

Farmers



Greater and less variable income

Services



Higher participation of insurance and financial companies

Government



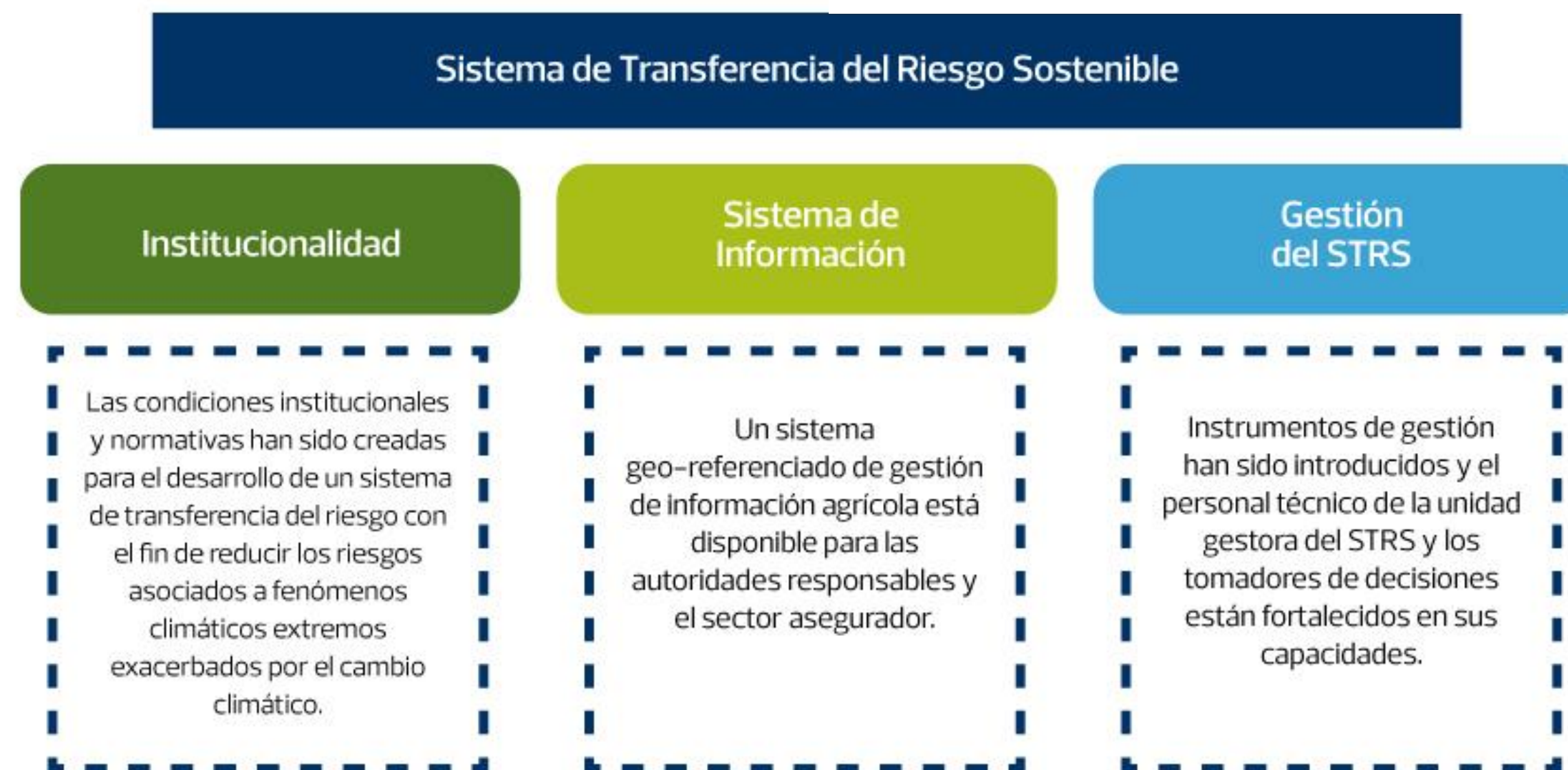
Improved policy, better provision of public services including early reaction to disasters



Information

Objective: Foster Resilience of the Peruvian Agricultural Production to Climate Change

giz Deutsche Gesellschaft
für Internationale
Zusammenarbeit (GIZ) GmbH



Component 2:

Improvement of the Agricultural Information System for MINAGRI, the Agrarian Banking and Insurance Sector
Duration: 06.2016 - 12.2018

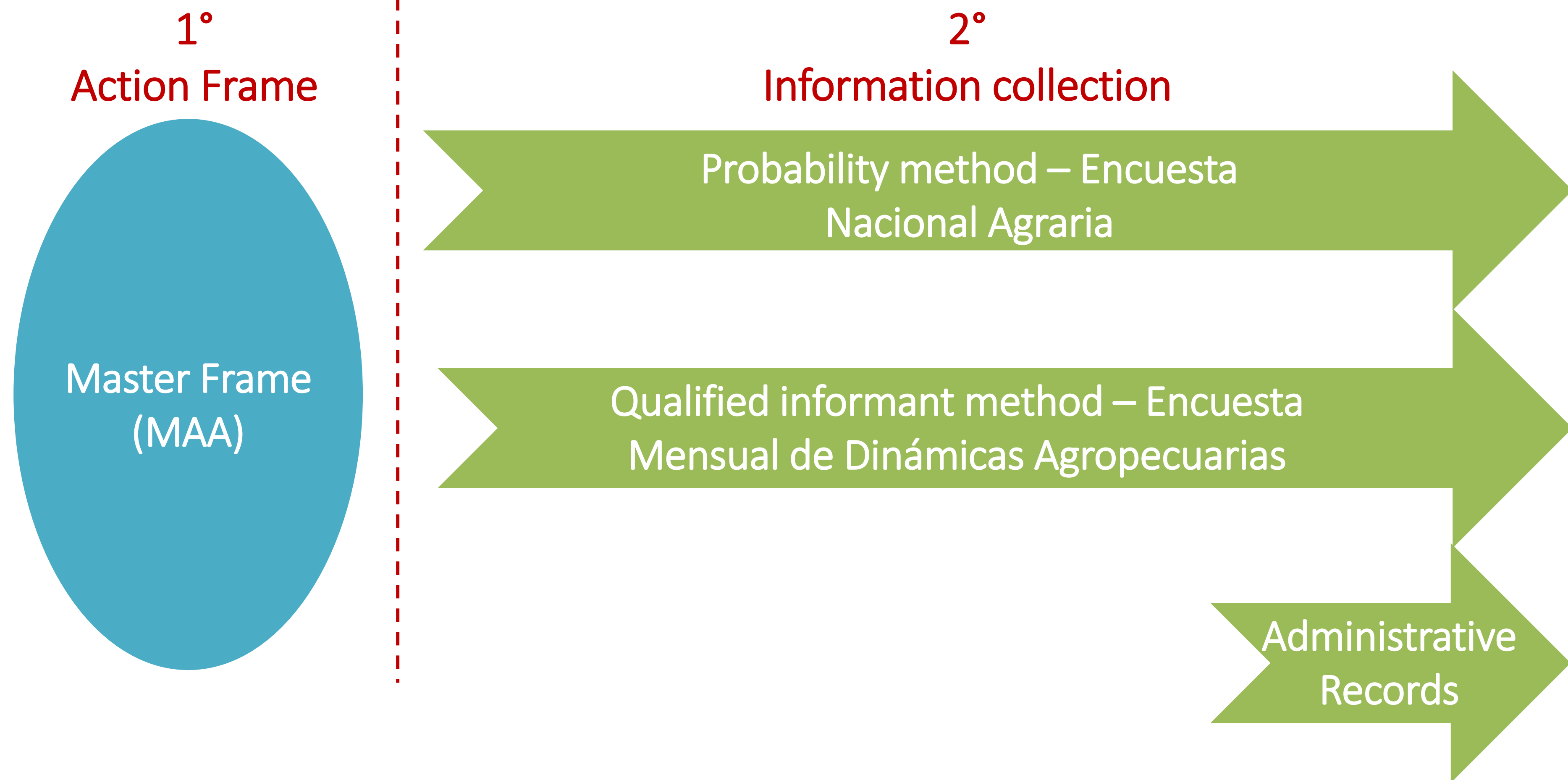
Partner:

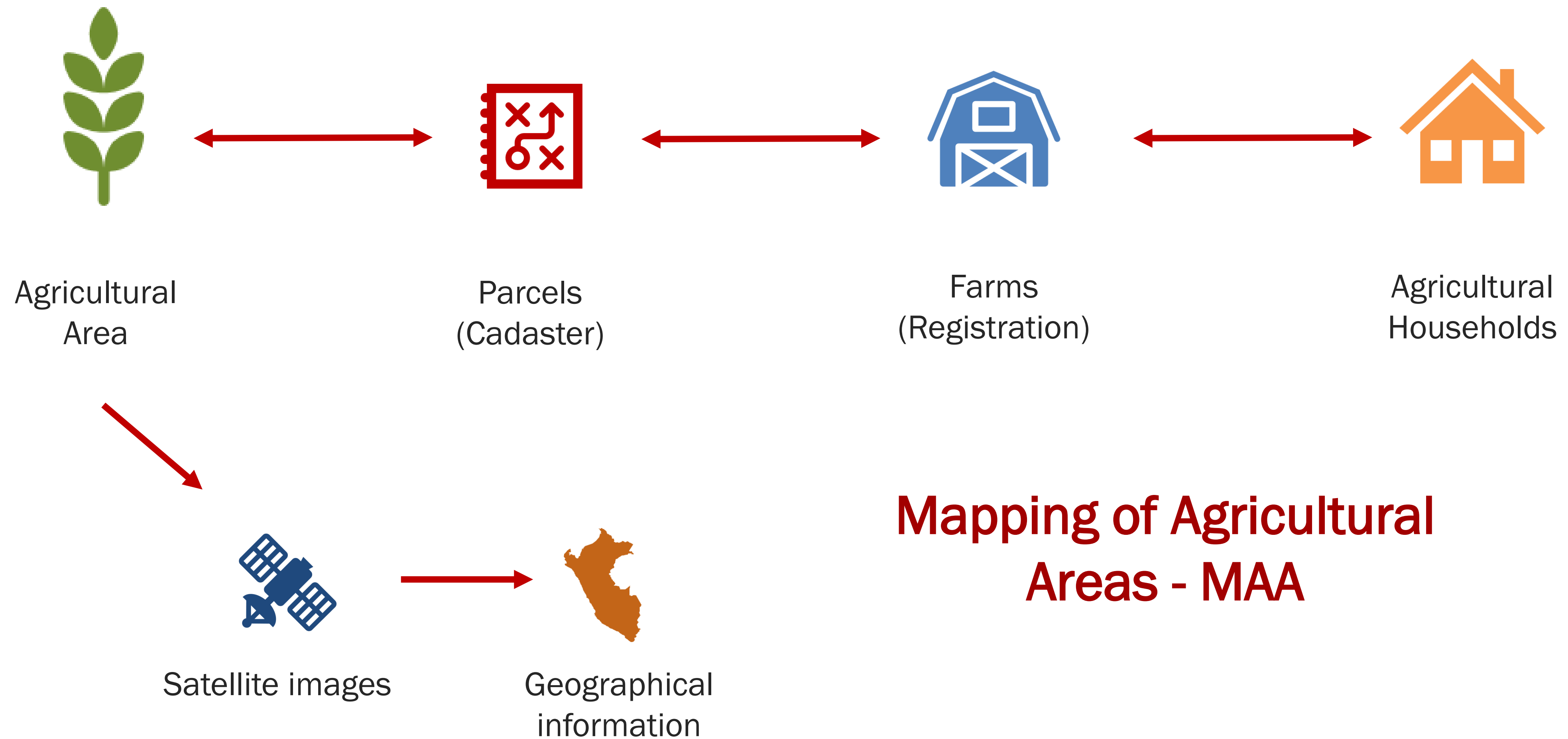


1. Improvement of the Agricultural Statistics System
2. Implementation of a Collaborative Information Platform
3. Provision of Training in the use of modern technology

GAF has conducted:

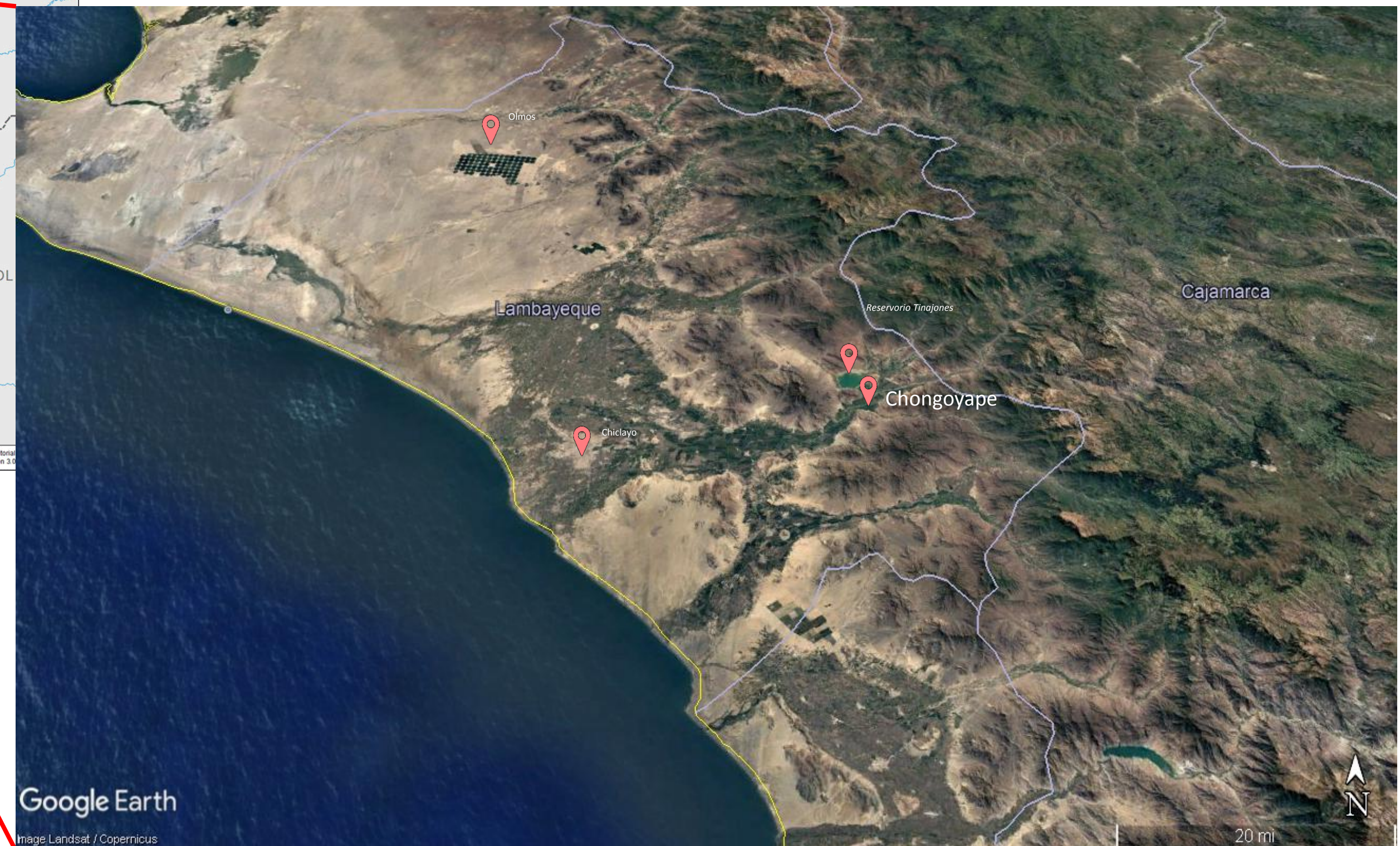
- Evaluation of previous methods of data collection used by MINAGRI
 - Probabilistic Sampling
 - Qualified Informant Method
- Analysis of the application of Administrative Records Method
- Development of a Prototype of a on-line Data Dissemination and Sharing Platform (CIP) – Web-GIS application
- Execution of a Pilot Study in Chongoyape, District of Chiclayo
- Conduction of a Workshop in Chiclayo with Regional Government, Agents and Qualified Informants
- Training on GIS, Sampling and Data Analysis
- Provision of Services well before the deadlines
- Pilot start of the MAA in the Sierra for Kishuara, Apurimac.





- Identifies the Agricultural Area using satellite images.
- Flexible: Adapts to all natural and administrative boundaries.
- Free of charge images: Sentinel.
- Easy to update: Images available in several periods

Pilot Area: Chongoyape, Lambayeque

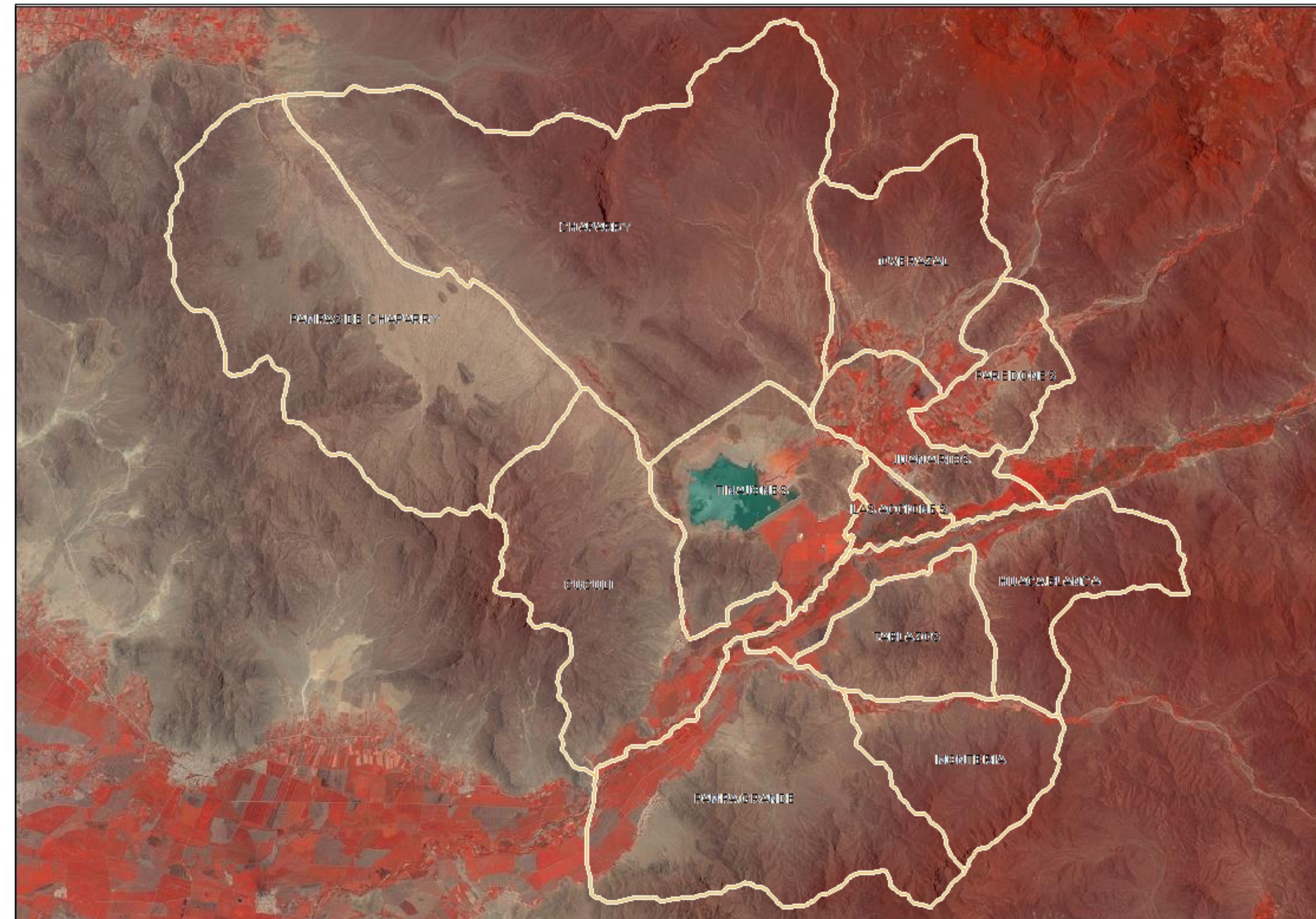


Statistical Sectors

LEGEND

Sentinel Image
(09-10-2016)

Statistical
Sector



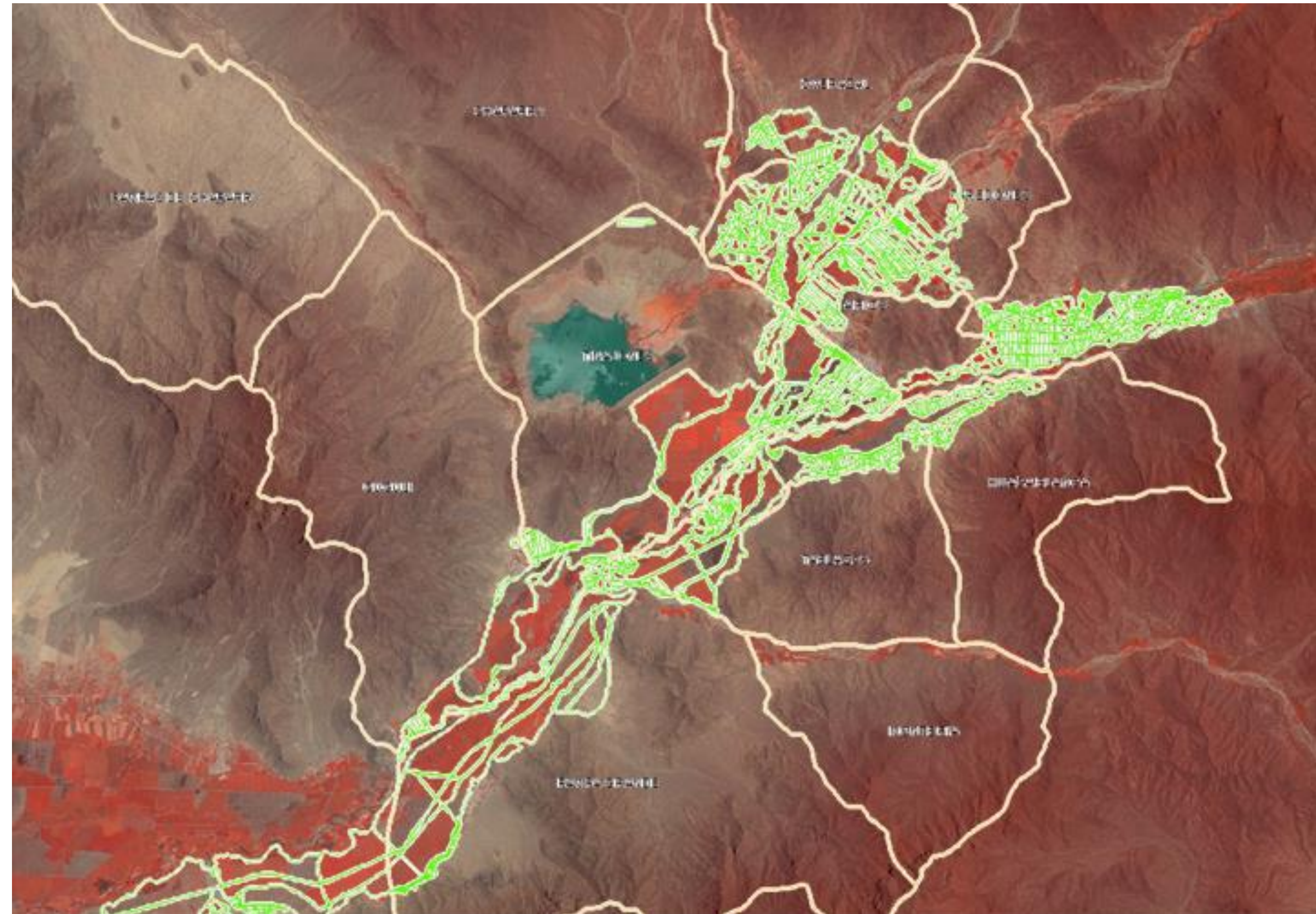
Statistical Sectors - Cadastre

LEGEND

Sentinel Image
(09-10-2016)

Statistical
Sector

Cadastre



Cropland Sector (CLS)	Cropland Mask (CLM)	Crop Mask (CM)
	Arable Crops	Rice, Cereals, Oilseed s, Pulses, Potatoes (and other Roots and Tubers), Cotton (and other Fibre Crops), Vegetables
	Permanent Crops	Vineyard, Sugar Cane, Coffee, Banana, Spices, Fruits and Berries, Cocoa
	Fodder Crops	Annual Fodder Crops, Pastures and Natural Grassland
	Heterogeneous Agricultural Areas	Annual Crops associated with Permanent Crops, Complex Cultivation Patterns

Statistical Sectors - Cadastre - MAA

LEGEND

Sentinel Image (09-10-2016)

Statistical Sector

Cadastre

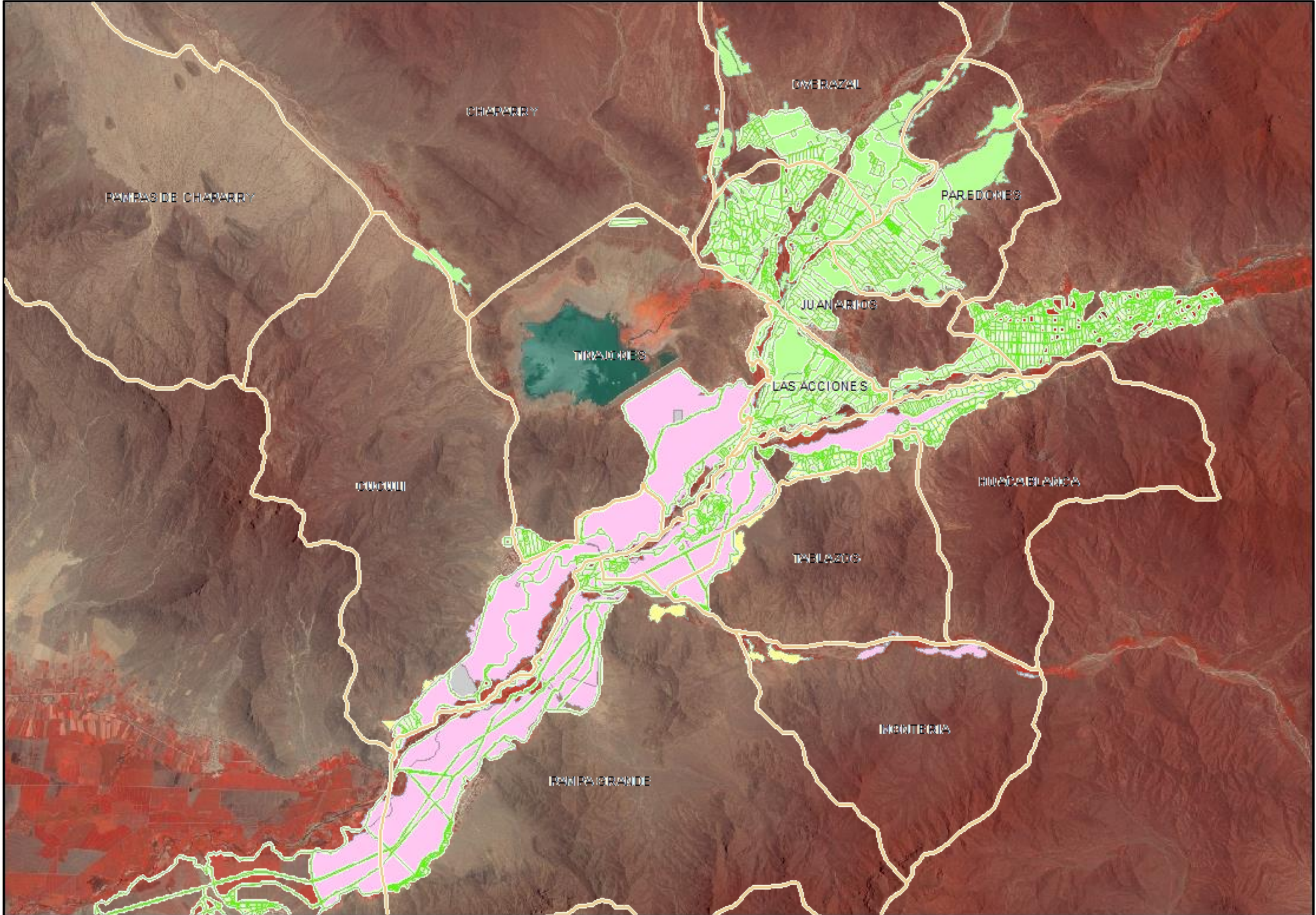
MAA

Arable Crop

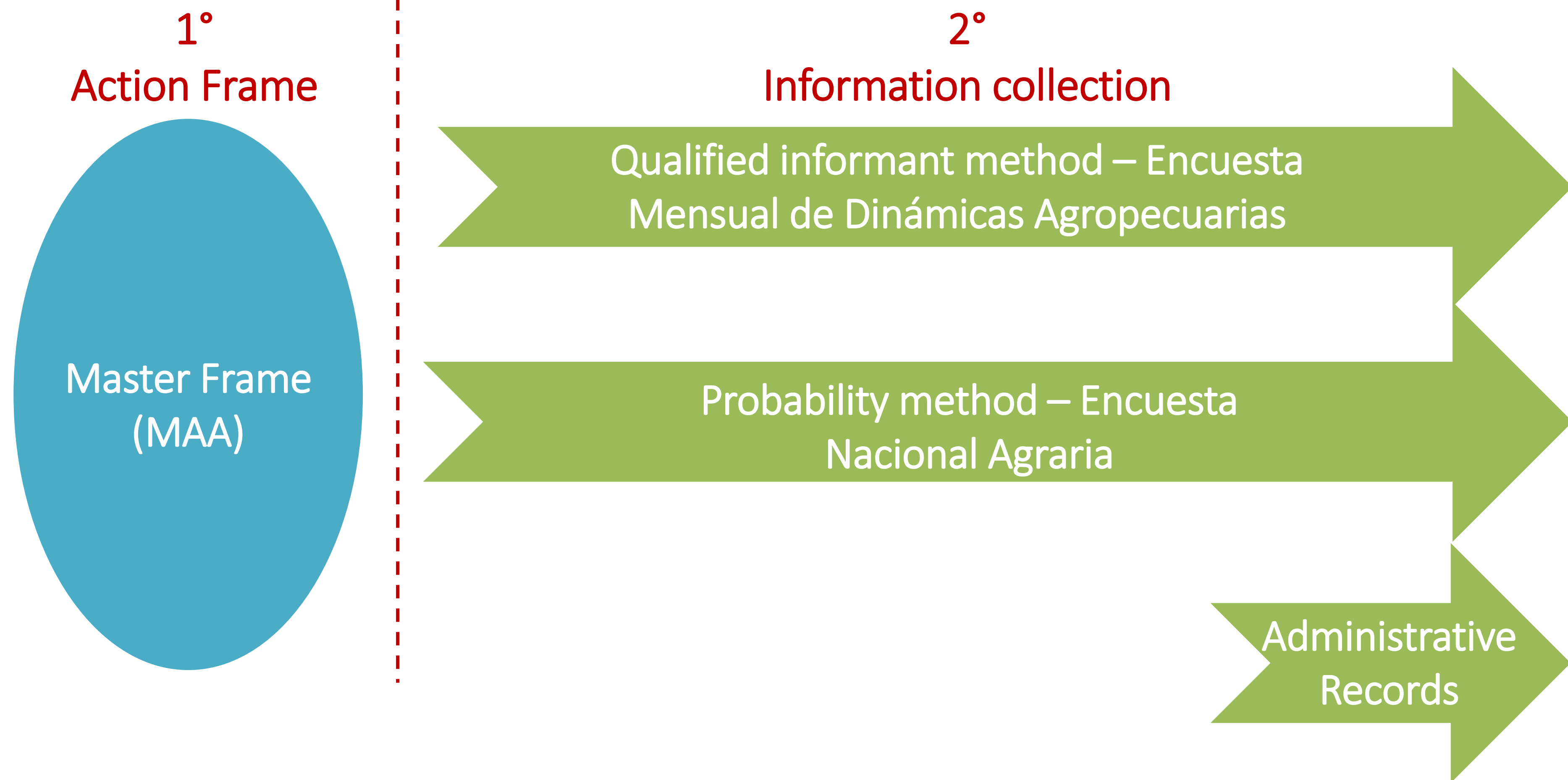
Permanent Crop

 Heterogeneous Agricultural Areas

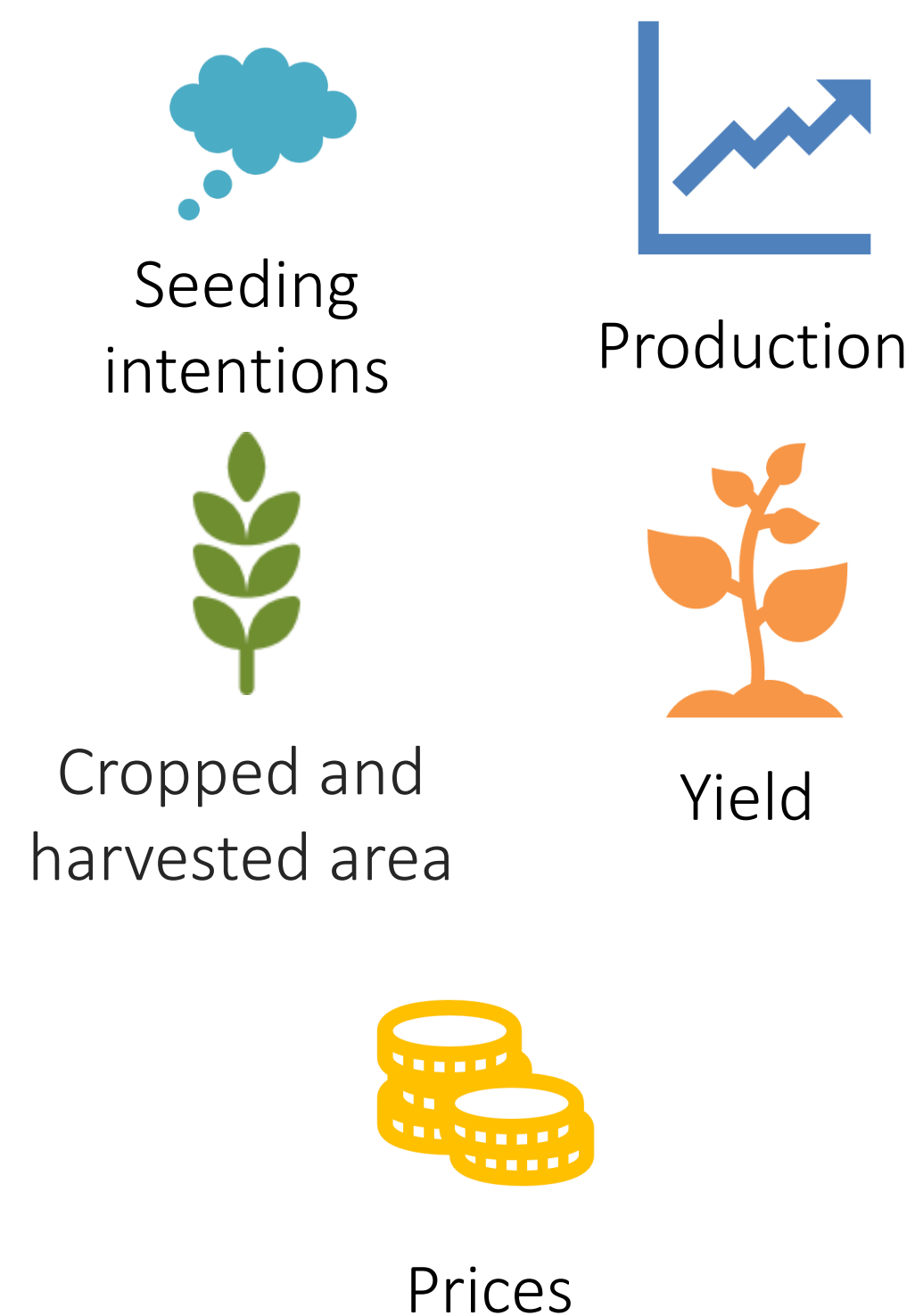
 Non Agricultural Land







Qualified informant



- Current method used for official Agricultural Statistics
- Non-probabilistic
- QI are “experts” in the area of analysis
- No frame, data collected on statistical sectors (if available)
- Error cannot be measure
- Regional governments collect data
- Monthly
- Data is not reliable
- Aggregated data (at statistical sector level when available)

How can it be improved?

- Improve Statistical Sectors → Master frame-MAA
- Consider seasonality for collection → Crop categories (MAA)

Probabilistic



Yield



Production



Agricultural Area



Revenues



Demography



Technology



Farmers

- National Agricultural Survey
- Estimations based on surveys to farmers
- Measurable error
- Detailed information about the farm and farm household
- Representative at the regional level
- Currently developed by INEI
- Once a year

How can it be improved?

- Better sampling frame → Master frame-MAA
- Representative at a lower level → Province
- Remove large farms → Administrative Records

Administrative records



Intentions



Seeded and
harvested area

- Collected by institutions for day-to-day activities
- Information systems of the institutions
- Examples: Water User Associations, Communities, Cooperatives, Municipalities, etc.

Pilot area: Chancay-Lambayeque

- Possibility of using administrative records from WUA in the Coast.
- WUA of Chancay-Lambayeque uses a web application for data collection.
- Currently: seeding intentions, but will develop for area cropped and harvested

DECLARACION DE INTENCION DE SIEMBRA (DIS)

Formulario PADH

MINISTERIO DE AGRICULTURA Y RIEGO

AUTORIDAD NACIONAL DEL AGUA

FORMULARIO PADH - 02

DEMANDA DE AGUA DEL USUARIO AGRARIO

PERIODO AÑO 2015-2016

Administración del agua Inqueyayque-Zarumilla V

Operador de infraestructura hídrica menor: Juan de Venancio Chancay Lambayeque

Administración local del agua: Chancay-Lambayeque

Sector Hidráulico

Sub Sector Hidráulico

Comisión de usuario

FECHA RECEPCION: 11/04/2015

CODIGO DE RIEGO: CACR00331

Nombre: RAZON SOCIAL DEL USUARIO DECLARANTE

ARAUJO CLAVO FELIPE

DIRECCION DE USO DE AGUA

LICENCIA [X]

PERMISO []

Nombre de fuente de agua

Rio TAYANCO TAYANCO-LA LUNA CHUPEL-03 CHOCUPU-L-03 CHOCUPU-BAGOL-04

PAREDES "P" y "H" DERECHOS "H"

En a canal de Derivación

Nombre de PRECIO CAPTADEMA

Unidad Cotacachi: 12564

Área a regar(he): 2.5000

Obras del Canal-48

Nombre Bloque riego:

PUNTE DE AGUA

ASIGNACION MANO DE OBRA - PUNTO DE ENTREGA

Valuacion(m3)

E.A.

0

0.00

TOTAL

0.00

Eficiencia operativa eficiencia de conducción (ce) * eficiencia de distribución

EFICIENCIA OPERATIVA

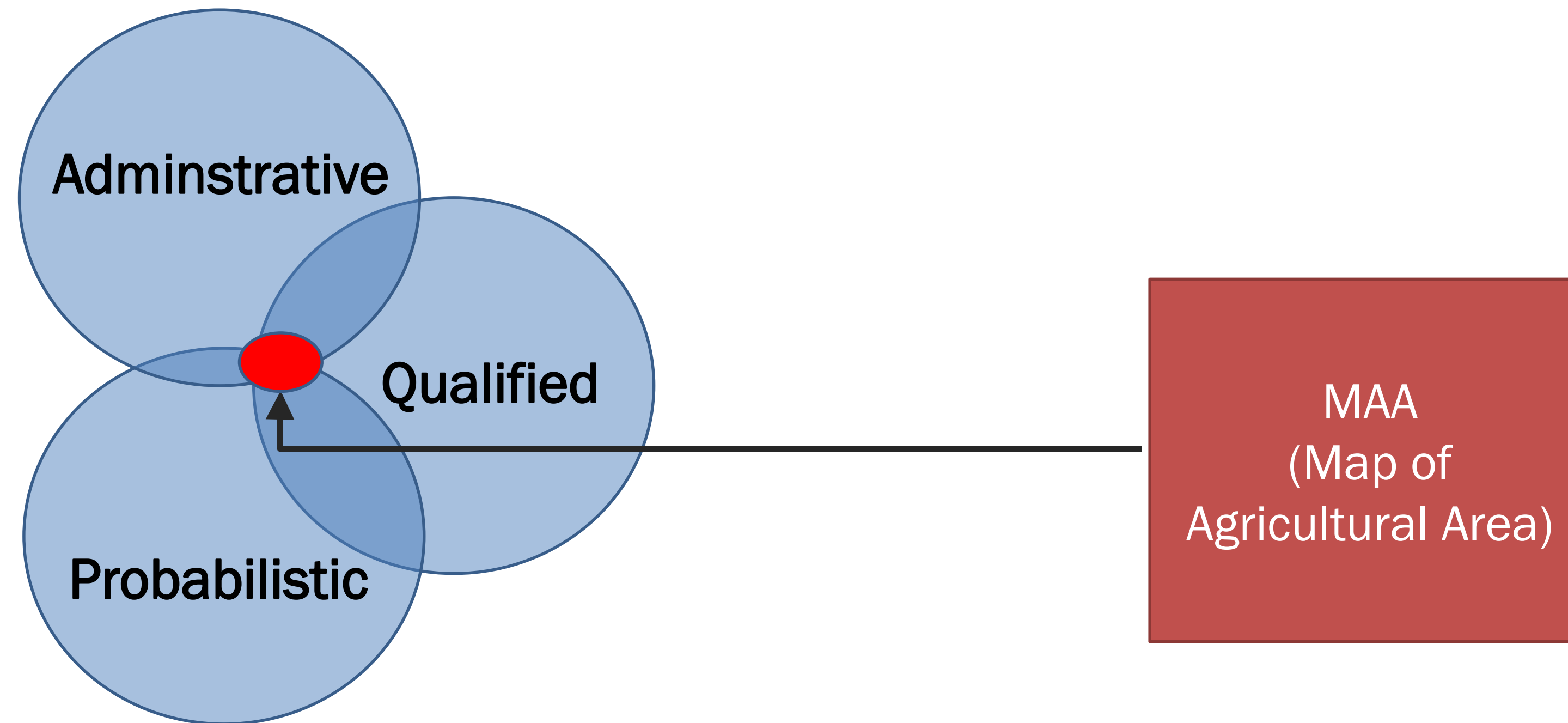
GRAVEDAD PRESURIZADO

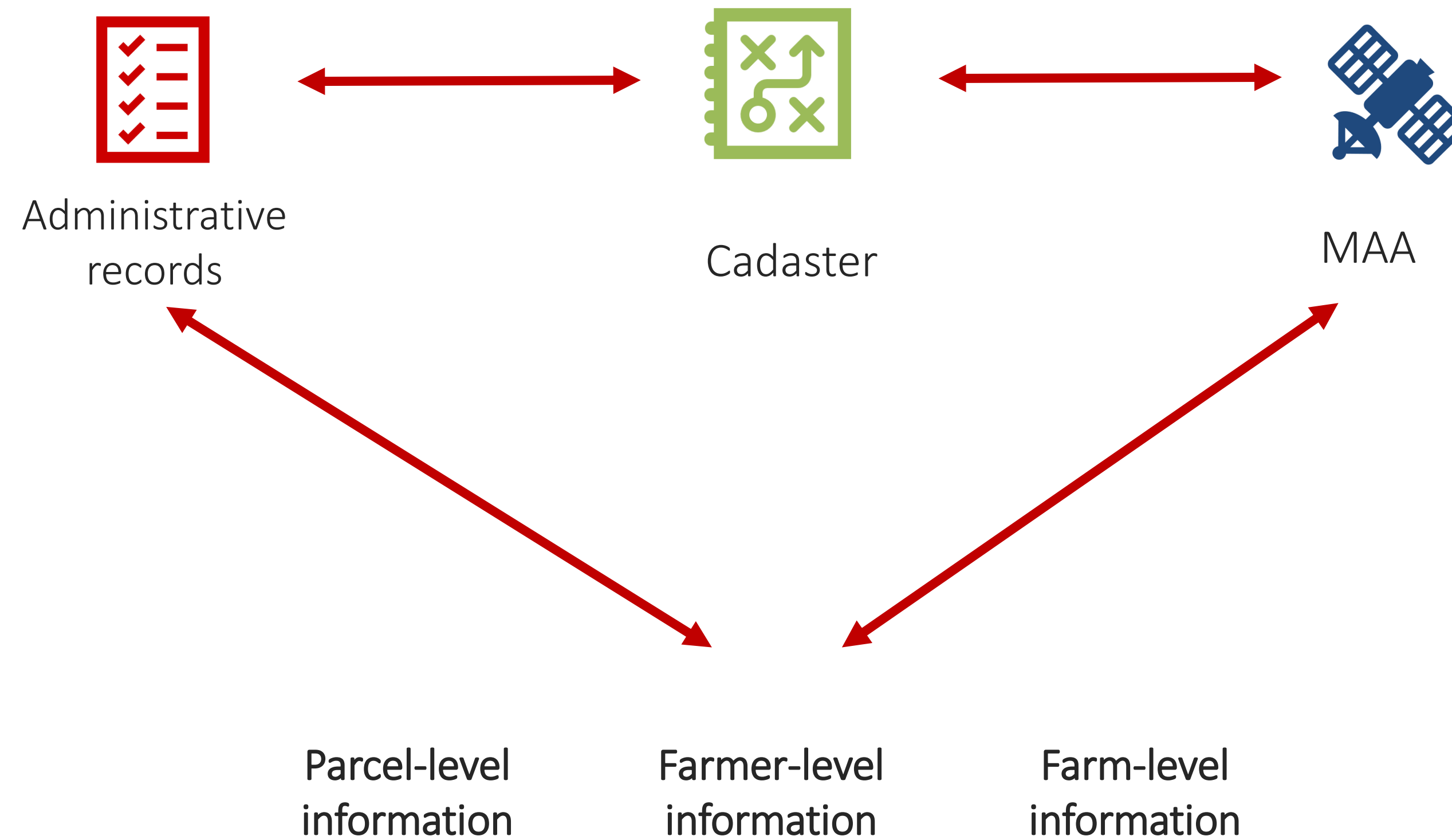
DEMANDA DE AGUA MENSUALIZADA (m3)

CMR	AGO	SEPT	OCT	NOV	DIC	ENE	FEB	MAR	ABR	MAY	JUN	JUL	TOTAL
AGC02	22000	60000	60000	60000	60000	220000	700000	1700000	1300000	1400000	60000	60000	22000000
SMC03	22000	60000	60000	60000	60000	220000	700000	1700000	1300000	1400000	60000	60000	22000000

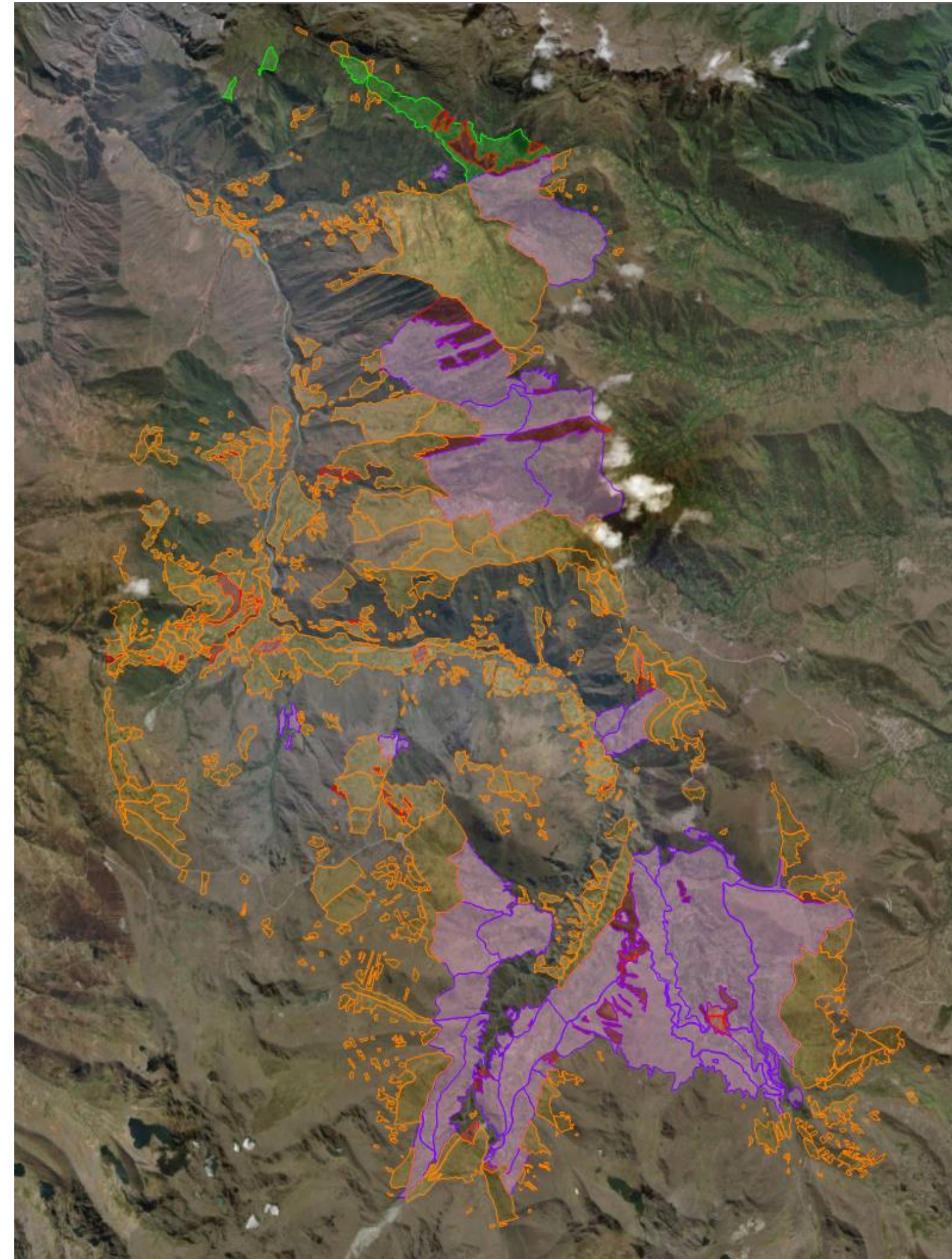
Comparison of area estimation

Source of data	Agricultural Area (ha)
Cropland Mask - MAA (2016)	8,580
Agricultural census (2012)	7,351
Cadastre (2015)	7,501
Administrative Records (2016)	8,700
Qualified Informants (2016)	4,750





- ✓ Reliable Data on Agricultural Areas
- ✓ Basis for Definition of a Frame for further Statistical Estimations
- ✓ Possible support to PIADER: Source for Redefinition/Adaptation of Statistical Sectors to Crop Land Sectors
- ✓ Information on Commercial Farms
- ✓ Verification of Data from other Sources
- ✓ Data Exchange Stimulated – Maps / Data can be Provided to Governmental Institutions, Insurance & Banking Sector, Farmers, QI, Agricultural Agents, ...





Thank you very much for your attention



Contact:

Dr. Rodrigo Salcedo Du Bois

Email: rsalcedo@gmail.com

➤ Consideration of:

- Current System - QI, Statistical Sectors, previous Efforts
- PIADER - Cooperation, coincide Efforts, Usability...
- Chiclayo WS Results – Status Quo, Deficiencies, Proposals..
- Agricultural Structure – Regional, Farm, Cultivation..
- Available Resources – Staff, Financial, IT...
- Required Flexibility – Stakeholders, Adaptability, Ready to Start...

➤ System Improvement

- Data Reliability
- Data Traceability
- Data & Information Exchange
- Adaptable to Insurance & Financing Sector
- Flexibility, Scalability, Capability & Cost Efficiency
- Geo-enabled & ready to incorporate Data from PeruSat-1