



Why Mapping of Agricultural Areas

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CAT - Climate, Agriculture & Risk Transfer - BMUB/GIZ



⇒ Foster Resilience of the Peruvian Agricultural Production to Climate Change

Component 2: Improvement of the Agricultural Information System for MINAGRI, the Agrarian Banking and Insurance Sector

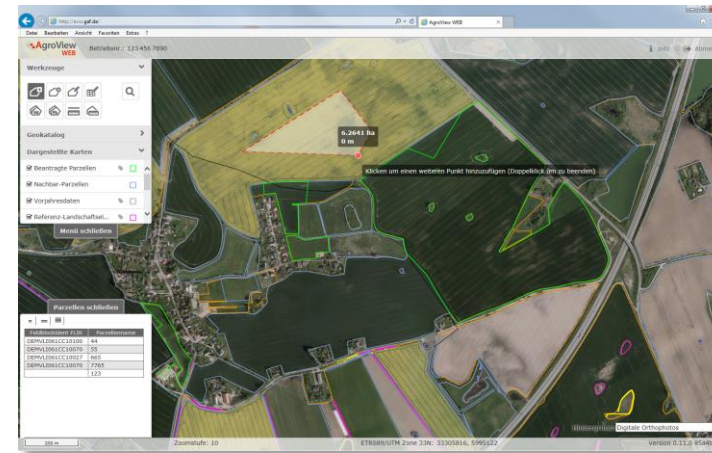
Partner:



- A) Improvement of the agricultural statistics system
- B) Implementation of a collaborative web platform
- C) Provision of training in the use of modern technology



National Production Data –
Analysis & Improvement incl. RS&GIS



Agricultural web-GIS developed by GAF AG



> 30 Years of experience in Geo Technology

> 230 Employees

Munich (Headquarters) & Neustrelitz (MV)

Geo-Information: Solutions from Single Source

– Geodata:

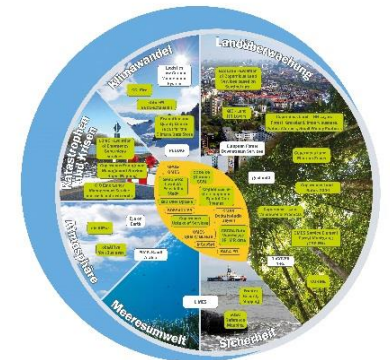
Reception – Distribution - Processing

– Services & Products :

Geoinformation Systems, Software & Integrated Satellite Services

– Consulting Services in > 100 Countries

Professional & Institutional Consulting, Project Management





Percent of Agricultural Labour 26%

Share of Agriculture in overall GDP: 6% which was 9% in 2000

Share of Agriculture in overall export is 3.2% . It was 1.6% in 1998.

Agricultural Sector estimated to keep its importance in coming future.

Important Percent of the agricultural area is controlled by large farms

Between 1972 and 2012, total of 14.3 million ha of new agricultural areas developed



Land use changes continuously in Peru.

Agricultural Sector in under high risk of changing Climate Events.

High Rate of Urbanization. Migration from Rural to Urban. 78% of the population live in urban areas

Lack of Reliable Agricultural Statistics Data causes important challenges on Development of commercial Agricultural Insurance System and Planning of Agricultural Development.

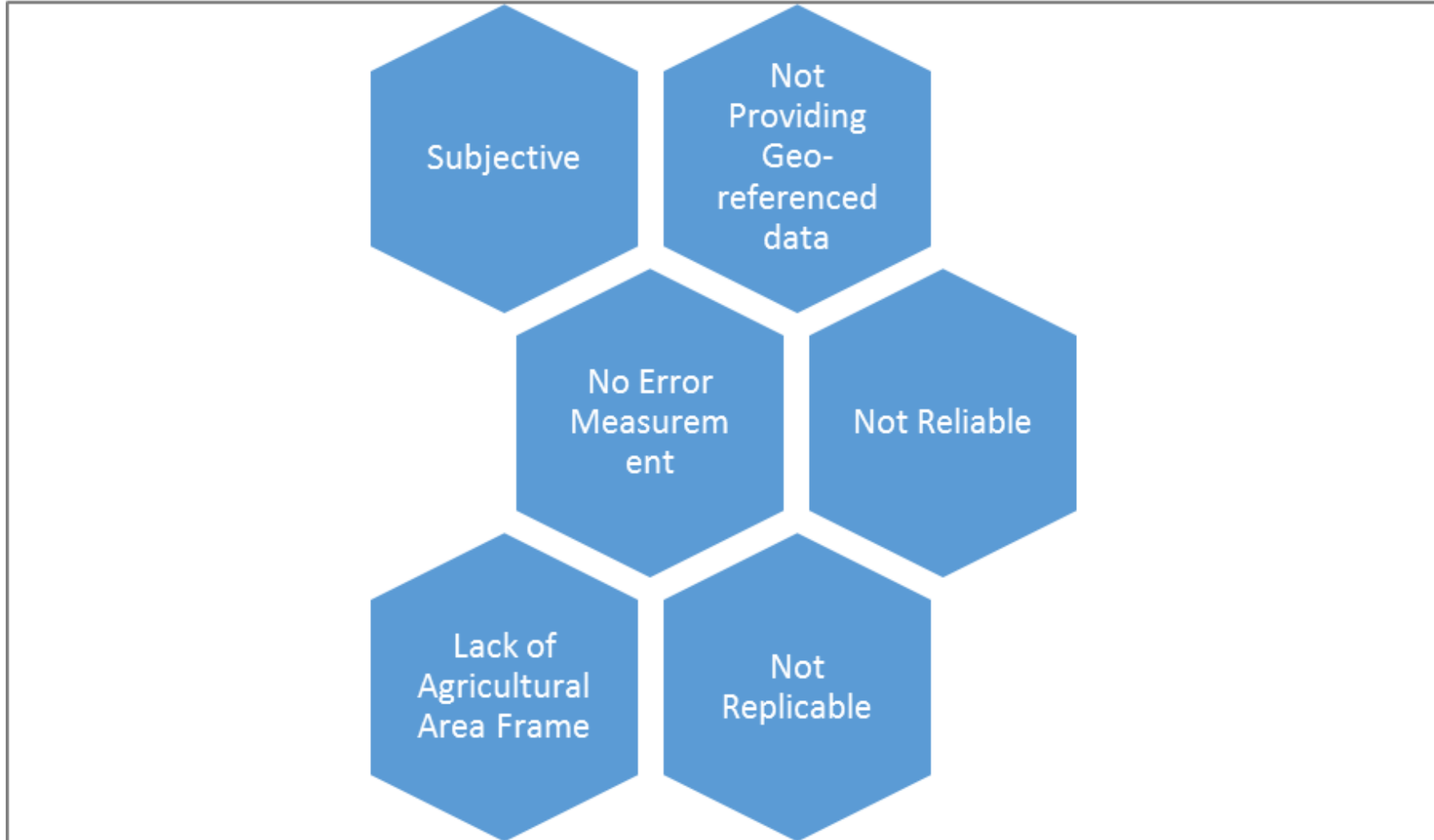


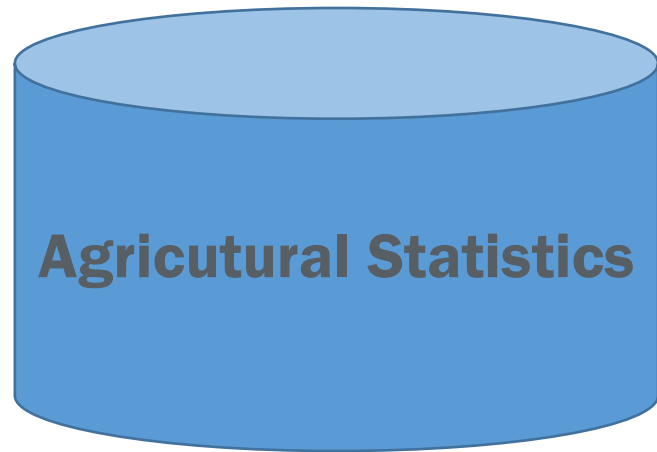
MINAGRI is using Qualified Informant Methodology to collect Agricultural Statistics.

Qualified Informant Methodology based on reporting of Qualified Informants.



Main Challenges of Qualified Informant Method





If Agricultural Statistics are
not existing or not Reliable ...?



Governments make
inaccurate decisions about
Agricultural Policies

Producers suffers because of
wrong agricultural policies

No Commercial Insurance
System

Rural Poverty Increases thus
Urbanization Increases

Food Insecurity happens



How Agricultural Statistics are Produced worldwide ?

Census

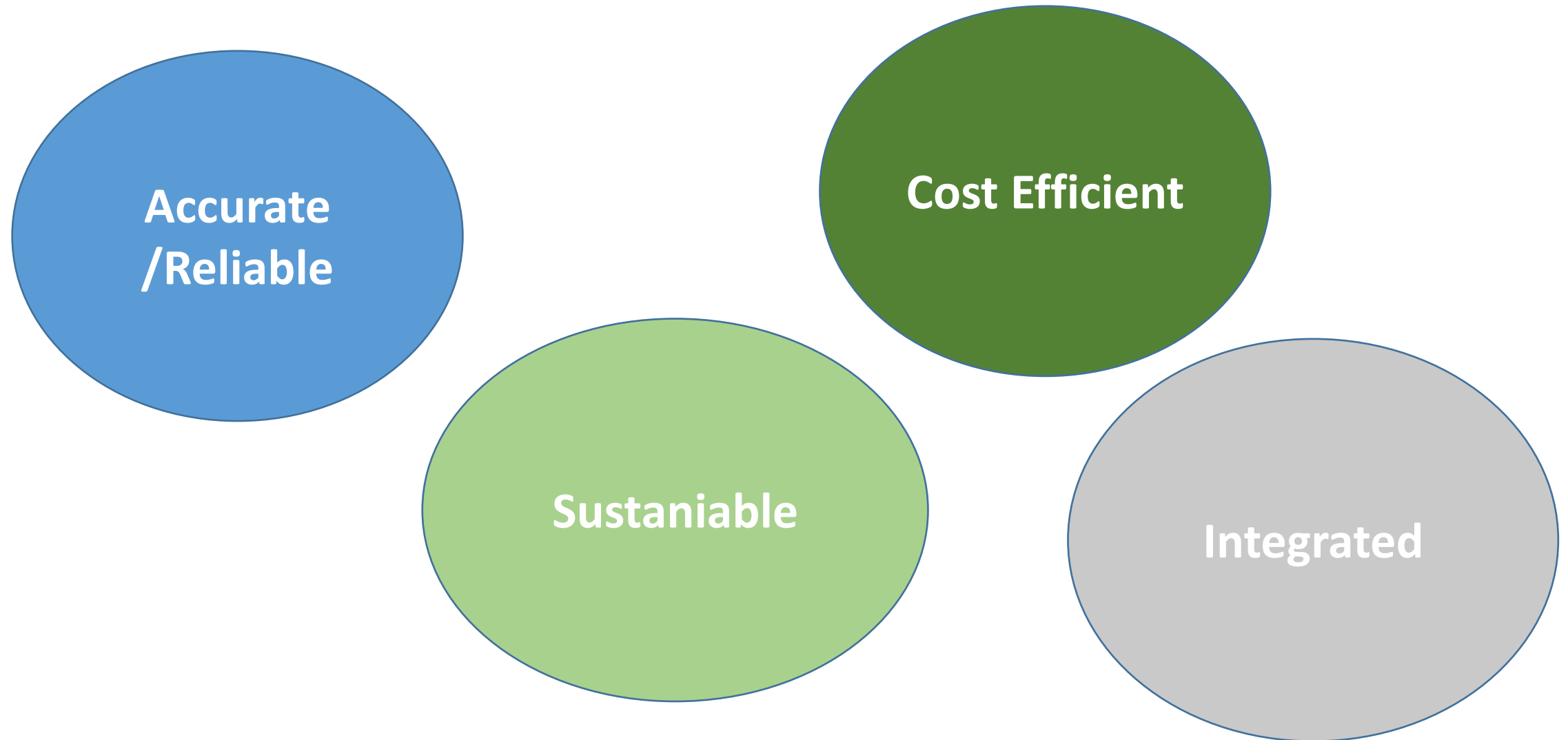
Surveys

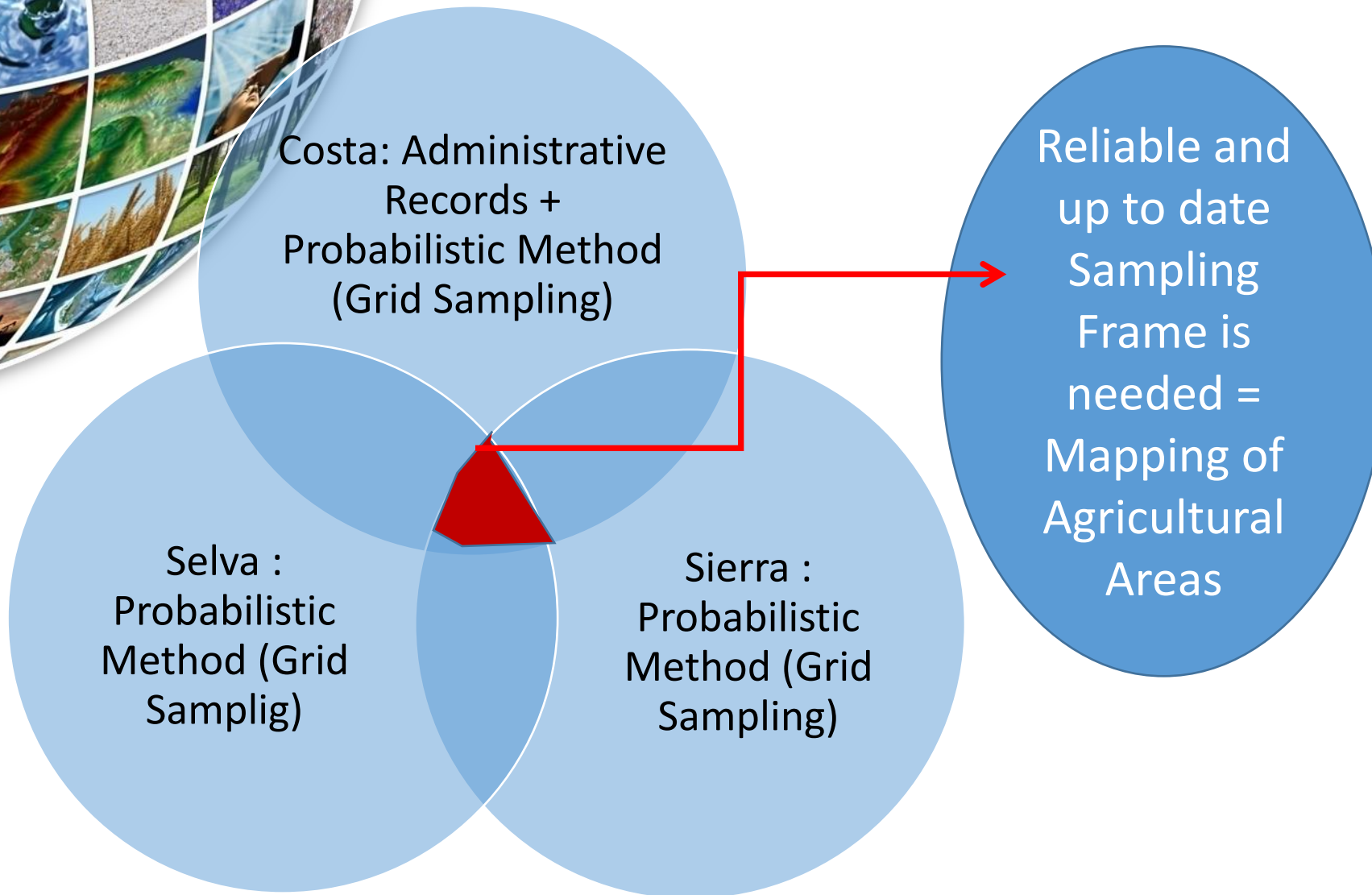
Offical
Registration
Systems

Mixed
Method

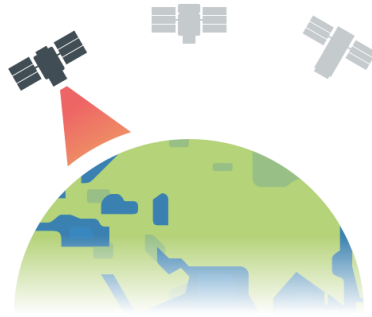


Main Criterias to Select a Method for Agricultural Statistics

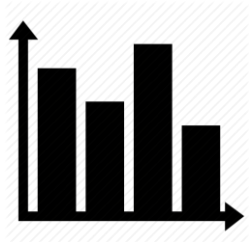




For any Method to estimate the amount of production/cultivation of agricultural products, a statistical geo-referenced Frame is needed which is not existing for Peru!

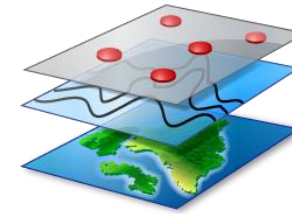


**Satellite
Imagery**



**Statistical
Tools**

Geo-
Referenced
Agricultural
Frame (MAA)



GIS Tools



- ✓ Geo-referenced Database on Agricultural Areas
- ✓ Improvement of Qualified Informant System
- ✓ Information on Commercial Farms
- ✓ Inline with Other Projects of Ministry of Agriculture
- ✓ Reliable & Traceable Data
- ✓ Robust, Scalable & Cost-Efficient
- ✓ Integration of Data from other Sources
- ✓ Basis for Definition of a Frame for further Statistical Estimations
- ✓ Data Exchange Stimulated (Administrations, Insurance & Banking, Farmers)



CLASSIFICATION CATEGORIES

MAA-Category	Crop Type
Arable Crops	Rice, Cereals, Oilseeds, 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
Non Agricultural Land	Forest, Water, Urban, Others



Lambayeque

QAULIFIED Informant Method (HA)	WATER USER (HA)	CENSUS (HA)	MAA (HA)
2750	8700	7351	8253

Kishuara

QAULIFIED Informant Method (HA)	Regional Government (HA)	CENSUS (HA)	MAA (HA)
1865 (year 2015)	2994 (year 2017)	3556 (year 2012)	9,294 (including uncultivated land)

Campoverde

QAULIFIED Informant Method (HA)	CENSUS (HA)	MAA (HA)
10,345 (year 2017)	17,784 (year 2012)	27,408 (including uncultivated land)

Qualified Informant method under estimates the agricultural areas !



DEVELOP FRAME (MAA) FOR ENTIRE PERU BY USING UP TO DATE SATELLITE IMAGERY

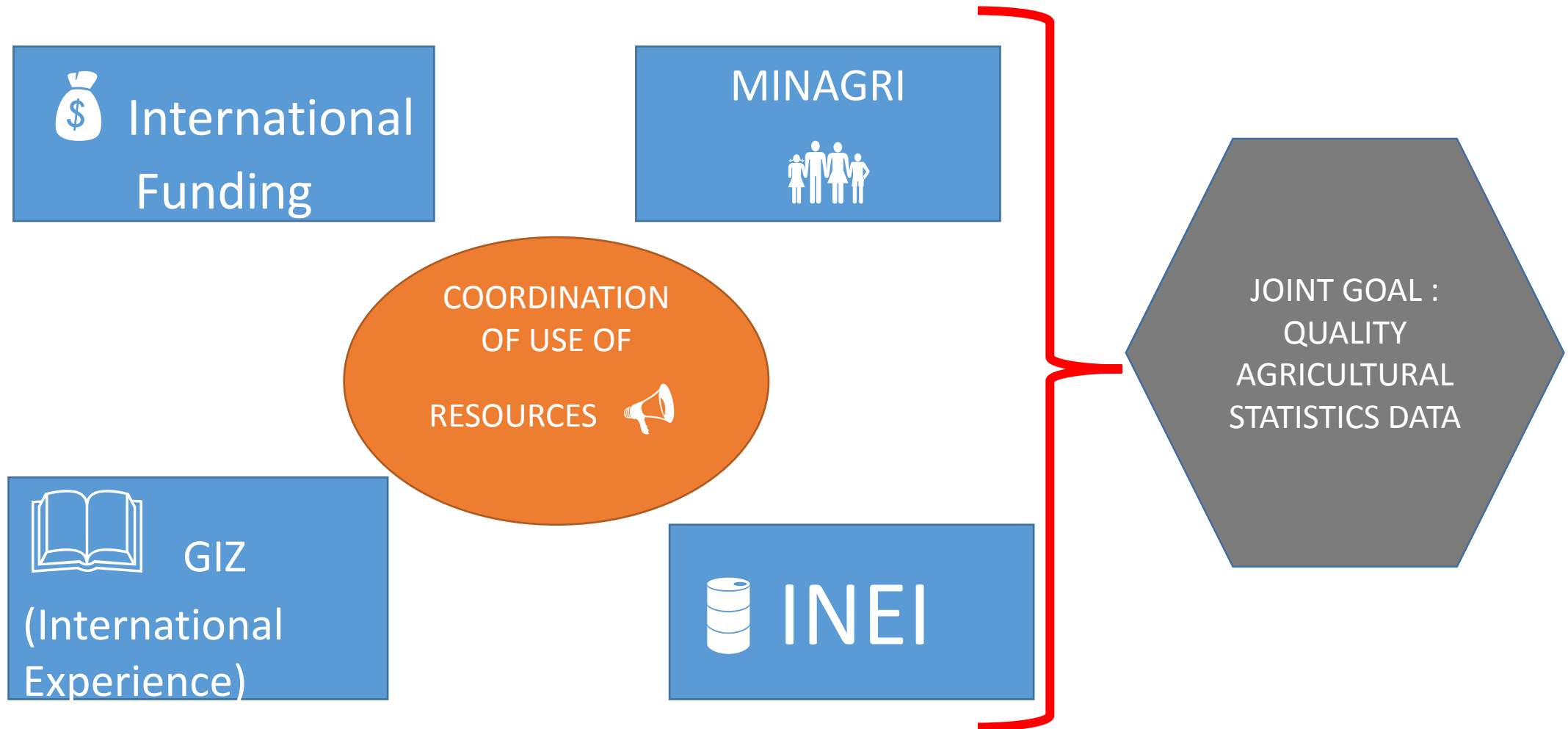
CONDUCT PILOT TEST FOR PROBABILISTIC METHOD IN SELVA, SIERRA AND COSTA

START DEVELOPING ADMINISTRATIVE RECORD SYSTEM FOR COSTA

TRAIN MINANGRI / PIADER STAFF ON IMAGE PROCESSING AND DEVELOPMENT OF MAA AND SAMPLING



All needed resources are available to develop a reliable Agricultural Statistics System!





Thank you very much
for your attention!

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