recent disaster events with an impact on agriculture, the possibility of a La Niña event, and an analysis of rangeland management in Africa.

[Full report](#)

[报告全文](#)



Key messages from the report:

- Global agroclimatic patterns. Disasters took a heavy toll on all continents; key events included (1) the continuation of the complex emergency situation with drought component in the Horn of Africa, (2) heat waves around the Mediterranean and in North America, (3) more than ten tropical storms and cyclones, essentially in Asia and the Caribbean, and (4) exceptional floods in southern Asia.
- Updated and final 2017 global production estimates. CropWatch presents its revised and final estimates for 2017 production; they include estimates of 2,509 million tons of total 2017 output for major grains and 326 million tons of soybeans.
- Total cereal production of the three major cereal producers. The total 2017 cereal output of China reached 519,584 thousand tons (down -1.9% compared with 2016), while estimates are 435,918 thousand tons for the United States (+0.1%) and 275,676 thousand tons for India (+5.4%).
- China total production. The final CropWatch estimate for 2017 total summer crops production in China is 403.0 million tons, a significant decrease (-3.0%) compared to 2016. The total annual crop production (including cereals, tubers, and legumes) is put at 562.3 million tons (-1.0%).
- China production of maize, wheat, rice and soybean. The combined production of winter and spring wheat in China increased 0.3% compared to 2016, while maize production was reduced by 5.2%, mainly resulting from a 3.7% decrease in planted area for maize. Overall rice output for China did not change from 2016. Soybean production is up 3.4% over last year.

Introduction

This CropWatch bulletin summarizes global crop condition developments and agroclimatic factors from July 1 to October 31, 2017. Chapters 1 through 4 zoom in from a global overview of agroclimatic indicators (Chapter 1) to detailed descriptions of crop and environmental conditions in large production zones (Chapter 2), to individual country analyses covering 30 major producers and exporters including sub-national agro-ecological regions (Chapter 3) and China (Chapter 4). A special focus section is included in Chapter 5, covering this time revised and final 2017 CropWatch food production estimates, disaster events, focus on rangeland management in Africa, and an update on El Niño. This first part of the report includes the cover, table of contents, abbreviations, and a short overview of the different sections of the bulletin

Download

[Introduction](#)

Chapter 1. Global agroclimatic patterns

Chapter 1 describes the CropWatch agroclimatic indicators for rainfall (RAIN), temperature (TEMP), and radiation (RADPAR), along with the agronomic indicator for potential biomass (BIOMSS) for sixty-five global Mapping and Reporting Units (MRU). Indicator values for all MRUs are provided in Annex A.

Download

[Chapter 1. Global agroclimatic patterns](#)

Chapter 2. Crop and environmental conditions in major production zones

Chapter 2 presents the same indicators—RAIN, TEMP, RADPAR, and BIOMSS—used in Chapter 1 and combines them with agronomic indicators—cropped arable land fraction (CALF), maximum vegetation condition index (VCIx), and minimum vegetation health index (VHIn)—to describe crop and environmental conditions in six global major production zones (MPZ): West Africa, North America, South America, South and southeast Asia, Western Europe, and Central Europe to western Russia. (See also Annex C for more information about these zones.)

Download

[Chapter 2. Crop and environmental conditions in major production zones](#)

Chapter 3. Main producing and exporting countries

Building on the global patterns presented in previous chapters, this chapter assesses the situation of crops in 30 key countries that represent the global major producers and exporters or otherwise are of global or CropWatch relevance. First, the overview section (3.1) pays attention to all countries worldwide, to provide some spatial and thematic detail to the overall features described in section 1.1. In section 3.2, more detail is provided for each of the CropWatch monitored countries, including analyses by key agro-ecological regions within the country. For each country, maps are included illustrating NDVI-based crop condition development graphs, maximum VCI, and spatial NDVI patterns with associated NDVI profiles. Additional information about indicators per country is provided in Annex A, while Annex B provides 2017 production estimates for select countries.

Download

[Chapter 3. Main producing and exporting countries](#)

Chapter 4. China

After a brief overview of the agroclimatic and agronomic conditions in China over the reporting period (section 4.1), Chapter 4 presents an updated estimate of national winter crop production (4.2) and describes the situation by region, focusing on the seven most productive agro-ecological regions of the east and south: Northeast China, Inner Mongolia, Huanghuaihai, Loess region, Lower Yangtze, Southwest China, and Southern China (4.3). Section 4.4 presents the results of ongoing pests and diseases monitoring, while sections 4.5 and 4.6 describe trade prospects (import/export) of major crops (4.5) and an updated outlook for domestic prices of maize, rice, wheat and soybean (4.6). Additional information on the agroclimatic indicators for agriculturally important Chinese provinces are listed in table A.11 in Annex A.

Download

[Chapter 4. China](#)

Chapter 5. Focus and perspectives

Building on the CropWatch analyses presented in chapters 1 through 4, this chapter presents revised CropWatch food production estimates for 2017 (section 5.1), as well as sections on recent disaster events (5.2), the rangeland management in Africa (5.3), and an update on El Niño (5.4).

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[Chapter 5. Focus and perspectives](#)

Annex A. Agroclimatic indicators



Outline

- CropWatch Cloud
- Demonstration: Registration & Configuration
- Practice

<http://cloud.cropwatch.com.cn>

To start

Home page

- <http://cloud.cropwatch.com.cn/>

The screenshot shows the CropWatch website home page. At the top, there is a navigation menu with links for Home, About, Update, Bulletin, Methodology, Publications, Contact Us, and a language selector for English. A 'Login' button is highlighted with an orange box. Below the navigation is a featured article for the 'February 2021 CropWatch Bulletin' with a 'Click here to register' link. A 'Bulletin' link with a right-pointing arrow is also present. The main content area is titled 'CropWatch Sub System' and contains four tiles: 'CropWatch Pro dev', 'CropWatch Explorer', 'CropWatch Analysis', and 'CropWatch Bulletin', each with an 'Enter' button. Below this is a section with three columns: 'About' (with a group photo), 'Bulletin' (with images of the bulletin in Chinese and English), and 'Publications' (with an image of a person reading a bulletin). Each column has a 'More' link at the bottom.

CropWatch

Home About Update Bulletin Methodology Publications Contact Us English Login

February 2021 CropWatch Bulletin

[Click here to register](#)

February 2021 CropWatch Bulletin is based mainly on current remote sensing inputs in addition to detailed and spatially accurate reference data about crops and their management. Focusing on the months of October 2020 to January 2021, chapters cover global, national, and regional level agroclimatic conditions and the condition of crops that were growing during this time. For China, the bulletin presents crop conditions for each of seven key agro-ecological zones, an updated estimate of trade prospects (import/export) of major crops. The focus section reports on the production outlook of major cereal and oil crops countries in the Southern Hemisphere and some tropical and sub-tropical countries, recent disaster events and an update on El Niño or La Niña.

[Bulletin](#) →

CropWatch Sub System

- CropWatch Pro** dev
[Enter](#) »
- CropWatch Explorer**
[Enter](#) »
- CropWatch Analysis**
[Enter](#) »
- CropWatch Bulletin**
[Enter](#) »

About

CropWatch is China's leading crop monitoring system. Using remote sensing and ground-based indicators the system assesses national and global crop production.

[More](#) »

Bulletin

Each quarter, CropWatch findings are published in the CropWatch bulletin. The bulletin is issued in English and Chinese.

[More](#) »

Publications

The CropWatch system and methodologies are described in various articles published in international and Chinese journals.

[More](#) »

CropWatch Cloud

Login



Username



Password

LOGIN




Forgot password?

- Or -

[Click here to register](#)
Register

Didn't receive confirmation message?

Sign up

	Username
	Email
	Password

After type in your user name, email address and set your password as left graph, **click the green button** to finish the registration

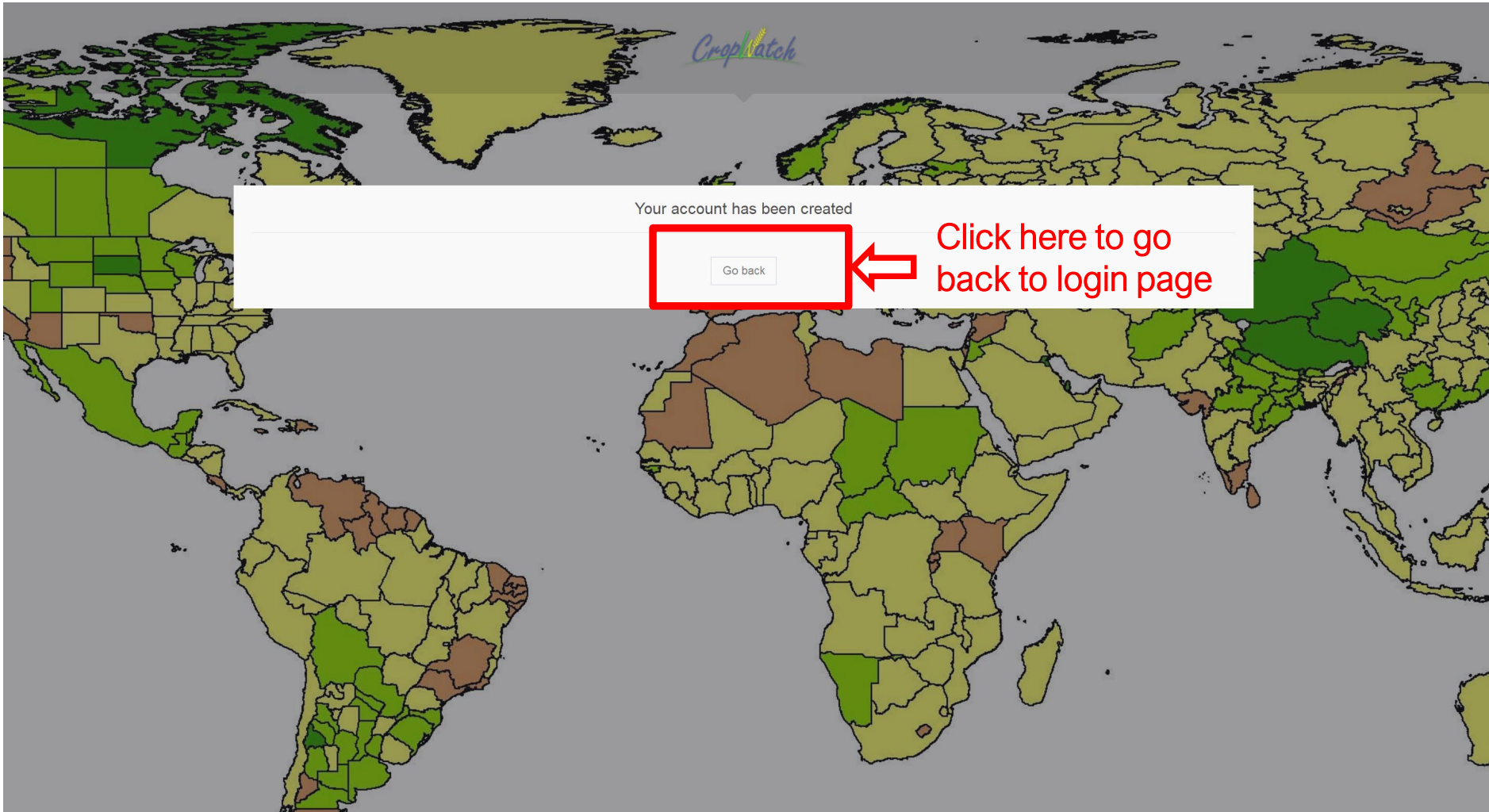
SIGN UP

Already registered? Sign in!

Didn't receive confirmation message?

Better to use your name as username
!Do remember your username and password!

Registration



Your account has been created

Go back

Click here to go
back to login page

Login

- Please share with me your username so that we can track all your account.
- Only user name and password are needed to login

CropWatch Cloud

Home About Conditions Contact Us English Login

Type in your username

Enter your password

LOGIN

Forgot password?

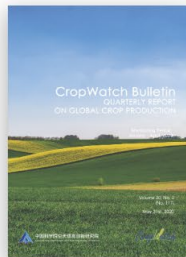
- Or -

Register

Didn't receive confirmation message?

Account configuration

- If login successfully, you will see your username on top right
- Click ‘CropWatch Pro’ Component (blue box below)




May 2020 CropWatch Bulletin

May 2020 CropWatch Bulletin is based mainly on current remote sensing inputs in addition to detailed and spatially accurate reference data about crops and their management. Focusing on the months of January to April 2020, chapters cover global, national, and regional level agroclimatic conditions and the condition of crops that were growing during this time. For China, the bulletin presents crop conditions for each of seven key agro-ecological zones, an updated estimate of national winter crop production and trade prospects (import/export) of major crops. The focus section reports on the first early outlook of crop production for 2020, as well as sections on recent disaster events, Drought impacts on rice production in lower Mekong river, and an update on El Niño.


[Bulletin →](#)

CropWatch Sub System



CropWatch **Pro** dev

Enter >




CropWatch **Explorer**

Enter >



CropWatch **Analysis**

Enter >



CropWatch **Bulletin**

Enter >

Account configuration

- For the users who login for the first time, you may define the system interface according to your own interests
- A popup window to ask you to configurate your own interface.

Please configurate the components of your personal interests

Language in default	<input checked="" type="checkbox"/> 中文	1. select the language: English
Country of interest	<input type="text" value="China"/>	2. Select your country
Province/state of interest	<input type="text" value="Province/State"/>	3. Select your own provinces
System title	<input type="text" value="CropWatch for China"/>	4. Set the name of your own system
Remarks	<input type="text" value="Remarks"/>	
Menu	<ul style="list-style-type: none"><input checked="" type="checkbox"/> Menu<ul style="list-style-type: none"><input type="checkbox"/> Data Preparation<input type="checkbox"/> Agro-climatic Index<input type="checkbox"/> Agronomic Indicators<input type="checkbox"/> Production Indicators<input type="checkbox"/> Warning Indicators<input type="checkbox"/> Crop Condition Monitoring<input type="checkbox"/> Zonal Statistics<input checked="" type="checkbox"/> Thematic Map<input checked="" type="checkbox"/> Task Center<input checked="" type="checkbox"/> System Management<input type="checkbox"/> Self Defined Area of Interests<input type="checkbox"/> Batch Processing	5. Select the components for this training:
<p>Note: The system can be used normally after your requests are reviewed</p>		6. Submit your request

Note: The system can be used normally after your requests are reviewed



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Practice

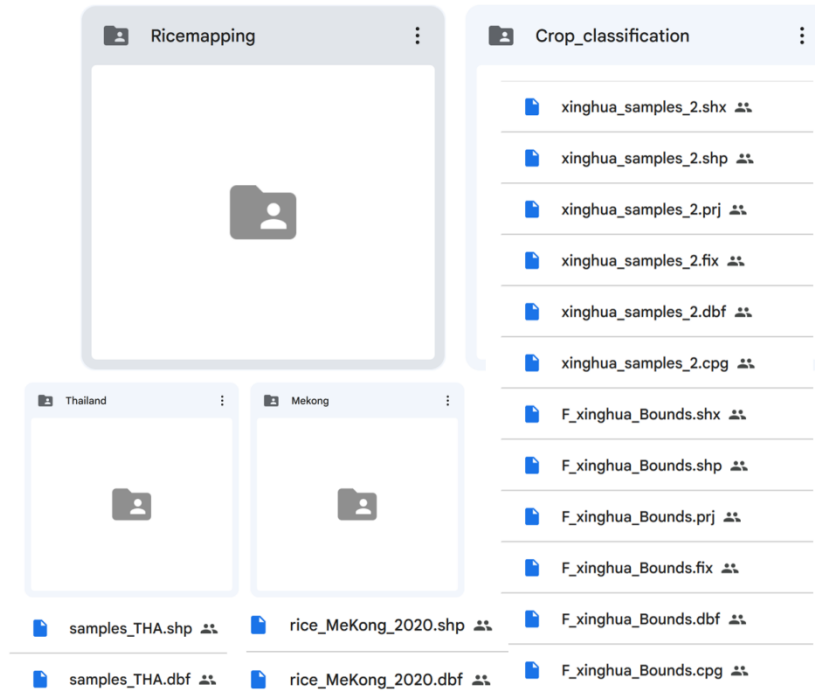
1. Account Registration
2. Account Configuration



Demo data for CropWatch Processing

Demo data to use the components

<https://drive.google.com/drive/u/1/folders/1HYy5IFWqibpSwjX0U2KI663jZJ1eoCs0>



Thanks!

中国科学院空天信息研究院

Contact us:

cropwatch@aircas.ac.cn;

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zhangmiao@aircas.ac.cn;

yannn@aircas.ac.cn;

