



Food and Agriculture  
Organization of the  
United Nations



International  
Plant Protection  
Convention



Department  
for Environment  
Food & Rural Affairs

# Regional Alert System for Locusts in the Americas

Development of a locust management, monitoring and alert system

---

London, 21 – 23 September 2022

## International Plant Health Conference





# Cooperation project IICA - COSAVE: Phytosanitary Intelligence

Alert System for Locusts in  
the Cosave Region







**Locusts can destroy crops in a few minutes, affecting crops and their export, and farmer's livelihoods**



# Locusts of the American continent

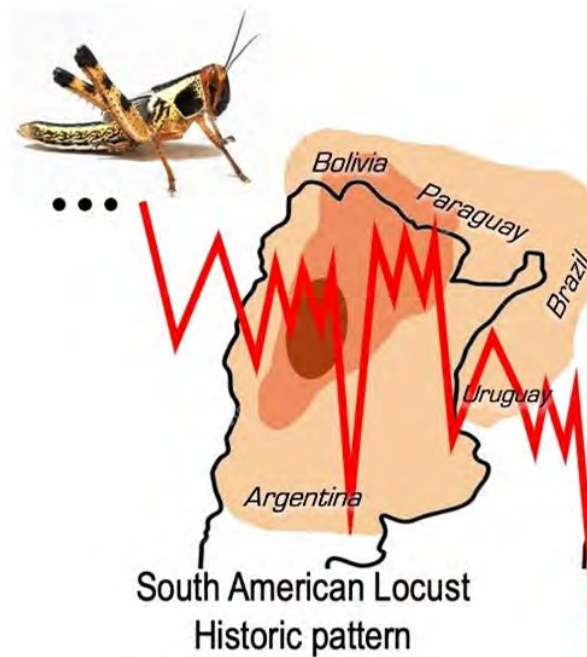
## DISTRIBUCIÓN DE LAS LANGOSTAS DE AMÉRICA



- Distribución *S. piceifrons piceifrons*
- Distribución *S. piceifrons peruviana*
- Distribución *S. interrita*
- Distribución *S. cancellata*



Ing. Agr. Hector E. Medina





# Locust Potential Impact



Production at risk  
**USD 3.7**  
billion dollars  
(Only in Argentina)



Consultoría Beneficio - Costo  
(2020, IICA)



# Objectives



## General Objective:

Contribute with the response system and risk assessment to reduce locust damage.

## Specific Objectives:

- Implement an Information System for the surveillance and alert responses in COSAVE Region.
- Develop a System for the management and assessment of data using GIS.





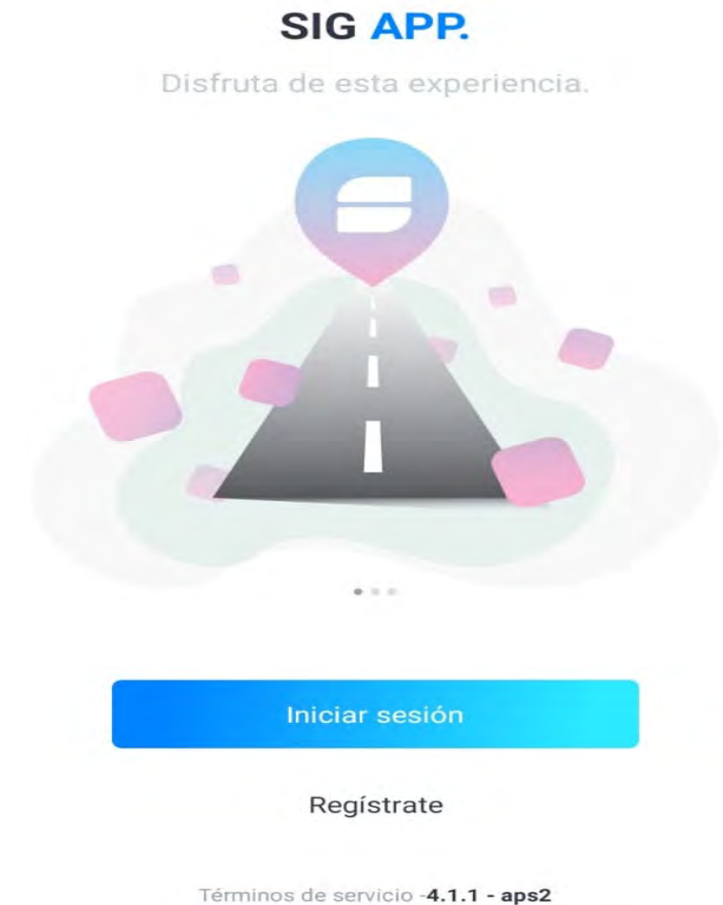
# 1) Mobile App at regional level

## What for?

Collect data and information  
from the field

## How?

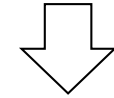
- By the mobile APP  
(SIGAPP Senasa AR)



# 1) Mobile App at regional level

## Advantages

- Harmonization of surveillance criteria
- Information in real time (it works offline)
- Information is centralized in the Locust GIS.







## 2) Locust Alert System

### What for?

- Improve the communication between NPPOs and notify farmers about the locust location in real time.
- Improve the response capacities for locust outbreak.



### How?

- Using the information from the Mobile App, through the Locust Alert System and the implementation of a website.



## 2) Locust Alert System

### Advantages:

- Constant and synchronized communication between NPPOs
- Fast decision making
- Countries can increase anticipation capacity and response
- Communication with the stakeholders







## 3) GIS Locust

### What for?

- To improve the management of the information, response capacities, risk assessment, decision making and pest control.

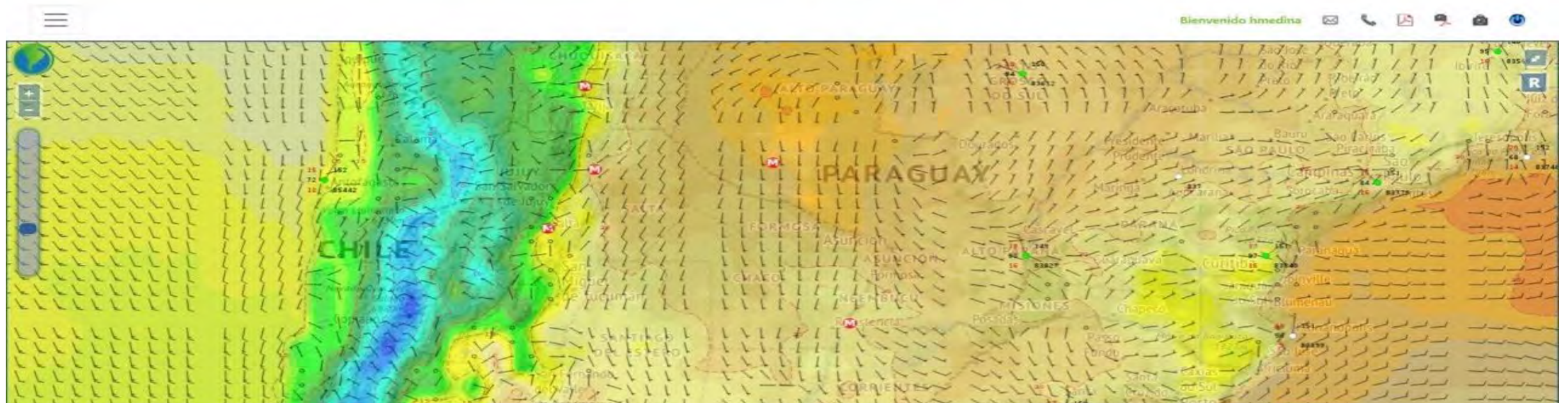
### How?

- Use the system to analyze and manage surveillance data to facilitate decision making and pest control.



### 3) GIS Locust

Sistema desarrollado por SENASA Argentina con el apoyo de IICA



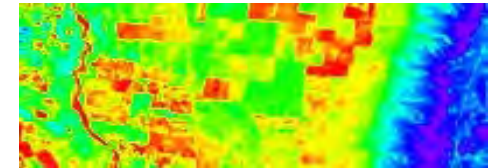




### 3) GIS Locust

#### Features:

- Integrated GIS System.
- Analyze, manage and download data.
- Upload layers in kml, csv, txt. formats.
- Share information and layers with users.
- Collect information from other systems.
- Incorporate information through WMS.





## Conclusion

- System available for pest surveillance, management and alerts of Locust in South America
- Easy system to be used by experts of different countries
- Integrated System to Strengthen Pest Outbreak Alert and Response Systems



<https://test.senasa.gov.ar/langostas>



## Next Steps

- Improve and develop the system, adding new features (\$)
- Use the system for other pests, E.g HLB, *Lobesia botrana*, Fruit Fly in Argentina
- Implement this system at continental level (or similar system), through Inter American Coordinating Group in Plant Protection (GICSV)



# GICSV

Grupo Interamericano de  
Coordinación en Sanidad Vegetal  
Inter-American Coordinating  
Group in Plant Protection



Food and Agriculture  
Organization of the  
United Nations



International  
Plant Protection  
Convention



Department  
for Environment  
Food & Rural Affairs

London, 21 – 23  
September 2022

# International Plant Health Conference

# Thanks for your attention

---

**Hector E. Medina** [hmedina@senasa.gob.ar](mailto:hmedina@senasa.gob.ar)

*Contingencies and Emergencies General Coordinator - Senasa ARGENTINA*

*OSAVE Locust Technical Group - Coordinator*

*GICSV Locust Technical Group - Coordinator*

