The Joint Research Centre

ISPRA, 18 and 19 June 2002

1st WORKSHOP ON THE IMPLEMENTATION OF OLIVE GIS IN THE MEMBER STATES

Proceedings

Monitoring Agriculture with Remote Sensing

MARS

EUROPEAN COMMISSION
Joint Research Centre
I.P.S.C - MARS Unit

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1st workshop on the Implementation of Olive GIS in the Member States

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Prepared by: Josiane Masson ***Approved by:*** Jacques Delincé	***Status:*** **Proceedings of conference** ***Diffusion:*** Internal JRC, Mars Unit DG AGRI: Malcolm Slade, J. Stakenborg, Arend van Duijn, Jean-Marie Gazagne National Administrations
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OLI-GIS Experts Meeting

1st workshop on the Implementation of Olive GIS in the Member States

ISPRA, 18 and 19 June 2002

Dear Participants,

Upon the request of many people who attended the workshop on Olive GIS implementation in June 2002, the MARS Unit decided to edit those proceedings. You will find some abstracts, Powerpoint presentations print out and summaries of presentations.

We would like to thank you very much for your participation. Thanks to your presentations and active contribution this workshop was very successful. This exchange of experience between national administrations and the Commission was very fruitful.

As kindly proposed by Mr Lourantos, Sub-secretary of the Hellenic Minister of Agriculture, we hope to be able to organise next year the second workshop on Olive GIS in Athens,. In the meantime there is no doubt that the project will progress a lot in all Member States.

Yours faithfully,

J. Masson, responsible of Olive and Vineyard registers, MARS Unit, ISPC, JRC Ispra

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OLI-GIS Experts Meeting

1st workshop on the Implementation of Olive GIS in the Member States

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Agenda

Tuesday 18 June

Session 1: overview of OLI-GIS implementation in the EU

9:00 – 9:20 Welcome and introduction
Jacques Delincé, Unit Head of MARS Unit (IPSC, JRC Ispra)

9:20 – 9:40 Overview of the situation and DG AGRI point of view
Jacques Stakenborg, DG AGRI Audit of Agricultural expenditure

9:40 – 10:15 Reminder of OLI-GIS concept and overall situation of OLI-GIS implementation in the 5 Member States
Josiane Masson, MARS Unit (IPSC, JRC Ispra)

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Session 2: Presentation of progress status, volumes and planning by Member State

10:15 – 10:45 Presentation of the Portuguese project
Rita Araujo & Carla Martins, INGA

10 :45 – 11 :00 *Coffee break*

11:00 – 11:30 Presentation of the Italian project
Giancarlo Nanni, AGEA

11:30 – 12:00 Presentation of the French project
Alain Madaule, ONIOL

12:00 – 12:30 Presentation of the Spanish project
Francisco Peña, MAPA, Presidente del Comité Permanente GIS-oléicola

12:30 – 14:00 Lunch

14 :00 – 14:30 Presentation of the Greek project
Xenofon Lourantos, Special Secretary of the Hellenic Ministry of Agriculture and Register's coordinator

Session 3: issues related to the technical work

14:30 – 14:35 Session opening
Josiane Masson, MARS Unit (IPSC, JRC Ispra)

14:35 – 15:40 Technical limits of the identification of Olive trees

- 14:35 – 14:55 Technical limits of identification of olive trees on orthophotos in some French areas, by *Didier Reboux, SCOT*

- 14:55 – 15:20 Technical limits of identification of olive trees in Spain, by *D. Fernando Ruiz, TRAGSATEC*
- 15:20 – 15:40 Technical limits of identification in Portugal, by *Rita Araujo & Carla Martins, INGA*

15:40 – 17:15 Location and identification of olive parcels using or not cadastral system

- 15:40 – 16:00 Advantages and drawbacks of using cadastre for the location of olive parcels in France, by *Emmanuel de Laroche, ONIC/ONIOL*
- 16:00 – 16:30 Facing cadastral reference mismatching in Italy, by *Antonio Lucaroni, FINSIEL*
- 16:30 – 17:00 Creation of base reference maps and extensive field surveys for the location of olive parcels in Greece, *Mr Doganis, Representative of the Register's Consortium MIN.AGR.*

Coffee break

17:15 – 18:00 Open discussion on technical issues

20:30 *Dinner*

Wednesday 19 June

Session 4: Consolidation of the GIS: notification, dissemination of information and corrections

9:00 – 9:15 Session opening
Olivier Léo, MARS Unit (IPSC, JRC Ispra)

9:15 – 11:15 Notification, dissemination of GIS information to olive producers and management of feed-backs

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- 9:15 – 9:35 Notification and consolidation phase in France, *Alain Madaule & Bruno Antic, ONIOL*
- 9:35 – 9:55 Notification and consolidation phase in Italy, Mariano Laghezza, RTI Finsiel
- 9:55 – 10:15 'Proceso de verificación': the case of Andalucia, *D. Luis Delgado, Comité Permanente, MAPA*
- 10:15 – 10:35 Convocation of producers in regional offices and additional field surveys to clean the GIS database in Portugal, *Rita Araujo & Carla Martins, INGA*
- 10:35 – 10:55 Greek strategy, *by Lazaros Kiokakis, Assistant of the Coordinator, Ministry of Agriculture*

Coffee break

11:15 – 12:00 Development and implementation of the GIS system at national and regional level

- 11:15 – 11:40 Internet application to access public layer of information (orthophoto + cadastral maps) in Spain, *by D. Luis Delgado, MAPA*
- 11:40 – 12:00 Presentation of the Internet application to access GIS data in Italy, *F. Smania, consultant for AGEA*
- 12:00 – 12:10 *Discussion on other countries*

12:10 – 12:30 Discussion on regulation and legal issues

12:30 – 14:00 Lunch

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Session 5: Validation of the GIS and future developments

14:00 – 14:30 Progress in the field of orthophotos and new sensors
Simon Kay, Peter Spruyt, MARS Unit (IPSC, JRC Ispra)

14 :30 – 15 :00 Quickbird features and examples and presentation of test cases on two Italian areas
F. Smania, AGEA and Livio Rossi, Eurimage

15:00 – 15:30 Procedure for the validation of OLI-GIS and planning proposal for 2002-2003 audits
Jacques Stakenborg, DG AGRI Audit of Agricultural expenditure

15:30 – 16:00 Debate on the future of the GIS: updating, issues related to the eligibility of olive parcels, reform of the olive sector, possible technical improvements etc.

16 :30 Conclusions

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Introduction

For the first time a workshop on Olive GIS implementation in the Member States was organized by the MARS Unit (Monitoring Agriculture with remote Sensing) of the IPSC, JRC (Joint Research Center of the European Commission) in Ispra on 18-19 June 2002.

One of the activities of the MARS Unit is to follow up the implementation of the Olive GIS by providing technical support both to Member States and to DG AGRI. Since 1998 the Commission and the Member States have discussed the reform of the olive Common Market Organisation. In order to reinforce the system of subsidies control and subsidies management, a regulation was adopted in 1998 (Reg. (CE) 2366/98) making compulsory the implementation of an 'olive GIS' (Geographic Information System) in the 5 olive-growing Member States: France Greece, Italy, Spain and Portugal. This implementation is in progress in the 5 Member States and should be completed before November 2002.

This 1st workshop was mostly dedicated to national administrations and organizations involved in the implementation of the Olive GIS under Regulation (EC) 2366/98. The purpose was also to set up discussion forum enabling exchange of experience between Member States. A total of **51 participants** attended the workshop, with most of responsible persons in charge of the Olive GIS implementation in the National Administrations.

It was a technical workshop structured in 5 sessions:

1. ***Overview of OLI-GIS implementation in the EU*** with presentations of both DG AGRI and JRC reminding the concept and regulation basis as well as providing an overview of the situation in the 5 Member States.
2. ***Presentation of progress status, volumes and planning by Member States***
3. ***Issues related to the technical work***: the purpose of this session was to discuss the results of the technical part of the work covering the identification of olive parcels and olive trees using orthophotos and field surveys, and the problems encountered so far.
4. ***Consolidation of the GIS***: this session covered the second part of the work from cross-checks between GIS and declarations to notification, dissemination of data and correction of information.
5. ***Validation of the GIS and future development***: this session covered the OLI-GIS validation procedure and the future after it becomes operational.

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Presentations

Tuesday 18 June

Session 1: overview of OLI-GIS implementation in the EU

Session 1 - Welcome and introduction, by *Jacques Delincé, Unit Head of MARS Unit (IPSC, JRC Ispra)*

Summary

Jacques Delincé welcomed the participants and introduced the workshop with a brief historical recall. J. Delincé, now the Unit Head of the MARS Unit is involved in the Olive registers since a very long time. He was formerly in charge of IACS and Registers within the DG AGRI that he left a little bit later after the publication of Reg 2366/98 for a work at EUROSTAT. He is one of the fathers of this well-known regulation. He recalls that the Olive GIS was defined as the extension of the LPIS for the olive oil sector. The objective was really to set up a system for a better management of subsidies claims which should be accessible to the olive producers. This last point is as important as the first one. On the other hand the JRC also contributed very closely to a better knowledge of olive sector, both with OLISTAT and OLIAREA studies in the 1998-99 years.
He's aware, as everybody else, that the implementation of the GIS requires a lot of effort from the National Administrations and their contractors. However the deadline is close now and it is very important for the JRC, and generally speaking for the Commission to have the Olive GIS completed as soon as possible.

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Session 1 - Overview of the situation and DG AGRI point of view, by *Jacques Stakenborg, DG AGRI Audit of Agricultural expenditure*

Summary

Jacques Stakenborg agrees with J. Delincé but he would like to put emphasis on the deadlines: to date none of the Member States have completed the OLIGIS implementation and the DG AGRI is very concerned about that. Only Portugal submitted a request for a validation audit, and DG AGRI hope to be able to validate the Portuguese GIS following the next mission end of June. For the other Member States, J. Stakenborg requires from National Administrations a formal letter to DG AGRI with a planning for the validation stage. Otherwise there might be a lot of troubles on the Commission side. From his point of view there is no time left for technical discussions now. The important thing is the completion.

Session 1 - Reminder of OLI-GIS concept and overall situation of OLI-GIS implementation in the 5 Member States, by *Josiane Masson, MARS Unit (IPSC, JRC Ispra)*

Abstracts

During this presentation Josiane Masson (responsible of vineyard and olive registers activities in the MARS Unit) recalled first the context and objectives of the GIS and then presented the contents of the GIS as specified in the regulation 2366/98. Of high importance were the concepts of Olive parcels and olive area which were very much discussed at the beginning of the project. The Olive parcel identification has to be consistent with the LPIS (IACS – arable lands). Therefore some countries decided to keep the existing cadastral references (FR, SP, IT) and the others (PO, GR) had to set up block system. Each system has drawbacks and advantages. For countries with cadastral references the location of olive parcels made the 1st step of identification

easier, but the Member States had to face errors in the cadastral references and discrepancies between cadastral boundaries and olive parcel boundaries. For those who opted for block-based system, the 1st step of identification of parcels by the farmers was heavier. Both Portugal and Greece had to organise extensive campaigns of declaration with interviews of farmers in local offices. Following the location of parcels, the olive trees were identified using orthophotos 1m B&W) and additional field survey if relevant. The 2nd step is cross-checking declaration data with measured data: when the discrepancy is more than 3% of the declared number of olive trees at dossier level, then the dossier is classified as 'discordant'. A notification has to be made for each discordant dossier. An overview of the progress status by country showed that all countries (except Portugal) are still dealing with discordant dossiers. The problem is that for all countries the rate of discordances was very high (50% of dossiers on average), due to the bad quality of existing data (registers, cadastre, existing declarations) and sometimes difficulties to identify olive trees on orthophotos (small parcels, mixed crops...). The commission insists on the fact that it is not enough to create the database, an operational system has to be implemented in the National Administration (at national and/or regional level) and the producers should be able to access the Olive GIS information.

(Presentation Powerpoint)

OLIGIS expert meeting
1st WORKSHOP ON THE IMPLEMENTATION OF OLIVE GIS IN THE MEMBER STATES

ISPRA, 18 and 19 June 2002

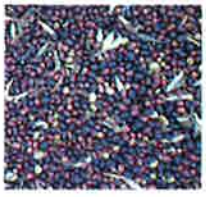
Overview of OLI-GIS concepts and progress status in the 5 Member States

Josiane Masson, JRC, IPSC, MARS Unit

CONTEXT: A TRANSITION PERIOD

- **After 'crisis' of 1996/97, discussions between M.S and the Commission about reform of the market policy**
  - ✓ **Prior to any reform: get objective information (on olive areas and number of olive trees**

    →OLISTAT, OLIAREA…
  - ✓ **Transition period 3 years (+3 more)**
    - ➢ **Increasing the quotas to 1.777 M (+13.75%)**
    - ➢ **Decreasing the subsidies 1322.5 Euros/T (-5%)**
  - ✓ **Reinforcing the system of control and management of aids: Reg. 2366/98, extended to 3 more campaigns (Reg. (CE) 1513/2001 of the Council of 23/07/01).**



Subsidies based on olive production → **?** **based on area or on olive trees?**

OLIGIS PURPOSE

- **PURPOSES OF OLI-GIS**
  - ✓ to identify and locate all olive parcels and olive trees of the producers who lodged at least one crop declaration and one aid application (cf. Chapter 6, Reg. 2366/98) during the campaigns 1998 to 2001.
    - ➢ **NB: OLI-GIS is not an exhaustive database of all OT and OP like olive register**
  - ✓ to set up a **reference basis of eligible olive trees**
  - ✓ to have an operational tool for the management and the control of the aid applications

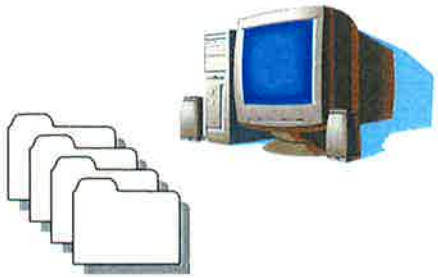
CONCEPTS AND OUTPUT DEFINED IN THE REGULATION

- **Reg. (EC) 2366/98 of the Commission of 30/10/98: core definition of OLI GIS in chapter 6:**
  - ✓ Art. 23 & 24 -> contents
  - ✓ Art. 25 -> general methodology
  - ✓ Art. 26 -> criteria for the final acceptance of the GIS
- **Reg. (CE) 1513/2001 of the Council of 23/07/01 extends the transition period to 3 more campaigns : "*after 1st November 2003, the subsidies scheme will only cover olive trees which are recorded in a GIS which was considered as finalised*"**

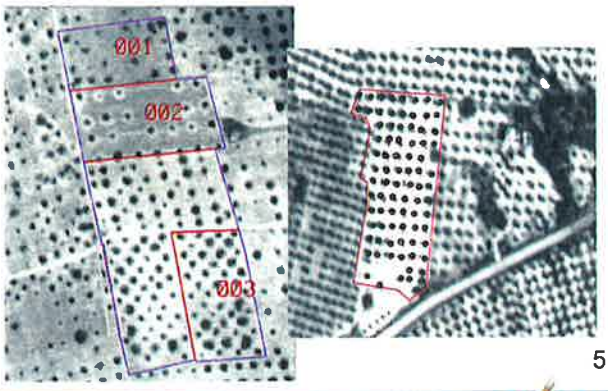
Reg. (EC) 2366/98, Art. 23 & 24 definition of contents

- **The OLI GIS is composed of 2 parts which have to be fully consistent and 'seamless' linked**
  - ✓ Alphanumeric DB: aid applications, payments and controls data
  - ✓ Graphic reference data composed of 3 layers:
    - ➢ aerial orthophotos (<= 5 years, resolution ≤1m, emulsion Panchro)
    - ➢ Parcel vector layer including 'base reference maps' (cadaster, blocks, ilotage) plus olive parcels
    - ➢ olive trees individually located

Graphic reference database



α- numeric database



KEY POINT: DEFINITION OF THE DOMAIN OF OLISIG

- **Alphanumeric DB: covers all crop declarations and subsidy claims of the last 3 campaigns (+ extension years)**
- **Graphic coverage: all OP and OT declared in the crop declarations and subsidy claims of the last 3 campaigns within a 'domain' defined by the MS:**
  - ✓ Geographic extent "*.. a graphic reference DB containing the parcels covered by a significant number of declarations shall be established for the administrative units designated by the M.S.*" (Art. 24.1).
    - ➢ all major olive production areas should be covered
    - ➢ Non covered areas: alternative system to be set up
  - ✓ Thresholds
    - ➢ The GIS covers the olive trees in production
    - ➢ Parcel size threshold ≤10 ares (*Art. 24. 1*)
    - ➢ Dossier size threshold
    - ➢ Other criteria ? Can be justified by the M.S (marginal and difficult cases...)
    - ➢ Specific management of the 'isolated' trees
      - Identification and approximate location
      - Area: 1 isolated tree = 10 ares

BASIC CONCEPTS (REG 2366/98 Art 1(2))

- Concept of Olive Parcels (OP) was very much discussed at the beginning of the project '*olive-growing parcel means: _a parcel of olive trees as defined by the Member State concerned or, if no such definition exists _ a contiguous tract of land covered, over an area greater that referred to in the second indent of Article 24(1), by olive trees in production each of which is less than 20 meters from another olive trees'*
  - ✓ i.e. OP are different from the cadastral parcels. It is an additional layer of information
  - ✓ Recommended to define the 'real' limits of OP using an automatic tool such as OLIAREA
  - ✓ cf. also note "OLISIG Génération de la parcelle oléicole, développement de OLICOUNT 2000", Laurence Bories 19/07/99, MARS ref. /I04/M1773/99)
- Concept of Olive area "... the area of an olive-growing parcel, or for each scattered olive tree, an area of 1 are.

IDENTIFICATION OF OLIVE PARCELS

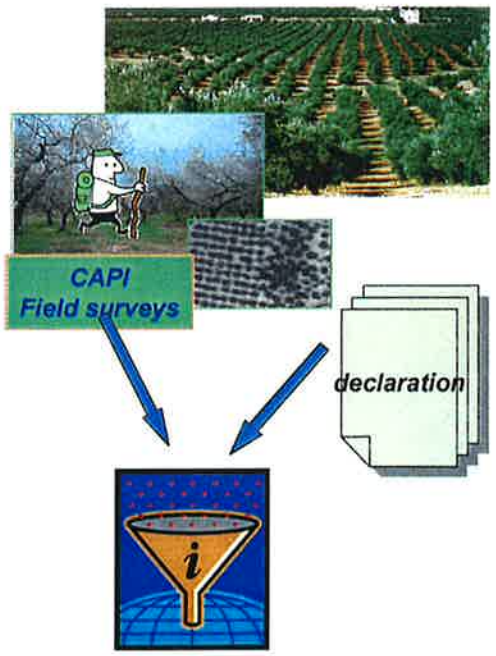
- OP identification based on the LPIS. Various situations:
  - ✓ LPIS based on cadastre (IT, SP, FR): olive producers declare the cadastral parcels with a declared number of OT:
    - ➢ In SP MAPA and cadaster have agreement for modification of cadastral limits if relevant
    - ➢ IT and FR keep cadastral parcel as a unit, with possible subdivisions...
  - ✓ LPIS based on blocks or 'ilots' (PO, GR):
    - ➢ PO: OP partly registered throught IACS, the balance to be added
    - ➢ GR: ilotage to be carried out specifically for half area approximately (= 1st phase). Reference ilots maps created from orthophotos. Then location of OP by organising convocations of farmers in the communities (2nd stage of the project). OLISIG coordinated with VITISIG

DRAWBACKS AND ADVANTAGES OF REFERENCE LPIS

	PRO	CONST
Cadastral system	• Parcels are already declared with existing references in the crop applications. • Low investment.	• Quality & updating of Cadastre ? Errors in the cadastre increase the discordance and notifications. • Management of discrepancies with orthophotos ? • Are OP identified and managed?
Blocks/Ilots	• A dedicated system (start from crash) • No correction to be made in the declarations • Fits to orthophoto • OP better identified?	• High investment to support initial declarative stages • Difficulties to locate properly the parcels and retrieve information from producers. • High rate of field work.

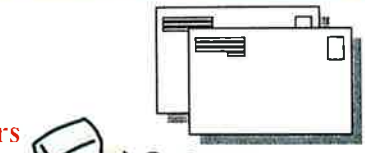
Reg. (EC) 2366/98, Art. 25 general methodology

- **1st step: identification and location of all OP and OT declared in the dossiers within the 'domain' by:**
  - ✓ orthophotos photo-interpretation (CAPI/automatic counting)
  - ✓ completed by field surveys
- **2nd step: comparison of measured number OT with declared number OT at parcel and dossier level, applying tolerances and sort:**
  - ✓ discordant dossiers discrepancy declared/measured > 3%
  - ✓ conform dossiers discrepancy <=3%



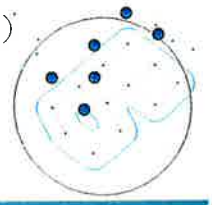
Reg. (EC) 2366/98, Art. 25 general methodology

- **3rd step: notification for all discordant dossiers**
  - ✓ possible to organise convocations of farmers
  - ✓ contradictory visits upon farmer's request

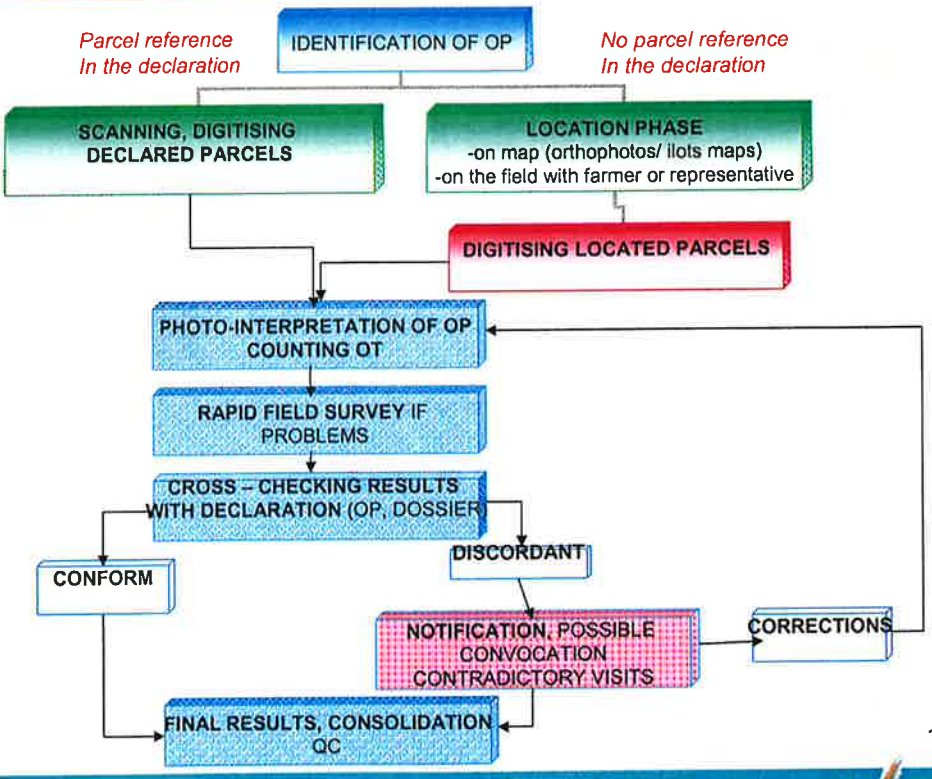


- **4th step: allocation of the final retained number of trees by parcel, according to findings**
  - ✓ retained = declared if conform
  - ✓ retained = measured if no reply or according to contradictory visits

- **Calculation of OP area**



GENERAL METHODOLOGY FOR THE CREATION OF THE GRAPHIC DATABASE



HIGHLIGHTS

- **The detailed methodology is up to the M.S. It is also their responsibility to fix up the technical tolerances.**
- **Several paths might be necessary for solving all cases: CAPI, field survey, visit to the farmers, convocation in local offices...**
- **Correction of the declaration is allowed the first time (i.e. during the creation of the graphic DB), then apply normal control procedure**
  - ✓ The GIS is not a static database but will be updated and improved

TECHNICAL TOLERANCES

- **Recommendations (EC)**

5% avec arrondis, seuil minimum de 1 olivier et seuil maximum de 25

Nombre d'arbres photo -interprétés	1-29	30-49	50-69	70-89	90-109	110-129	..	..	470-489	>490
Tolérance acceptée	±1	±2	±3	±4	±5	±6	..	..	±24	±25

- **France:**

Nombre d'arbres photo-interprétés	1 - 19	20-50	50-100	..	..	>100
Tolérance acceptée	±2	10%	±5	..	..	5% avec max 25

- **Greece: ?**
- **Italy: pas de tolérances à la parcelle**
- **Portugal:**

Nombre d'arbres photo-Interprétés	1 - 29	30-149	>=150
Tolérance acceptée	±3	±6	4% pas de max ?

- **Spain:**
  - ✓ tolerance = 0.015 Olive Trees GIS + 5, limites max 25% et 100 oliviers

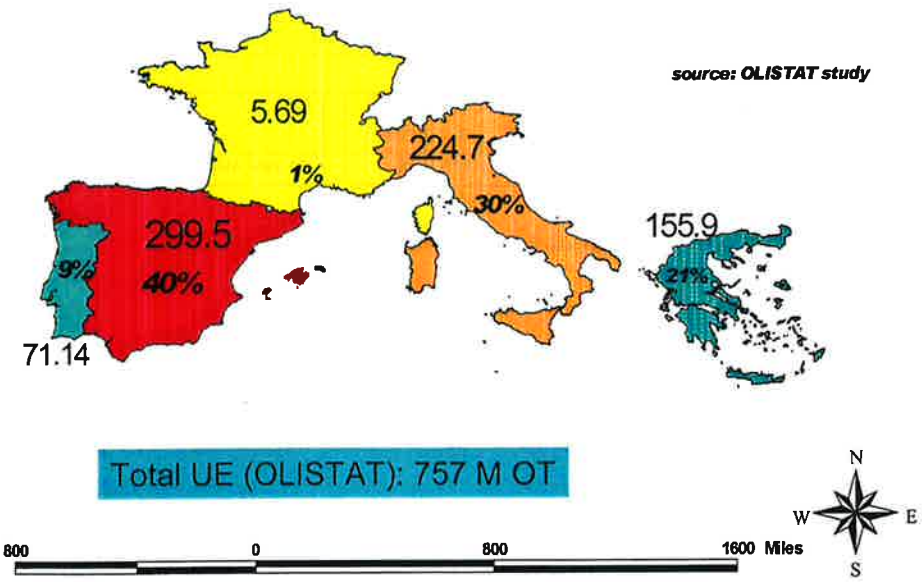
Nombre d'arbres photo -Interprétés	1-29	30-49	50-69	70-89	90-109	110-129	..	..	470-489	>490
Tolérance acceptée	±0-5	±5-6	±6	±6	±6-7	±7	..	..	±12	±12 – 100

Reg. (EC) 2366/98, Art. 26 final acceptance of the GIS

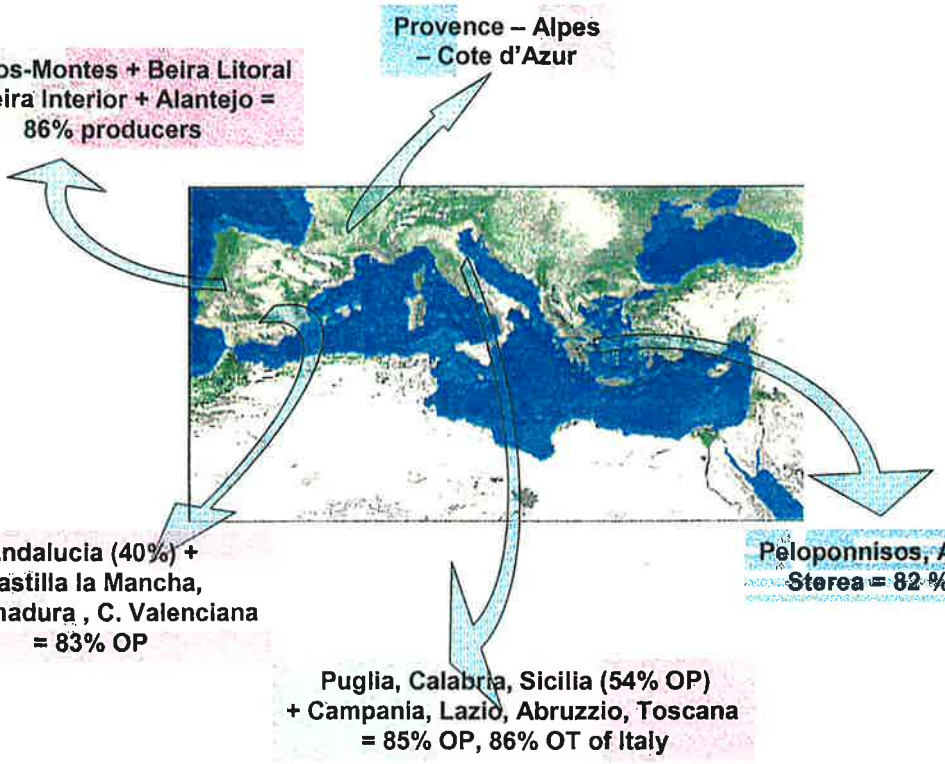
- **Option to be decided by the MS: acceptance for the whole country or by region**
- **Main criteria of acceptance:**
  - ✓ MOST IMPORTANT CRITERIA: the proportion of discordant dossiers should be < 5% of the total number of crop declarations.
  - ✓ the alphanumeric DB contains all information defined by Reg. 2366/98 for all aid application of the last 3 campaigns (+3)
  - ✓ the GIS contains all layers and all data for the 'domain' of the graphic DB
    - ➢ quality checks of the graphic data (orthophotos, vectors, OT position)
    - ➢ each parcel and each tree should be located in the GIS
  - ✓ the system is implemented at national level with consistency and seamless link between the GIS and the alphanumeric DB
  - ✓ the access of GIS information by olive producers is organised

SITUATION IN THE UE: SOME STATISTICS FIRST

Number (in Millions olive trees) and percentage of olive trees in the U.E per Member State



MAJOR REGIONS OF OLIVE GROWING



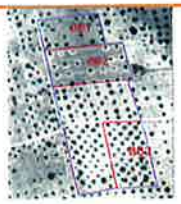
VOLUMES OF DATA TO BE PROCESSED

- **Volume of dossiers, OP and OT in the OLI-GIS (provisional)**

COUNTRY	TOTAL NUMBER of DOSSIERS	NUMBER DECLARED PARCELS	NUMBER DECLARED OLIVE TREES	NUMBER OLIVE TREES OLISTAT	NUMBER OLIVE TREES IN REGISTER
SPAIN	712,402	2,247,503	# 290 M	299,500,000	170,000,000
FRANCE	16,991	44,993	2,388,465	5,690,000	3,200,000
GREECE	808,107	3,232,00	145,000,000	155,900,000	?
ITALY	1,137,452	4,063,904	197,957,763	224,700,000	170,000,000
PORTUGAL	130,000	690,039	39,803,073	71,140,000	39,000,000
TOTAL	# 2.8 Millions	# 10.3 M	# 675 M	756,930,000	*382,200,000*

- Spain: 712402 aid applications for 450,000 producers (1 declaration / termino munic.). 1932796 parcels initially planned but with the new declaration campaign in 99/2000, 2.25 M parcelles declared and up to 2.4 M expected at final stage.
- Greece: number of dossiers provisional, based on contracts signed on 21/01/02 (4 Nomos missing). Number of OP: calculated (4 parcels/declaration). Number of OT: statistics MoA (provisional)
- France: 2 level system with 14427 aid declarations (first stage) and 24000 crop declarations (balance processed in 2nd stage).

VOLUMES OF DATA TO BE PROCESSED



- **ESTIMATES in OLI-GIS for the 5 MS:**

2.8 M DOSSIERS

10.3 M OLIVE PARCELS

675 M OLIVE TREES

- **But still difficult to know the volumes:**
  - ✓ Except from Italy and Portugal, big discrepancies with the olive registers
  - ✓ In countries where no Parcel Identification was available (Greece, part of Portugal) even more difficult to get initial estimation of number of parcels.
  - ✓ According to OLISTAT and OLIAREA results, much more olive trees than estimated by national statistics.
  - ✓ New declaration campaigns and 'wilful policy' of the MS (Portugal, Spain, France...): increasing the number of OP and OT to be included in the GIS
- **Important for the national administrations to avoid contractual problems with the increasing of dossiers/parcels**

PROGRESS STATUS FRANCE

- **LAST MISSION OF THE COMMISSION: FEBRUARY 2001**
- **TECHNICAL MEETING IN ISPRA JANUARY 2001**
- **OLI-GIS DOMAIN:**
  - ✓ 33,000 km2 CORRESPONDING TO 97% OF OLIVE PRODUCTION
  - ✓ WILL FIRST COVER 16,991 AID DECLARATIONS OF 1998-2001 (45,000 OP AND 2.4 M OT DECLARED).
  - ✓ 2ND STAGE: WILL INCLUDE 25,000 CROP DECLARATIONS (65000 OP AND 2.6 M OT).
- **SPECIFICITIES:**
  - ✓ SCATTERED AND DECLINING SECTOR, FEW PROFESSIONAL PRODUCERS
  - ✓ MARGINAL COMPARED TO OTHER MS
  - ✓ A LOT OF SMALL PRODUCERS DO NOT CLAIM SUBSIDIES

PROGRESS STATUS FRANCE

- AERIAL PHOTOS OLISTAT 1997, IGN
- ORTHOPHOTOS PRODUCTION: COMPLETED AND QC
- 'CORE' CONTRACT IN 2 PARTS, STILL IN PROGRESS:
  - IMPLEMENTATION OF OLI-GIS
  - APPLICATION FOR THE MANAGEMENT, CONTROL AND PAYMENT OF SUBSIDIES (SIPA)
- 1ST STEP: METHODOLOGY TESTED ON A PILOT REGION:
  - DIFFICULT TO IDENTIFY SOME PARCELS
  - ERRORS IN THE DECLARATION: RAPID FILED SURVEY NOT EFFICIENT
  - DIFFICULT (CONTRACTOR & ADMINISTRATION) TO DEAL WITH MANY DISCORDANCES

PROGRESS STATUS FRANCE

- CHANGED METHODOLOGY:
  - DIGITISING AND PHOTO-INTEPRETATION BY THE CONTRACTOR: COMPLETED
  - NOTIFICATIONS SENT PRIOR TO RAPID FIELD SURVEY: 7,514 DISCORDANT DOSSIERS (52%)
  - SET UP HOT LINE IN CENTRAL OFFICE (MARSEILLE): QUITE EFFICIENT TO CORRECT ERRORS:
    - 4,130 CALLS IN
    - 3,636 CALLS OUT
  - RAPID FIELD VISITS: 3,204 DOSSIERS AND 7,200 PARCELS. STILL IN PROGRESS IN JANUARY: 1,900 DOSSIERS PENDING.
- FINALISATION STAGE: COMPLETION EXPECTED FOR SEPT. OCT. 2002
- VALIDATION AT NATIONAL LEVEL.

PROGRESS STATUS GREECE

- GREECE OPTED FOR COMBINING OLIVE AND VINEYARD GIS: 808, 107 OLI + 203,365 VITI dossiers
- LAST MISSION OF THE COMMISSION OCT. 2002
- 2 PHASES:
  - ✓ 1ST PHASE: ORTHOPHOTOS AND ILOTS BASE MAPS (COMBINED IACS / REGISTERS), COORDINATION IACS/REGISTERS, COMPLETED EXCEPT FROM SOME QC
  - ✓ 2ND PHASE: OLI-VITI GIS IMPLEMENTATION, IN PROGRESS, STARTED VERY LATE
- CHARACTERISTICS: WORK SPREAD OUT MANY CONTRACTORS

PROGRESS STATUS GREECE

IACS / LPIS

Olive and vineyard registers

Total coverage 68,600 km2 | 27,700 km2 mixed IACS/ registers | 65,100 km2 complement OLI / VITI registers

PHASE 1 breakdown	Lot 1	Lot 2	Lot 3
	Evros, Rodopi, Serres, Kilkis, Salinika, Halkidiki (partie), Kavala (partie)	Pella, Imathia, Pierra, Larissa, Florina, Kastoria, Kozani, Grevena, Trikala, Karditsa, Phtiotidis, Magnisia	Lot 3 Boetia, Euboia, Attioa, Arta, Thesprotia, Aetolia-Arkaniana, Korinthia, Argolis, Arkhaya, Aroadia, Messenia, parties de Ioanina, Preveza, Phocis, Olia et Lakonia
Aerial photo acquisition	CGR / Geomatics (1996-1997)		
Orthophotos	Geomet & co	Hellen consult & co	Geomatics-Dromos
Ilotage	Terra consortium	Meleti	ENM, Georgiou, Agriconsulting

PHASE 1 breakdown	Lot 1	Lot 2	Lot 3
	Ionian islands, Central and North Greece	Péloponèse, Attiki, Evia, Zakinthos	Crète, Aegean Islands
Aerial photo acquisition	OLISTAT (1997-98): Geoapikonisis/Dromos + 1999/2000 complements		
Orthophotos	Geomet, Geoapikonisis & Erathostenes	Dromos, Geoanalysi & Planitiki	Meleti & Kampsax
Ilotage	SIMA	Meleti & Co	Fasma & Terra

PROGRESS STATUS GREECE

- 2ND PHASE: CRITICAL BECAUSE STARTED VERY LATE
  - CONTRACTED IN 14 LOTS (51 NOMI):
    - 2 CONTRACTS STILL PENDING
    - 1 POSTPONED SINCE 1 YEAR ½
    - NONE OF THE NOMI ARE COMPLETED
    - NOMI MORE ADVANCED: ACHAIA, HERAKLEIO, MESSINIA, ATTIKI, EXPECTED TO BE COMPLETED BY THE END OF 2002?
  - METHODOLOGY BASED ON
    - A FIRST STAGE OF LOCATION OF PARCELS (LOCAL OFFICE + FIELD VISITS)
    - A 2ND DECLARATIVE PHASE (PUBLICATION, OBJECTIONS, CORRECTIONS).
  - RISK TO FAIL THE DEADLINE OF NOV. 2003 FOR SOME NOMI, DUE TO CONTRACTUAL DELAYS AND LACK OF COORDINATION AND TECHNICAL MANAGEMENT (BUT REORGANISATION AT MINISTRY LEVEL)
  - THE JRC PROPOSED REINFORCED TECHNICAL SUPPORT. CONTRACT FOR EXTERNAL TECHNICAL ASSISTANCE.
  - GREECE OPTED FOR VALIDATION BY NOMOS.

PROGRESS STATUS ITALY

- OLI-GIS PART OF A 'MULTI-SECTORIAL' GIS SET UP BY AGEA SINCE 1996, COVERING THE WHOLE NATIONAL TERRITORY
- AUDIT MISSION ORGANISED BY DG AGRI IN SEPTEMBER 2001 IN ROMA
  - ✓ OLI-GIS FAR FROM COMPLETION
  - ✓ ONLY TECHNICAL WORK COMPLETED (DIGITISING, PIAO, FIELD SURVEY)
- ITALY WAS QUITE IN ADVANCED COMPARED TO OTHER COUNTRIES (OPERATIONAL REGISTER WITH USE OF ORTHOPHOTOS) BUT THE PROJECT WAS VERY MUCH DELAYED IN 2000/2001 (ADMINISTRATIVE REORGANISATION, CONTRACTUAL ISSUES).
- VOLUMES:
  - ✓ 1.14 M DECLARATIONS

4 M OP

198 M OT.

- TECHNICAL WORK CONTRACTED TO A CONSORTIUM (FINSIEL)

PROGRESS STATUS ITALY

- PROGRESS STATUS IN APRIL 2002
  - CAPI AND FIELD SURVEY PHASE IS COMPLETED.
  - 667,973 NOTIFICATIONS (59%) SENT TO FARMERS FOR DISCORDANT CASES OR PARCEL PROBLEMS.
  - 469,479 NOTIFICATIONS SENT TO CONFORM DOSSIER, 16,762 RETURNED AND GOT A 'DISCORDANT' STATUS
  - 548,750 REPLIES FOR DISCORDANT DOSSIERS ARE BEING PROCESSED. 30% RE-ENTERED IN THE 3%.
  - 76% DOSSIERS CONSIDERED AS 'CONSOLIDATED' BY AGEA, 24% STILL PENDING.
- MAJOR CHALLENGE TO HANDLE EVERY REPLY WITHIN A SHORT PERIOD, SPECIALLY TO SOLVE ALL CADASTRAL PROBLEMS (772,000 PARCELS, REDUCED NOW TO 233,000).
- OLI_GIS ACCESSIBLE VIA INTERNET IN 250 PROFESSIONAL ASSOCIATIONS, 9 UNIONS AT NATIONAL LEVEL (# 600 USERS).
- AGEA PLANNED TO FINALISE OLI-GIS IN JUNE 2002 (POSTPONED?) AND OPTED FOR A NATIONAL VALIDATION.

PROGRESS STATUS PORTUGAL

- AUDIT MISSION ORGANISED BY DG AGRI IN JUNE 2001: SYSTEM ALMOST COMPLETED:
  - ✓ CAMPAIGN 2000-01 STILL TO BE INTEGRATED, DONE NOW.
  - ✓ OLIVE AREA AND LINK BETWEEN OLI-GIS AND DECLARATION DB MISSING: SHOULD BE DONE.
  - ✓ IMPROVING QC AND UPDATING SIG OL AFTER FIELD VISIT
- EXPECTED TO VALIDATE THE SYSTEM DURING THE NEXT AUDIT MISSION (JUNE 2002).
- THANKS TO STRONG INVOLVEMENT OF INGA AND APPROPRIATE RESOURCES: PORTUGAL IS THE MOST ADVANCED MS.

PROGRESS STATUS PORTUGAL

- **SIG OL PART OF THE SIP (INTEGRATED GIS OF INGA) COVERING 4.7 M HA (PORTUGAL # 9 M HA), 638,691 BLOCKS AND 3 M PARCELS.**
- **WORK UNDERTAKEN:**
  - ✓ PREPARATION OF DB AND PHOTO-INTERPRETATION BY CONSORTIUMS
  - ✓ INTERVIEW IN 193 LOCAL OFFICES OF 140,731 PRODUCERS
  - ✓ CROSS-CHECKING DECLARATIONS AND MEASUREMENTS: 52% OF PRODUCERS.
  - ✓ 179,204 PARCELS (25%) WITH PROBLEMS FIELD VISITED
  - ✓ INTEGRATION GO SIG OL IN THE SIP: USED FOR 2000/2001 CAMPAIGN
  - ✓ 2001/2002 CAMPAIGN: CROP DECLARATIONS NOT ACCEPTED UNLESS THEY ARE BASED ON SIG OL

PROGRESS STATUS - PORTUGAL

NBR DOSSIERS WITH AID DEC. 91 320
(479 644 OP, 24 536 922 OT)
Of which: 5083 discordant **(5.57 %)**

NBR DOSSIERS WITH CROP DEC. 123 457
(678 865 OP, 34 998 222 OT)
Of which: - 6550 discordant **(5.31 %)**
- 2290 dossiers (1.85%) with parcels without correspondence in the GIS

TOTAL NB. DOSSIERS IN THE GIS: #130 000
Total nb. Olive Parcels: 690 039
Total nb. Olive Trees: 39.8 M

PROGRESS STATUS SPAIN

- **LAST MISSION OF THE JRC IN APRIL 2002:**
  - ✓ ORTHOPHOTOS PRODUCTION (TRAGSATEC) COMPLETED (385,550 KM2), VERY GOOD QUALITY
  - ✓ 1ST PHASE OF TECHNICAL WORK (INTEGRATION OF ROE DATA, DIGITISING CADASTRAL PARCELS, PHOTO-INTERPRETATION, FIELD SURVEYS) ALMOST COMPLETED (TRAGSATEC)
  - ✓ 'PROCESO DE VERIFICACIÒN' STARTED LATE (AGREEMENT TO BE FOUND WITH AUTONOMOUS COMMUNITIES AND OPRS)
    - ➢ IN PROGRESS IN ANDALUCIA
    - ➢ JUST STARTED IN OTHER AUTONOMOUS COMMUNITIES
- **ONE OF THE MAIN PROBLEM DUE TO THE BAD ESTIMATION OF VOLUMES AT THE BEGINNING OF THE PROJECT:**
  - ✓ INITIALLY PLANNED 1.64 M OP, ON THE BASIS OF ROE (SPANISH OLIVE REGISTER) BUT NOT CORRECT (CF. OLISTAT: 299.5 M OT FOUND INSTEAD OF 170 M IN THE ROE).
  - ✓ BEGINNING OF THE PROJECT: ALREADY INCREASED TO 1.9 M OP
  - ✓ INCREASING AFTER THE NEW DECLARATIVE PHASE 1999-2000: 2.2 M OP, DUE TO YOUNG PLANTATIONS, PARCELS NOT PREVIOUSLY DECLARED, CORRECTIONS OF ERRORS.
  - ✓ EXPECTED AT THE END: 2.4 M OP (+50%) AND 310 M OT.

PROGRESS STATUS SPAIN

- **MAPA NOT PREPARED TO FACE SUCH A HUGE VOLUME OF DISCORDANCES: 145,108 DISCORDANT DOSSIERS IN ANDALUCIA (46%), NOT AVAILABLE IN ALL COMMUNITIES (ESTREMADURA: 40%, VALENCE: 25-30%, NAVARRE: 15%...).**
  - ✓ ERRORS IN THE DECLARATION
  - ✓ ERRORS IN CADASTRAL BOUNDARIES
  - ✓ BIG CADASTRE RENEWAL CAMPAIGN (UNTIL 2005)
- **THEY HAD TO FIND SOLUTION: AGREEMENT WITH AUTONOMOUS COMMUNITIES AND OPRs, TO FINALISE 'PROCESO DE VERIFICACION' BY THE END OF APRIL 2002 IN ANDALUCIA.**

PROGRESS STATUS SPAIN

- PROGRESS SO FAR (ANDALUCIA):
  - ✓ DIGITISING OF 3,475 'TERMINO MUNICIPOS' (+272)
  - ✓ PHOTO-INTERPRETATION OF 1.9 M PARCELS (+321,000)
  - ✓ FIELD SURVEY OF 490,000 PARCELS (25%)
  - ✓ 'PROCESO DE VERIFICACIÒN' BEING IN PROGRESS IN OPRs. 170 000 DOSSIERS PENDING FOR ADMINISTRATIVE REASONS, 37 000 IN LITIGATION
  - ✓ AGREEMENT CADASTRE/MAPA FOR CADASTRE MODIFICATIONS
  - ✓ CHANGING REQUEST OF DECLARATION: JUNTA DE ANDALUCIA
  - ✓ CHANGING REQUESTS OF OLI-GIS BY TRAGSATEC IN PROGRESS: 100,00 REQUEST RECEIVED, 25,000 CONSOLIDATED.
  - ✓ CONTRADICTORY VISITS TO BE MANAGED BY THE ADMINISTRATION (JUNTA DE ANDALUCIA): NOT YET STARTED, BUT PAYMENT BLOCKED FOR DISCORDANT CASES.
  - ✓ BASE MAPPING CAN BE ACCESSED BY INTERNET WWW.MAPYA.ES
- THE MAPA OPTED FOR VALIDATION BY REGION AND PLANNED TO FINALISE ANDALUCIA BY THE END OF 2002, AND POSSIBLY OTHER REGIONS

CONCLUSIONS

- IMPLEMENTATION OF OLI-GIS NOT YET FINALISED IN THE 5 MS, BUT THANKS TO BIG EFFORTS FROM NATIONAL ADMINISTRATIONS AND CONTRACTORS, A LOT OF PROGRESS WAS ACCOMPLISHED. EXCEPT MAYBE FROM SOME PARTS OF GREECE, OLI-GIS SHOULD BE COMPLETED AND VALIDATED BEFORE THE DEADLINE OF NOVEMBER 2003.
- FIRST TECHNICAL PART ALMOST COMPLETED IN ALL COUNTRIES (EXCEPT GREECE). CONTRACTOR FACED TECHNICAL PROBLEMS (DIFFICULT TO LOCATE SOME PARCELS AND TO IDENTIFY OLIVE TREES IN COMPLEX AREAS – MIXED CROPS, GARRIGUE, VERY SMALL OR ELONGATED PARCELS...)
- BUT... MAIN PROBLEM WAS NOT TECHNICAL BUT ORGANISATIONAL: NATIONAL ADMINISTRATIONS NOT PREPARE TO FACE SUCH HIGH RATES OF DISCORDANCE (1/2 DOSSIERS MORE OR LESS). SITUATION DUE TO THE BAD QUALITY (OR NOT UP-TO-DATE) OF EXISTING DATA: REGISTERS, CROP DECLARATIONS, CADASTRE...
- BIG CHALLENGE TO REDUCE DISCORDANCES FROM 50% TO 5%...
- NOT EASY AS WELL TO CONVINCE PRODUCERS, UNIONS AND SOMETIMES REGIONAL AUTHORITIES TO COOPERATE...

CONCLUSIONS

- NOW A LITTLE BIT MORE HAS TO BE MADE TO HAVE A REAL OPERATIONAL SYSTEM.
- THE ACCESS BY PRODUCERS IS ESSENTIAL: INTERNET APPLICATIONS ARE VERY APPROPRIATE (COST/EFFECTIVENESS). ON-LINE APPLICATIONS ARE PROBABLY THE FUTURE.
- NATIONAL ADMINISTRATION SHOULD ALSO START TO PREPARE UPDATING:
  - HOW WILL IT BE ORGANISED?
  - WHO IS GOING TO DO WHAT?
  - AT WHICH COST?
- ... AND START TO THINK 'INTEGRATION' AS IT IS ALREADY THE CASE WITH 'MULTI-SECTORIAL' GIS IN SOME MS (PO, IT)

EUROPEAN COMMISSION
DIRECTORATE GENERAL JRC
JOINT RESEARCH CENTRE - ISPRA
Institute for Protection and Security of the Citizen
MARS Unit

Session 2: Presentation of progress status, volumes and planning by Member State

Session 2 - Presentation of the Portuguese project, by *Rita Araujo & Carla Martins, INGA*

Summary

Rita Araujo and Carla Martins are technical responsible of the Olive GIS in INGA (the Portuguese Paying Agency). The project now came to its end, as Portugal made the official request for a validation audit (to be done the week following the workshop).

***The first presentation** by Carla Martins was an overview of the Portuguese methodology, with the presentation of the organisation and context, OLI_SIG being an extension of the SIP (i.e. the Portuguese Land Parcel Identification System) which has been created in 1995. She briefly presented the SIP methodology and its contents. Then she focused on the methodology of the OLI-SIG project which was implemented in 6 phases between January 1999 and December 2000. One of the specificities in Portugal is that the SIP already contained 55% of olive producers. However in spite of that it required a lot of efforts and resources to undertake interviews of olive growers throughout the country. Thanks to the collaboration of producer associations and the work of 3 contractors in 194 regional offices, 140,731 producers were interviewed in a 6 months-period, for the identification of about 36 M olive trees and 728,000 olive parcels. Following this phase declared olive trees were cross-checked with photo-interpretation data: a lot of discordant dossiers were found (53% of applicants) which were systematically field visited. In total field visits covered 25**% of parcels and 36% of olive trees**. The last phases consist in the integration of SIG_OL in the SIP, the consolidation of data (including the integration of the new campaign) and the mailing of final documents to the farmers (including the consolidated number of olive trees and the maps of olive parcels)*

(Presentation Powerpoint)

OLI-SIG

OLIVE TREE
GEOGRAPHIC INFORMATION SYSTEM

- Overview of the Portuguese Methodology -

ISPRA, 18th June 2002

INGA Instituto Nacional de Intervenção e Garantia Agrícola

Presentation Programme:

- 1. Background and organisation of the project
- 2. OLI-SIG as an extension of The Land Parcel Identification System (SIP)
- 3. OLI_SIG Methodology
  - Office preparation work
  - Survey to the Olive Tree Farmers
  - Planning of the field visits - discordant dossiers
  - Field visits
  - Integration of OLI-SIG into SIP
  - Mailing of the individual documents to the farmers

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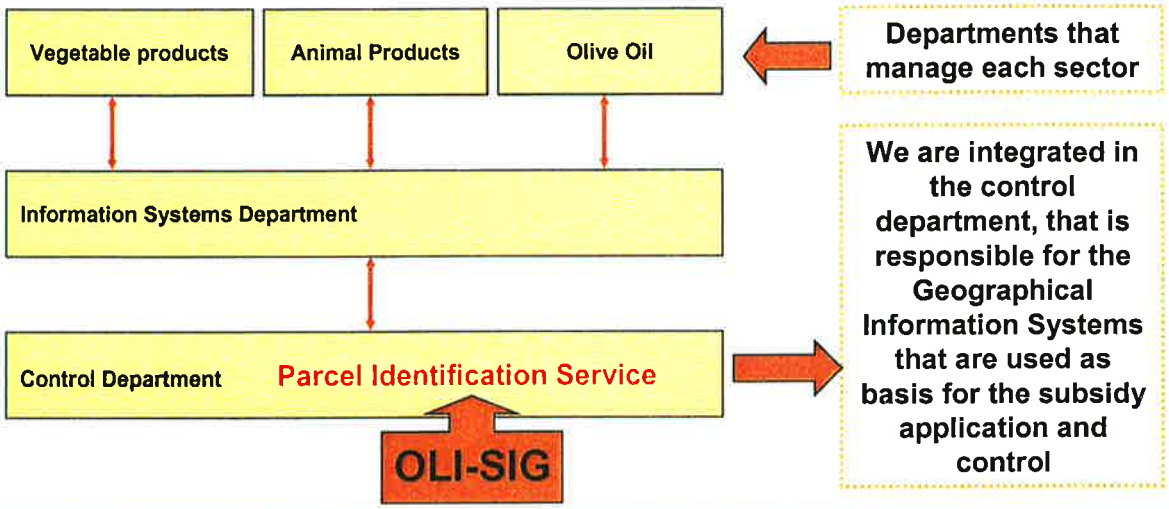
The Organization of the Land Parcel Identification System

INGA - National Institute of Agriculture Intervention and Guarantee



OLI_SIG as an extension of SIP (Land Parcel Identification System)

What we had:

- Crop Declarations of the olive oil sector were made using cadastral information (without any geographical reference, in the south) and information related with finance register (without any geographical reference, in the north) ;
- SIP (Land Parcel Identification System) was already implemented.

What do we need?

- OLI-SIG (Olive Tree Geographic Information System)

SIP Aims :

European Union Reg. Nº 3508/92, 27th November 1992

- Geographical Localization of Agriculture Holdings
- Simplify the Farmers' Requests for European Subsidies
- Help to Control European Subsidies

OLI_SIG Aims :

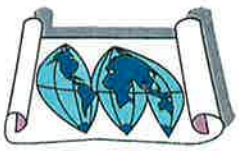
European Union Reg. Nº 2366/98, 30th October 1998

- Identification of the land parcels with olive trees
- Agronomic Characterization of the land parcels with olive trees
- Georeference of the olive trees

SIP Stages since 1995

1. National Aerial Photographic Coverage

2. Scanning and orthorectification and of aerial photographs



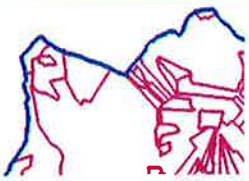
3. Land parcel Surveys to the Farmers

4. Digitazation, and building the Database

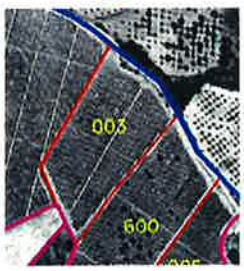
The structure of SIP

Municipality

Parish



Block



Land Parcel

Municipality	V.F.Xira
Parish	Povoa
Block	1234567890
Area	0,86
Land use	vineyard
Trees	4
Name	Manuel Silva
Address	R. de Lisboa, 45 V.F. Xira
Cadaster	AA 143

OLI-SIG Project Methodology

1999				2000						
JAN	AGO	SET	DEC	JAN	FEB	MAR	APR	OCT	NOV	DEC
Data Base preparation and Photointerpretation		Olive-Grower Survey				discordant dossiers	Field Visits		integration in SIP	Final Documents
1		2				3	4		5	6

- **1st Phase - Data Base preparation and Photointerpretation- Central Office work**
- **2nd Phase - Olive-Grower Survey - Local Office work**
- **3rd Phase - Dossier review - discordant dossiers- Central Office work**
- **4th Phase - Field Visits**
- **5th Phase - OLI_SIG integration in SIP - Central Office work**
- **6th Phase - Final Documents - Central Office work**

1999				2000						
JAN	AGO	SET	DEC	JAN	FEB	MAR	APR	OCT	NOV	DEC
Data Base preparation and Photointerpretation		Olive-Grower Survey				discordant dossiers	Field Visits		integration in SIP	Final Documents

1 st phase

Building de OLI-SIG Initial Database

- **Identify de olive growers to notify for the survey**
- **Identify the parcels for photointerpretation**

Crop Declarations Database (95,96,97) **X** **Aid Application Database** **X** **SIP Database**

1999				2000						
JAN	AGO	SET	DEC	JAN	FEB	MAR	APR	OCT	NOV	DEC
Data Base preparation and Photointerpretation		Olive-Grower Survey				discordant dossiers	Field Visits		integration in SIP	Final Documents

SIP

Olive Oil Crop Declarations and Aid Applications

3 100 000 - cultural parcels

690 000 - parcels with OT

800 000 parcels

90 000 - SIP parcels were identified by olive oil producers

55% of the producers had identified parcels in SIP

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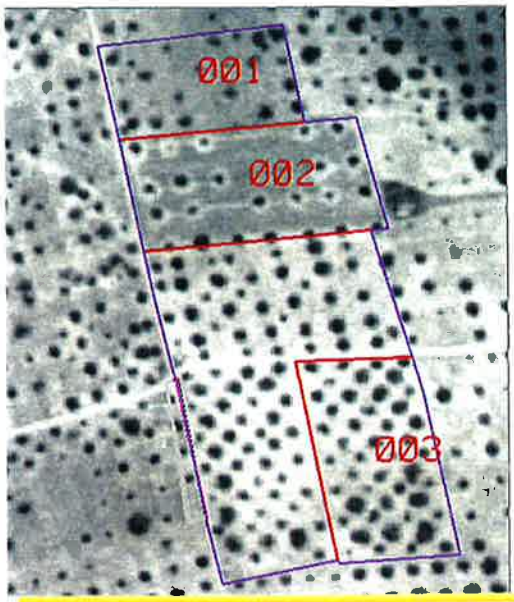
1999				2000						
JAN	AGO	SET	DEC	JAN	FEB	MAR	APR	OCT	NOV	DEC
Data Base preparation and Photointerpretation		Olive-Grower Survey				discordant dossiers	Field Visits		integration in SIP	Final Documents



Photointerpretation

(3 contractors - North, Center and South)

- **Parcels with Olive Tree Land use**
- **Parcels identified in Olive tree blocks**
- **Oli_count methodology**
- **Construction of olive tree X,Y coordinates table**

1999				2000						
JAN	AGO	SET	DEC	JAN	FEB	MAR	APR	OCT	NOV	DEC
Data Base preparation and Photointerpretation		**Olive-Grower Survey**				discordant dossiers	Field Visits		integration in SIP	Final Documents

2 nd phase

Olive-Grower Survey

- 4 farmer associations (privileged contacts with producers)
- 3 contractors (technical experience and equipment)
- 194 regional survey locations

1999				2000						
JAN	AGO	SET	DEC	JAN	FEB	MAR	APR	OCT	NOV	DEC
Data Base preparation and Photointerpretation		**Olive-Grower Survey**				discordant dossiers	Field Visits		integration in SIP	Final Documents

2 nd phase — Olive-Grower Survey

- 1- Contractors identify the parcels and photointerpret the olive trees
- 2- SIP survey (in case the parcel has not been identified)
- 3- Producers declared number of olive trees on each parcel
- 4- Agronomic Characterization of olive trees (information identical to Crop Declaration)

1999				2000						
JAN	AGO	SET	DEC	JAN	FEB	MAR	APR	OCT	NOV	DEC
Data Base preparation and Photointerpretation		**Olive-Grower Survey**				discordant dossiers	Field Visits		integration in SIP	Final Documents

2 nd phase — Olive-Grower Survey - Statistics

- number of surveys - **140 731** producers
- number of declared Olive Trees - **35 662 814**
- number of parcels - **727 692**

1999				2000						
JAN	AGO	SET	DEC	JAN	FEB	MAR	APR	OCT	NOV	DEC
Data Base preparation and Photointerpretation		Olive-Grower Survey				**discordant dossiers**	Field Visits		integration in SIP	Final Documents

Discordant Dossiers - **Tolerances**

3 rd phase

Declared Olive trees vs. Photointerpreted Olive trees

Technical tolerances photointerpretation

Olive trees	**tolerance**
1 to 30	3 olive trees
30 to 150	6 olive trees
+ than 150	4%

Administrative tolerances Reg. 2366/98 art. 25º, 2.

3% per dossier

Field Visit

1999				2000						
JAN	AGO	SET	DEC	JAN	FEB	MAR	APR	OCT	NOV	DEC
Data Base preparation and Photointerpretation		Olive-Grower Survey				**discordant dossiers**	Field Visits		integration in SIP	Final Documents

producer	parcel	declared	photoint	Visit?
Maria	0001	100	95	**NO**
Maria	0002	100	106	**NO**
Maria	0003	100	94	**NO**
Maria	0004	100	104	**NO**
Maria	0005	100	**0**	**YES**
Total		500	399	**25,3%**

producer	parcel	declared	photoint	Visit?
António	0011	**100**	**50**	**YES**
António	0012	100	95	NO
António	0013	100	140	NO
António	0014	100	104	NO
António	0015	100	100	NO
Total		500	489	**2,2%**

producer	parcel	declared	photoint	Visit?
Paulo	0006	100	95	**NO**
Paulo	0007	100	120	**NO**
Paulo	0008	100	30	**YES**
Paulo	0009	100	104	**NO**
Paulo	0010	100	**0**	**YES**
Total		500	349	**43,3%**

Field Visit

1999				2000						
JAN	AGO	SET	DEC	JAN	FEB	MAR	APR	OCT	NOV	DEC
Data Base preparation and Photointerpretation		Olive-Grower Survey				discordant dossiers	**Field Visits**		integration in SIP	Final Documents

4 th phase

Field visit documents :

- Farm Document - Document with all the Olive-grower's parcels information.
- Parcel Document - Document with the parcel information containing a graphic layout. This document contains some fields to be filled during the visit.

Farm Document

Sistema de Identificação Parcelar Olivícola
Visita de Campo – Ficha de Exploração
Página 1 de 1

Nome ______________________ Número de Contribuinte ______________________
Concelho ______________________ Número de Parcelas da Exploração ______________________

COD. DE LITÍGIO	NUMER ODEF	NOME DA PARCELA	OCUPAÇÃO_ SOLO	TIPO_LOCALI ZAÇÃO	AREA_PAR CELA	OL_CONT ADAS	OL_DECLAR ADAS	OL_DETERMI NADAS	COD. DE CAMPO

COD. LITÍGIO À EXPLORAÇÃO:

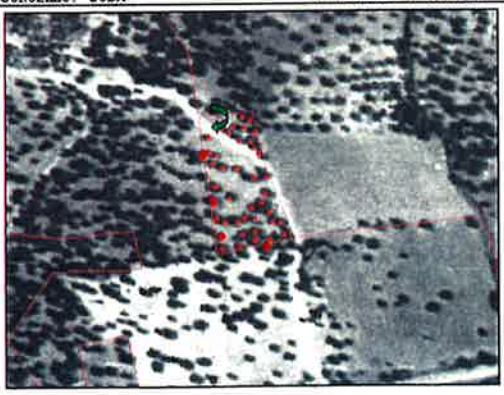
O Olivicultor	O Consórcio
Concordo com o número de oliveiras determinado(1) ao nível da exploração.	Data: ________
ASSINATURA: ______________________	Os controladores: ______________________

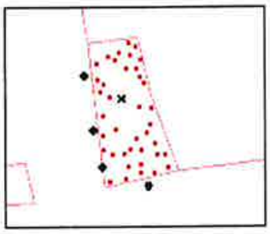
Parcel Document

Sistema de Identificação Parcelar Olívicola
Visita de Campo – Ficha de Parcela

CONCELHO: CUBA FREGUESIA: VILA RUIVA NOME DA PARCELA: POÇO

ESCALA: 1:2500





OBSERVAÇÕES:

transferida • acrescentada X morta

Nome: João Francisco Silva Nº Contrib: 123456789

Nº da Parcela	21614243087000	Nº oliveiras cortadas	40	Alteração da ocupação do solo		Nº da Oliveiras Mortas	
Código de conflito	S	Nº oliveiras declaradas	47	Alteração do tipo de localização		Nº de Oliveiras Acrescentadas	
Área da Parcela	1 ha	Nº oliveiras determinadas		Nº de oliveiras não georeferenciáveis		Nº de Oliveiras Transferidas	

Assinatura dos Controladores:
Assinatura do Agricultor: Local e Data:

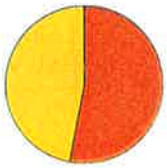
1999				2000						
JAN	AGO	SET	DEC	JAN	FEB	MAR	APR	OCT	NOV	DEC
Data Base preparation and Photointerpretation		Olive-Grower Survey				discordant dossiers	**Field Visits**		integration in SIP	Final Documents

Field Visits - Statistics

3 rd phase

- number of **parcels** visited - **179 204 (25 %)**

- number of **producers** visited - **73 860 (53 %)**

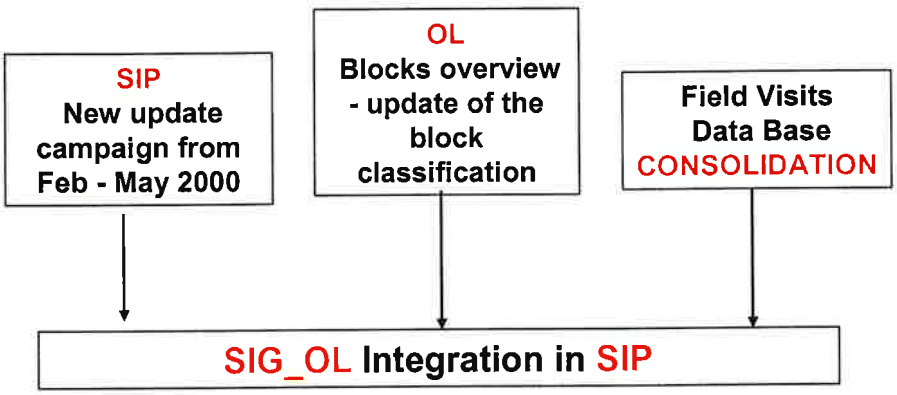


- number of **olive trees** visited - **13 519 760 (36 %)**

INGA Instituto Nacional de Intervenção e Garantia Agrícola

1999				2000						
JAN	AGO	SET	DEC	JAN	FEB	MAR	APR	OCT	NOV	DEC
Data Base preparation and Photointerpretation		Olive-Grower Survey				discordant dossiers	Field Visits		integration In SIP	Final Documents

4 th phase



producer	parcel	declared	photoint	Visit?	visited	OLIV
Maria	0001	100	95	NO		95
Maria	0002	100	106	NO		100
Maria	0003	100	94	NO		94
Maria	0004	100	104	NO		100
Maria	0005	100	0	YES	98	98
Total		500	399	25,3%		

producer	parcel	declared	photoint	Visit?	visited	OLIV
Paulo	0006	100	95	NO		95
Paulo	0007	100	120	NO		100
Paulo	0008	100	30	YES	31	31
Paulo	0009	100	104	NO		100
Paulo	0010	100	0	YES	103	103
Total		500	349	43,3%		

producer	parcel	declared	photoint	Visit?	visited	OLIV
António	0011	100	50	YES	47	47
António	0012	100	95	NO		95
António	0013	100	140	NO		100
António	0014	100	104	NO		100
António	0015	100	100	NO		100
Total		500	489	2,2%		

Field Visits Data Base CONSOLIDATION

DECL	PHOTO.	VISIT	OLIV
100	95		95
100	106		100
100		97	97
100		104	104

1999				2000						
JAN	AGO	SET	DEC	JAN	FEB	MAR	APR	OCT	NOV	DEC
Data Base preparation and Photointerpretation		Olive-Grower Survey				discordant dossiers	Field Visits		integration in SIP	**Final Documents**

6 th phase

Mailing of final final documents to producers

P1_OL Document with all the tabular information

P3_OL Graphic Documents with the map of each parcel

P1 Document with all the alphanumeric information

oliv → Number of consolidated olive trees

SISTEMA DE IDENTIFICAÇÃO DO PARCELAR AGRÍCOLA

INGA Instituto Nacional de Intervenção e Garantia Agrícola

Nome:
Distrito:
Concelho:
Nº Total de Parcelas:
Nº Contribuinte:
Nº INGA:
Data de Emissão:

P1 2001

Sistema (a)	Anexo (b)	Nº de Parcelário (c)	Sec./Fin. (d)	Artigo (e)	Nome da Parcela (f)	Tit. (g)	Freguesia		Grupo Cult. Bloco (h)	Ocup Cult Parc (i)	Indicador (j)	Arvores					Area Gis ha (Tipo "d") (k)	Area SIP ha	Tipo (l)
							Freg.					Oliv	Figueira	Qu/Cas/Al	Citri	Vinha			
9	9	999999999999	9999	999999999	99999999999999999999999	9	99	99999999999999999999	99	99	9	99999	9999	9999	9999	9	999.999	999.999	9

Conclusions

- Every producer has all the Olive parcels and olive trees identified
- Every parcel has a number of olive trees that is considered for the Crop Declaration.
- After obtaining for each declared parcel an unique value of **considered** olive trees it is not necessary to calculate the discordant cases
- This calculation will only be needed when the parcel is modified graphically or when the number of declared olive trees is changed.

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The second presentation *by Rita Araujo detailed the consolidation phase where the declared data were compared to photo-interpretation data and field visits data to define the final number of consolidated olive trees and the olive area in OLI_SIG. Then she presented the organisation of the first updating campaign which was carried out in January-May 2001 using resources of 22 regional offices and 100 technical staff (from the administration), as well as a software application called SIPG. For this campaign she highlighted that the producers were already able to lodge their declaration based on OLI_GIS data. She presented the entities and the flow of information between entities in charge of updating as well as the identification and codification of errors. The errors were subject to notification to the producers.*

(Presentation Powerpoint)

OLI-SIG

OLIVE TREE
GEOGRAPHIC INFORMATION SYSTEM

- Consolidation of the GIS -

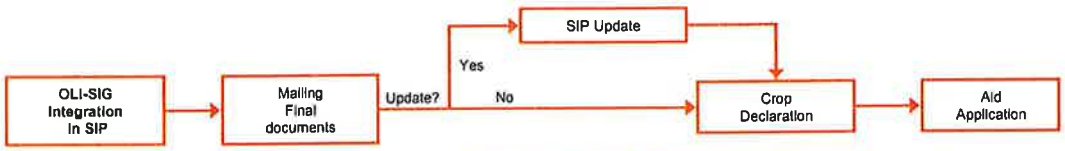
ISPRA, 19th June 2002

Presentation Programme:

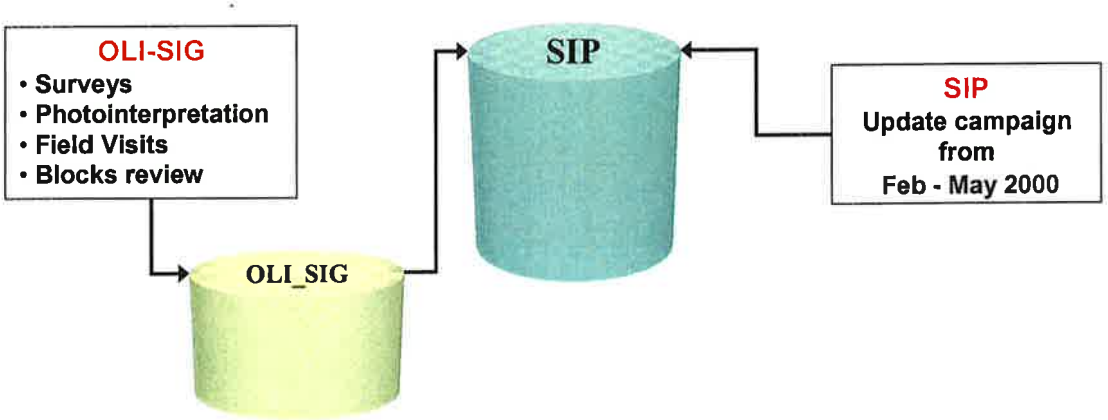
- **From OLI-SIG integration in SIP to Crop Declaration and Aid Application**
  - Oli-Sig Integration in Land Parcel Identification System (SIP)
  - Mailing Final Documents
  - SIP update campaign
    - First update campaign after integration (Jan-May 2001)
    - Present structure for SIP/OLI-SIG updates
  - Presenting Crop Declaration and Aid Application
- **Cross Checking procedures for 2000/2001 campaign**
  - Entities and Relations
  - Errors Identification
  - Notifications and Replies analysis
- **Conclusions**

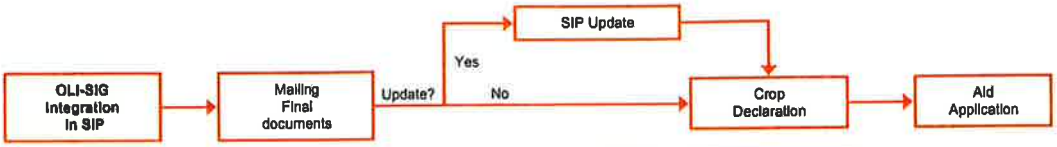
ISPRA, 19th June 2002

From OLI-SIG integration in SIP to Crop Declaration and Aid Application

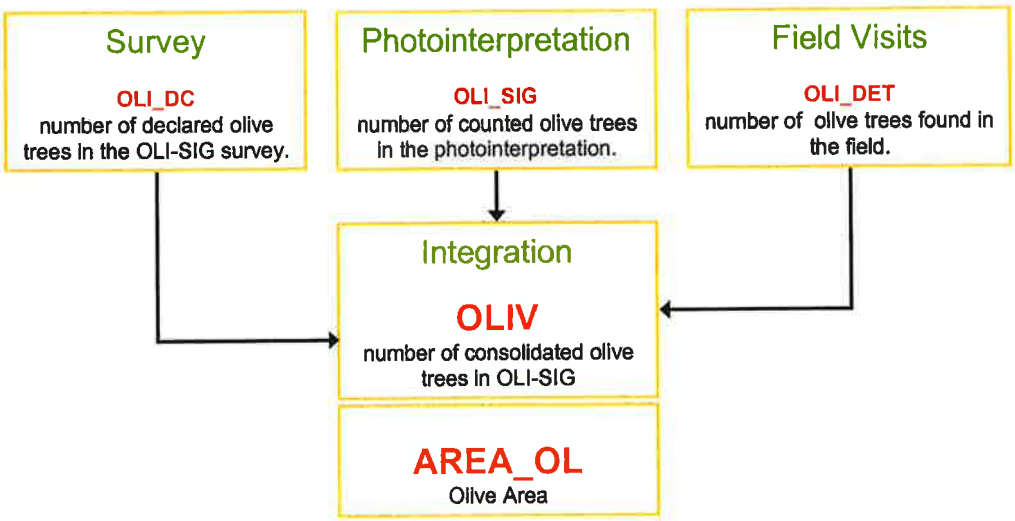


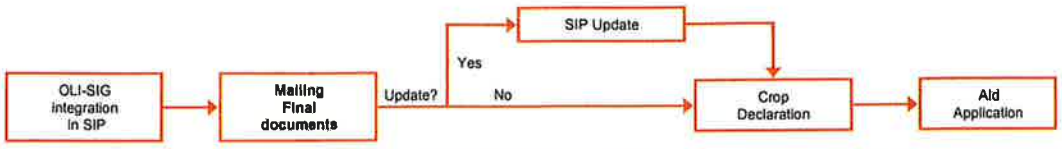
Integration of OLI_SIG in Land Parcel Identification System (SIP) (Oct-Nov 2000)





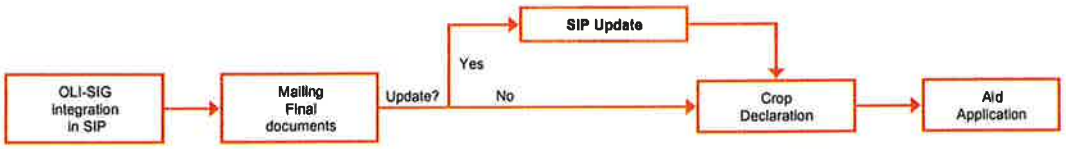
Consolidation of the number of Olive Trees and calculation of Olive Area





Mailing Final Documents to Producers (Dec 2000)

SEE COPY OF DOCUMENTS
ON CARLA'S
PRESENTATION



OLI-SIG's First Update Campaign (Jan - May 2001)

Regional Services of the Ministry of Agriculture

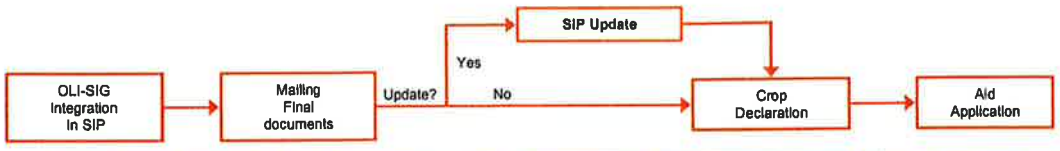
- ✓ 1. Identify new parcels
- ✓ 2. Update the P1/P3 information

Graphical

Tabular

Contractor

- ✓ 1. Photointerpretation and count of olive trees
- ✓ 2. Apply tolerances
- ✓ 3. Field visits

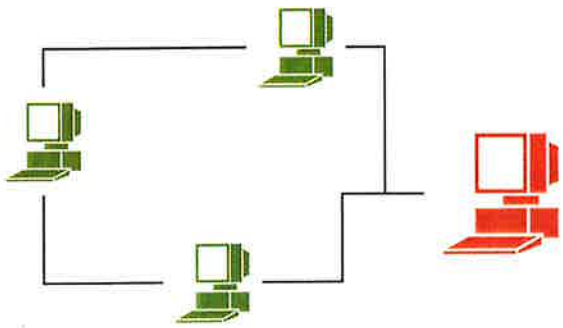


Present structure for SIP/OLI-SIG updates (annually)

- 22 regional survey locations (SUC)
- 100 technical staff with experience in SIP

Present structure for SIP/OLI-SIG updates (annually)

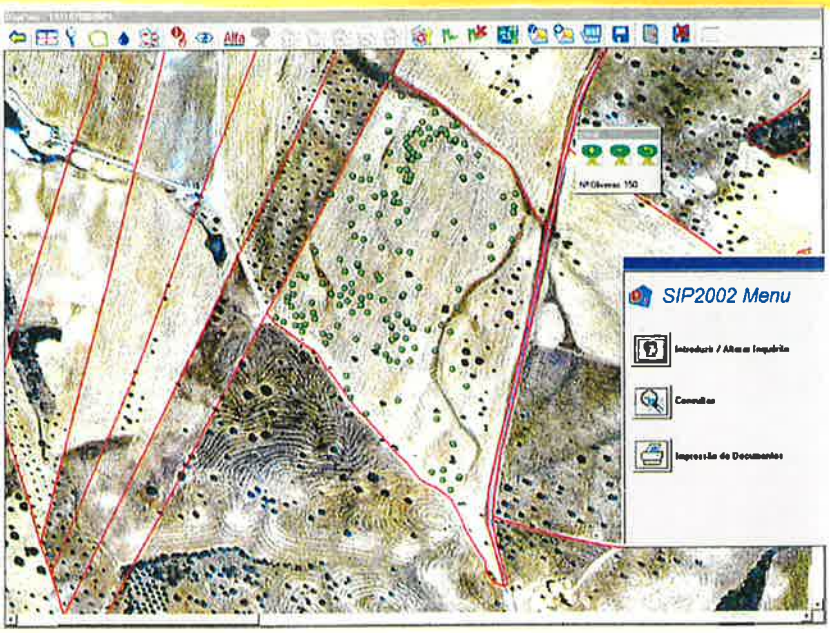
Each regional survey location has:



Present structure for SIP/OLI-SIG updates (annually)

SIPG

software application:

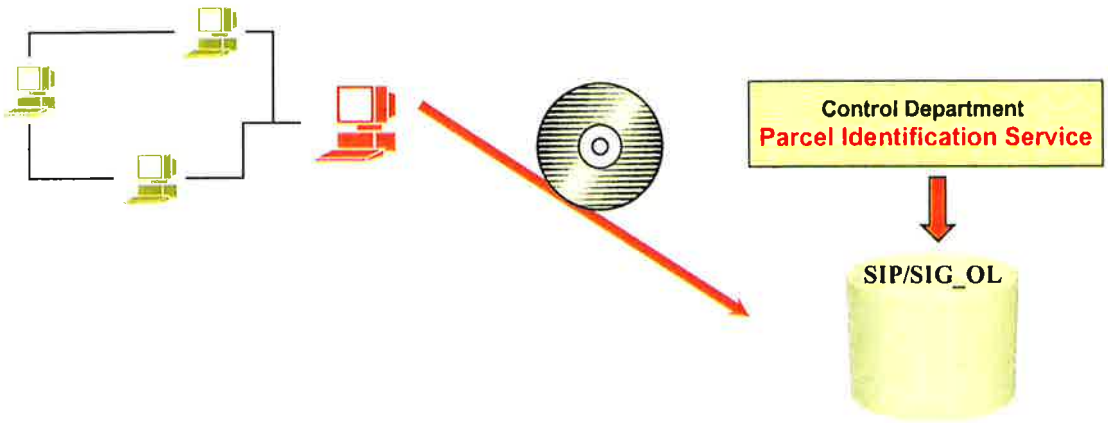


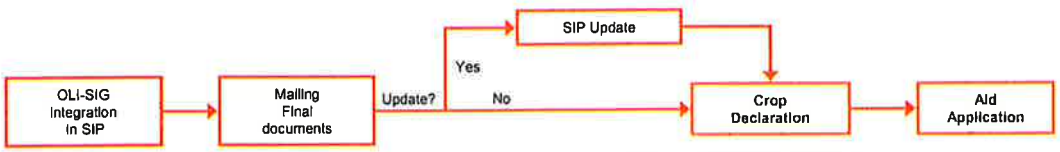
ISPRA, 19th June 2002

INGA Instituto Nacional de Investigação Agrária

Present structure for SIP/OLI-SIG updates (annually)

In the end of the SIP update campaign:



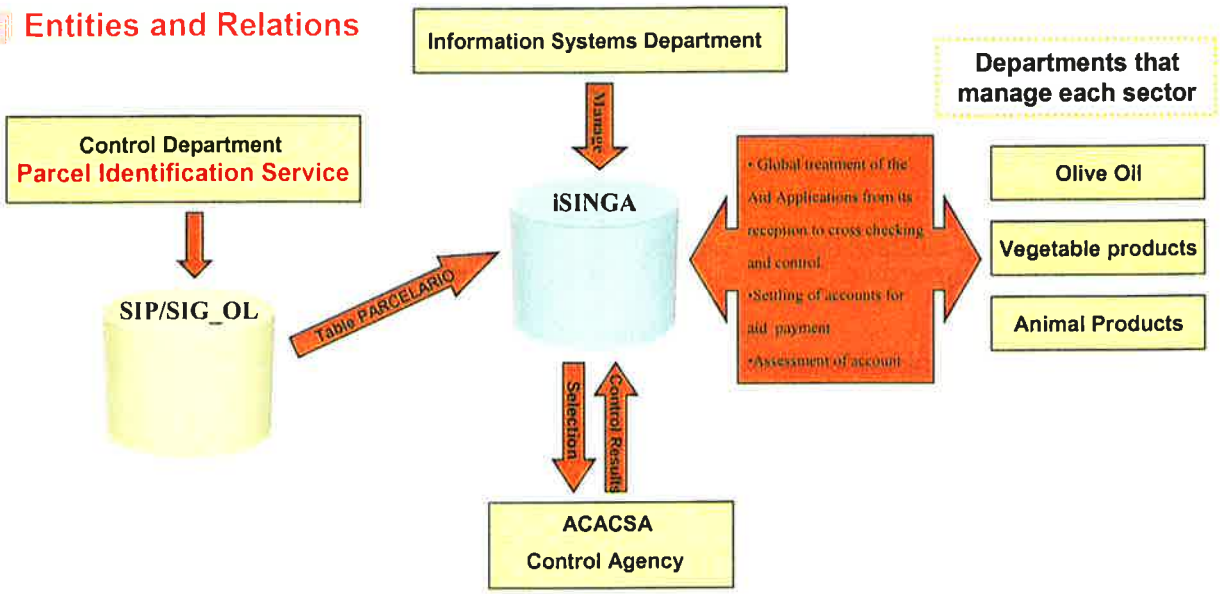


- ✓ 1. The producers have their individual documents
- ✓ 2. The producers are able to update the OLI-SIG information
- ✓ 3. The software application that receives the Crop Declarations and Aid Applications is based no OLI-SIG

The producers were able to present their Crop Declarations based on a geographic information system.

Cross Checking

Entities and Relations



38

Cross Checking

Errors Identification

Assumes that all work related with:

- The comparison with photointerpretation
- Application of tolerances
- And field visits

was made previously in OLI-SIG implementation and its Parcel Identification Service's responsibility.

ISPRA, 19th June 2002

Cross Checking

Errors Identification

PARCELARIO X Crop Declaration X Aid Application

DC REC30 – Invalid Parcel Number in the Crop Declaration

DC REC48 – Duplicated Parcel Number in the producer's Crop Declaration

DC REC 49 – Duplicated Parcel Number in more than one producer's Crop Declaration

Z REC 0048 – Invalid municipality code in Aid Application

Z REC 0049 – Invalid Parcel number or municipality code in Aid Application

Notification

Cross Checking

Crop Declarations

ERROR	Nº Dossiers	%Dossiers	Nº Parcels	%Parcels
DC REC30	489	0,39%	814	0,12%
DC REC48	10	0,01%	22	0,00%
DC REC49	2467	1,98%	3310	0,49%
TOTAL	2966	2,38%	4146	0,61%

2,38%

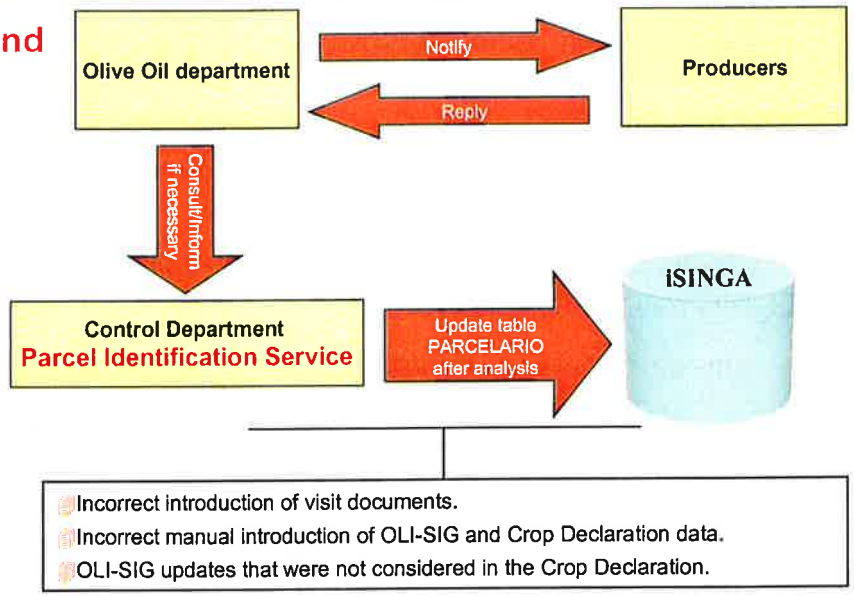
Aid Applications

ERROR	Nº Dossiers	%Dossiers	Nº Parcels	%Parcels
Z REC 0048	24	0,03%	51	0,01%
Z REC 0049	791	0,83%	1262	0,25%
TOTAL	815	0,85%	1313	0,26%

0,85%

Cross Checking

Notifications and Replies Analysis



Cross Checking

- Settling of accounts for aid payment

The number of Olive trees declared in Crop Declaration is greater than the number of olive tress in iSINGA (table PARCELARIO)?

Nº.2 of art.15º of the Reg.2366/98

Conclusion

- With the integration of OLI-SIG in SIP, Portugal continues to have a dynamic and unified Geographical Information System.\
- There is a annual update period that includes all the parcels of the system.
- As far as the Crop Declarations and Aid Applications in the Olive Oil sector OLI_SIG has made possible:
  - the producers know the information INGA has on their parcels
  - the Crop Declarations and Aid Applications are based on OLI_SIG information which makes them easier
  - Cross Checking is based on a geographic Information System

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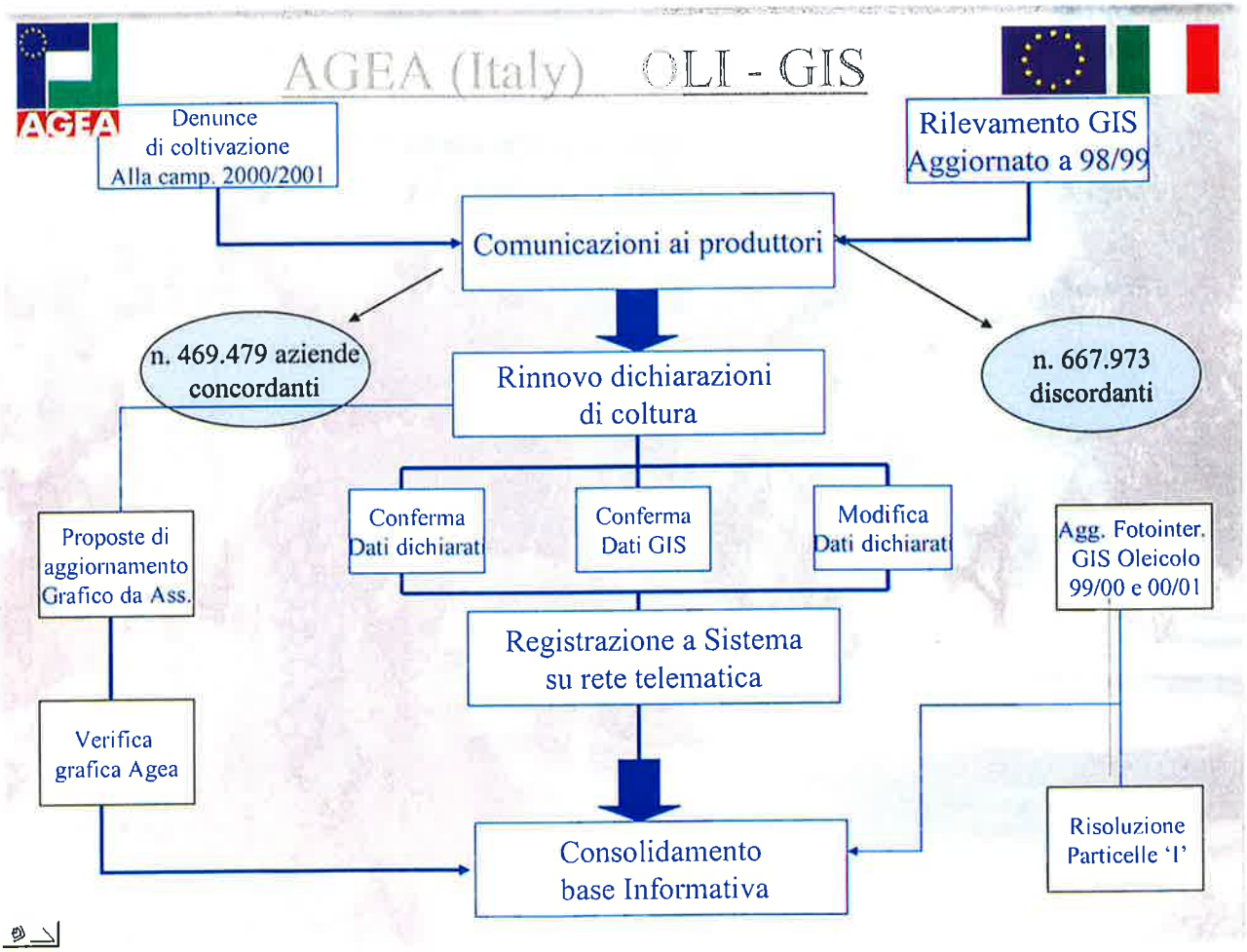
Session 2 - Presentation of the Italian project, by *Giancarlo Nanni, AGEA*

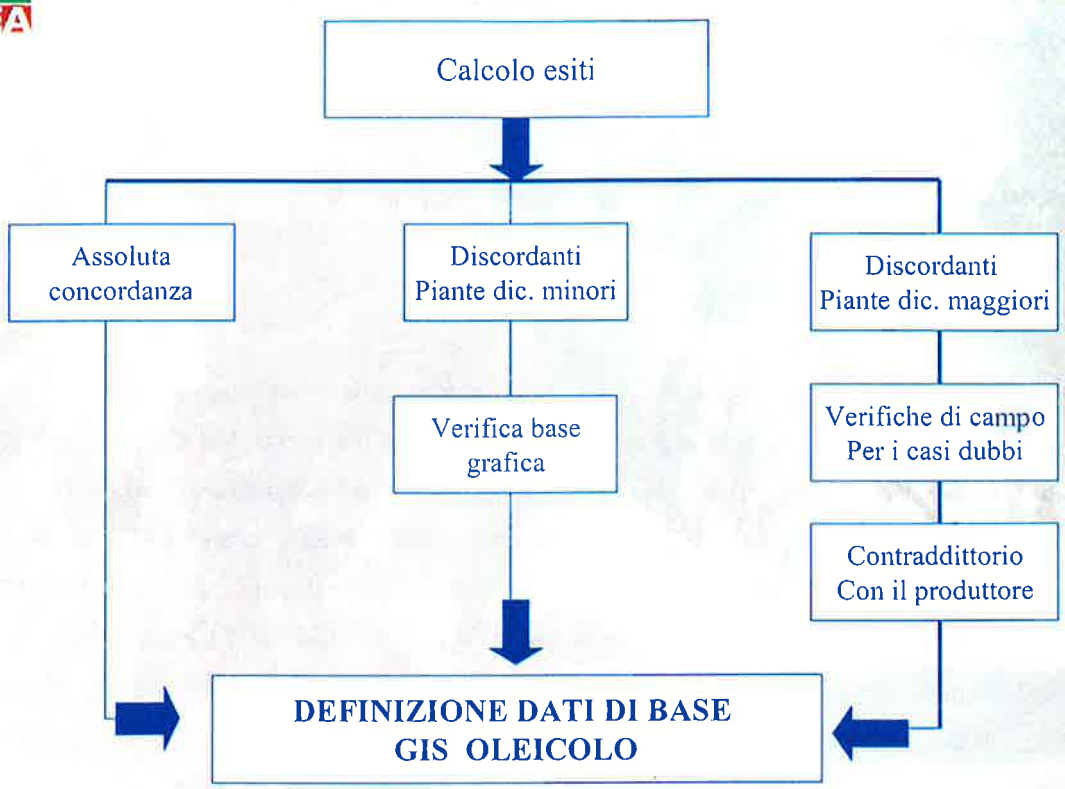
Summary

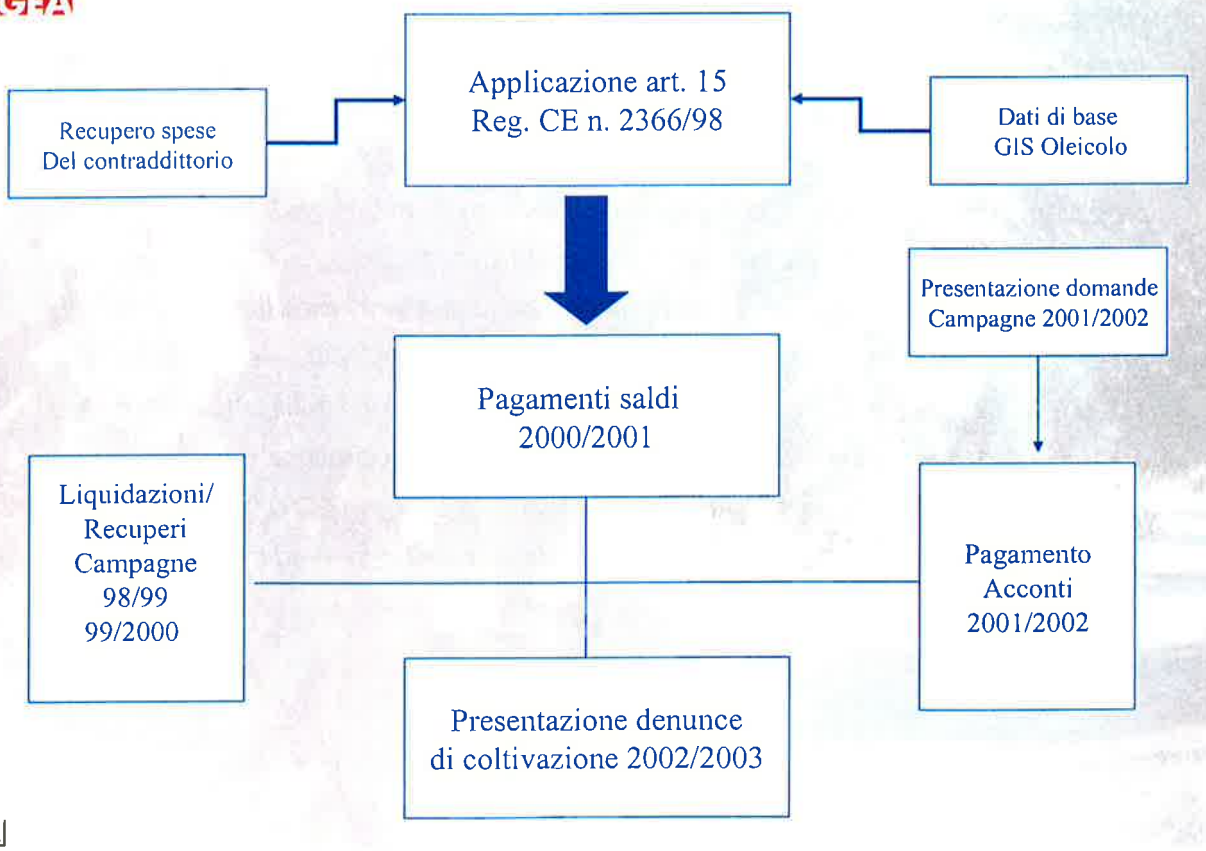
Dr Nanni from AGEA (the Italian paying agency) presented the general methodology and the progress status of the olive GIS implementation in Italy. In total the olive GIS will cover 1.4 M applicants of which ***1.1 M*** *are considered as 'active' because they submitted a declaration in the last campaigns. He highlighted the fact that in Italy all the* ***667,973 discordant dossiers (59%)*** *and the* ***469,479 concordant dossiers*** *were subject to a notification to producers. This consolidation phase was carried out thanks to the collaboration with OPR (producers associations). In Italy one of the main problems was with the so-called parcels 'I' (i.e. cadastral problems, e.g. existing parcels but not found on cadastral maps). The feed-back from notification is being currently handled by the consortium in charge of the implementation of OLI GIS (130 local offices): when the dossier is still discordant, additional checks have to be carried out, possibly by photo-interpretation or field visits or contradictory visits with the producer. Dr Nanni highlighted the fact that Article 15 will be applied after contradictory field visits. In addition contradictory field visits are paid by the producer if he is wrong. The OLI GIS data will be used for the balance payment of 2001/2002 campaign and for the new declaration campaign 2002/03. It is planned to complete the project by the end of 2002 in Italy.*

(PowerPoint presentation)


AGEA
OLI-GIS Experts Meeting
1st workshop on the Implementation of Olive GIS in the Member States
ISPRA, 18 and 19 June 2002
Presentation of the Italian project
Dr Nanni, AGEA


AGEA
AGEA (Italy) OLI - GIS
Denunce di coltivazione Alla camp. 2000/2001
Rilevamento GIS Aggiornato a 98/99
Comunicazioni ai produttori
n. 469.479 aziende concordanti
n. 667.973 discordanti
Rinnovo dichiarazioni di coltura
Conferma Dati dichiarati
Conferma Dati GIS
Modifica Dati dichiarati
Proposte di aggiornamento Grafico da Ass.
Agg. Fotointer. GIS Oleicolo 99/00 e 00/01
Registrazione a Sistema su rete telematica
Verifica grafica Agea
Risoluzione Particelle 'I'
Consolidamento base Informativa


Calcolo esiti
Assoluta concordanza
Discordanti Piante dic. minori
Discordanti Piante dic. maggiori
Verifica base grafica
Verifiche di campo Per i casi dubbi
Contraddittorio Con il produttore
DEFINIZIONE DATI DI BASE GIS OLEICOLO


Recupero spese Del contraddittorio
Applicazione art. 15 Reg. CE n. 2366/98
Dati di base GIS Oleicolo
Presentazione domande Campagne 2001/2002
Pagamenti saldi 2000/2001
Liquidazioni/ Recuperi Campagne 98/99 99/2000
Pagamento Acconti 2001/2002
Presentazione denunce di coltivazione 2002/2003

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Session 2 - Presentation of the French project, by *Alain Madaule, ONIOL*

Summary

Alain Madaule is responsible of the ONIOL office in Marseille, in charge of the implementation of the Olive GIS in France. He highlighted the fact that the olive growing sector is very small compared to other countries (only ***25,352 crop declarations****) but the implementation of the olive GIS had to face some difficulties: sparse olive groves with small parcels, non professional olive growers and a lot of variation in the number of subsidies claims from one year to the other (only* ***14,388 subsidies claims in 99/00****, i.e. 57% of the crop declarations. The annual variation is up to +/- 3000 declarations, depending on the production. Therefore the ONIOL decided to* ***adopt a 2-levels approach****: all the 25,352 crop declarations (called DO) were photo-interpreted by the contractor and when the photo-interpretation was concordant with the declaration, the dossier was considered as consolidated. For the discordant dossiers, only those with a subsidies claim (called DA) were further processed: for those dossiers, 7514 notifications (called DCI 'demande complementaire d'information') were sent to the producers. The discordant dossiers without DA have been stored as 'pending' in the database. They will be further processed if a DA is submitted in the next campaigns. Of the 7514 notifications, 6978 were returned by the producers of which 6051 (80.5%) were corrected and found conform. Rapid field visits were carried out on 2,704 of those 6051 dossiers. Mr Madaule insisted on the fact that Quality Control was carried out by ONIC as well as QC of the photo-intepretatation. All 927 dossiers returned by the producers and still discordant and should be field inspected by ONIC. In addition for the 539 dossiers which were notified but not returned by producers, a new phase of notification was carried out: some field visits will be undertaken, the other dossiers will be considered as consolidated with the GIS data. The ONIC/ONIOL planned to carry out 1,500 field visits in July-October 2002. It is also planned to send notifications (including graphic data) to all farmers who did not update their crop declaration. The problem now is to complete field visits and to process the new declarations of 2000/01 (4824 parcels) and 2001/02 campaigns (1661 parcels). Mr Madaule expects to send the validation request in* ***May 2003****.*
(PowerPoint presentation)

Le Système d'Information Géographique Oléicole français

- État d'Avancement -

ISPRA 18 - 19 juin 2002

Base réglementaire

Règlement 2366/98
de la Commission, chapitre 6

- **LOCALISATION des Vergers**
- **DENOMBREMENT des Oliviers**
- **POSITIONNEMENT des Oliviers**

ISPRA 18 - 19 juin 2002

Spécificités françaises

- Un verger dispersé et composé de petites parcelles
- Un nombre d 'arbres réduit par déclaration

- Une population à dominante non agricole et âgée
- Une fluctuation importante des demandeurs d 'aide d 'une campagne sur l 'autre

ONIOL
OFFICE NATIONAL INTERPROFESSIONNEL DES OLÉAGINEUX PROTÉAGINEUX ET CULTURES TEXTILES

ONIC
OFFICE NATIONAL INTERPROFESSIONNEL DES CÉRÉALES

Base du système oléicole (Déclaration de culture: DO)

25 352 DO dont 14 388 DA en 99/ 00 soit 56,75 %

- **Si PIAO confirme:**

  Validation dans la base de la déclaration déposée par l 'oléiculteur

ONIOL
OFFICE NATIONAL INTERPROFESSIONNEL DES OLÉAGINEUX PROTÉAGINEUX ET CULTURES TEXTILES

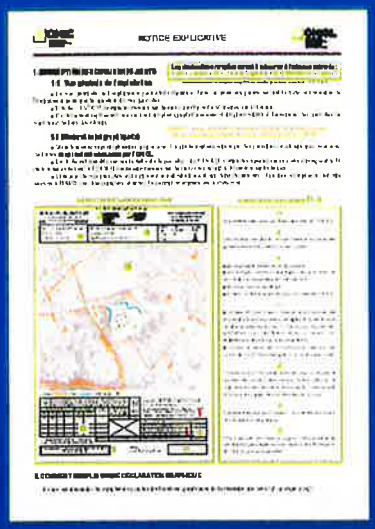
ONIC
OFFICE NATIONAL INTERPROFESSIONNEL DES CÉRÉALES

- **Si PIAO infirme:**

  Poursuite des investigations au moyen d 'une Déclaration Complémentaire d 'Information (DCI)

ONIOL
OFFICE NATIONAL INTERPROFESSIONNEL DES OLÉAGINEUX PROTÉAGINEUX ET DU LIN TEXTILE

ONIC
OFFICE NATIONAL INTERPROFESSIONNEL DES CÉRÉALES


NOTICE EXPLICATIVE

Lettre d 'accompagnement

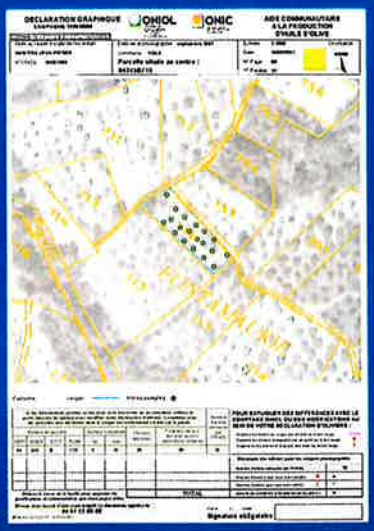

DECLARATION GRAPHIQUE

Photo-aérienne

ONIOL
OFFICE NATIONAL INTERPROFESSIONNEL DES OLÉAGINEUX PROTÉAGINEUX ET DU LIN TEXTILE

ONIC
OFFICE NATIONAL INTERPROFESSIONNEL DES CÉRÉALES

- nombre de DCI envoyé : 7 514 soit 52,64 % des DA 99/00
- nombre de DCI retourné : 6 978 soit 92,86 % des DCI envoyées
- nombre de DCI sans réponse : 536 soit 7,14 % des DCI envoyées

ONIOL
OFFICE NATIONAL INTERPROFESSIONNEL DES OLÉAGINEUX PROTÉAGINEUX ET CULTURES TEXTILES

ONIC
OFFICE NATIONAL INTERPROFESSIONNEL DES CÉRÉALES

Analyse des DCI retournées qui sont considérées comme une actualisation de la déclaration.

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Retour cohérent :

- intégration dans la base
(retour au système déclaratif)

- des vérifications terrain, par l 'ONIC, pour s 'assurer de la qualité des réponses sur un panel de dossiers (Visites Rapides)

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- DCI conformes : 6 051 soit 80,52 % des DCI conformes après réintégration
- Visites Rapides (VR) demandées :
  - dossiers : 2 704 soit 44,68 % des DCI conformes après réintégration
  - parcelles : 4 461

En cas de divergence négative, le dossier est finalisé au travers d 'un contrôle terrain réalisé par l 'ONIC.

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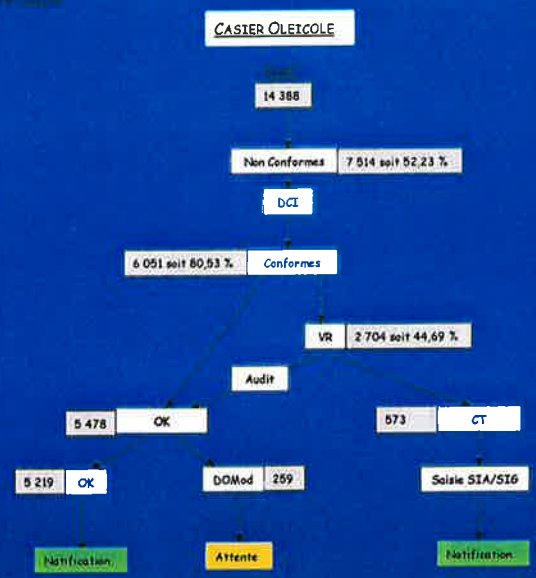

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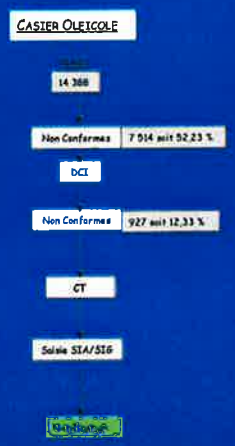

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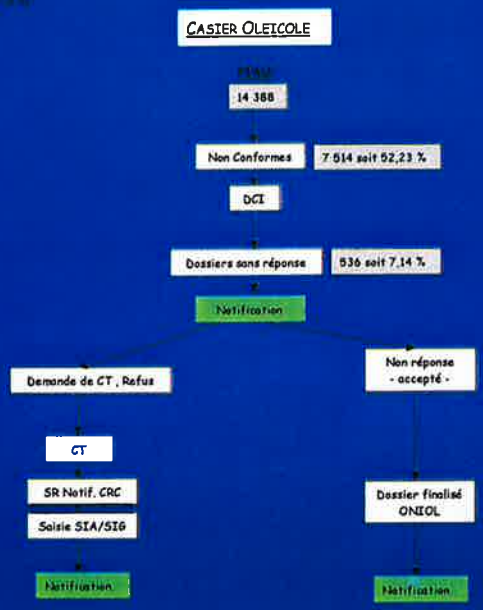
OFFICE NATIONAL INTERPROFESSIONNEL DES OLÉAGINEUX PROTÉAGINEUX ET CULTURES TEXTILES

ONIC
OFFICE NATIONAL INTERPROFESSIONNEL DES CÉRÉALES



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CALENDRIER FIN DES OPERATIONS

en vue de la validation

Le choix suivant a été arrêté

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ONIOL
OFFICE NATIONAL INTERPROFESSIONNEL DES OLÉAGINEUX PROTÉAGINEUX ET CULTURES TEXTILES

ONIC
OFFICE NATIONAL INTERPROFESSIONNEL DES CÉRÉALES

- **Constitution du SIG sur 3 campagnes (1999/2000, 2000/2001, 2001/2002)**
- **Validation au titre de la campagne 2001/2002**

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ONIOL
OFFICE NATIONAL INTERPROFESSIONNEL DES OLÉAGINEUX PROTÉAGINEUX ET DES FILIÈRES TEXTILES

ONIC
OFFICE NATIONAL INTERPROFESSIONNEL DES CÉRÉALES

Le calendrier des opérations est le suivant :

ONIOL
OFFICE NATIONAL INTERPROFESSIONNEL DES OLÉAGINEUX PROTÉAGINEUX ET DES FILIÈRES TEXTILES

ONIC
OFFICE NATIONAL INTERPROFESSIONNEL DES CÉRÉALES

☞ *Période d'initialisation*

A - Envoi des notifications aux oléiculteurs dont les dossiers présentent les caractéristiques suivantes :

ONIOL
OFFICE NATIONAL INTERPROFESSIONNEL DES OLÉAGINEUX PROTÉAGINEUX ET CULTURES TEXTILES

ONIC
OFFICE NATIONAL INTERPROFESSIONNEL DES CÉRÉALES

1er cas :

Oléiculteurs dont les dossiers sont conformes et qui n 'ont pas déposé de DO modificatives au titre des campagnes 2000/2001 et 2001/2002 (juillet 2002) : 6 057 + 3 347 soit 9 404 dossiers soit 65,36 %

ONIOL
OFFICE NATIONAL INTERPROFESSIONNEL DES OLÉAGINEUX PROTÉAGINEUX ET CULTURES TEXTILES

ONIC
OFFICE NATIONAL INTERPROFESSIONNEL DES CÉRÉALES

2ème cas:

Oléiculteurs qui n 'ont pas répondu à la DCI : 536 (juillet 2002)

ONIOL
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ONIC
OFFICE NATIONAL INTERPROFESSIONNEL DES CÉRÉALES

B - Intégration dans la base des résultats des visites terrain contradictoires :

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ONIC
OFFICE NATIONAL INTERPROFESSIONNEL DES CÉRÉALES

VR :

parcelles visitées : 4 461 soit 2 704 dossiers

Contrôles :

1 500 dossiers soit 10,42 %

(juillet à octobre 2002)

Envoi des notifications aux oléiculteurs qui n 'ont pas fait de DO modificatives.

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OFFICE NATIONAL INTERPROFESSIONNEL DES CÉRÉALES

☞ *Période de finalisation avant demande de validation*

A - Phase préparatoire

Nouvelles parcelles déclarées

2000/2001 : 4 824

2001/2002 : 1 667

ONIOL
OFFICE NATIONAL INTERPROFESSIONNEL DES OLÉAGINEUX PROTÉAGINEUX ET CULTURES TEXTILES

ONIC
OFFICE NATIONAL INTERPROFESSIONNEL DES CÉRÉALES

1 - Définition du nouveau champ d 'investigation

Nombre de planches complémentaires

2000/2001 : 2 239

2001/2002 : 1 187

(fin juillet 2002)

ONIOL
OFFICE NATIONAL INTERPROFESSIONNEL DES OLÉAGINEUX PROTÉAGINEUX ET CULTURES TEXTILES

ONIC
OFFICE NATIONAL INTERPROFESSIONNEL DES CÉRÉALES

2 - Numérisation des planches cadastrales

(juillet-septembre 2002)

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ONIC
OFFICE NATIONAL INTERPROFESSIONNEL DES CÉRÉALES

B - Phase PIAO

DO à traiter : 2400

(octobre 2002 - janvier 2003)

NB: L 'ONIC se réserve le droit de procéder à des investigations complémentaires au moyen de DCI et de VR

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OFFICE NATIONAL INTERPROFESSIONNEL DES OLÉAGINEUX PROTÉAGINEUX ET DES TEXTILES

ONIC
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☞ Finalisation terrain

Dans les cas de discordances, réalisation de contrôles terrain contradictoires

(novembre 2002 - avril 2003)

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OFFICE NATIONAL INTERPROFESSIONNEL DES OLÉAGINEUX PROTÉAGINEUX ET DES TEXTILES

ONIC
OFFICE NATIONAL INTERPROFESSIONNEL DES CÉRÉALES

En parallèle intégration des résultats dans la base et envoi des notifications aux oléiculteurs

ONIOL
OFFICE NATIONAL INTERPROFESSIONNEL DES OLÉAGINEUX PROTÉAGINEUX ET CULTURES TEXTILES

ONIC
OFFICE NATIONAL INTERPROFESSIONNEL DES CÉRÉALES

Demande de validation

MAI 2003

ISPRA 18 - 19 juin 2002

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ONIC
OFFICE NATIONAL INTERPROFESSIONNEL DES CÉRÉALES

Fin de l 'exposé

ISPRA 18 - 19 juin 2002

EUROPEAN COMMISSION
DIRECTORATE GENERAL JRC
JOINT RESEARCH CENTRE - ISPRA
Institute for Protection and Security of the Citizen
MARS Unit

Session 2 - Presentation of the Spanish project, by *Francisco Peña, MAPA, Presidente del Comité Permanente GIS-oléicola*

Summary

Francisco Peña, Presidente del Comité Permanente GIS-oléicola in the MAPA first presented the overall organization: there will be a large centralized database ('fichier oléicole informatisé') with a network connecting all Autonomous Communities 'CCAA' (which manage the crop declarations, the subsidies claims and the data of the campaign, the MAPA and the FEGA (paying agency in charge of the payment of subsidies) as well as the AAOO (data of olive oil industry and controls data). In June 2002 the volumes covered by OLI_GIS were 713,009 olive growers and 2.029 M parcels for the whole country, the main regions being Andalusia (313,009 dossiers) and Castilla la Mancha (137,240 dossiers). The administrative flow is that crop declarations are submitted to the OPR (producers associations) or directly to the CCAA for the olive growers who are not members of a professional organization. Then they are sent to CCAA which entry the data and send them to the MAPA in Madrid (FOI 'fichier oléicole informatisé'). The MAPA contracted the creation of graphic database to TRAGSATEC. The ROE data (olive register) were updated with the digitization of all cadastral parcels and photo-interpretation on 97/98 aerial photos. Then those data were cross-checked with the declaration database. The problem is that about 50% of dossiers were found as discordant (with some variation from one autonomous community to the other), partly due to errors in the crop declarations, new plantations not visible on existing aerial photos and problems with cadastre which made the identification of parcels difficult (large plan of renovation through the country). All discordant dossiers are sent to the CCAA which are responsible of administrative actions. This work of verification and consolidation (called 'proceso de verificación') is in progress. It is almost finished in Andalusia and 50% in the province of Valencia. The MAPA expects to submit validation request for several autonomous communities by the end of the year.

EUROPEAN COMMISSION
DIRECTORATE GENERAL JRC
JOINT RESEARCH CENTRE - ISPRA
Institute for Protection and Security of the Citizen
MARS Unit

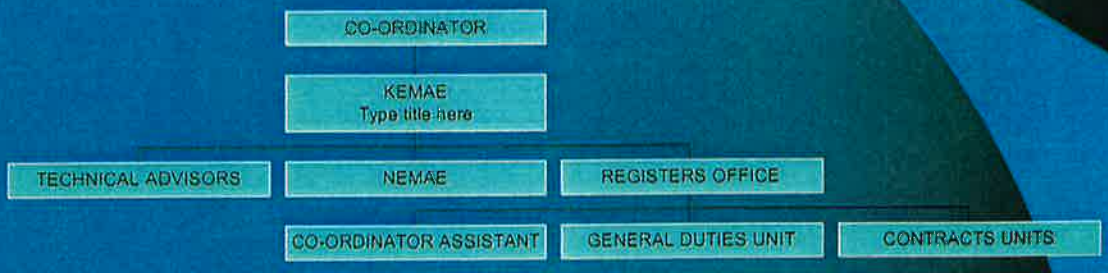
Session 2 - Presentation of the Greek project , *Xenofon Lourantos, Special Secretary of the Hellenic Ministry of Agriculture and Register's coordinator*

Allocution

MINISTRY OF AGRICULTURE
SPECIAL SECRETARY CSF III

LEOF. ATHINON 58 – 10441 ATHENS
THA:+30 010 5275126-8 FAX:+30 010 5275143

Organizational chart



Representatives of the European Commission,

Delegates of the Member States,

...

Ladies and Gentlemen,

From the very beginning, I would like to express my satisfaction to participate in this workshop for the implementation of the Olive Geographical Information System (Oli-GIS), organized by the Institute for the Protection and Security of the Citizen (ISPRI), the Joint Research Centre (JRS), and the Monitoring Agriculture with Remote Sensing Unit (MARS Unit).

Today, my presence and participation, as well as the participation of the other two from the Ministry of Agriculture and the Contractors in this two-days expert meeting, represents the importance of the Registers for Cattle, Sheep and Goats, Currant, Vineyard and Olive, and also the importance of such conferences, for the greek authorities.

It is our belief that the use of all the above Registers will contribute to the realization of the goals of agricultural policy at a

national and European level, bolster cooperation between Member States, support the implementation of Common Agricultural policy (C.A.P.), monitor the changes in the field and adjust to them. The Geographical Information System (GIS) is a very useful tool, that will support our efforts to create, conceive and harmonize European databases. After all, what is most important is that these policies will benefit the members of the farming community.

For all the above reasons, we are planning to:

1. update all the chartographical database of the Ministry of Agriculture and,
2. create Registers for Citrus and Ploughing Fields.

In this context, such expert meetings contribute to the necessary opinion exchange, know-how and experience, and also to networks of cooperation between European Community and Member States, as well as between Member States.

There is no need to us to deny that the greek authorities showed a considerable delay to the completion of the necessary procedures. However, bureaucratic mismanagement and hesitation is not the reason for that. Our country started late the procedures compared to the other states. This was mainly due to

the absence of a Cadastre, something that made our efforts much harder. To put it simply by giving an example, in order to complete the Register, not only had we to count the olive trees in the parcels, but we had to locate the parcels and to correspond them with the growers as well. Moreover, there were considerable technical problems, which are finally resolved. Let us not ignore the fact that the completion of the program faces significant difficulties and delays in the other Member States too. Now, having completed the first phase of the project, which include mainly the elaboration of orthophotographies, we are moving on to the next steps without hesitation.

The greek landscape has split up to fourteen (14) peripheries. The agreements with the Contractors have been completed to the thirteen of them (see Table 1). The law issues considering the areas of Pieria, Viotia, and Fthiotida, are now resolved. The project of the Aegean Sea is in the process of economic valuation and the remaining Contract is expected to be completed in the next few days. The problems with Panhellenic Confederation of Unions of Agricultural Cooperatives (PASEGES), concerning the areas of Evia, Fokida, and Evritania, have finally been overcome, and PASEGES has already started the project. According to its estimations 80% of the project will be delivered until November 2002. According to the timetables of the Contractors, all the projects are expected to be completed during the year, with the exception of Messinia, where the project will be accomplished in the spring of 2003.

It is not my purpose to go through the details of the projects. We have sent all the necessary data to ISPRA. In West Attica, the collection of 100% of declarations has been completed, and a 80% of them has been registered in the Database. In the periphery of Messinia we have collected 15% of the declarations, and we have located the 100% of vintage and olive parcels. Finally, in Corfu we have collected 85% of declarations and the project is going through the next stages (see Table 2).

The greek government has also adopted a new organizational scheme for the administration of the Project, appointing a political officer as the head of it, something that underlines the importance of this program to us.

Mr Kiokakis (Ministry of Agriculture) and Mr Doganis (Contractor) will inform us in detail about the work progress, some technical issues and issues of methodology, information which I am sure we all find very interesting and useful. As far as I am concern, I want to repeat the commitment of the greek government to complete the Registers for Currant, Cattle, Sheep and Goats, until August/September 2002, and to complete the Olive Register in the first term of 2003. Greece is now fully prepared to meet the challenge of November 2003.

Finally, although in the past there were considerable doubts about the ability of the greek authorities to meet the deadlines, it is my belief that in the end Greece will stay true to its obligations. Today, having all the necessary infrastructure, and overcome some technical problems, we are able to progress in full pace. The results will appear soon.

On behalf of the Minister of Agriculture and me, I would like to invite you to Greece in June 2003 for the second workshop on the implementation of the Oli-GIS, which will also coincide with the greek presidency of the European Union.

Thank you for your attention.

XENOPHON-S. LOURANTOS

SPECIAL SECRETARY, CSF III

MINISTRY OF AGRICULTURE
SPECIAL SECRETARY
CSF III

CONTRACT CHART

CONTRACT SECTION		NOMOS	CONTRACTORS	CONTRACT SERIAL NO.	DATE OF SIGNATURE	CONTRACTE XPIRE DATE	ΜΕΤΑΘΕΣΕΙΣ	Date of Expected Conclusion (Contractor)	Total no. of declarations (Olive) based on contract	Total no. of declarations (Vineyard) based on contract	Total no. of declarations based on contract	PRICE PER DECLARATION (σε €)	TOTAL AMOUNT (-FPA, €)**	TOTAL AMOUNT (+FPA, €)**
SECTION 0.1	1	Ahaia	ΕΛΛΗΝΙΚΗ ΜΕΛΕΤΩΝ, ΑΞΩΝ ΜΕΛΕΤΑΙ, J&K GPS ΑΜΕ	4745/ΜΚ/2000	04/08/2000	04/08/2001	1η 28/10/2001 2η 30/04/2002	29/09/2002	36.390	14.448	50.838	24,97	1.269.424,86	1.497.921,33
SECTION 0.2	3	Enia, Fikida, Evritania	ΠΑΣΕΓΕΣ ΕΛΑΙΟΥΡΓΙΚΗ, ΕΑΣ	4744/ΜΚ/2000	04/09/2000	04/09/2001	04/05/2002		53.310	10.265	63.575	22,28	1.416.451,00	1.671.412,18
SECTION I	15	Evros, Xanthi, Rodopi, Drama, Kavala, Serres, Thessaloniki, Chalkidiki, Kilkis, Pella, Imathia, Florina, Kozani, Kastoria, Grevena	ΠΛΑΝΗΤΙΚΗ Α.Ε., ΓΕΩΓΡΑΦΙΚΗ Α.Ε., ΕΛΛΗΝΙΚΗ ΦΩΤΟΓΡΑΜΜΕ-ΤΡΙΚΗ ΕΠΕ	4847/ΑΠ/2001	27/09/2001	27/09/2002		30/11/2002	61.638	23.887	85.525	30,81	2.635.025,25	3.109.329,80
SECTION II	7	Ioannina, Arta, Thesprotia, Preveza, Kerkira, Lefkada, Kefalonia	ΣΗΜΑ ΑΤΕΜΕ, ΧΩΡΟΜΕΤΡΙΑ ΕΕ	4848/ΑΠ/2001	05/08/2001	05/08/2002			66.148	12.569	78.717	32,13	2.529.177,21	2.984.429,11
SECTION III	3	Attica, Korinthia, Argolida	ΑΝΥΣΜΑ ΑΕ, ΟΡΙΖΩΝ ΟΕ, ΟΡΙΟ ΕΠΕ, ΤΟΠΟΔΟΜΙΚΗ ΕΕ, TERRA ΕΠΕ	4849/ΑΠ/2001	30/05/2001	30/05/2002		30/11/2002	65.954	16.335	82.289	32,28	2.656.286,92	3.134.420,93
SECTION IV	1	Messinia	ΜΕΛΕΤΗ ΑΜΕ Δ.ΚΩΤΟΥΖΑΣ - ΕΞΑΡΧΟΥ-ΝΙΚΟΛΟΠΟΥΛΟΣ-ΜΠΕΣΣΑΣΩΝ, Γ.ΑΥΓΕΡΙΚΟΣ-Π.ΚΑΘΑΡΙΟΣ	4850/ΑΠ/2001	08/08/2001	08/08/2002		30/05/2003	69.146	11.251	80.397	33,75	2.713.398,75	3.201.810,53
SECTION V	3	Lefkada, Arkadia, Zakinthos	ΕΛΛΗΝΙΚΗ ΜΕΛΕΤΩΝ, ΑΞΩΝ ΜΕΛΕΤΑΙ, J&K GPS ΑΜΕ	4851/ΑΠ/2001	19/09/2001	19/09/2002		30/09/2002	68.460	11.130	79.590	33,07	2.632.041,30	3.105.808,73
SECTION VI	1	Iraklio	ΓΕΩΑΠΕΙΚΟΝΙΣΗ ΕΠΕ, ΤΟΜΗ ΑΕ	4852/ΑΠ/2001	05/06/2001	05/06/2002			70.261	35.605	105.866	32,06	3.394.063,96	4.004.995,47
SECTION VII	3	Hania, Rethimno, Lasithi	ΓΡΑΦΕΙΟ ΔΟΞΙΑΔΗ, ΒΑΚΑΚΗΣ& ΣΥΝ., ΑΝΤΥΞ, ΓΡΑΜΜΙΚΗ, ΣΥΜΒ ΜΗΧΑΝΙΚΟΙ ΓΡΑΦ. ΜΕΛΕΤΩΝ ΕΠΕ	4853/ΑΠ/2001	27/09/2001	27/09/2002		31/12/2002	93.256	16.642	109.898	32,74	3.598.060,52	4.245.711,41
SECTION VIII*	5	Aegean Islands: Lesvos, Samos, Hios, Dodekanisa, Kiklades							72.207	14.734	86.941		0,00	0,00
SECTION XI*	3	Pieria, Fthiotida, Imathia							33.468	9.346	42.814		0,00	0,00

MINISTRY OF AGRICULTURE
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CSF III

CONTRACT SECTION		NOMOS	CONTRACTORS	CONTRACT SERIAL NO.	DATE OF SIGNATURE	CONTRACTE XPIRE DATE	ΜΕΤΑΘΕΣΕΙΣ	Date of Expected Conclusion (Contractor)	Total no. of declarations (Olive) based on contract	Total no. of declarations (Vineyard) based on contract	Total no. of declarations based on contract	PRICE PER DECLARATION (σε €)	TOTAL AMOUNT (-FPA, €)**	TOTAL AMOUNT (+FPA, €)**
SECTION XII	4	Trikala, Larissa, Kardiba, Magnisia	ΠΛΑΝΗΤΙΚΗ Α.Ε. ΓΕΩΓΡΑΦΙΚΗ Α.Ε., ΕΛΛΗΝΙΚΗ ΦΩΤΟΓΡΑΜΜΕ-ΤΡΙΚΗ ΕΠΕ	4894/ΓΚ/2001	18/12/2001	18/12/2002		31/12/2002	27.053	16.783	43.836	29,35	1.286.586,60	1.518.172,19
SECTION IX	1	Aitoloakarnania	ΓΡΑΦΕΙΟ ΔΟΞΙΑΔΗ, ΒΑΚΑΚΗΣ& ΣΥΝ., ΕΞΑΡΧΟΥ-ΝΙΚΟΛΟΠΟΥΛΟΣ-ΜΠΕΣΣΑΣΩΝ, Γ.ΑΥΓΕΡΙΚΟΣ-Π.ΚΑΘΑΡΙΟΣ	4895/ΓΚ/2001	18/12/2001	18/12/2002		31/12/2002	46.847	1.357	48.204	30,37	1.463.955,48	1.727.467,47
SECTION X	1	Ilia	ΑΝΥΣΜΑ ΑΕ, ΟΡΙΖΩΝ ΟΕ, ΟΡΙΟ ΕΠΕ, ΤΟΠΟΔΟΜΙΚΗ ΕΕ, TERRA ΕΠΕ	4893/ΓΚ/2001	18/12/2001	18/12/2002			43.989	9.013	52.982	29,35	1.555.021,70	1.834.925,81
TOTAL									808.107	203.365			27.149.495,55	32.036.404,75

*No contracts yet.
**Differences based on euro/drachmas conversion

OLIVITI GIS GREECE - WORK IN PROGRESS UNTIL MAY 2002

Section	Serial No.	Nomos	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
0.1	4745/ΜΚ/2000	Ahaia	100%	100%	100%	72%	100%	100%	95%	26%	22%	63%	69%	71%	26%				
0.2	4744/ΜΚ/2000	Evia																	
		Fokida																	
		Evritania																	
I	4847/ΑΠ/2001	Evros	100%	40%	63%		12%				84%								
		Xanthi	100%	30%	72%		25%				90%								
		Rodopi	100%	30%	67%		30%				90%								
		Drama	100%	30%	80%		30%				100%								
		Kavala	100%	40%	75%		15%				100%								
		Serres	100%	30%	72%		15%				100%								
		Thessaloniki	100%	30%	60%		20%				60%								
		Halkidiki	100%	30%	80%		40%				100%								
		Kilkis	100%	30%	75%		35%				90%								
		Pella	100%	50%	80%		40%				100%								
		Imathia	100%	30%	50%		25%				60%								
		Florina	100%	30%	95%														
		Kozani	100%	40%	80%		25%				100%								
		Kastoria	100%	30%	95%														
		Grevena	100%	30%	95%														
II	4848/ΑΠ/2001	Ioannina	100%	15%							100%								
		Arta	100%	20%	5%						100%								
		Thesprotia	100%	15%							100%								
		Preveza	100%	60%	10%						100%								
		Kerkira	100%	100%	100%	85%	85%	96%		85%	100%	85%							
		Leykada	100%	90%	95%	22%	22%	22%		22%	100%								
		Kefallonia	100%	15%							100%								
III	4849/ΑΠ/2001	Attica																	
		α.West Attica	100%	100%	100%	100%	100%	100%	5%	32%		79%							
		β. East Attica	100%	60%	60%	42%	42%	42%	2%	46%		29%	2%						
		γ. Piraeus	100%	50%	50%	12%	12%	12%				7%							
		Korinthia	100%	90%	90%	65%	74%	65%	17%	44%	100%	58%	5%	5%					
		Argolida																	
IV	4850/ΑΠ/2001	Messinia	100%	75%	80%	15%	80%	15%	75%	60%	80%	10%						10%	
V	4851/ΑΠ/2001	Lakonia	100%	20%	30%	10%	100%	100%											
		Arkadia	100%	40%	55%	64%	100%	100%											
		Zakinthos	100%	30%															

Section	Serial No.	Nomos	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
VI	4852/ΑΠ/2001	Heraklio	40%	F2	50%	10%	F3	16%	F3	40%	35%		F3						
VII	4853/ΑΠ/2001	Hania	100%	65%	75%	2%	2%		2%				1%						
		Rethimno	100%	60%	80%														
		Lasithi	100%	60%	100%	2%	2%		2%				1%						
VIII		Lesvos																	
		Samos																	
		Hios																	
		Dodekanhsa																	
		Kiklades																	
XI		Pieria																	
		Fthiotida																	
		Viotia																	
XII	4894/ΓΚ/2001	Trikala	100%	20%	45%		25%				50%								
		Larisa	100%	20%	40%		15%				55%								
		Karditsa	100%	20%	45%		15%				90%								
		Magnisia	100%	20%	45%		15%				40%								
IX	4895/ΓΚ/2001	Etoloakarnania	100%	100%	50%														
X	4893/ΓΚ/2001	Hilia																	

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Session 3: issues related to the technical work

Session 3 - Advantages and drawbacks of using cadastre for the location of olive parcels in France, by *Emmanuel de Laroche, ONIC/ONIOL*

Summary

Emmanuel de Laroche is a GIS expert working in ONIC/ONIOL. He is being involved in the implementation of IACS/LPIS, olive GIS and the control of Area Aid since a long time. E. de Laroche explained that until now (but it will change in the future) the IACS was based on alphanumerical cadastral references. In order to be consistent with IACS, it was decided to use also cadastral references for the OLI_GIS. They also wanted to keep a simple declaration system. In order to locate declared parcels, cadastral maps were scanned and olive parcels were identified within the cadastral parcels using orthophotos. Some difficulties were faced using cadastral references: updating problems (new references sometimes not known by the producer) and cadastral boundaries mismatching olive parcels boundaries, sometimes bad superimposition between cadastral maps and orthophotos (georeferencing problems). However there are some advantages to use cadastre: the producers know this referential, they just require alphanumeric declarations and cadastre is handle by a specific administration covering the whole territory.

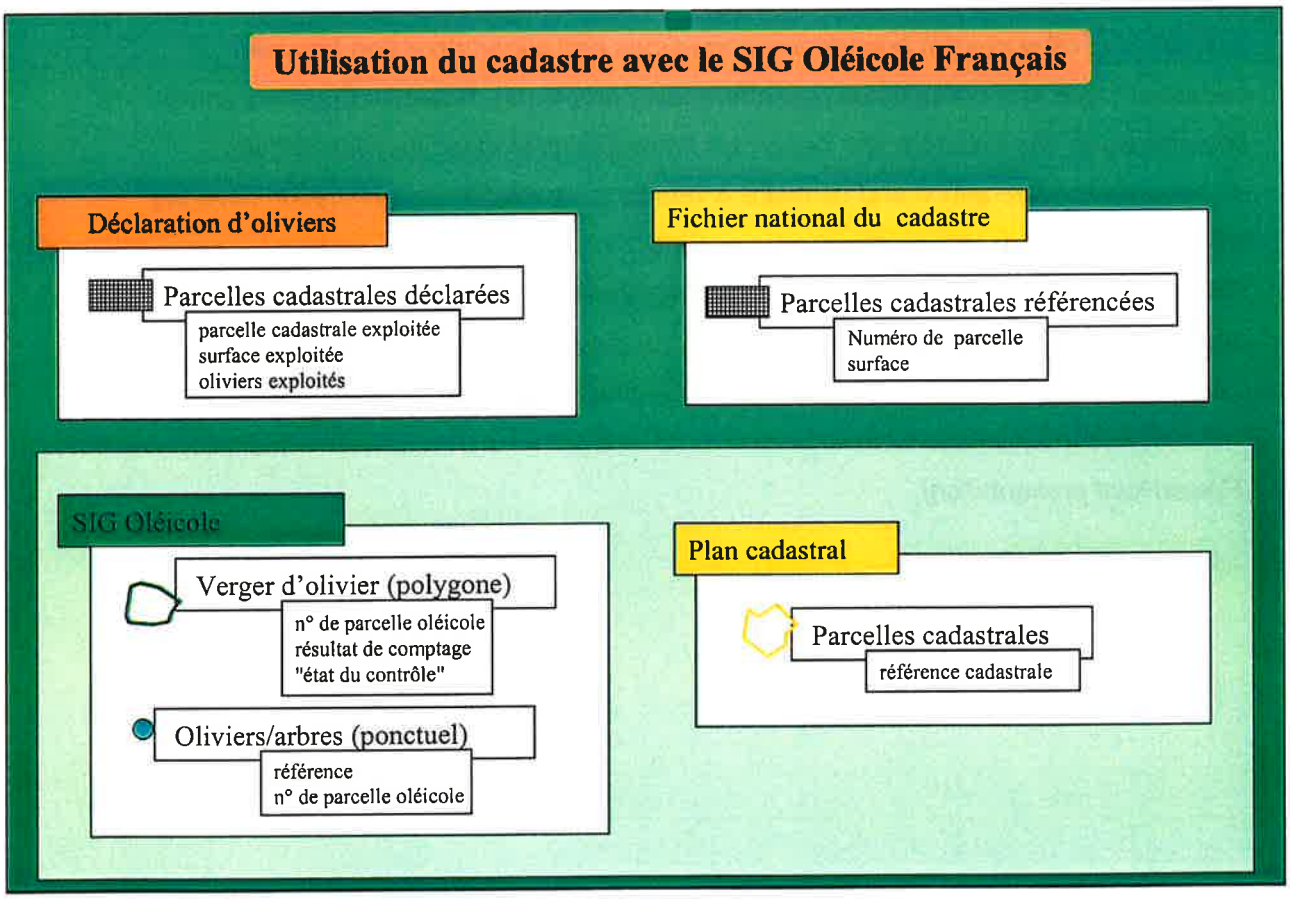
With the Regulation 1593/00, the French administration decided to drop cadastre as a reference system and to build a graphic LPIS on the basis of 'ilots'. It is therefore planned to move to 'ilots' for OLI_GIS as well in medium term.

(PowerPoint presentation)

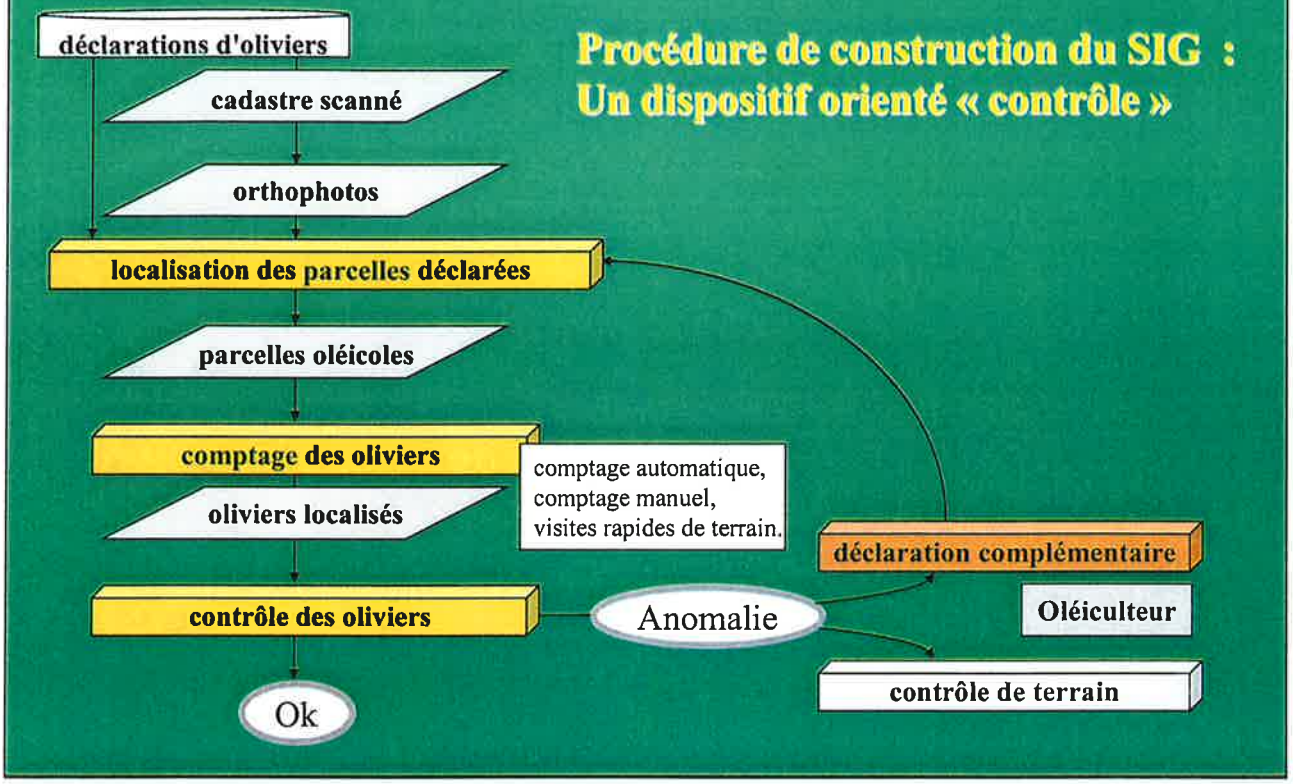
Utilisation du cadastre avec le SIG Oléicole Français

Dispositif de déclaration et le SIG Oléicole
Construction du SIG Oléicole
Le choix du cadastre
Difficultés liées à l'utilisation du cadastre
Exemples
Avantages liés au cadastre
Conclusions et perspectives

Utilisation du cadastre avec le SIG Oléicole Français



Utilisation du cadastre avec le SIG Oléicole Français



Utilisation du cadastre avec le SIG Oléicole Français

Fondement du choix relatif au cadastre

1- Conserver la compatibilité avec le SIGC (IACS)
2- Conserver un système déclaratif simple

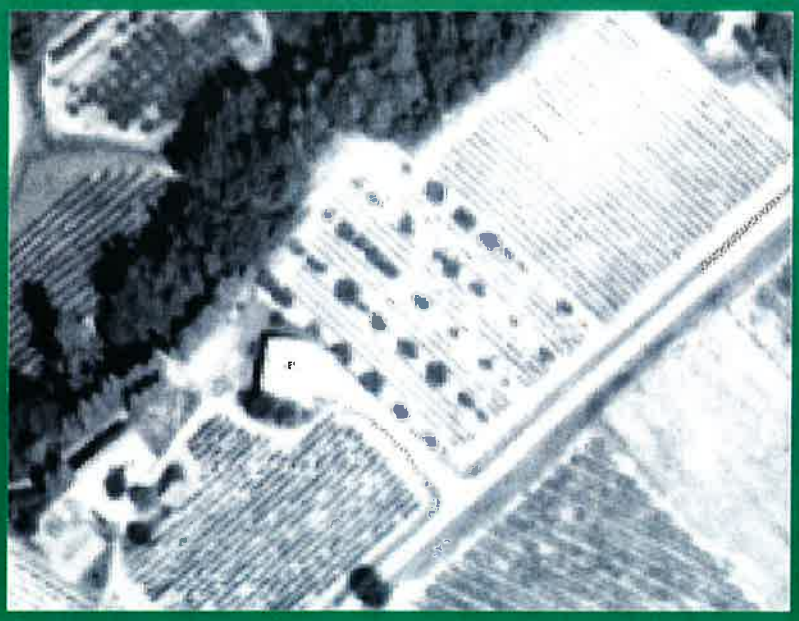
Utilisation du cadastre avec le SIG Oléicole Français

Difficultés liées à l'utilisation du cadastre

- Superposition du cadastre à l'ortho parfois imparfaite
- Le cadastre n'est pas opposable aux tiers
- Le cadastre doit aussi être mis à jour (délais)
- Les oléiculteurs connaissent parfois les anciennes référence
- Certaines parcelles peuvent manquer sur le plan (rarement)
- Le découpage « cadastral » est différent du « cultural »
- Vergers « à cheval »sur plusieurs parcelles cadastrales
- Parcelles cadastrales exploitées en partie

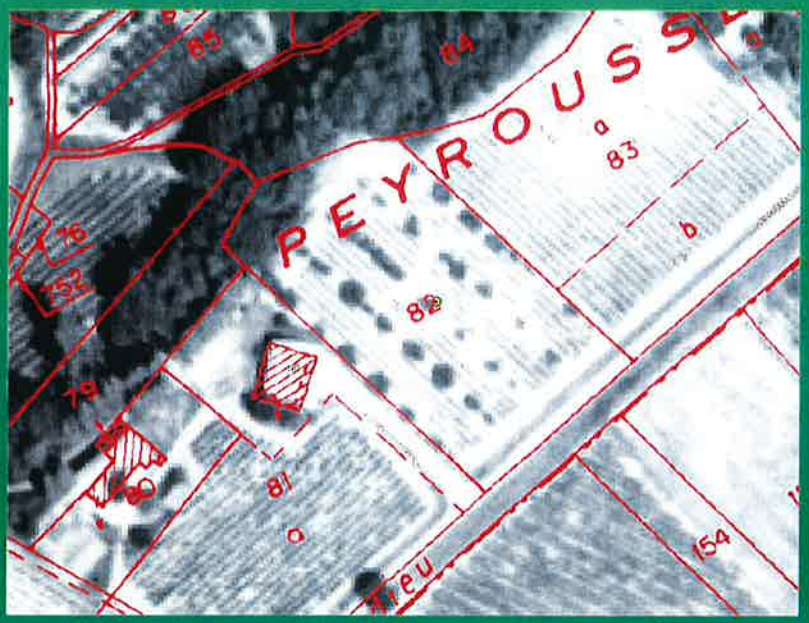
Utilisation du cadastre avec le SIG Oléicole Français

Exemples



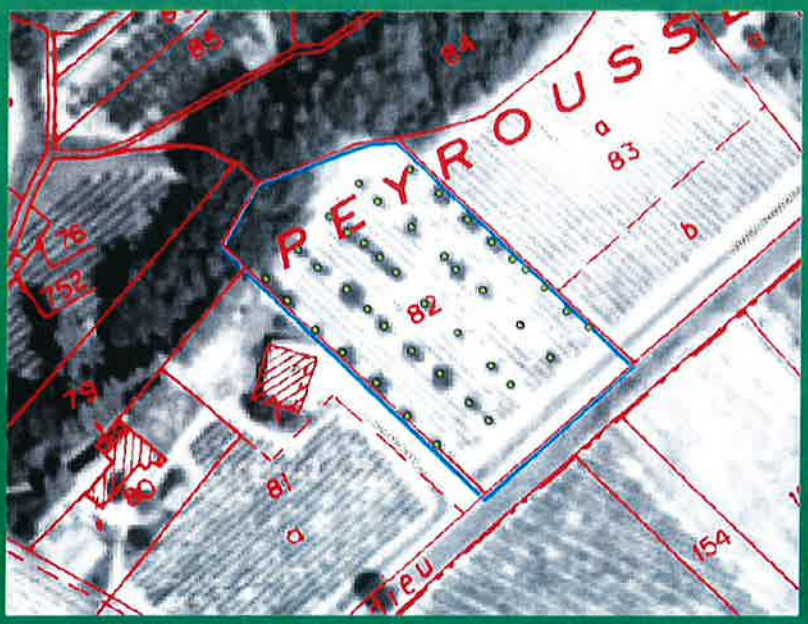
Utilisation du cadastre avec le SIG Oléicole Français

Exemples



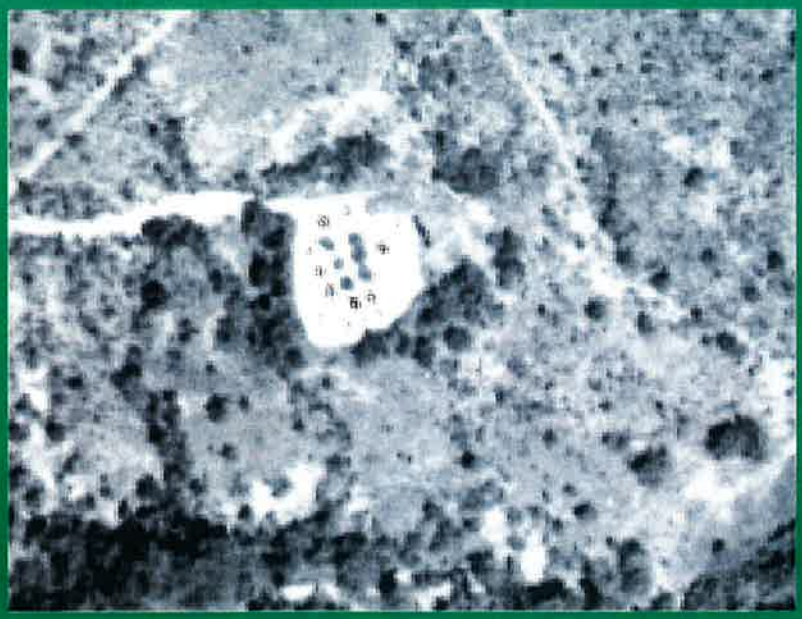
Utilisation du cadastre avec le SIG Oléicole Français

Exemples



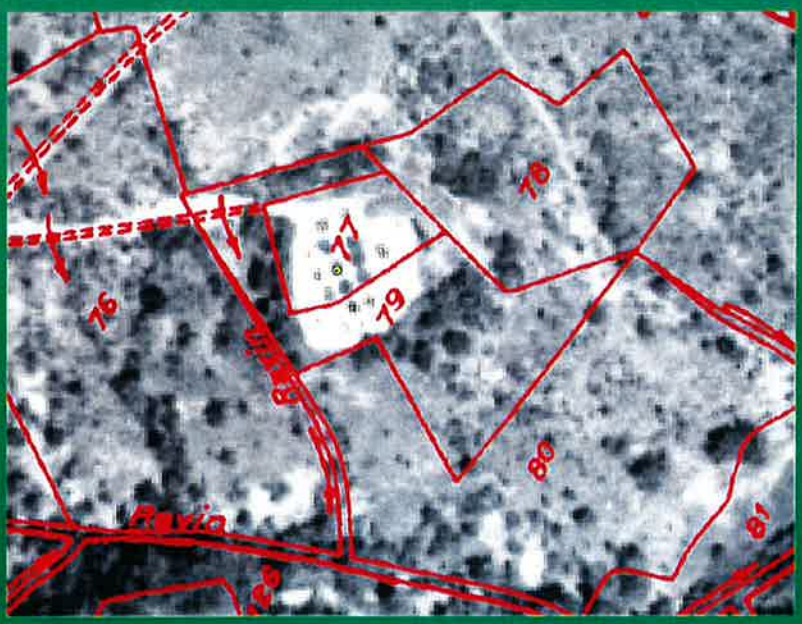
Utilisation du cadastre avec le SIG Oléicole Français

Exemples



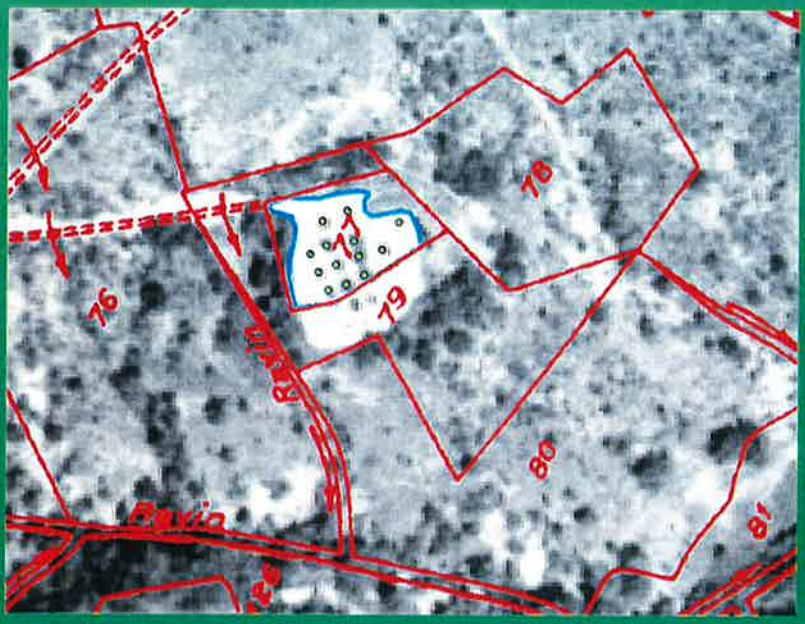
Utilisation du cadastre avec le SIG Oléicole Français

Exemples



Utilisation du cadastre avec le SIG Oléicole Français

Exemples



Utilisation du cadastre avec le SIG Oléicole Français

Avantages liés au cadastre

- Il s'agit d'un référentiel connu des agriculteurs
- La partition du territoire est assurée par un service spécialisé
- Une déclaration alphanumérique suffit aux déclarants

Utilisation du cadastre avec le SIG Oléicole Français

Conclusion

Si le cadastre existait sous forme numérique, mis à jour rapidement et mis à disposition de l'ONIOL
…mais ce n'est pas le cas

Il est difficile de suivre deux référentiels …

En définitive, le lien avec le SIGC a guidé le choix de l'utilisation du cadastre

Utilisation du cadastre avec le SIG Oléicole Français

Perspectives

Le règlement 1593/2000 et ses conséquences en France

- **Plus d'utilisation du cadastre**
- **Une déclaration par îlot**
- **Une déclaration 100% graphique**

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Session 3 - Technical limits of identification of olive trees on orthophotos in some French areas, by *Didier Reboux, SCOT*

Summary

Didier Reboux is Technical Manager in SCOT, the French contractor in charge of OLI_GIS creation. He first presented the decision rules applied during the photo-interpretation stage stating that when the olive trees could not be identified, additional information were systematically requested. The problem is that the ideal criteria for olive trees identification (specific crown with a clear center and regular plantation, olive region) do not apply very well to the French olive groves. In particular problems of discrimination between olive groves and garrigue or forest, or between olive trees and orchards (main confusion with almond trees, green oaks, cherry trees…) were faced in many cases. The identification of young plantation is also difficult. Olive trees counting was also problematic in case of joint crown, shadows and badly maintained parcels.
M. Reboux also presented some statistics on the CAPI: of the 15,820 dossiers and 41,479 which were photo-interpreted for OLI_GIS, 1,376,373 olive trees could be counted by CAPI, i.e. about 50% of parcels. When CAPI was not possible the number of OT assigned to the parcel was 0 and in case of discordance a notification was sent to the farmer (DCI). Of the total of 7,514 notifications, 4,898 had CAPI corrected by the producer. Several factors may improve the accuracy of CAPI: better resolution (future use of IGN 50 cm orthophotos?), optimization of acquisition date (later than september but view sun angle should be >30°), IR elmusion for mixed orchards.

(PowerPoint presentation)

SCOT

OLISIG Project

Technical limits of identification of olive-trees in France

1 - Rules of CAPI (Computer Aided Photo-Interpretation)

2 - Main difficulties

3 - Statistics

4 - Conclusion

OLISIG in France
Technical limits of identification of olive trees

SCOT

1 - Rules of CAPI

Available orthophotos:

- black and white
- resolution: 1 m
- acquisition in September 1997

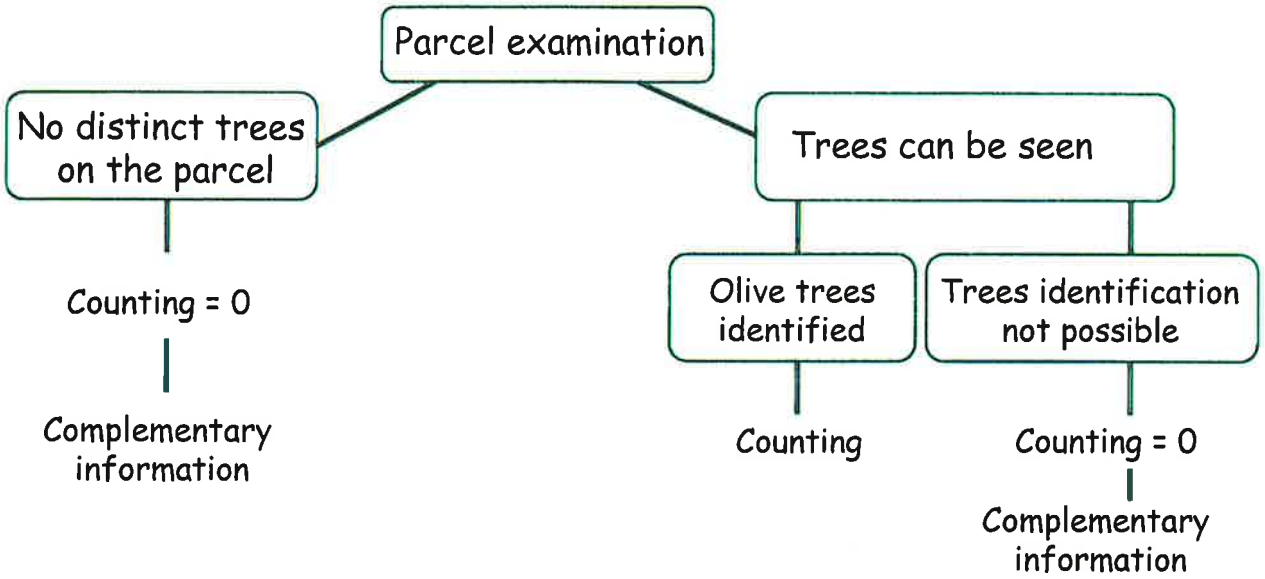
Objectives of CAPI

- inside declared parcels
- identifying, locating and counting olive trees

SCOT

1 - Rules of CAPI

Decision rules for CAPI



OLISIG in France
Technical limits of identification of olive trees

SCOT

1 - Rules of CAPI

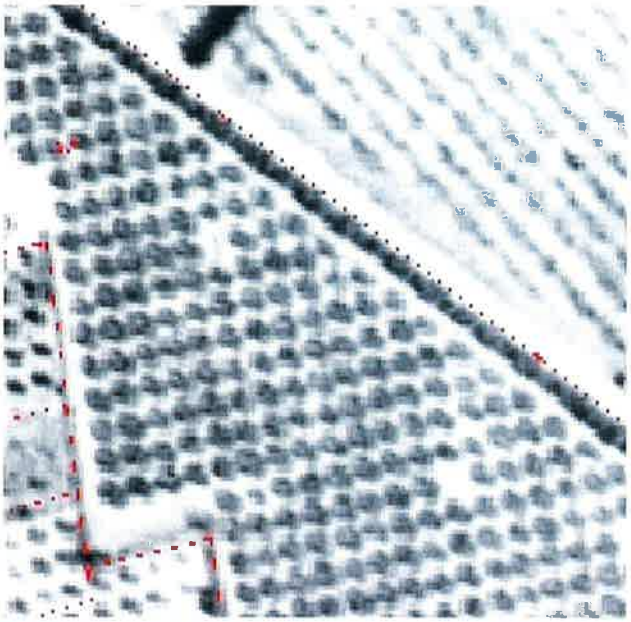
Criteria for olive trees identification

- Specific crown, with clear centre (1956 frost)
- Regular repartition of trees
- Local context

SCOT

1 - Rules of CAPI

Criteria for olive trees identification



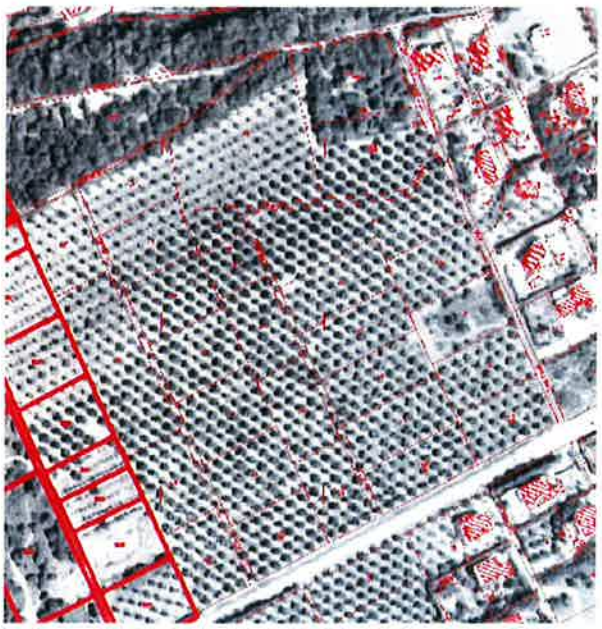
Specific crown: the centre is clearer (1956 frost)

OLISIG in France
Technical limits of identification of olive trees

SCOT

1 - Rules of CAPI

Criteria for olive trees identification



Regular repartition of trees

SCOT

1 - Rules of CAPI

Criteria for olive trees identification

Local context
Olive trees area

OLISIG in France
Technical limits of identification of olive trees

SCOT

2 - Difficulties

Main difficulties for CAPI on declared parcels

- Trees distinction
- Olive trees identification
- Counting

SCOT

2 - Difficulties

In trees distinction

- Garrigue

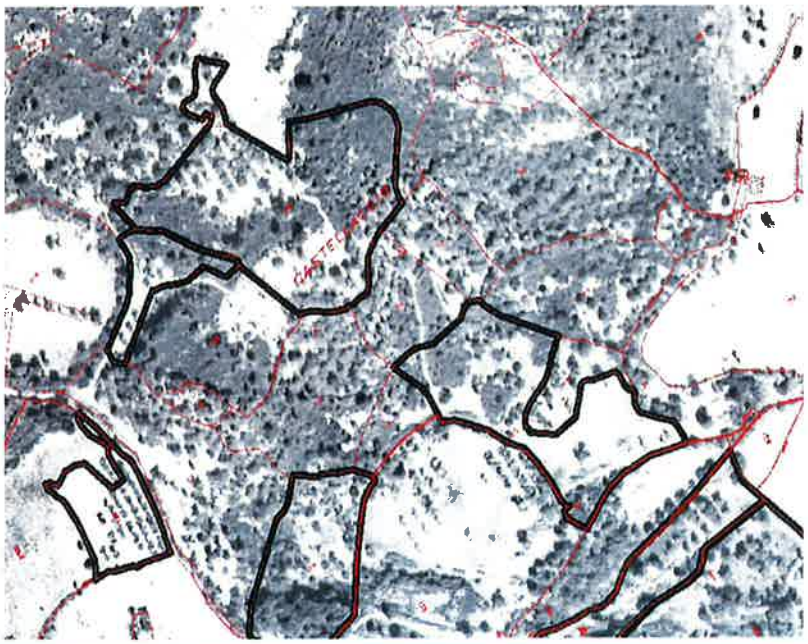
- Forest

OLISIG in France
Technical limits of identification of olive trees

SCOT

2 - Difficulties

In trees distinction



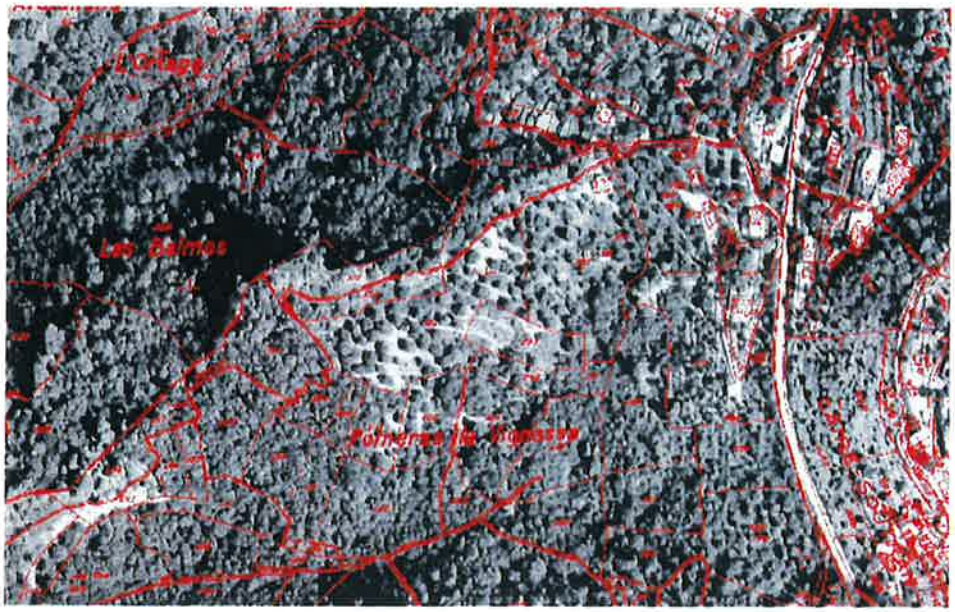
In Corsica:
the Garrigue

OLI-GIS Experts Meeting - ISPRA - 18-19 June 2002

SCOT

2 - Difficulties

In trees distinction



Forest

OLISIG in France
Technical limits of identification of olive trees

SCOT

2 - Difficulties

Trees identification

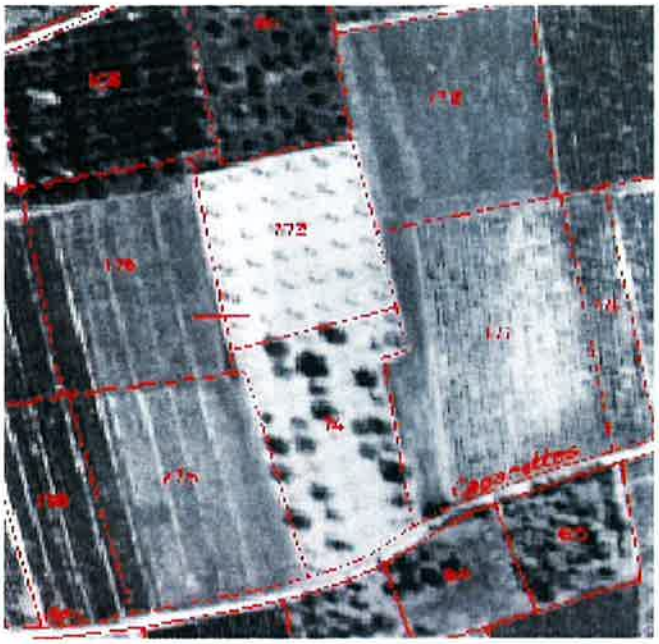
- Mixed orchards
- Young plantations

OLISIG in France

Technical limits of identification of olive trees

SCOT

2 - Difficulties — Trees identification



Mixed orchards

Olive trees are clearer

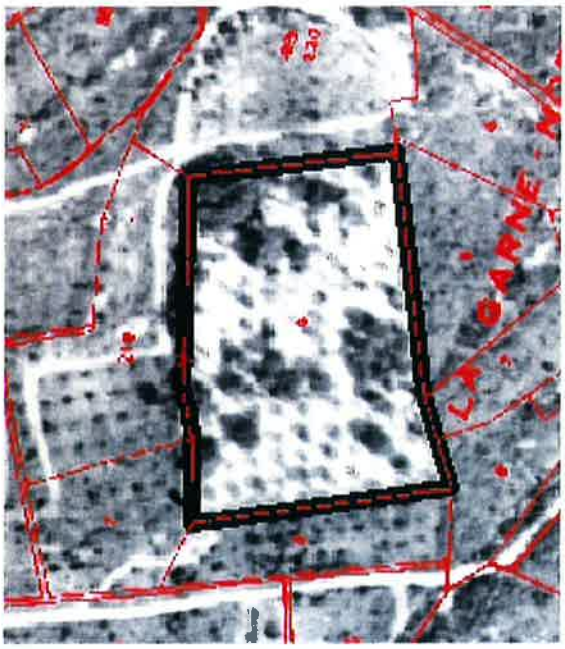
➔ CAPI possible

OLISIG in France

Technical limits of identification of olive trees

SCOT

2 - Difficulties — Trees identification



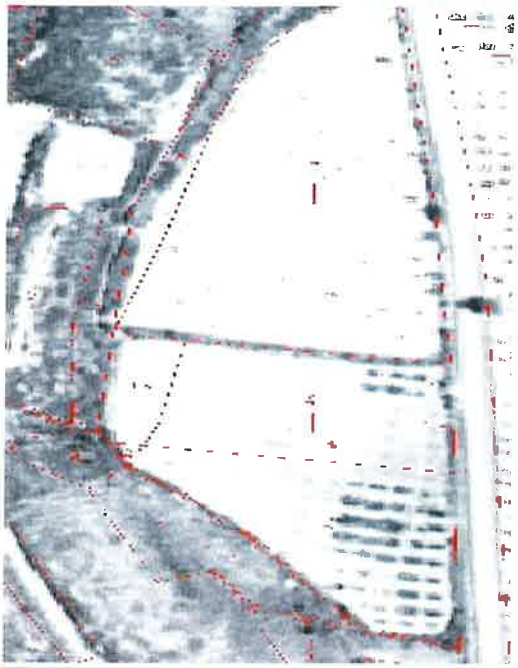
Mixed orchards: olive trees are clear, other trees in dark, but no clear distinction between trees

➔ CAPI difficult

SCOT

2 - Difficulties

Trees identification



Young plantations

Probably olive trees but possible confusion with uprooted trees

➔ CAPI impossible

OLISIG in France
Technical limits of identification of olive trees

SCOT

2 - Difficulties

Counting

- Badly maintained parcels
- Jointed crown
- Shadows (hedges, walls)
- Mixed cases

OLISIG in France
Technical limits of identification of olive trees

SCOT

2 - Difficulties — Counting

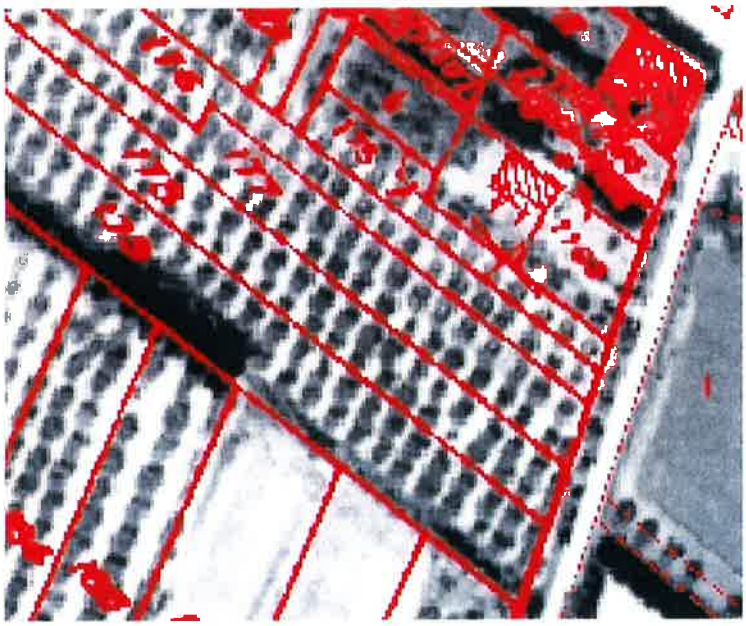
Badly maintained parcels

➔ Difficulties in counting without errors

OLISIG in France
Technical limits of identification of olive trees

SCOT

2 - Difficulties — Counting



Jointed crowns

➔ Counting difficult

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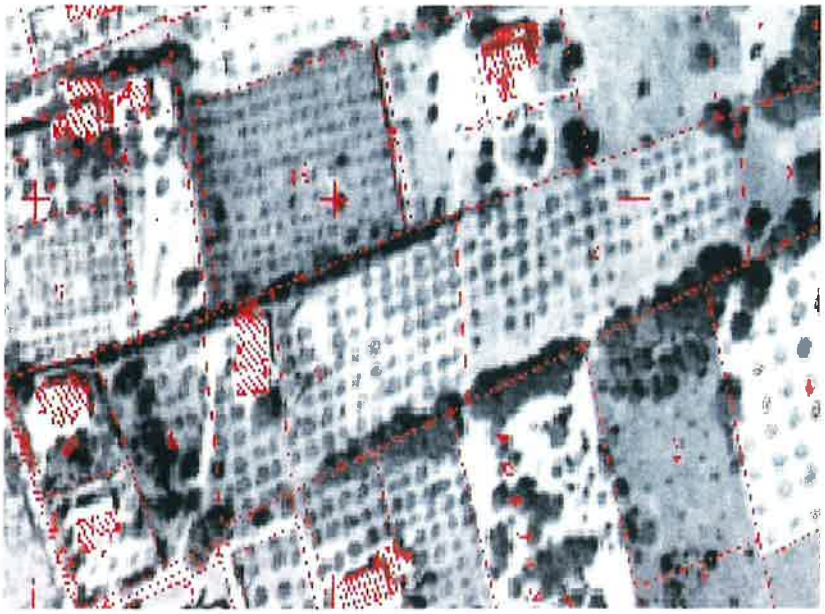
OLISIG in France
Technical limits of identification of olive trees

SCOT

2 - Difficulties — Counting



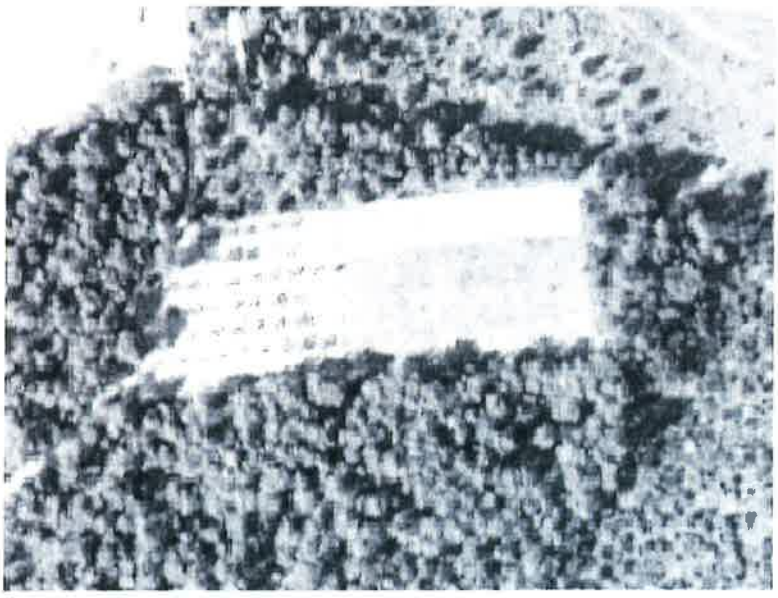
Hedge shadow disturbs counting

➡ Exact counting difficult

OLISIG in France
Technical limits of identification of olive trees

SCOT

2 - Difficulties — Counting



Parcels in forested areas

On the left, olive trees are partly hidden by trees

➡ Difficulties in exact counting

SCOT

3 - Statistics

15 820 photo-interpreted dossiers (41 479 parcels)

1 376 373 olive trees counted by CAPI

7 514 notifications (CAPI impossible or discordance)

Results of notification

2 616 dossiers with CAPI validated by producer

4 898 dossiers with corrected CAPI

3 435 dossiers non-discordant with tolerance,
1 463 dossiers remaining discordant

OLISIG in France
Technical limits of identification of olive trees

SCOT

4 - Conclusion Tentative analysis of improvement factors

CAPI difficulties		Improvement factors		
		Resolution < 1 m	Date of acquisition	IR emulsion
Forest/garrigue	(trees distinction)	=	+	=
Mixed orchards	(trees identification)	=	+	+
Young plantations	(identification & counting)	=	=	=
Badly maintained parcels	(counting)	+	+	=
Jointed crowns	(counting)	+	=	=
Shadows	(counting)	+	+	=
Complex cases	(counting)	+	+	=

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Session 3 - Technical limits of identification of olive trees in Spain, by *D. Fernando Ruiz, TRAGSATEC*

Fernando Ruiz-Laguna is the technical manager in charge of OLI_GIS project in Tragsatec. Compared to France the identification of olive trees varied very much from one Spanish province to the other. For example situation in the North is very similar to France, but in Andalusia the olive parcels are very regular and olive trees are quite easy to identify. F. Ruiz stressed that they started from the existing ROE (olive register). If any problem was identified at CAPI level (new plantation, species confusion, any identification problem), a rapid field survey was systematically undertaken by Tragsatec. They assigned technical code from 1 to 4 corresponding to increasing doubtful CAPI. Of the 2.252 M parcels photo-interpreted by Tragsatec the majority was classified with no technical problem: ***88% got code 1 (good)****, 9% code 2, 1% code 3 and 2% code 4. The main problems encountered were:*

- *Confusion with mixed fruit trees: 12% on average, but very variable*
    - *54% for Baleares*
    - *38% Castilla y Leon*
    - *335 Pais Vasco*
    - *31% Catalunya*
    - *6% only for Andalusia*
    - *specific problems of confusion with almond trees in Aragón*
- *new plantation: 15% of parcels on average. Problem of young olive trees among the old trees.*

In total ***27% of parcels were field surveyed*** *of which 82% had number of olive trees modified according to the field visit.*

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Session 3 - Technical limits of identification of olive trees in Portugal, by Fernando Prioste, COBA S.A.

Summary

M. Fernando Prioste works for COBA, one the contractor of INGA for OLI_GIS project. His company started to work in 1994-97 on the vineyard register of DOURO with aerial photos at 1:8,000 scale. For Olive GIS they work on the Beiras region. This region is very diverse: Beira Littoral is quite similar to South of France or North Spain, with small parcels, irregular plantations, mixed orchards and sometimes olive trees on parcel borders. Beira Interior is more similar to Andalusia with large parcels, regular plantations; there olive trees are sometimes mixed with green oaks but discrimination is quite easy (larger crown than olive trees). In Portugal there is also specific problem to deal with commonage olive parcels (called 'MACRO-PARCELS') where the boundaries between producers cannot be found.

In spite of tests done with 1.8,000 and 1:15,000 scale images the proportion of photo-interpretation errors remained high (30%). Therefore the rate of field survey was quite high: 22.85 for Beira Littoral, 23.3% for Beira Interiore, which required a lot of material and human resources (100 field teams, 5 regional offices).

OLI-SIG Expert Meeting

1st Workshop on the Implementation of Olive GIS in the Member States

Joint Research Centre, Ispra – Italy

18-19 June 2002

COBA

OLI-GIS Implementation in Portugal

by

Prioste, Fernando

COBA, Engineering and Environmental Consultants
Lisbon, PORTUGAL

THE CONTRACTOR

WHO WE ARE

COBA, a consulting engineers company established in 1962, is provided with permanent multidisciplinary teams specialized in the various sectors of activity:

- Hydraulic developments;
- Electrical power generation and transmission;
- Water supply; wastewater and storm water systems; Agricultural and rural development;
- Transportation Infrastructures;
- Environmental Quality;
- Geotechnical structures; safety control and rehabilitation of works; and
- Cartography and Geographical Information Systems

COBA

OUR GIS EXPERIENCE

1st Phase of the E.U. Vineyard Register (1994/1997)

The Douro Valley Project

Municipalities	*25*
Administrative Area	*300 000 ha*
Vineyard Area	*52 500 ha*

PROJECT PHASES

- A photogrammetric flight at 1:8,000 scale
- Production of 2800 digital orthophotomaps with a 20 cm geometric resolution
- Field survey to gather agricultural data of the vineyards, including the physical aspects of parcels and the agronomic aspects of grapevines
- Digitizing all the vineyard parcels and land parcels and loading of databases
- Production of Orthophotomap layouts

COBA

OUR GIS EXPERIENCE

2nd Phase of the E.U. Vineyard Register (1999/2000)

COVERED AREAS

MINHO	900 000 ha
TRÁS-OS-MONTES	1 208 000 ha
RIBATEJO	716 000 ha
ESTREMADURA	477 000 ha
TERRAS DO SADO	539 000 ha

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E.U. OLI-GIS

BEIRAS REGION – PORTUGAL

The Region: Beiras

Sub-region 1 – Beira Litoral

Sub-region 2 – Beira Interior

Total Covered Area	
Municipalities	*78*
Administrative Area	*2 370 000 ha*
Number of olive parcels	*240 000 unit.*
Number of olive trees	*8 507 928 unit.*

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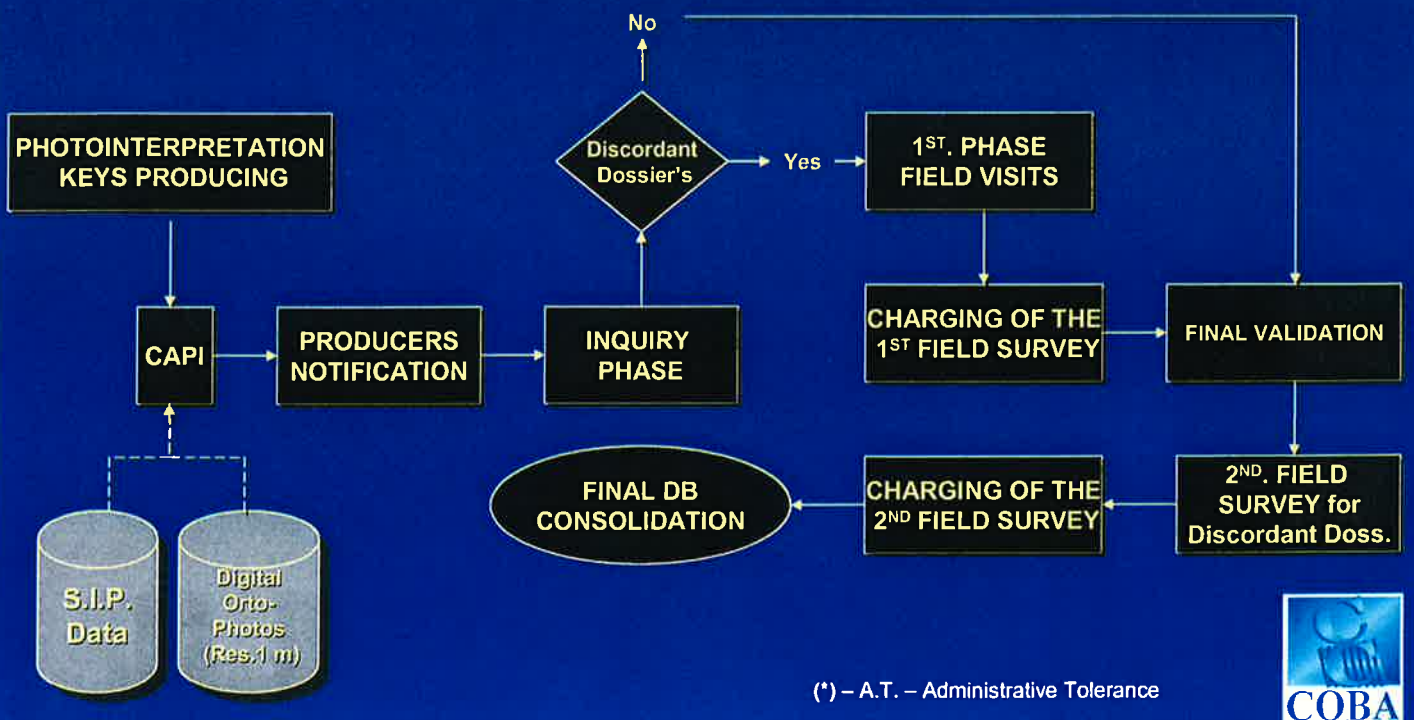
E.U. OLI-GIS

BEIRAS REGION – PORTUGAL

OLI – GIS PROJECT FLOWCHART



(*) – A.T. – Administrative Tolerance

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BEIRAS REGION – PORTUGAL

Main Characteristics

- *Small parcels with a great crop variety*
- *Irregular plantation gaps*
- *Olive trees consociated with other trees*
- *Marginal olive growing areas*

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E.U. OLI-GIS

BEIRAS REGION – PORTUGAL

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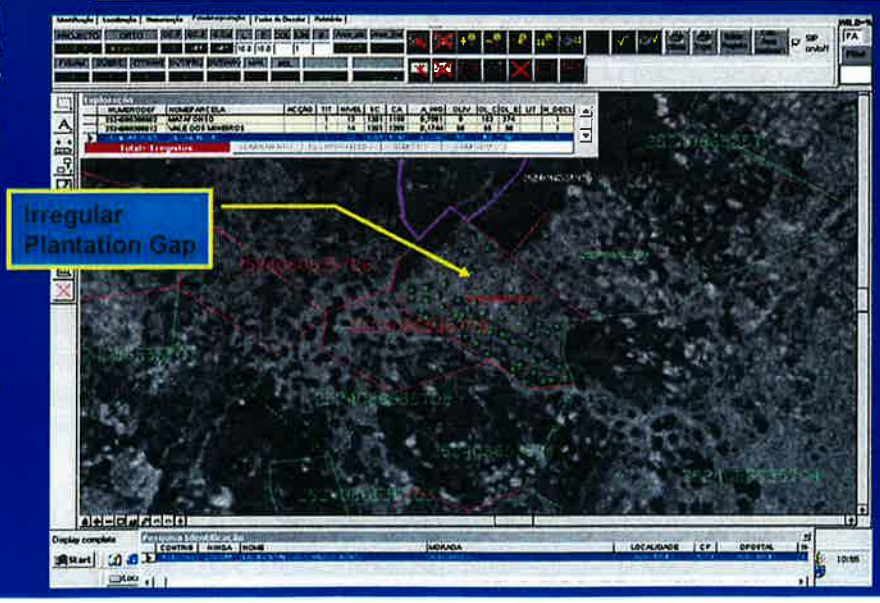

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BEIRAS REGION – PORTUGAL

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E.U. OLI-GIS

BEIRAS REGION – PORTUGAL

Main Characteristics

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- *Irregular plantation gaps*
- *Olive trees consociated with other trees*
- *Marginal olive growing areas*

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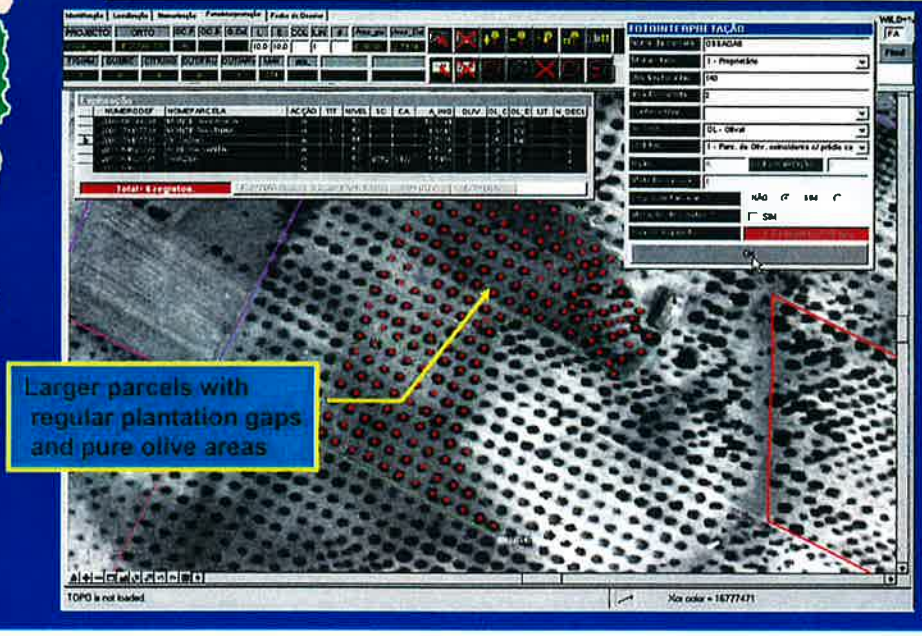
E.U. OLI-GIS

BEIRAS REGION – PORTUGAL

Main Characteristics

- *Larger parcels without or with small crop variety*
- *Regular and Irregular plantation gaps in pure olive areas*
- *Consociation with wood trees*



COBA

E.U. OLI-GIS

BEIRAS REGION – PORTUGAL

Main Characteristics

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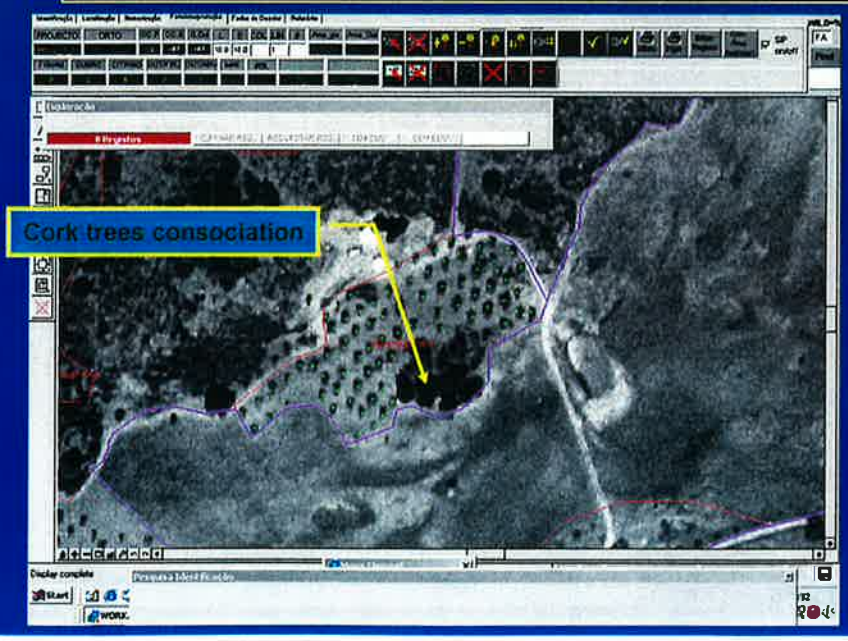

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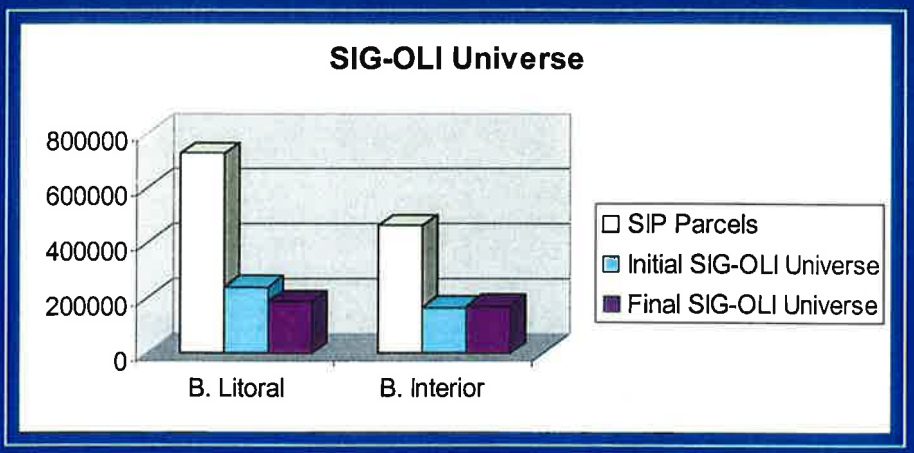
BEIRAS REGION – PORTUGAL



SIG-OLI Universe

	BL	BI
•SIP(*) Parcels	724 972	461 984
•Initial SIG-OLI Universe	240 726	164 935
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(*) - SIP – National Parcel Identification System

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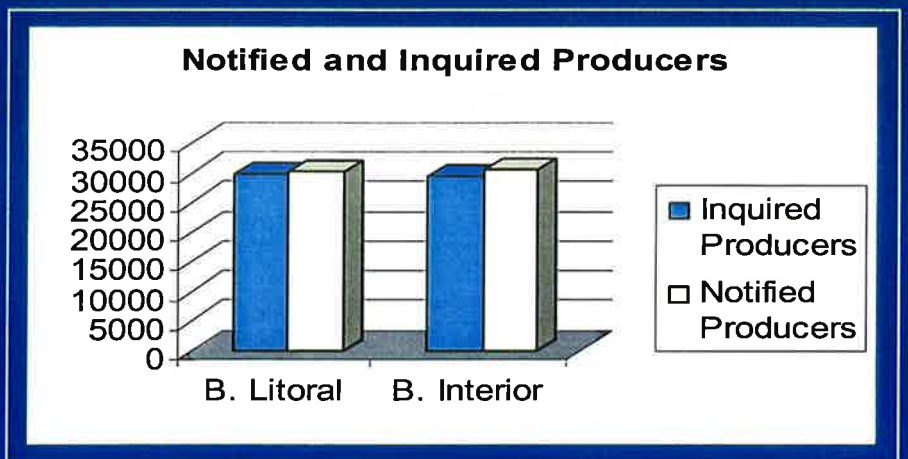

Producers

	BL	BI
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•Number of Inquired Producers	- 29 808	29 511

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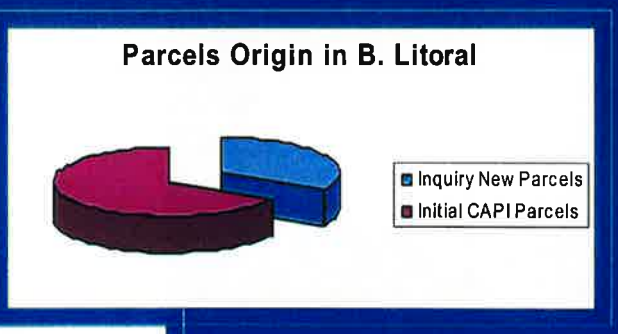
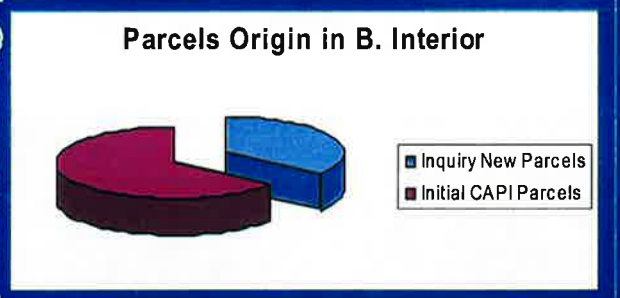
BEIRAS REGION – PORTUGAL





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BEIRAS REGION – PORTUGAL

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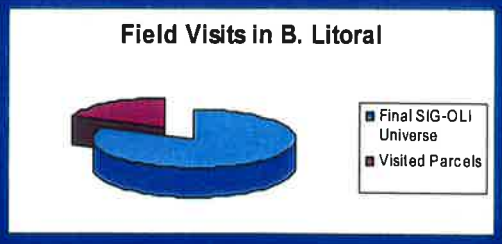

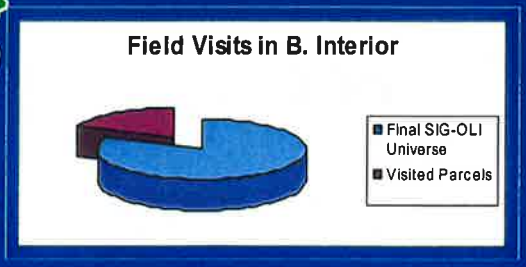

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- ✓*Great number of field visits to done*
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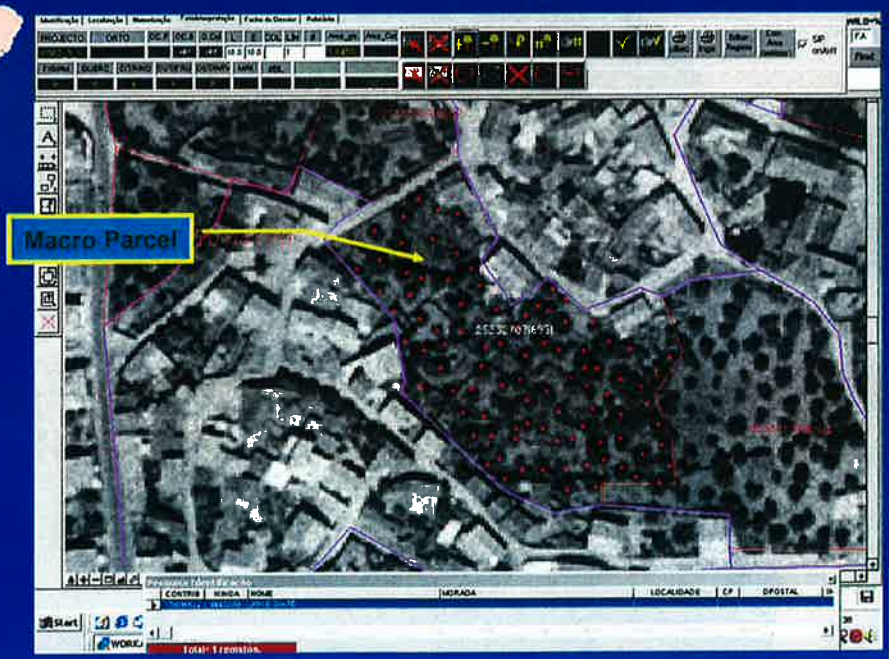

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BEIRAS REGION – PORTUGAL

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Data Supplier (Consortium):

OLITEC CONSÓRCIO
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1649-034 LISBOA — *Fax: 351-1-7518600*
PORTUGAL — *E-mail:inga@min-agricultura.pt*

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OLI-SIG Expert Meeting

1st Workshop on the Implementation of Olive GIS in the Member States

Joint Research Centre, Ispra – Italy

18-19 June 2002

COBA

OLI-GIS Implementation in Portugal

by
Prioste, Fernando

COBA, Engineering and Environmental Consultants
Lisbon, PORTUGAL

THE CONTRACTOR

WHO WE ARE

COBA, a consulting engineers company established in 1962, is provided with permanent multidisciplinary teams specialized in the various sectors of activity:

- Hydraulic developments;
- Electrical power generation and transmission;
- Water supply; wastewater and storm water systems; Agricultural and rural development;
- Transportation Infrastructures;
- Environmental Quality;
- Geotechnical structures; safety control and rehabilitation of works; and
- Cartography and Geographical Information Systems

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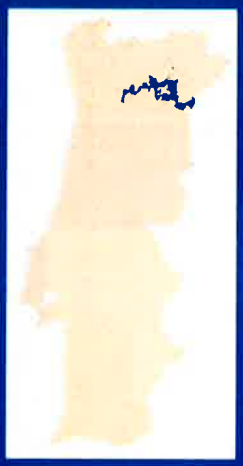
OUR GIS EXPERIENCE

1st Phase of the E.U. Vineyard Register (1994/1997)

The Douro Valley Project



PROJECT PHASES

- A photogrammetric flight at 1:8,000 scale
- Production of 2800 digital orthophotomaps with a 20 cm geometric resolution
- Field survey to gather agricultural data of the vineyards, including the physical aspects of parcels and the agronomic aspects of grapevines
- Digitizing all the vineyard parcels and land parcels and loading of databases
- Production of Orthophotomap layouts

Municipalities	*25*
Administrative Area	*300 000 ha*
Vineyard Area	*52 500 ha*

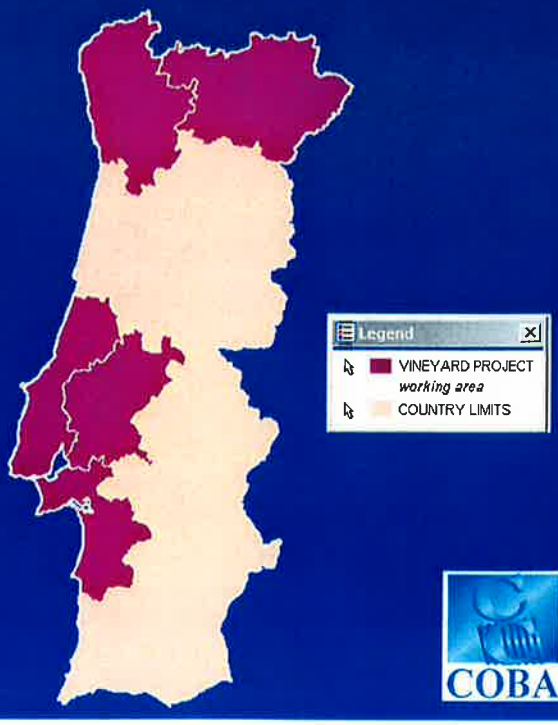
COBA

OUR GIS EXPERIENCE

2nd Phase of the E.U. Vineyard Register (1999/2000)

COVERED AREAS

MINHO	900 000 ha
TRÁS-OS-MONTES	1 208 000 ha
RIBATEJO	716 000 ha
ESTREMADURA	477 000 ha
TERRAS DO SADO	539 000 ha



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BEIRAS REGION – PORTUGAL

The Region: Beiras

Sub-region 1 – Beira Litoral

Sub-region 2 – Beira Interior

Total Covered Area	
Municipalities	*78*
Administrative Area	*2 370 000 ha*
Number of olive parcels	*240 000 unit.*
Number of olive trees	*8 507 928 unit.*

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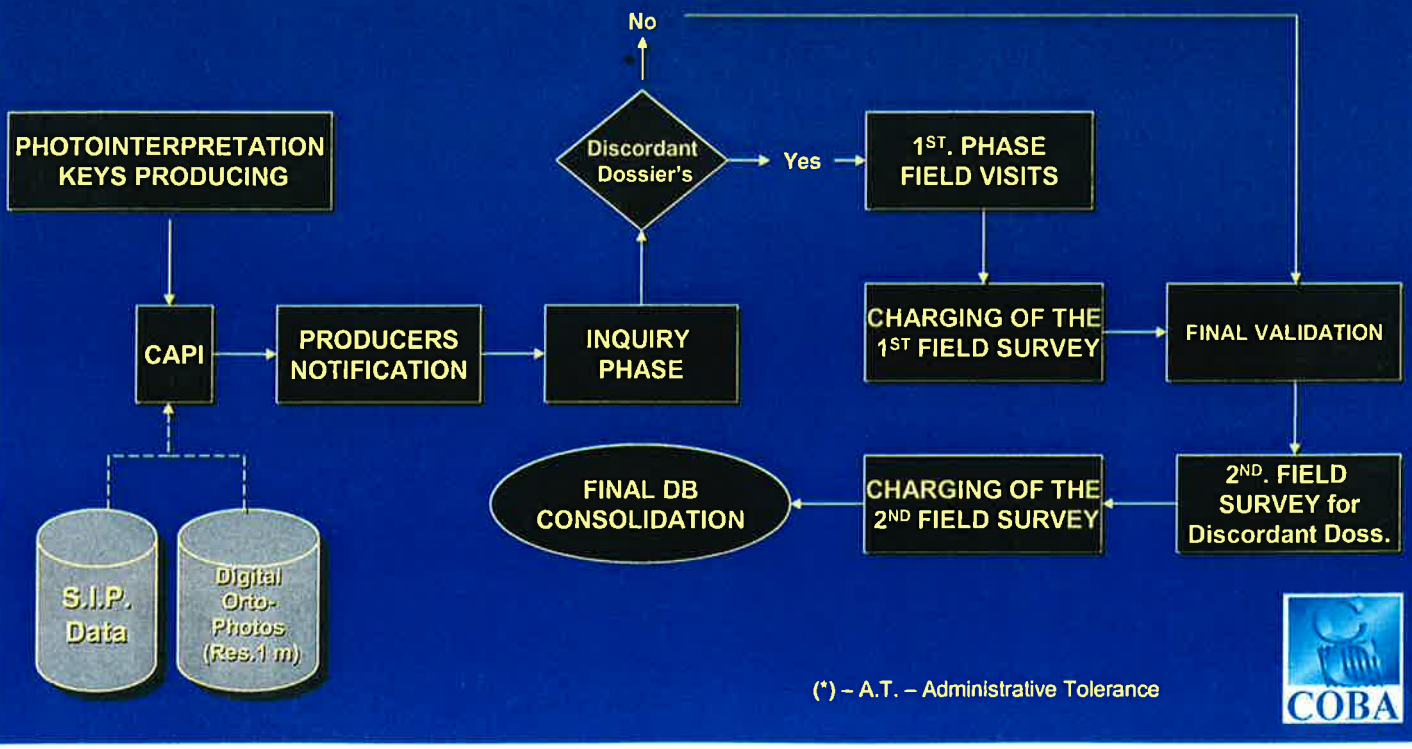
BEIRAS REGION – PORTUGAL

OLI – GIS PROJECT FLOWCHART



(*) – A.T. – Administrative Tolerance

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BEIRAS REGION – PORTUGAL

Main Characteristics

- *Small parcels with a great crop variety*
- *Irregular plantation gaps*
- *Olive trees consociated with other trees*
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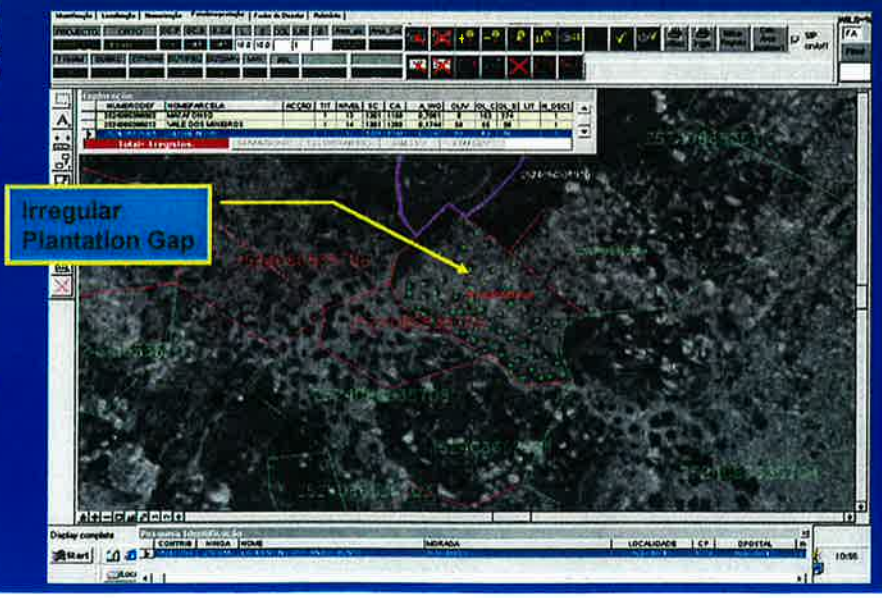

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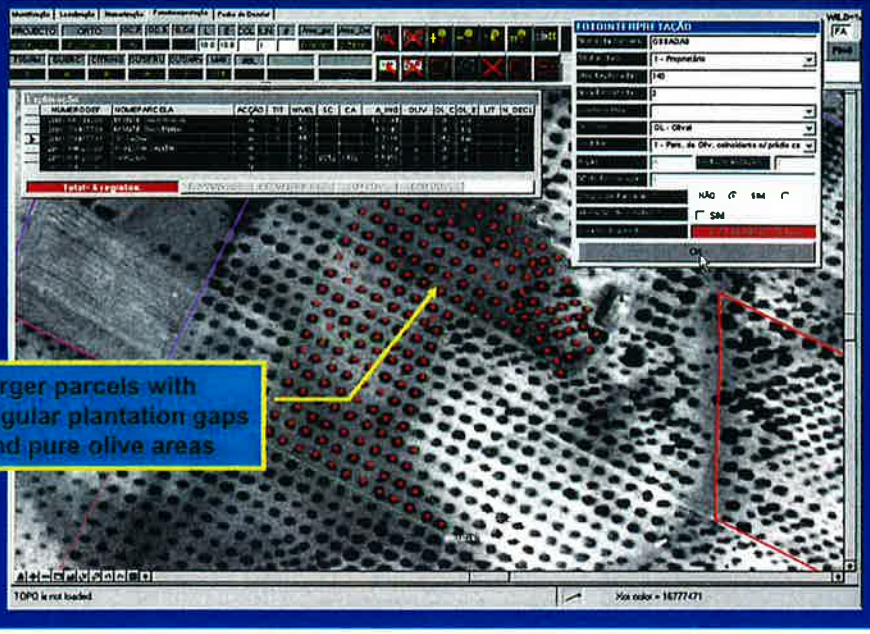

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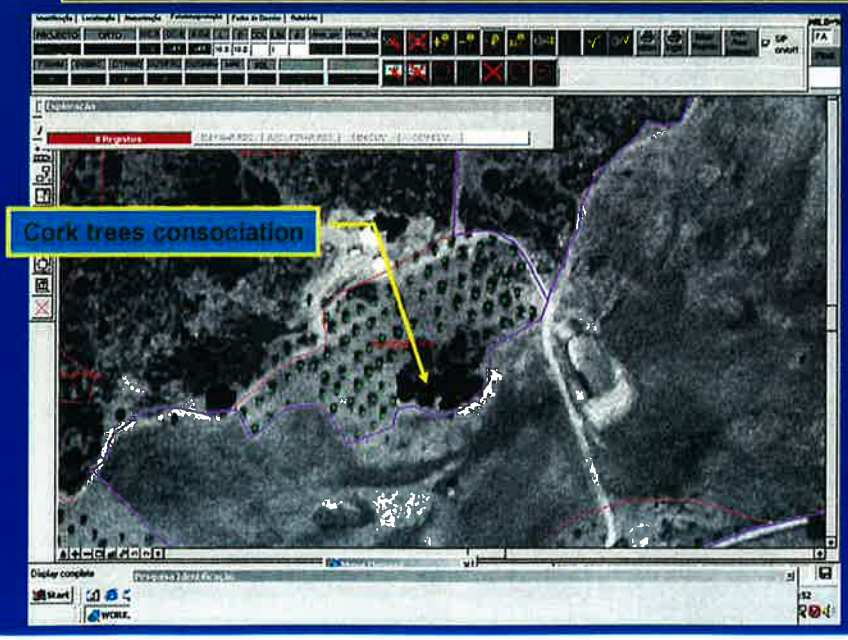

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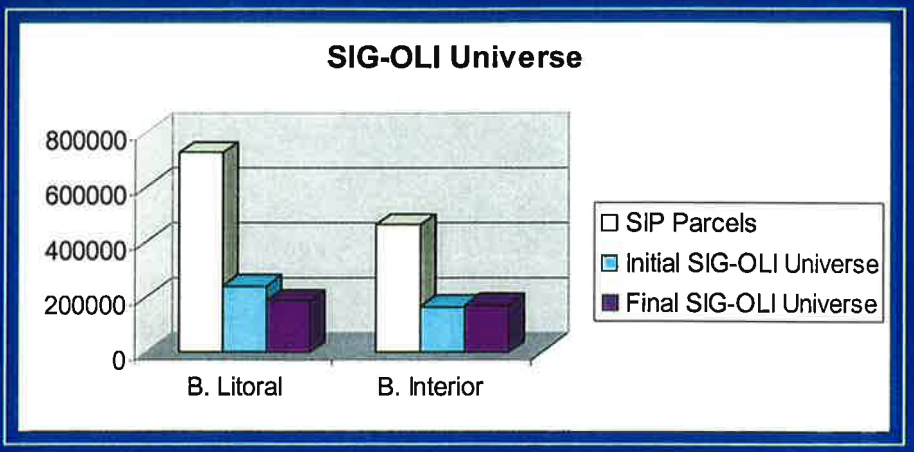

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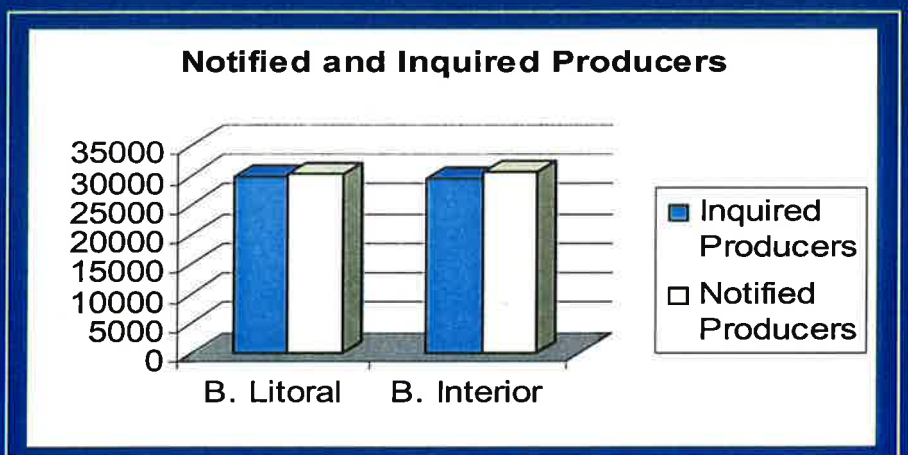

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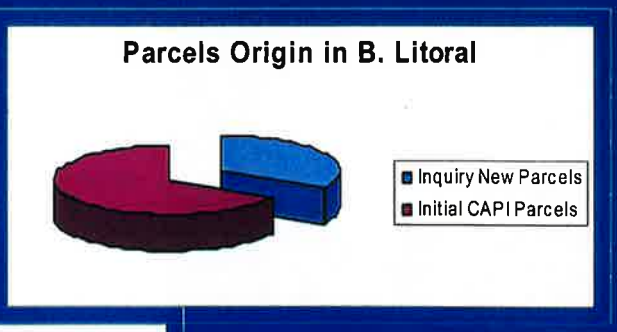
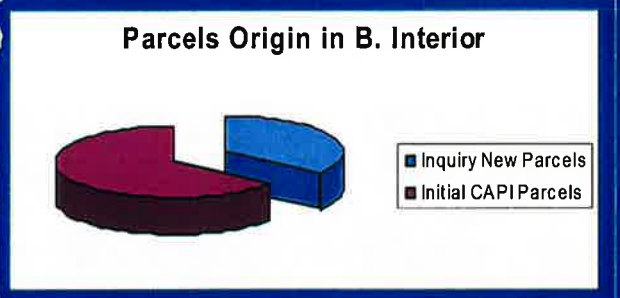
BEIRAS REGION – PORTUGAL





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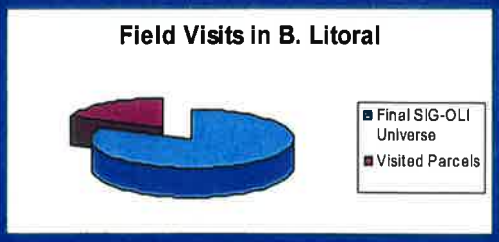

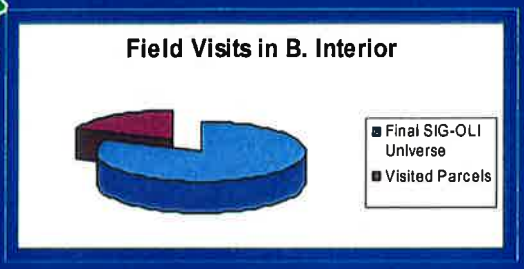

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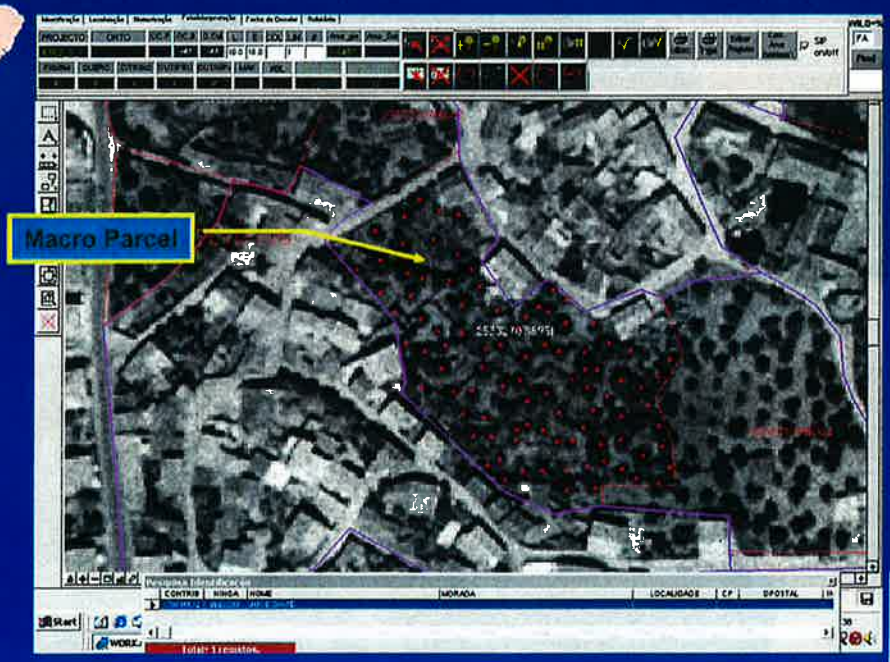

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DIRECTORATE GENERAL JRC
JOINT RESEARCH CENTRE - ISPRA
Institute for Protection and Security of the Citizen
MARS Unit

Session 3 - Facing cadastral reference mismatching in Italy, by *Antonio Lucaroni, FINSIEL*

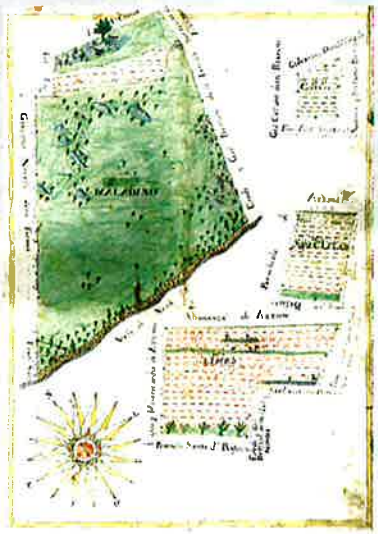
Summary

M. Lucaroni works for FINSIEL, contractor for AGEA for OLI_GIS implementation. He first presented the characteristics of the Italian cadastre: created in late XIX century, cadastral parcels were originally crop homogeneous but then it was degraded. Now the country is covered by 300,000 cadastral maps with 70 M parcels. The Italian cadastre is fully georeferenced (Gauss-BOAGA map projection reference) and 33% provinces have already cadastre in vector format, 67% in raster format. The OLI_GIS is based on the identification of olive parcels based on cadastral maps overlaying orthophotos. The main problems encountered were errors of cadastral references by the producers and problems of cadastre updating. All of these problems were notified to the producers. This type of problems should be resolved with the access by the producers to the OLI_GIS graphic database and the possibility to submit ONLINE their application in the future.

(PowerPoint presentation)

AGEA (Italy) OLI - GIS

With law of 1 march 1886 n.3682 it was decreed to constitute a geometric, parcel based land register, not probative, founded on measures and estimate.



AGEA (Italy) OLI - GIS

The italian cadastre is geometric and parcel based

- Geometric = trasfers planimetry and survey of the territory
- Parcel based = the main element is the cadastral parcel

AGEA (Italy) OLI - GIS

GIS - AGEA

National territory	**300.000 km²**
• 20 Regions	**15.000 km²**
• 103 Provinces	**2.900 km²**
• 8.100 Municipalities	**37 km²**
• 300.000 Cadastral Maps	**1 km²**
• 70.000.000 Cadastral Parcels	**0,0043km²**

AGEA (Italy) OLI - GIS

Region: Tuscany

Province: Siena

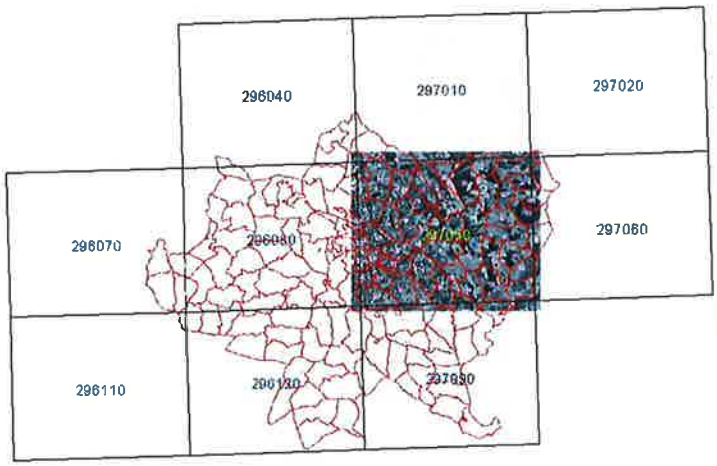
AGEA (Italy) OLI - GIS

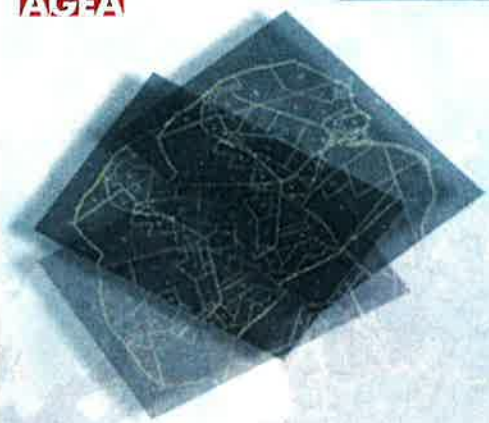
Municipalities of the province of Siena

AGEA (Italy) OLI - GIS

Cadastral map of the province of Siena

AGEA (Italy) OLI - GIS





Gis - Agea Methodology and technical specifications

CADASTRAL CARTOGRAPHY

- Property identification system on the land
- Univocal identification of the parcel
- Cadastral map
- Cadastral parcel
- Vector or raster data technical characteristics typical of a mapping on a nominal scale of 1:10.000

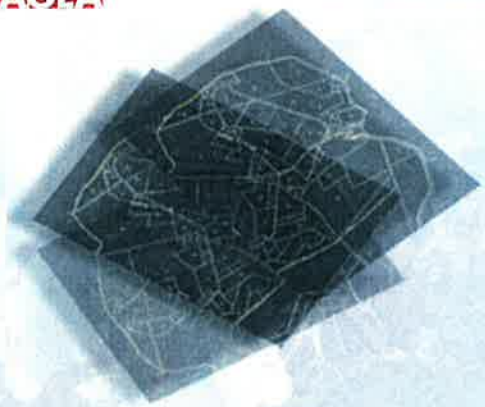
AGEA (Italy) OLI - GIS

AGEA (Italy) OLI - GIS

Gis - Agea Methodology and technical specifications

CADASTRAL MAP-ORTOPHOTOGRAPH OVERLAP

AGEA (Italy) OLI - GIS



Gis - Agea Methodology and technical specifications

CADASTRAL MAP-ORTOPHOTOGRAPH OVERLAP

- Georeferencing of the cadastral maps in conformity with the italian national system GAUSS-BOAGA
- Acquisition of the parcel number and of the parcel location (centroid)
- Cadastral map-ortograph overlap in conformity with the GAUSS-BOAGA system
- Data storage in GIS-AGEA

AGEA (Italy) OLI - GIS

AGEA (Italy) OLI - GIS

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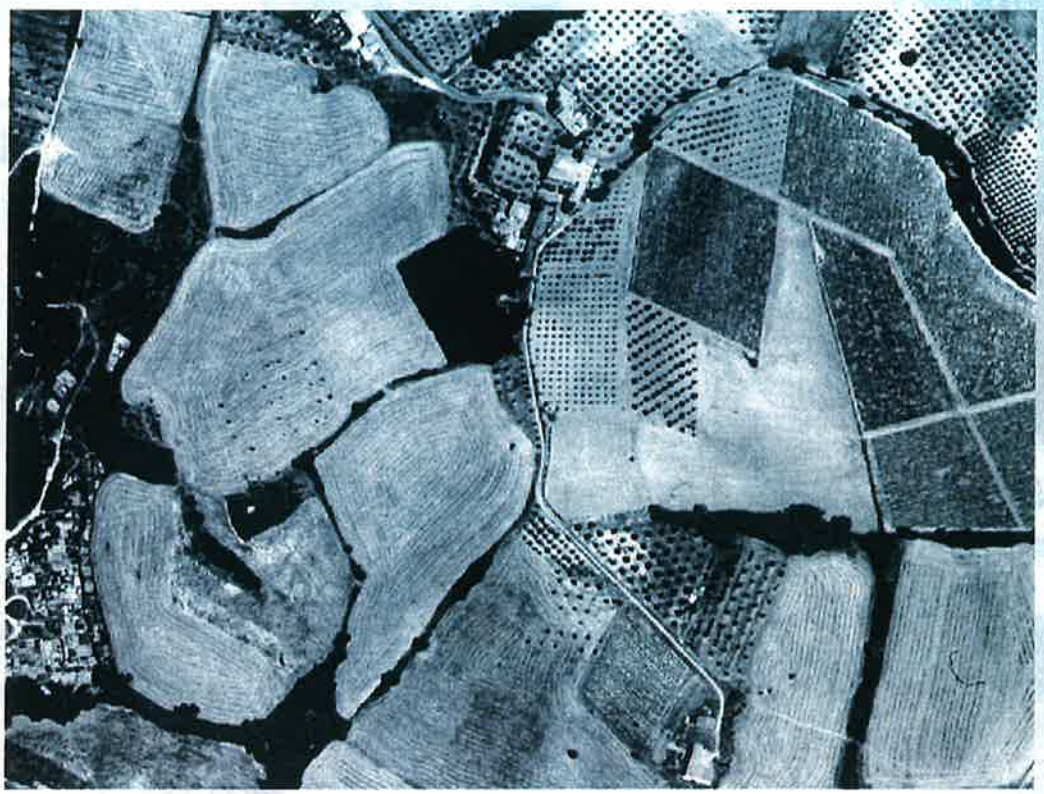
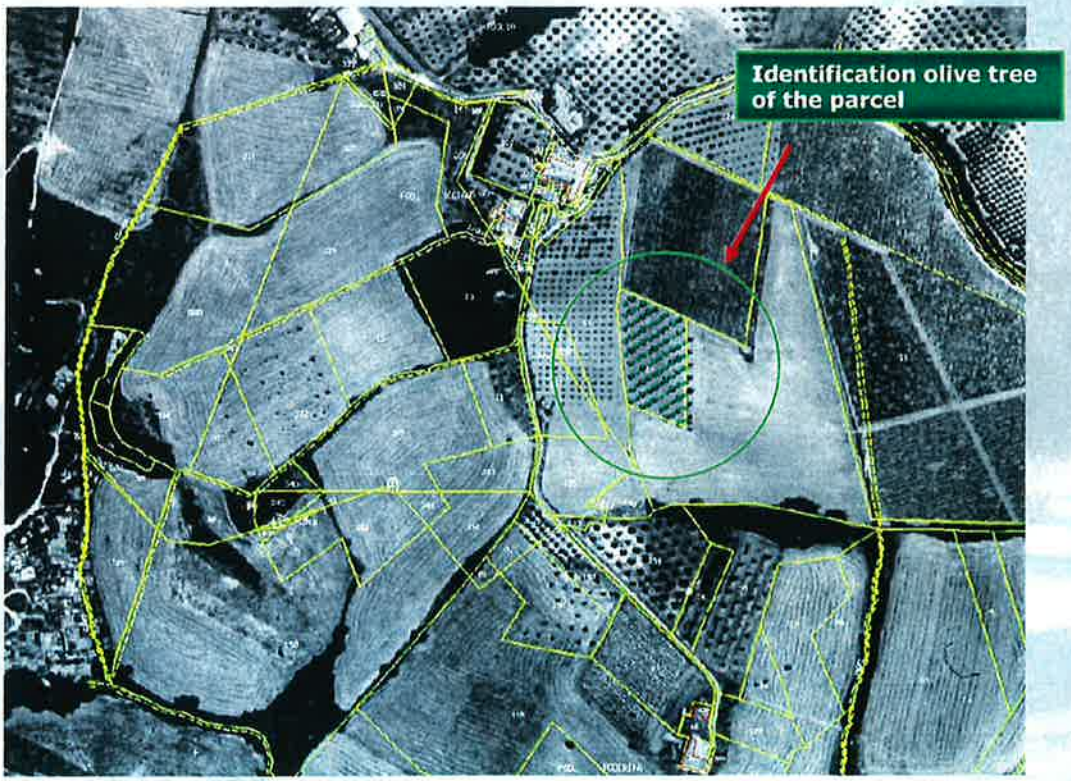


AGEA (Italy) OLI - GIS



The problems

1. Correct location and identification of the cadastral parcels from the producers
2. Trouble in updating and missed updates

The answers

1. The first point is solved through the accessibility of graphical land data by all peripheral bodies authorized to process applications for aid (Regional Administration, Oil Associations, Wine Co-operatives, Professional Organizations, etc.)
2. The second point , in perspective, is faced with the same solutions described on point 1. In order to recover the old situations, however, has been predisposed the procedure described in the following slides.

AGEA (Italy) OLI - GIS

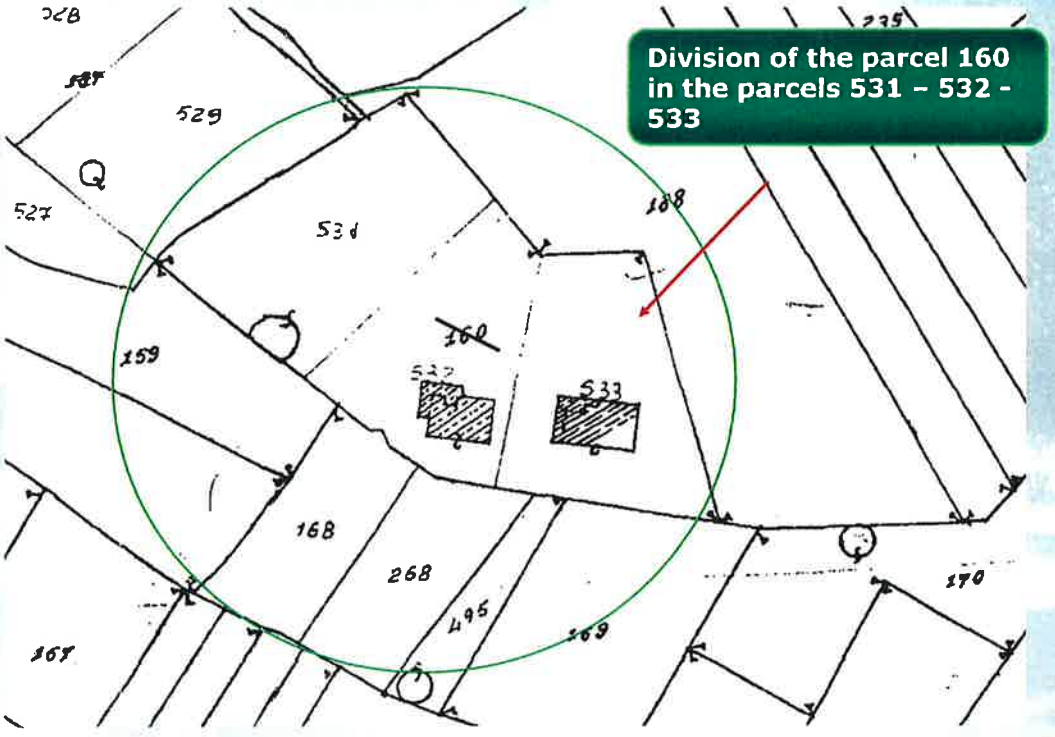
... the procedure

The procedure used in Italy in order to face cadastral problems previews, in agreement with Professional Organizations:

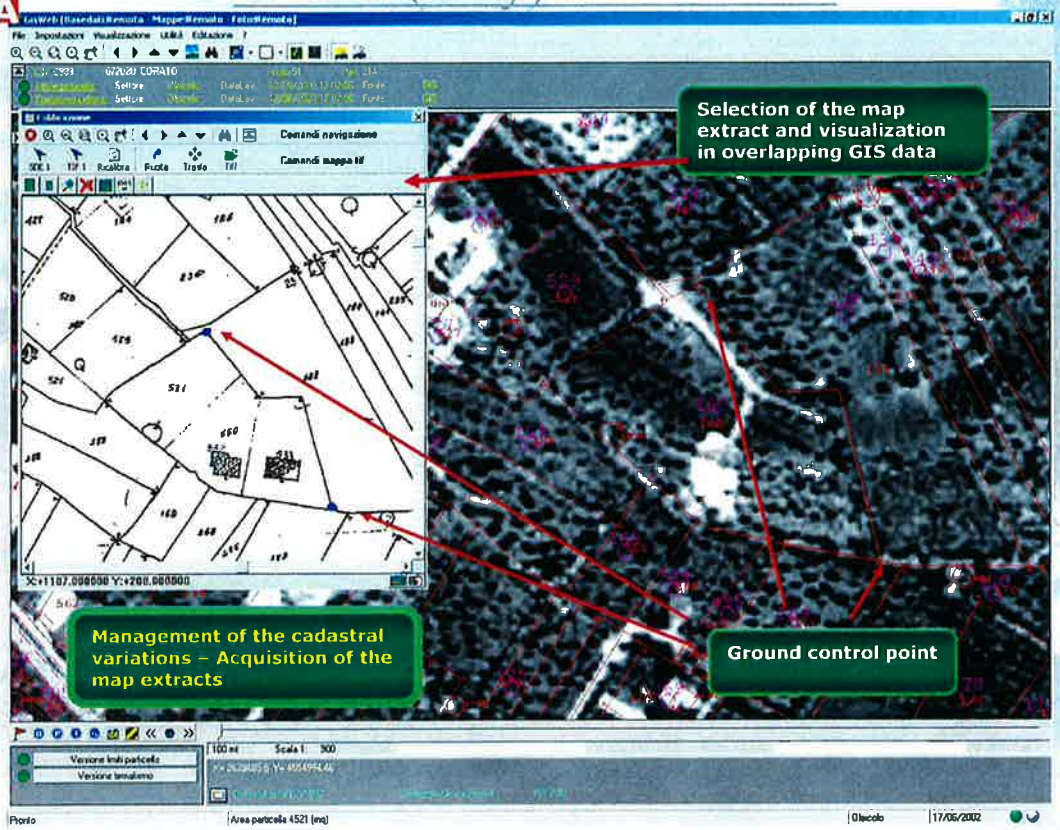
1. Notification to the producer of the not found parcels
2. Finding of suitable documentation or correction of the cadastral details
3. Insertion in the System of the new parcels

AGEA (Italy) OLI - GIS

AGEA (Italy) OLI - GIS

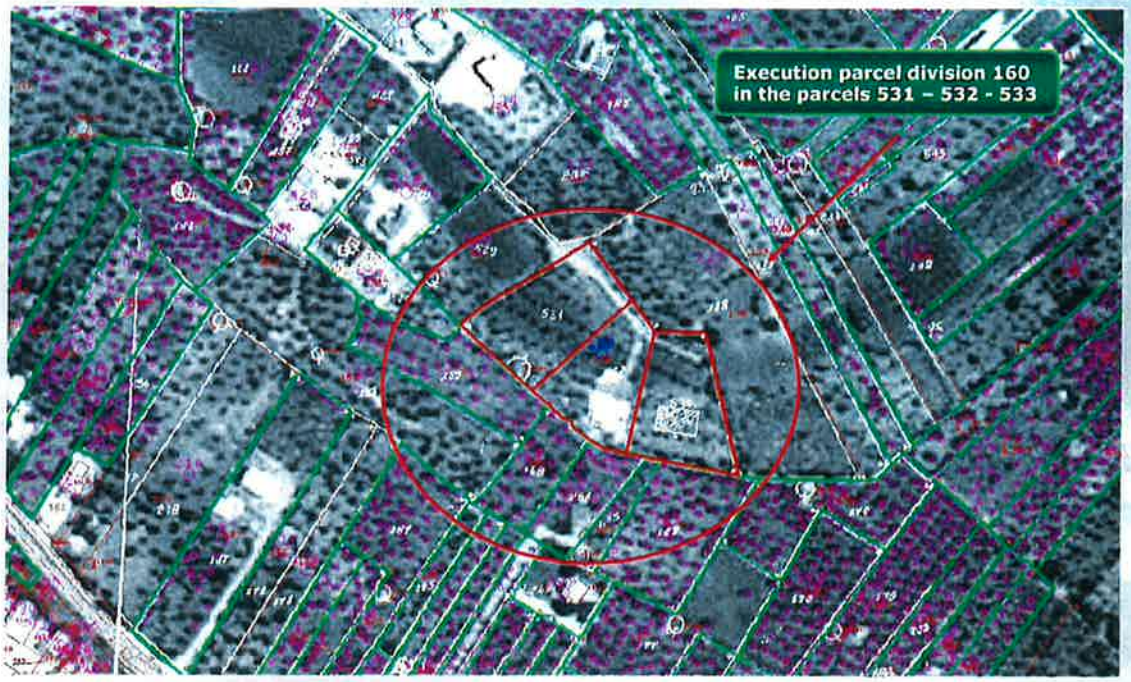


AGEA (Italy) OLI - GIS



AGEA (Italy) OLI - GIS

AGEA (Italy) OLI - GIS



AGEA (Italy) OLI - GIS

- Declared parcels 4.1 millions
- Parcels not found at the beginning 420.000
- Parcels actually not found * 190.000

(*) solving procedures in progress

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Session 3 - Creation of base reference maps and extensive field surveys for the location of olive parcels in Greece, *Dr Thanos Doganis, Representative of a Register's Consortium Greek Ministry of Agriculture.*

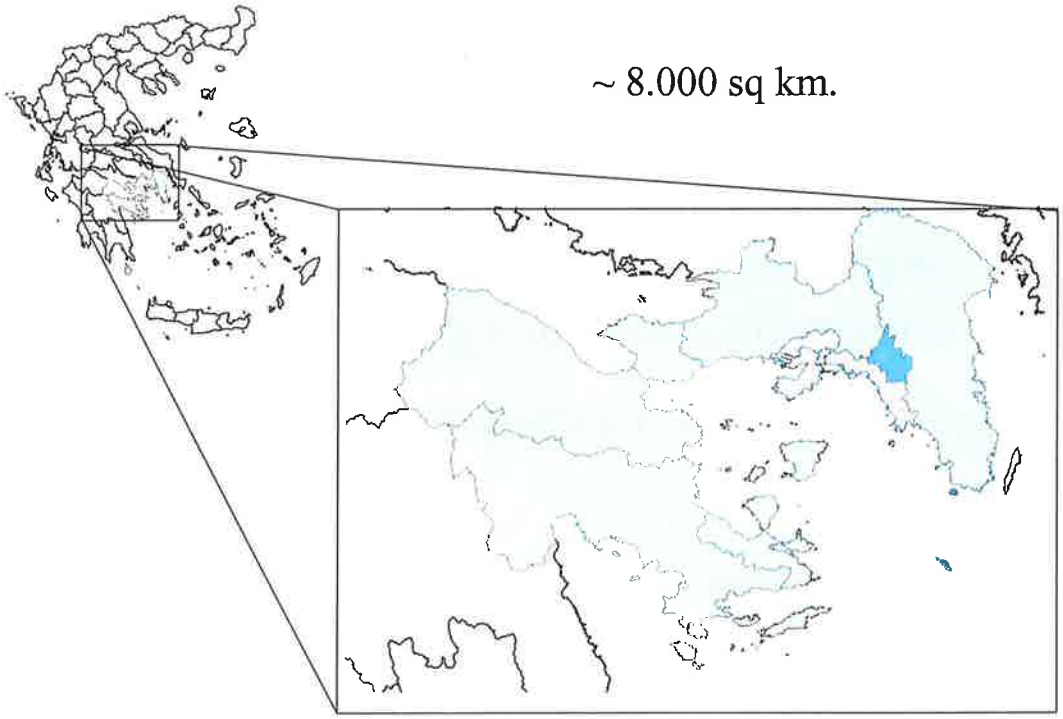
Dr. Thanos Doganis works for TERRA company, which participate to a consortium contracting for the OLI_VITI GIS in Greece. Terra is in charge of approximately 8,000 km2 in the North of Greece. He first presented a workflow chart and the Information System which should be set up for the project. The work consists first in the collection and preparation of data, where they pre-counted olive trees by CAPI and plotted these information with the ilots maps. The second step consists in the extensive collection of declaration in local offices. He highlighted the importance of Quality Control at this level. Then a so-called '1st intermediate OLIGIS' will be issued to producers. Then there will be the Objection procedure where errors on data entry, difference in area, difference in olive trees and errors of parcel identification should be solved, possibly with field checks. The main problems faced by the contractor are: young plantations, OT retrieval, mixed orchards, difficulties with very small parcels. The location of parcels in Greece is very time-consuming.

(PowerPoint presentation)

OLIVIT GIS in Hellas

Dr. Thanos Doganis
thanos@terra.gr
Mr. Yannis Roukoutakis
yannisr@terra.gr

Area of Interest



WorkFlow

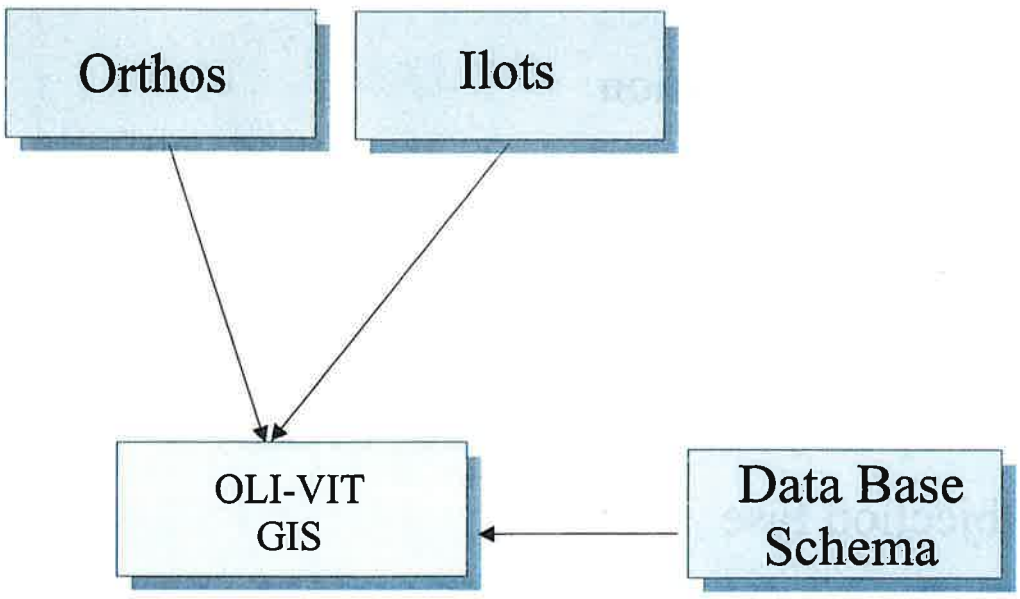
- General Preparation
- Specific Preparatory work
- Declaration collection
- Processing
- 1st Report (Intermediate OLIVITGIS)
- Objection fase
- 2nd Report (Final OLIVITGIS)

www.terra.gr

General Preparation

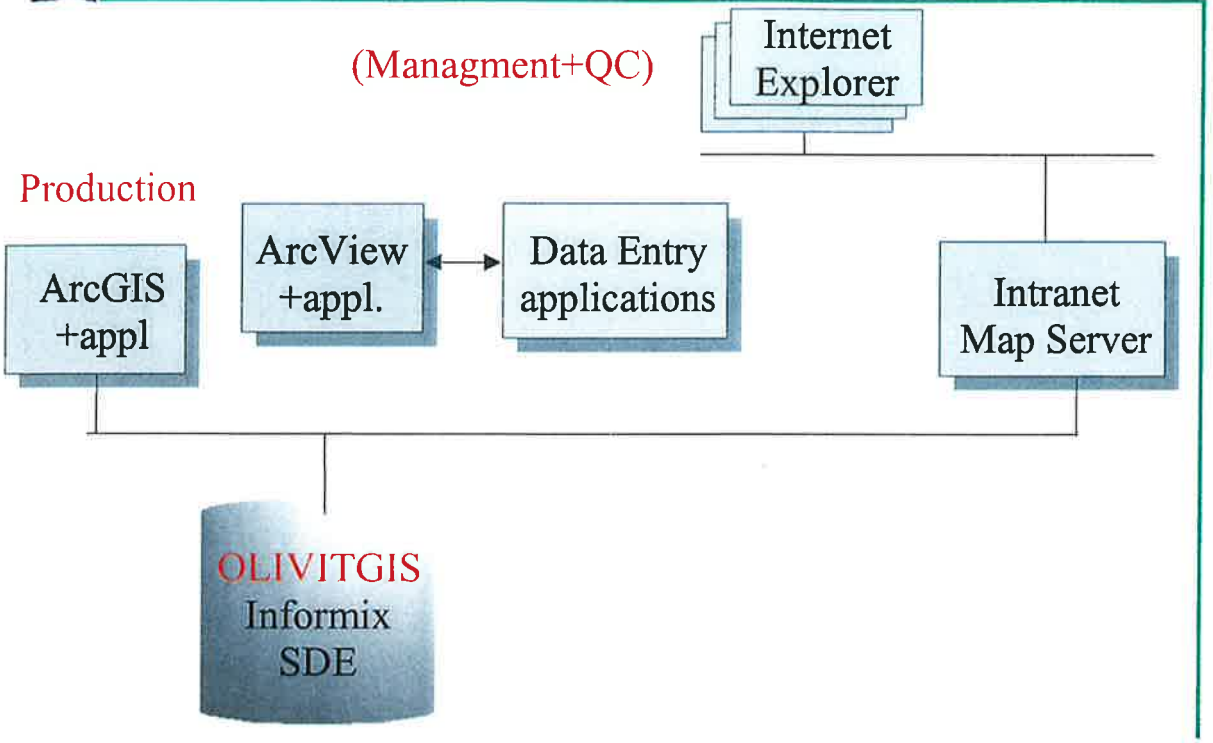
- Quality Plan
- Data Base design
- Organize and transform data from Administration to conform data base design
- Application Development and Testing
- Training
- Preprint Forms

Data Base Implementation



Based on ESRI's Spatial DataBase Engine and INFORMIX.

Data Base Implementation



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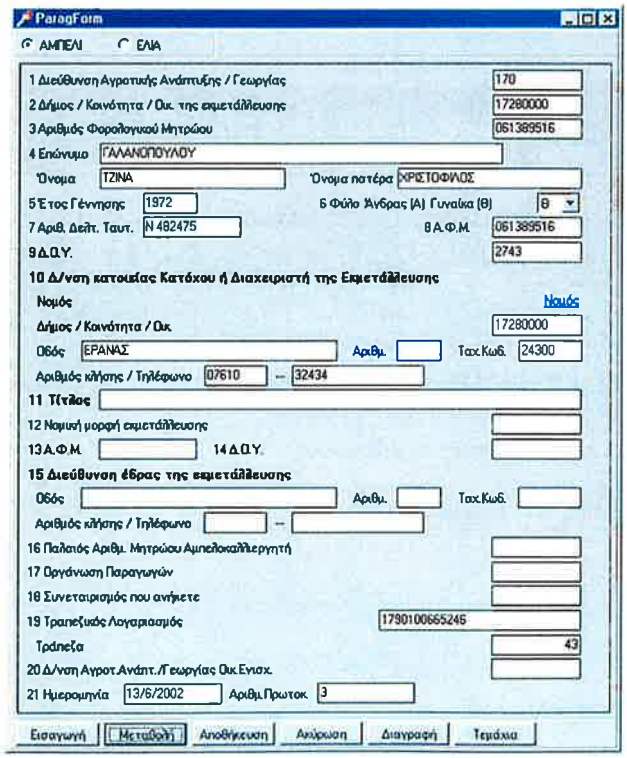
Holders Form



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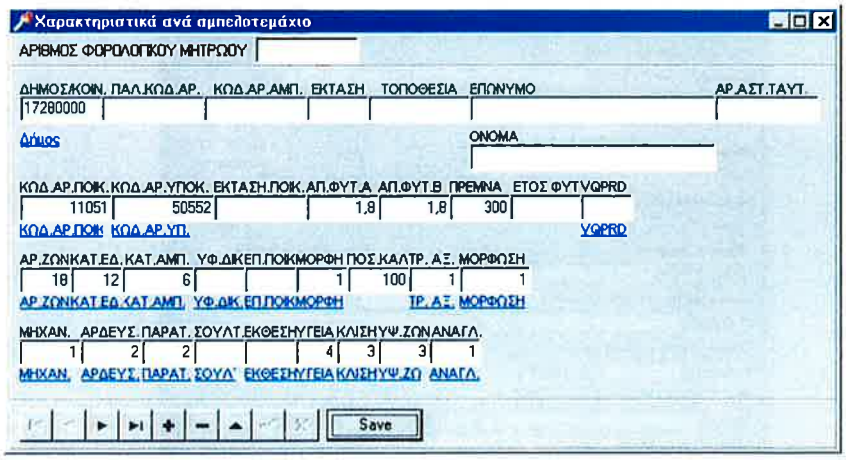
Olive RegistryAttributes

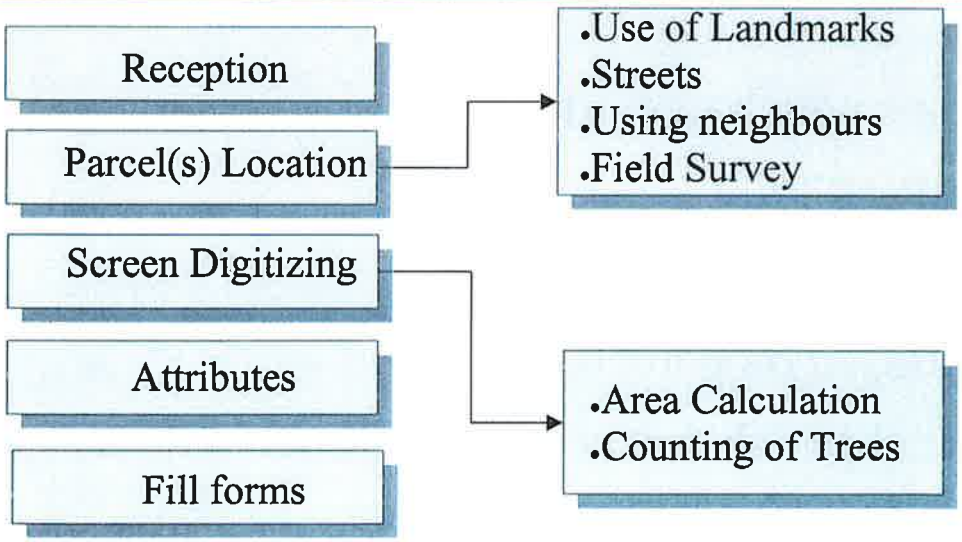
Wine RegistryAttributes



Detailed Preparation

- Precounting of trees using CAPI.
- Plot orthos in 1:2.500 with ilot information.
- Print 1:10.000 orthos with map indexes, names, landmarks
- Communication establishment with local authorities and Agricultural Unions.
- Prepare field computers.
  - Install applications
  - Load Orthophotos
  - Load data bases of the areas
- Field survey to identify streets, landmarks, place names (gazetter) e.t.c.

Declaration Procedure



Daily Processing

- Download Information from field Computers to Central Data Base.
- Cross checks
- Upload updated and checked information from central Data Base to field computers
- QUALITY CONTROL

Reporting (1st intermediate OLIGIS)

- Maps with parcel ids
- REPORTS
  - Based on holders
  - Based on parcels
- Data base abstracts mailed to each holders

Objection Procedure

- Errors on data entry.
- Differences in areas.
- Differences in olive trees.
- Wrong parcel identification.
- FIELD CHECKS

Difficulties – Problems

- Olive trees newer than Orthophotos
- Olive trees not existing any more
- Mixing of olive trees with other trees.
- Unable to identify very small olive trees.
- Time consuming location of parcels
- Registry project is almost building Cadastral for 45% of the country

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Wednesday 19 June

Session 4: Consolidation of the GIS: notification, dissemination of information and corrections

Session 4 - Notification and consolidation phase in France, by *Alain Madaule & Bruno Antic, ONIOL*

Summary

Alain Madaule is the manager of the ONIOL office of Marseille, in charge of managing OLI_GIS and Bruno Antinc works for ONIC/ONIOL in Marseille office as well. They presented the management of notification (so-called DCI 'Demande Compémentaire d' Information) which were sent to discordant dossiers. They stressed that due to the lack of resources and local offices, it was decided to set up a 'hot line' to solve as many discordances as possible by phone. 55% of producers which received a DCI called the hot line, the others (3,636 calls) were systematically contacted by the administration. IT was quite successful since 6,051 DCI (80.5%) were categorized as conform following the phone calls. 927 DCI remaining discordant are handled with a contradictory field visit. 536 DCI did not get any answer and will be notified again. Some rapid field visit were organized to check the conformity of diagnostic, of which 80% were confirmed and 20% were not confirmed (the last have been submitted to contradictory field visit with the producer). In case of rapid field visit or field check, a notification was also sent to farmer. The initial crop declaration should always be updated by DCI or field check.

(PowerPoint presentation)

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Le Système d'Information Géographique Oléicole français

- Gestion administrative et finalisation du projet -

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L 'ensemble des DO recensées au titre de la campagne 1999/2000 (conformément au règlement 2366/98) a fait l 'objet d 'un traitement par P.I.A.O.

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La ventilation entre DA et NDA était la suivante :

- DA = 14 388 soit 56,75 %
- NDA = 10 964 soit 43,25 %

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Pour les DA si le nombre d 'arbres ne peut être déterminé de manière satisfaisante , une DCI(demande complémentaire d'information) est envoyée

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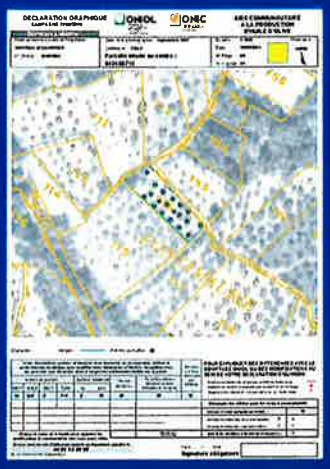
OFFICE NATIONAL INTERPROFESSIONNEL DES CÉRÉALES

Une DCI comprend les éléments suivants :

Une lettre d 'accompagnement (notice explicative)



Une photo-aérienne par parcelle déclarée

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La photographie aérienne

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Elle comprend les éléments suivants :

- La photographie de la parcelle
- un tableau reprenant les références cadastrales
- le nombre déclaré
- le nombre trouvé à l 'issu de la PIAO qui correspond à celui positionné sur le document

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Mise en place d 'une cellule spécifique

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Son rôle :

Aide téléphonique sur appel de l'oléiculteur (du 31 octobre 2000 au 1er novembre 2001)

Appels : 4 130 soit 55% des oléiculteurs concernés par l'envoi d'une DCI

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- Relance systématique des oléiculteurs qui ne l 'ont pas contacté (du 31 octobre 2000 au 1er novembre 2001)

  Appels : 3 636

- Fourniture de documents complémentaires à la demande de l'oléiculteur

  (parcelle omise - erreur de déclaration)

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- **Intégration des réponses qui génèrent un nouveau diagnostic**
  - DCI cohérentes : 6 051 soit 80,53 %
  - DCI non cohérentes : 927 soit 12,33 %
    --> mise à contrôle terrain contradictoire
  - DCI sans réponse : 536 soit 7,14 %
    --> notification

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Les DCI conformes ont fait l'objet d'une analyse individuelle afin de s'assurer de la qualité de la réponse de l'oléiculteur

- **Validation des dossiers dont la cohérence est confirmée : 3 347 soit 55,31 %**
- **Investigation complémentaire au moyen de VR ciblées pour les autres dossiers : 2 704 soit 44,69 %**

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L'objectif d'une visite rapide est la vérification de la réponse de l'oléiculteur.
Un enquêteur dispose pour la réaliser :

- D'un plan de masse
- Du plan des parcelles à visiter
- De la réponse de l'oléiculteur

Cette visite qui s'effectue en l'absence de l'oléiculteur donne lieu à la rédaction d'un compte rendu qui mentionne le nombre d'arbres trouvés et leur localisation.

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Deux alternatives :

- **Dossier confirmé lors de la VR : 2 157 soit 79,78 %**
- **Dossier infirmé lors de la VR : 547 soit 20,22 %**

Ceux-ci sont finalisés au moyen d 'un contrôle terrain contradictoire

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- **L'objectif du contrôle contradictoire est la détermination du nombre d'oliviers se trouvant sur la parcelle; il est alors réalisé par un contrôleur de l'office en présence de l'oléiculteur**

Ce contrôleur dispose des mêmes documents que l'enquêteur qui réalise les visites rapides.
Il donne lieu à la rédaction d'un compte rendu contradictoire dont les résultats seront notifiés à l'oléiculteur.

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Les dossiers définitivement validés après DCI, visite rapide ou contrôle terrain font ensuite l'objet d'une notification.
Il est à noter que la DO initiale ne peut être modifiée que par une actualisation de déclaration (DCI) ou un constat terrain (visite rapide ou contrôle terrain)

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Fin de l 'exposé

ISPRA 18 - 19 juin 2002

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Session 4 - Notification and consolidation phase in Italy, Mariano Laghezza, RTI Finsiel

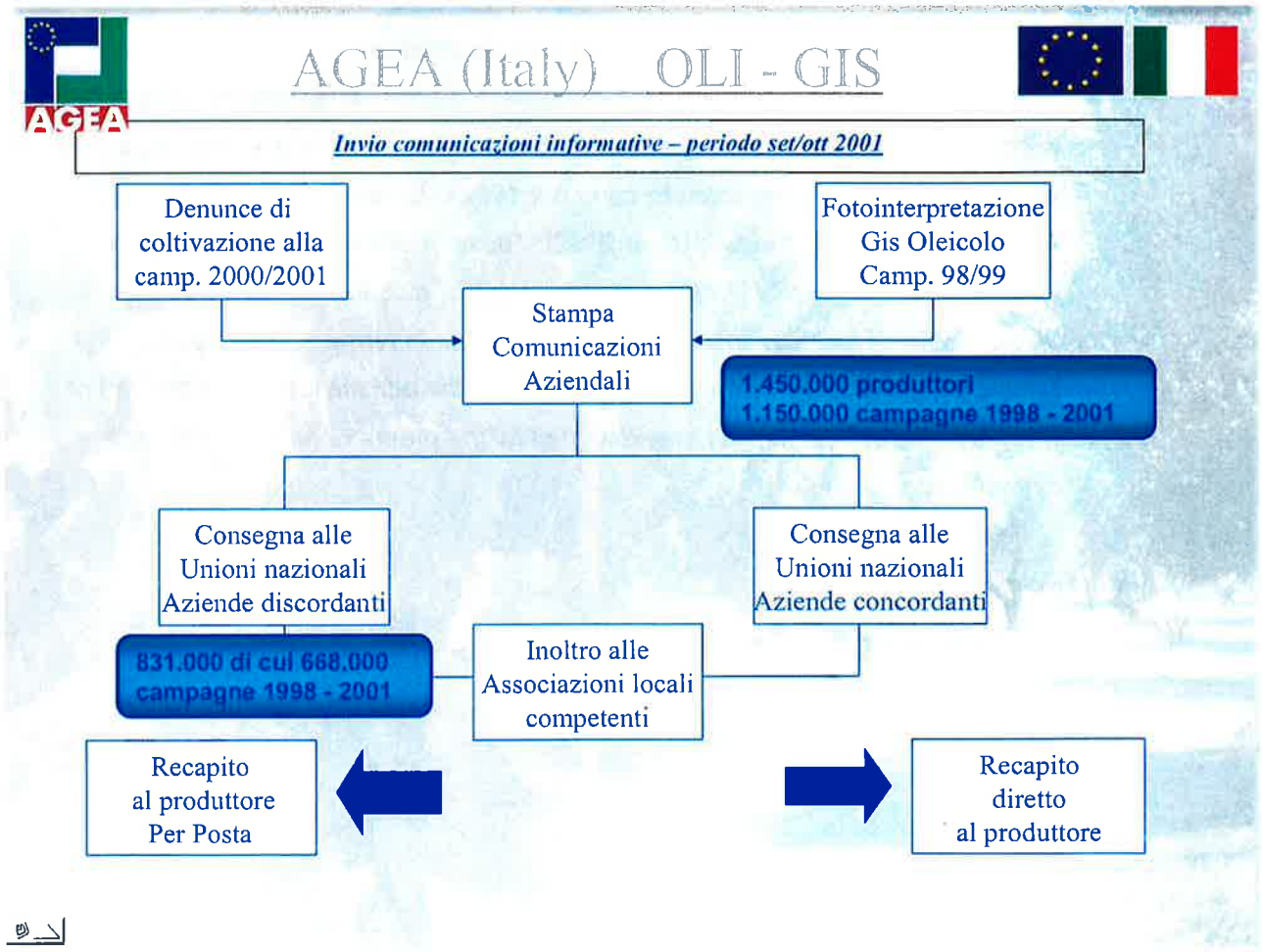
Summary

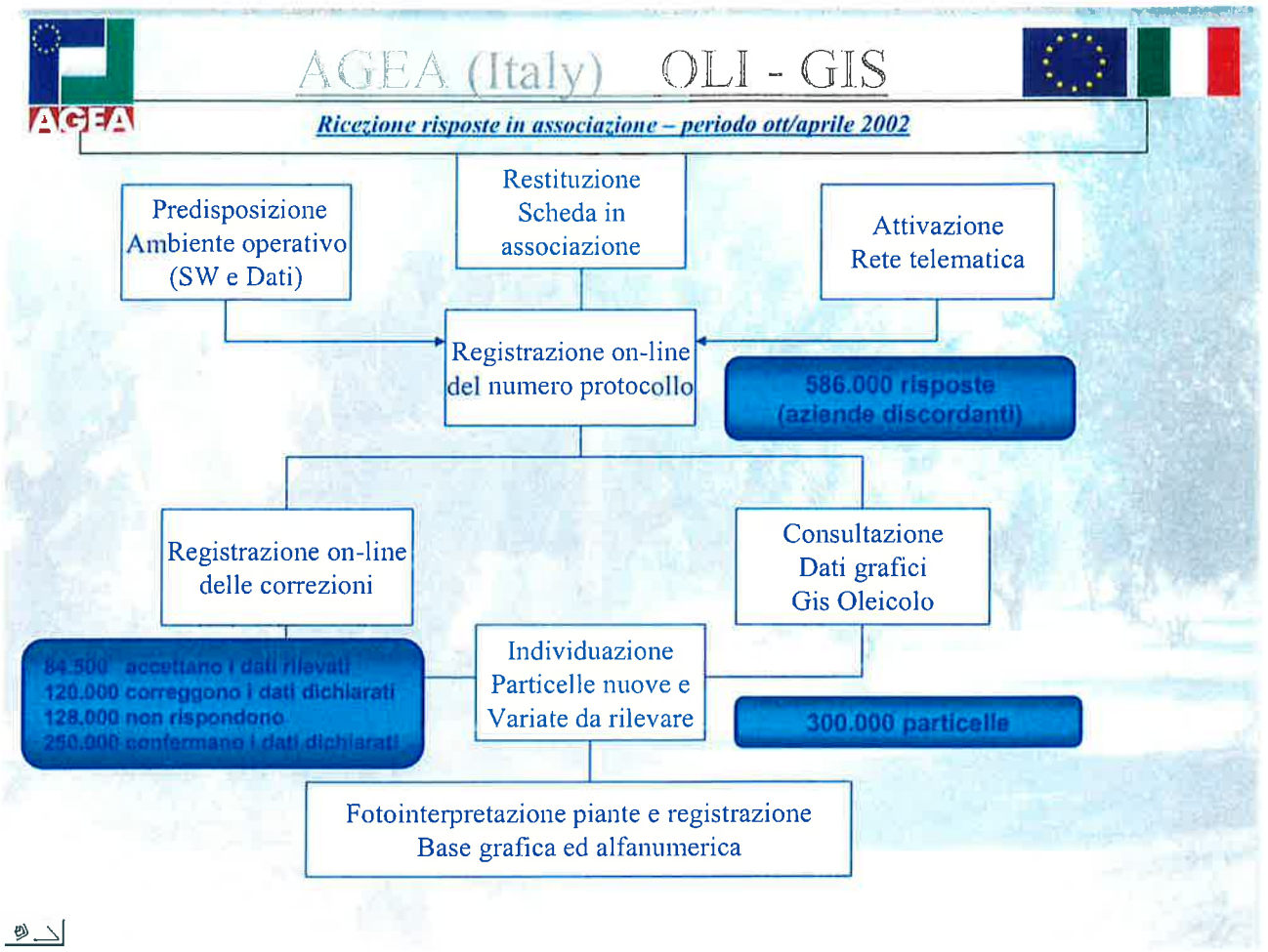
Mario Laghezza works for FINSIEL, the consortium in charge of the implementation of OLI_GIS in Italy. The notification and consolidation phase started in September 2001 on the basis of cross-checks between 2000/01data and GIS data. Notifications were sent the period September-October 2001, for all dossiers with positive and negative discordances. The replies were sent by producers directly to producers associations, where a telematic network was set up to register on line the corrections. Of the replies for discordant dossiers, 84,500 (14.5%) accepted the GIS data, 250,000 (43%) confirmed their initial declaration, 120,000 (21%) corrected the declared data and 128,000 (22%) did not answer. 300,000 new or updated parcels had to be handled by photo-interpretation. Then a new categorization was carried out:

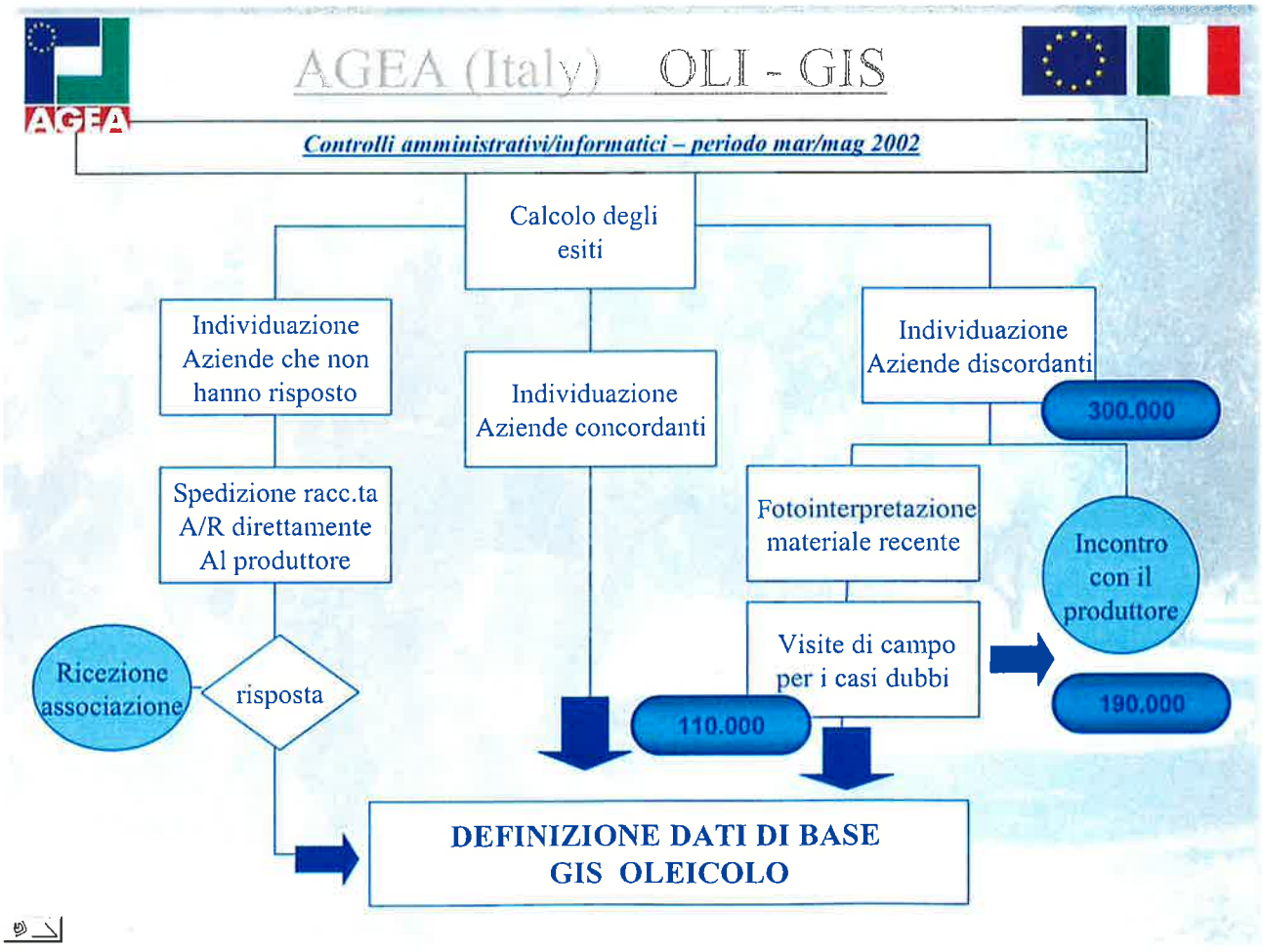
- *The dossiers without reply were notified again. In case of no answer the GIS data were retained.*
- *The conform dossiers were considered as consolidated*
- *For the 300,000 dossiers remaining discordant, a photo-intepretation using recent data (new aerial photo) was carried out with a rapid field survey in case of doubt (110,000). It is expected to carry out 190,000 interviews with farmer (50,000 were already done in June 2002). Those interviews are organized in collaboration with OPR (120 local offices of AGEA plus the offices of producers associations). The local offices send convocations to farmers. If required by the farmer a contradictory field visit is organized by the administration. At the end of this phase a 'verbale' is written and signed by the producer and GIS data are consolidated.*

(PowerPoint presentation)


AGEA
OLI-GIS Experts Meeting
1st workshop on the Implementation of Olive GIS in the Member States
ISPRA, 18 and 19 June 2002
Notification and consolidation phase in Italy

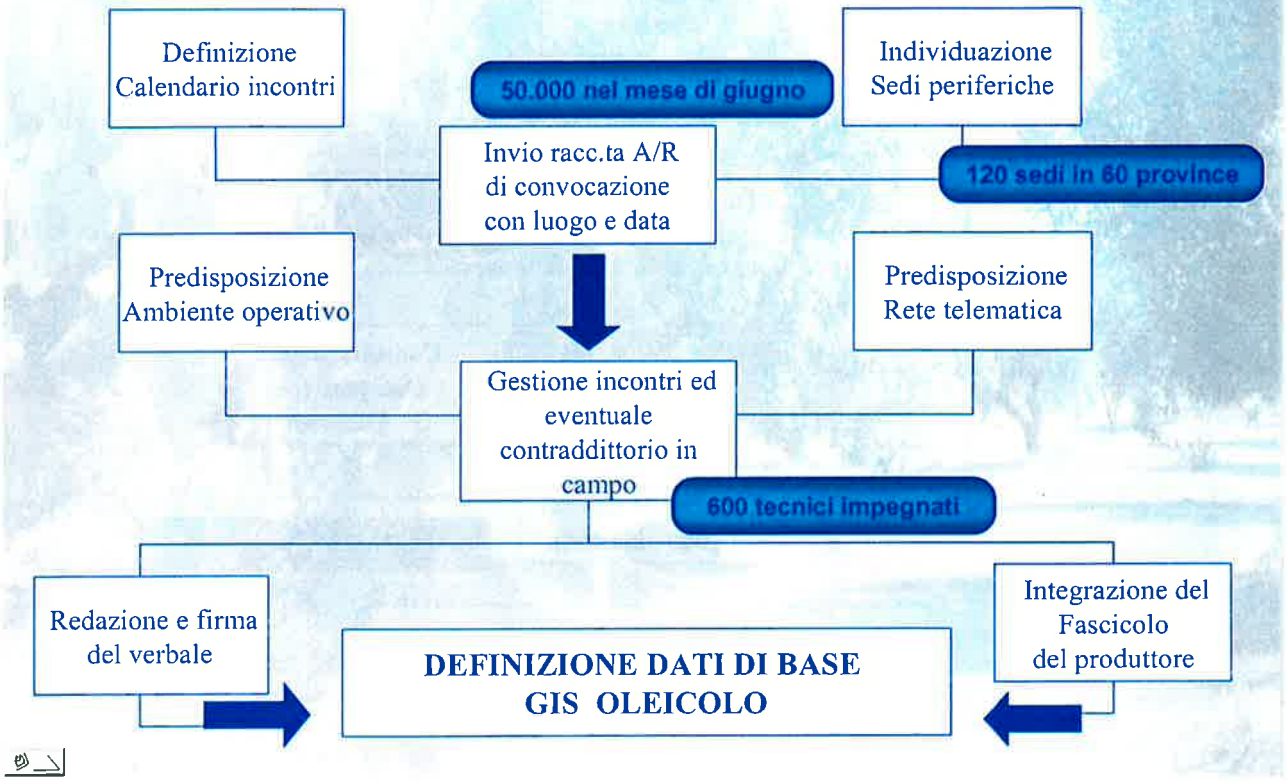

AGEA
AGEA (Italy) OLI - GIS
Invio comunicazioni informative – periodo set/ott 2001
Denunce di coltivazione alla camp. 2000/2001
Fotointerpretazione Gis Oleicolo Camp. 98/99
Stampa Comunicazioni Aziendali
1.450.000 produttori
1.150.000 campagne 1998 - 2001
Consegna alle Unioni nazionali Aziende discordanti
Consegna alle Unioni nazionali Aziende concordanti
831.000 di cui 668.000 campagne 1998 - 2001
Inoltro alle Associazioni locali competenti
Recapito al produttore Per Posta
Recapito diretto al produttore


AGEA (Italy) OLI - GIS
AGEA
Ricezione risposte in associazione – periodo ott/aprile 2002
Predisposizione Ambiente operativo (SW e Dati)
Restituzione Scheda in associazione
Attivazione Rete telematica
Registrazione on-line del numero protocollo
586.000 risposte (aziende discordanti)
Registrazione on-line delle correzioni
Consultazione Dati grafici Gis Oleicolo
84.500 accettano i dati rilevati
120.000 correggono i dati dichiarati
128.000 non rispondono
250.000 confermano i dati dichiarati
Individuazione Particelle nuove e Variate da rilevare
300.000 particelle
Fotointerpretazione piante e registrazione Base grafica ed alfanumerica


AGEA (Italy) OLI - GIS
AGEA
Controlli amministrativi/informatici – periodo mar/mag 2002
Calcolo degli esiti
Individuazione Aziende che non hanno risposto
Individuazione Aziende concordanti
Individuazione Aziende discordanti
300.000
Spedizione racc.ta A/R direttamente Al produttore
Fotointerpretazione materiale recente
Incontro con il produttore
Ricezione associazione
risposta
Visite di campo per i casi dubbi
110.000
190.000
DEFINIZIONE DATI DI BASE GIS OLEICOLO

AGEA (Italy) OLI - GIS

Incontro con i produttori – periodo giu/ago 2002



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Session 4 - Proceso de verificación': the case of Andalucia, *D. Luis Delgado, Comité Permanente, MAPA*

Summary

M. Luis Delgado Manzano works for the Comité Permanente del GIS-oleicola. He presented the organisation of the notification and validation phase called 'proceso de verificación'. In Andalusia it is now completed and it covered about 900,000 parcels. The discordances have been calculated at the level of MAPA and then sent to the CCAA (autonomous communities). The notifications were handled by the OPR (association of producers) or by the CCAA which sent convocations to the producers and organized field visits. Following these field visits proposals of modifications were written and had to be signed by the producers. When the modification deals with the subsidies claim only, it is handled directly by the CCAA which corrects the alphanumerical database. When the notification deals with GIS data it is handled at national level by MAPA (under the contract with Tragsatec). Either the modification request is accepted or rejected or submitted to field validation.

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Session 4 - Greek strategy for the consolidation of the GIS: notification, dissemination of information and corrections, *by Lazaros Kiokakis, Assistant of the Coordinator, Ministry of Agriculture*

Summary

Lazaros Kiokakis is the assistant of the Sub-Secretary of the Minister of Agriculture in charge of the OLI_VITI register in Greece. The consolidation stage did not yet started in Greece, so he presented what will be the strategy. He first made an overview of the general methodology highlighting the specificities in Greece, from the preliminary field work for the identification of Olive and Vineyard Parcels boundaries, to the office work for the collection of declarations where all farmers have to identify and locate their olive and vineyard parcels on graphic paper reference maps (ilots maps plus orthophotomaps). He also stressed that in Greece on-the-spot inspections (in presence of the producer) are carried out for all parcels which could not be located on the orthophotomaps or in case of discrepancy between the declaration and the photo-interpretation; field checks have to be carried out by the contractor for at least 10% of the declarations for each register (as stated in the contracts). The notification procedure consists in the publication of results with copies of orthophotomaps and lists of information. At this stage in case of disagreement, the producer may submit an objection (within a 20-days period). The objections are registered in local Directions of Agriculture. The contractors carry out contradictory visits and submit the results to the NEMAE which has 1 month to review the objection requests and send it back to the contractor for corrections. The final step is the printing and provision of final documents. In addition the Ministry of Agriculture will issue an ITT for a technical support to the Ministry of Agriculture for the Quality Control of the data delivered by the contractors, the organization and project management and for the consolidation of GIS and alphanumeric database, including the homogenization of the delivered data. It is expect that this technical assistance will continue 6 months after the end of contractor's work (until end 2003).

(PowerPoint presentation)

HELLENIC MINISTRY OF AGRICULTURE

OLIGIS EXPERT MEETING

1ST Workshop on the Implementation of Olive GIS in the Member States

ISPRA, 18 and 19 June 2002

Session 4: Consolidation of the GIS: notification, dissemination of information and corrections

GREEK STRATEGY
Lazaros KIOKAKIS

HELLENIC MINISTRY OF AGRICULTURE

GENERAL METHODOLOGY

➢ Preliminary Field Work

- Identification and location of OP, VP limits

- Fill in the graphical reference map (area's local name, rivers' names, churches, bridges etc)

By the Contractor

➢ Office Work

- Declaration Submission

- Identification and location of OP, VP and OT on the graphical reference map (check of the declared area of OP,VP and of the declared number of OT)

By the Contractor

HELLENIC MINISTRY OF AGRICULTURE

GENERAL METHODOLOGY

➢ On-spot-inspections

Conducted **for every** OP, VP, OT

- That can't be located on the orthophotomaps or

- When there is discrepancy between the grower's declaration and the results of the orthophotos photo-interpretation

By the Contractor

Discordant declaration

(The declared number of OT (at parcel and declaration level) differs by *more than 3%* from the measured number of OT obtained by photo-interpretation)

HELLENIC MINISTRY OF AGRICULTURE

GENERAL METHODOLOGY

➢ On-spot-inspections

- The presence both of the grower (or a representative of his) and the Contractor is *compulsory*, during the field visit

- Identification and location of the parcel and the OT on the graphical reference map

By the Contractor

- Cross-checks between the data of the declarations and real situation for at least the 10% of the declarations (per Register)

By the Contractor

HELLENIC MINISTRY OF AGRICULTURE

GENERAL METHODOLOGY

➢ Digitization – Data Entry

- Creation of Graphic Reference Data

- Creation of Alphanumeric Database

- Check for typing or digitization mistakes

- Check for differences between declared and located OT

By the Contractor

HELLENIC MINISTRY OF AGRICULTURE

GENERAL METHODOLOGY

➢ Notifications

- Publication of **results**

Copies of the orthophotomaps

-Ilots' limits
-Ops' limits
-VPs' limits

Lists

-Grower's name
-ID number
-Declared OP,VP, OT
-etc

By the Contractor

Published for 10 days

HELLENIC MINISTRY OF AGRICULTURE

GENERAL METHODOLOGY

➢ Objections

- The grower doesn't agree with the published results

⇩

The grower fills an objection form + submits documents in proof

- The objections are entered in a special register of the local Direction of Agriculture

By the Contractor

Time limit to submit an objection: 20 days since the results were published

HELLENIC MINISTRY OF AGRICULTURE

GENERAL METHODOLOGY

➢ Objection judgment - Corrections

- Publication
- Contradictory visits
- Evaluation of submitted objections

} Completed

By the Contractor

- Submission of a report to the NEMAE where the reasons of acceptance or rejection of the objection are explained

By the Contractor

- Mistakes eg in the name or ID number etc might be directly corrected by the Contractor

HELLENIC MINISTRY OF AGRICULTURE

GENERAL METHODOLOGY

➢ Objection judgment - Corrections

- The NEMAE (+ Representative of the Contractor)

⇩

Judges the objections — *By the NEMAE*

⇩

Submits a report to the Contractor

Time limit: 1 month — *By the NEMAE*

⇩

Corrections of the declarations — *By the Contractor*

HELLENIC MINISTRY OF AGRICULTURE

GENERAL METHODOLOGY

➢ Printing – Sending Final Documents

- Lists
  - Dossiers' data
  - Corresponding parcels' diagrams

Per ilot

By the Contractor

- Submission to the Direction of Agriculture of the Nomos

By the Contractor

HELLENIC MINISTRY OF AGRICULTURE

CONSOLIDATION PHASE

Assignment of the Technical Support of the project to Technical Consultant

- Technical Specifications already implemented
- Invitation to Tender is about to be processed and completed

HELLENIC MINISTRY OF AGRICULTURE

CONSOLIDATION PHASE

Objective of the Project*

Technical Support to The Ministry of Agriculture - national + regional level

- Organization and project management
- Quality Control of the project
- Consolidation of GIS and the alphanumeric database

* As it is stipulated in the technical specifications

HELLENIC MINISTRY OF AGRICULTURE

CONSOLIDATION PHASE

Technical Consultant's Obligations*

- Brief and objective evaluation of the progress status of the project
- Systematic follow-up of each Contractor's works – Monthly progress reports - Submission to KEMAE
- Suggestion to the KEMAE (for correctional measures or penalties imposition, when the contractors don't satisfy their contractual obligations

* As they are stipulated in the technical specifications

HELLENIC MINISTRY OF AGRICULTURE

VALIDATION OF THE GIS

Technical Consultant's Obligations*

- Suggestion to the KEMAE for an effective way to implement and keep the Registers updated
- Compilation of Technical Specifications concerning the forms and the construction of the delivered archives

→

- Reassurance of homogeneity
- Reassurance of compatibility with GIS and DBs of the MIN AGR

* As they are stipulated in the technical specifications

HELLENIC MINISTRY OF AGRICULTURE

VALIDATION OF THE GIS

Technical Consultant's Obligations*

- Homogenize all the delivered digital archives
- Input of these archives to the GIS and the DBs of the MIN AGR
- Seamless link between these archives and the existing graphical reference map, the IACS and the Growers' Register
- Quality Control
  - Complement check: *Full correlation between the analogical data and the digital files*
  - Quality check: *Compatibility of the digital archives with the GIS and the DBs of MIN AGR*

* As they are stipulated in the technical specifications

HELLENIC MINISTRY OF AGRICULTURE

VALIDATION OF THE GIS

Duration of the Technical Consultant's work*

- Up to 6 months after the end of the Contractor's works
- Possible date of work termination: **31-12-2003**

* As it is stipulated in the technical specifications

EUROPEAN COMMISSION
DIRECTORATE GENERAL JRC
JOINT RESEARCH CENTRE - ISPRA
Institute for Protection and Security of the Citizen
MARS Unit

Development and implementation of the GIS system at national and regional level

Session 4 - Internet application to access public layer of information (orthophoto + cadastral maps) in Spain, *by D. Luis Delgado, MAPA*

M. Delgado presented the Internet application which is currently available on the MAPA Internet site at: **www.mapya.es** *. At the moment only cadastral parcels and orthophotos coverage is available, without declarative information but it is planned in the future a secure access with password restricted to the producers.*

Session 4 - Presentation of the Internet application to access GIS data in Italy, *F. Smania, consultant for AGEA*

F. Smania is consultant for AGEA for IACS and GIS registers issues. He presented the Italian Internet application which makes available to access Olive GIS in all local offices. It should be also possible for Italian producers in a near future to submit directly their application by Internet.

EUROPEAN COMMISSION
DIRECTORATE GENERAL JRC
JOINT RESEARCH CENTRE - ISPRA
Institute for Protection and Security of the Citizen
MARS Unit

Session 5: Validation of the GIS and future developments

Session 5 - Progress in the field of orthophotos and new sensors, *Simon Kay, Peter Spruyt, MARS Unit (IPSC, JRC Ispra)*

Summary

Simon Kay is responsible for IACS and geomatic issues in the MARS Unit at the JRC. He first recalled the situation 6 years ago (Baveno November 1996) when the digital orthophotos were new and trend to a better spatial resolution was quite promising. The purpose of this presentation was to overview the new 'state of the art' techniques:

(i) The first area of improvement relates to flight control with flight planning and flight execution tools.

(ii) INS (Inertial Navigation System) + GPS should improve the knowledge of position parameters and improve the tie-point extraction. With the short-term use of EGNOS system (2004) 1m 95% position accuracy of GPS and GLONASS data are announced which should improve airborne data acquisition.

(iii) Digital camera (ADS40, DLR camera) should definitely improve the quality and reduce cost and time compared to analog systems.

(iv) DTM extraction: with the new technique of airborne laser scanner (such as Leica Geosystem ALS40) based on LIDAR principle laser emitted and backscattered signals are combined to GPS and inertial and measurement unit systems to generate a very dense XYZ coordinates cover.

(v) New space sensors provide now Very High Resolution images (Ikonos, Quickbird) but the question is now the availability, timeliness and cost-competitiveness compared to orthophotos.

(vi) There were dramatic improvements in the field of photogrammetric scanners: 12 bit dynamic range will improve radiometric quality (DSW500, Vexcel 5000, Photoscan 2002…). To data with fasters computers, cheaper memory and storage capacity, it is possible to improve scan resolution. With a 10µ scan it is possible to generate 50 cm pixel size orthophotos, which is the cheapest way to improve the identification of olive trees.

(vii) Wavelet compression techniques will improve the storage and access to large images

(PowerPoint presentation)

Progress in the field of Orthophotos and new sensors

Peter Spruyt, Simon Kay
MARS unit

Outline

- Rationale for change
- Topics presented:
  - Flight management
  - Camera
  - GPS/INS
  - Scanners
  - Storage and wavelet compression
    - Won't cover: aerotriangulation, orthorectification
- Segment covered

  ➔Data acquisition (flight) through to product delivery

Rationale

Spain	CAPI'd + VI		CAPI not VI		VI not CAPI		*of which young*	
	Sensitivity		PVP					
Cat 1	11 071	87.4%	422	96.3%	1 602	12.6%	*648*	*5%*
Cat 2	25 91[illegible]	85.5%	4 040	86.5%	4 379	14.5%	*3 569*	*12%*
Cat 3	12 261	60.8%	3 785	76.4%	7 919	39.2%	*2 112*	*10%*
Cat 4	0	0%	0	n/a	1 229	n/a	*1 083*	*88%*

Italy	CAPI'd + VI		CAPI not VI		VI not CAPI		*of which young*	
	Sensitivity		PVP					
Cat 1	5 819	53.2%	631	90.2%	5 117	46.8%	*1 426*	*13%*
Cat 2	9 439	59.1%	2 165	81.3%	6 538	40.9%	*2 000*	*13%*
Cat 3	12 669	50.2%	2 620	82.9%	12 569	49.8%	*2 708*	*11%*
Cat 4	0	0%	0	n/a	474	N/a	*224*	*47%*

Portugal	CAPI'd + VI		CAPI not VI		VI not CAPI		*of which young*	
	Sensitivity		PVP					
Cat 1	1 752	63.8%	142	92.5%	995	36.2%	*161*	*6%*
Cat 2	9 895	68.9%	2 571	79.4%	4 457	31.1%	*1 913*	*13%*
Cat 3	5 584	48.3%	1 765	76.0%	5 975	51.7%	*717*	*6%*
Cat 4	0	0%	0	n/a	1 250	n/a	*348*	*28%*

Tests: standard OLISTAT CAPI results

→CAPI results based upon raw data sample plot data

- CAPI was assisted by automated count
  - →*but post-count editing also!*
- population of 2000 plots CAPI'd and visited
- not tree by tree verification

zone Jaén	*Category 1*	*Category 2*	*Category 3*	*Category 4*
Producer's Accuracy (Omission statement)	95.3%	89.8%	62.6%	*200 trees/43 SSUs*
User's Accuracy (Commission statement)	97.2%	88.5%	69.9%	n/a

zone all Spain				
Producer's Accuracy (Omission statement)	88.9%	86.3%	43.4%	*1080 trees/374 SSUs*
User's Accuracy (Commission statement)	96.9%	86.2%	76.2%	n/a

Rationale

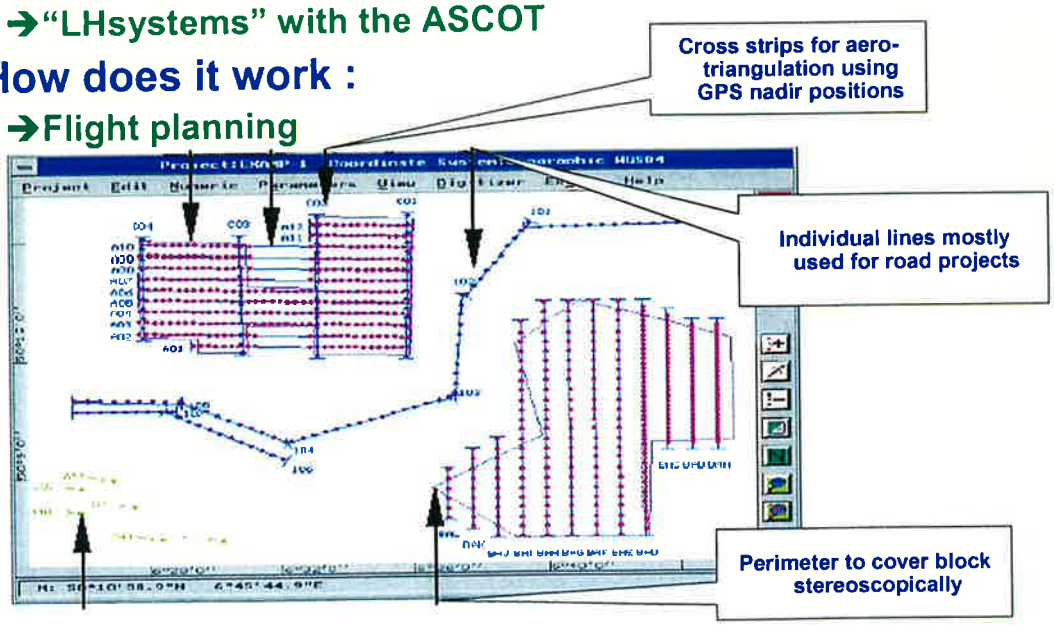
- **Specification for future work**
  - → Current project 1/40.000 scale, 1m pixel
  - → Main constraints made for reasons of economy
    - Data volume
    - Technology
- **Limitations – CAPI?**
  - Portuguese experiment?
  - SCOT table of improvements?
- **New "state of the art" techniques**
  - → Is it feasible to change :
    - Scale of flight ?
    - Scan-resolution ?
    - Emulsion (B/W or Color) ?
    - Data acquisition system ?

- Flight planning
- GPS/INS
- Camera
- Scanners
- Storage and wavelet compressions

- Flight planning
- GPS/INS
- Camera
- Scanners
- Storage and wavelet compressions

Flight control

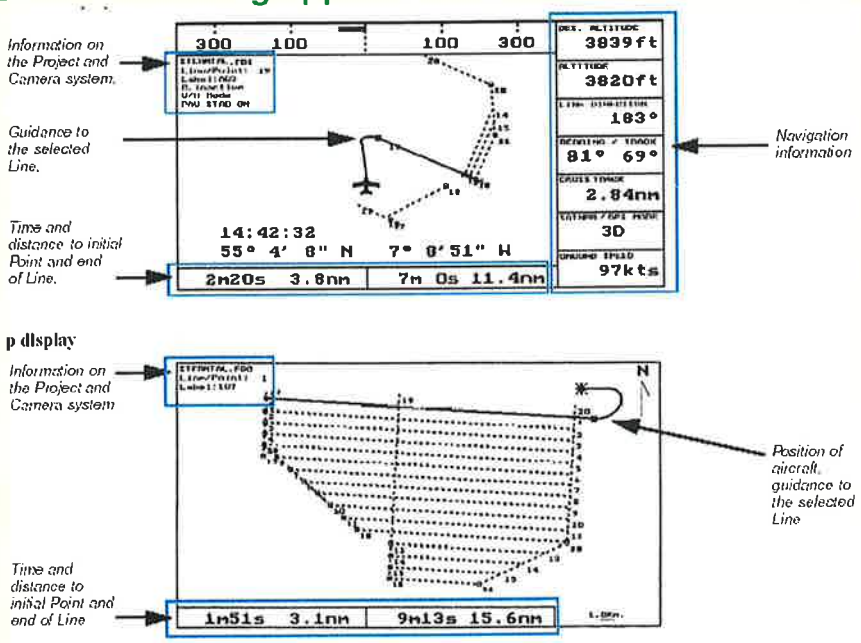
- **Main vendors are :**
  - ➔"Ziimaging" with the Aerial Camera system
  - ➔"LHsystems" with the ASCOT
- **How does it work :**
  - ➔Flight planning



Flight control

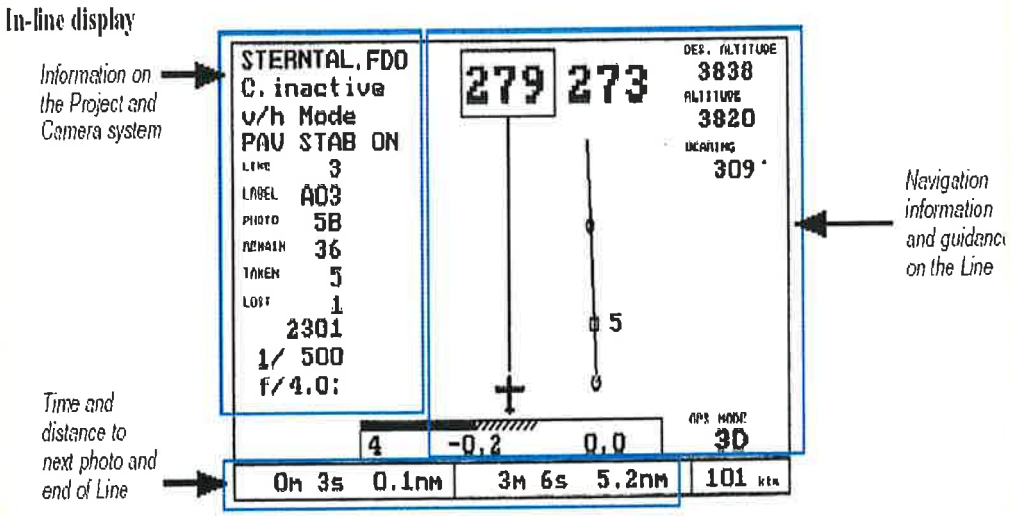
• Flight execution

➔Guidance during approach and turns



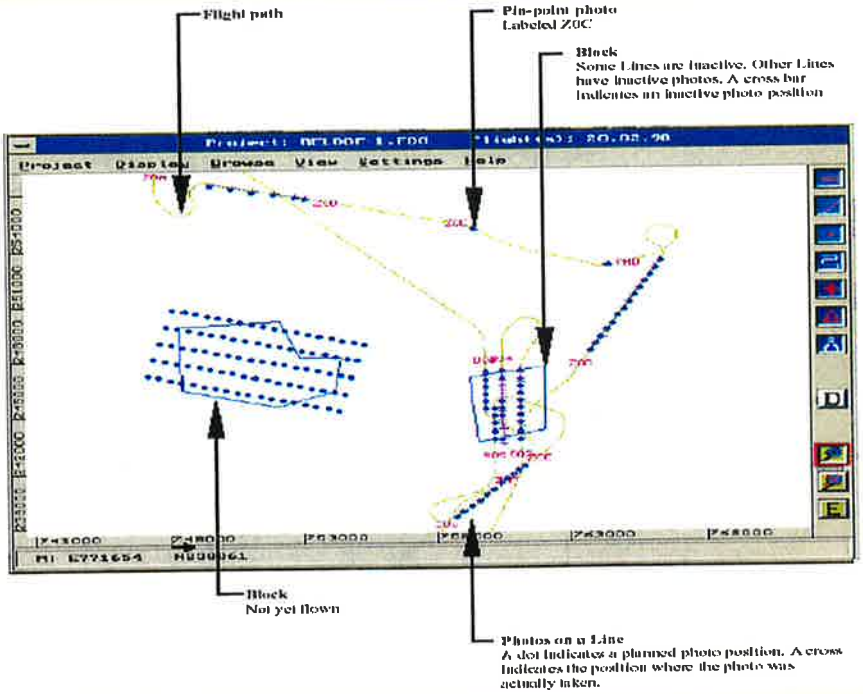
Flight control

➔Guidance once on photo line



Flight control

➔Graphical display of an example



- Flight planning
- GPS/INS
- Camera
- Scanners
- Storage and wavelet compressions

- Flight planning
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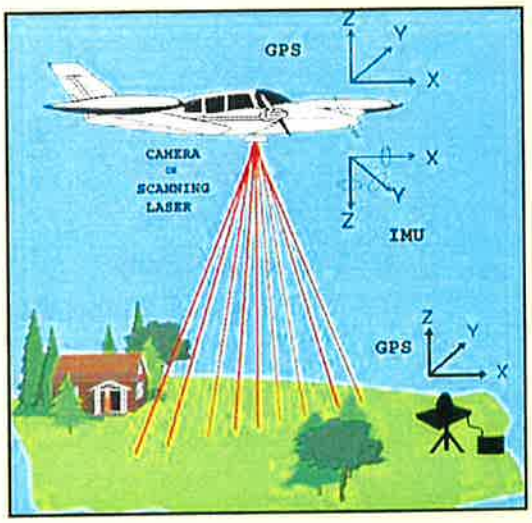
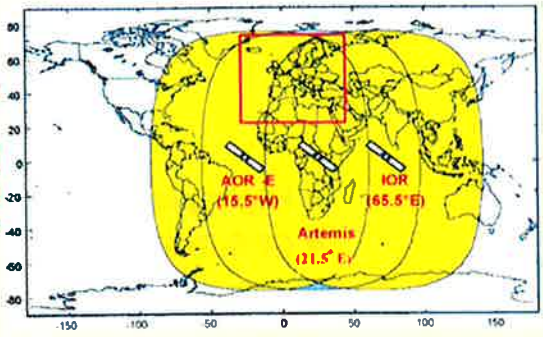
INS/GPS

- Inertial navigation system + GPS
  - →INS is still rather expensive (Applanix system)
  - →Position and orientation solution for airborne surveying
  - →Smoother aero-triangulation
  - →Knowledge (with certain accuracy) of "Fi, kappa, omega + x,y,z position of nadir" makes automatic tie-point extraction more easy
  - →Less blunders, less editing of automatic tie-point extraction results
  - →Control points reduced



INS/GPS

- **EGNOS**
  - ➔Consists of three geostationary satellites and a network of ground stations
  - ➔ EGNOS will transmit a signal containing information on the reliability and accuracy of the positioning data sent out by GPS and GLONASS.
  - ➔1m 95% position accuracy announced .



  - Joint project of the European Space Agency (ESA), the European Commission (EC) and Eurocontrol
  - EGNOS will become fully operational in 2004.

- **Main advantage for airborne data acquisition:**
  - ➔Designed for aircraft systems
  - ➔reduced reliance on ground stations
  - ➔Increased reliability

- Flight planning
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- Flight planning
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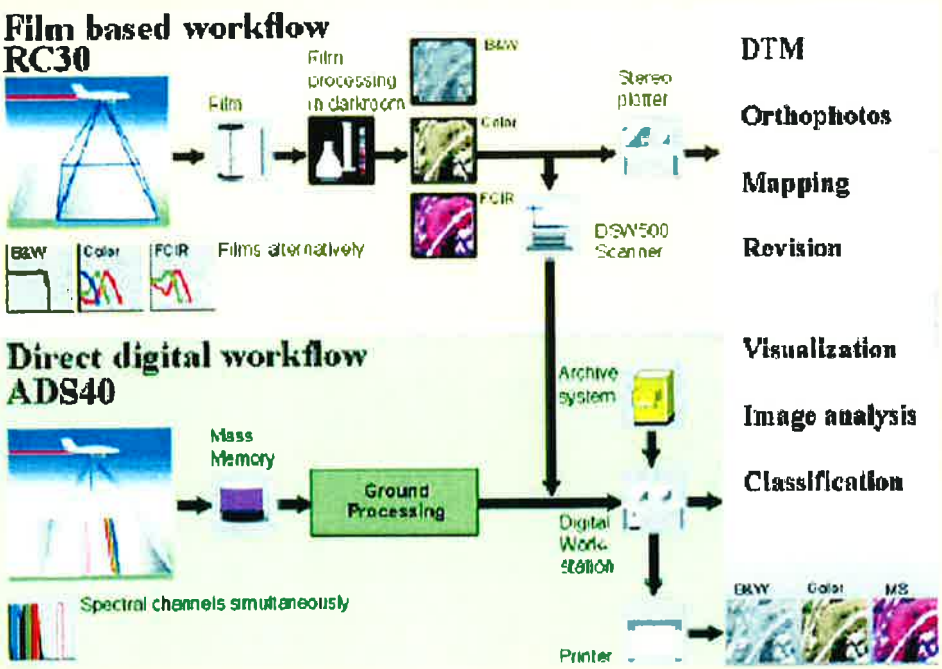
Digital camera

- **Advantages**
  - → **Cost saving**
    - No film
    - No photo lab
    - Better automation
    - Additional photo flight days
  - → **time saving**
    - highly automatic workflow
    - no photo lab
    - no scanning
  - → **higher quality**
    - radiometric resolution
    - radiometric accuracy
    - reproducible color
    - spatial accuracy
    - in-flight image control
  - → **new applications**
    - new kind of information multi-spectral
    - quick results within a short time
    - multimedia

Digital airborne camera

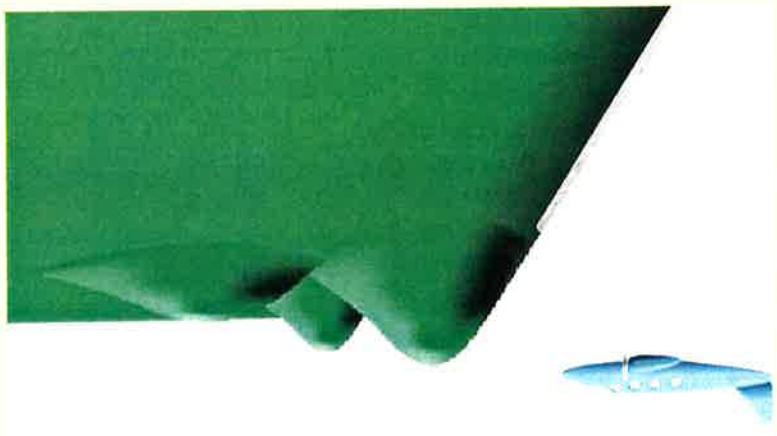
Analog versus digital



New sensor techniques

- **Airborne**
  - ➔Digital photogrammetric cameras
    - push broom
      - DLR camera operational via ISTAR company
      - ADS40 (Leica) : airborne digital sensor
    - CCD matrix sensor
      - DMC (ziiimaging) : digital mapping camera

ADS40



DTM extraction

- **Accuracy of conventional ortho-rectified images are dependable on the quality of the DTM**
- **Main advantage**
  - High precision
  - DTM on ground level and not on canopy level.
- **Applications:**
  - bare earth digital terrain models (DTMs)
  - forestry and engineering
  - corridor mapping for utilities, coastal and riverine studies
  - urban modeling

Leica Geosystems
ALS40 AIRBORNE LASER SCANNER

DTM extraction

➔LIDAR principle

- As the aircraft flies across the project area, laser pulses are emitted with high rapidity towards the ground.
  - These are reflected by the ground and/or objects
  - For each pulse the elapsed time between the emitted and returning signals is measured, which enables a slant distance to be computed.
  - At the same time, the position and attitude of the aircraft are measured with airborne GPS and inertial measurement unit (IMU) sub-systems.
- Data is combined to generate an XYZ coordinate of a point on the ground.
- As the mission progresses, millions of such points are captured, providing a dense digital terrain model (DTM).

➔Cost?

New space sensors

- **Ikonos**
  - Products (swath 11 km)
    - 1-meter Panchromatic (Pan)
    - 4-meter Multispechtral (MS)
  - Claimed accuracies for ortho-rectified products
    - Pro
      - →*This product has Horizontal Accuracy of ±10 meters (CE 90%) and meets 1:12,000 Map Accuracy Standards.*
    - Precision
      - →*This product is produced with the use of Ground Control Points (GCPs), has a ±4 meter horizontal accuracy (CE 90%) and meets 1:4,800 Map Accuracy Standards.*

➔**Availability?**

- **Quickbird**
  - Panchromatic
    - 0.61 m at nadir
    - 0.72 at 25 degrees of nadir
  - Multispectral
    - 2.44 at nadir
    - 2.88 at 25 degrees of nadir
  - Specification: 1:10,000 8.3-m (27.2-ft) 5-m (16.4-ft)
    - Ortho availability?
    - Timeliness?
    - Coverage?
    - Cost – competitive?

- Flight planning
- GPS/INS
- Camera
- Scanners
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Photogrammetric scanners

- **Relevant scanner technical considerations**
  - ➔ **Geometric accuracy**
    - For most manufacturers the geometric accuracy of 2 Micron is the limit which can be achieved.
  - ➔ **Throughput**
    - Time per scan is important in a production environment
    - For example the Vexcel scanner has the following theoretical specs for throughput

Resolution [µm]	P III 500 MHz 256MB RAM			
	Black & White		Color	
	Scan Time [min:sec]	Scan Size [MB]	Scan Time [min:sec]	Scan Size [MB]
30.0	3:06	57	3:49	172
25.0	5:01	83	7:02	248
20.0	5:51	129	8:41	388
15.0	14:29	228	25:37	668
10.0	19:07	517	31:07	1,550

  - ➔ **Radiometric quality**
  - ➔ **Pixel size and available range of pixel sizes**
    - Important to check the dynamic range of the photogrammetric scanner
    - Scanners performing a 12 bit dynamic range will have better performance in shadow zones (more gray values)
    - Price

Photogrammetric scanners comparison

Company	LH Systems	Zi Imaging	Wehrli and Associates	ISM	Vexcel Imaging Austria
Model	DSW 300	SCAI	RM-2 Rastermaster	XL-10	UltraScan 5000
Technology	Square Array CCD Stare-Stepping Kodak Megaplus 1kx1k to 2kx2k	10,000 Linear Array CCD XY Scan Head 5632 active pixels	2k Linear Array TDI-CCD 96x2k pixels XY-Moving stage	3*8k Butted Linear Array CCD X-Moving stage	6k Linear Array CCD XY-Stitching
Radiometry					
Maximum Density			2.0D	2.4D	4.0D
Density Range	3.0D	3.0D	1.8D	2.3D	3.6D
Accuracy in DN	±1 to ±2	±1.5			±0.3 at 1D
Color					
Simultaneous RGB Color	No	Yes	No	Yes	Yes
Internal/Output Bits	10/8	10/8	12/8	10/8	16/8
Geometric Resolution					
Optical Resolutions	4 µm	7 µm	10 µm	10 µm	5 or 28.8 µm
Continuous Selection	No	No	No	No	Yes
Geometric Performance					
On-Line Calibration	No	No	No	No	Yes
Coordinate Accuracy	2 µm	2 µm	<4 µm	<3 µm	2 µm
Throughput					
Color	1.7 MB/s 12.5 µm	4 MB/s 7 µm	0.5 MB/s	0.73 MB/s 20 µm	8 mn 25 µm
Black & White	1.3 MB/s 12.5 µm	0.45 MB/s 14 µm	1.2 MB/s	0.37 MB/s 20 µm	18 mn 12.5 µm
Other					
Format in mm²	265 x 265	275 x 250	245 x 245	254 x 254	440 x 330
Roll film mounting	Yes	Yes	No	Yes	Yes
Operating System	Unix,NT	Unix, NT	NT	NT	NT/2000/XP

Photogrammetric scanners

www.topscanmodels.com

DSW500

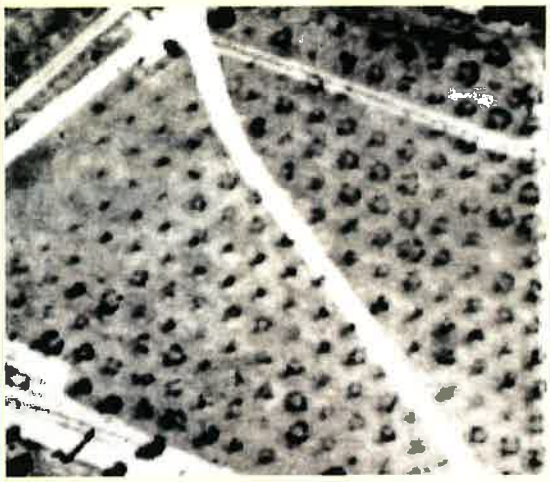
Vexcel5000

photoscan2002

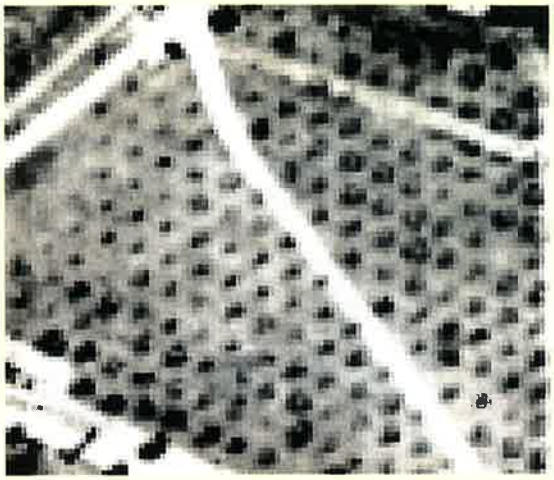
- **Scan-resolution**
  - Faster computers and cheaper memory and storage space removes restriction on the pixel and the file size.
  - Evaluation of project to optimize the relation between pixel-size and objects we want to identify
  - Limitation between scan-resolution and the grain of the film
- **Objects we want to identify are olive trees**
  - Performance of detection of trees better with a 50 cm pixel
    - File size becomes 4 times higher !
    - Evaluation if this is worth-while

- Olive trees

10 micron scan



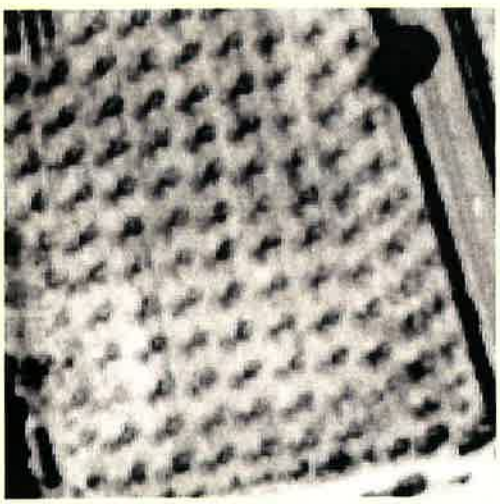
20 micron scan



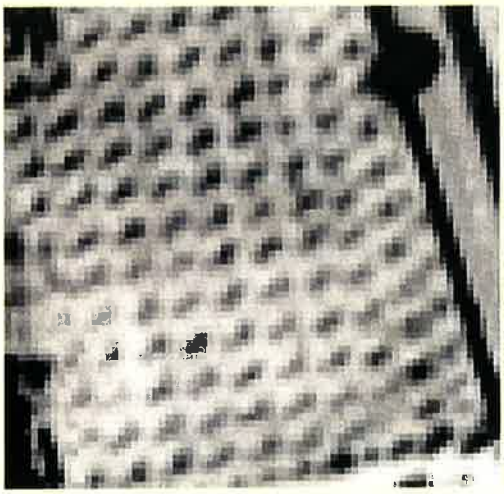
OLISIG expert Meeting
18-19 June 02 , Ispra, Italy

- Olive trees

10 micron scan

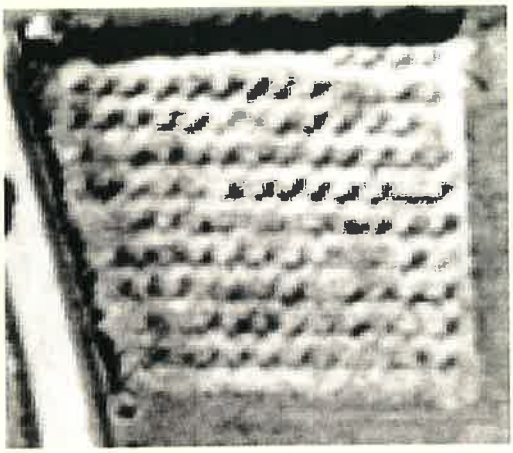


20 micron scan

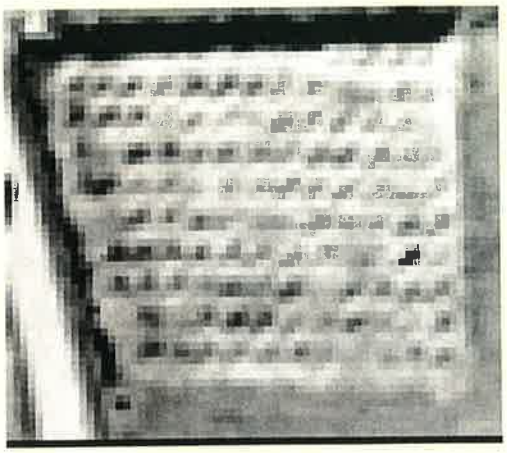


- **Olive trees**

10 micron scan

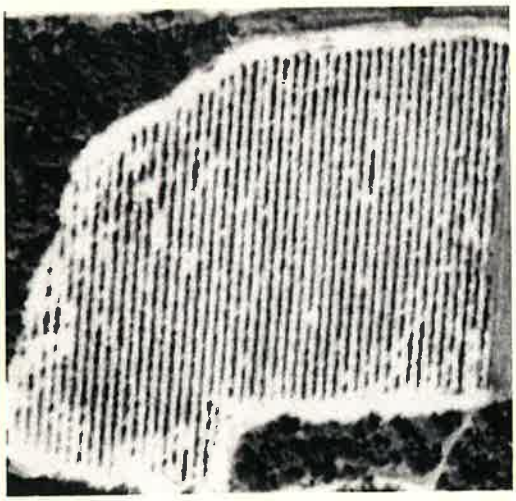


20 micron scan

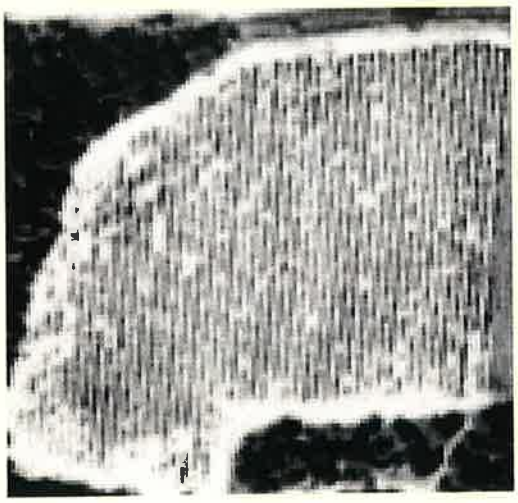


- **Vineyards**

10 micron scan



20 micron scan



Conclusion, scanning

- Identification of olive trees appears easier
- Images "easier on the eye"
  - Advantages for farmer interaction
- Even when images are 4 times bigger for a 50 cm pixel, the advantages are clear

- Flight planning
- GPS/INS
- Camera
- Scanners
- Storage and wavelet compressions

- Flight planning
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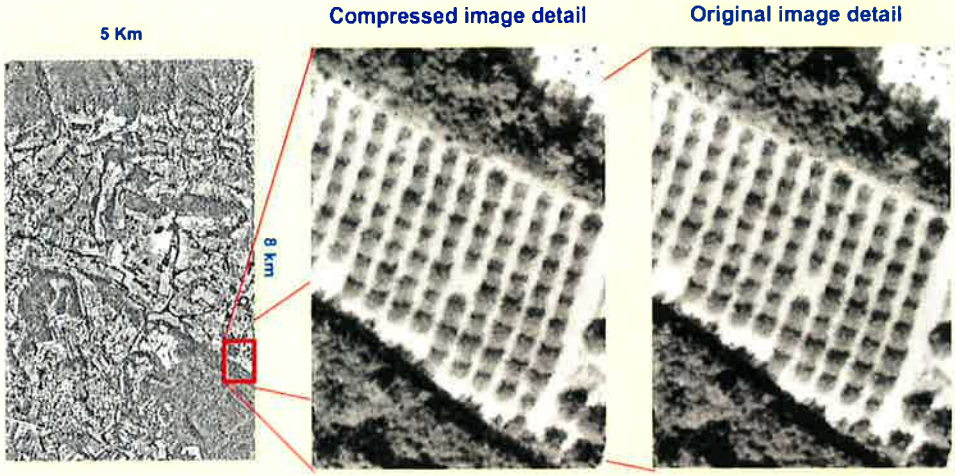
Wavelet compression technique

- **Lossy compression.**
  - → In principle, loss of image information
  - → Compromise between quality and image size
    - Speed, image quality preservation (radiometric, geometric)
- **2 main providers of wavelet compression utilities**
  - → Mr SID (http://www.lizardtech.com/)
  - → ECW (http://www.ermapper.com/)
    - Others (LuRaTech, Infinop, Summus,etc…)

Original Image = 152 Mbytes

Wavelet compressed image "factor 5" = 32.8 Mbytes



- **Conclusions, compression**
  - Loss of image content is limited for wavelet compression less then factor 5
    - 5 times less file size
  - Little profit in production environment (aero-triangulation, DTM collection ortho-rectification)
    - Original image should be kept, every loss of content can give negative impact on automatic correlation (ex.)
    - Furthermore better storage media and faster computers (so no need to compress in ortho-production environment)

➔Compressions are important and significant for processed data

- Transmitted over the internet (dissemination of imagery)
- Stored on handheld devices

Summary: Simon's personal view

- **Digital airborne technology**
  - → will become quickly competitive
    - already <100 €/km²
- **Scanner technology + compression**
  - → 50cm pixel size should be standard for next round of ortho products
- **Better INS/GPS (EGNOS) will**
  - → improve block geometry
  - → Increase efficiency/reduce costs

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Development and implementation of the GIS system at national and regional level

Internet application to access public layer of information (orthophoto + cadastral maps) in Spain, *by D. Luis Delgado, MAPA*

M. Delgado presented the Internet application which is currently available on the MAPA Internet site at: **www.mapya.es** *. At the moment only cadastral parcels and orthophotos coverage is available, without declarative information but it is planned in the future a secure access with password restricted to the producers.*

Presentation of the Internet application to access GIS data in Italy, *F. Smania, consultant for AGEA*

F. Smania is consultant for AGEA for IACS and GIS registers issues. He presented the Italian Internation application which makes available to access Olive GIS in all local offices. It should be also possible for Italian producers in a near future to submit directly their application by Internet.

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Session 5 - Quickbird features and examples and presentation of test cases on two Italian areas, *F. Smania, AGEA and Livio Rossi, Eurimage*

Summary

Livio Rossi works for Eurimage, and he presented the technical characteristics of the new Quickbird satellite which was launched on 18/10/01. There are two modes: Panchro with 0.61m pixel resolution and Multispectral (blue, red, green and IR bands) with 2.44 m pixel resolution with a possibility to fusion Panchro with colour band (bundle mode). Quickbird images cost 22.5$/km2. He showed examples where olive trees can be very well identified (clear center in the crown), which is due to better radiometric resolution (rather than geometric accuracy). The ideal scale is 1:5000.

F. Smania is consultant for AGEA for IACS and GIS registers issues. He presented examples of comparison between various types of images. On the same area it was possible to compare 1m orthophotos with Ikonos (1m) and Quickbird image: Ikonos is quite comparable to B&W orthophotos but there is no doubt that Quickbird improves significantly the identification of olive trees: it should be possible to better separate olive trees from other species, and maybe improve the identification of young plantation. However the question of availability and cost is still pending.

(PowerPoint presentation)

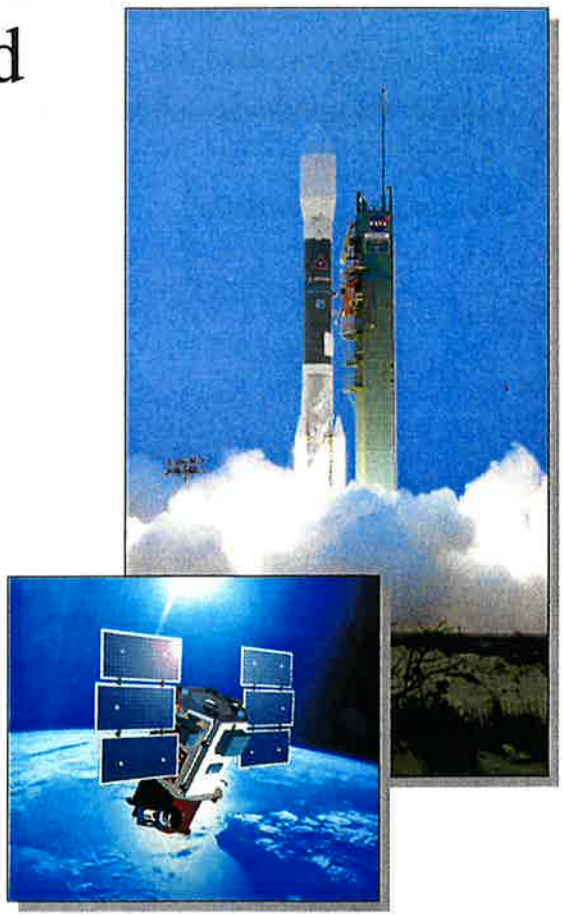
www.eurimage.com

QuickBird
Features and examples

Livio Rossi
rossi@eurimage.com

Quick Bird

- QuickBird was succesfully launched on the 18th October 2001 from Vandenberg Air Force Base, California on a Boeing Delta II launch vehicle
- It was placed in 98 degree inclination, polar, sun synchronous, low earth orbit (450 km)
- Highest performing satellite for civilian use



DIGITALGLOBE

QuickBird Specifications

- 0.61-meter panchromatic resolution (at nadir)

  450-900 nm (grayscale)

- 2.44-meter multispectral resolution (at nadir)

  450-520 nm (blue)

  520-600 nm (green)

  630-690 nm (red)

  760-900 nm (near IR)

  (standard products will be provided with 0.7 and 2.8-meter resolution; due to U.S. Government policy, all imagery over Israel will be resampled to 2 m)

- Radiometric dynamic range

  11 bit (2048 gray levels)

  (Landsat is 8 bit, 256 gray levels)

System Characteristics

	450 Km (walking orbit)
	93.6 min
	61 cm (nadir) 72 cm (25° off-nadir)
	16.5 Km (nadir) 20.8 Km (25° off-nadir)
	11 bit
	128 Gbit (approx. 57 scenes)
	approx. 4 days (0-25°) approx. 7 days (0-15°)

Remote Ground Stations (RGT)

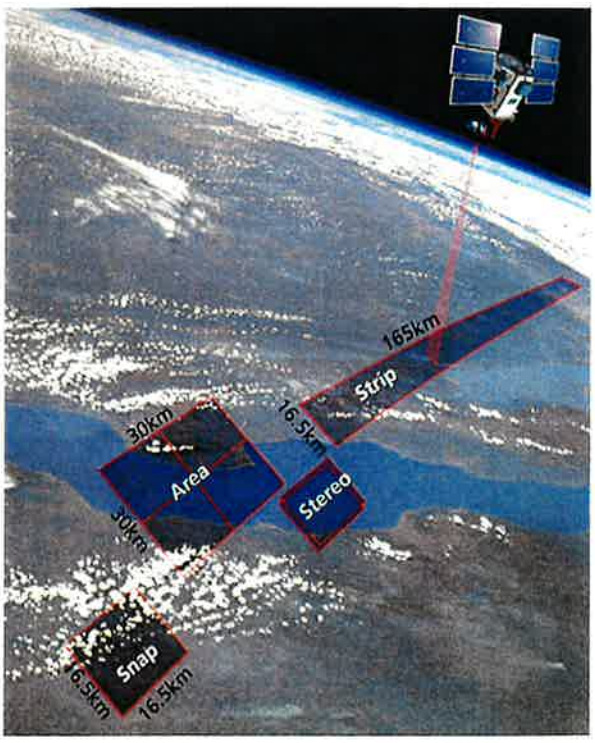
RGT Telemetry & Control (TCFE)

- Command & Telemetry processing
- Fairbanks (Alaska) and Tromsoe (Norway) Stations
- All the satellite orbits are collected (in some few cases visibility is too short to completely download on-board memory)

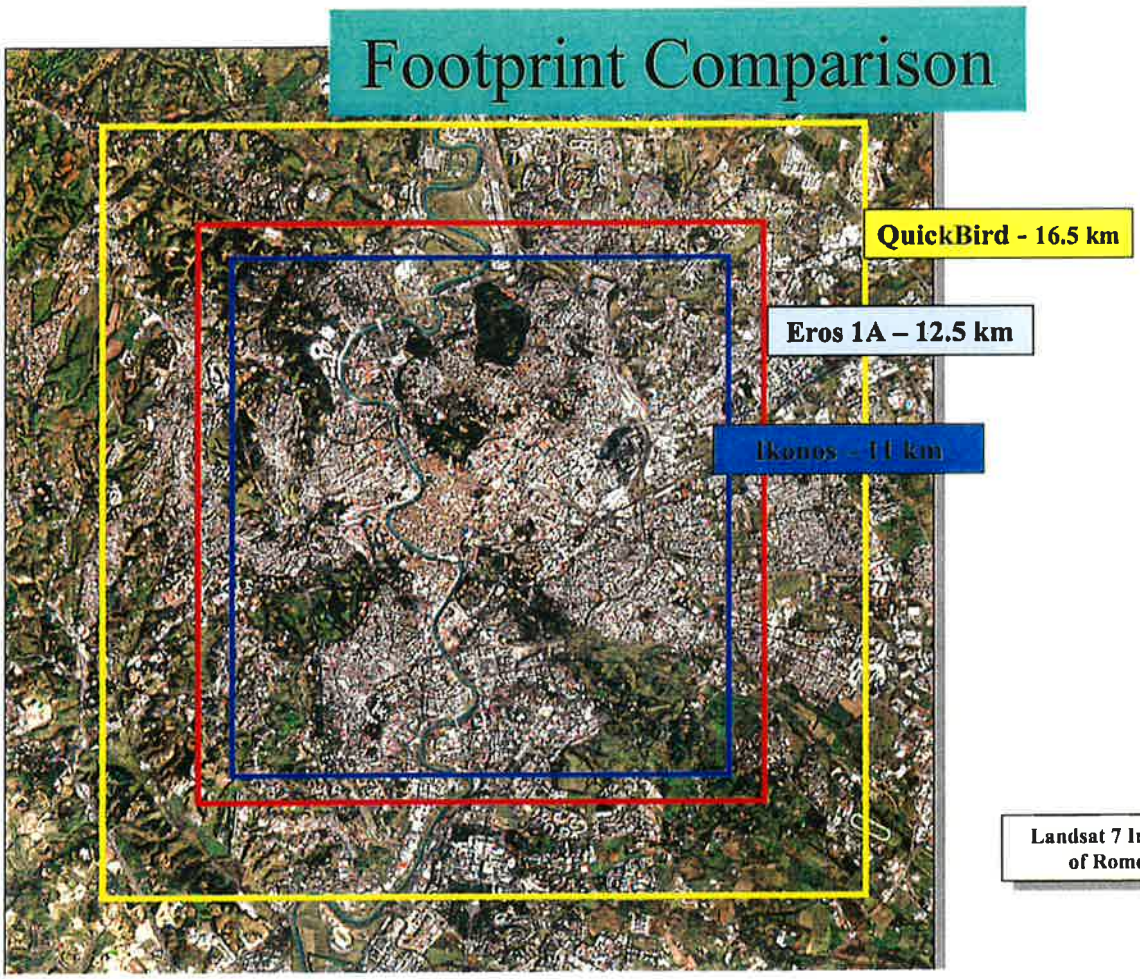
- RGT Antenna (for direct downlink)
  - X-Band receive
  - S-Band transmit

Quick Bird Acquisition Modes

- One SNAPSHOT (16.5 x 16.5 Km) is collected in 4 seconds and downlinked in 5-6;
- The acquisition in AREA mode allows collection of data over approximately a 30x30 Km area (4 overlapping snaps) in a single pass
- The STRIP mode allows collection of a strip parallel to the satellite track with a maximal length of 10 scenes (165 Km)
- STEREO mode allows collection of fore-aft 15x15 Km overlapping area



QuickBird Full Basic Image of Venezia, Italy, acquired 16th May 2002



Landsat 7 Image of Rome

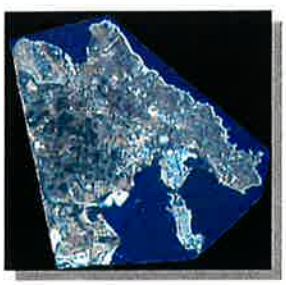
Current Spacecraft Comparison

	DIGITALGLOBE	SPACE IMAGING	ImageSat International
	450 Km	600 Km	480 Km
	0.61 m (from 0.61 m)	0.81 m (1 m)	1.8 m (1.8 m)
	16.5 Km	11 Km	12.5 Km
	128 Gbit	64 Gbit	Available
	PAN + 4 MS	PAN + 4 MS	PAN
	4.5 - 5 days (0.7 m res.)	2.5 – 3 days (1 m res.)	1.8 days (1.8 m res.)
	64 Km^2	100 Km^2	156 Km^2

QuickBird area based products

Order Polygon

Image Acquired



File Produced

Landsat 7 Image of Augusta (Sicily)

"Open Systems" approach

- Working with major Image processing software vendors to ensure data compatibility:
  - Image format
  - Bit depth
  - RPCs
  - Camera Model for orthocorrection
- Customers can use software of choice
- Additional vendors in progress

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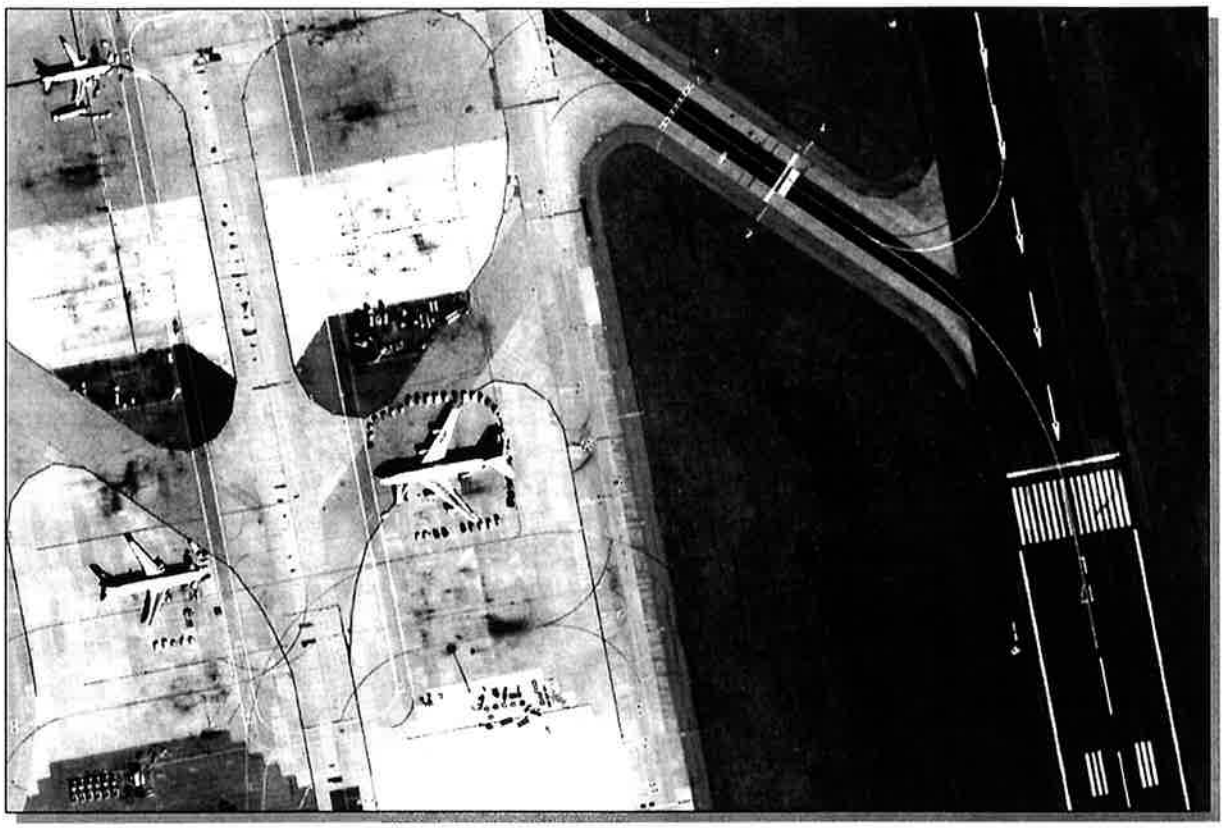
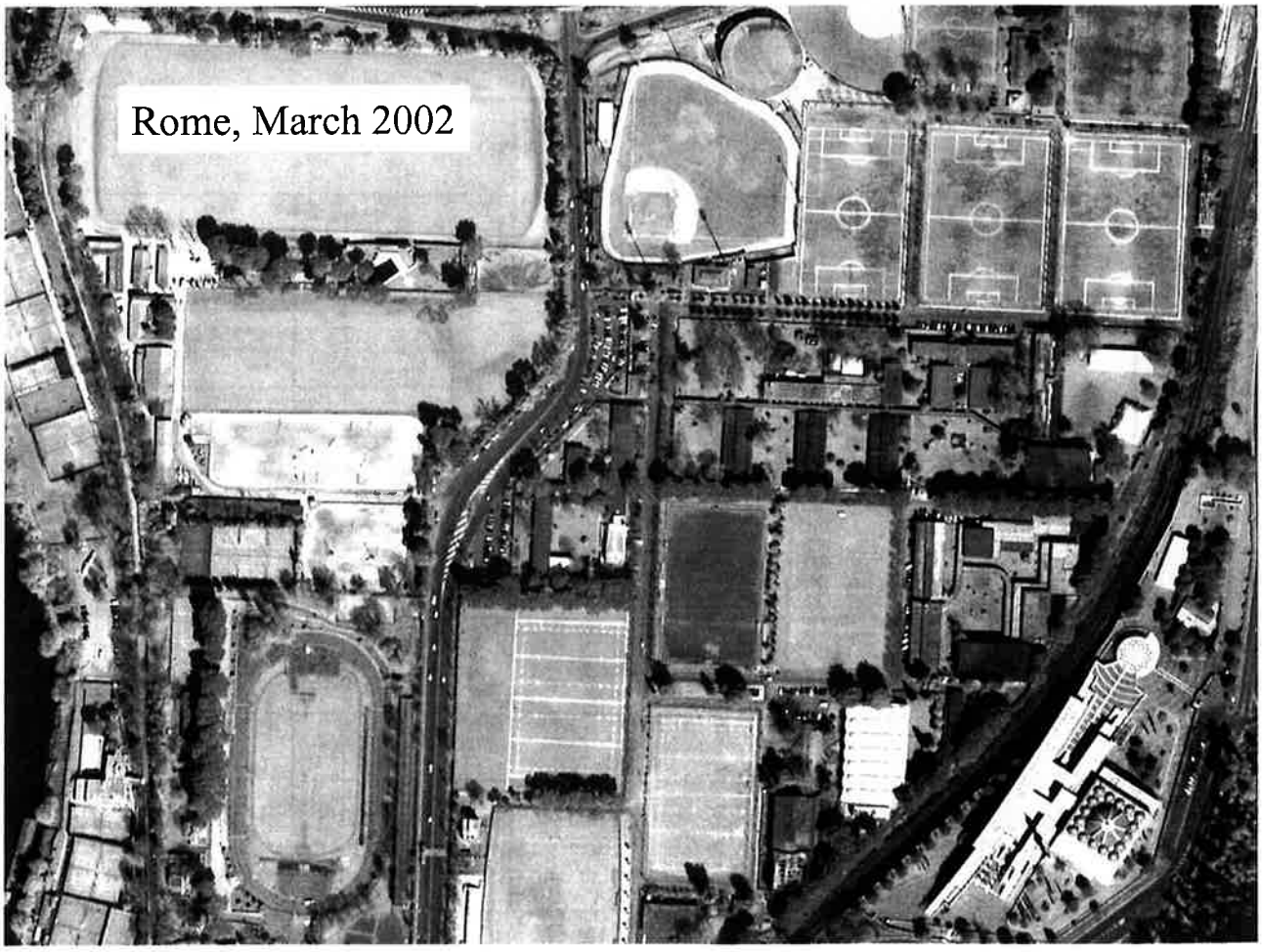
Optical data – indicative prices

Satellite		Price per Scene	Min Area	Min Cost
QuickBird Pan new acquisitions (0.7 m)		22,5 $	64 Km²	1,440 $
Ikonos Pan new acquisitions (1 m)	Ikonos USA	25 $	100 Km²	2,500 $
	Ikonos Eurasia	30 $	100 Km²	3,500 $
IRS Pan (5.8 m)	Full	0.51 €	4,900 Km²	2,500 €
	1/9	1.28 €	625 Km²	800 €
SPOT Pan (10 m)	Recent Archive	0.72 €	3,600 Km²	2,600 €
Landsat 7 (15/30 m) Basic	Full	0.02 €	32,400 Km²	600 €
	Quarter	0.07 €	8,100 Km²	550 €
	Mini	0.2 €	2,500 Km²	500 €

Malpensa (Italy), 25/3/2002: PAN, 0.7 m



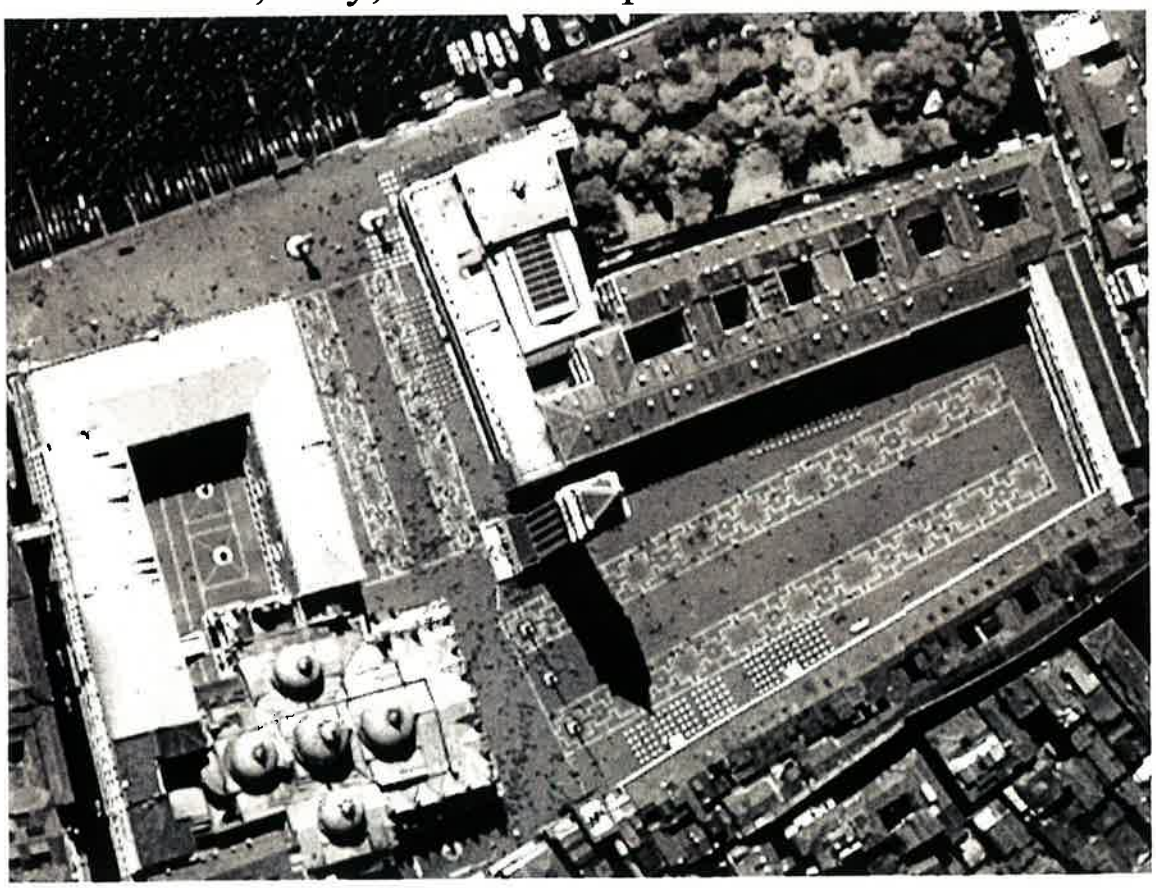


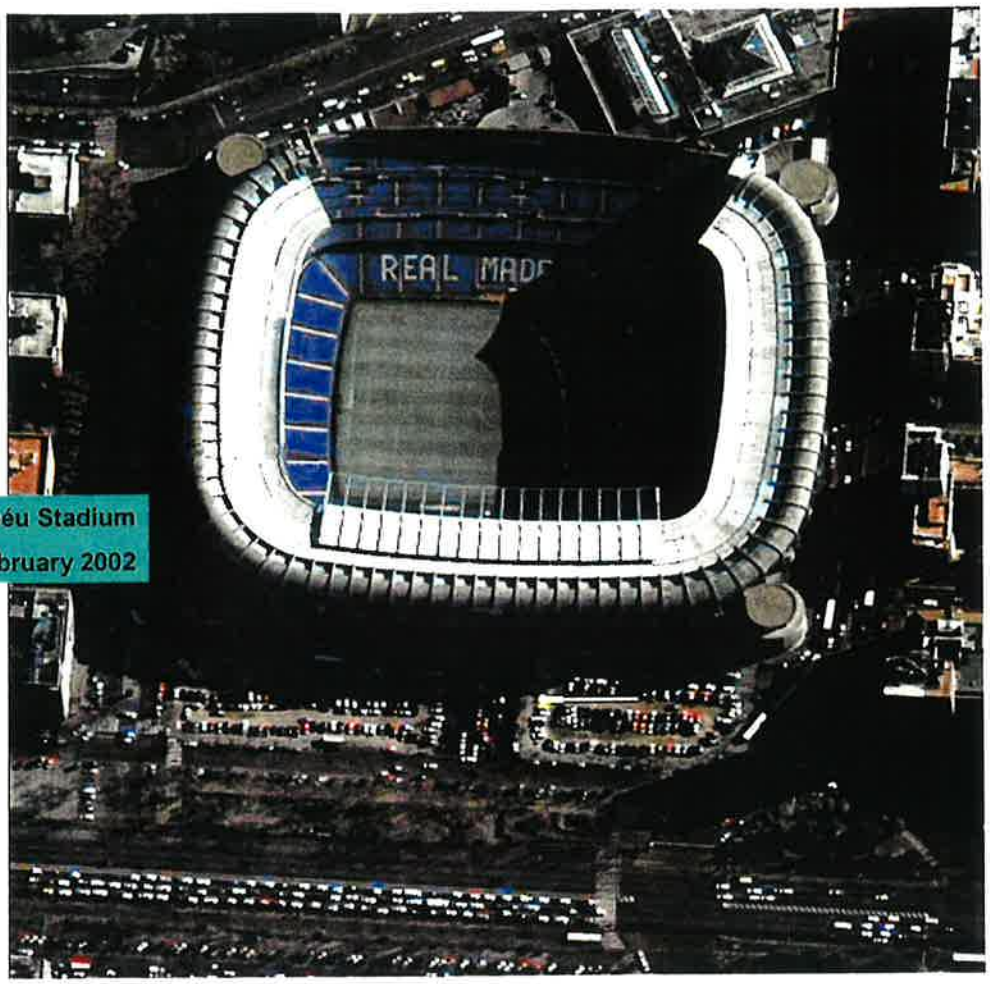
Laguna Veneta, Italy, 16/5/2002: MS 321, 2.56 m

Venezia, Italy, 16/5/2002: MS 321, 2.56 m

Venezia, Italy, 16/5/2002: PSM 321, 0.64 m

Venezia, Italy, 16/5/2002: pan 0.64 m





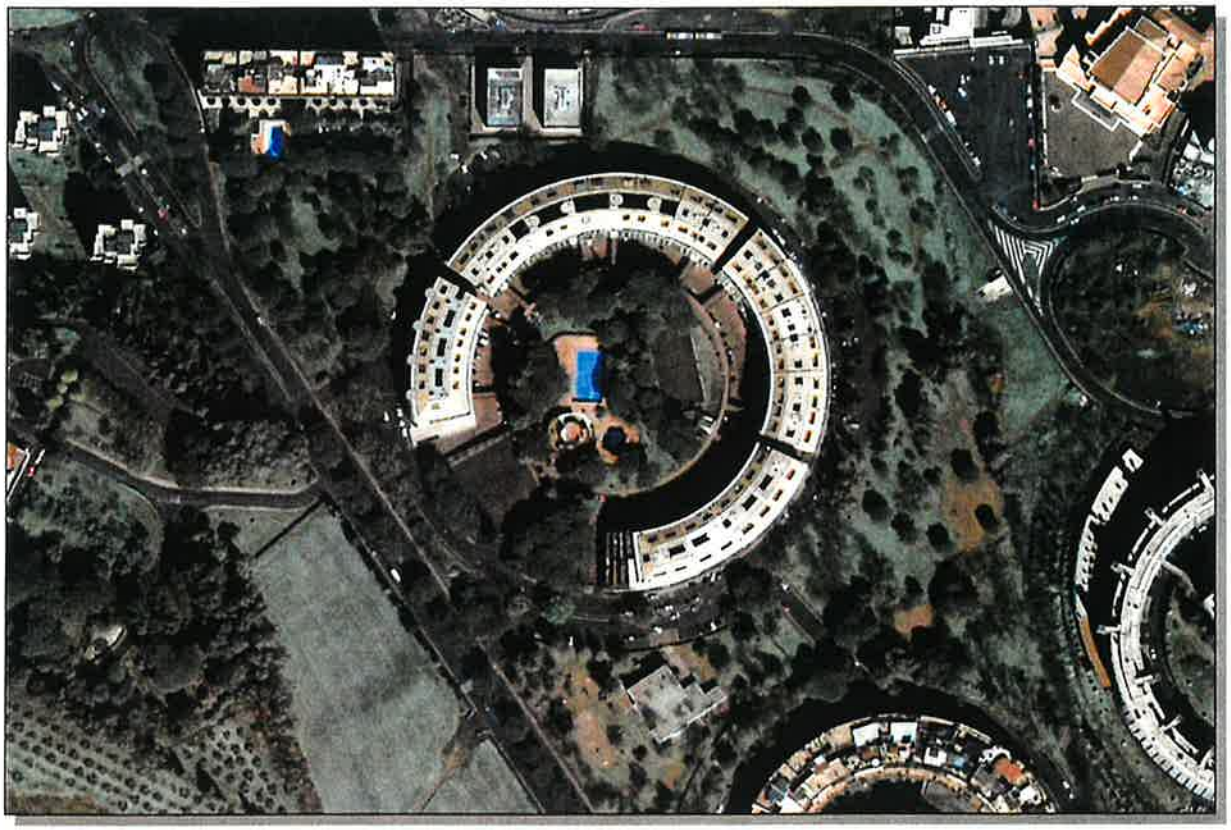
Santiago Bernabéu Stadium
Madrid, Spain, 8th February 2002

11 Bits for shadow detail

QB - 11 bits for shadow details

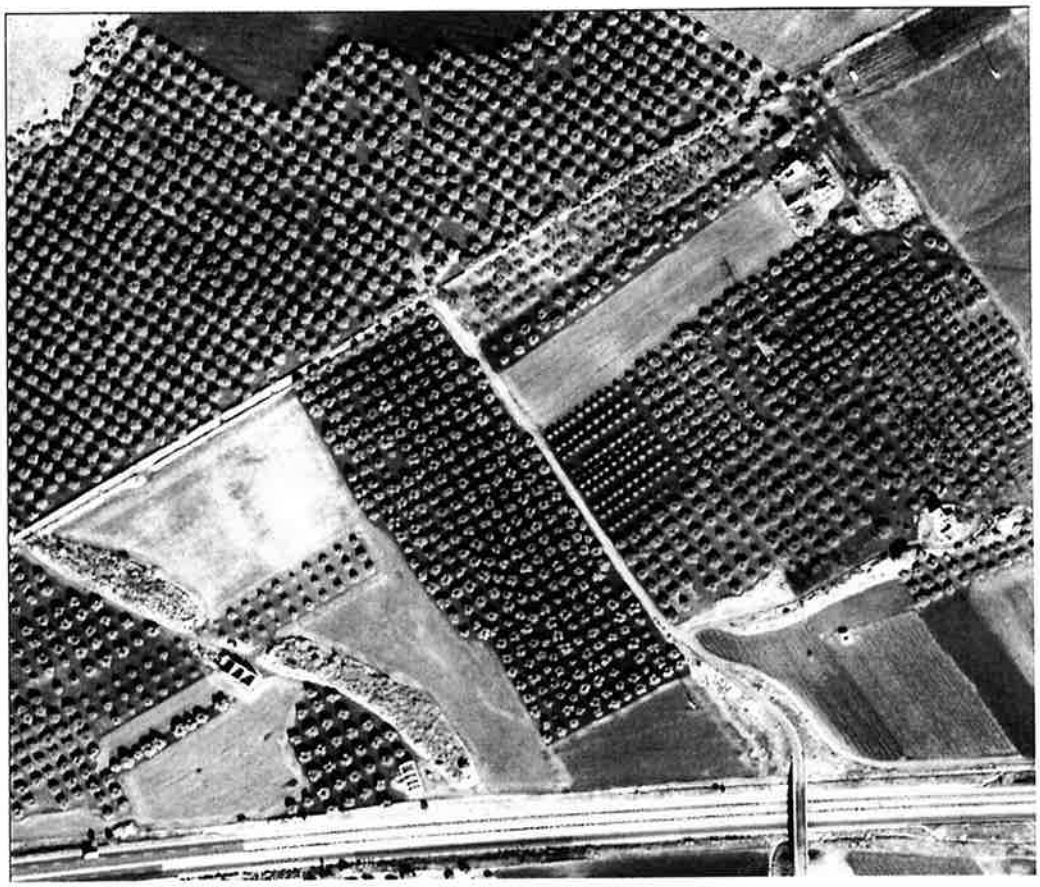
Rome, 23/3/2002: PAN, 0.61 m

Rome, 23/3/2002: PSM 321, 0.61 m

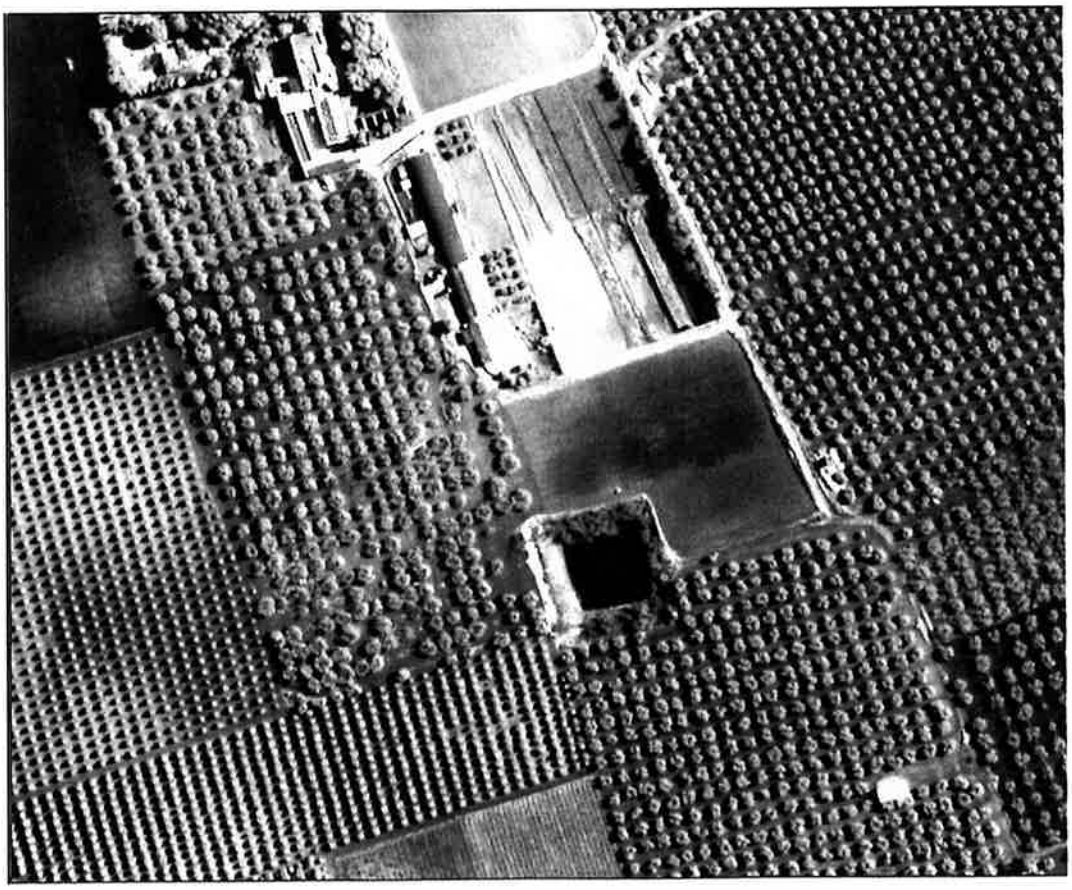


Rome, 23/3/2002: PSM 432, 0.61 m

Olives



New plantations



Milano
Prov.
Q.B.
2002

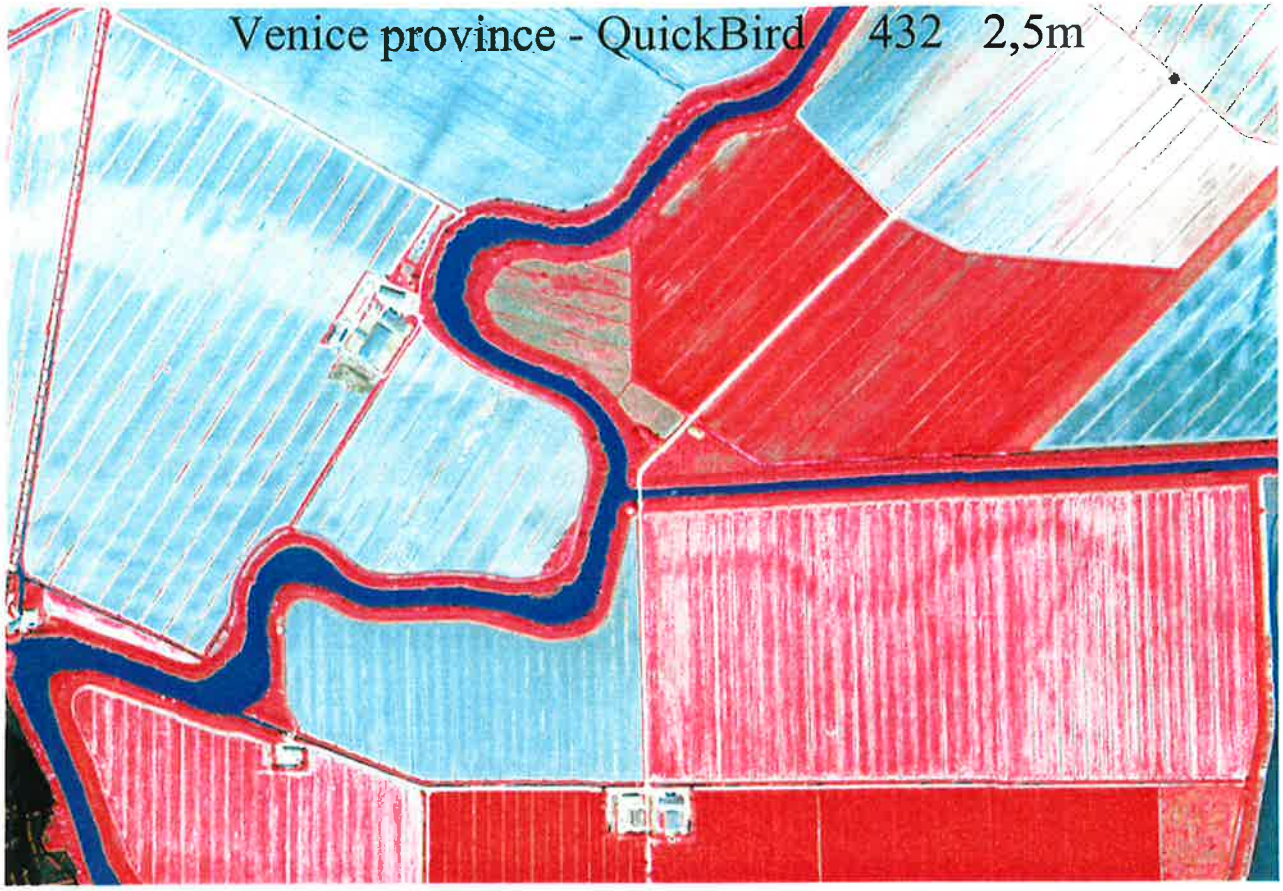
Electric.
poles
ENEL

Prov.
Pavia
Q.B.
2002

Telephone
poles

Prov.
Pavia
Q.B. 432
2002
2,4 m
paddies

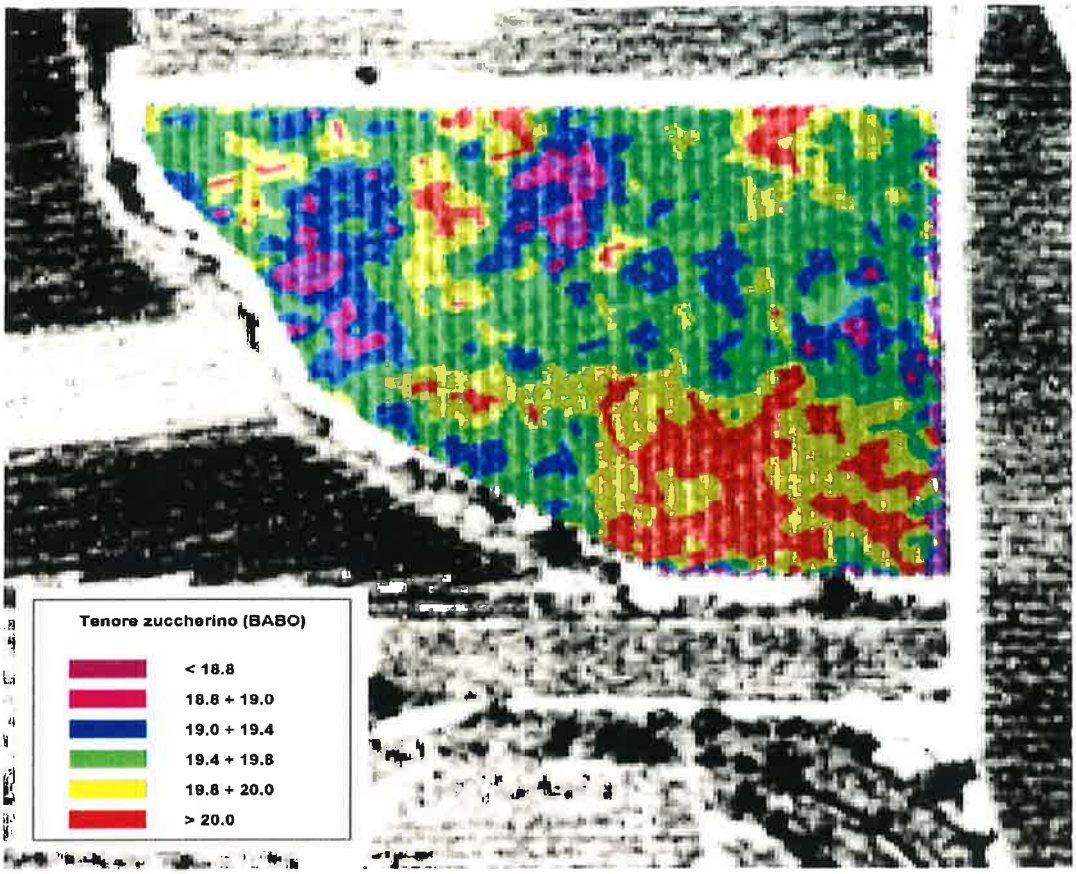
Venice province - QuickBird 432 2,5m



Salt extraction

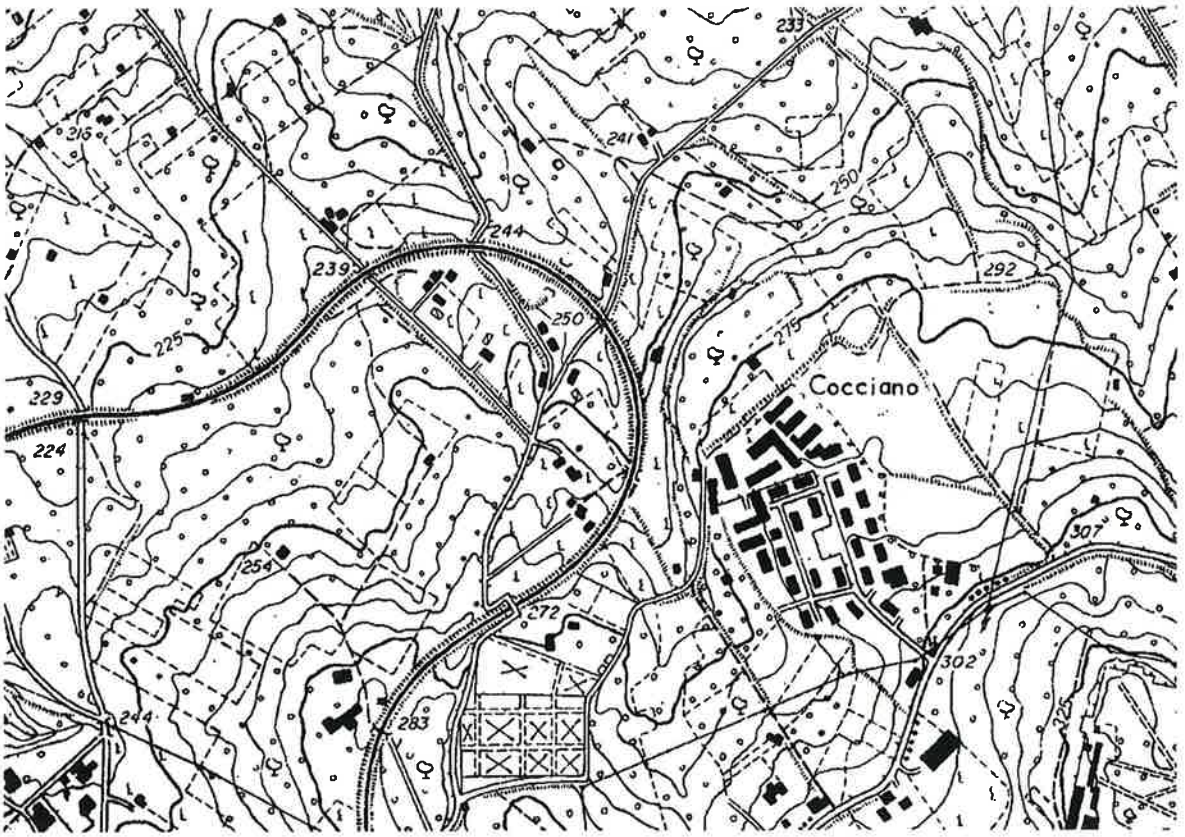
QuickBird at work
Cadastral map 1:2000 over QuickBird

Vineyars farming



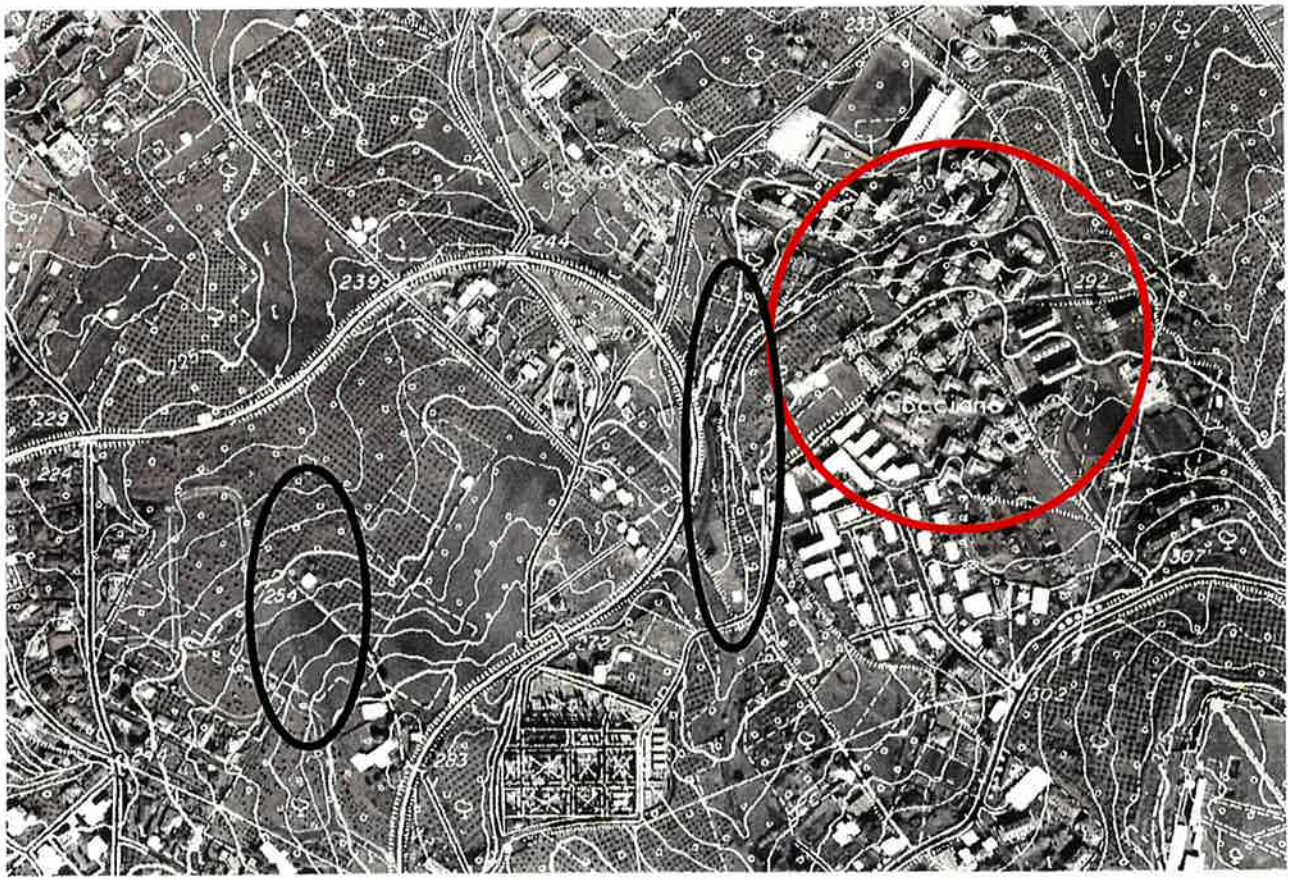
mappa del tenore zuccherino (mostimetro BABO) del vigneto 12 (cabernet sauvignon) ottenuta tramite analisi di correlazione tra i dati satellitari ed i dati di campagna

QuickBird at work



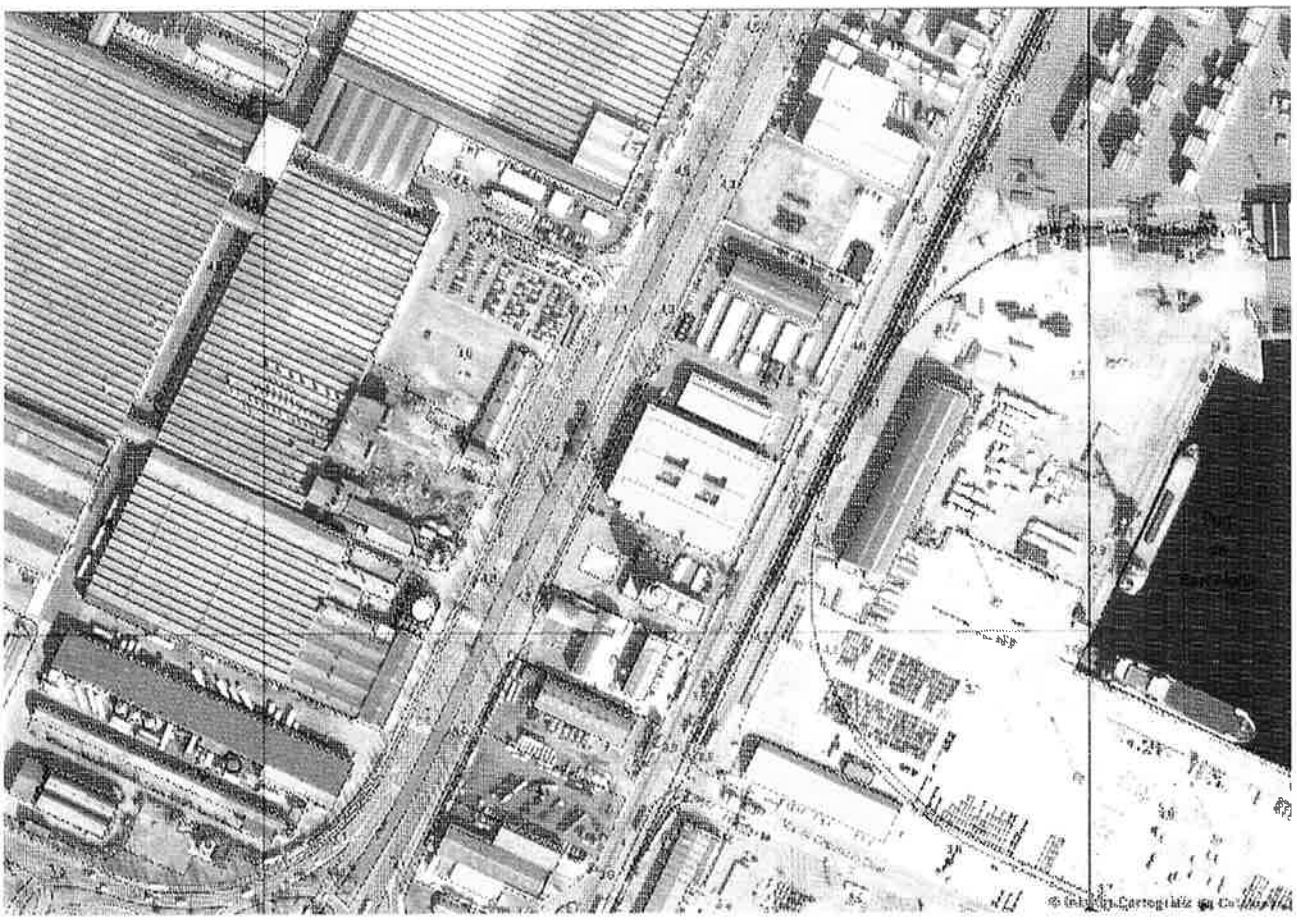
QuickBird at work

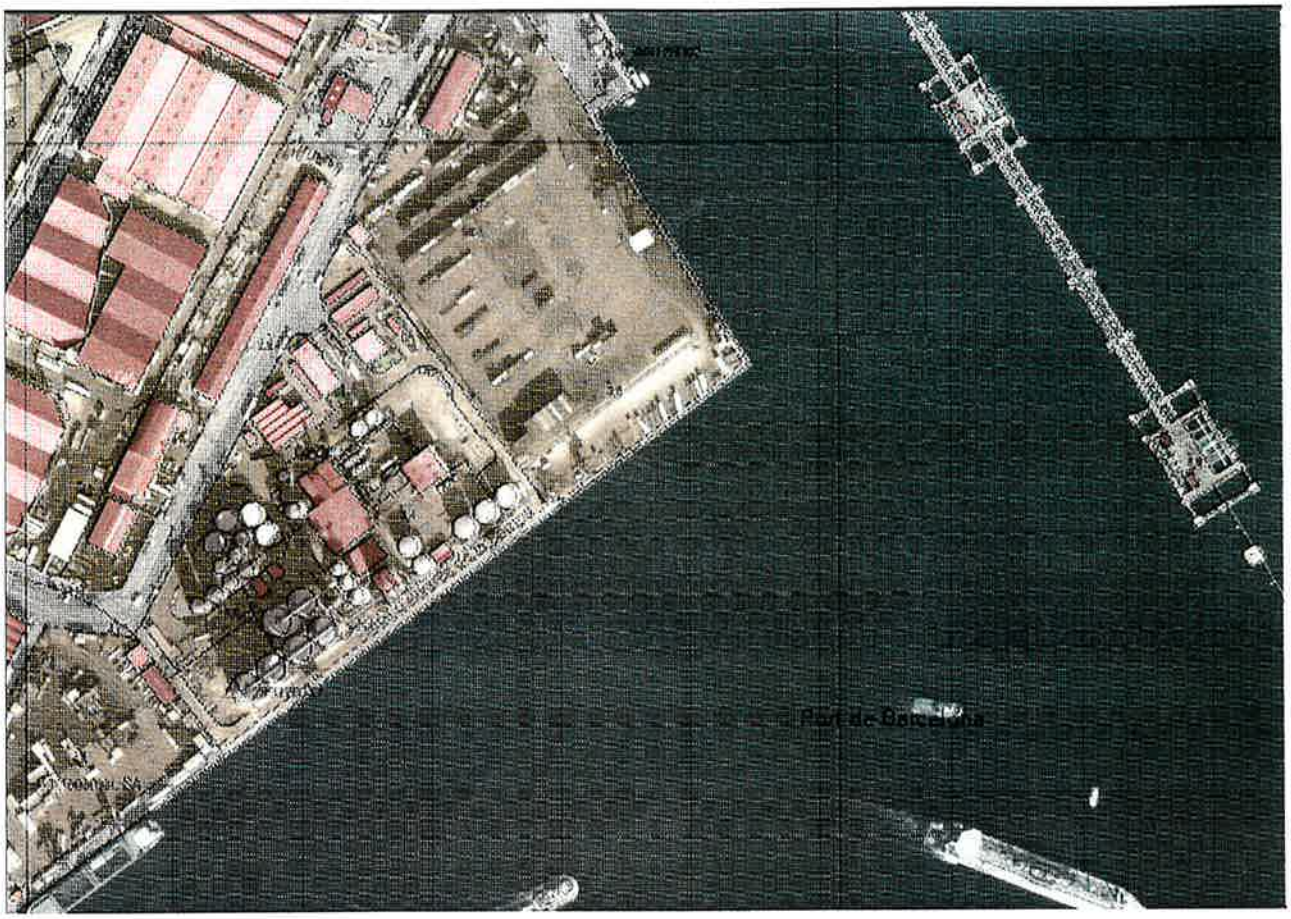
QuickBird at work



QuickBird Orthoimage

- Barcellona
- Topographic map sheets scale 1:5.000





QuickBird at work

•Data processed by GeoImage

QuickBird at work

•Data processed by Geoimage

www.eurimage.com

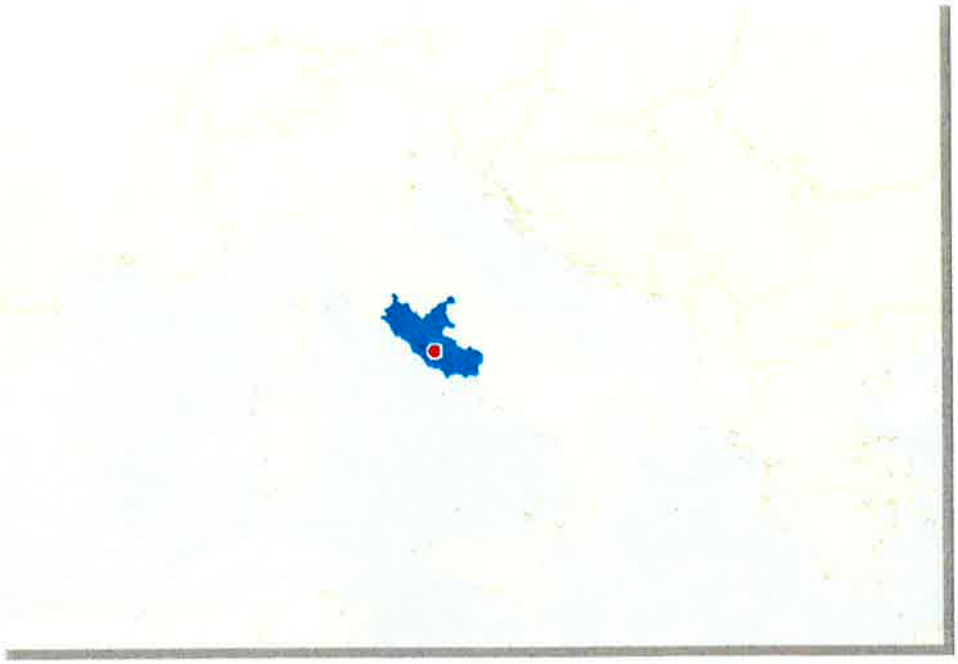
QuickBird
features and examples

Livio Rossi

rossi@eurimage.com

OLISIG: comparison of several types of images

ISPRA June 18-19 2002



Ferdinando Smania

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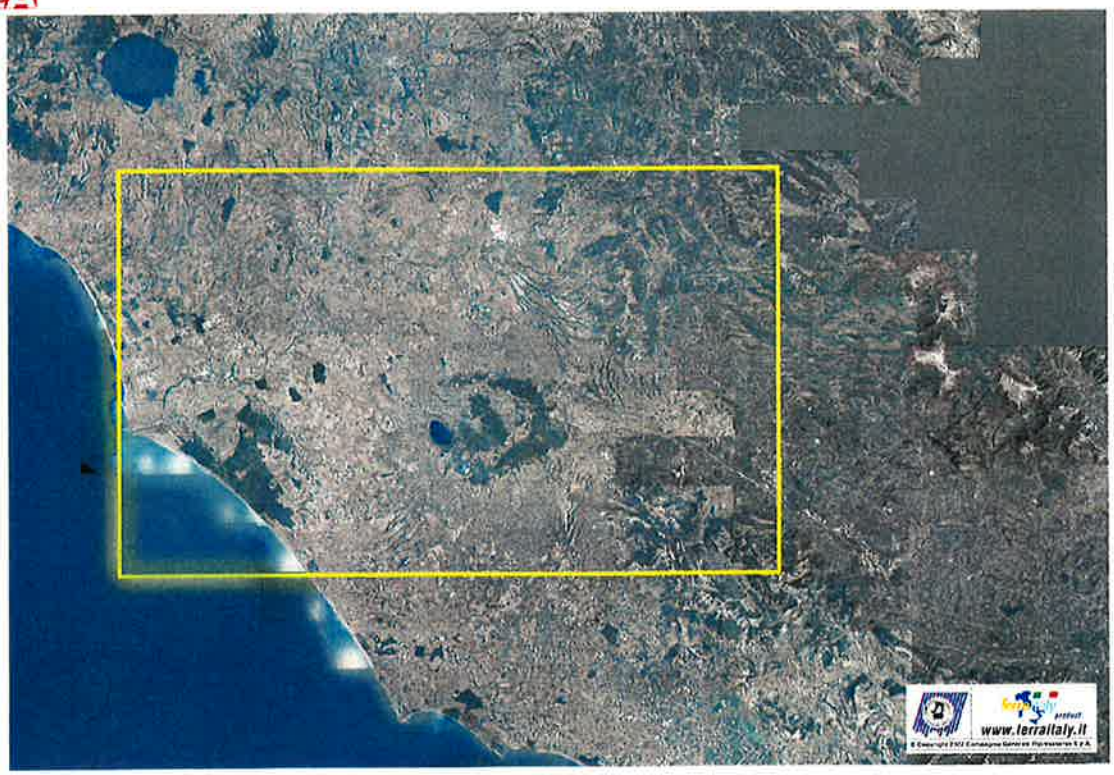
ISPRA June 18-19 2002



Terraitaly™ product - ortophoto pixel size 1 m res.
scale 1: 500.000 Surface area = 15.000 km²

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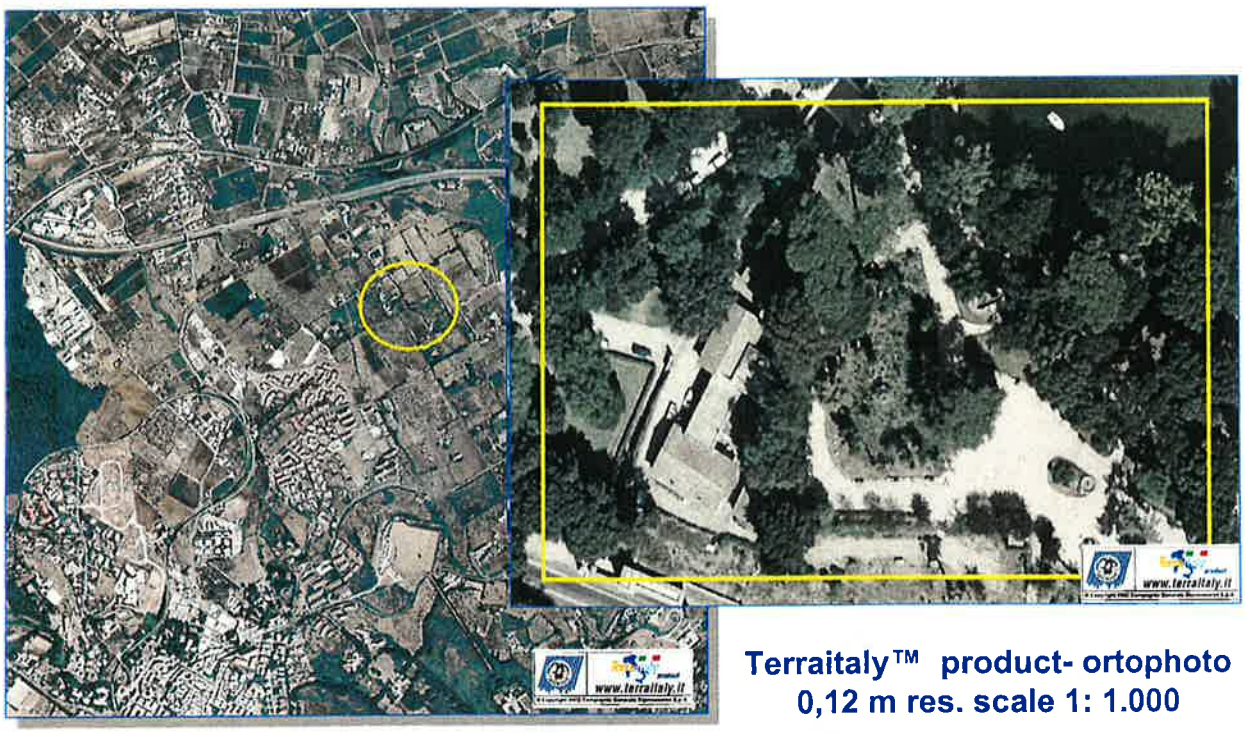

Terraitaly™ product- ortophoto 1 m res.
scale 1: 20.000 Surface area = 4 km²

Terraitaly™ product- ortophoto
0,12 m res. scale 1: 1.000

OLISIG: comparison of several types of images
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QuickBird - Scale 17.000 March 2002

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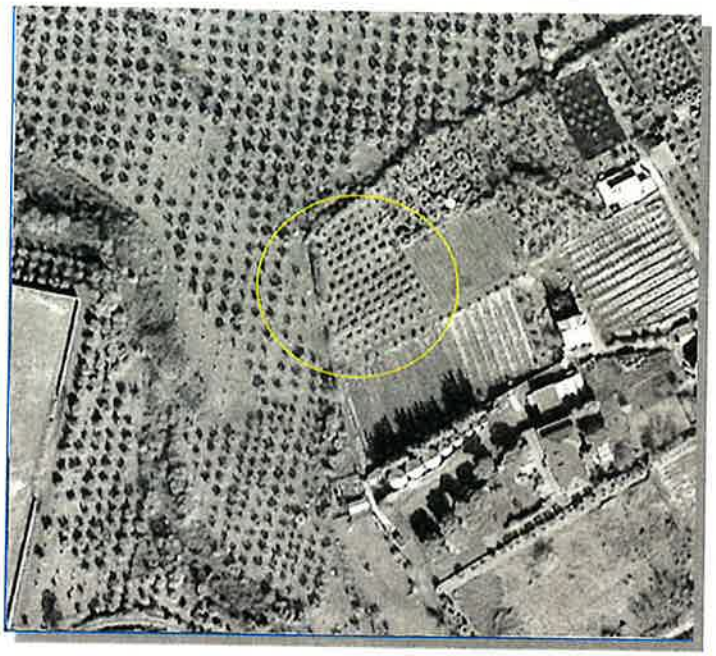

Ter[illegible]2000 Spring 2001

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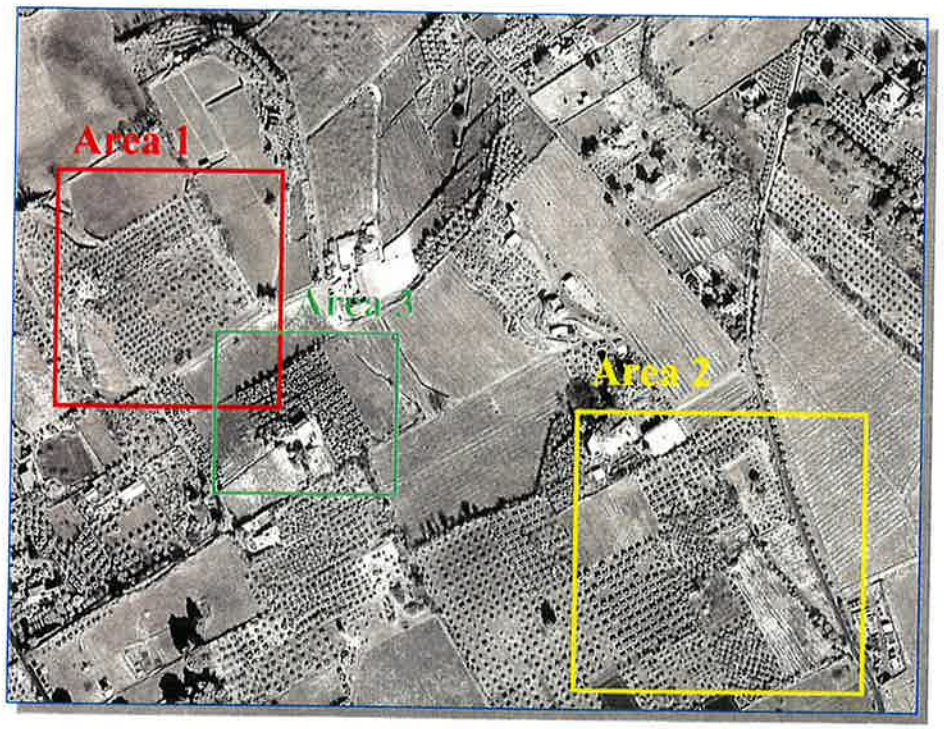

QuickBird - Scale 1: 4.000 March 2002

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Area n° 1

QuickBird 1:2.000 March 2002
0,64 m res.

Ortophoto 1:2.000 Spring 2001
1m res.

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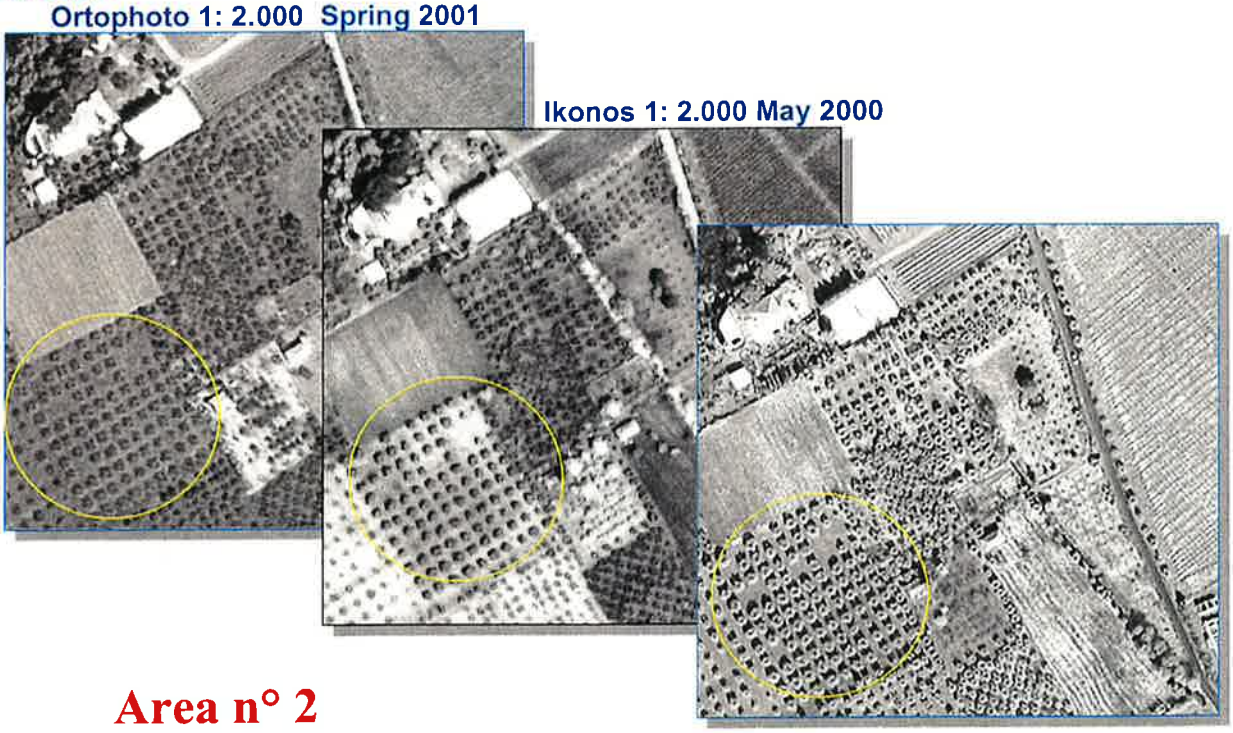
ISPRA June 18-19 2002

Ortophoto 1: 2.000 Spring 2001

Ikonos 1: 2.000 May 2000



Area n° 2

QuickBird 1: 2.000 March 2002

OLISIG: comparison of several types of images

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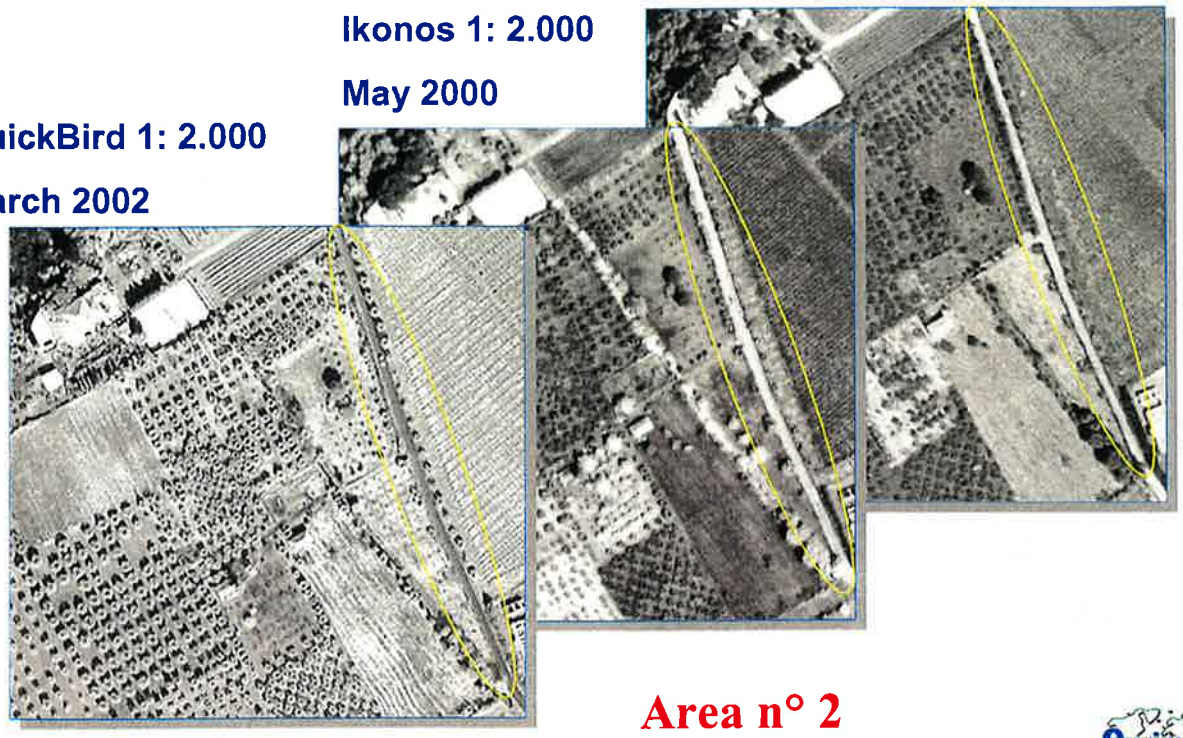
Ortophoto 1: 2.000 Spring 2001

Ikonos 1: 2.000

May 2000

QuickBird 1: 2.000

March 2002



Area n° 2

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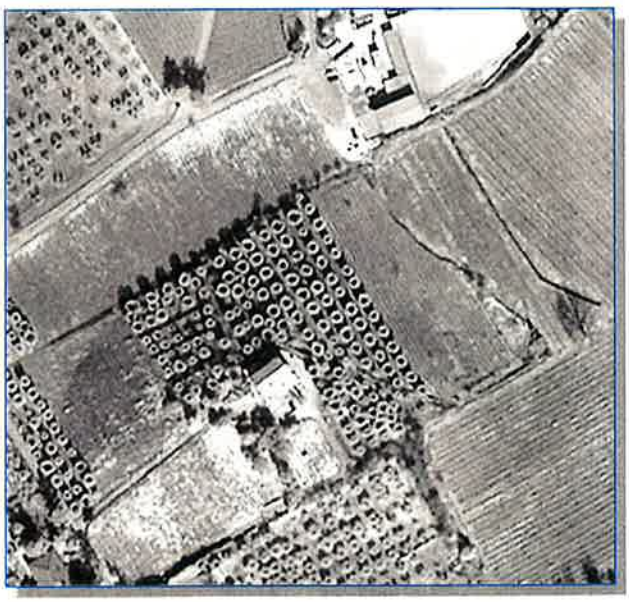
Area n° 3

Terraitaly™ product - ortophoto 1: 2.000

April 1999 1 m res.



QuickBird 1:2.000 March 2002

0,64m res.

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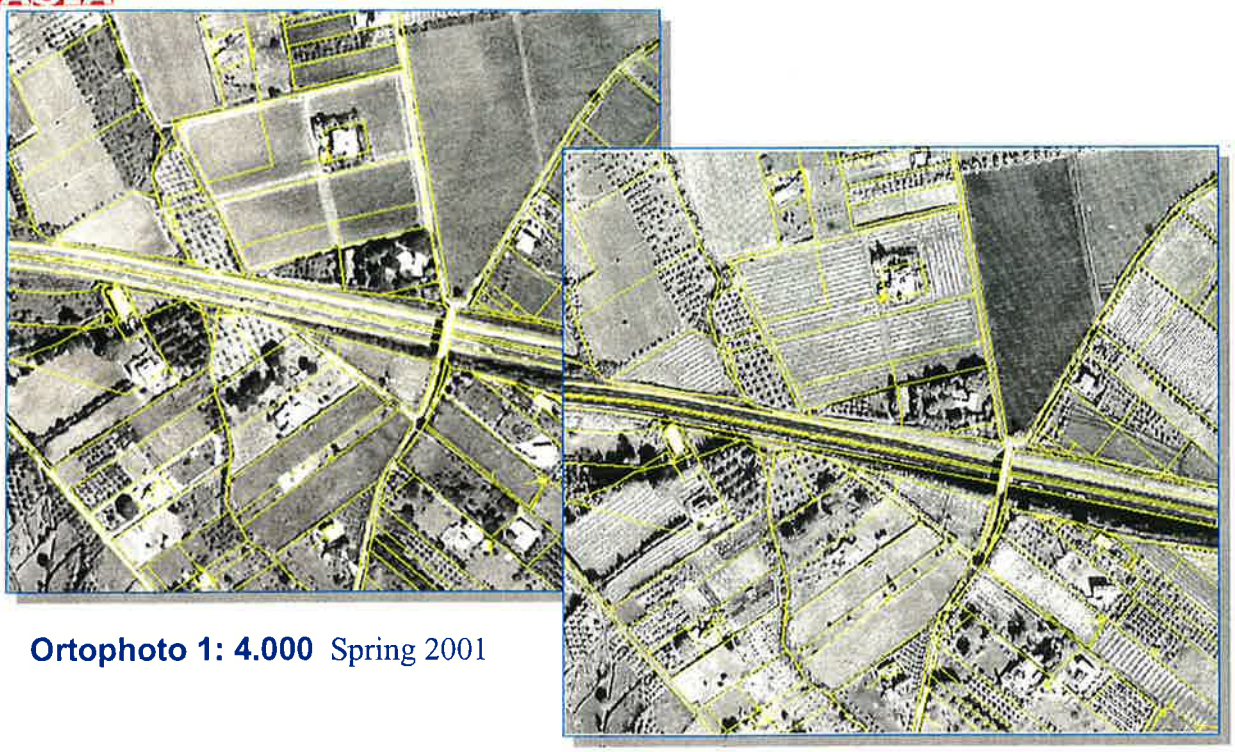

Ortophoto 1: 4.000 Spring 2001

QuickBird 1: 4.000 March 2002

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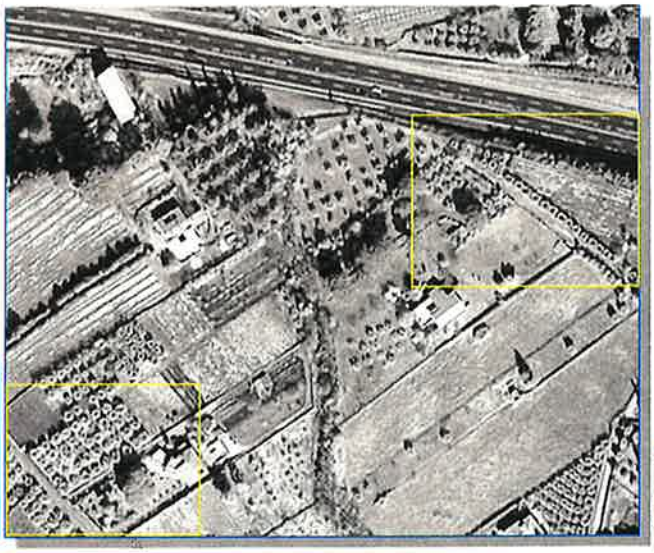
Ortophoto

Ikonos



Terraltaly Ortophoto

QuickBird

It 2000

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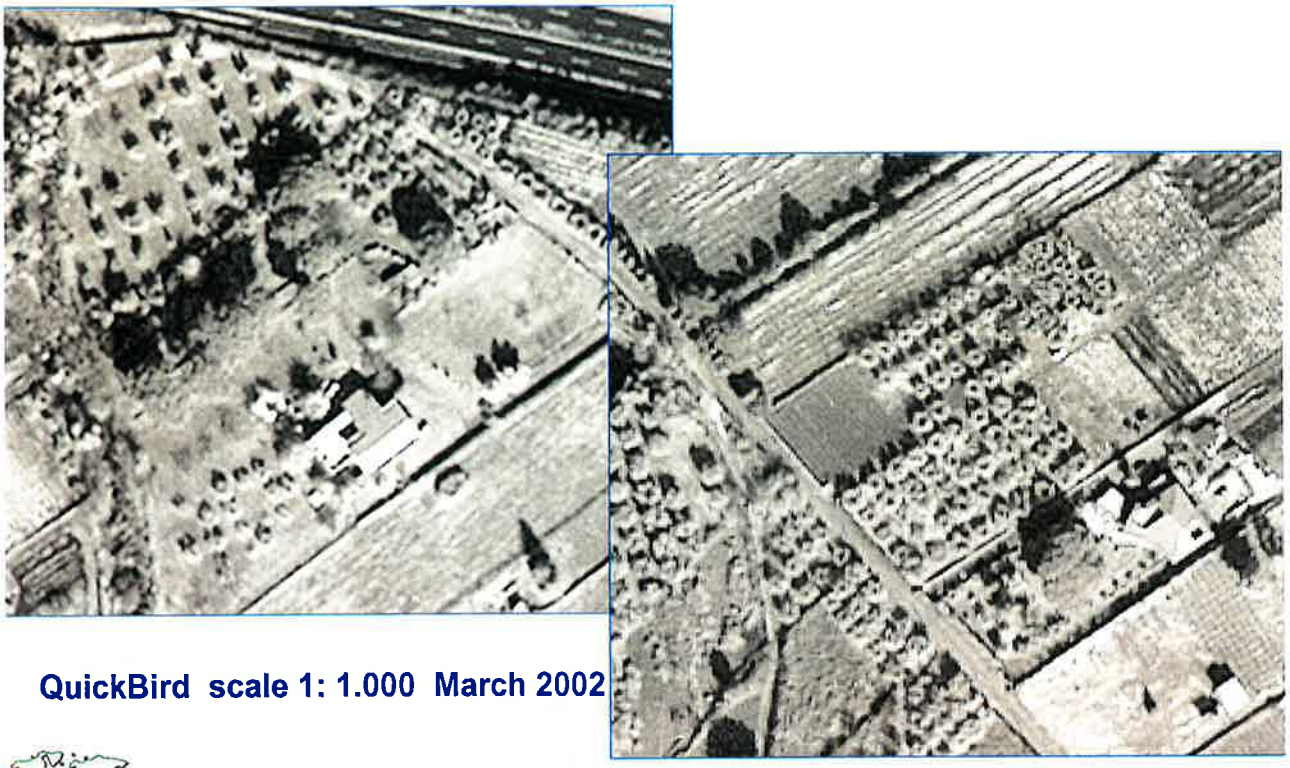

QuickBird scale 1: 1.000 March 2002

Eurimage

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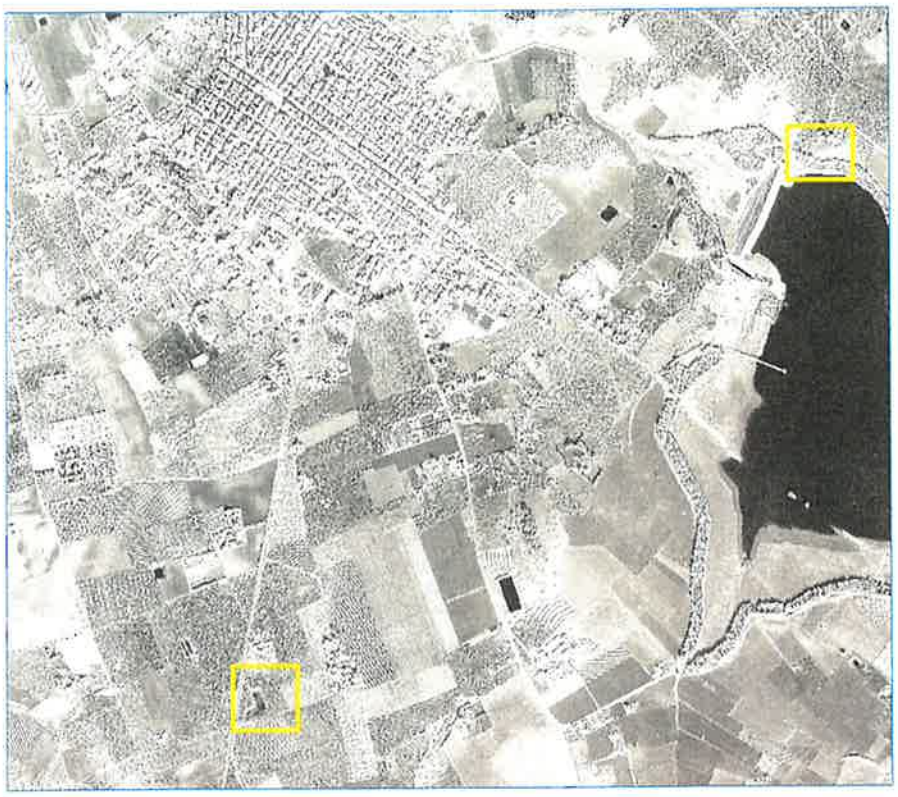
OLISIG: comparison of several types of images

ISPRA June 18-19 2002

OLISIG: comparison of several types of images

ISPRA June 18-19 2002



QuickBird February 2002

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OLISIG: comparison of several types of images

ISPRA June 18-19 2002

Ortophoto 1: 2.000 Spring 1999

QuickBird 1: 2.000 February 2002

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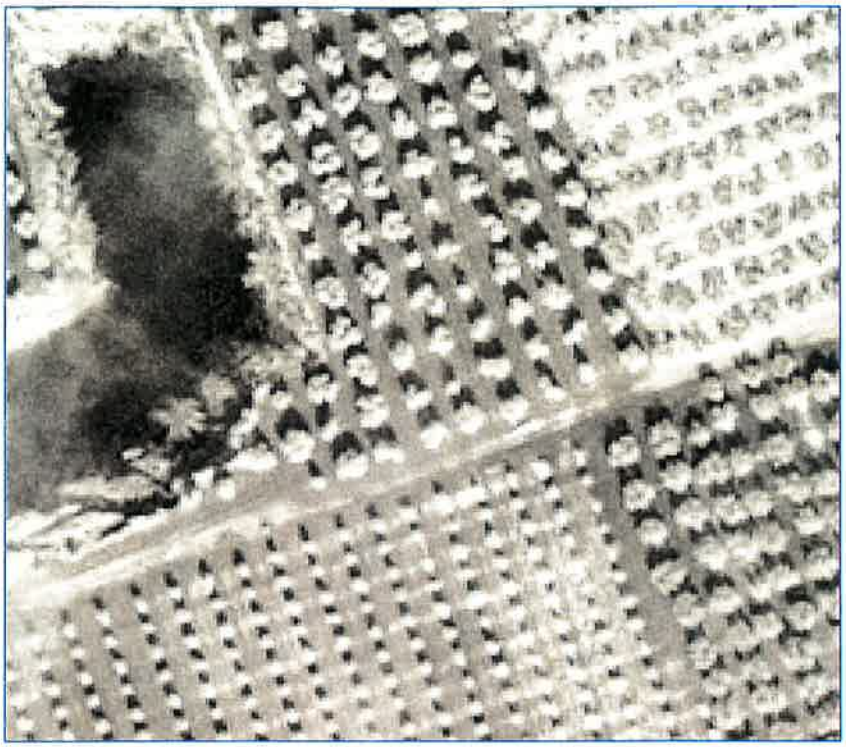
OLISIG: comparison of several types of images
ISPRA June 18-19 2002



QuickBird 1: 1.000 February 2002

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Ortophoto 1: 2.000 Spring 1999

QuickBird 1: 2.000 March 2002

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Session 5 - Procedure for the validation of OLI-GIS and planning proposal for 2002-2003 audits, by *Jacques Stakenborg, DG AGRI Audit of Agricultural expenditure*

Jacques Stakenborg stressed that concerns can be expressed on the fact that none of the Member States is yet validated. Extra-control should be applied and the Commission will check this point very carefully. J. Stakenborg asked the Member States to help DG AGRI to find a solution to avoid any problem (regarding clearance of account). The Member States should be informed by letter from MS on the plan for audit validation (1st July at latest): regions which will be completed and when (according to Reg. 2366/98 Art. 26), marketing year from which the GIS will be used onward. In the meantime it is likely that the validation audit will take place as follows: France May 2003, Greece 4 Nomi ready by end 2002, Italy September 2002, Portugal audit June 2002 after the workshop, most of Spain by end 2002.