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

2nd workshop on the Implementation of Olive GIS in the Member States

Athens - 24th and 25th June, 2003

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MARS Unit

2nd workshop on the Implementation of Olive GIS in the Member States

Athens, 24th and 25th June 2003

Introduction

Dear Participants,

We have the pleasure to present the Proceedings of the 2nd workshop on Olive GIS implementation which was held in Athens in June 2003. You will find the Powerpoint presentations print out and summaries of presentations.

This year, in the framework of the Greek Presidency, the conference was co-organised and hosted by the Hellenic Minister of Agriculture. The Minister of Agriculture himself, M. Georges Drys opened the workshop which clearly indicates the crucial importance of this activity.

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We would like to thank you very much for your participation. Thanks to your presentations and the very good support of the Register Implementation Office of the Special Secretariat CSF III, the conference was very successful. About 75 persons attended this workshop, mostly from National Administration of the UE (Spain, Italy, Greece, Portugal, France) and Candidate Countries (Cyprus, Malta, Turkey, Slovenia) which are concerned by the implementation of the Olive GIS. Two Directorate General of the Commission were represented: DG AGRI (with M. Jacques Stakenborg and Jean-Marie Bertrand) and DG JRC (with M. Olivier Leo and Mrs Josiane Masson) from the MARS Unit.

The implementation of Olive GIS in the UE has to be achieved by November 2003 under Reg. (EC) 2366/98. It is also a part of the '*acquis communautaires*' for the Candidate Countries. Since 1998 the MARS Unit provides technical support to national administration and DG AGRI for this project, including technical evaluation missions and organisation of workshops like this one. This workshop was an opportunity for Member States to present the progress status of the project and to exchange their experience. To date the Olive GIS are being finalised in the five EU olive-growing countries to currently control and manage geographically the 10 Millions Olive Parcels and 600 Millions olive trees declared by some 2.7 Millions farmers in the UE.

Yours faithfully,

Jacques Delincé, Head of MARS Unit, ISPC, JRC Ispra

For more details on olive and permanent crop activities in MARS Unit, contact Josiane Masson, MARS Unit Tel +39 0332 78 6331, Fax: +39 0332 78 6369, email josiane.masson@jrc.it

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Agenda

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OLI-GIS Experts Meeting

2nd workshop on the Implementation of Olive GIS in the UE

Athens (Greece), 24 & 25th June 2003

Final Agenda

Tuesday 24th June, 2003

Session 1: Introduction and overview of the OLI-GIS implementation

8:45 – 9:30 Registration of participants

9:30 – 9:45 Welcome
M. G. Drys, Minister of Agriculture of Greece

9:45 – 10:00 Welcome
Xenofon Lourantos, Special Secretary of the Hellenic Ministry of Agriculture and Register's coordinator

10:00 – 10:15 Welcome and introduction
Olivier Léo, Deputy Unit Head of MARS Unit (IPSC, JRC Ispra)

10:15 – 10:30 Message from the DG AGRI

Jean-Marie Bertrand & Jacques Stakenborg, DG AGRI Audit of Agricultural expenditure

10:45 – 11:00 Overview of the Olive GIS project in the UE
Josiane Masson, MARS Unit (IPSC, JRC Ispra)

11:00 – 11:15 *Coffee break*

Session 2:	**Presentation of the status of Olive GIS in the UE by the Member States**

11:15 – 11:45 Presentation of the Portuguese project
Carla Martins, INGA

11:45 – 12:30 Status of Olive GIS in Italy
M. Guerra, FINSIEL

12:30 – 13:30 Status of Olive GIS in Spain
Jose Luis Montero, MAPA, Presidente del Comité Permanente GIS-oléicola

13:30 – 15:30 Lunch

15:30 – 16:15 Presentation of the French project
Alain Madaule, ONIOL

16:15 – 17:15 Status of Olive and Viti GIS in Greece
Ekaterini Belitsou, Anastasios Panagiotopoulos and Lazaros Kiokakis of the Hellenic Ministry of Agriculture

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

21:00 *Dinner*

Wednesday 25th June, 2003

Session 3:	**Situation of Olive GIS in the Candidate Countries**

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

9:15 – 9:45 Progress status in Cyprus
Michael Constantinides, Department of Agriculture, Cyprus

9:45 – 10:15 Progress status of Olive GIS and link with IACS in Slovenia
Alenka Marjetic, Ministry of Agriculture, food and Forestry of Slovenia

10:15 – 10:45 Progress status of Olive GIS in Malta
Randall Caruana, Ministry of Agriculture and Fisheries of Malta

10:45 – 11:15 Situation in Turkey
Nihal Ceylan, Ministry of Agriculture

11:15 – 11:45 *Coffee break*

Session 4:	**Future developments**

11:45 – 12:20 Presentation of the tests on VHR (Very High Resolution) images for the identification of permanent crops, by the JRC
Josiane Masson, MARS Unit (IPSC, JRC Ispra)

12 :20 – 12 :40 Presentation of Ikonos products
Adrian Zevenbergen, Director International of Sales, Space Imaging

12:40 – 13:00 Presentation of Quickbird products
Bruno Biagini, Eurimage

13:00 – 15: 00 Lunch

15:00 -15:30 The challenge of using and maintaining the Olive GIS in an operational environment
Pr. Miranda, University of Lisbon

15:30 -16:30 Discussion on finalisation of the project and the future (requirements for updating, possible improvements, reform of the olive sector etc.)
Olivier Léo, Chairman

16:30 End of the workshop

Presentations

Tuesday 24th June

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

Session 1 – Opening of the workshop, by M. G. Drys, Minister of Agriculture of Greece

Hereby is the speech of M. G. Drys, Minister of Agriculture of the Hellenic Republic.

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HELLENIC REPUBLIC
MINISTRY OF AGRICULTURE **Athens, 28-2-2003**
MINISTER

OPENING OF THE 2ND WORKSHOP FOR THE IMPLEMENTATION OF THE OLIVE REGISTER IN EU BY THE MINISTER OF AGRICULTURE MR. GEORGE DRIS

Ladies and Gentlemen,

I am particularly happy to be among all of you.
I greet in Athens all of the foreign delegations.
I really wish, that your meeting here in Athens will lead to the quickest completion of the works for the Olive Register.

With great pleasure we welcome at this meeting the representatives of the new Countries-Members, Cyprus, Malta, Slovenia, as well as the representatives of Turkey.

Your presence here, today, gives a special emphasis to the significance that the Ministry of Agriculture gives to the Agricultural Registers. We believe that the function of all the Registers will facilitate the correct implementation of C.A.P. in a national as well as in an international level and will encourage the co-operation among the Countries-Members.

More specifically, the implementation of the G.I.S. in the Olive Register, is a very important tool, which will allow the creation of joint and in accord data bases in a European level, will simplify the relevant procedures and will minimize the possibility of errors in the objective determination of production and fair payment of the real producers.

Nevertheless, those who will benefit from the function of the Registers are our Olive-producers. Therefore, the maximum of the efforts are worked so as the Registers to be accomplished and start running as soon as possible.

Moreover, we have already accomplished the Plough Register, as well as the Registers of the Goats, Sheep and Cattle; we have registered 380.000 cattle and 10.6 million goats and sheep. Finally, the Dry Resin Register was accomplished in July 2002 and we registered 50.000 producers.

The works for the Olive and Vineyard Registers will end during the following months and in any case before the privity in deed in November. The Registers will comprise the collection, process and digitization of 808.000 declarations of Olive-producers and 203.000 of Vine dressers.

The implementation of the Registers is an important mission with its specificities and problems that the Countries have to solve. We have acquired very important experience and we have the necessary know-how, in administrative as well as in technical level. I want to assure you that the Greek principles and the Contractors will willingly help if necessary.

Ladies and Gentlemen,

I do not really want to go into further details. But their function will give a final conclusion to the very serious fiscal corrections that were imposed to my Country and will create absolutely clear and easily checked procedures of all the payments and EU subsidies to the Greek farmers, from the European inspectional departments.

I wish good luck to the works of your Meeting. I consider the results of your works particularly interesting for the applied policy at the Olive and Vineyard Registers in our Country.

Session 1 – Greetings, by M. Xenophon Lourantos, Special Secretary of the Minister of Agriculture of Greece

Hereby is the speech of M. Lourantos, Special Secretary of the Minister of Agriculture of the Hellenic Republic, responsible of Special Secretariat CSF III, Managing Authority Operational Program for the Implementation of Olive and Vineyard Registers.

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X.-S. LOURANTOS- GREETING AT THE 2ND WORKSHOP OF ISPRA FOR THE OLIVE AND VINEYARD REGISTER

Mr. Minister,
Misters representatives of JRC-ISPRA and of the EU,
Misters representatives of the Countries-Members and of the Observers,
Misters representatives of KEMAE,
Misters representatives of the Contractors,
Ladies and Gentlemen,

(D1)-(D2) With great pleasure **we welcome** all of you here in Athens. Today, there are among us representatives from France, Germany, Italy, Spain, Portugal, Cyprus, Malta, Slovenia and Turkey. As a sequel to last year's first and very interesting meeting at ISPRA in Italy, we are entertaining you with great pleasure here in Athens, at the 2nd Workshop for the implementation of the Olive Register in EU. This meeting is a promise we gave last year and we managed to carry into effect, with the aid of JRC-ISPRA and especially of Olivier Leo and Josiane Masson who we would like to thank very much. I am sure that we will have the chance to exchange interesting ideas that **will lead us to very interesting results** which can be properly exploited for the future.

The organization of the surveillance of the production, **so as to guarantee accurate, clear, quick and simple procedures for the payment of the amplifications to the producers,** is one of our Ministry's priorities and this is being emphasized by the Minister's presence here today.

(D6) At the Ministry of Agriculture, we adopted recently a new, very flexible configuration, with the institutionalization of a new **Department of Administration of the Registries**, which comprises an experienced and well-educated staff,that has the duty to attend and administrate, on the whole, the Registries. Our goal is to be able to accommodate the needs of the producers, through the **easiness and the formulism of the relevant procedures** for the update of the Registries. For this reason, we move along to a complete informative system that will ensure the on-line connection between the Peripherals and the Central Base for the quickest update and affirmation of the evidence.

A year ago, at the first Workshop for the Olive Register in Ispra of Italy, we had said that in spite of the difficulties we had to face, we would be able to be prompt to the obligations we undertook. Today, we are at the very pleasant position to affirm what we had said, as the progress that has been done is **extremely satisfying**. Following, we will have the chance to watch a detailed presentation for the progress of the implementation for the Olive and Vineyard Registers in Greece, calling to attention that next year, during the 3d Workshop of Ispra, the Registries will have been accomplished and we will be at the phase of their update. I will insist on 3 points:

Firstly, as our Minister already said, we have accomplished the implementation of the **Dry Raisin Register** with the collection, process and check of **50.000 declarations** of producers and we have completed the payment of the amplification for the first time with the new system.

(D4) Secondly, for the implementation of the G.I.S. at the Olive and Vineyard Registers, we have faced very important difficulties, such as the great number of declarations that had to be processed, as Greece produces the **18%** of the total oil production of the E.U. The E.U. itself has the 25% of the world production.

(D5) More specifically, we expect **808.000** declarations (**140 million** olive trees) at the Olive Register and **203.000** declarations **(550.000** vineyards) at the Vineyard Register. Also, a major problem was the lack of a complete Cadastre. This made our work very time-consuming, as we couldn't confine ourselves to the record of the space that the olive trees take up in the field, or the number of the trees in it, but we should have had the cartographical background, the ilots and the delimitation of the fields so as to join them with the olive-producers. What we mean is that we should have had a pre-Register or a pre-Cadastre **before** starting the collection of the declarations of the producers.

(D6) For a more effective and quicker realization of the work, we created an administrative configuration, by the composition of a Central Committee for the Olive and Vineyard Registries (KEMAE) and the Prefectorial Committees (NEMAE) and also the employment of a political chief on top. All these prove our will for the prompt completion of the Registers.

(D7-8-9) Thirdly, in order to give a total picture of the situation, we have to say that up to now the project, in all of the 14 Peripheries in which the Country has been divided for a better completion, has been completed in a percentage of **70-100%.**

Here, you can see the 14 contracts and the 17 stages of progress that we have separated them at, as well as the progress in each stage, part of the Monthly Report that we send to the Minister and to ISPRA since May 2002.

In every case, until **November 2003**, which is the final date for the Community payments with the new system, all of the olive-trees and the vineyards will be assured by the G.I.S.

Later on, we will have the chance to refer to all of the issues for the implementation of the Registries more detailed and also we will have the chance to exchange opinions. I really want to thank the Minister of Agriculture Mr. G. Dris warmly, for his support to our difficult work, the qualified persons of the European Committee (DG AGRI) and of JRC and the Professor Mr Miranda from Portugal for their really valuable comments, the officials of the Departments of Trees-Plantation, Topographiki, Informatics, Alteration, OPEKEPE and of course the Office of the Registries, the KEMAE, the NEMAE and the Contractors. Their contribution is determinative and the co-operation is really exemplary and this will lead us to the prompt completion of the project we have taken over. Finally, I would like to thank in particular, Ms Dimitra Moraitou from the Register Implementation Office, who with Ms Mason (JRC) were the 'soul' of this event.

Thank you all, for your presence and attention and I wish you good luck to your works and a pleasant stay in our Country.

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Session 1 - Introduction, by Olivier Leo, European Commission, JRC Ispra, IPSC, MARS Unit

Summary

Olivier Leo welcomed the participants and congratulated the Greek Ministry of Agriculture for the co-organisation of this conference and the very good support provided by the RIO (Register Implementation Office) for the conference. He recalled the long history of Greek registers to which he participated. It took more than 10 years, starting with 1975 regulation (olive register) and 1986 regulation (vineyard sector). At the beginning due to the lack of cadastre, very heavy topographical tasks were expected. The JRC launched a series of pilot studies in 1992-93 to define more simple approach. It was decided to acquire aerial photos coverage and to set up basic maps on the basis of orthophotos. This so-called Phase 1 was heavy both from technical and financial point of view. Of course there are technical limits with 1m orthophotos which are not optimal for the identification of olive trees and vineyard. However the most difficult part was the location of parcels by the farmers and to relate parcels with producers who are not always present in the villages. The collection of declaration started 3-4 years ago and the JRC was very please to see the progress made by Greek during the last years, specially with the recruitment of a young and motivated team. Of course we don't minimise the difficulties, especially the management of 14 contracts and organisational issues to collect data and to carry out field visits. We hope that it will be shortly finalised, but from our point of view the most important is that the system is used and updated.

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Session 1 – Message from DG AGRI, by Jean-Marie Bertrand, European Commission, DG AGRI, C3- Olive oil market unit

Hereby is the speech of M. Jean-Marie Bertrand, who works in DG AGRI at the market Unit C.3. Olive oil, textile, sugar and ultra-peripherical regions

Monsieur Le Ministre, Monsieur Le Sous Secrétaire, Mesdames, Messieurs,

Les services de la Commission vous remercient de votre invitation pour ce deuxième séminaire technique relatif à l'état d'avancement du système d'information géographique oléicole.

L'organisation de cette réunion à Athènes avec l'ensemble des acteurs impliqués dans la mise au point de ce nouvel outil de gestion de l'organisation commune des marchés des matières grasses témoigne de l'importance accordée à ce dossier par la Présidence Grecque de l'Union Européenne.

A la veille de la prochaine campagne, il s'agit de faire le point, dans les Etats Membres de l'Union Européenne à 15, sur les progrès effectués depuis l'an dernier en matière de recensement du potentiel de production oléicole aidée, mais aussi d'évaluer la situation dans les pays concernés qui vont nous rejoindre en 2004 ainsi qu'en Turquie.

Dans le cadre de la réglementation, cette question prend d'autant plus d'acuité que la récolte de la prochaine campagne 2003/2004 ne pourra faire l'objet de subventions communautaires que si elle provient de parcelle répertoriée par la présence d'un système d'information géographique oléicole.

A ce jour, plusieurs rapports d'achèvement du système d'information géographique oléicole mis en place par les Etats Membres ont été transmis aux services concernés de la Direction Générale de l'Agriculture : au niveau national pour l'Italie et le Portugal ainsi qu'au niveau des principales régions pour l'Espagne. Compte tenu des nombreux efforts entrepris par les autorités grecques au cours de ces derniers mois, l'achèvement du système d'information géographique oléicole de la Grèce devrait également voir le jour prochainement. Pour en arriver à ce stade, les Etats membres ont dû faire face à une lourde charge de travail qui certainement ne manquera pas de porter ses fruits dans un proche avenir.

Les modalités techniques de constitution du système d'information géographique oléicole prévues par la réglementation communautaire et les contraintes y

afférentes ont également nécessité et nécessitent encore un travail d'encadrement conséquent des services concernés de la Commission. Afin d'en améliorer l'efficacité, une étroite et régulière collaboration s'est instaurée là où le besoin s'est fait le plus sentir. Nous sommes désormais proches de l'objectif final.

A l'heure actuelle, l'article 26 paragraphe 3 du règlement (CE) n° 2366/98 de la Commission prévoit que la Commission constate l'achèvement du système d'information géographique oléicole d'un Etat membre ou d'une de ces régions sur base d'un rapport fourni par les intéressés. Cela crée des difficultés pratiques qui sont considérables, notamment lorsque l'achèvement du SIG doit être constaté région par région. Cette procédure retarde l'utilisation du SIG considéré comme terminé par les Etats membres pour le contrôle des déclarations de culture de la campagne 2003/2004. Les services de la Commission ont l'intention d'aborder prochainement le sujet avec le Comité de gestion des matières Grasses afin de trouver une solution satisfaisante au plus tôt et en tout cas avant le 1er novembre 2003.

Je vous remercie pour votre attention.

(J. Marie Bertrand, DG AGRI C3)

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Session 1 – Overview of the Olive GIS project in UE, 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) reported the progress status of Olive GIS implementation in the 5 Member States. Whereas the Olive GIS is completed in Italy and Portugal, it still has to be finalised in Spain, Greece and Portugal. In Spain 88% of dossiers are completed; a final report has been received by the Commission in February 2002 for the CAA of Andalucia and Madrid, Baleares are also completed. However some CAA are quite late (the most significant being Extremadure and Castilla-la-Mancha). In spite of considerable progress since last year, Greece is still late with only 1 Nomoi completed (Achaia). There is a plan to finalise the contractual work by September but the most sensitive issue will be the integration of all data from the contractors into the central database and the QC of data, as well as the design of the GIS application. This part is quite late. In France it seems that there was few progress since last year, since only 75% of the dossiers are completed.

(Presentation)

The Joint Research Centre

2nd WORKSHOP ON THE IMPLEMENTATION OF OLIVE GIS IN THE UE

ATHENS, 24-25th June 2003

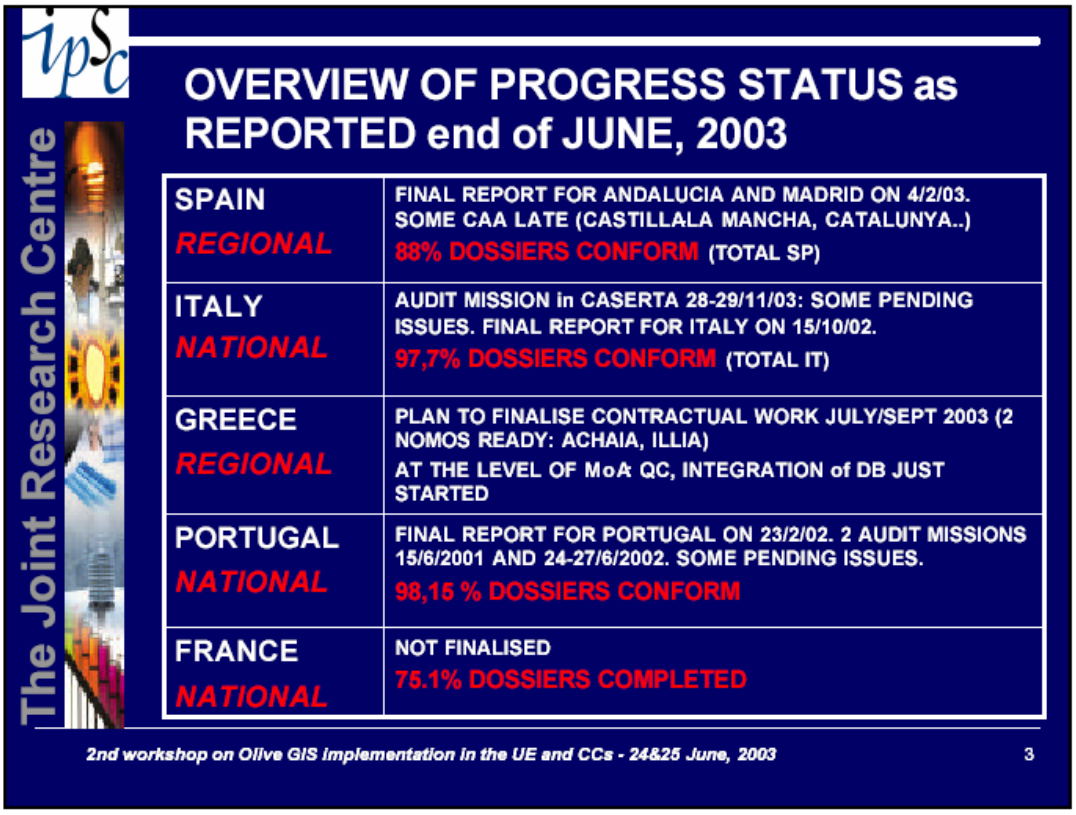
Overview of the Olive GIS projects in the UE

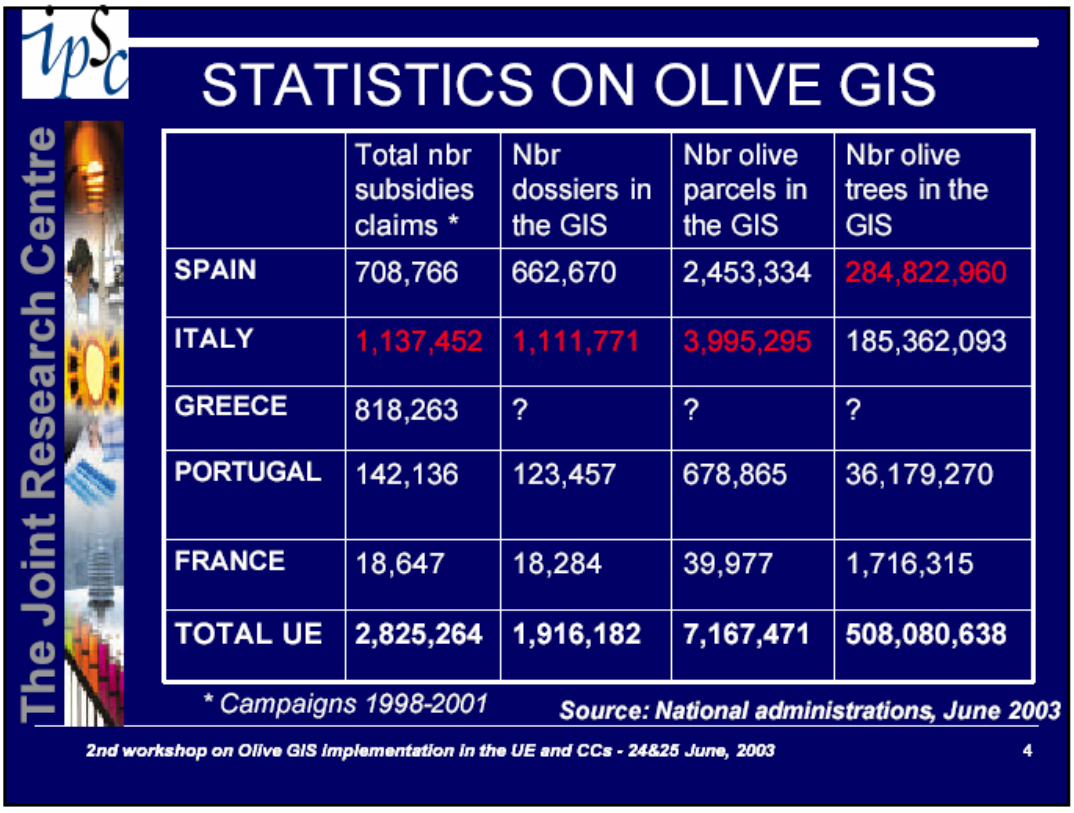
Presentation by Josiane MASSON, JRC

The Joint Research Centre

COMPLETION OF OLIVE GIS

- Recall of main criteria of acceptance:
  - **Discordant dossiers < 5%** of the total number of crop declarations.
  - Covers every aid application of the last campaigns (from 1998/99 onward)
  - **Each parcel and each tree should be located in the GIS**
  - Complete with required alphanumeric and graphic DB
  - System implemented in the national administration
  - Access to the GIS information by olive producers
- Final report (national/regional level) submitted to the EC Management Committee


The Joint Research Centre
OVERVIEW OF PROGRESS STATUS as REPORTED end of JUNE, 2003
SPAIN
REGIONAL
FINAL REPORT FOR ANDALUCIA AND MADRID ON 4/2/03. SOME CAA LATE (CASTILLALA MANCHA, CATALUNYA..)
88% DOSSIERS CONFORM (TOTAL SP)
ITALY
NATIONAL
AUDIT MISSION in CASERTA 28-29/11/03: SOME PENDING ISSUES. FINAL REPORT FOR ITALY ON 15/10/02.
97,7% DOSSIERS CONFORM (TOTAL IT)
GREECE
REGIONAL
PLAN TO FINALISE CONTRACTUAL WORK JULY/SEPT 2003 (2 NOMOS READY: ACHAIA, ILLIA)
AT THE LEVEL OF MoA: QC, INTEGRATION of DB JUST STARTED
PORTUGAL
NATIONAL
FINAL REPORT FOR PORTUGAL ON 23/2/02. 2 AUDIT MISSIONS 15/6/2001 AND 24-27/6/2002. SOME PENDING ISSUES.
98,15 % DOSSIERS CONFORM
FRANCE
NATIONAL
NOT FINALISED
75.1% DOSSIERS COMPLETED
2nd workshop on Olive GIS implementation in the UE and CCs - 24&25 June, 2003
3


The Joint Research Centre
STATISTICS ON OLIVE GIS
Total nbr subsidies claims *
Nbr dossiers in the GIS
Nbr olive parcels in the GIS
Nbr olive trees in the GIS
SPAIN 708,766 662,670 2,453,334 284,822,960
ITALY 1,137,452 1,111,771 3,995,295 185,362,093
GREECE 818,263 ? ? ?
PORTUGAL 142,136 123,457 678,865 36,179,270
FRANCE 18,647 18,284 39,977 1,716,315
TOTAL UE 2,825,264 1,916,182 7,167,471 508,080,638
* Campaigns 1998-2001
Source: National administrations, June 2003
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Discordances by M.S (as reported by national administration in June, 2003)

	Nbr dossiers in the GIS	Number of discordant dossiers	% discordances
SPAIN	662,670	84,887	12%
ITALY	1,111,771	25,681	2.26%
GREECE	??	??	??
PORTUGAL	123,457	2290	1.85%
FRANCE	18,284	4,547	24.9%

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STATISTICS ON OLIVE TREES COUNTING

	Nbr declared olive trees	Nbr OT consolidated in the GIS	Of which: OT counted in the field	% OT counted in the field
SPAIN	273,576,116	284,822,960	107,992,384	40%
ITALY	197,957,763	185,362,093	44,627,420	24%
GREECE	??	??	??	??
PORTUGAL	35,692,901	36,179,270	??	?? (52% dossiers &25% parcels)
FRANCE	2,797,774	2,190,451	936,276	43%
TOTAL UE-4	510,024,554	508,554,774		

Source: National administrations, June2003

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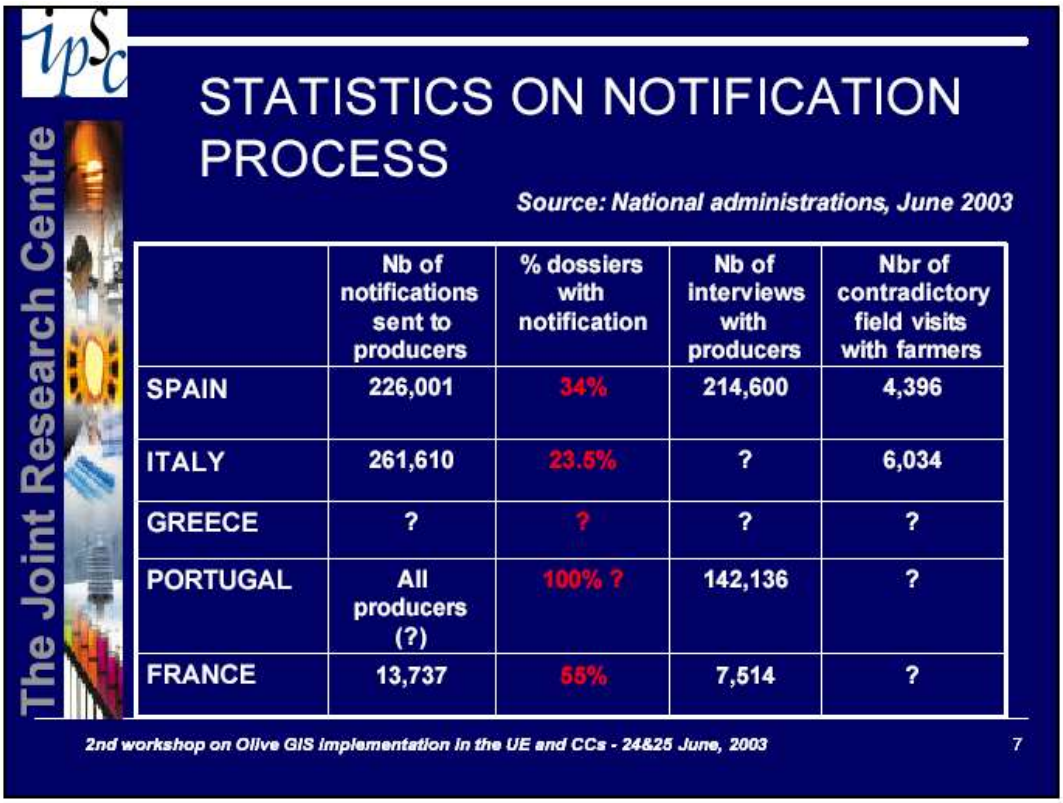
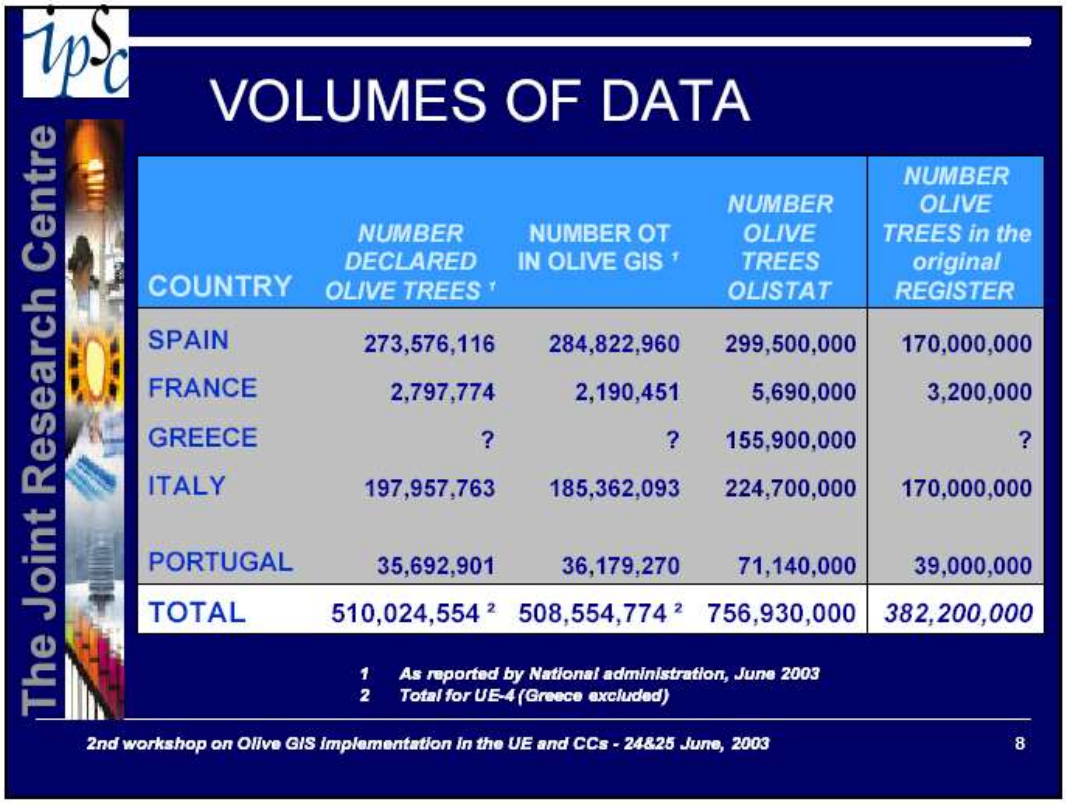
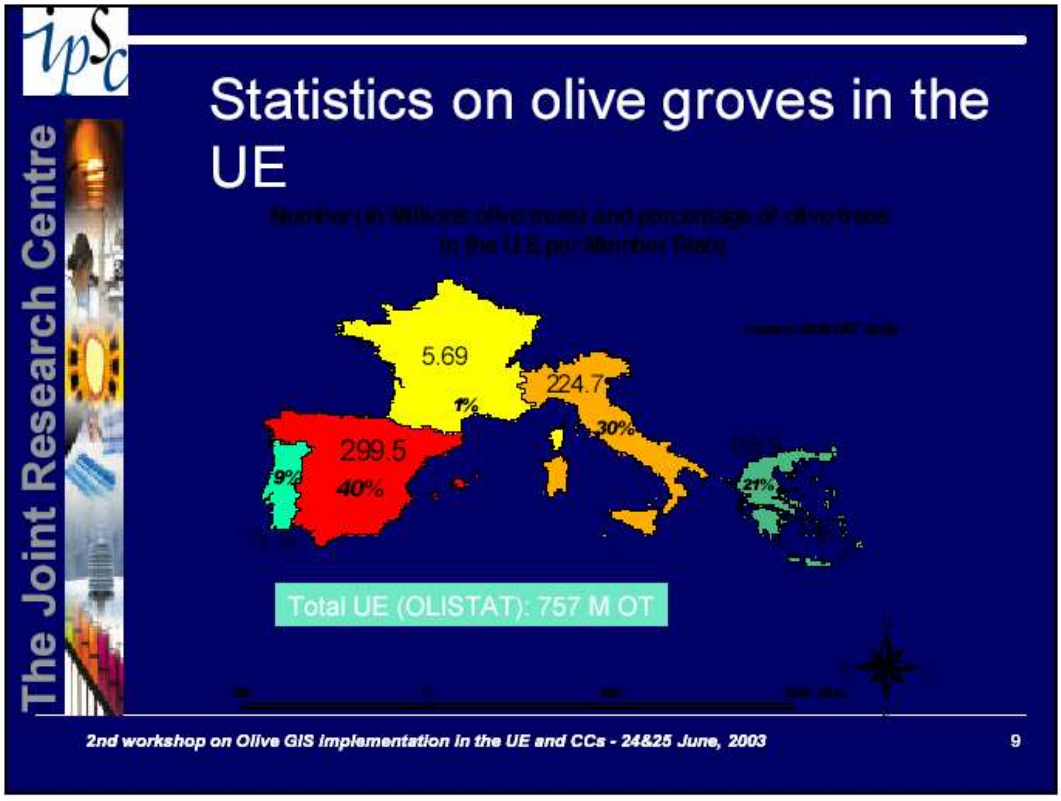


	Nb of notifications sent to producers	% dossiers with notification	Nb of interviews with producers	Nbr of contradictory field visits with farmers
SPAIN	226,001	34%	214,600	4,396
ITALY	261,610	23.5%	?	6,034
GREECE	?	?	?	?
PORTUGAL	All producers (?)	100% ?	142,136	?
FRANCE	13,737	55%	7,514	?



COUNTRY	NUMBER DECLARED OLIVE TREES [1]	NUMBER OT IN OLIVE GIS [1]	NUMBER OLIVE TREES OLISTAT	NUMBER OLIVE TREES in the original REGISTER
SPAIN	273,576,116	284,822,960	299,500,000	170,000,000
FRANCE	2,797,774	2,190,451	5,690,000	3,200,000
GREECE	?	?	155,900,000	?
ITALY	197,957,763	185,362,093	224,700,000	170,000,000
PORTUGAL	35,692,901	36,179,270	71,140,000	39,000,000
TOTAL	510,024,554 [2]	508,554,774 [2]	756,930,000	*382,200,000*

1 As reported by National administration, June 2003
2 Total for UE-4 (Greece excluded)


The Joint Research Centre
Statistics on olive groves in the UE
5.69
1%
224.7
30%
299.5
40%
9%
21%
Total UE (OLISTAT): 757 M OT
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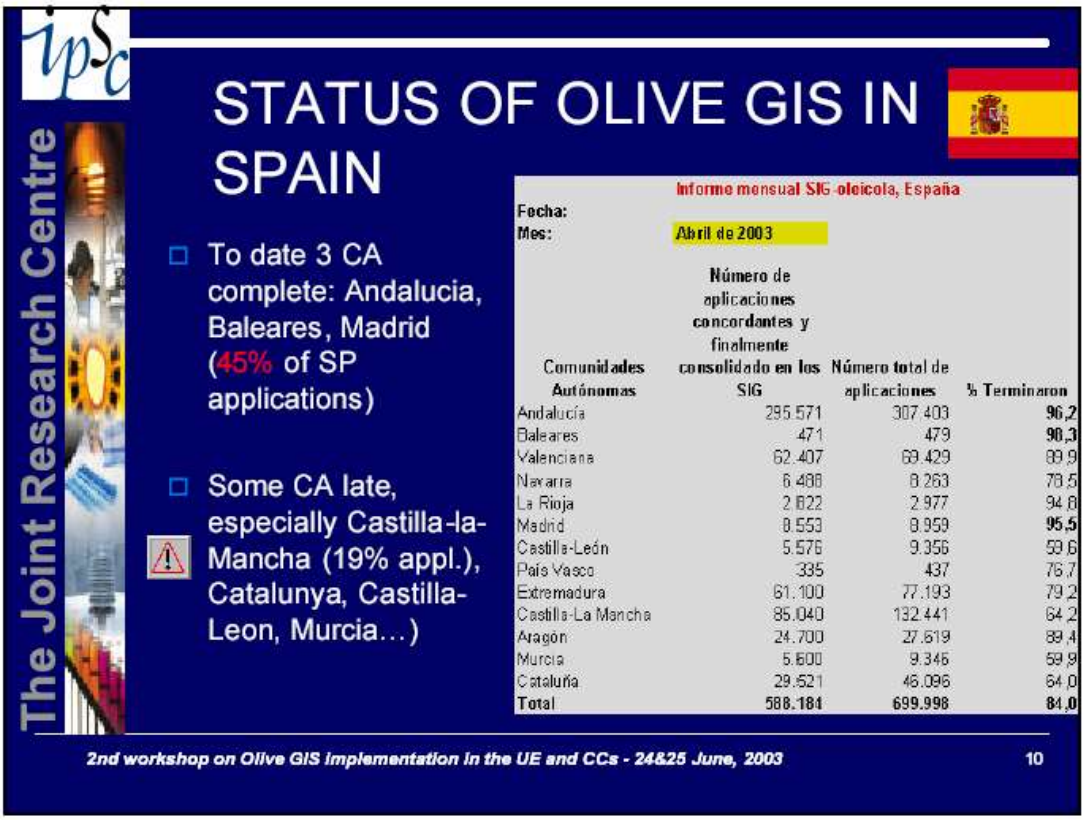
The Joint Research Centre
STATUS OF OLIVE GIS IN SPAIN
To date 3 CA complete: Andalucia, Baleares, Madrid (45% of SP applications)
Some CA late, especially Castilla-la-Mancha (19% appl.), Catalunya, Castilla-Leon, Murcia…)
Informe mensual SIG-oleícola, España
Fecha:
Mes: Abril de 2003
Comunidades Autónomas | Número de aplicaciones concordantes y finalmente consolidado en los SIG | Número total de aplicaciones | % Terminaron
Andalucía 295.571 307.403 96,2
Baleares 471 479 98,3
Valenciana 62.407 69.429 89,9
Navarra 6.486 8.263 78,5
La Rioja 2.822 2.977 94,8
Madrid 8.553 8.959 95,5
Castilla-León 5.576 9.356 59,6
País Vasco 335 437 76,7
Extremadura 61.100 77.193 79,2
Castilla-La Mancha 85.040 132.441 64,2
Aragón 24.700 27.619 89,4
Murcia 5.600 9.346 59,9
Cataluña 29.521 46.096 64,0
Total 588.181 699.998 84,0
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STATUS OF OLIVE GIS IN SPAIN

- EC Mission to Spain: 9-11/4/02 and July 2003
- Olive GIS was a strong priority for MAPA: plan to finish all CA by end 2002.
- Except Andalucia, few progress in the last months???
  - Reasons?
  - Other CA difficult?
  - Political issue with the reform of CMO?

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STATUS OF OLIVE GIS IN ITALY

- 2nd olive - growing country in the EU after Spain with about 1.4 M ha (source: OLIAREA) and 225 M olive trees (source: Olistat).
- A large part of Italy grows olive trees (except from the Northern part) but main areas are Puglia, Sicilia, Basilicate , Lazio, Toscana.

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STATUS OF OLIVE GIS IN ITALY
A lot of effort made by AGEA to complete notification stage by october 2002.
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STATUS OF OLIVE GIS IN GREECE
Greece is the 3rd olive-growing country in the EU (± 800,000 olive growers, 156 M olive trees (source: Olistat).
Olive trees can be found everywhere in Greece but the main regions of olive growing are
Peloponese (36% of olive area, main Nomi Messinia and Lakonia),
Creta (20% of olive area, mostly in Heraklion region)
Sterea Ellada (26% of olive area)
and Aegean Islands (10%).
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STATUS OF OLIVE GIS IN GREECE
Lot of progress compared to last year: contractors work hard and the MoA reinforced his staff
But some delays expected due to
late beginning of the project:
Aegean Islands: contract signed 25/2/03
Pieria-Viotia-Fthiotida: contract signed 30/10/02
Enia, Fokida, Evritania: late due to problem with main contractor, sub-contracting
… and technical & organisational problems
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STATUS OF OLIVE GIS IN GREECE
Difficulties faced by OLI_VITI GIS
No reference maps at the beginning
No declaration at parcel level -> location and declaration of parcels part of the project. Very huge task
Politically sensitive: producers unions against the project at the beginning
Bad quality of orthophotos
Small producers, small parcels
Organisational problems at MoA level, now solved (RIO & new directorate of registers)
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STATUS OF OLIVE GIS IN GREECE
Progress status of contracts:
Only 2 Nomi completed (Achaia, Illia) but…
A lot of pression on the contractors to deliver DB for QA end of June-September 2003, some of them well advanced but…
Bad weather condition in Winter-Spring 2003
Problems in some Nomi
Late contracts (Aegean, Pieria-Vioti-Fthiotida, & Enia…)
Situation in Creta is concerning: main olive area but difficult conditions (olive growers very reluctant, small olive groves spread out…)
Some Nomi difficult (young plantation, bad orthophotos…)
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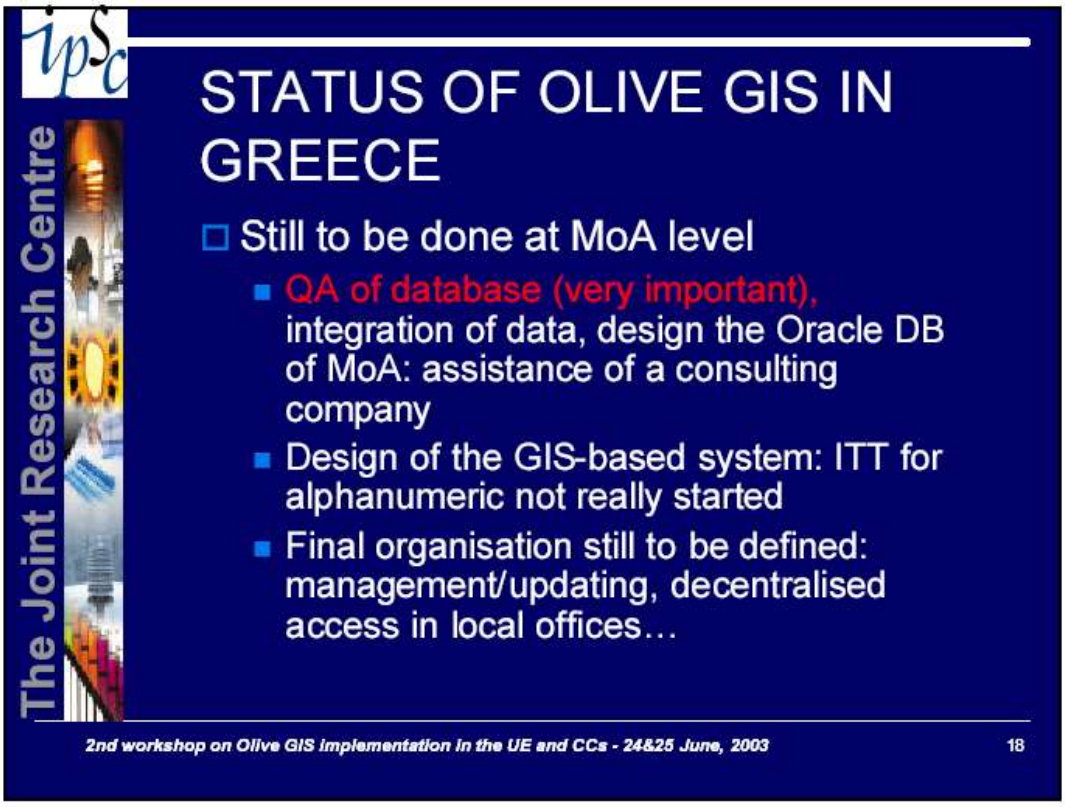
The Joint Research Centre
STATUS OF OLIVE GIS IN GREECE
Still to be done at MoA level
QA of database (very important), integration of data, design the Oracle DB of MoA: assistance of a consulting company
Design of the GIS-based system: ITT for alphanumeric not really started
Final organisation still to be defined: management/updating, decentralised access in local offices…
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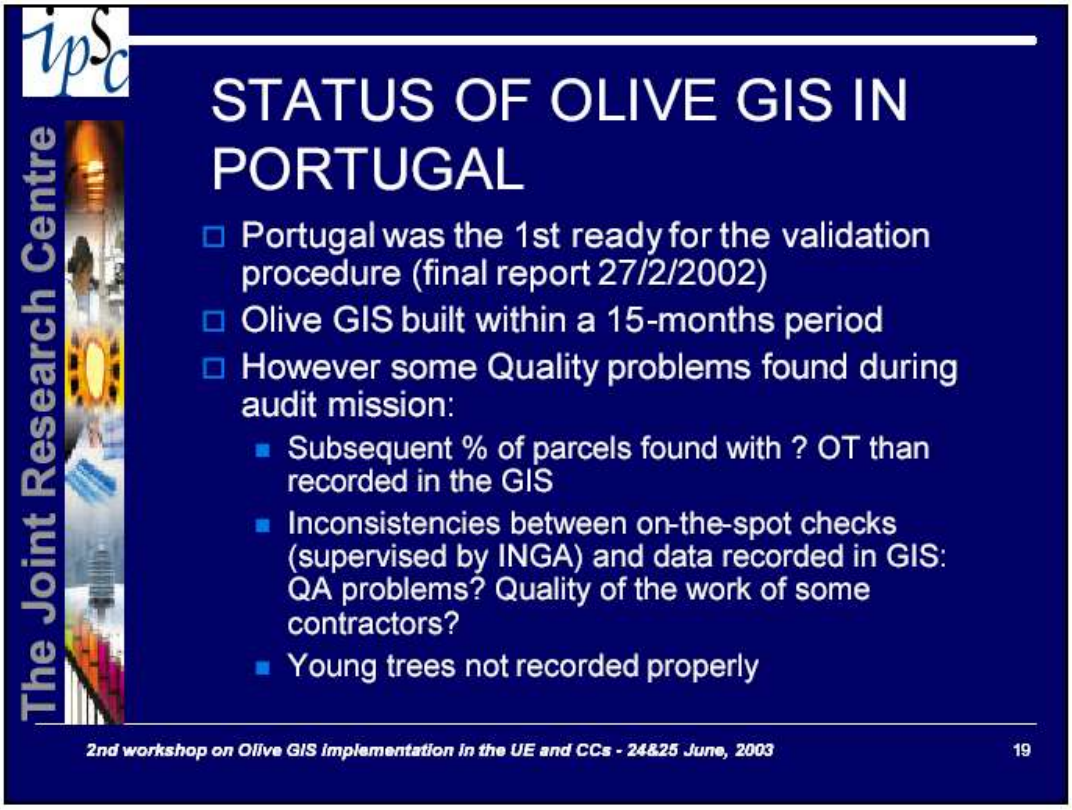
The Joint Research Centre
STATUS OF OLIVE GIS IN PORTUGAL
Portugal was the 1st ready for the validation procedure (final report 27/2/2002)
Olive GIS built within a 15-months period
However some Quality problems found during audit mission:
Subsequent % of parcels found with ? OT than recorded in the GIS
Inconsistencies between on-the-spot checks (supervised by INGA) and data recorded in GIS: QA problems? Quality of the work of some contractors?
Young trees not recorded properly
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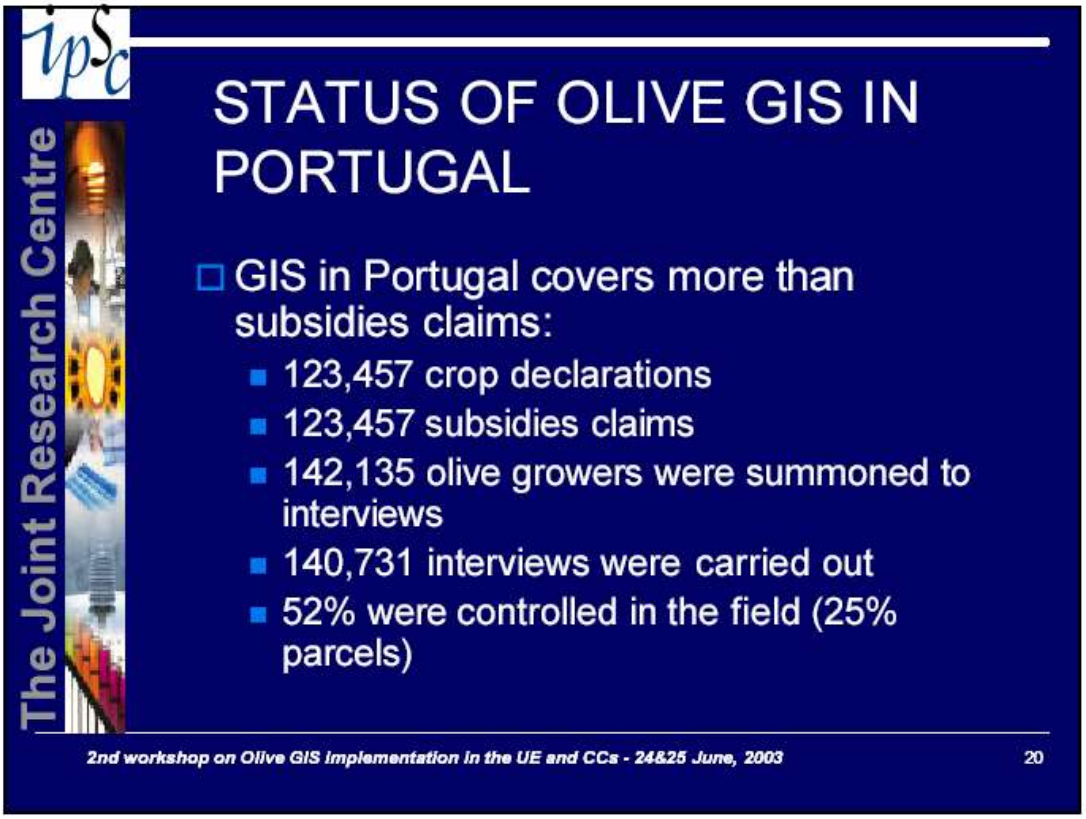
The Joint Research Centre
STATUS OF OLIVE GIS IN PORTUGAL
GIS in Portugal covers more than subsidies claims:
123,457 crop declarations
123,457 subsidies claims
142,135 olive growers were summoned to interviews
140,731 interviews were carried out
52% were controlled in the field (25% parcels)
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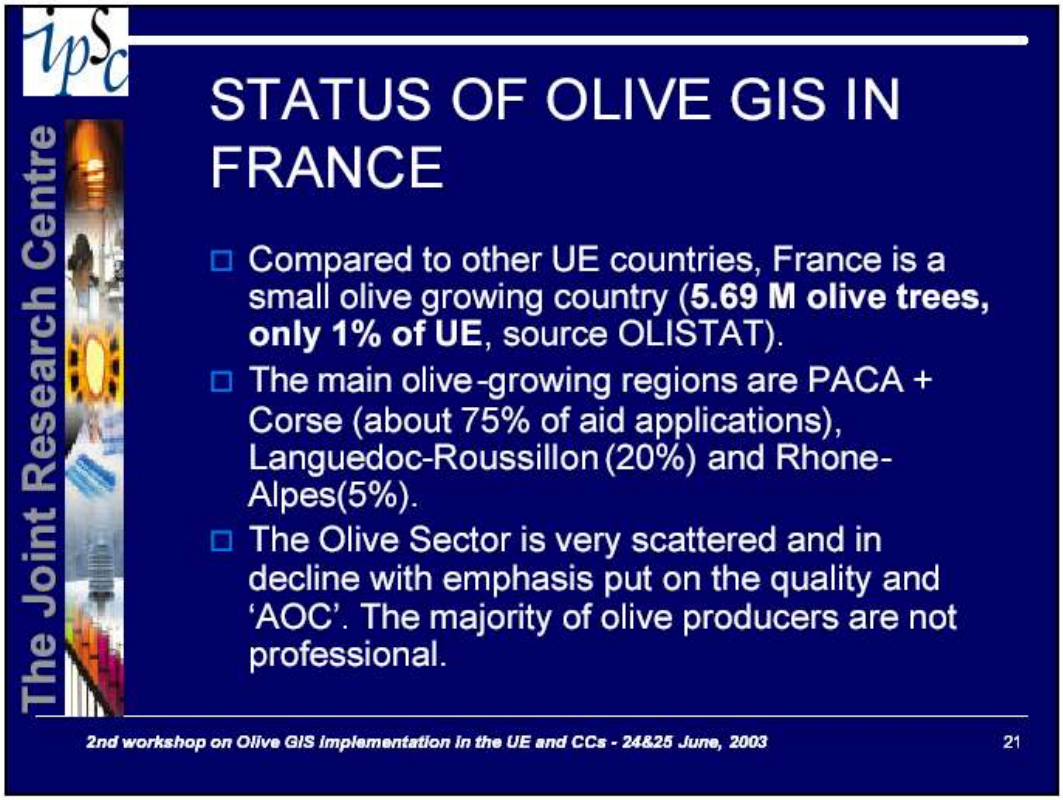
The Joint Research Centre
STATUS OF OLIVE GIS IN FRANCE
Compared to other UE countries, France is a small olive growing country (**5.69 M olive trees, only 1% of UE**, source OLISTAT).
The main olive-growing regions are PACA + Corse (about 75% of aid applications), Languedoc-Roussillon (20%) and Rhone-Alpes(5%).
The Olive Sector is very scattered and in decline with emphasis put on the quality and 'AOC'. The majority of olive producers are not professional.
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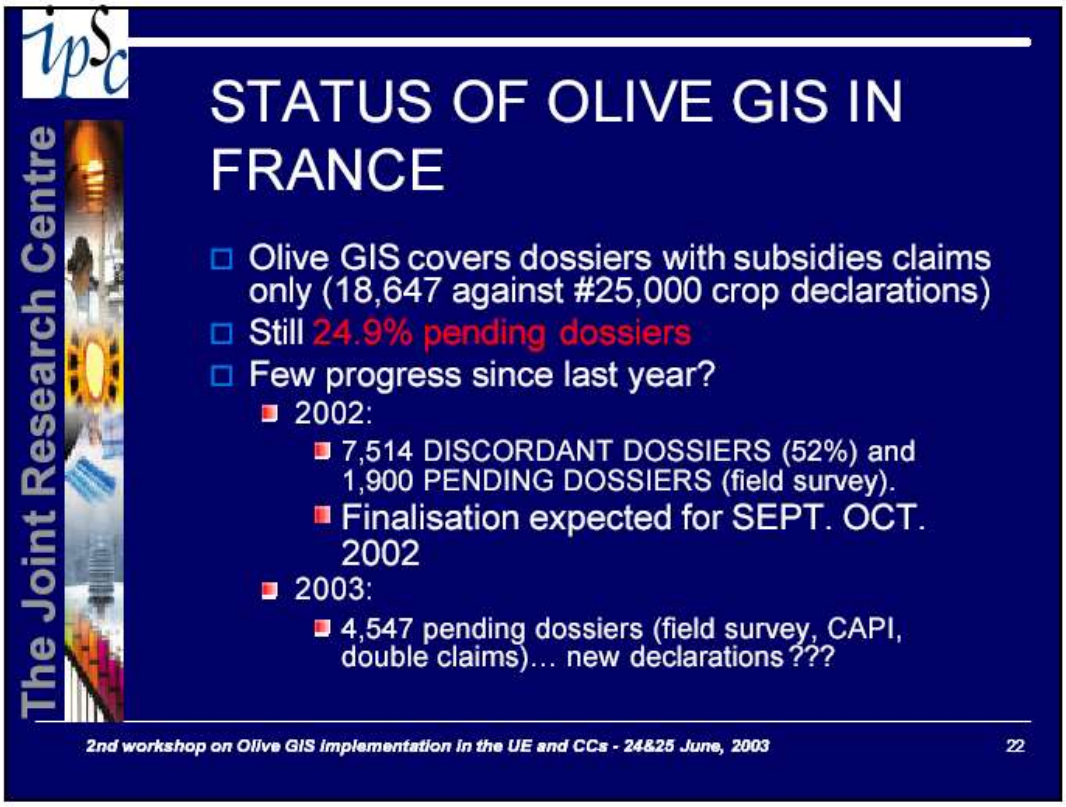
The Joint Research Centre
STATUS OF OLIVE GIS IN FRANCE
Olive GIS covers dossiers with subsidies claims only (18,647 against #25,000 crop declarations)
Still 24.9% pending dossiers
Few progress since last year?
2002:
7,514 DISCORDANT DOSSIERS (52%) and 1,900 PENDING DOSSIERS (field survey).
Finalisation expected for SEPT. OCT. 2002
2003:
4,547 pending dossiers (field survey, CAPI, double claims)… new declarations???
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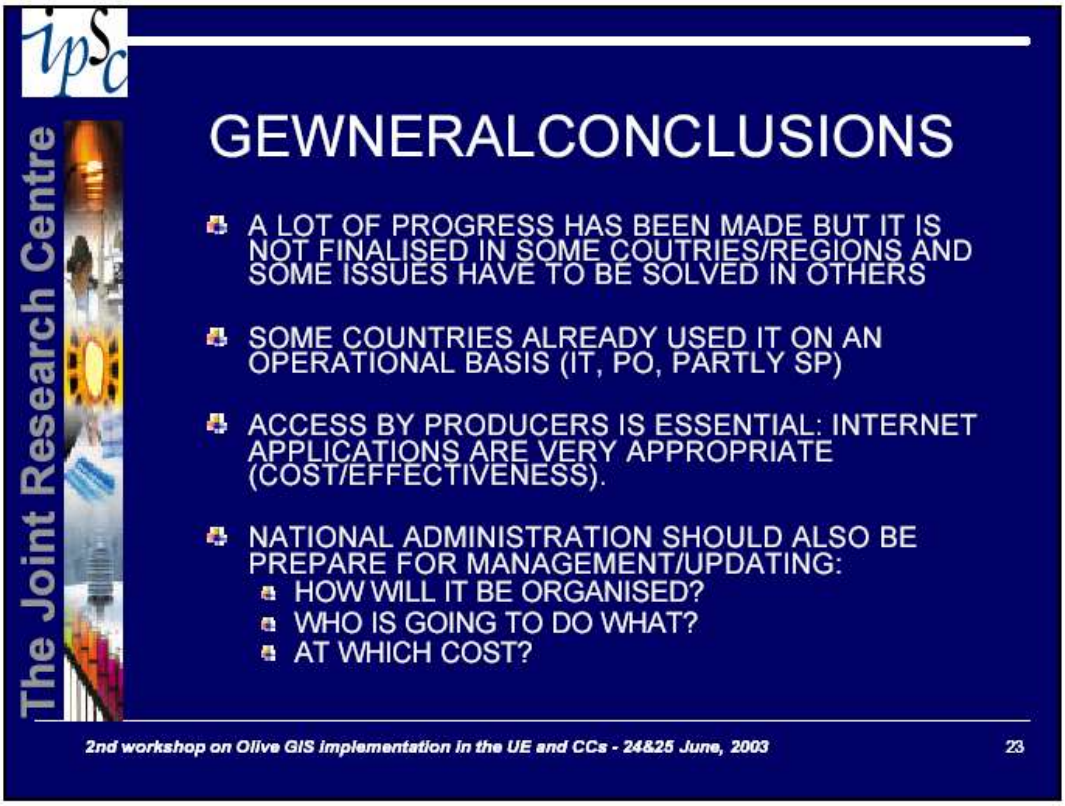
The Joint Research Centre
GEWNERALCONCLUSIONS
A LOT OF PROGRESS HAS BEEN MADE BUT IT IS NOT FINALISED IN SOME COUTRIES/REGIONS AND SOME ISSUES HAVE TO BE SOLVED IN OTHERS
SOME COUNTRIES ALREADY USED IT ON AN OPERATIONAL BASIS (IT, PO, PARTLY SP)
ACCESS BY PRODUCERS IS ESSENTIAL: INTERNET APPLICATIONS ARE VERY APPROPRIATE (COST/EFFECTIVENESS).
NATIONAL ADMINISTRATION SHOULD ALSO BE PREPARE FOR MANAGEMENT/UPDATING:
HOW WILL IT BE ORGANISED?
WHO IS GOING TO DO WHAT?
AT WHICH COST?
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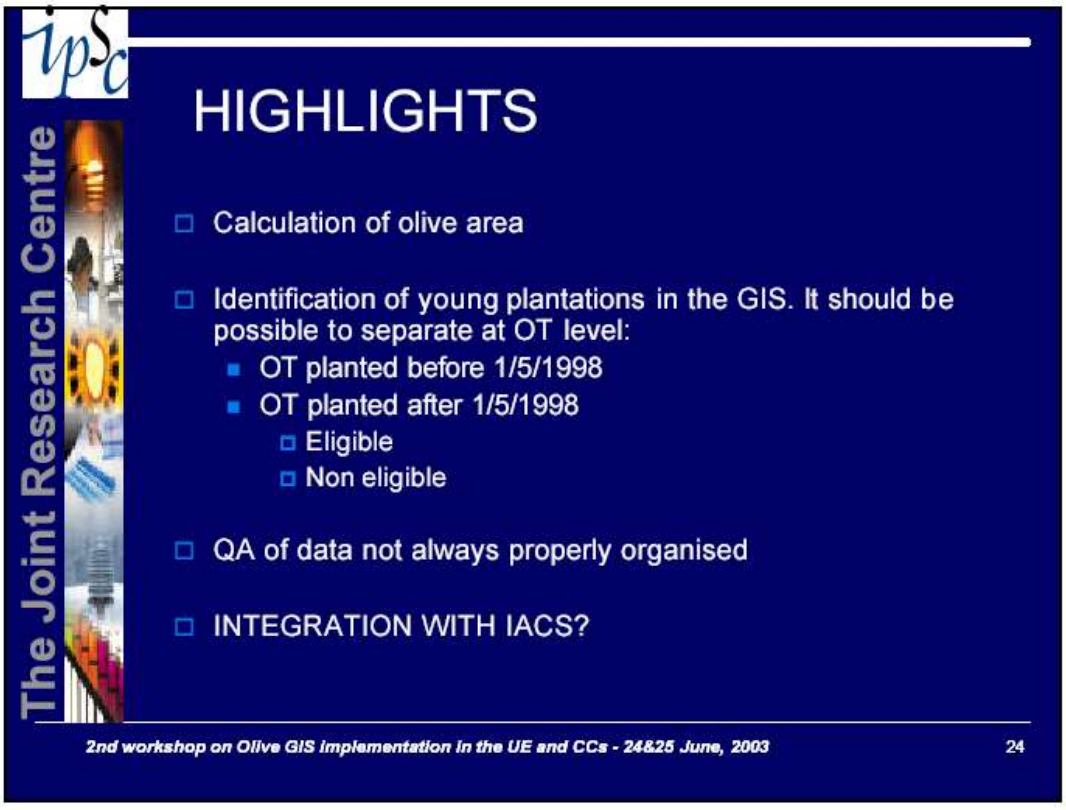
The Joint Research Centre
HIGHLIGHTS
Calculation of olive area
Identification of young plantations in the GIS. It should be possible to separate at OT level:
OT planted before 1/5/1998
OT planted after 1/5/1998
Eligible
Non eligible
QA of data not always properly organised
INTEGRATION WITH IACS?
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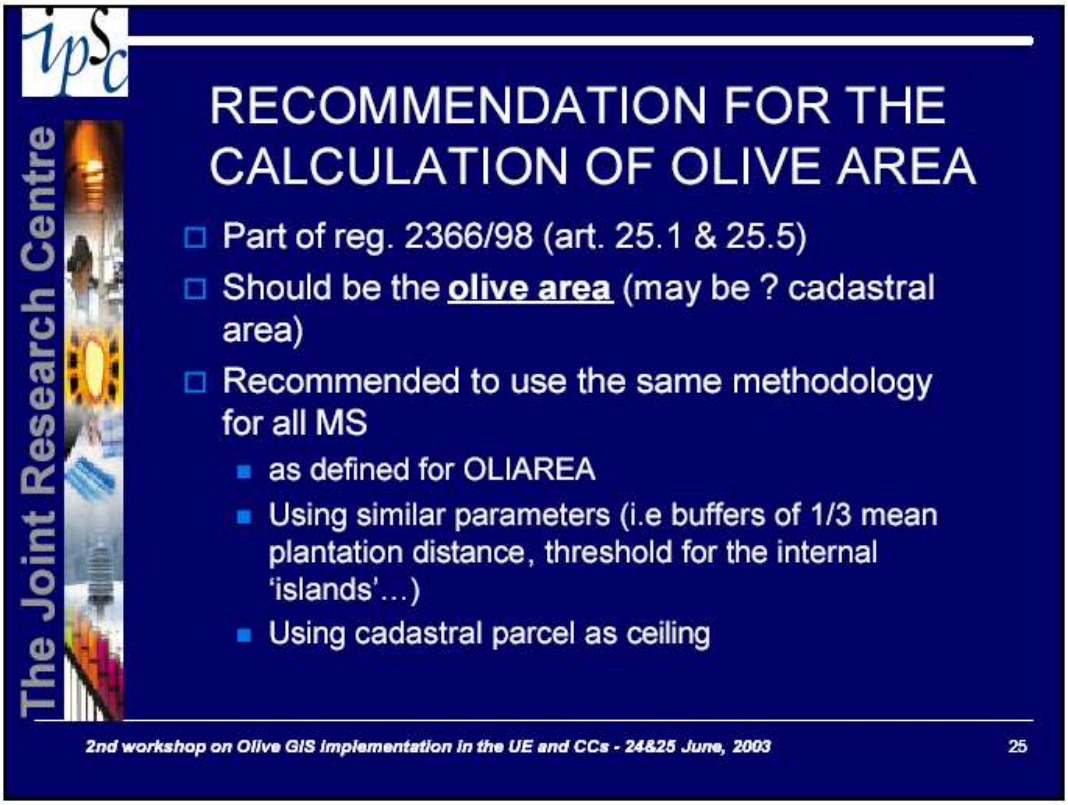
The Joint Research Centre
RECOMMENDATION FOR THE CALCULATION OF OLIVE AREA
Part of reg. 2366/98 (art. 25.1 & 25.5)
Should be the olive area (may be ? cadastral area)
Recommended to use the same methodology for all MS
as defined for OLIAREA
Using similar parameters (i.e buffers of 1/3 mean plantation distance, threshold for the internal 'islands'…)
Using cadastral parcel as ceiling
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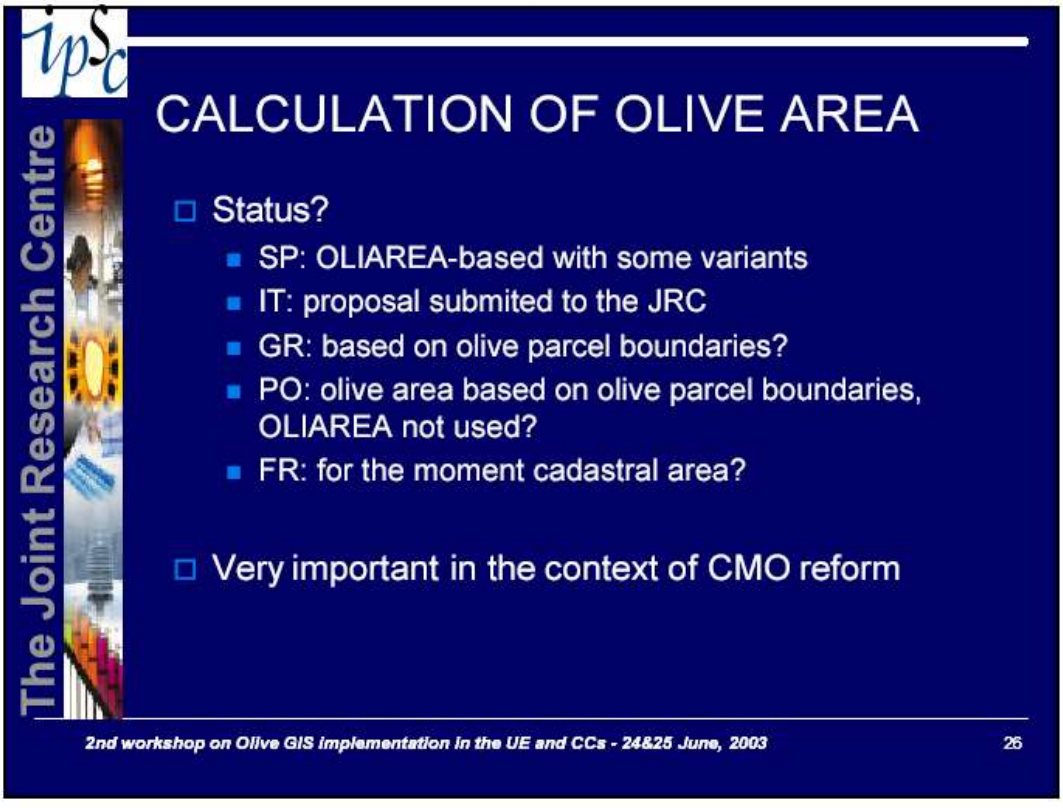
The Joint Research Centre
CALCULATION OF OLIVE AREA
Status?
SP: OLIAREA-based with some variants
IT: proposal submited to the JRC
GR: based on olive parcel boundaries?
PO: olive area based on olive parcel boundaries, OLIAREA not used?
FR: for the moment cadastral area?
Very important in the context of CMO reform
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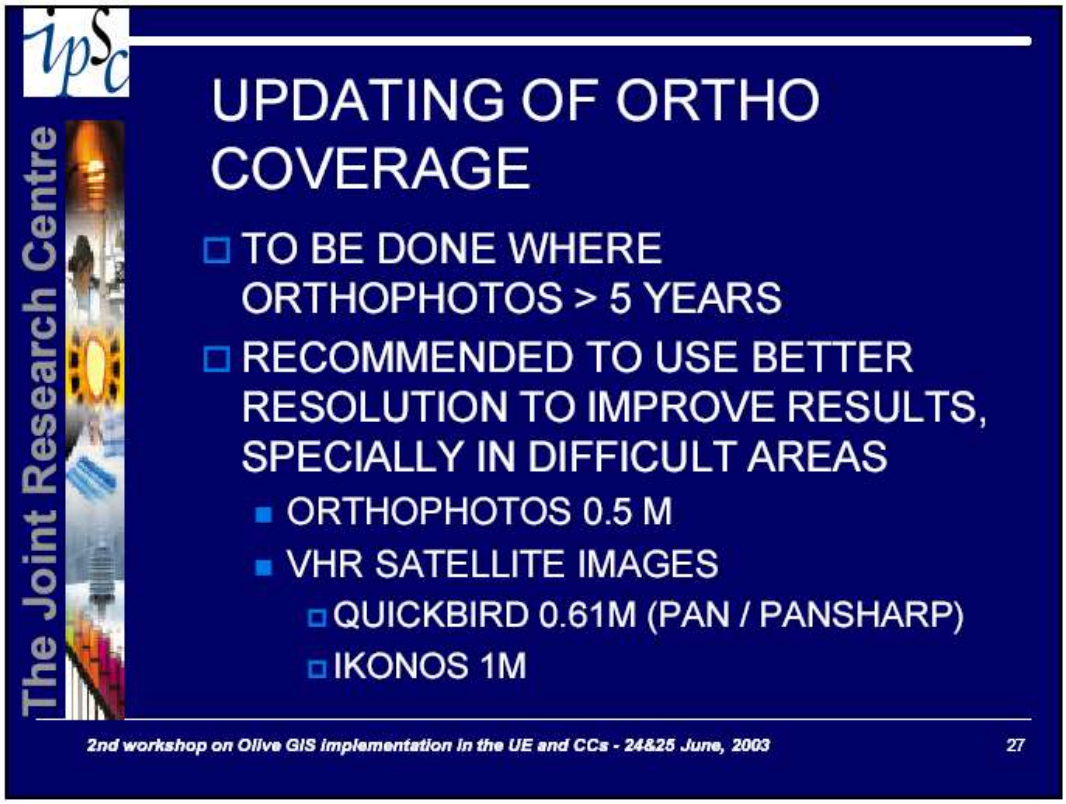
The Joint Research Centre
UPDATING OF ORTHO COVERAGE
TO BE DONE WHERE ORTHOPHOTOS > 5 YEARS
RECOMMENDED TO USE BETTER RESOLUTION TO IMPROVE RESULTS, SPECIALLY IN DIFFICULT AREAS
ORTHOPHOTOS 0.5 M
VHR SATELLITE IMAGES
QUICKBIRD 0.61M (PAN / PANSHARP)
IKONOS 1M
2nd workshop on Olive GIS implementation in the UE and CCs - 24&25 June, 2003
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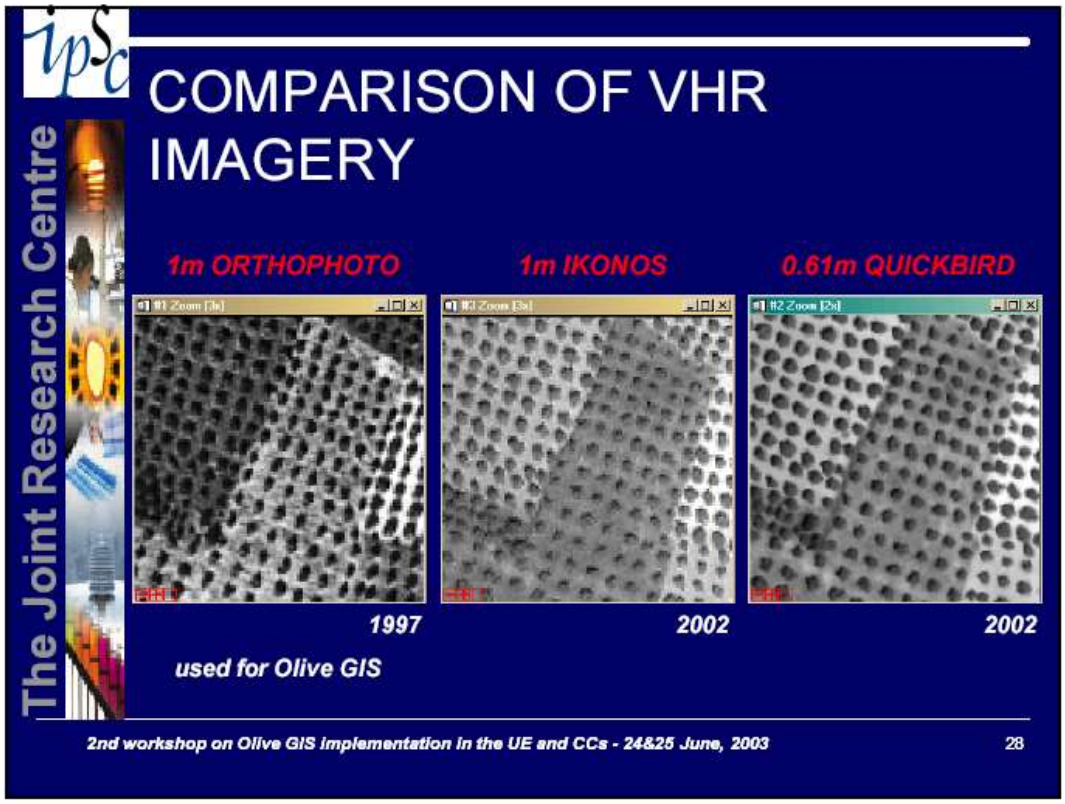
The Joint Research Centre
COMPARISON OF VHR IMAGERY
1m ORTHOPHOTO
1m IKONOS
0.61m QUICKBIRD
1997
2002
2002
used for Olive GIS
2nd workshop on Olive GIS implementation in the UE and CCs - 24&25 June, 2003
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Session 2: Presentation of the status of Olive GIS in EU by the Member States

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

Summary

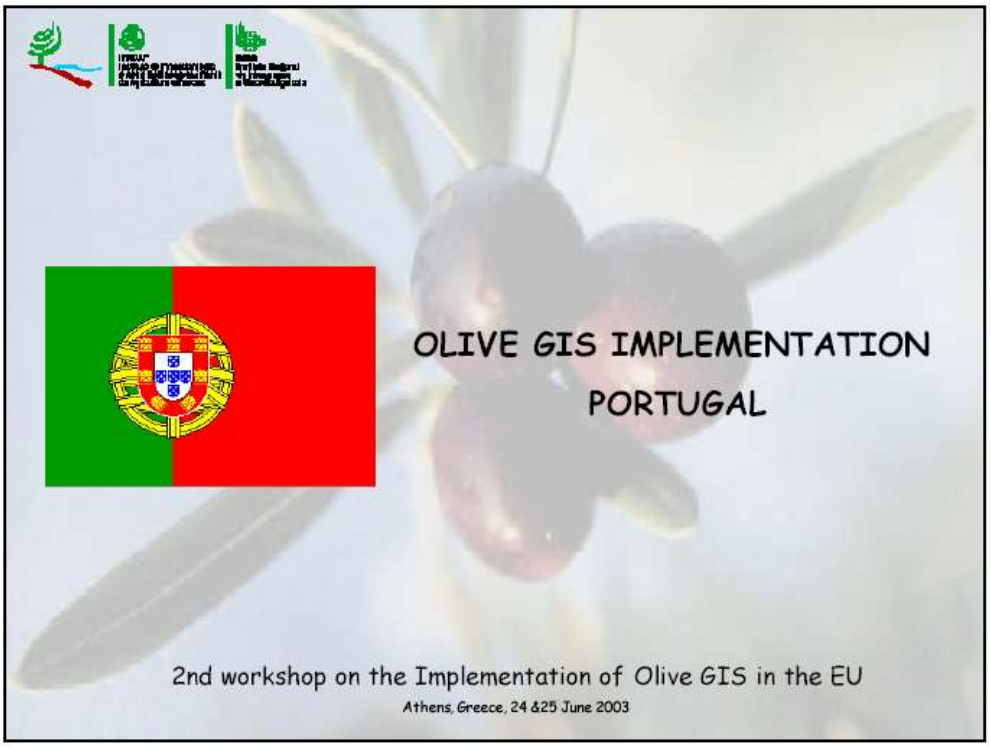
Carla Martins is a technical responsible of the Olive GIS at the Direction of Inspection and Controls of INGA (the Portuguese Paying Agency). She recalled the main phases of the project, started in 1999-2000.In November 1999 crop declarations were renewed in Portugal. From this basis the Dbase was prepared and olive parcels were photo-interpreted. Then all olive growers were interviewed in local offices, field visits were organised in case of discordances and field visits. The Olive GIS data were integrated in the SIP (the Portuguese Land Parcel Identification System) and final documents were provided to farmers with P1 (alphanumeric data) and P3 (graphic document). The first updating was done in 2001: new parcels were declared in regional services of the Ministry of Agriculture (on paper), then they were digitised, photo-interpreted and field visited by a contractor (Prosistema). A lot of pending dossiers were sorted with a specific code (P). In november 2001 started the 2nd updating (until april 2002). This second update was much easier than the 1st one. The new parcels were directly digitised in regional offices, as well as CAPI and field visits. The 3rd updating campaign started in November 2002 on the basis of the 3rd crop declaration. The Olive GIS is therefore completely operational since crop declarations are made with consolidated data.

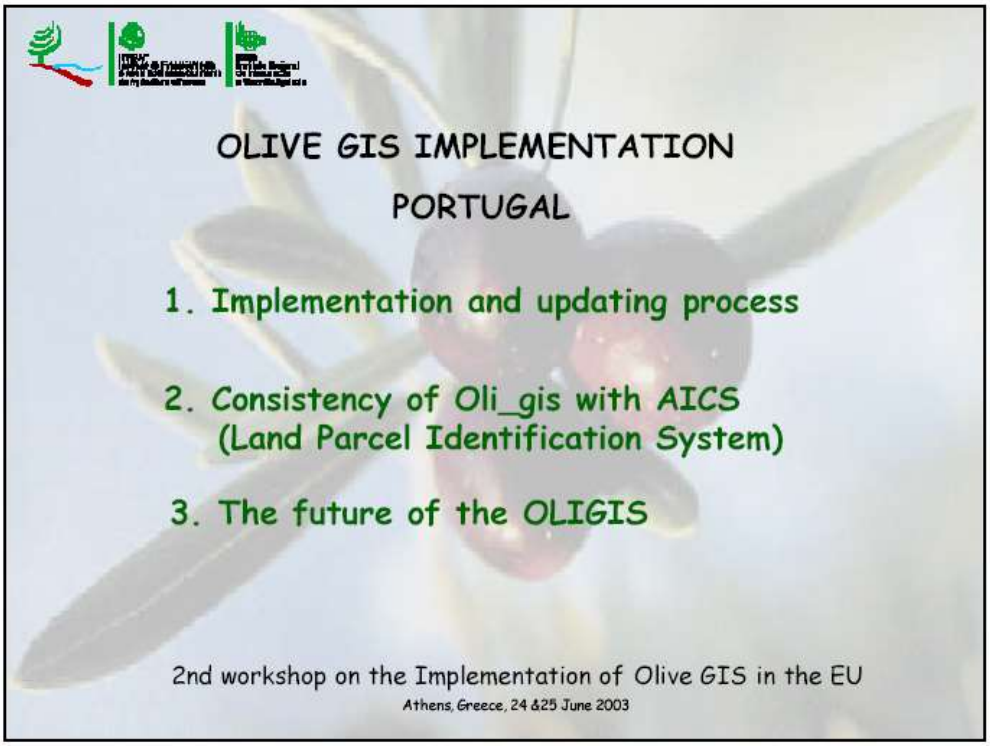
The Olive GIS is completely integrated in the SIP: parcels are the same, the only specific element in Olive GIS are the olive trees. The Olive GIS updating is also completely integrated in the SIP updating procedures: the same resources are used (from regional

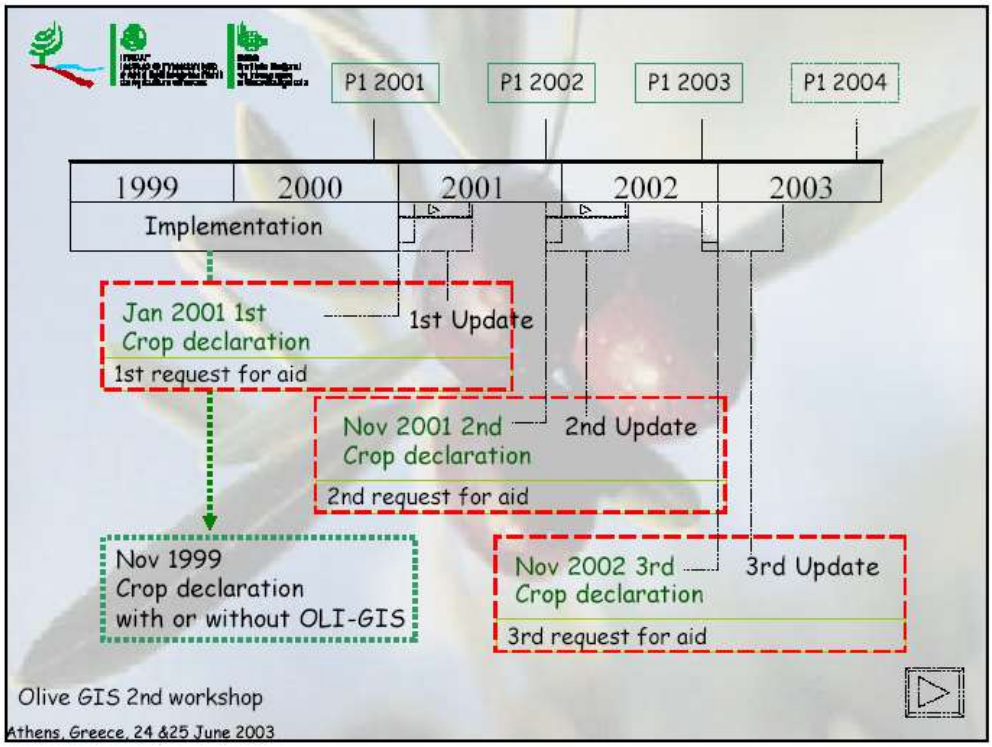
offices). However there are some problems of timing between LPIS and Olive GIS calendars; unlike LPIS the Olive GIS has to be consolidated by November for the next campaign.

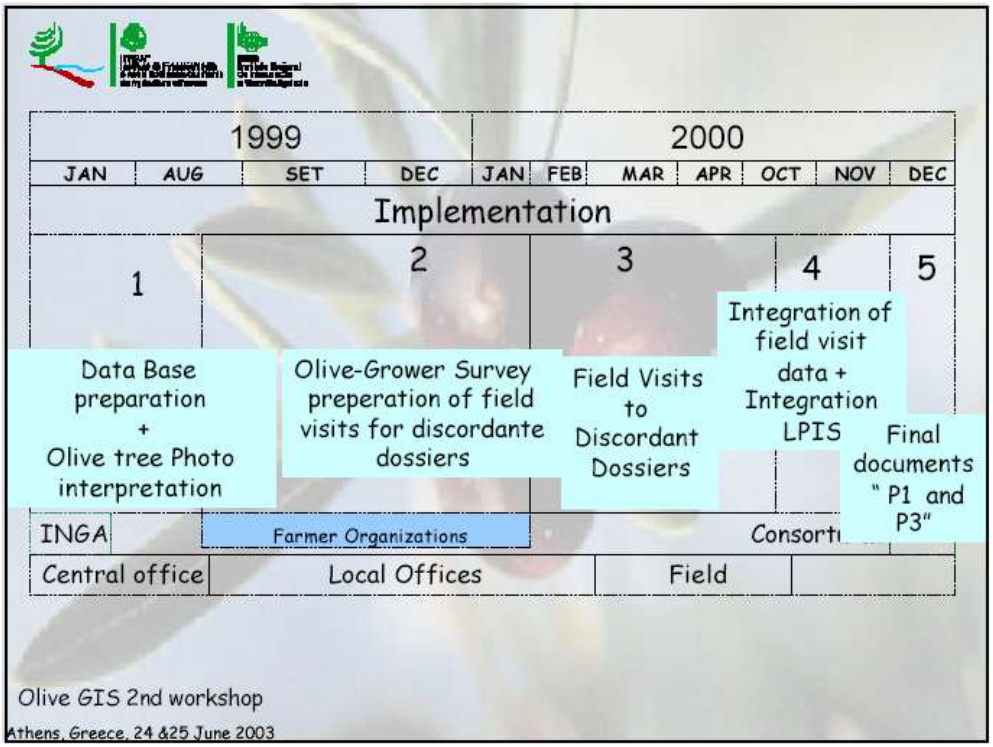
The system is being completely rebuilding at the moment: it will be moved from ACCESS/Arcview/image files to a single Oracle Spatial database (2003). There will be an Internet access to static informations. The next step in 2004 will be the migration to regional updating of the central DB with an ONLINE access.

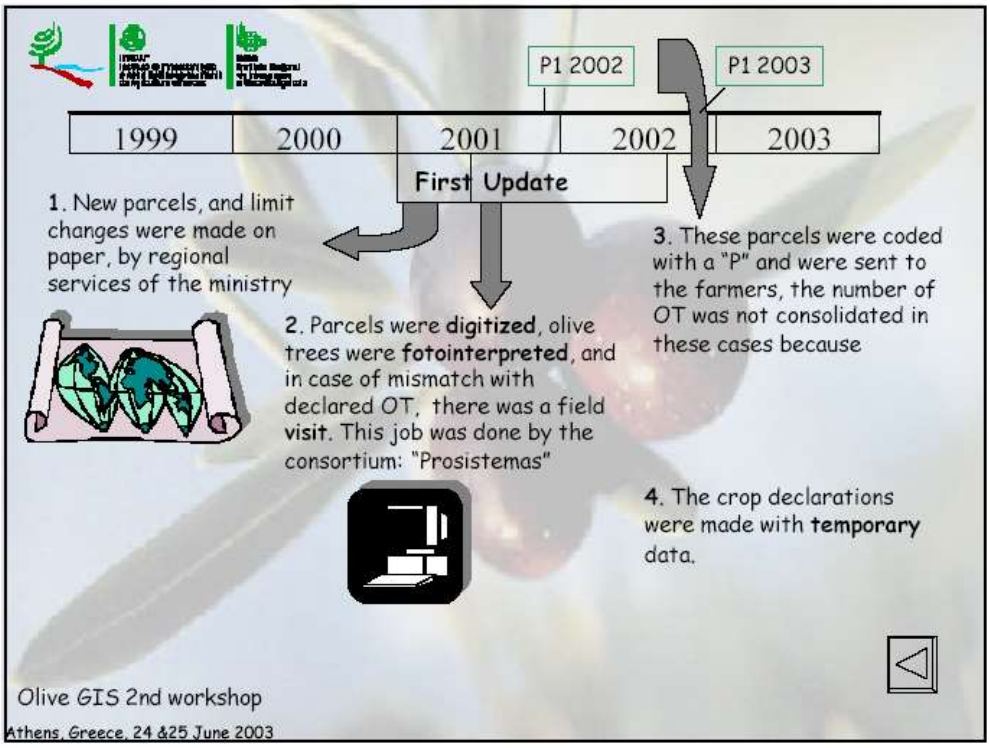
(Presentation)

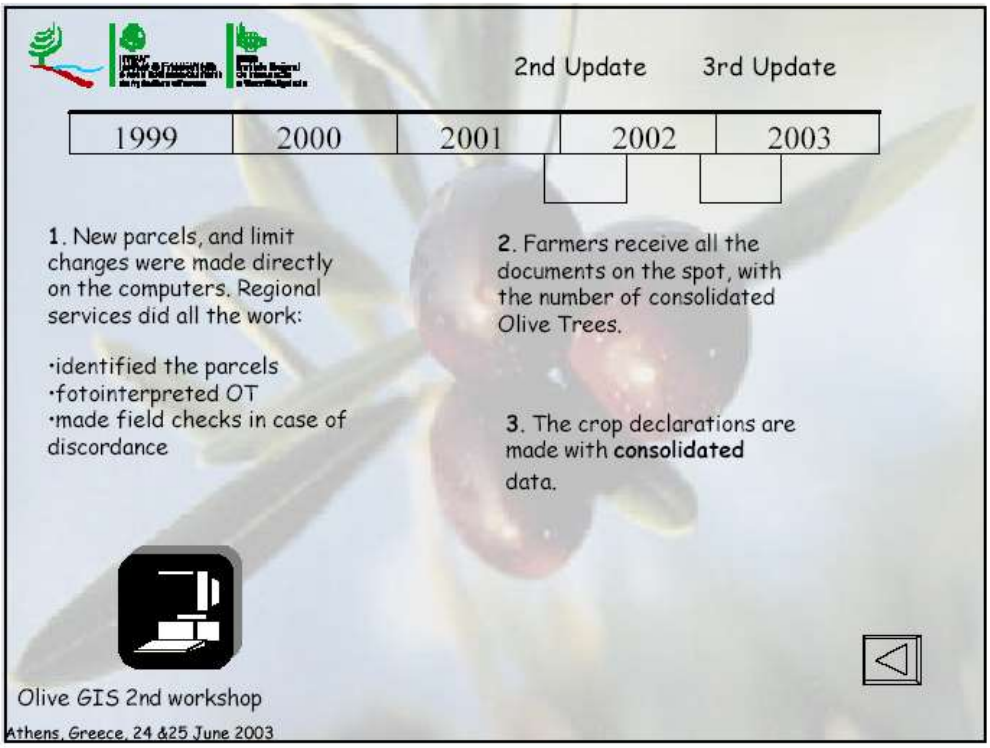

OLIVE GIS IMPLEMENTATION
PORTUGAL
2nd workshop on the Implementation of Olive GIS in the EU
Athens, Greece, 24 &25 June 2003


OLIVE GIS IMPLEMENTATION
PORTUGAL
1. Implementation and updating process
2. Consistency of Oli_gis with AICS
(Land Parcel Identification System)
3. The future of the OLIGIS
2nd workshop on the Implementation of Olive GIS in the EU
Athens, Greece, 24 &25 June 2003


P1 2001
P1 2002
P1 2003
P1 2004
1999
2000
2001
2002
2003
Implementation
Jan 2001 1st Crop declaration
1st request for aid
1st Update
Nov 2001 2nd Crop declaration
2nd request for aid
2nd Update
Nov 1999 Crop declaration with or without OLI-GIS
Nov 2002 3rd Crop declaration
3rd request for aid
3rd Update
Olive GIS 2nd workshop
Athens, Greece, 24 &25 June 2003


1999
2000
JAN
AUG
SET
DEC
JAN
FEB
MAR
APR
OCT
NOV
DEC
Implementation
1
2
3
4
5
Data Base preparation + Olive tree Photo interpretation
Olive-Grower Survey preperation of field visits for discordante dossiers
Field Visits to Discordant Dossiers
Integration of field visit data + Integration LPIS
Final documents " P1 and P3"
INGA
Farmer Organizations
Consorti
Central office
Local Offices
Field
Olive GIS 2nd workshop
Athens, Greece, 24 &25 June 2003


P1 2002
P1 2003
1999
2000
2001
2002
2003
First Update
1. New parcels, and limit changes were made on paper, by regional services of the ministry
2. Parcels were digitized, olive trees were fotointerpreted, and in case of mismatch with declared OT, there was a field visit. This job was done by the consortium: "Prosistemas"
3. These parcels were coded with a "P" and were sent to the farmers, the number of OT was not consolidated in these cases because
4. The crop declarations were made with temporary data.
Olive GIS 2nd workshop
Athens, Greece, 24 &25 June 2003


2nd Update
3rd Update
1999
2000
2001
2002
2003
1. New parcels, and limit changes were made directly on the computers. Regional services did all the work:
·identified the parcels
·fotointerpreted OT
·made field checks in case of discordance
2. Farmers receive all the documents on the spot, with the number of consolidated Olive Trees.
3. The crop declarations are made with consolidated data.
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Updating OLI_SIG
The OLI_GIS update is completely integrated in the Land Parcel Identification System (LPIS) update
we are able to use the resources available for the LPIS (regional staff, GIS know-how, technical equipment, ortophotography new photos every 5 years)
the fact of having to have the database consolidated in November (Crop Declarations), and having the LPIS update in the regional services until April, leaves us with a tight calendar for validating the information and emiting the farmers' individual documents.
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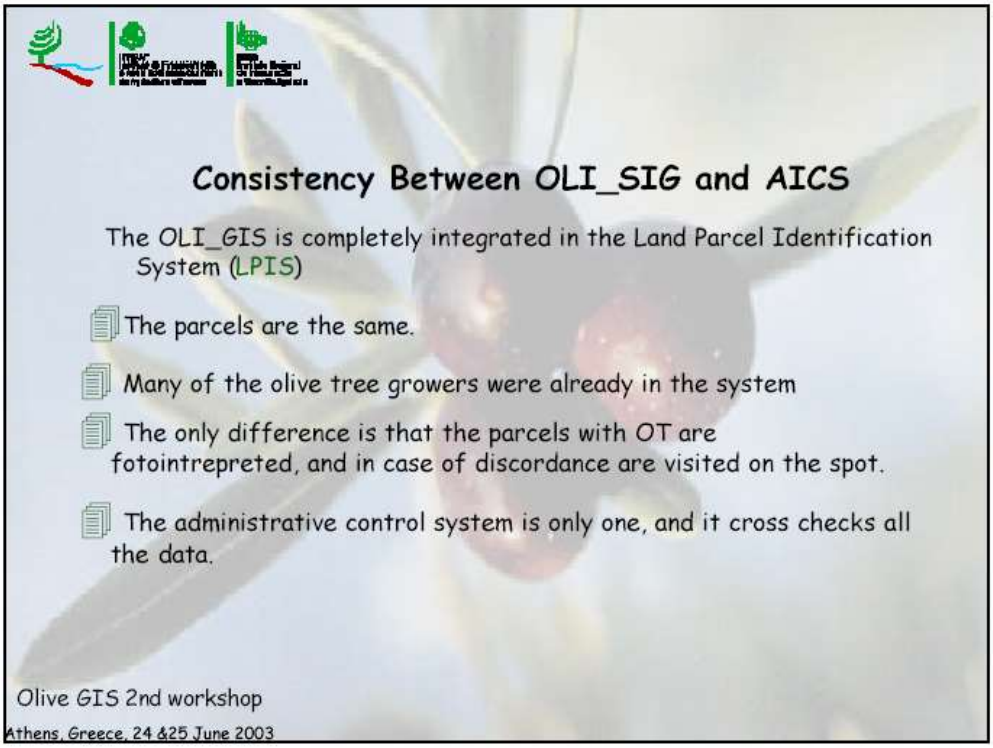
Athens, Greece, 24 &25 June 2003


Consistency Between OLI_SIG and AICS
The OLI_GIS is completely integrated in the Land Parcel Identification System (LPIS)
The parcels are the same.
Many of the olive tree growers were already in the system
The only difference is that the parcels with OT are fotointrepreted, and in case of discordance are visited on the spot.
The administrative control system is only one, and it cross checks all the data.
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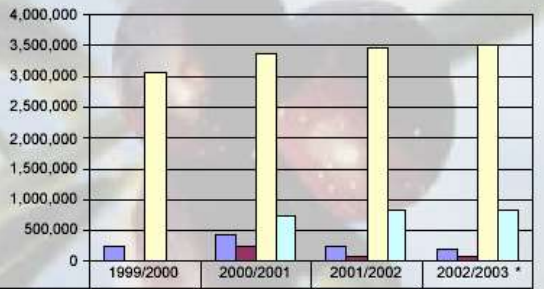
Athens, Greece, 24 &25 June 2003

Statistics

updates LPIS / SIG-OL 1999-2003



	1999/2000	2000/2001	2001/2002	2002/2003 *
Updated_Total	203,067	424,903	207,649	189,537
Updated_SIG-OL	0	199,693	49,981	52,841
Total Number of Parcels	3,075,727	3,370,953	3,457,014	3,500,858
Total Number of Parcels with Olive Trees	0	716,293	809,635	821,088

Olive GIS 2nd workshop
Athens, Greece, 24 &25 June 2003

The future rebuilding the GIS

Today	Future
· access + shape files + image files	· oracle data base
· updating off-line	· central data base with on-line updating system
· validation work	· validation is automatic
· new set of files every year	· historical storage

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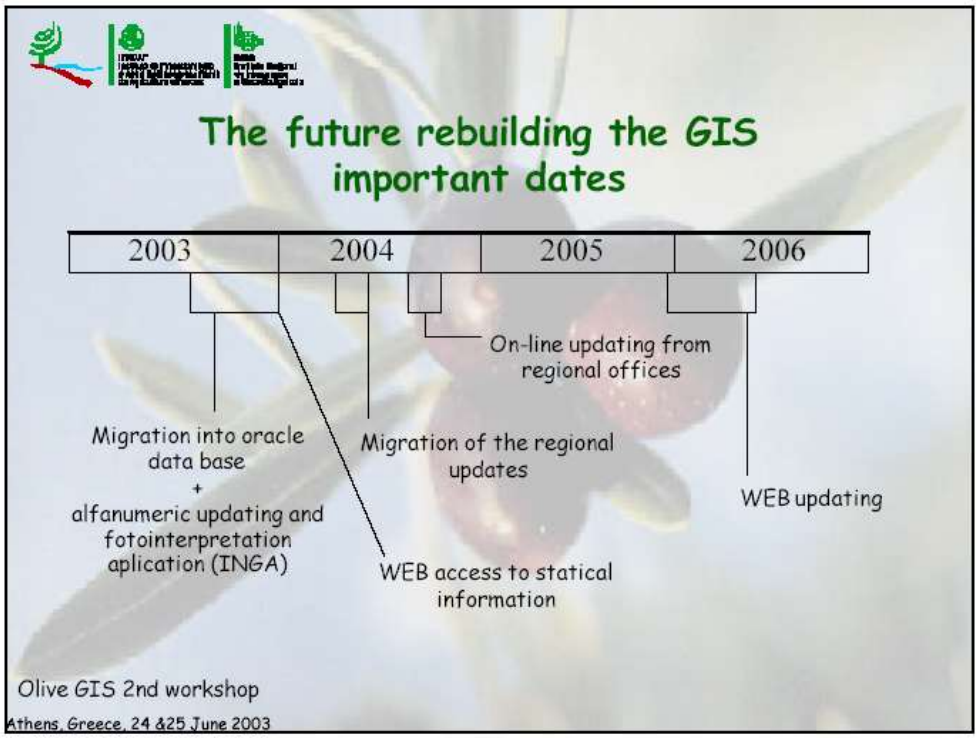
Athens, Greece, 24 &25 June 2003


The future rebuilding the GIS important dates
2003
2004
2005
2006
On-line updating from regional offices
Migration into oracle data base
+
alfanumeric updating and fotointerpretation aplication (INGA)
Migration of the regional updates
WEB updating
WEB access to statical information
Olive GIS 2nd workshop
Athens, Greece, 24 &25 June 2003


IFADAP
Instituto de Financiamento e Apoio ao Desenvolvimento da Agricultura e Pescas
INGA
Instituto Nacional de Intervenção e Garantia Agrícola
OLIVE GIS IMPLEMENTATION
PORTUGAL
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2nd workshop on the Implementation of Olive GIS in the EU
Athens, Greece, 24 &25 June 2003

Session 2 – Status of Olive GIS in Italy, by *M. Guerra, FINSIEL*

Summary

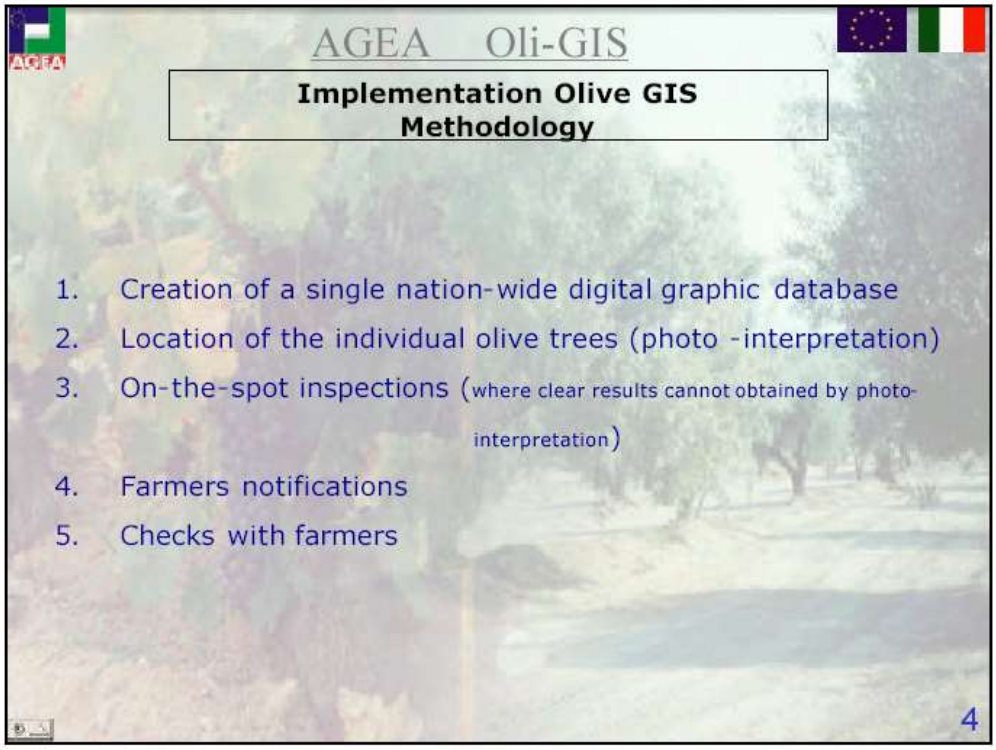
M. Guerra from FINSIEL (the Italian contractor) represented AGEA (the Italian paying agency). He recalled the schedule of Olive GIS implementation (1998-2002) which has been declared as completed by the Italian administration and which contains 1.45 M olive growers (1.15 M for the campaigns 1998 to 2001) and 190 M olive trees. The methodology was based on the creation of a single 'graphical reference database' which is common to all sectors. The location of individual olive trees for the Olive GIS was based on the photo-interpretation of olive trees based on the crop declaration data (using the OLICOUNT software). All the farmers were notified, through the producers associations. In case of remaining discordances interviews of farmers were organised in the 120 local offices of AGEA (in the 60 provinces) with 600 technicians, and possibly field checks. The Olive GIS was completed on 30th September, 2002. The current activities are: (i) the updating of Olive GIS (campaigns 2001/02 and 2002/03), (ii) the calculation of Olive area with tests using the OLIAREA software (with the collaboration of the JRC), and (iii) the census of 'additional OT' (ie. the new plantation after 1/5/1998). The updating covers more or less 100,000 dossiers.
On the system side there is an online graphic declaration with a new wide-spread access through Internet.

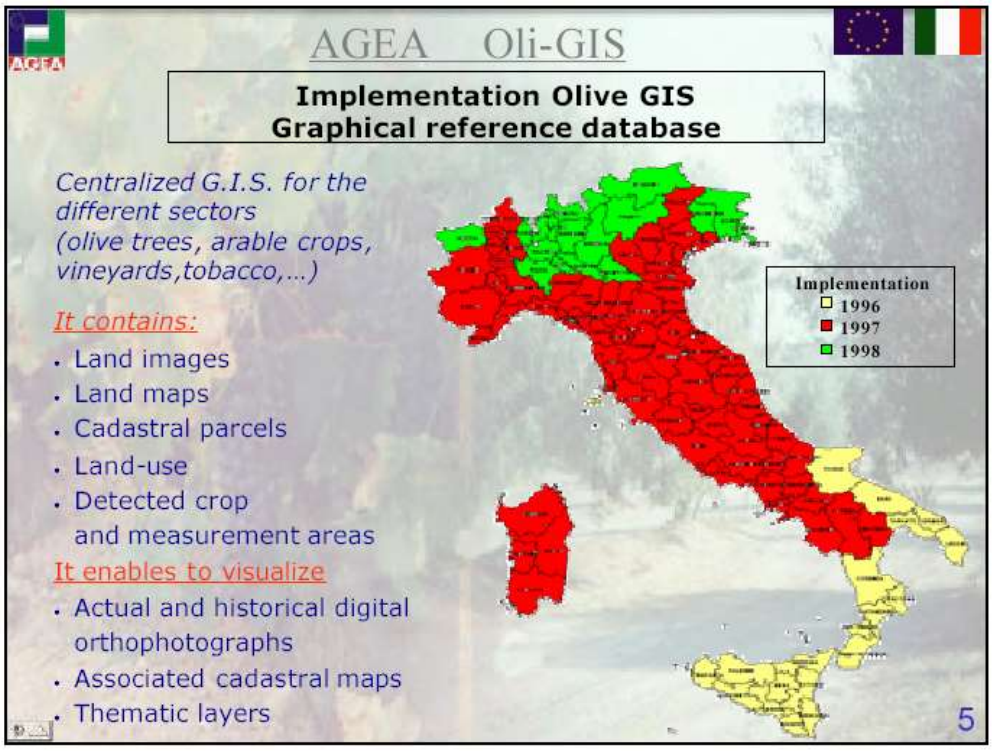
(Presentation)

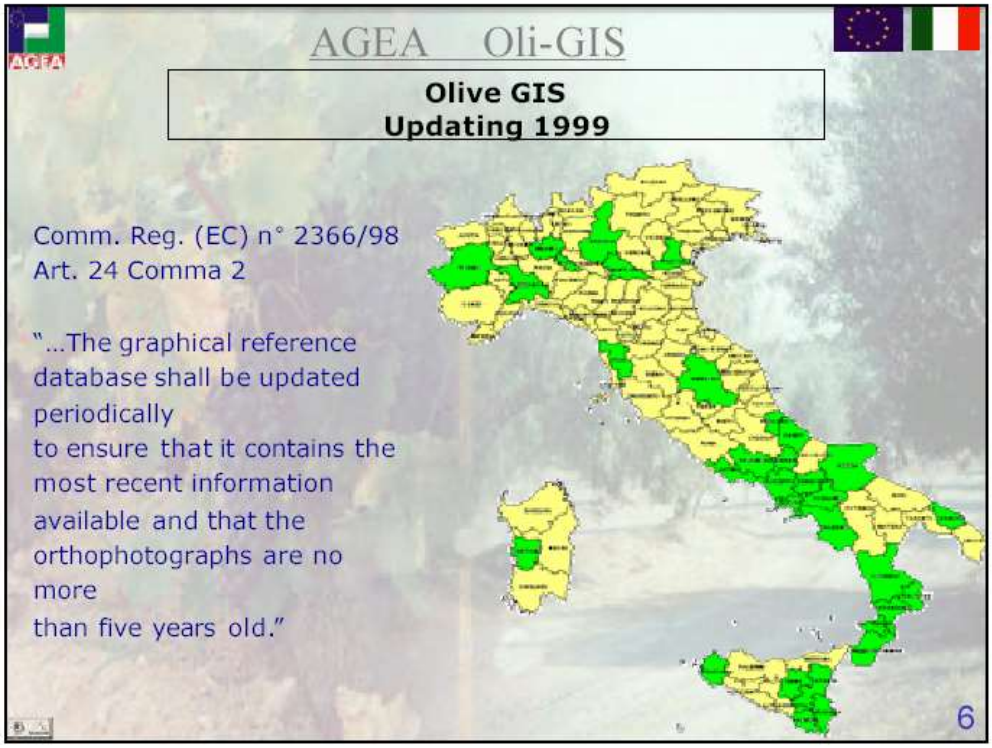

AGEA
OLI-GIS Experts Meeting
2nd workshop on the Implementation of Olive GIS in the Member States
Athens (Greece), 24 & 25th June 2003
Status of Olive GIS in Italy
1

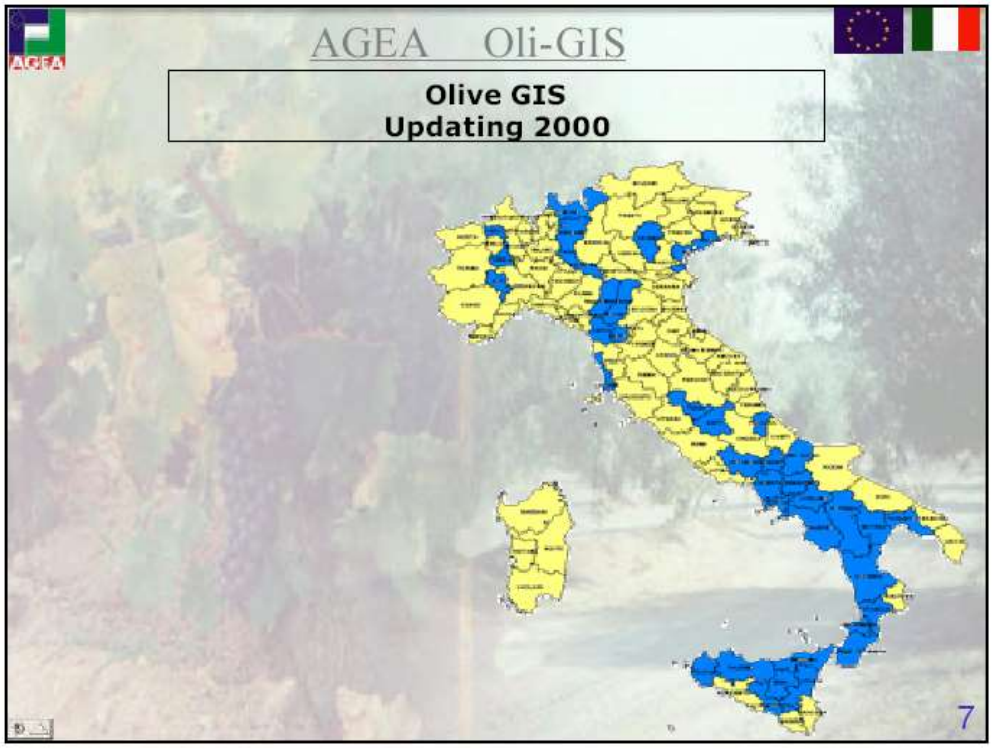

AGEA
AGEA Oli-GIS
Status of Olive GIS in Italy
In compliance with Commission Regulation (EC) n° 2366/98 Article 26, the European Commission transmits to Italy, with the note dated May 14, 2003 prot. n° VI/012791:
"Due to the absence of major discrepance between crop declaration and the information in the Geographical Information System, it may be provisionally concluded that, in the selected cases, the GIS is of an acceptable quality and meets the criteria defined in Regulation (EC) 2366/98"
2

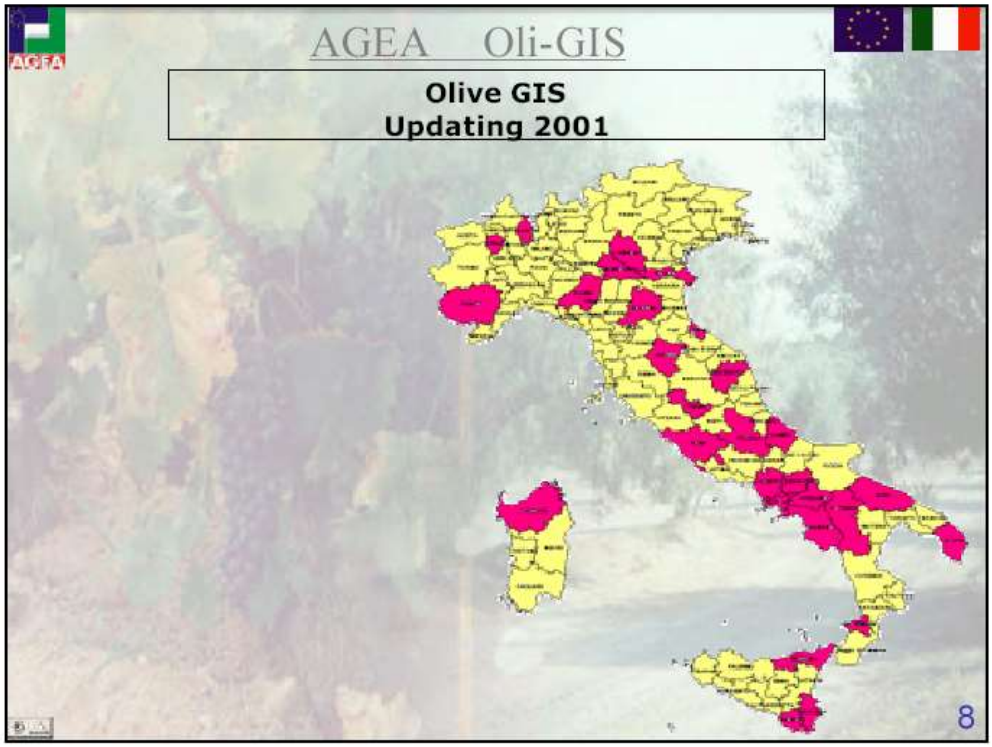

AGEA Oli-GIS
Status of Olive GIS in Italy
Implementation (at campaigns 2000/2001)
The activities 1998 – 2002 concerned:
Farmers notifications 1.450.000 farmers
Georeferencing olive trees 190.000.000 plants
On-the-spot inspections 700.000 parcels
Checks with the farmers 215.000 farmers
3

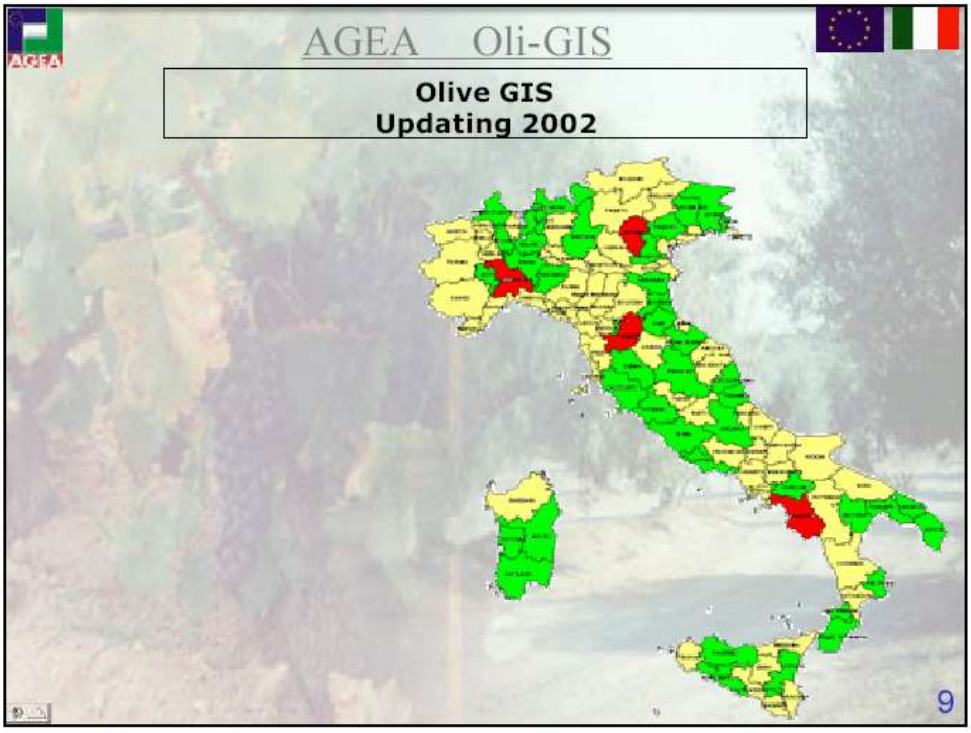

AGEA Oli-GIS
Implementation Olive GIS
Methodology
1. Creation of a single nation-wide digital graphic database
2. Location of the individual olive trees (photo -interpretation)
3. On-the-spot inspections (where clear results cannot obtained by photo-interpretation)
4. Farmers notifications
5. Checks with farmers
4

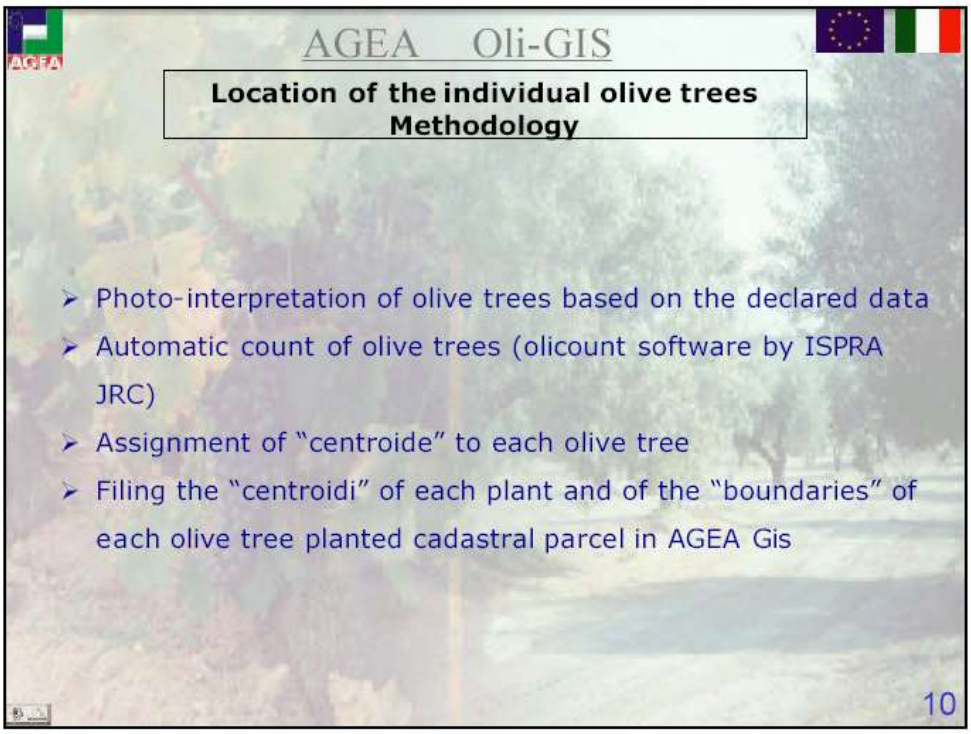

AGEA Oli-GIS
Implementation Olive GIS
Graphical reference database
Centralized G.I.S. for the different sectors (olive trees, arable crops, vineyards,tobacco,…)
It contains:
• Land images
• Land maps
• Cadastral parcels
• Land-use
• Detected crop and measurement areas
It enables to visualize
• Actual and historical digital orthophotographs
• Associated cadastral maps
• Thematic layers
Implementation
1996
1997
1998
5


AGEA Oli-GIS
Olive GIS
Updating 1999
Comm. Reg. (EC) n° 2366/98
Art. 24 Comma 2
"…The graphical reference database shall be updated periodically to ensure that it contains the most recent information available and that the orthophotographs are no more than five years old."
6

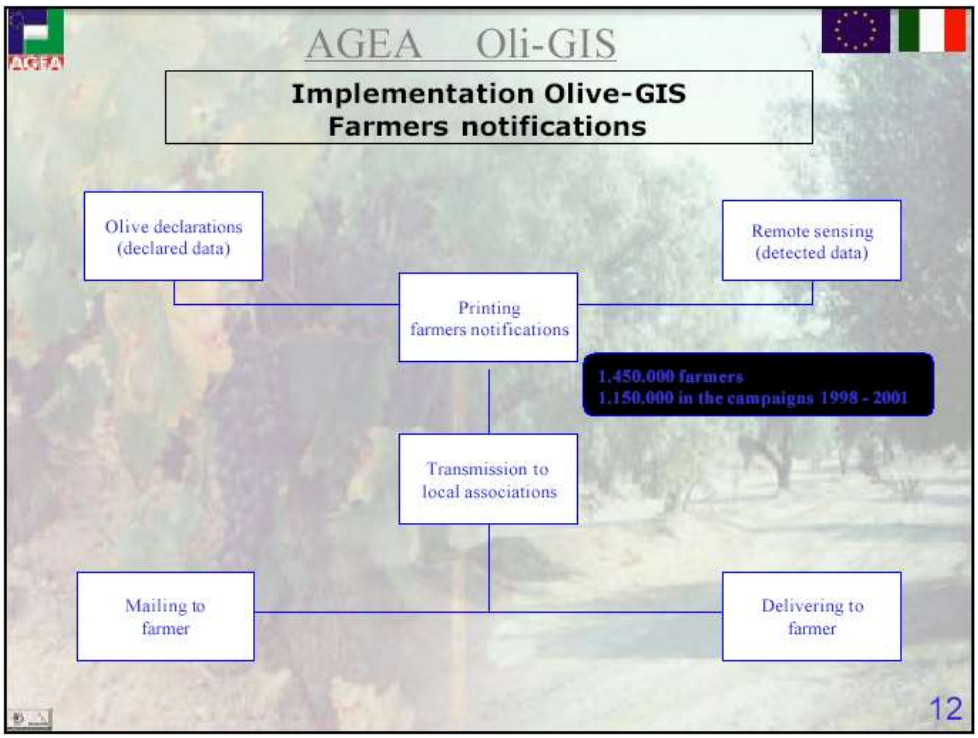

AGEA Oli-GIS
Olive GIS
Updating 2000
7

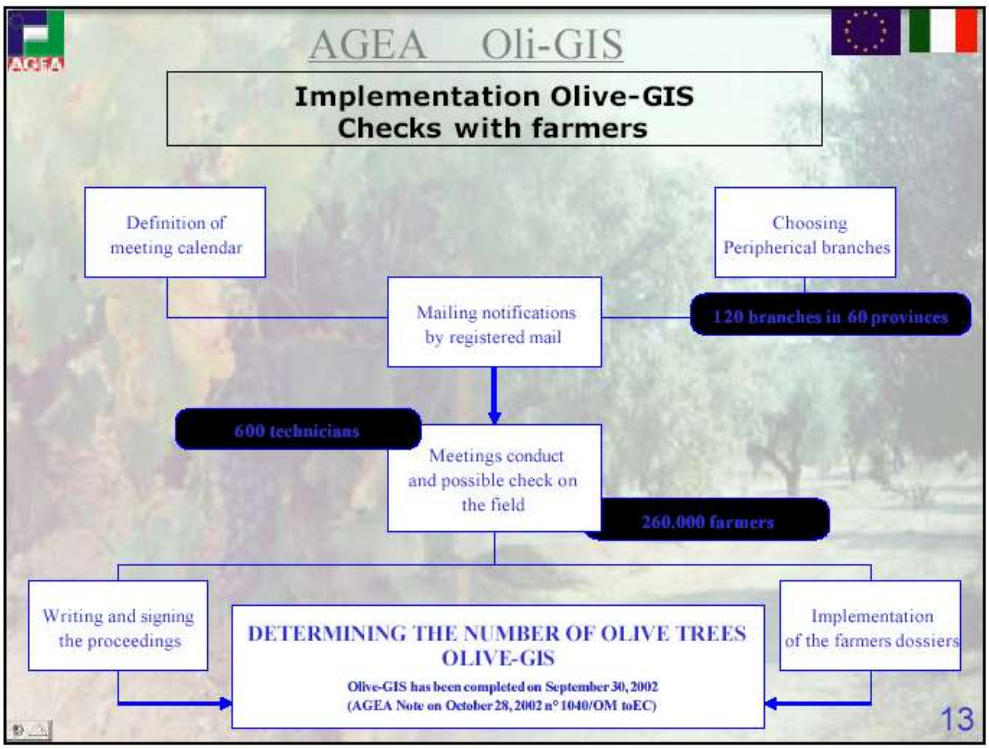

AGEA Oli-GIS
Olive GIS
Updating 2001
8

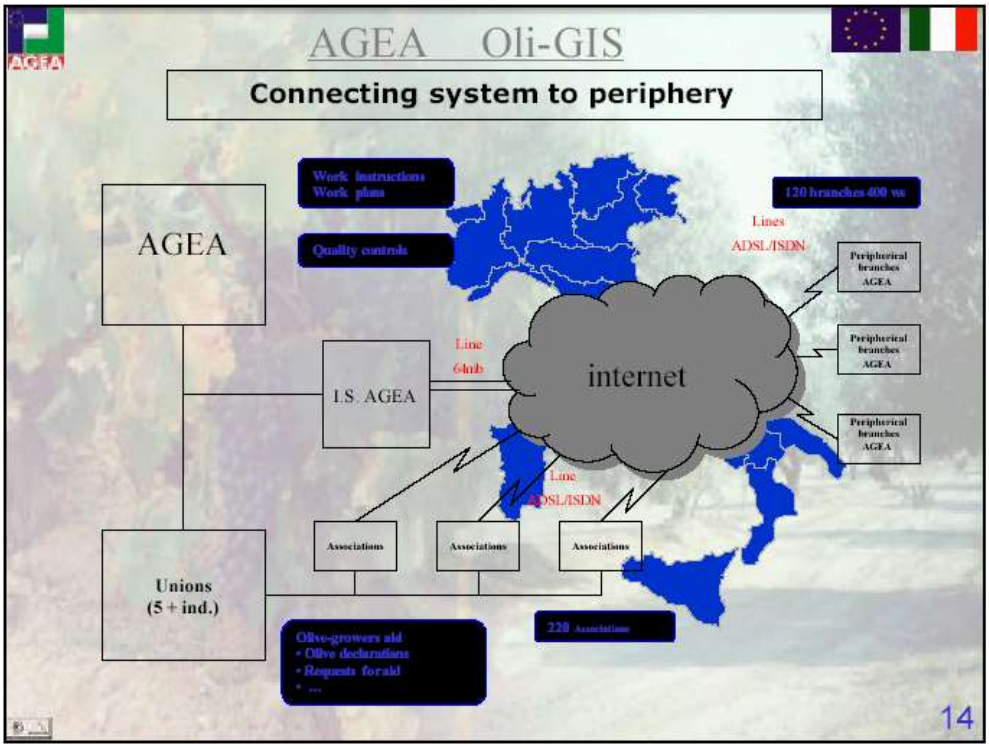

AGEA Oli-GIS
Olive GIS
Updating 2002
9

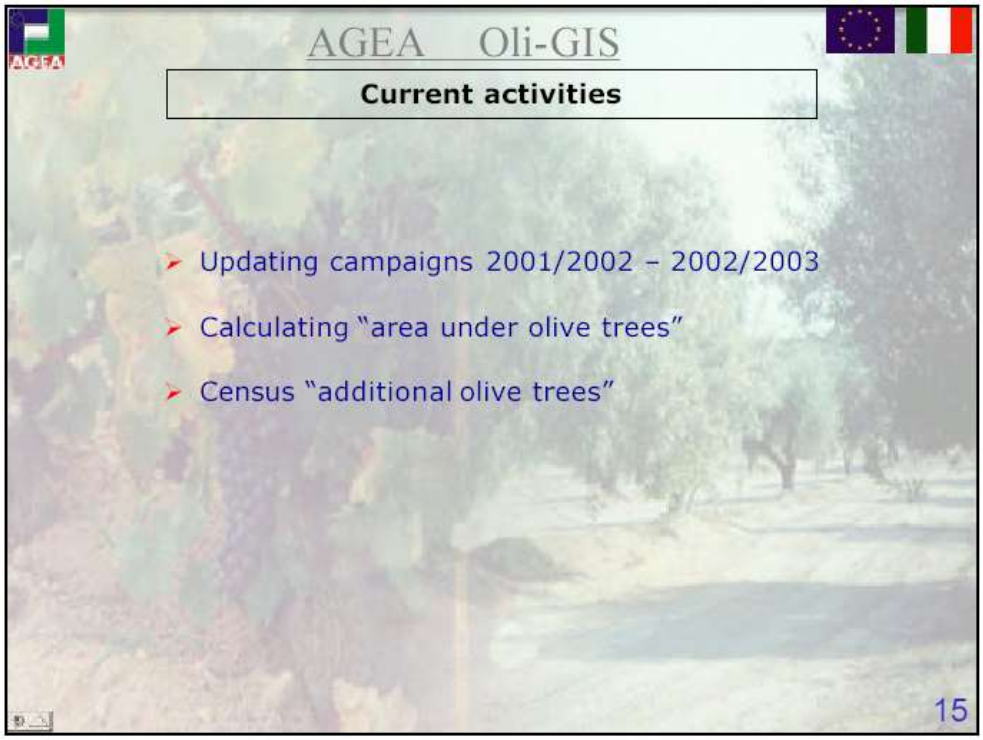

AGEA Oli-GIS
Location of the individual olive trees
Methodology
Photo-interpretation of olive trees based on the declared data
Automatic count of olive trees (olicount software by ISPRA JRC)
Assignment of "centroide" to each olive tree
Filing the "centroidi" of each plant and of the "boundaries" of each olive tree planted cadastral parcel in AGEA Gis
10

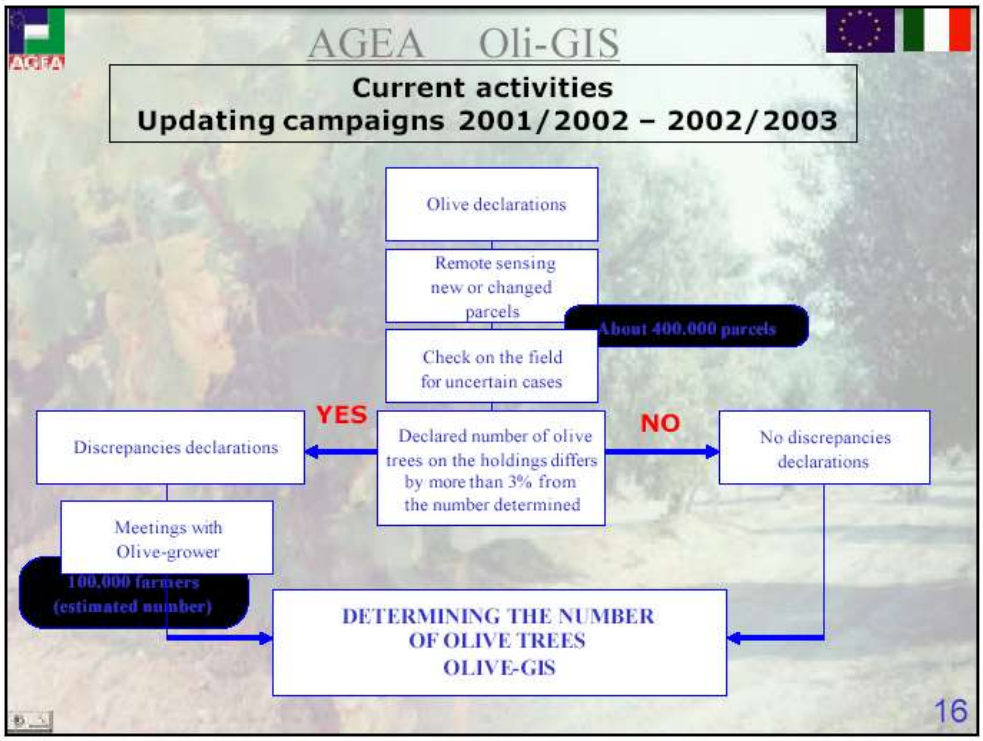

AGEA Oli-GIS
Location of the individual olive tree
An example...
Boundaries cadastral parcel
centroidi
olive-trees
11

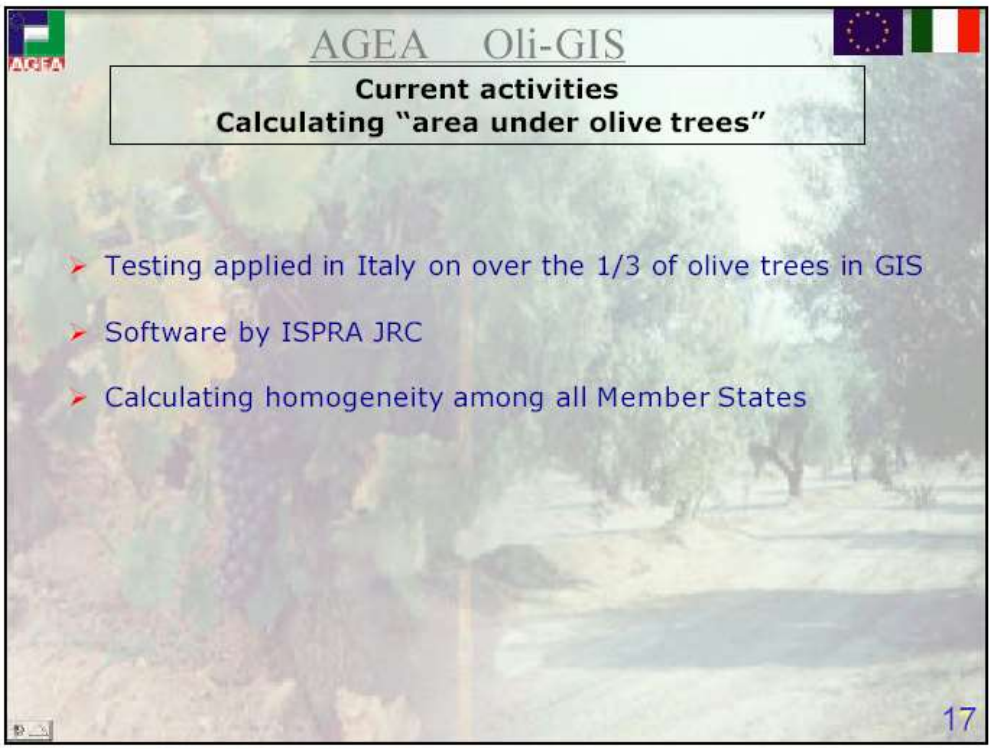

AGEA Oli-GIS
Implementation Olive-GIS
Farmers notifications
Olive declarations (declared data)
Remote sensing (detected data)
Printing farmers notifications
1.450.000 farmers
1.150.000 in the campaigns 1998 - 2001
Transmission to local associations
Mailing to farmer
Delivering to farmer
12

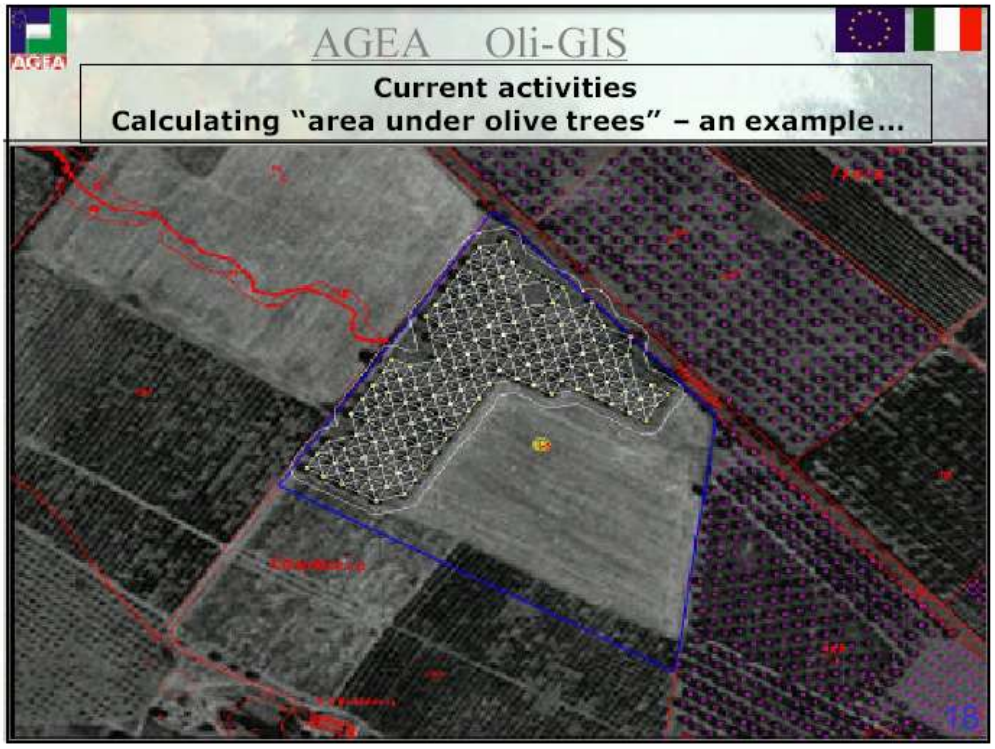

AGEA Oli-GIS
Implementation Olive-GIS
Checks with farmers
Definition of meeting calendar
Choosing Peripherical branches
Mailing notifications by registered mail
120 branches in 60 provinces
600 technicians
Meetings conduct and possible check on the field
260.000 farmers
Writing and signing the proceedings
DETERMINING THE NUMBER OF OLIVE TREES
OLIVE-GIS
Olive-GIS has been completed on September 30, 2002
(AGEA Note on October 28, 2002 n° 1040/OM toEC)
Implementation of the farmers dossiers
13

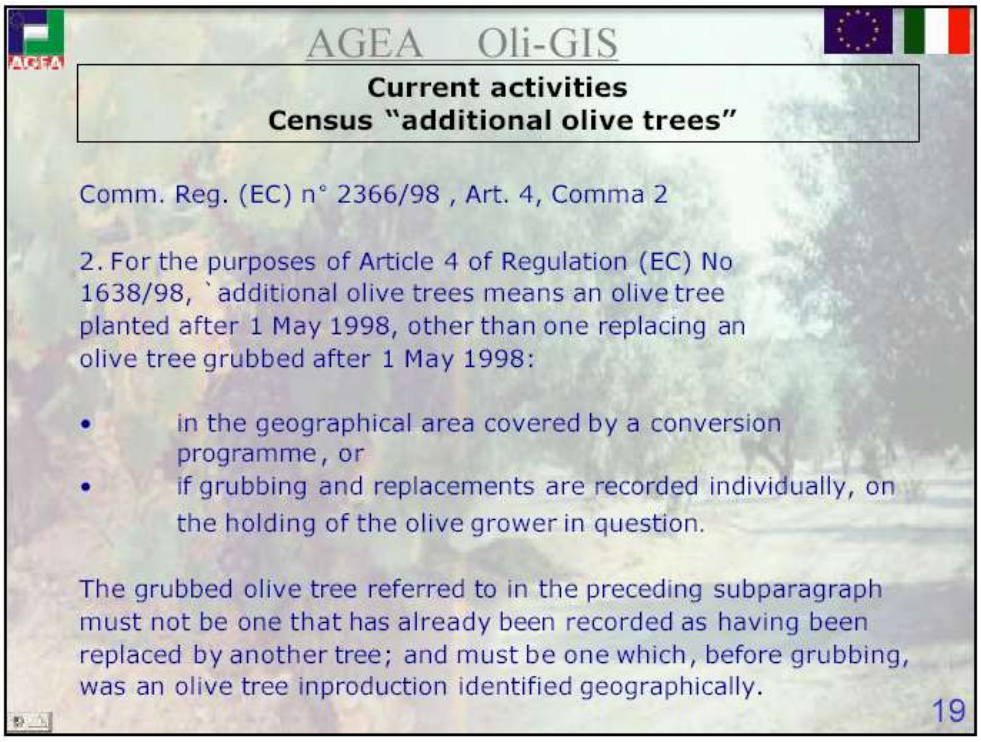

AGEA Oli-GIS
Connecting system to periphery
AGEA
Work instructions
Work plans
Quality controls
120 branches 400 ws
Lines
ADSL/ISDN
Peripherical branches AGEA
Peripherical branches AGEA
Peripherical branches AGEA
Line
64nb
I.S. AGEA
internet
Line
ADSL/ISDN
Associations
Associations
Associations
Unions
(5 + ind.)
220 Associations
Olive-growers aid
• Olive declarations
• Requests for aid
• ...
14

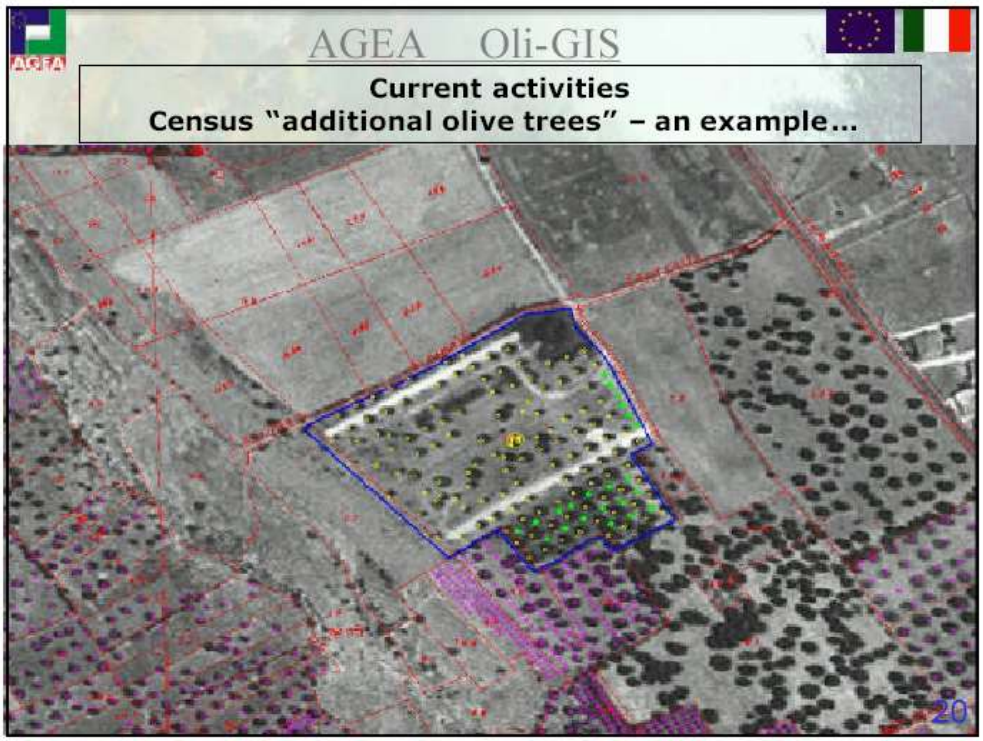

AGEA Oli-GIS
Current activities
Updating campaigns 2001/2002 – 2002/2003
Calculating "area under olive trees"
Census "additional olive trees"
15


AGEA Oli-GIS
Current activities
Updating campaigns 2001/2002 – 2002/2003
Olive declarations
Remote sensing new or changed parcels
About 400.000 parcels
Check on the field for uncertain cases
YES
NO
Discrepancies declarations
Declared number of olive trees on the holdings differs by more than 3% from the number determined
No discrepancies declarations
Meetings with Olive-grower
100,000 farmers (estimated number)
DETERMINING THE NUMBER OF OLIVE TREES OLIVE-GIS
16


AGEA Oli-GIS
Current activities
Calculating "area under olive trees"
Testing applied in Italy on over the 1/3 of olive trees in GIS
Software by ISPRA JRC
Calculating homogeneity among all Member States
17


AGEA Oli-GIS
Current activities
Calculating "area under olive trees" – an example...
18


AGEA Oli-GIS
Current activities
Census "additional olive trees"
Comm. Reg. (EC) n° 2366/98 , Art. 4, Comma 2
2. For the purposes of Article 4 of Regulation (EC) No 1638/98, `additional olive trees means an olive tree planted after 1 May 1998, other than one replacing an olive tree grubbed after 1 May 1998:
• in the geographical area covered by a conversion programme, or
• if grubbing and replacements are recorded individually, on the holding of the olive grower in question.
The grubbed olive tree referred to in the preceding subparagraph must not be one that has already been recorded as having been replaced by another tree; and must be one which, before grubbing, was an olive tree inproduction identified geographically.
19


AGEA Oli-GIS
Current activities
Census "additional olive trees" – an example...
20

AGEA Oli-GIS

STATISTICS ON OLIVE GIS IMPLEMENTATION

TOTAL NUMBER OF OLIVE DECLARATIONS CAMPAIGNS 1998-2001 (olive-growers with requests for aid in the campaigns 1998/1999 - 1999/2000 - 2000/2001)	1.137.452
TOTAL NUMBER OF DOSSIERS INCLUDED IN THE GIS	1.111.771
NUMBER OF DECLARATIONS NOT INCLUDED IN THE GIS (number of declarations containing discrepancies....represents less than 5% of all crop declarations - Comm. Reg. (EC) n° 2366/98 ,art.26, comma c)	25.681
% OF DOSSIERS OUT OF THE GIS	2,26%
TOTAL NBR DECLARED PARCELS	4.101.089
NBR PARCELS IN THE GIS WHICH HAVE BEEN CONSOLIDATED	3.995.295
NBR DECLARED OLIVE TREES	197.957.763
TOTAL NBR OF COUNTED OLIVE TREES	189.286.762
OF WHICH OLIVE TREES COUNTED IN THE FIELD	44.627.420
NBR OF OLIVE TREES CONSOLIDATED IN THE GIS	185.362.093
NBR NOTIFICATIONS SENT TO PRODUCERS (Declared number of olive trees on the holdings differs by more than 3% from the number determined)	261.610
OF WHICH NBR REPLIES FROM PRODUCERS	215.082
NBR OF FIELD INSPECTIONS FOLLOWING OBJECTIONS FROM PRODU	6.034

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AGEA Oli-GIS

Innovations – Farm dossier

Implementation

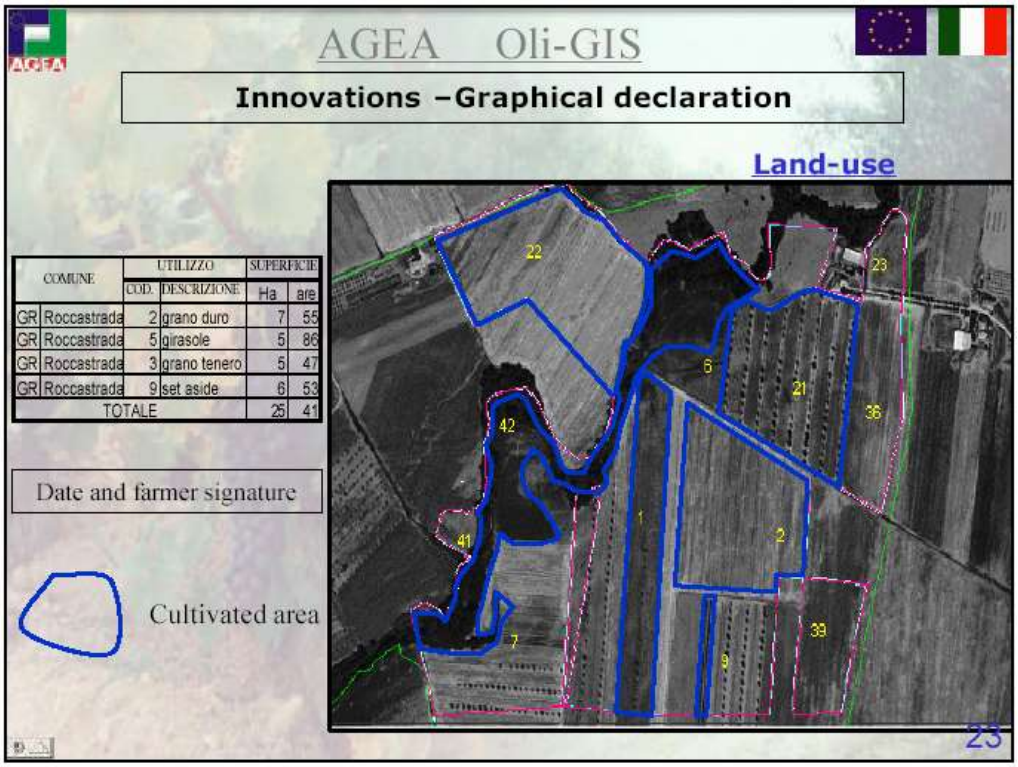
provincia Grosseto		comune	dati catastali				superficie catastale	
codici istat		descrizione	sez.	foglio	part.	sub	ettari	are
53	021	Roccastrada		210	1		2	69
53	021	Roccastrada		210	2		4	54
53	021	Roccastrada		210	6			14
53	021	Roccastrada		210	7			08
53	021	Roccastrada		210	8			08
53	021	Roccastrada		210	21			73
53	021	Roccastrada		210	22		9	34
53	021	Roccastrada		210	23			40
53	021	Roccastrada		210	24			06
53	021	Roccastrada		210	36		5	70
53	021	Roccastrada		210	39		2	67
53	021	Roccastrada		210	41			09
53	021	Roccastrada		210	42		1	59
						TOTALE	28	41

Cadastral area: ha 28,41
Farm area: ha 28,41
In contest area: ha 0,00
Eligible area: ha 25,41
Ineligible area: ha 3,00

Farm boundary

Date and farmer signature

22


AGEA Oli-GIS
Innovations –Graphical declaration
Land-use
COMUNE
UTILIZZO
COD.
DESCRIZIONE
SUPERFICIE
Ha
are
GR Roccastrada 2 grano duro 7 55
GR Roccastrada 5 girasole 5 86
GR Roccastrada 3 grano tenero 5 47
GR Roccastrada 9 set aside 6 53
TOTALE 25 41
Date and farmer signature
Cultivated area
22
23
6
21
36
42
1
2
41
7
39
9
23

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

Session 2 - Status of Olive GIS in Spain, by Jose Luis Montero, MAPA, Presidente del Comité Permanente SIG-oléicola

Summary

M. Jose Luis MONTERO is the president of the Comité Permanente para la Gestión y mantenimiento del F.I.O y del S.I.G. oleícola of the Ministry of Agriculture in Madrid. He replaced recently M. Francisco Luis Peña. He first presented the overview of the project (cf. presentation below) and then a film on the 'identification booklet of the olive grower'.

In Spain there are two independent parts: the F.O.I (Fichero Oleícola Informatizado) which contains alphanumerical data and the graphic database of the Olive GIS (SIG oléicola). In Spain the decentralisation of the CA (Communautés Autonomes) is important: the CA are in charge of the management of the crop declarations, the susidies claims and the payment of subsidies. The MAPA has a role of coordination only, but he is in charge of the creation of the Graphic database.

M. Montero recalled the methodology: in Spain it was decided to completely digitise the cadastre, which was a heavy task. The technical work (photo-interpretation completed by rapid field visits) was carried out by a contractor (Tragsatec). Due to the high rate of discordant dossiers at the beginning of the project, the Verification Procedure (Proceso de Verificacíon) was the trickiest part of the project: heads of agreement had to be signed with the 17 CA (of which 13 produce olives) and it was decided to rely on the associations of producers (AO). The CAA and AO were in charge of solving the discordances, changing the crop declarations and submitting request of change in the graphical database. The graphic modifications were carried out by TRAGSATEC.

To date (June 2003) 5 CA are completed and the Olive GIS is completed for 88% of dossiers in Spain. It should be highlighted that Andalucia was processed as priority number 1. The Olive GIS covers ***708,766 dossiers, 2,453,334 parcels and 284,822,960 Olive Trees for an area of 2.205 M ha****. In total 226,001 dossiers have been notified.*

The FOI is now in a central DB in the MAPA which is populated by the 13 CA. The olive growers have already access to the basic graphic data (digital cadastral maps on orthophotos background).

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

(Presentation)

MINISTERIO DE AGRICULTURA, PESCA Y ALIMENTACIÓN

COMITÉ PERMANENTE PARA LA GESTIÓN Y MANTENIMIENTO DEL F.O.I. Y DEL S.I.G. OLEÍCOLA

SITUACIÓN DEL SIG OLEÍCOLA ESPAÑOL

- FICHERO OLEÍCOLA INFORMATIZADO (F.O.I.)
- BASE GRÁFICA DEL S.I.G. OLEÍCOLA

Atenas : Workshop OLISIG 24 - 25 Junio 2003

DESCRIPCIÓN METODOLOGÍA NACIONAL

Declaraciones de cultivo

- Realizadas en Comunidades Autónomas
- S.I.P (Sistema de Identificación de Parcelas). Referencias catastrales de Hacienda
- Declaraciones válidas para campañas sucesivas

Base Gráfica inicial

- Ortofoto (Ollstat 97/98)
- Referencias catastrales de las entidades administrativas del Ministerio de Hacienda
- Olivos identificados

Proceso de verificación

- Determinación de las discordancias
- Cambios en la declaración de cultivo
- Cambios en la Base Gráfica

Base Gráfica Homologación

- Nivel de discordancia menor del 5 %

Fichero Oleícola Informatizado F.O.I.

Atenas : Workshop OLISIG 24 - 25 Junio 2003

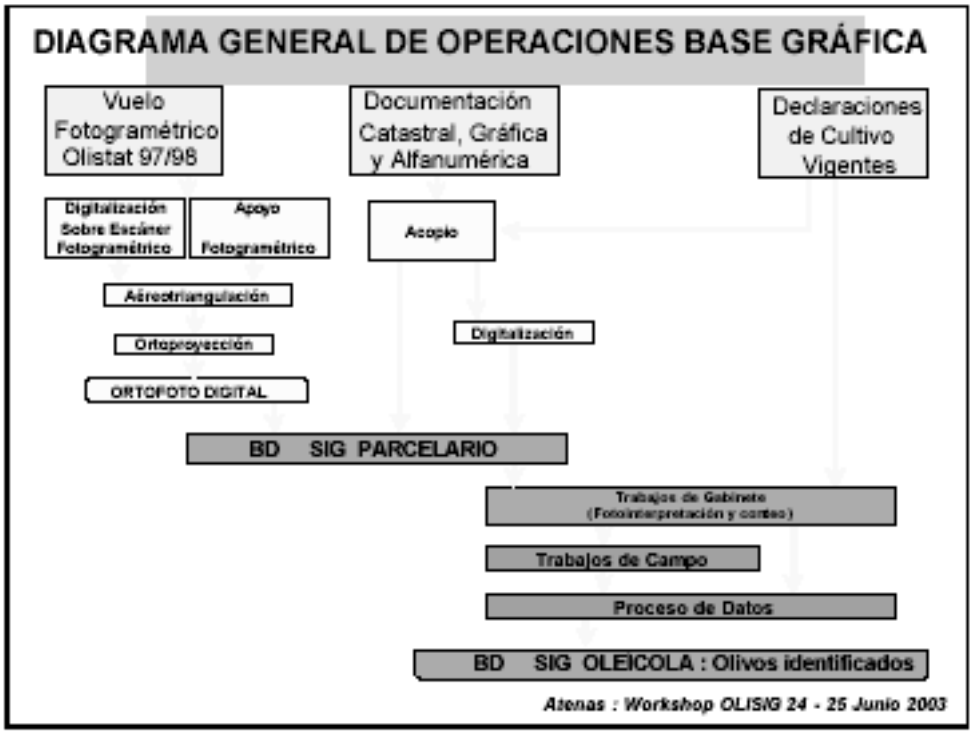


DIAGRAMA GENERAL DE OPERACIONES BASE GRÁFICA
Vuelo Fotogramétrico Olistat 97/98
Documentación Catastral, Gráfica y Alfanumérica
Declaraciones de Cultivo Vigentes
Digitalización Sobre Escáner Fotogramétrico
Apoyo Fotogramétrico
Acopio
Aerotriangulación
Ortoproyección
Digitalización
ORTOFOTO DIGITAL
BD SIG PARCELARIO
Trabajos de Gabinete (Fotointerpretación y cotteo)
Trabajos de Campo
Proceso de Datos
BD SIG OLEICOLA : Olivos identificados
Atenas : Workshop OLISIG 24 - 25 Junio 2003


F.O.I. art.23 R(CE) 2366/98 : ACCESO AL SISTEMA
F.O.I.
Atenas : Workshop OLISIG 24 - 25 Junio 2003

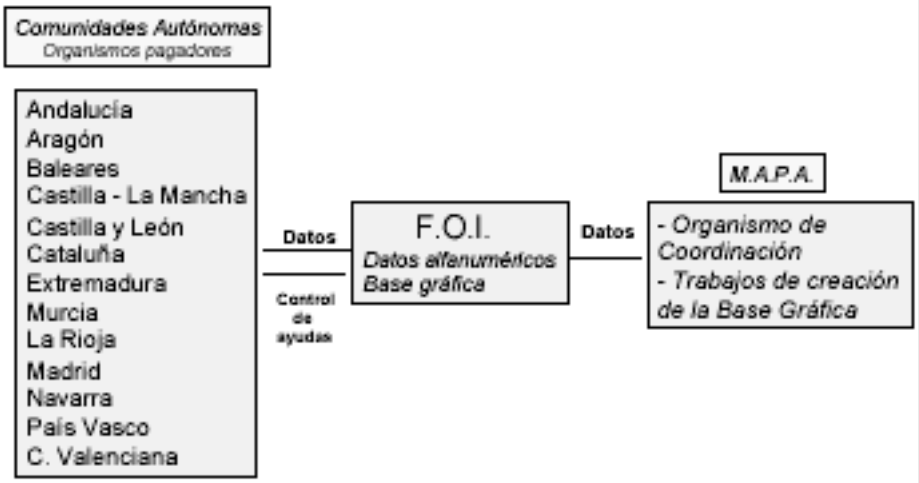
F.O.I.: CONTENIDO BÁSICO DE INFORMACIÓN

art.23 R(CE) 2366/98

FICHEROS	ORGANISMO
DECLARACIÓN DE CULTIVO	Comunidades Autónomas
PARCELAS GRÁFICAS DECLARADAS	
PARCELAS CATASTRALES	
DECLARACIÓN DE INTENCIÓN DE PLANTAR	
ORGANIZACIONES DE PRODUCTORES O.P.R.	
DATOS DE O.P.R. POR CAMPAÑAS	
RELACIÓN DE SOCIOS DE LAS OPRI	
LINDEROS	
SOLICITUD DE AYUDA	
REFERENCIA A DECLARACIONES	
CERTIFICADOS DE ALMAZARA : ENTREGAS	
CERTIFICADOS DE INDUSTRIAS PRODUCTORAS DE ACEITUNA DE MESA : ENTREGAS	
RECEPTORES DE ACEITUNA	
ALMAZARAS AUTORIZADAS	
DATOS DE CAMPAÑA	
PAGOS A ORGANIZACIONES DE PRODUCTORES (O.P.R.)	F.E.G.A.
PAGOS A BENEFICIARIOS	
INDUSTRIAS PRODUCTORAS DE ACEITUNA DE MESA AUTORIZADAS	A.A.O.
CONTROLES	
ZONAS HOMOGÉNEAS, REINCIDENCIOS Y MUNICIPIOS	COPER
BASE GRÁFICA DEL S.I.G.	

Atenas : Workshop OLISIG 24 - 25 Junio 2003

ORGANIZACIÓN DE LA INFORMACIÓN



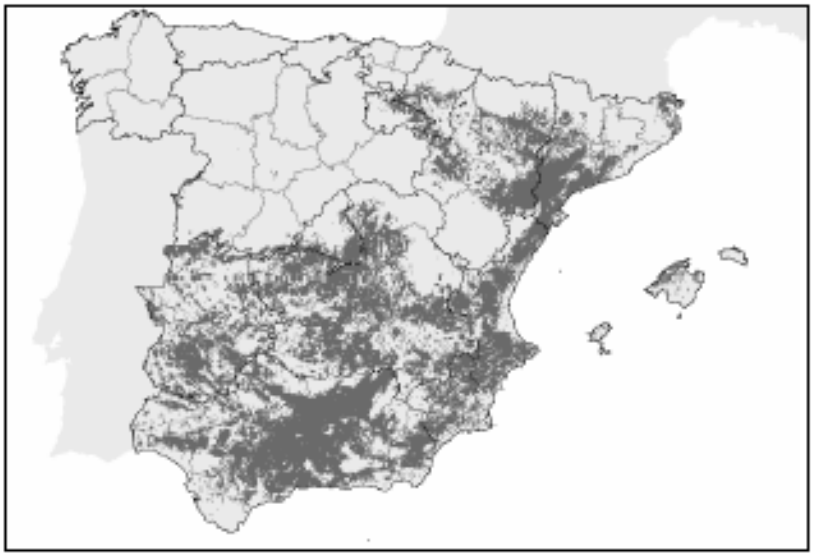
Atenas : Workshop OLISIG 24 - 25 Junio 2003

CONTENIDO DE LA BASE GRÁFICA (mayo 2003)

COMUNIDAD AUTÓNOMA	Número de municipios	Número de parcelas	Número de olivos	Superficie de olivar (has)
ANDALUCÍA	730	935.104	174.811.893	1.379.848,80
ARAGÓN	470	128.332	8.317.836	50.484,49
BALEARES	46	2.085	926.827	8.137,05
CASTILLA - LA MANCHA	767	560.774	34.503.490	295.093,87
CASTILLA y LEÓN	85	42.414	1.173.146	6.322,17
CATALUÑA	559	135.971	14.808.508	111.069,33
EXTREMADURA	379	303.028	31.127.754	222.955,59
MURCIA	41	31.123	3.148.962	16.707,13
LA RIOJA	67	20.394	860.899	2.711,26
MADRID	97	43.928	2.304.145	23.574,25
NAVARRA	124	18.480	1.040.961	3.979,03
PAÍS VASCO	8	2.003	41.348	252,86
C. VALENCIANA	421	229.698	11.757.181	84.307,56
TOTAL	3.794	2.453.334	284.822.960	2.205.443,39

Atenas : Workshop OLISIG 24 - 25 Junio 2003

MAPA OLIVAR NACIONAL. Datos SIG Oleícola



Atenas : Workshop OLISIG 24 - 25 Junio 2003

SITUACIÓN DE DISCORDANCIAS POR COMUNIDADES AUTÓNOMAS (mayo 2003)

COMUNIDAD AUTÓNOMA	Número de declaraciones		% Declaraciones discordantes en el SIG-FO! (Total)	Número de notificaciones enviadas (Total)
	Campaña de homologación (Total)	Discordantes (Total)		
ANDALUCÍA	307.483	11.832	3,8%	112.317
BALEARES	479	8	1,7%	41
C. VALENCIANA	69.429	3.506	5,0%	11.921
NAVARRA	8.263	1.775	21,5%	53
LA RIOJA	4.238	220	5,2%	1.001
MADRID	8.959	406	4,5%	2.450
CASTILLA Y LEÓN	9.356	3.756	40,1%	5.638
PAÍS VASCO	437	19	4,3%	102
EXTREMADURA	77.193	16.093	20,8%	32.111
CASTILLA - LA MANCHA	139.948	27.948	20,0%	39.199
ARAGÓN	27.619	403	1,5%	18.833
MURCIA	9.346	2.346	25,1%	1.235
CATALUÑA	46.096	16.575	36,0%	500
TOTAL	709.766	84.887	12,0%	226.001

Atenas : Workshop OLISIG 24 - 25 Junio 2003

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MARS Unit

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

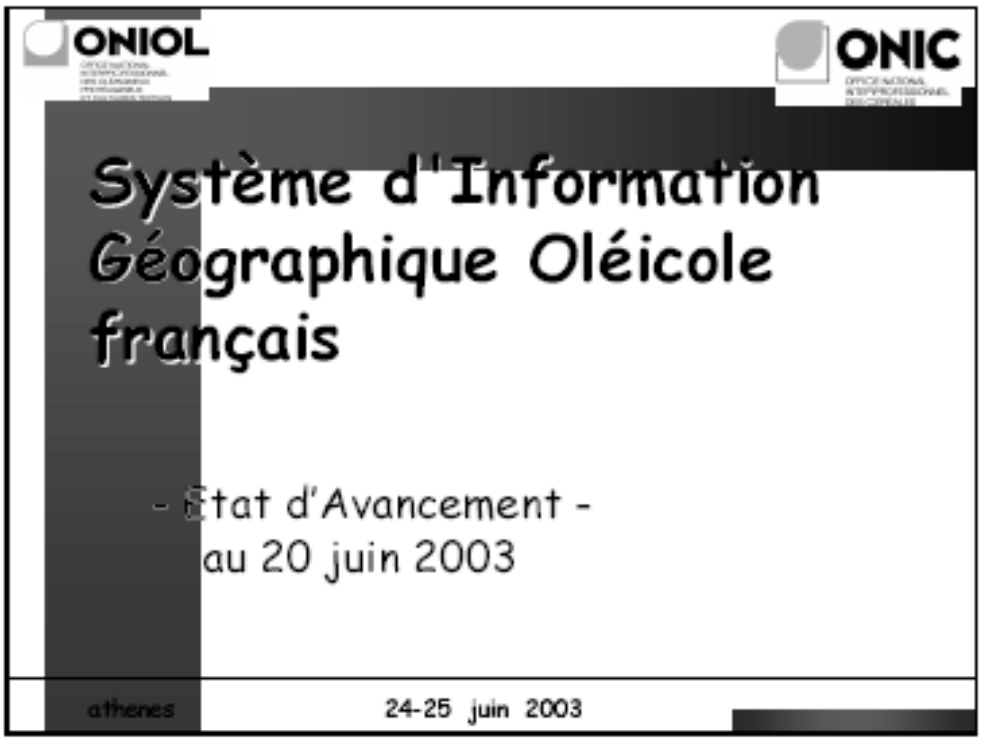
Summary

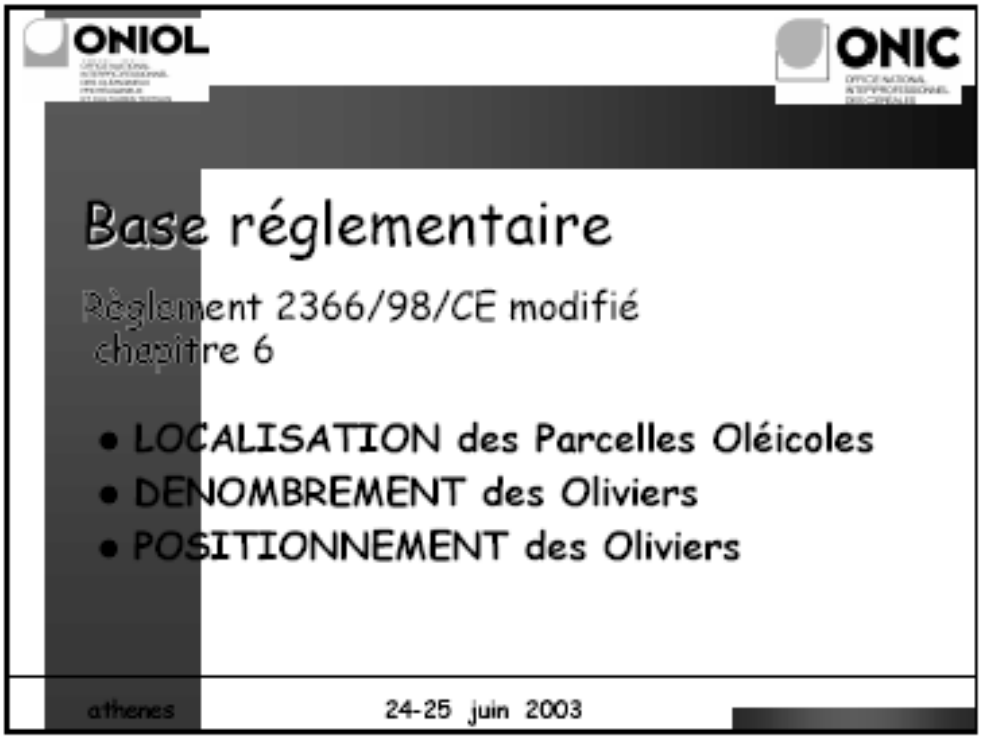
Alain Madaule is responsible of the ONIOL office in Marseille, in charge of the implementation of the Olive GIS in France. He recalled the French specificities: scattered olive groves, small parcels and small number of olive trees per olive growers, non professional sector and old olive growers. The main problem is the variation of subsidies claim (DA 'demande d'aide') from one year to the other which makes the consolidation of the DB quite difficult. In total there are 26,701 dossiers in the GIS, but only 13,825 made a subsidy claim in 2000-01 and 14,549 in 2001-02. The discrepancy between 2000-01 and 2001-02 is quite low but the variation is significant in terms of 'in' and 'out' dossiers: +3130 dossiers and -2406 dossiers. This is due to the fact that when the production is lower one year (which occurs each 2 years) the producer may not lodge a DA. Of the 26,701 DC (crop declarations) in the GIS, 8,417 never had DA. For those dossiers the discordances have not been solved, but they will be in case of DA.

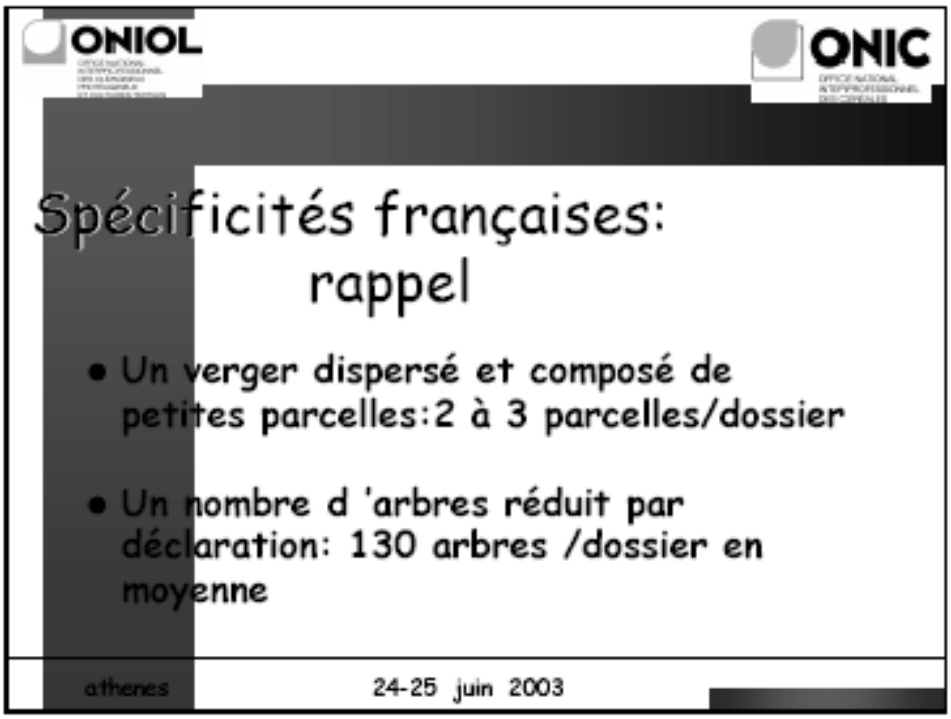
Of the 'priority' 18,824 dossiers (with at least 1 DA during the last campaigns), 62.46% were found as discordant (young plantation, problems of photo-interpretation, errors of declaration, cadastral problems etc.). All the discordant dossiers have been notified. But the integration of the new 3130 dossiers of the campaign 2001-02 is not completed. ONIC/ONIOL does not expect to complete the GIS for the campaign 2001-02.

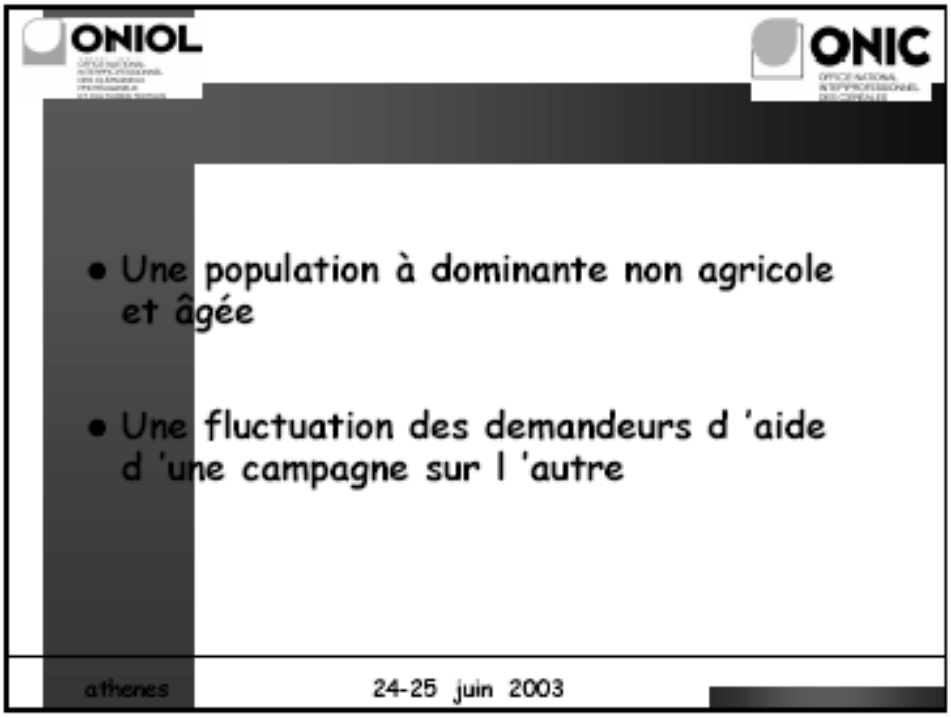
There is a plan to make the LPIS consistent with the Olive GIS. In France it is quite critical since the LPIS will move from cadastral references to 'ilots'. It will start with the department 84 which will be covered by new orthophotos in autumn 2003. Then it will be moved to the other olive growing departments.

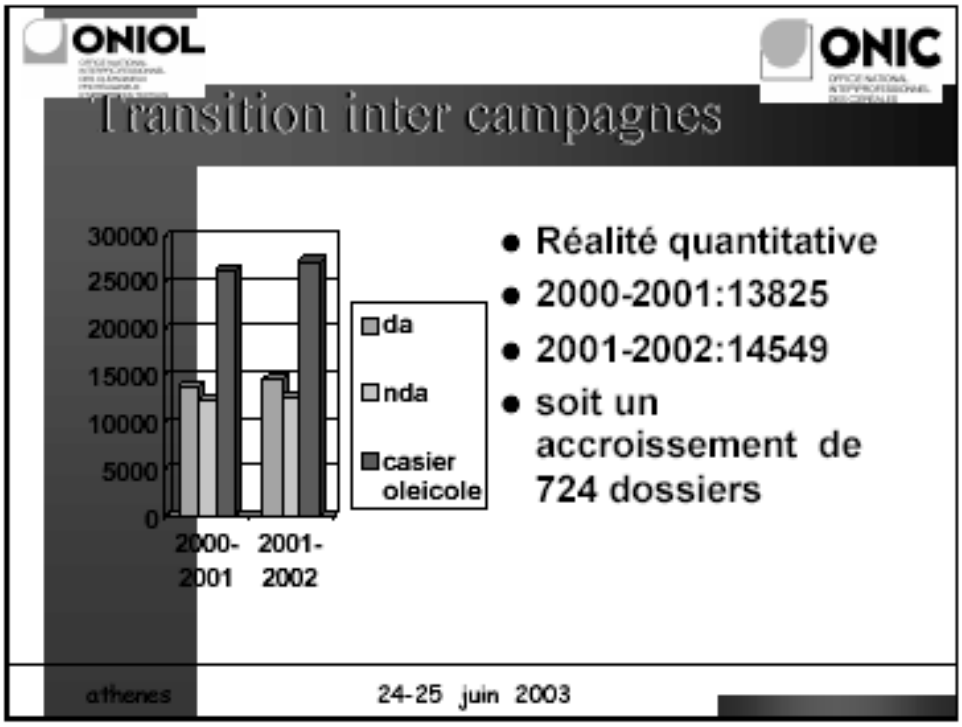
(Presentation)

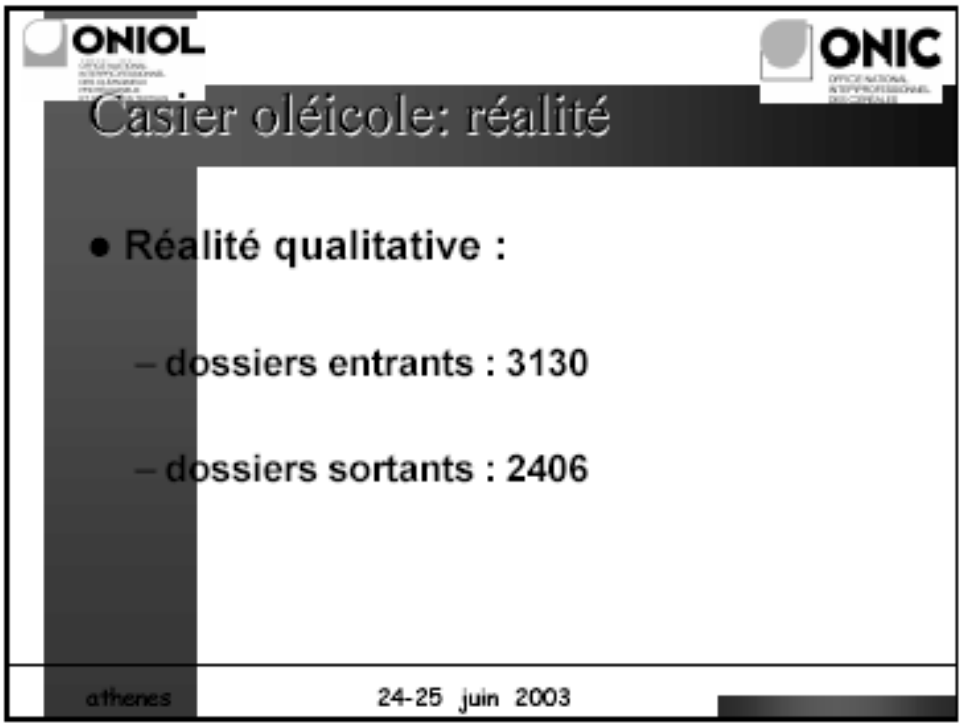

ONIOL
ONIC
Système d'Information Géographique Oléicole français
- État d'Avancement -
au 20 juin 2003
athenes
24-25 juin 2003

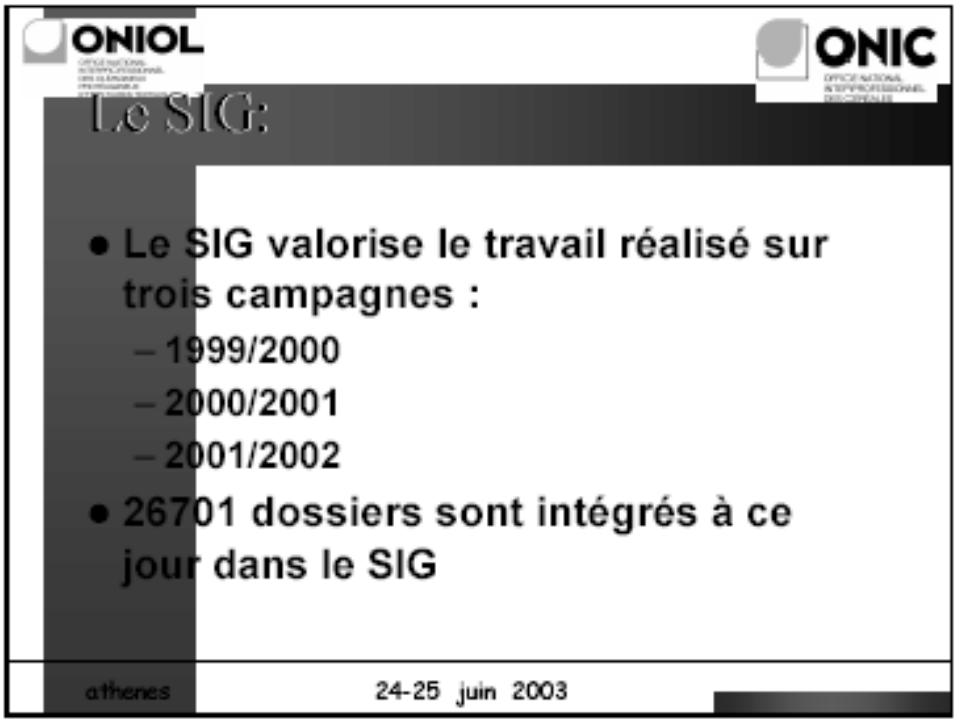

ONIOL
ONIC
Base réglementaire
Règlement 2366/98/CE modifié
chapitre 6
• LOCALISATION des Parcelles Oléicoles
• DENOMBREMENT des Oliviers
• POSITIONNEMENT des Oliviers
athenes
24-25 juin 2003

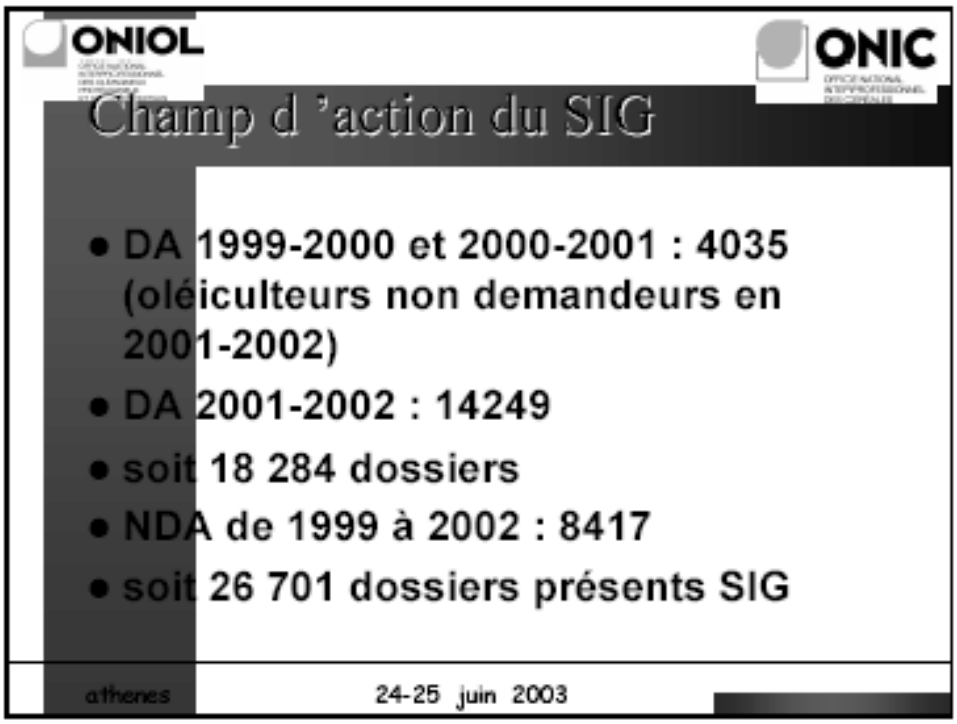

ONIOL
ONIC
Spécificités françaises:
rappel
• Un verger dispersé et composé de petites parcelles:2 à 3 parcelles/dossier
• Un nombre d 'arbres réduit par déclaration: 130 arbres /dossier en moyenne
athenes
24-25 juin 2003

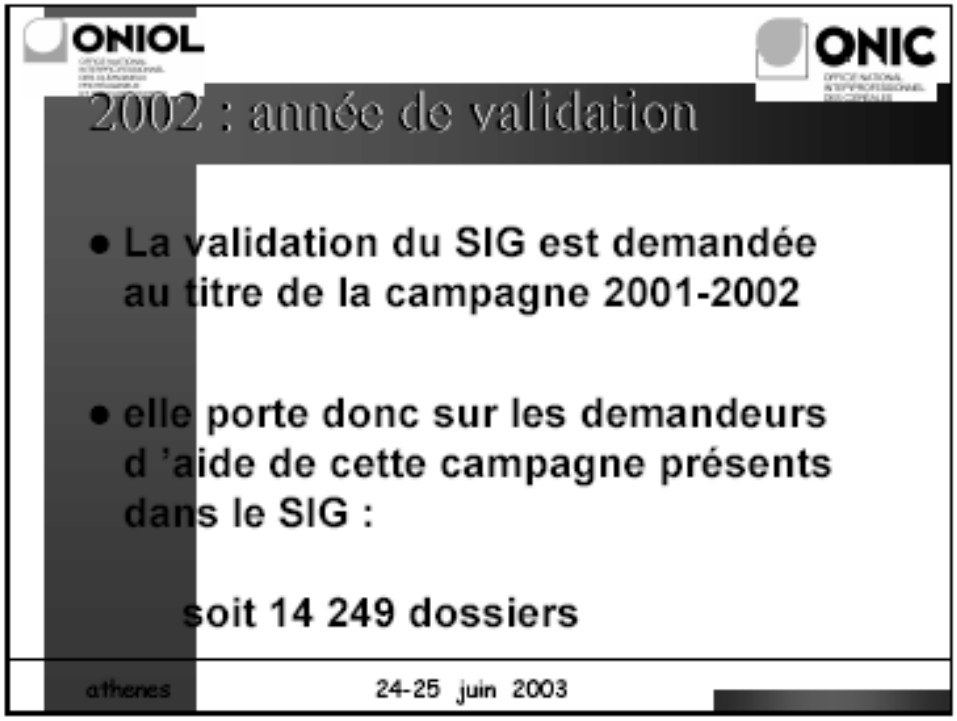

ONIOL
ONIC
• Une population à dominante non agricole et âgée
• Une fluctuation des demandeurs d 'aide d 'une campagne sur l 'autre
athenes
24-25 juin 2003

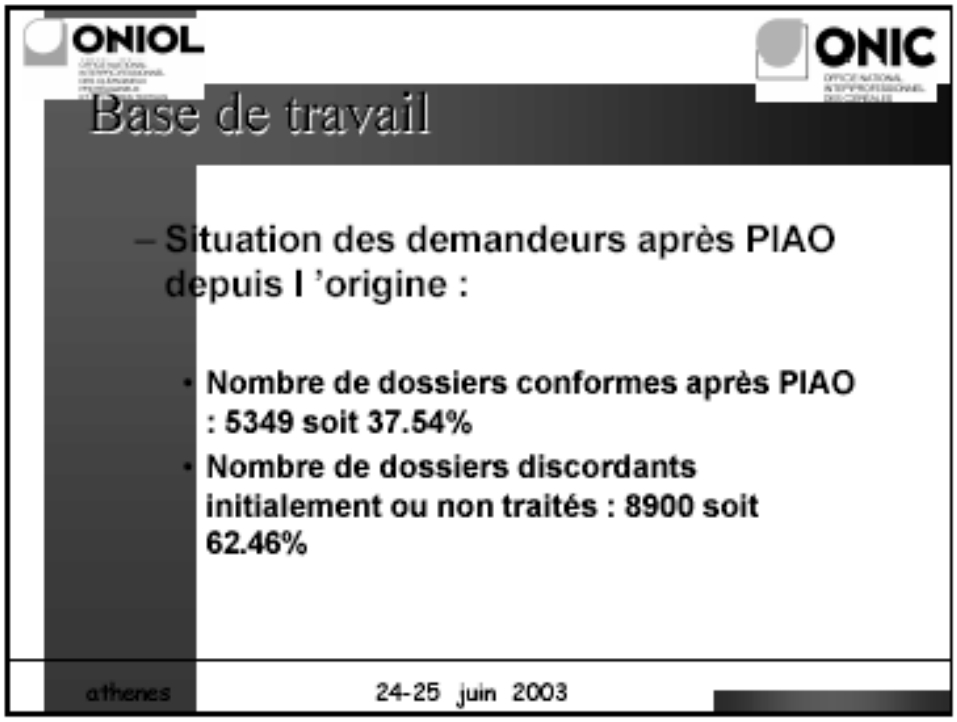

ONIOL
ONIC
Transition inter campagnes
30000
25000
20000
15000
10000
5000
0
2000-2001
2001-2002
da
nda
casier oleicole
• Réalité quantitative
• 2000-2001:13825
• 2001-2002:14549
• soit un accroissement de 724 dossiers
athenes
24-25 juin 2003

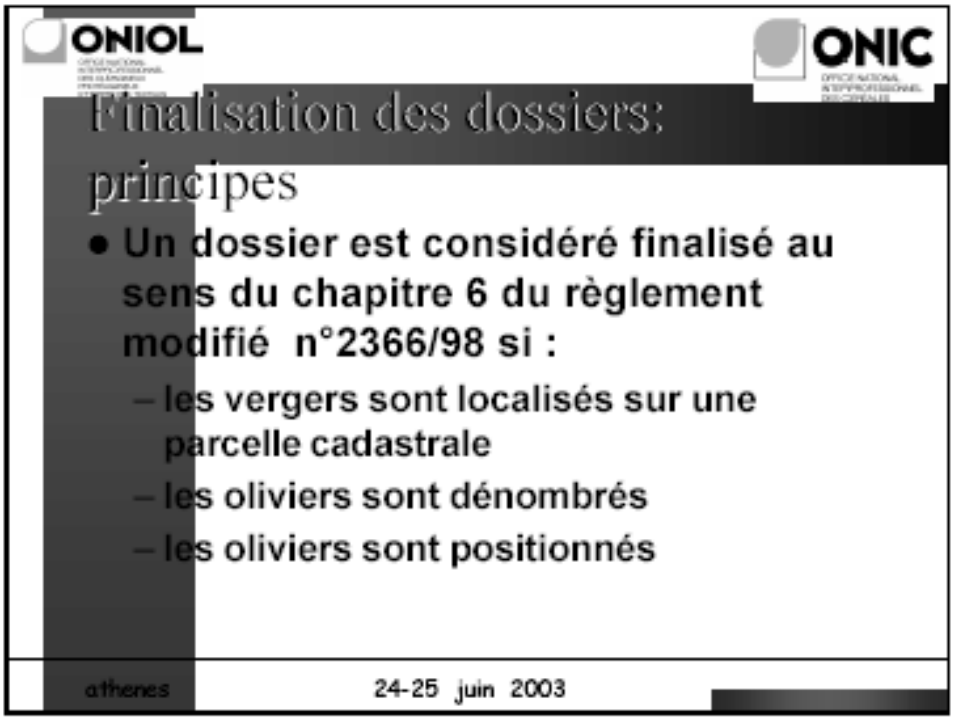

ONIOL
ONIC
Casier oléicole: réalité
• Réalité qualitative :
– dossiers entrants : 3130
– dossiers sortants : 2406
athenes
24-25 juin 2003

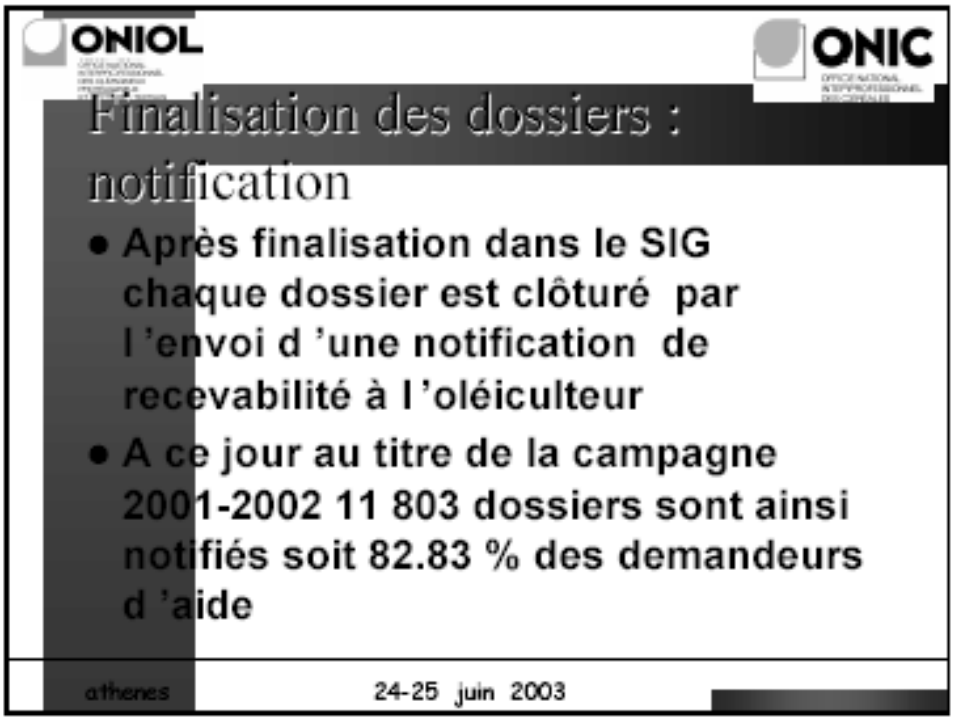

ONIOL
ONIC
Le SIG:
• Le SIG valorise le travail réalisé sur trois campagnes :
– 1999/2000
– 2000/2001
– 2001/2002
• 26701 dossiers sont intégrés à ce jour dans le SIG
athenes
24-25 juin 2003

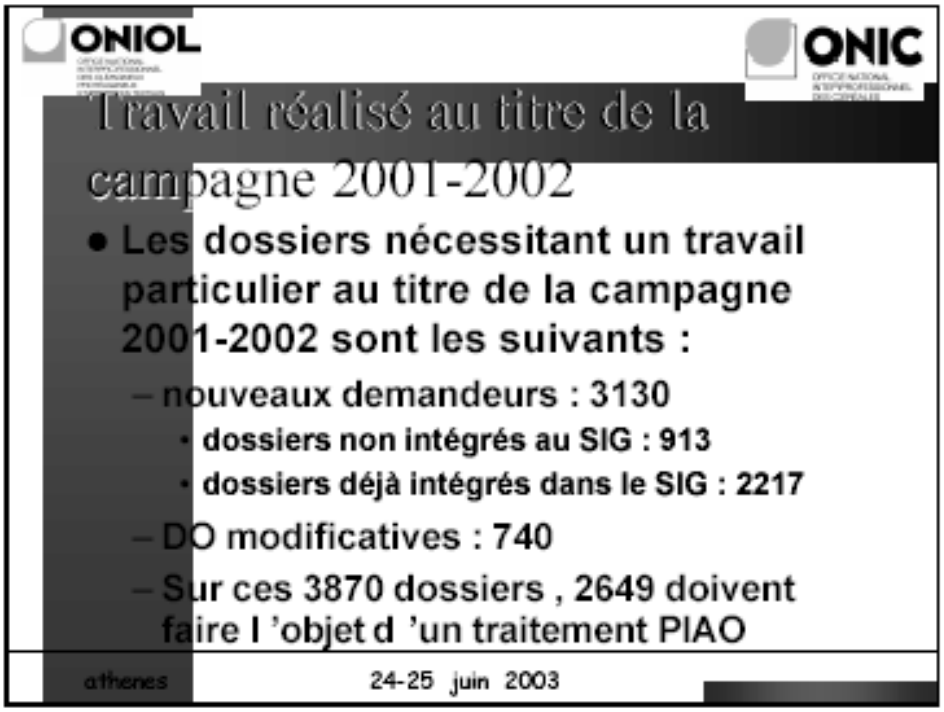

ONIOL
ONIC
Champ d 'action du SIG
• DA 1999-2000 et 2000-2001 : 4035 (oléiculteurs non demandeurs en 2001-2002)
• DA 2001-2002 : 14249
• soit 18 284 dossiers
• NDA de 1999 à 2002 : 8417
• soit 26 701 dossiers présents SIG
athenes
24-25 juin 2003

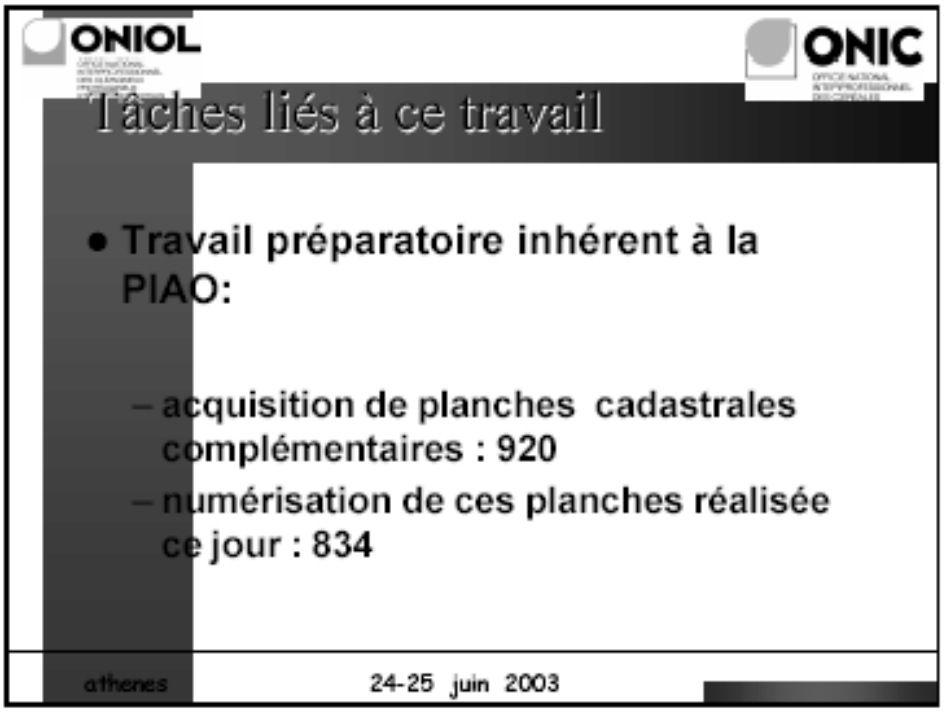

ONIOL
ONIC
2002 : année de validation
• La validation du SIG est demandée au titre de la campagne 2001-2002
• elle porte donc sur les demandeurs d 'aide de cette campagne présents dans le SIG :
soit 14 249 dossiers
athenes
24-25 juin 2003


ONIOL
ONIC
Base de travail
– Situation des demandeurs après PIAO depuis l 'origine :
• Nombre de dossiers conformes après PIAO : 5349 soit 37.54%
• Nombre de dossiers discordants initialement ou non traités : 8900 soit 62.46%
athenes
24-25 juin 2003


ONIOL
ONIC
Finalisation des dossiers: principes
• Un dossier est considéré finalisé au sens du chapitre 6 du règlement modifié n°2366/98 si :
– les vergers sont localisés sur une parcelle cadastrale
– les oliviers sont dénombrés
– les oliviers sont positionnés
athenes
24-25 juin 2003


ONIOL
ONIC
Finalisation des dossiers : notification
• Après finalisation dans le SIG chaque dossier est clôturé par l'envoi d 'une notification de recevabilité à l 'oléiculteur
• A ce jour au titre de la campagne 2001-2002 11 803 dossiers sont ainsi notifiés soit 82.83 % des demandeurs d 'aide
athenes
24-25 juin 2003


ONIOL
ONIC
Travail réalisé au titre de la campagne 2001-2002
• Les dossiers nécessitant un travail particulier au titre de la campagne 2001-2002 sont les suivants :
– nouveaux demandeurs : 3130
• dossiers non intégrés au SIG : 913
• dossiers déjà intégrés dans le SIG : 2217
– DO modificatives : 740
– Sur ces 3870 dossiers , 2649 doivent faire l 'objet d 'un traitement PIAO
athenes
24-25 juin 2003


ONIOL
ONIC
Tâches liés à ce travail
• Travail préparatoire inhérent à la PIAO:
– acquisition de planches cadastrales complémentaires : 920
– numérisation de ces planches réalisée ce jour : 834
athenes
24-25 juin 2003

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MARS Unit

Session 2 – Status of Olive and Viti GIS in Greece, Ekaterini Belitsou, Anastasios Panagiotopoulos and Lazaros Kiokakis, Hellenic Ministry of Agriculture

Summary

The first presentation was made by Mrs Bellitsou, director of the new Directorate of Registers of the Ministry of Agriculture of Greece. There will be a budget of 40.7 M Euros for this directorate with 20 full time staff and 40 part-time experts. In addition there are 150 in the Nomoi. The GIS cover 1M producers (of which 200,000 viti + 800,000 olive growers) and about 4 M parcels. The work is carried out under 14 contracts, the first were signed in 2000 and the last in 2002 (due to legal problems). For the moment the IT status is that alphanumeric data are managed by the IT department of the MoA with an Oracle DB; there is a central IBM RS600 server connected to Regional directions of the MoA through a WAN. On the other hand graphic data are managed by the Topographic Services using Geomedia Intergraph software. There is a new ITT for the provision of an integrated system (alphanumeric + graphic data) using Oracle 9i BD and MS Visual Studio Net to build an Internet application.

The creation of the Oli-Viti GIS was performed in 2000-03, it is not yet finalized but it is expected to have it ready on time. This project is managed by the RIO staff (Register Implementation Office) with 14 staff and the technical support of an external consulting company which is in charge of data integration and QC.

The updating will start with the 2003 campaign. The data will be captured and a temporary database is created; after administrative controls (Unit of reception and acceptance) and cross-checks vs. LPIS (national level) the data will be integrated in the central Dbase and then provided to OPEKEPE. The central Dbase will be under the responsibility of the new Directorate of registers with the support from IT division and topographic services. During the first 4 years it is expected to outsource a lot of work, then the maintenance will be performed by the MoA with an external technical support. The users of the system will be: the Register Directorate, the Topographic Services, the direction of rural development in the Nomi, the OPEKEPE, the directions of MoA dealing with these data, the associations of producers, the farmers.

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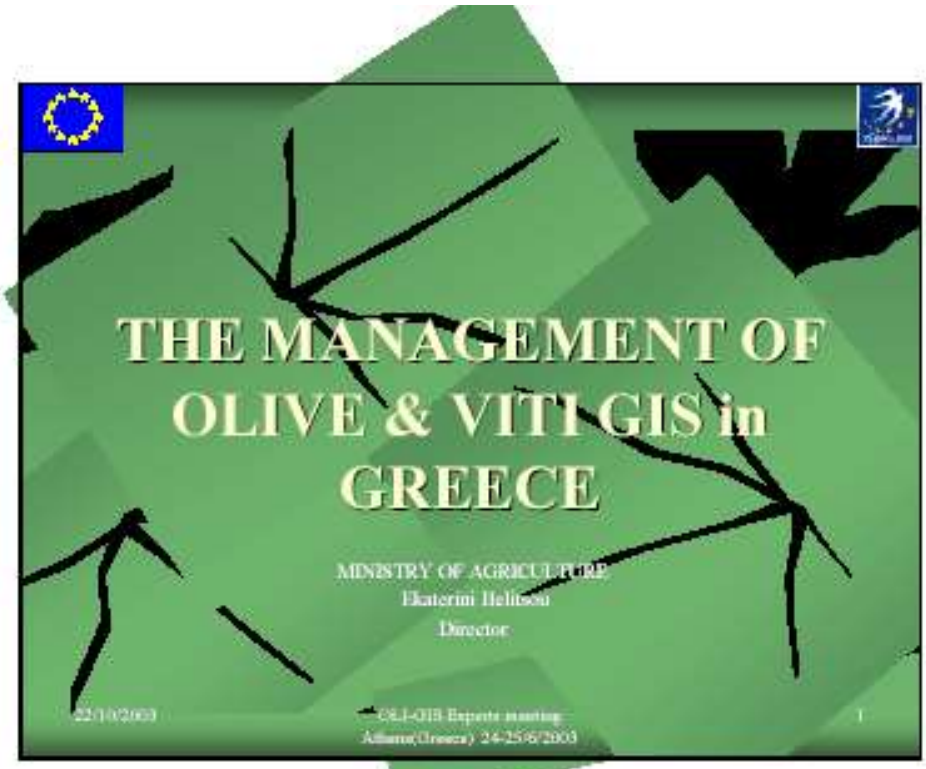
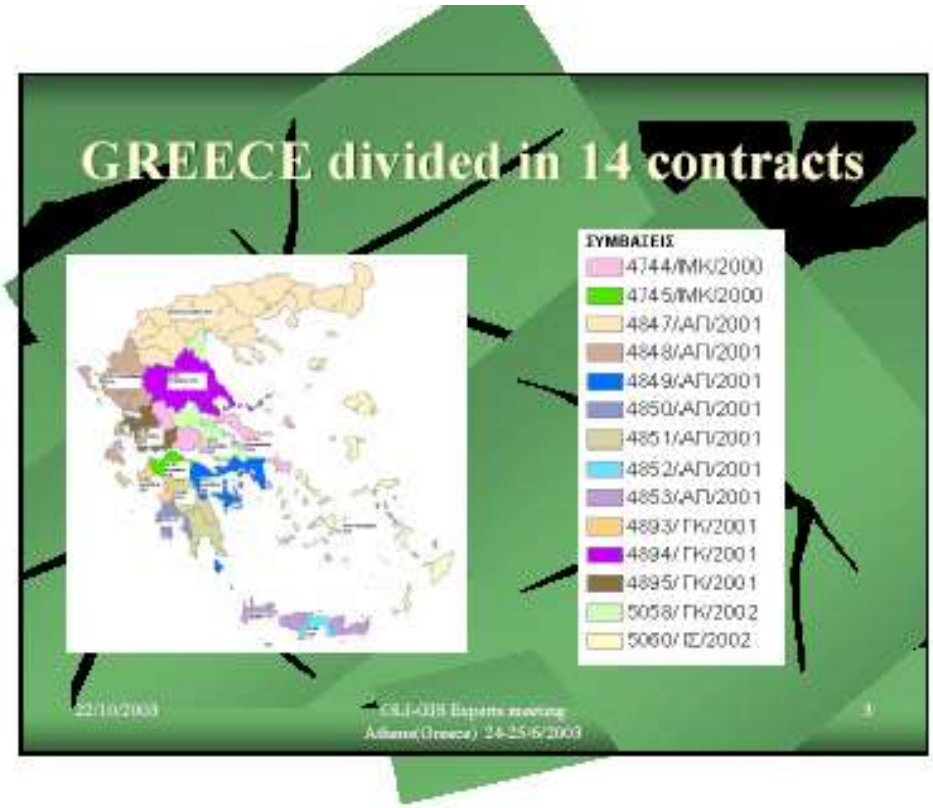
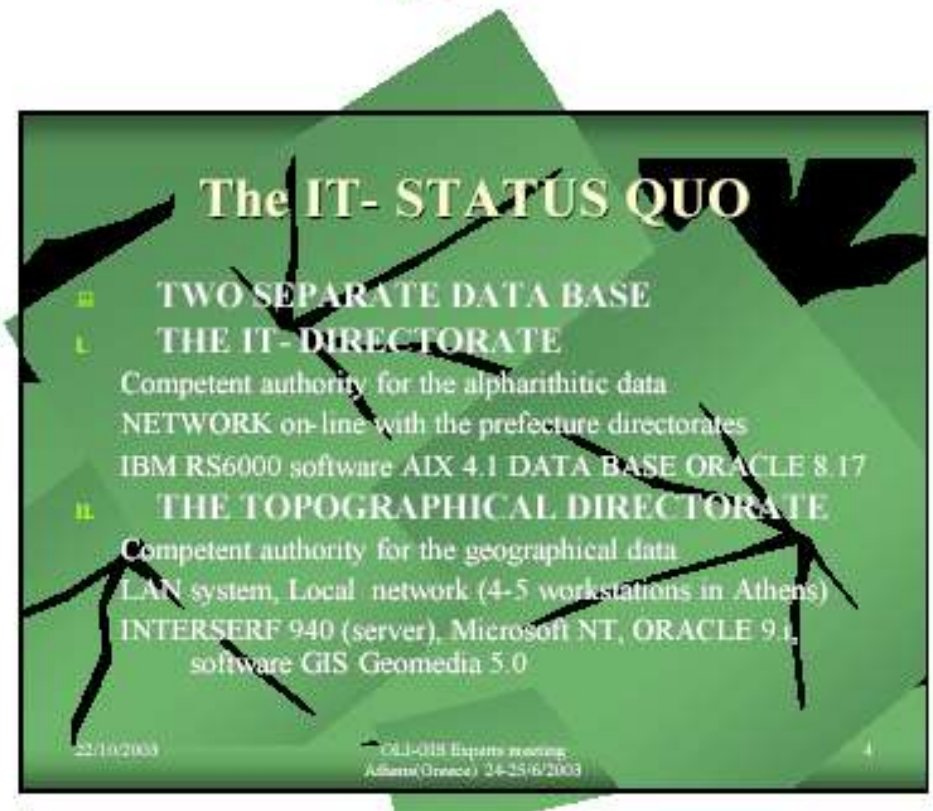
(Presentation)


THE MANAGEMENT OF OLIVE & VITI GIS in GREECE
MINISTRY OF AGRICULTURE
Ekaterini Helitsou
Director
22/10/2003
OLI-GIS Experts meeting
Athens(Greece) 24-25/6/2003
1


The Volume of the project
The budget of this project is 40,7 Mio euro
Staff: 20 persons full occupation, 40 experts partial occupation in the Centre, and 150 persons in the prefectures (53 NOMOS)
Declarations: 1.000.000 producers
800.000 Olive oil producers
200.000 Vineyards producers
Parcels: 4.000.000
Contracts: Greece was divided in 14 contracts
22/10/2003
OLI-GIS Experts meeting
Athens(Greece) 24-25/6/2003
2

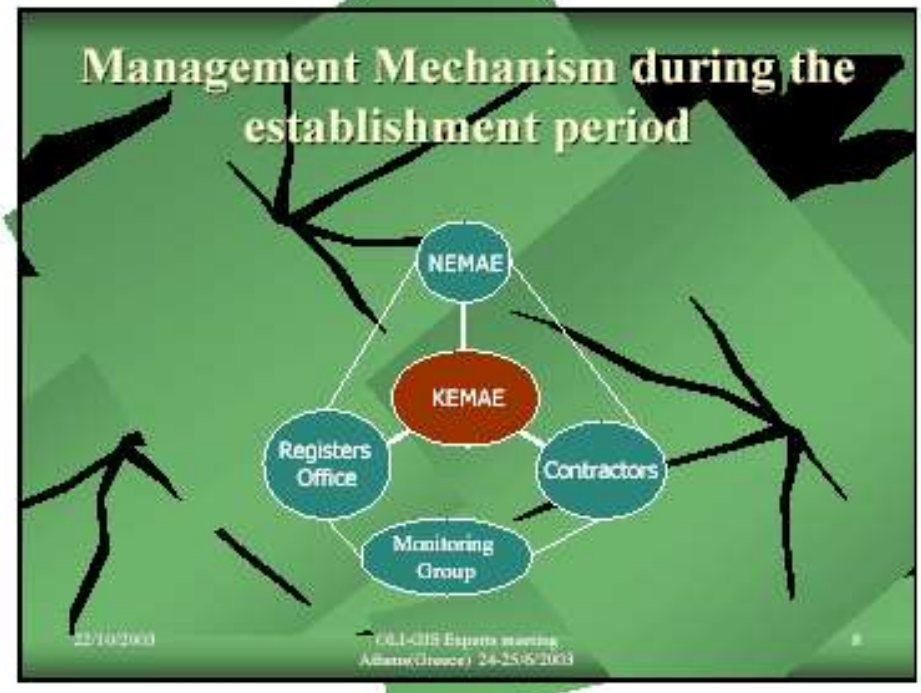

GREECE divided in 14 contracts
ΣΥΜΒΑΣΕΙΣ
4744/ΜΚ/2000
4745/ΜΚ/2000
4847/ΑΠ/2001
4848/ΑΠ/2001
4849/ΑΠ/2001
4850/ΑΠ/2001
4851/ΑΠ/2001
4852/ΑΠ/2001
4853/ΑΠ/2001
4893/ΓΚ/2001
4894/ΓΚ/2001
4895/ΓΚ/2001
5058/ΓΚ/2002
5060/ΙΣ/2002
22/10/2003
CLI-GIS Experts meeting
Athens(Greece) 24-25/6/2003


The IT- STATUS QUO
TWO SEPARATE DATA BASE
I. THE IT- DIRECTORATE
Competent authority for the alpharithitic data
NETWORK on-line with the prefecture directorates
IBM RS6000 software AIX 4.1 DATA BASE ORACLE 8.17
II. THE TOPOGRAPHICAL DIRECTORATE
Competent authority for the geographical data
LAN system, Local network (4-5 workstations in Athens)
INTERSERF 940 (server), Microsoft NT, ORACLE 9.1,
software GIS Geomedia 5.0
22/10/2003
CLI-GIS Experts meeting
Athens(Greece) 24-25/6/2003


THE NEW IT-SYSTEM
for Oli & Viti-GIS
INTERGRATED SYSTEM (alpharithitic and geographical data) in NETWORK
IBM server 440 Intel software WINDOWS 2000 Advanced Server, Data Base ORACLE 9i, Development Tools ORACLE & MICROSOFT, Microsoft Visual Studio NET
Quality Controls: ARC Info 8.3, Application Delphi-Arc Object
22/10/2003
OLI-GIS Experts meeting
Athens(Greece) 24-25/6/2003

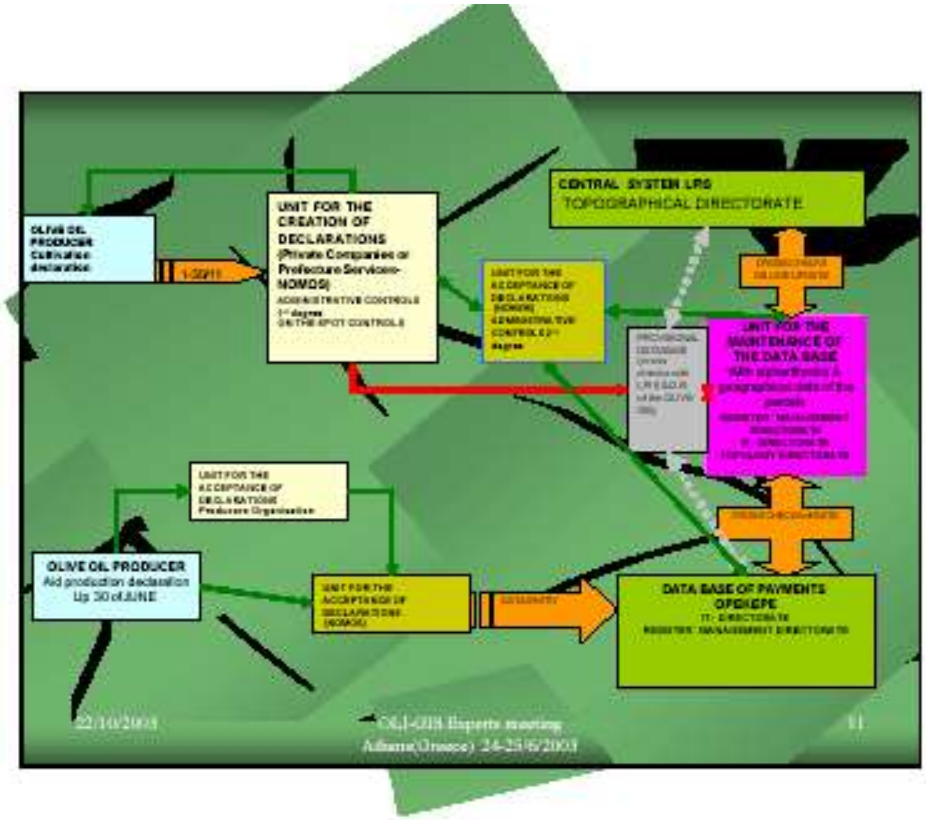

The Management
of OLIVE & VITI GIS in GREECE
The establishment period (2000-2003)
KEMAE (Central Olive & Viti Register Committee)
NEMAE (Regional Olive & Viti Register Committee) One for each prefecture
The update of the system (from 2004)
Ministry of Agriculture
Registers' Management Directorate
22/10/2003
OLI-GIS Experts meeting
Athens(Greece) 24-25/6/2003


The establishment period (2000-2003)
The desirable objective: Operational Olive & Viti GIS on time
Competent authorities:
Ministry of Agriculture (IT Directorate, Topographical Directorate, Registers' Office)
KEMAE & NEMAE responsible for the follow-up of the contracts
Private companies- Contractors


Management Mechanism during the establishment period
NEMAE
KEMAE
Registers Office
Contractors
Monitoring Group


The update of the Olive & Viti GIS
Desirable objective: an update Olive & Viti GIS with the elements for each period (market or production)
Competent Authority: Ministry of Agriculture Registers' Management Directorate
SUPPORT UNITS OF THE SYSTEM
Unit for the creation of declarations (NOMOS)
Unit for the acceptance of declarations (NOMOS)
Unit for the maintenance of the Data Base (Center)
22/10/2003
OLI-GIS Experts meeting
Athens(Greece) 24-25/6/2003
9


SUPPORT UNITS OF THE SYSTEM
Unit for the creation of declarations (NOMOS)
Unit for the acceptance of declarations (NOMOS)
Unit for the maintenance of the Data Base (Center)
Help the farmers to make the modifications of his declaration (especially the geographic modifications)
Accept the modified declarations of farmers
Technical Support of the Data Base, cross checks
22/10/2003
OLI-GIS Experts meeting
Athens(Greece) 24-25/6/2003
10


CENTRAL SYSTEM LPIS
TOPOGRAPHICAL DIRECTORATE
OLIVE OIL PRODUCER
UNIT FOR THE CREATION OF DECLARATIONS
(Private Companies or Prefecture Services-NOMOS)
UNIT FOR THE MAINTENANCE OF THE DATA BASE
UNIT FOR THE ACCEPTANCE OF DECLARATIONS
Prefecture Organization
OLIVE OIL PRODUCER
Aid production declaration
Up 30 of JUNE
DATA BASE OF PAYMENTS
OPEKEPE
22/10/2003
OLI-GIS Experts meeting
Athens(Greece) 24-25/6/2003
11

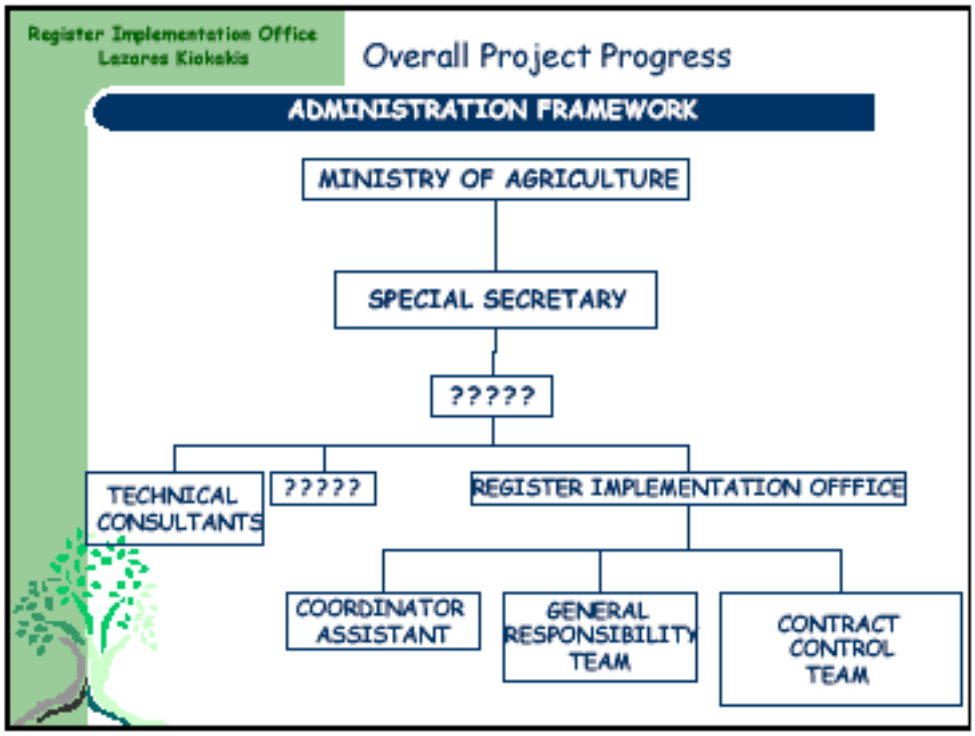

USERS OF THE SYSTEM
Registers' Management Directorate
Topographical Directorate
Agricultural Directorates to each prefecture
OPEKEPE
Directorates of Ministry of Agriculture which need data
Farmers Organizations
22/10/2003
OLI-GIS Experts meeting
Athens(Greece) 24-25/6/2003
12


THE FUTURE
Our focus is: In 4 year period the maintenance of the Olive & Viti GIS Data Base to be exclusive by Ministry of Agriculture with help from a technical consultant company
22/10/2003
Athens(Greece) 24-25/6/2003


THANK YOU FOR YOUR ATTENTION
Photo C. Venizelees
22/10/2003
Athens(Greece) 24-25/6/2003

Lazaros Kiokakis is responsible of the coordination of the RIO. HE presented the progress of the GIS implementation. The last contracts were signed in October 2002 (Pieria Viotia …) and 25/2/2003 (Aegean islands). The contracts can be divided in 2 groups: 1st methodology based on the collection of declaration on base maps support and then the digitizing of parcels on orthophotos, the 2nd one based on the digitizing and then the collection of declaration. Since 1 year a lot of progress was done. The data collection phase in local offices is completed except from Viotia and Aegean Islands which started late. It is likely that the final number of olive dossiers in the GIS will be 750,000 instead of 800,000 first expected. However some of declarations were not registered because they were not submitted in time. As far as the publication phase is concerned, 10 Nomi did not yet started but 55% of communities have been published. In case of disagreement there is an objection procedure but it is very low (about 3% for the whole country). Of course many problems were encountered: lack of orthophotos in some regions, difficult conditions (mountains, small parcels, reluctant applicants etc.). It was decided to acquire some VHR images to solve problems in some regions.


Register Implementation Office
Lazaros Kiokekis
Overall Project Progress
GEOGRAPHIC INFORMATION SYSTEM
FOR THE OLIVE SECTOR
IN GREECE
JUNE 2003


Register Implementation Office
Lazaros Kiokekis
Overall Project Progress
ADMINISTRATION FRAMEWORK
MINISTRY OF AGRICULTURE
SPECIAL SECRETARY
?????
TECHNICAL CONSULTANTS
?????
REGISTER IMPLEMENTATION OFFFICE
COORDINATOR ASSISTANT
GENERAL RESPONSIBILITY TEAM
CONTRACT CONTROL TEAM

Register Implementation Office
Lazaros Kiokekis

Overall Project Progress

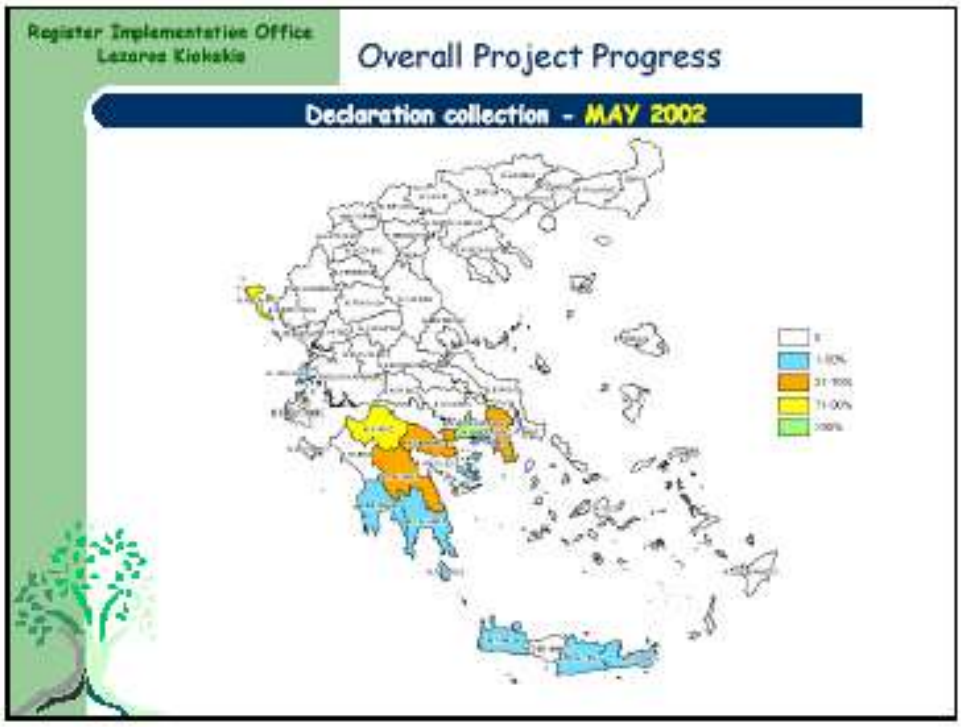
GREECE DIVIDED INTO THE 14 CONTRACTS - WORK AREAS

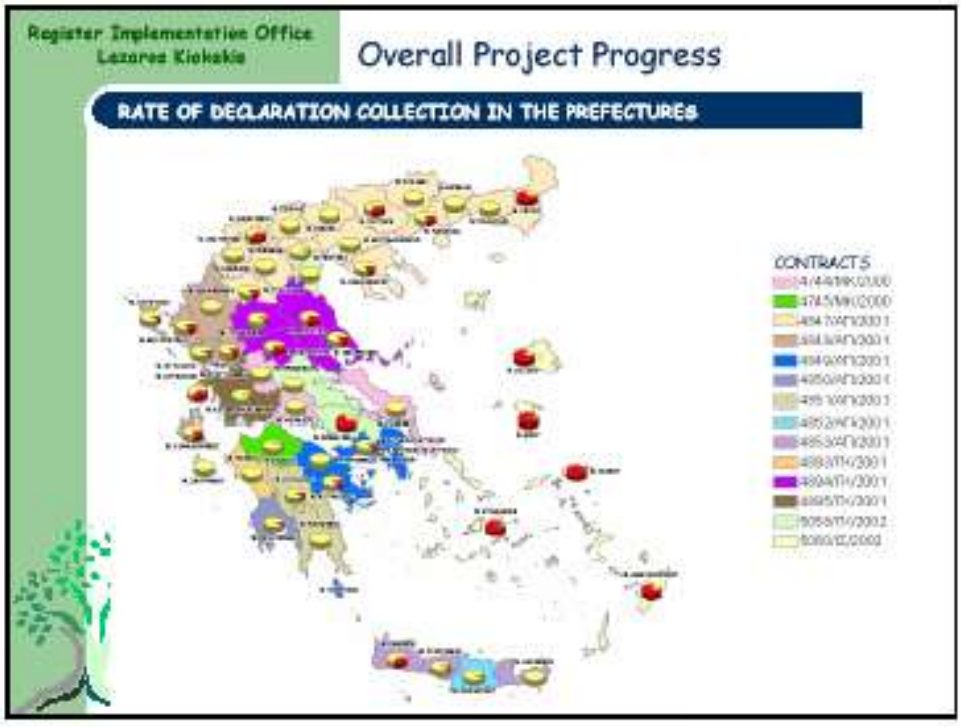
Register Implementation Office
Lazaros Kiokekis

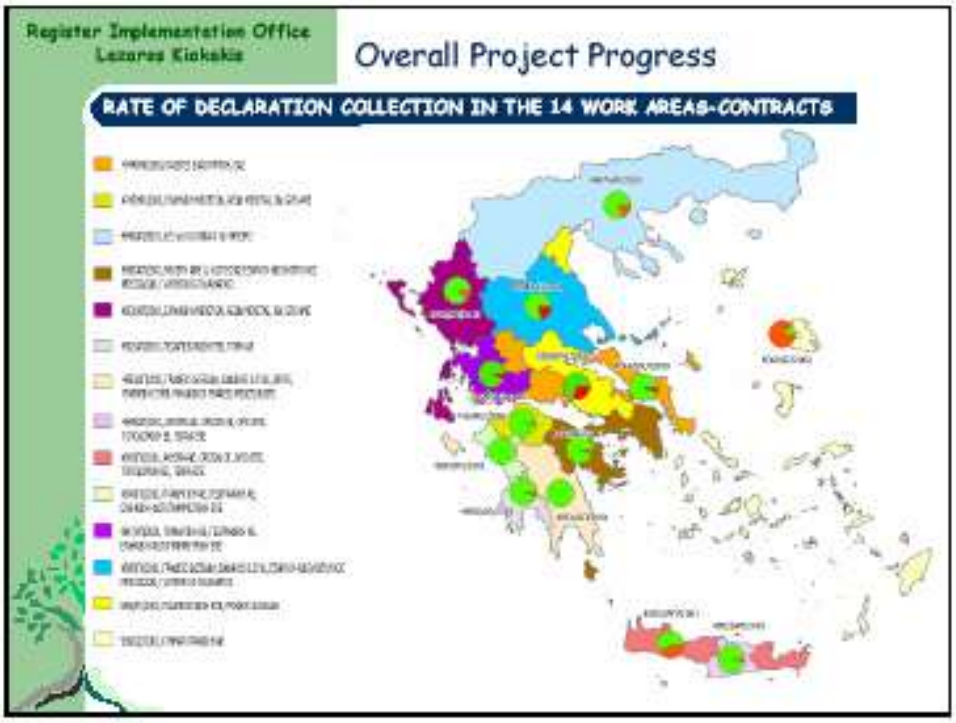
Overall Project Progress

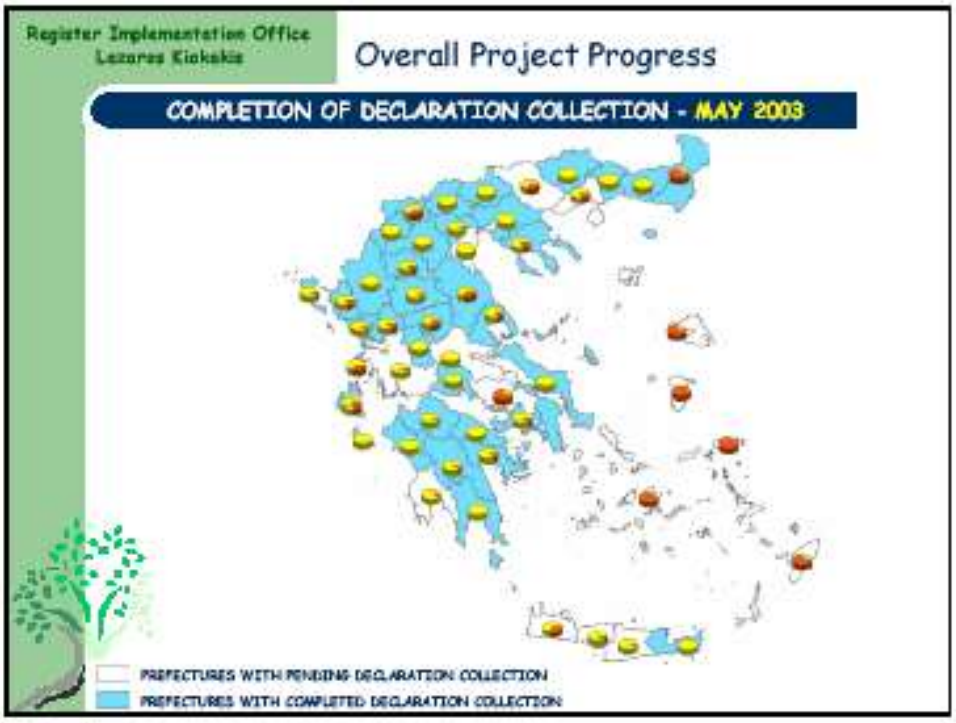
The Basic Methodologies of work followed by the contractors

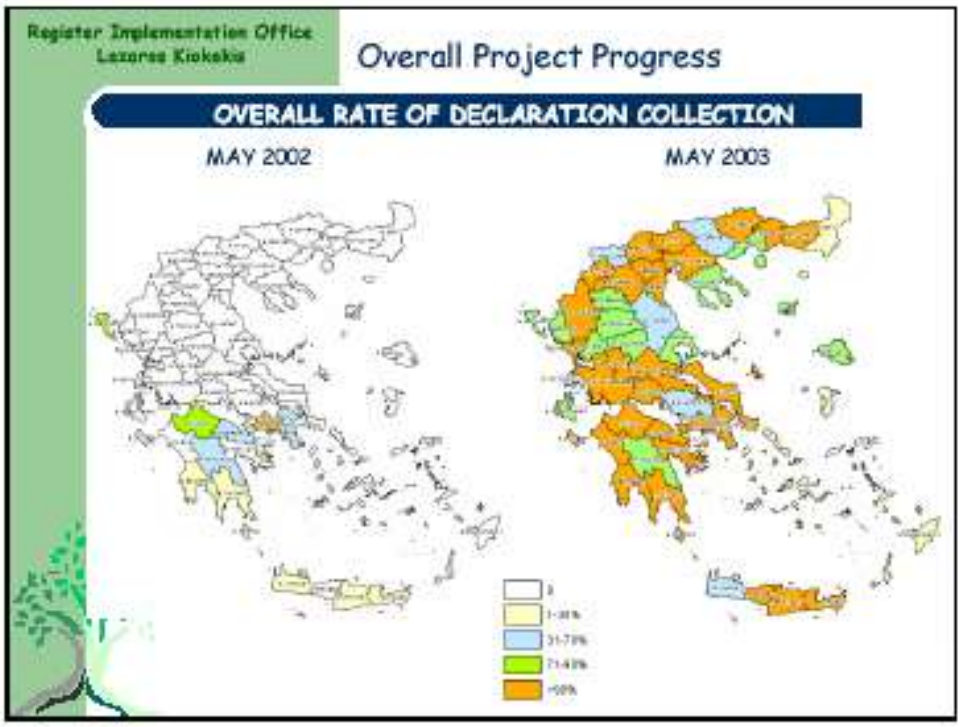
Place	Methodology A	Methodology B
Locally (Field Work)	Collection of Printed Declarations Delineation on ortho-photo maps	Typing Digitising GIS Development Producers' Data Control Quality Control
Central Premises	Typing Digitising GIS Development Producers' Data Control Quality Control	Quality Control Data Unification

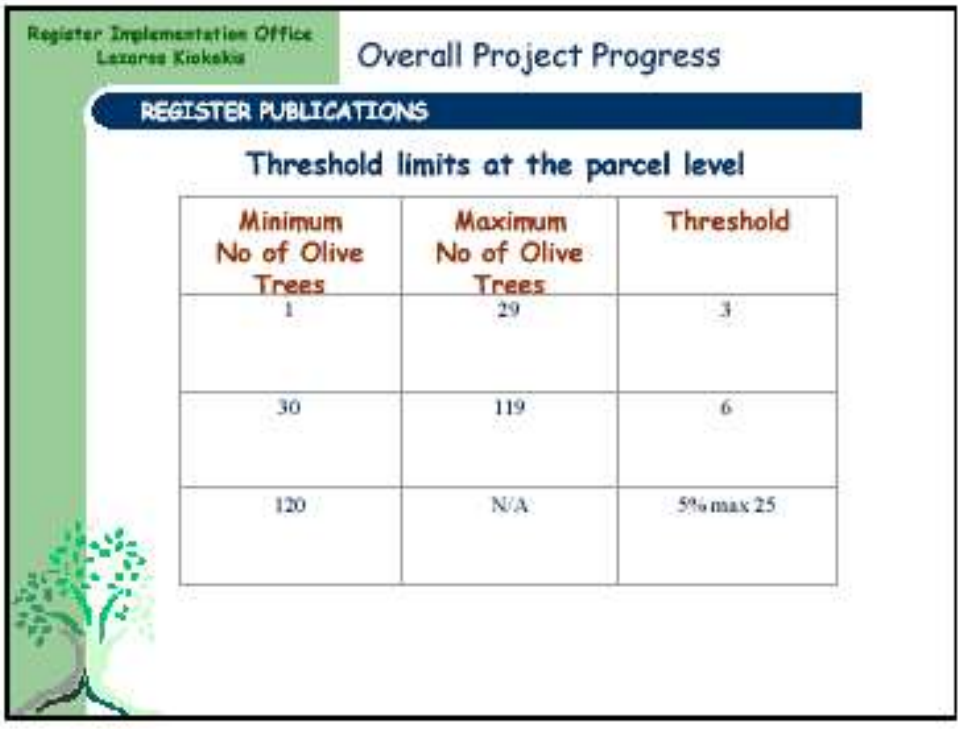

Register Implementation Office
Lazaros Kiokaks
Overall Project Progress
Declaration collection - MAY 2002


Register Implementation Office
Lazaros Kiokaks
Overall Project Progress
RATE OF DECLARATION COLLECTION IN THE PREFECTURES
CONTRACTS

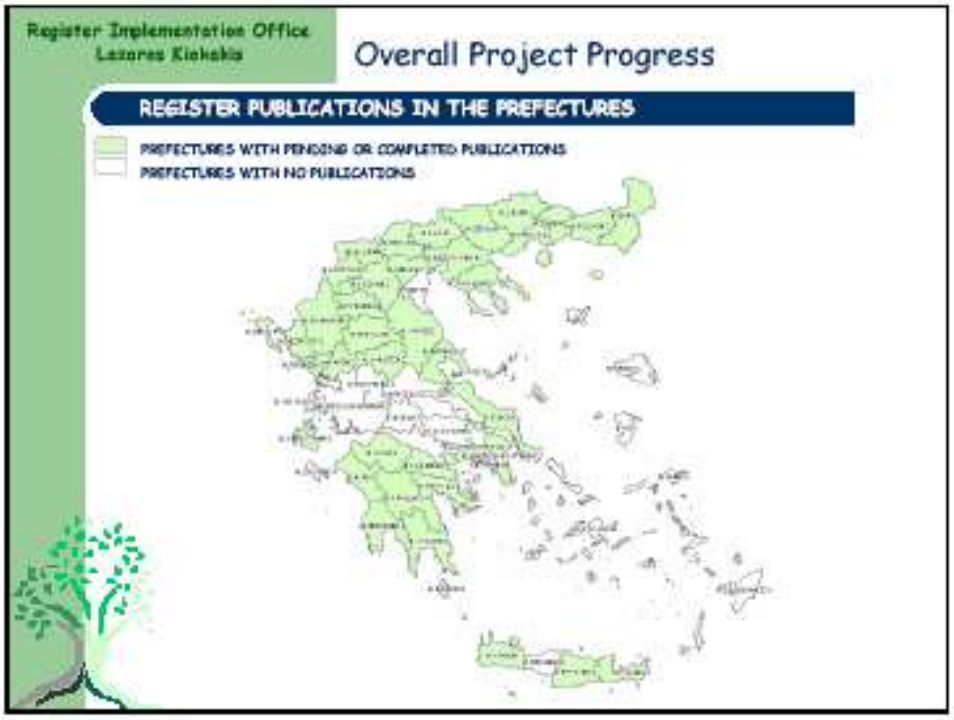

Register Implementation Office
Lazaros Kiokskis
Overall Project Progress
RATE OF DECLARATION COLLECTION IN THE 14 WORK AREAS-CONTRACTS

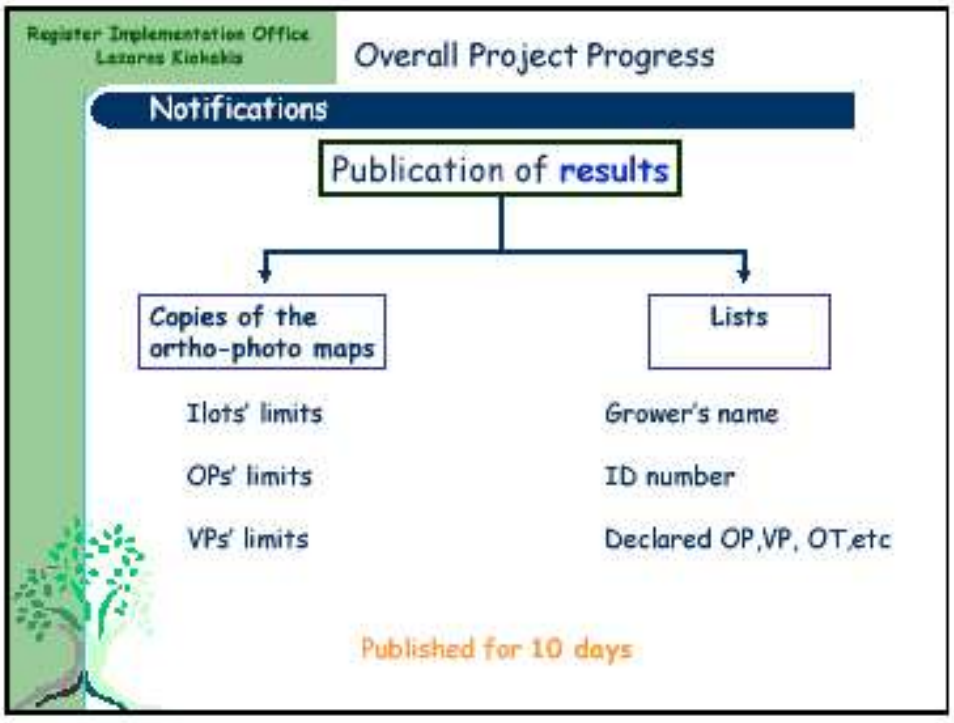

Register Implementation Office
Lazaros Kiokskis
Overall Project Progress
COMPLETION OF DECLARATION COLLECTION - MAY 2003
PREFECTURES WITH PENDING DECLARATION COLLECTION
PREFECTURES WITH COMPLETED DECLARATION COLLECTION

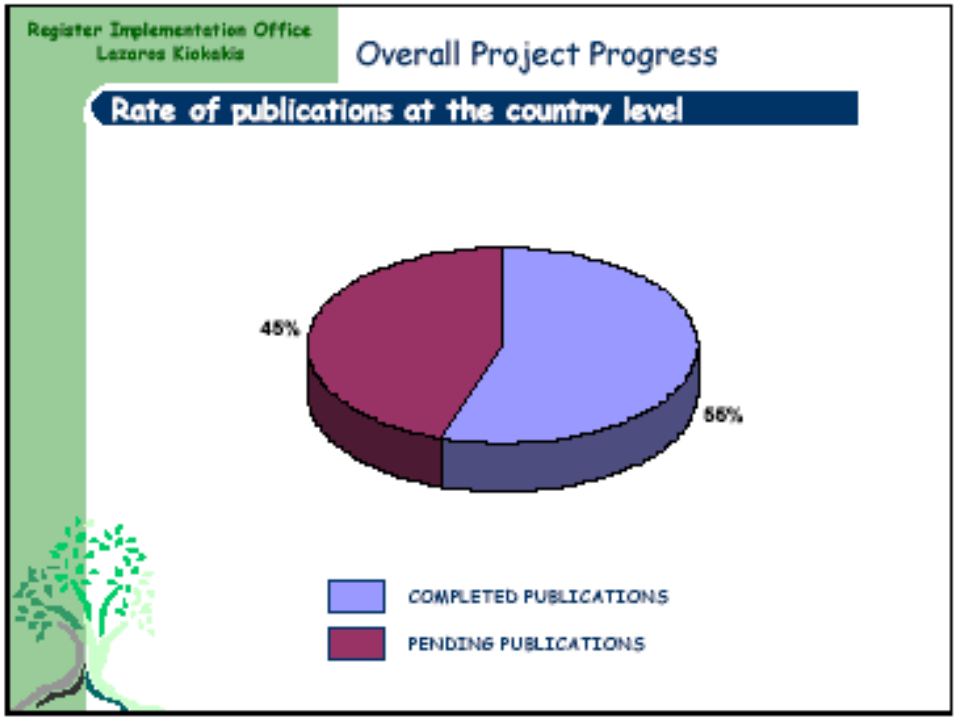


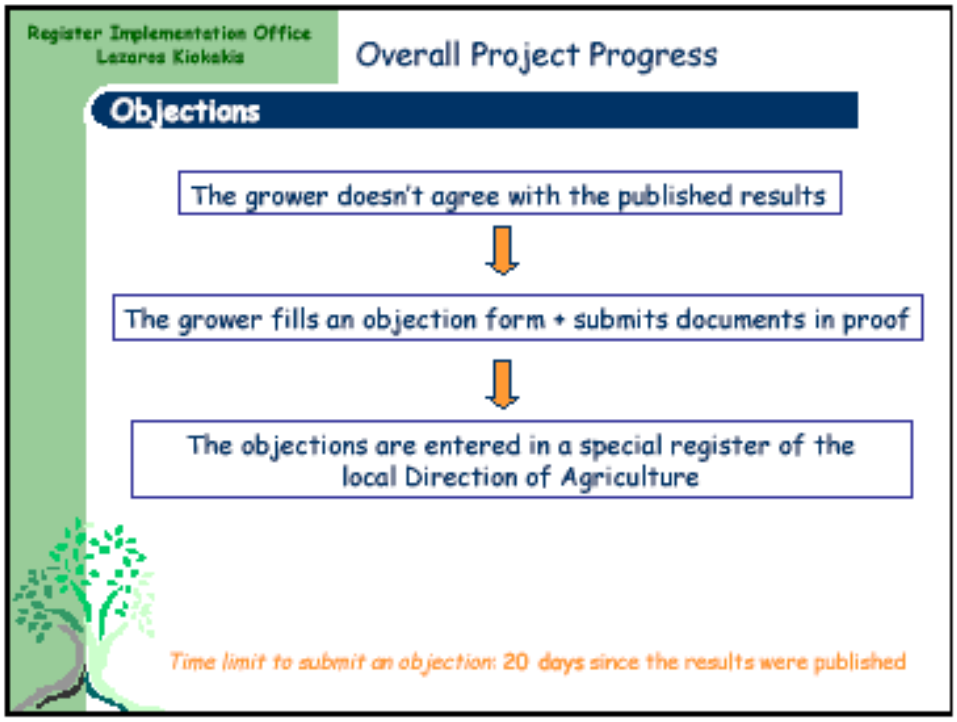


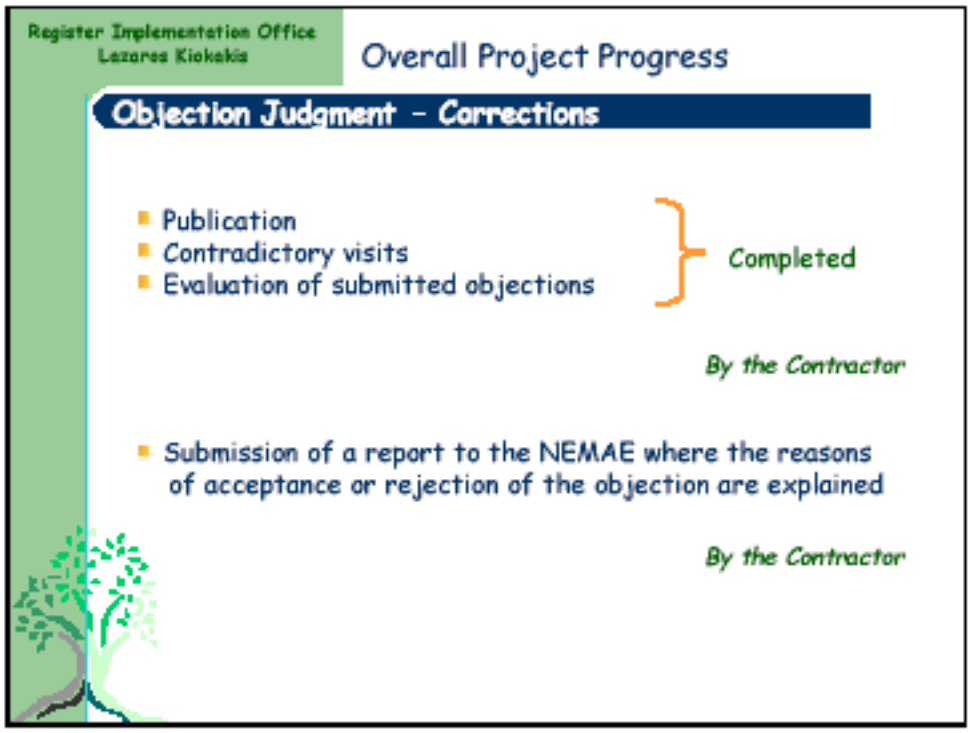
Minimum No of Olive Trees	Maximum No of Olive Trees	Threshold
1	29	3
30	119	6
120	N/A	5% max 25

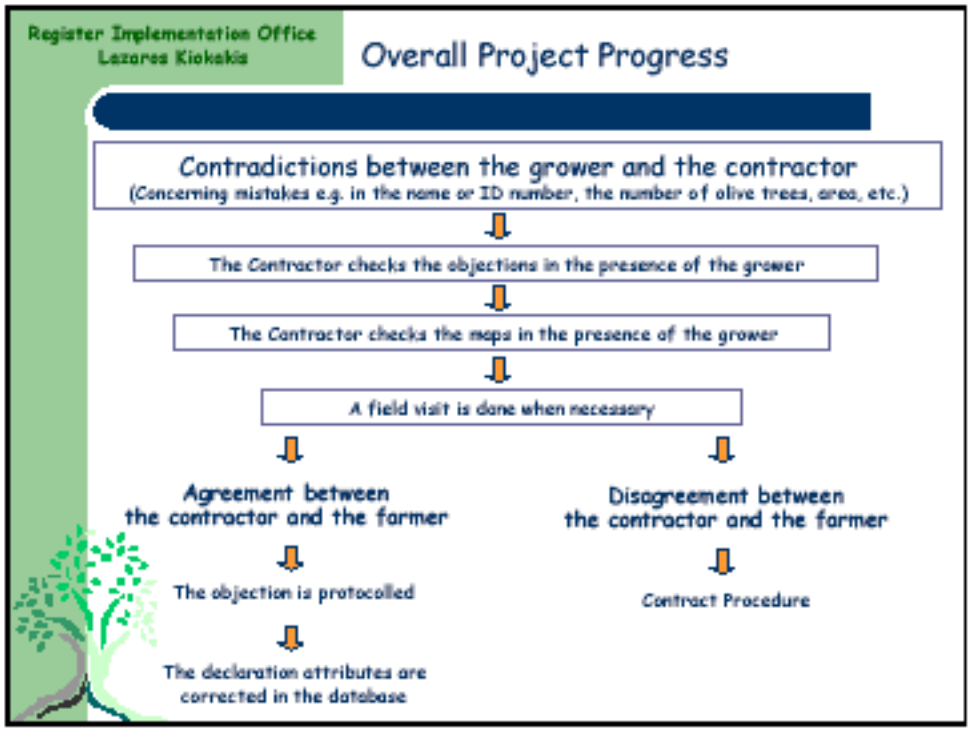

Register Implementation Office
Lazaros Kiokkis
Overall Project Progress
REGISTER PUBLICATIONS IN THE PREFECTURES
PREFECTURES WITH PENDING OR COMPLETED PUBLICATIONS
PREFECTURES WITH NO PUBLICATIONS

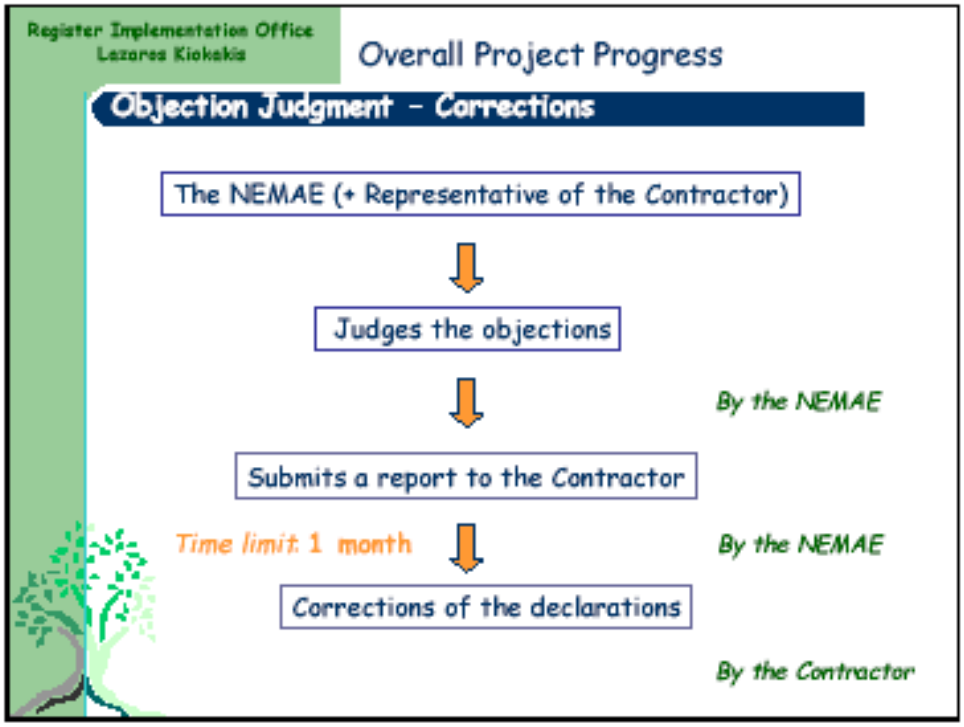

Register Implementation Office
Lazaros Kiokkis
Overall Project Progress
Notifications
Publication of results
Copies of the ortho-photo maps
Lists
Ilots' limits
OPs' limits
VPs' limits
Grower's name
ID number
Declared OP,VP, OT,etc
Published for 10 days

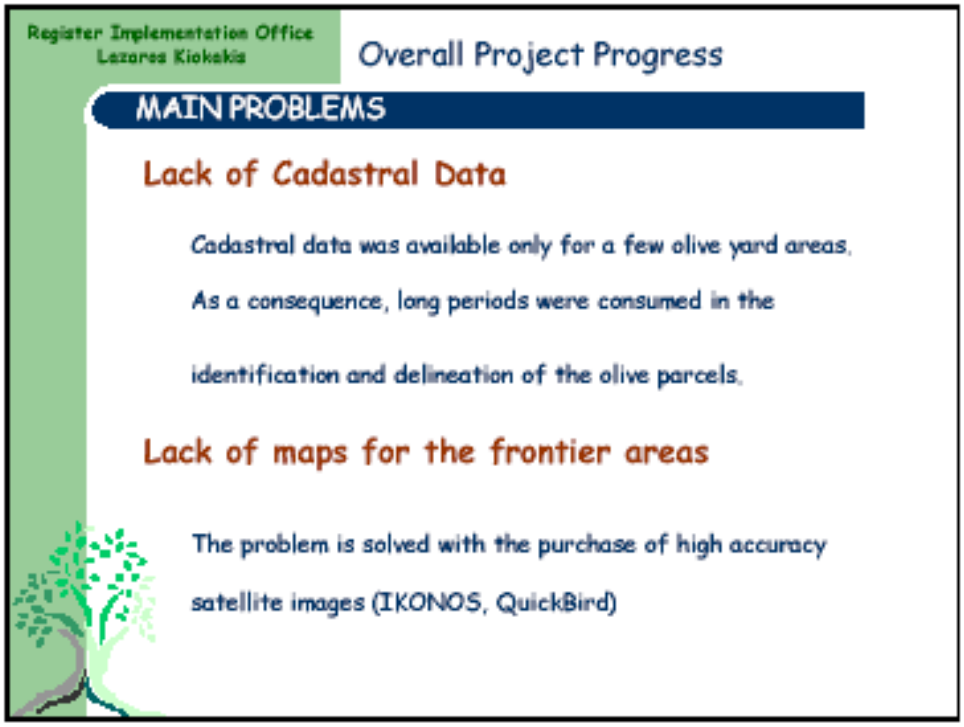

Register Implementation Office
Lazaros Kiokakis
Overall Project Progress
Rate of publications at the country level
45%
55%
COMPLETED PUBLICATIONS
PENDING PUBLICATIONS

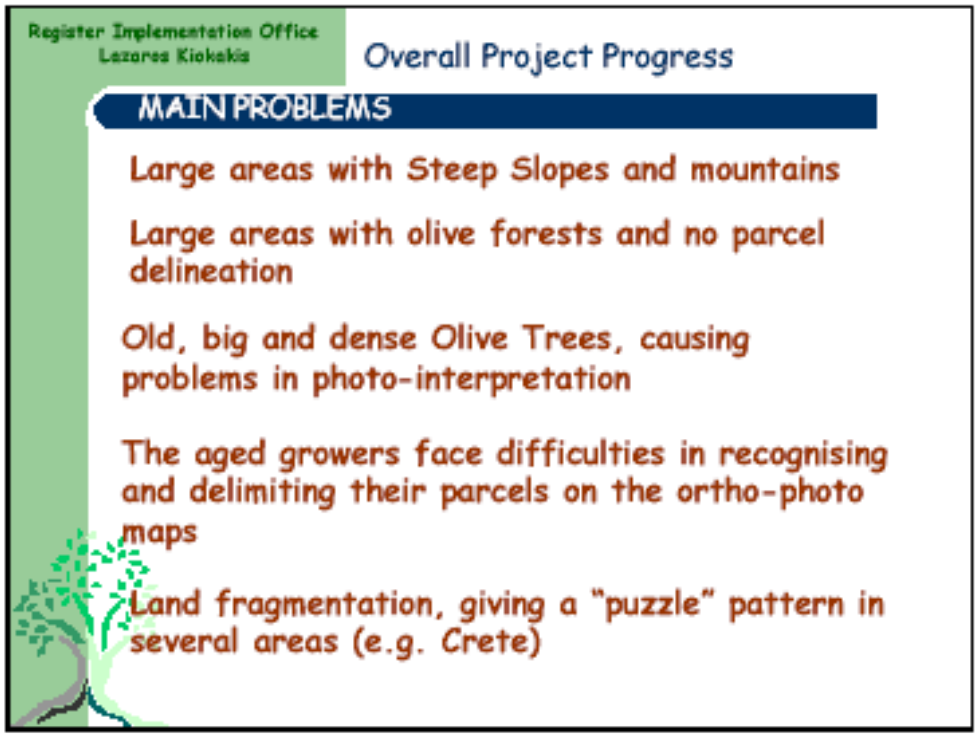

Register Implementation Office
Lazaros Kiokakis
Overall Project Progress
Objections
The grower doesn't agree with the published results
The grower fills an objection form + submits documents in proof
The objections are entered in a special register of the local Direction of Agriculture
Time limit to submit an objection: 20 days since the results were published

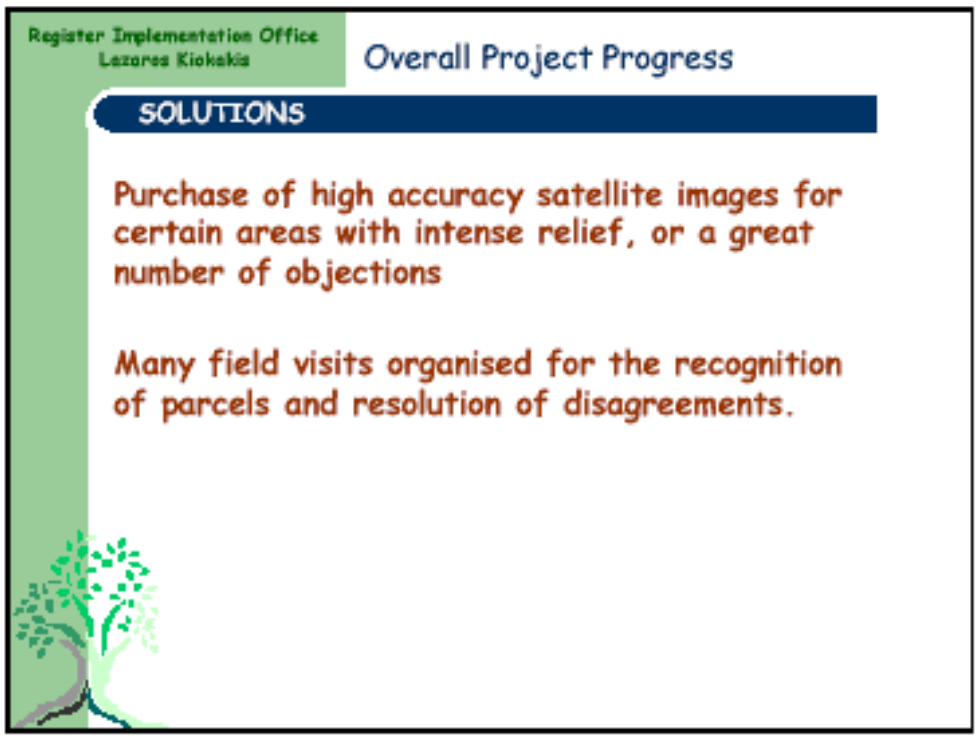

Register Implementation Office
Lazaros Kiokekis
Overall Project Progress
Objection Judgment – Corrections
Publication
Contradictory visits
Evaluation of submitted objections
Completed
By the Contractor
Submission of a report to the NEMAE where the reasons of acceptance or rejection of the objection are explained
By the Contractor

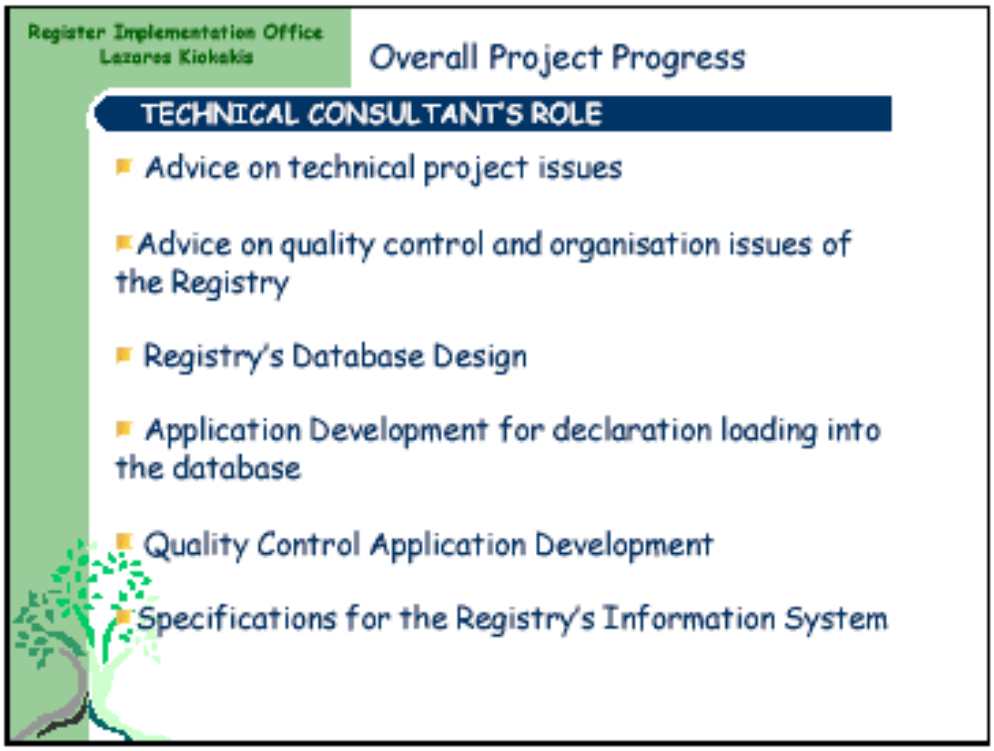

Register Implementation Office
Lazaros Kiokekis
Overall Project Progress
Contradictions between the grower and the contractor
(Concerning mistakes e.g. in the name or ID number, the number of olive trees, area, etc.)
The Contractor checks the objections in the presence of the grower
The Contractor checks the maps in the presence of the grower
A field visit is done when necessary
Agreement between the contractor and the farmer
Disagreement between the contractor and the farmer
The objection is protocolled
Contract Procedure
The declaration attributes are corrected in the database


Register Implementation Office
Lazaros Kiokekis
Overall Project Progress
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


Register Implementation Office
Lazaros Kiokekis
Overall Project Progress
MAIN PROBLEMS
Lack of Cadastral Data
Cadastral data was available only for a few olive yard areas.
As a consequence, long periods were consumed in the
identification and delineation of the olive parcels.
Lack of maps for the frontier areas
The problem is solved with the purchase of high accuracy
satellite images (IKONOS, QuickBird)

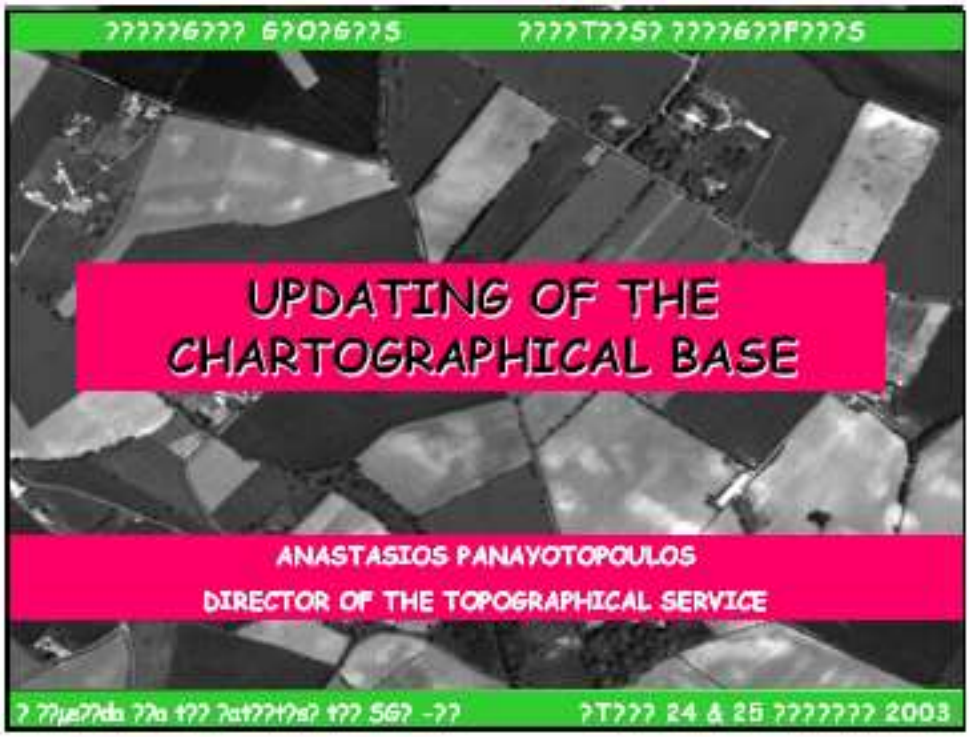

Register Implementation Office
Lazaros Kiokekis
Overall Project Progress
MAIN PROBLEMS
Large areas with Steep Slopes and mountains
Large areas with olive forests and no parcel delineation
Old, big and dense Olive Trees, causing problems in photo-interpretation
The aged growers face difficulties in recognising and delimiting their parcels on the ortho-photo maps
Land fragmentation, giving a "puzzle" pattern in several areas (e.g. Crete)

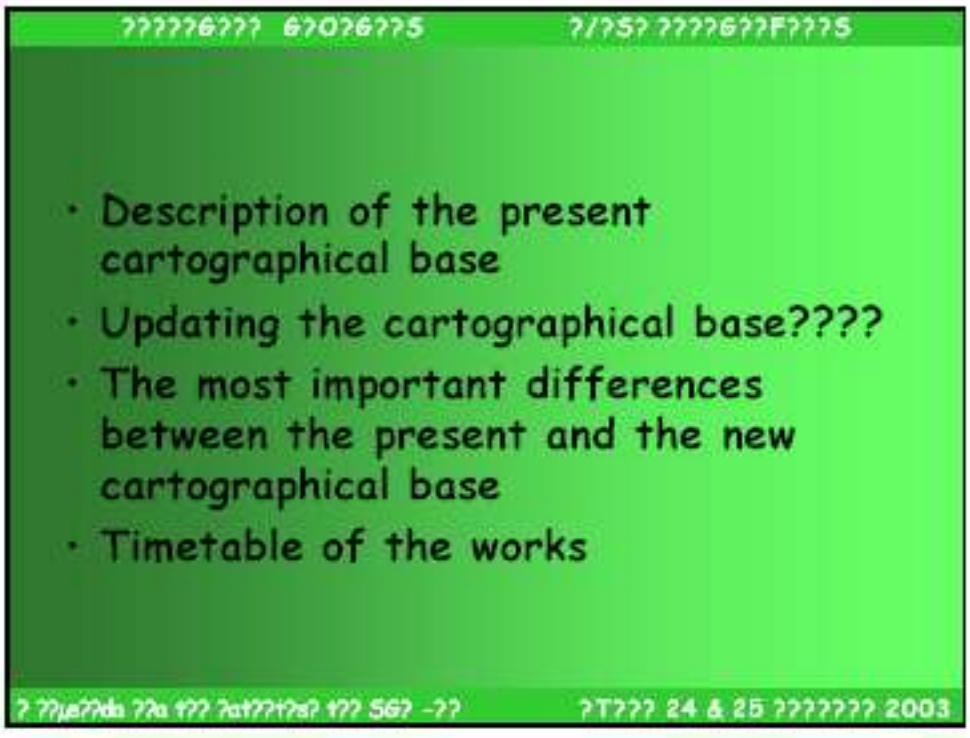

Register Implementation Office
Lazaros Kiokekis
Overall Project Progress
SOLUTIONS
Purchase of high accuracy satellite images for certain areas with intense relief, or a great number of objections
Many field visits organised for the recognition of parcels and resolution of disagreements.


Register Implementation Office
Lazaros Kiokakis
Overall Project Progress
TECHNICAL CONSULTANT'S ROLE
Advice on technical project issues
Advice on quality control and organisation issues of the Registry
Registry's Database Design
Application Development for declaration loading into the database
Quality Control Application Development
Specifications for the Registry's Information System

M. Panayotopoulos is the head of the Topographic Services of the MoA. He presented the plan for updating the cartographic database. He recalled the history of the creation of the base reference maps in 2 periods: (i) 1996-97 60% of the country was covered (ii) 2000-01 30% covered. The balance of 10% (border areas, Mount Athos and mountainous areas) is not covered.

A new ITT was recently published for the aerial photos acquisition and the production of orthophotos. The flight remains 1:40,000e scale, with Panchromatic film, but with a pixel of 50 cm (instead of 1m previously). It will be possible to use digital camera and satellite images on the border area.


UPDATING OF THE
CHARTOGRAPHICAL BASE
ANASTASIOS PANAYOTOPOULOS
DIRECTOR OF THE TOPOGRAPHICAL SERVICE


· Description of the present cartographical base
· Updating the cartographical base????
· The most important differences between the present and the new cartographical base
· Timetable of the works

?????6??? 6?O?6??5 ?/?5? ????6??F????5

- Description of the present cartographical base
- Updating the cartographical base????
- The most important differences between the present and the new cartographical base
- Timetable of the works

? ??µ??da ??a t?? ?at???t?s? t?? 5G? -?? ?T??? 24 & 25 ??????? 2003

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Regulation 1593/2000 of the Council foresees in its article 4 that member states should create a Land Parcel Identification System -LPIS based on maps or on other sources from the land register or on other cartographic sources. For the LPIS creation the use of the GIS's techniques (Geographical Information System) is essential, which should be based on the coverage of Orthophotographs preferably taken by air or space, which will have an homogenous criterion ensuring thus, accuracy at least equal to the one provided by the maps in scale 1: 10.000

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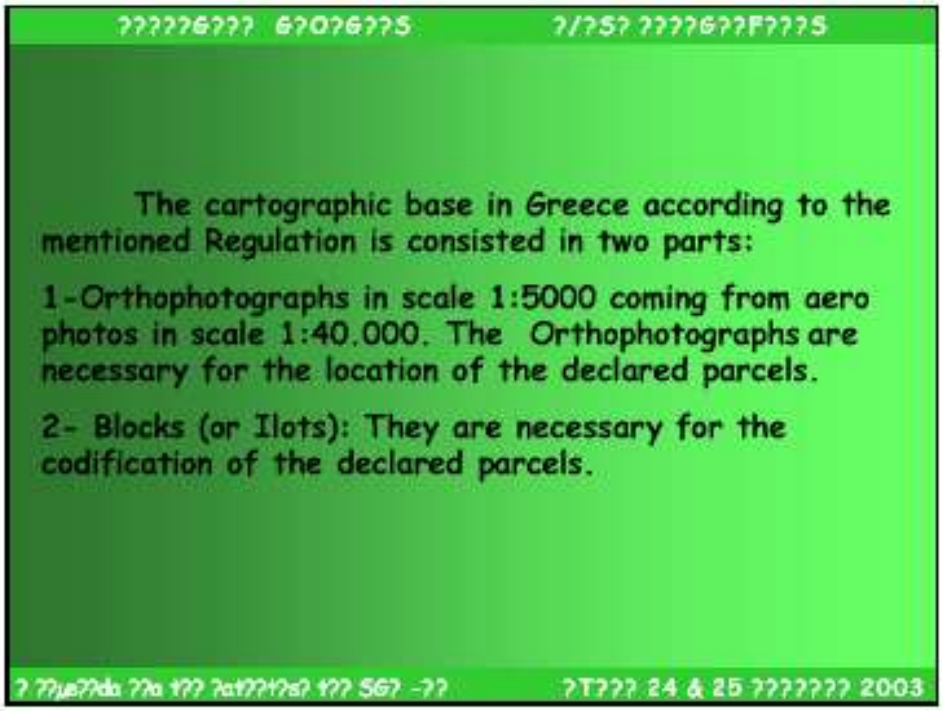
?????G??? G?O?G??S
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The cartographic base in Greece according to the mentioned Regulation is consisted in two parts:
1-Orthophotographs in scale 1:5000 coming from aero photos in scale 1:40.000. The Orthophotographs are necessary for the location of the declared parcels.
2- Blocks (or Ilots): They are necessary for the codification of the declared parcels.
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The present cartographic base in Greece was created in two different time periods:
1. During the first period 1996-1997 the 60% of the Country was covered.
2. During the second period 2000-2001 the rest of the Country was covered.
After the completion of the abovementioned coverage, remained a part without Orthophotographs (approximately 10% of the total area). It was not able to photo this particular section as it is part of the Greek frontier
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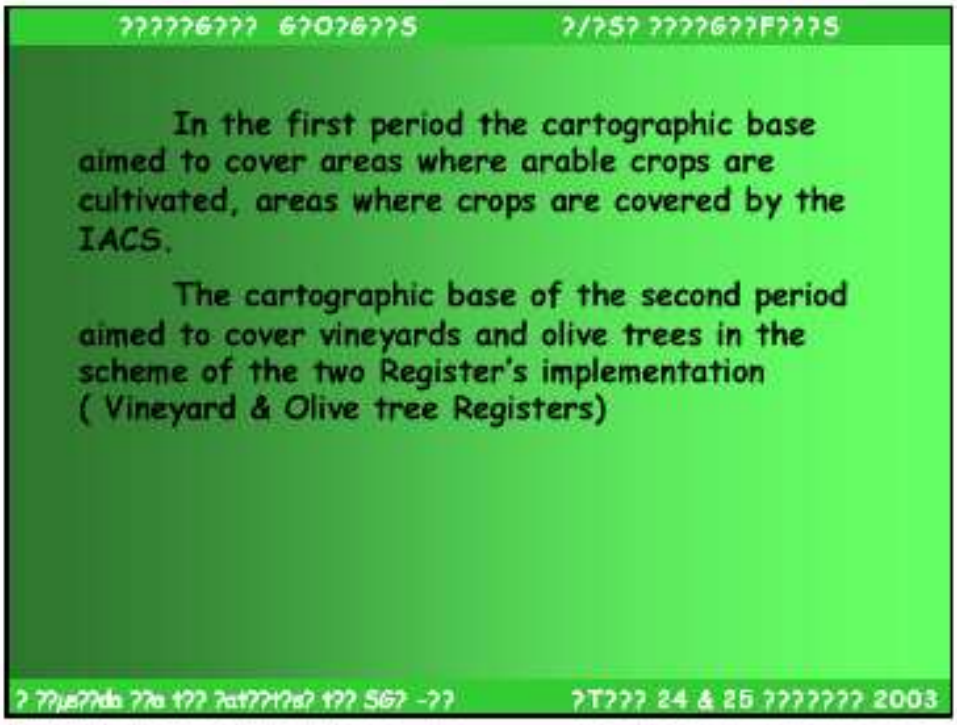
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In the first period the cartographic base aimed to cover areas where arable crops are cultivated, areas where crops are covered by the IACS.
The cartographic base of the second period aimed to cover vineyards and olive trees in the scheme of the two Register's implementation (Vineyard & Olive tree Registers)
? ??µ??da ??a t?? ?at????s? t?? SG? -??
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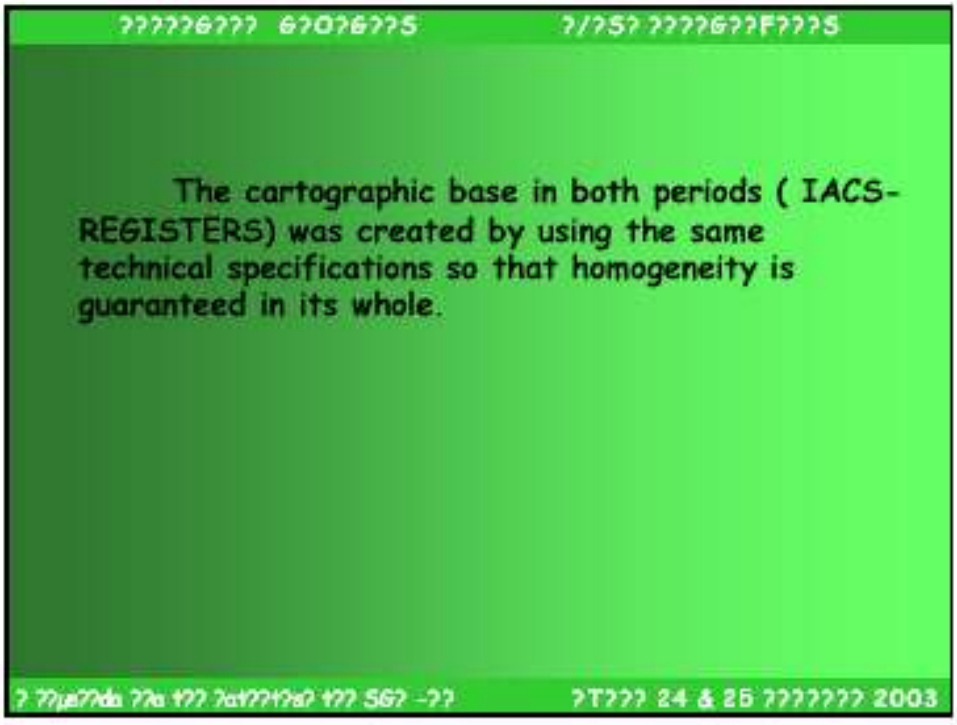
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The cartographic base in both periods (IACS-REGISTERS) was created by using the same technical specifications so that homogeneity is guaranteed in its whole.
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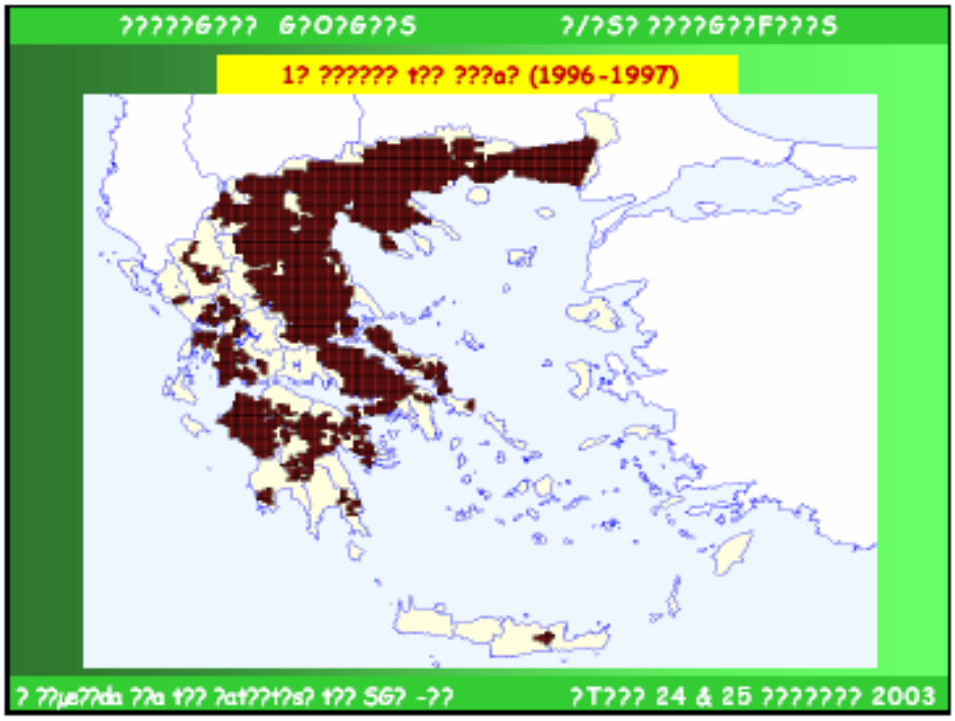
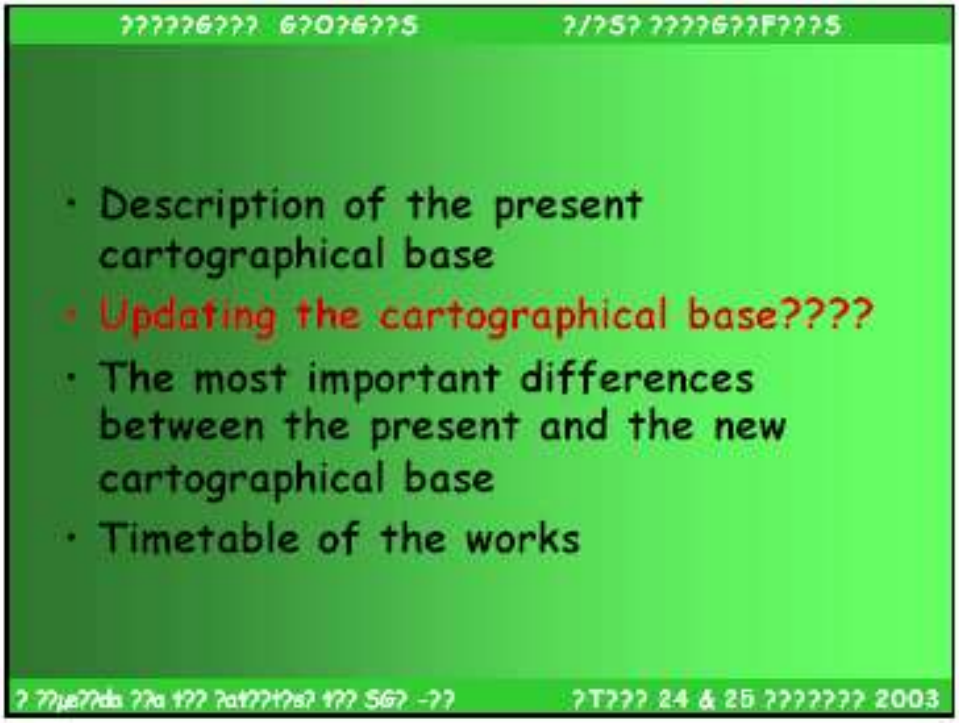
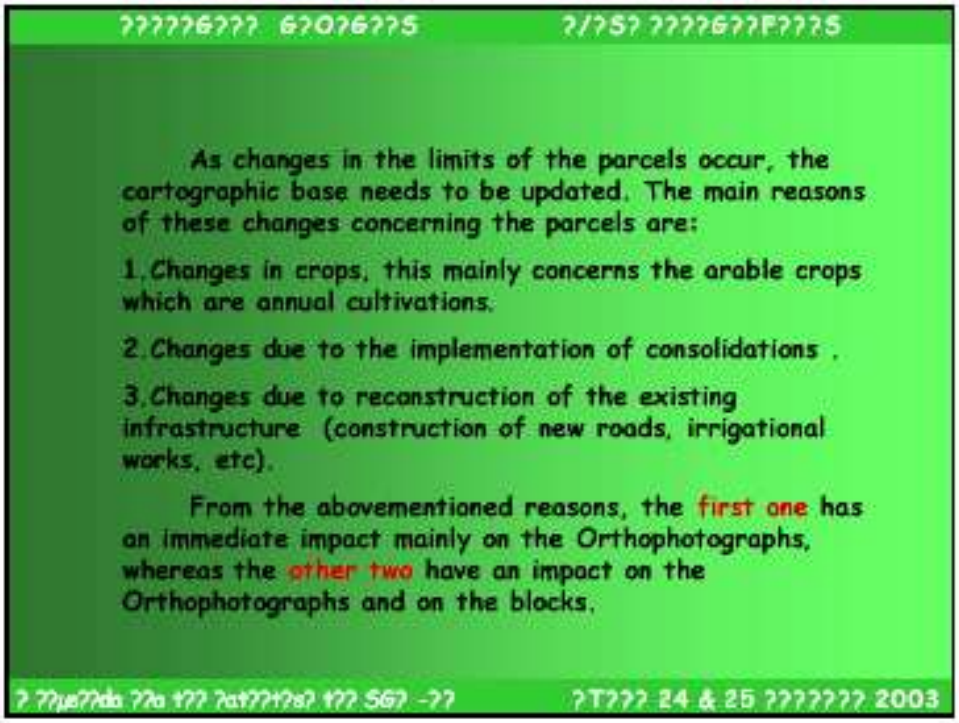


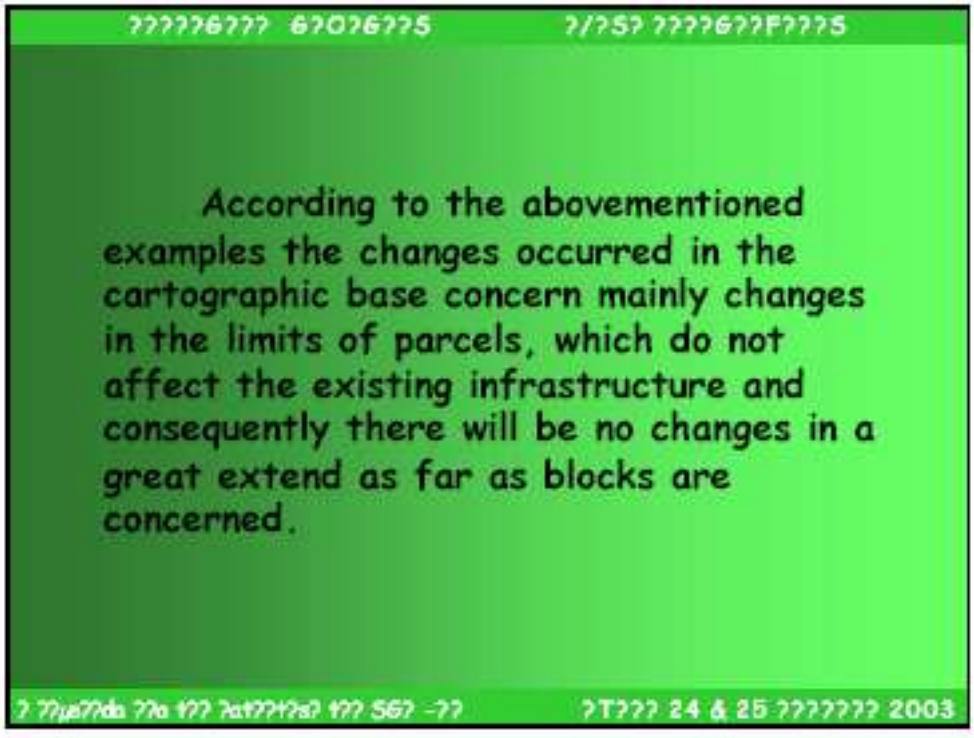

?????6??? 6?O?6??S ?/?S? ????6??F????S
· Description of the present cartographical base
· Updating the cartographical base????
· The most important differences between the present and the new cartographical base
· Timetable of the works
? ??µe??da ??a t?? ?at???t?s? t?? SG? -??
?T??? 24 & 25 ??????? 2003


?????6??? 6?O?6??S ?/?S? ????6??F????S
As changes in the limits of the parcels occur, the cartographic base needs to be updated. The main reasons of these changes concerning the parcels are:
1. Changes in crops, this mainly concerns the arable crops which are annual cultivations.
2. Changes due to the implementation of consolidations .
3. Changes due to reconstruction of the existing infrastructure (construction of new roads, irrigational works, etc).
From the abovementioned reasons, the first one has an immediate impact mainly on the Orthophotographs, whereas the other two have an impact on the Orthophotographs and on the blocks.
? ??µe??da ??a t?? ?at???t?s? t?? SG? -??
?T??? 24 & 25 ??????? 2003


1st EXAMPLE
IKONOS 2003


2nd EXAMPLE
IKONOS 2003


?????6??? 6?O?6??5
?/?S? ????6??F????5
3rd EXAMPLE
ORTHOPHOTO 1996-97
IKONOS 2003
? ??µ??da ??o ??? ?at???i?s? ??? SG? -??
?T??? 24 & 25 ??????? 2003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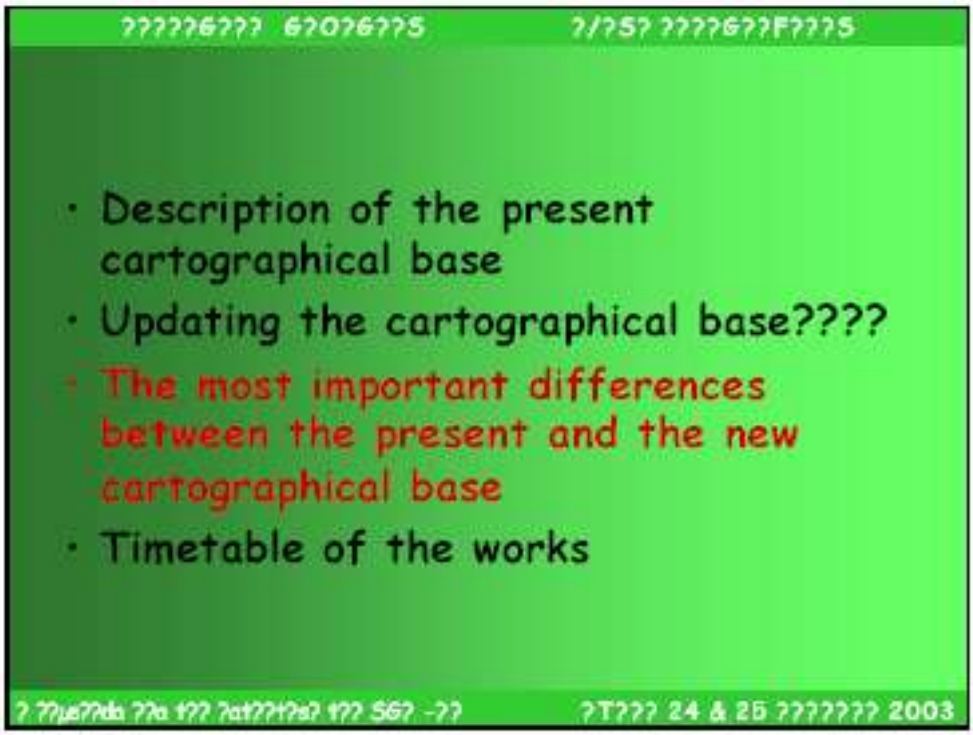
?/?S? ????6??F????5
According to the abovementioned examples the changes occurred in the cartographic base concern mainly changes in the limits of parcels, which do not affect the existing infrastructure and consequently there will be no changes in a great extend as far as blocks are concerned.
? ??µ??da ??o ??? ?at???i?s? ??? SG? -??
?T??? 24 & 25 ??????? 2003


?????6??? 6?O?6??S
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· Description of the present cartographical base
· Updating the cartographical base????
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? ??ue??da ??a t?? ?at???t?s? t?? S6? -??
?T??? 24 & 25 ??????? 2003


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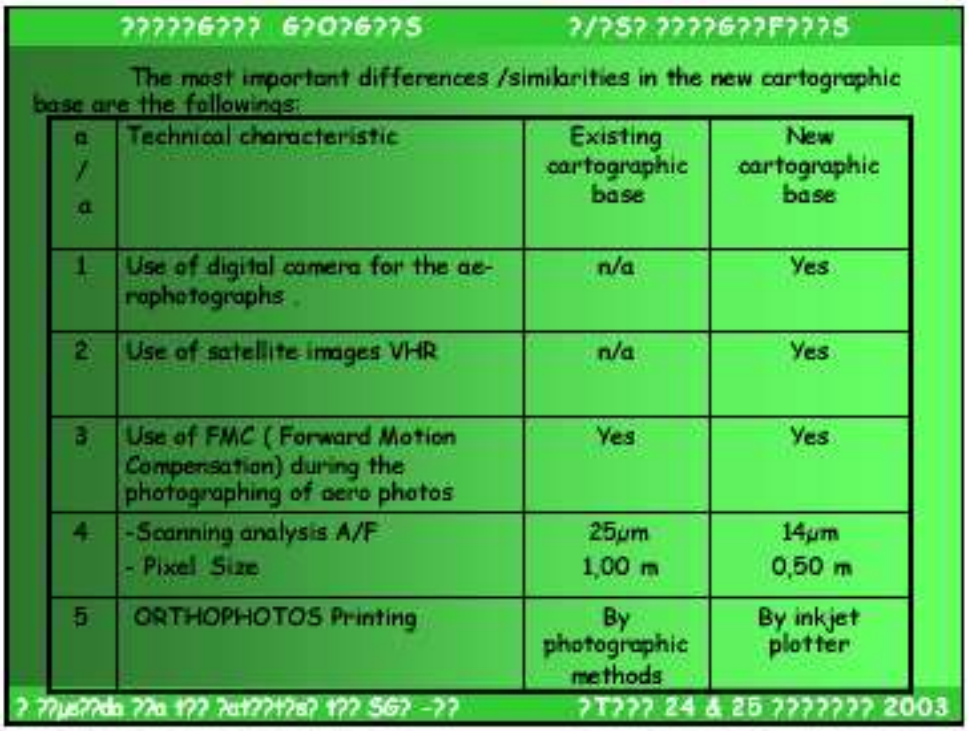
?/?S? ????6??F???S
Between the existing Orthophotographs and the new ones there will be improvements concerning their technical characteristics
Thus:
1. The 1:40000 scale for the aerophotos remains the same
2. The film continues to be panchromatic (black and white) VHRAF (Very High Resolution Aerial Film) but it has got now the possibility to use a digital camera and satellite images VHR in the frontier.
? ??ue??da ??a t?? ?at???t?s? t?? S6? -??
?T??? 24 & 25 ??????? 2003



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The most important differences /similarities in the new cartographic base are the followings:

a / a	Technical characteristic	Existing cartographic base	New cartographic base
1	Use of digital camera for the aerophotographs .	n/a	Yes
2	Use of satellite images VHR	n/a	Yes
3	Use of FMC (Forward Motion Compensation) during the photographing of aero photos	Yes	Yes
4	-Scanning analysis A/F - Pixel Size	25μm 1,00 m	14μm 0,50 m
5	ORTHOPHOTOS Printing	By photographic methods	By inkjet plotter

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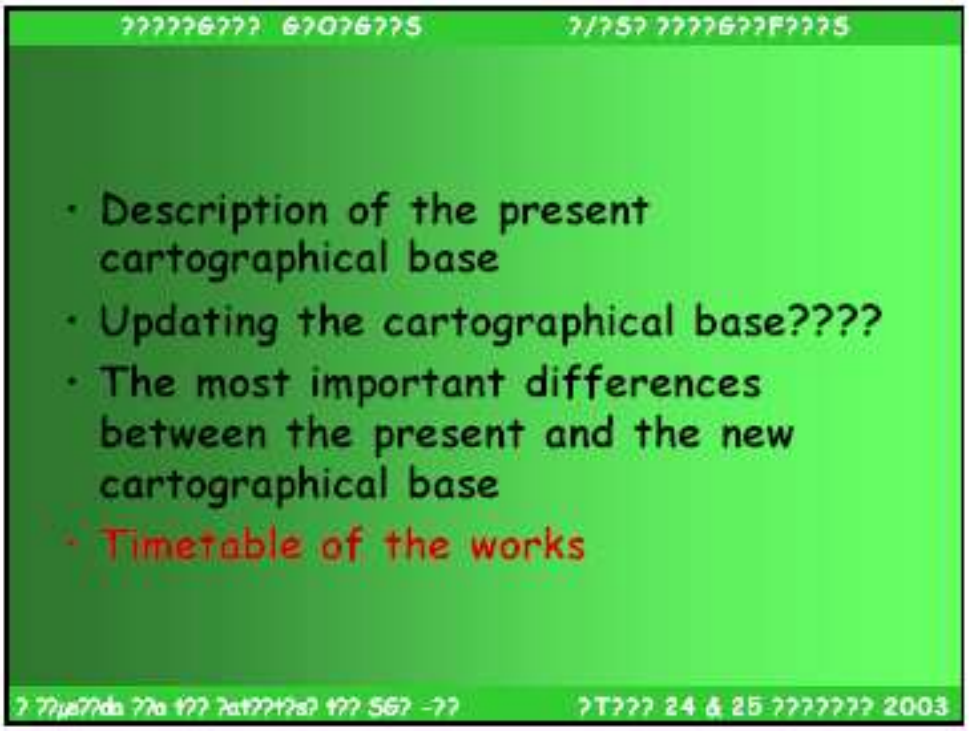

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- Description of the present cartographical base
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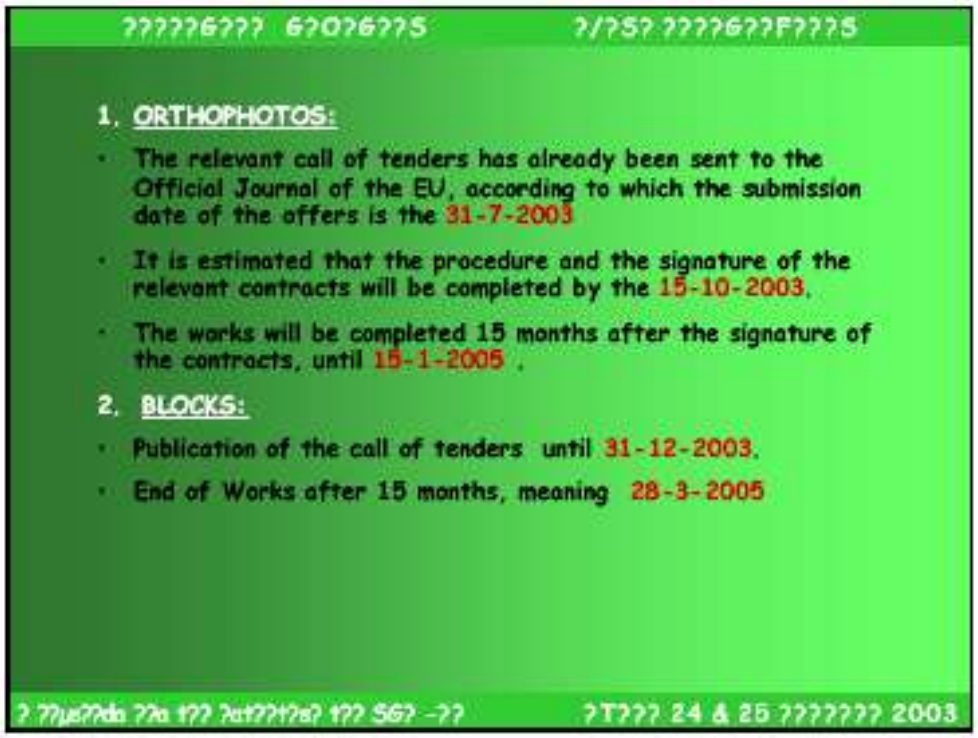
? ??μ??da ??a t?? ?at???t?s? t?? SG? -?? ?T??? 24 & 25 ??????? 2003


?????G??? G?O?G??S
?/?S? ????G??F???S
1. ORTHOPHOTOS:
· The relevant call of tenders has already been sent to the Official Journal of the EU, according to which the submission date of the offers is the 31-7-2003
· It is estimated that the procedure and the signature of the relevant contracts will be completed by the 15-10-2003.
· The works will be completed 15 months after the signature of the contracts, until 15-1-2005 .
2. BLOCKS:
· Publication of the call of tenders until 31-12-2003.
· End of Works after 15 months, meaning 28-3-2005
? ??µ??da ??a t?? ?at???t?s? t?? SG? -??
?T??? 24 & 25 ??????? 2003


?????G??? G?O?G??S
?/?S? ????G??F???S
THANK YOU FOR YOUR ATTENTION
? ??µ??da ??a t?? ?at???t?s? t?? SG? -??
?T??? 24 & 25 ??????? 2003

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Session 3: Situation of Olive GIS in the Candidate Countries

Session 3 Progress status in Cyprus, by Michalis Constantinides, Department of Agriculture of Cyprus

Summary

M. Michalis Constantinides works at the Department of Agriculture of Cyprus. He is in charge of the implementation of olive register. There are 6 agricultural districts in Cyprus, each of them have an agriculture regional office. Olive growing is a very old crop that can be found everywhere in Cyprus (383 of the 401 cypriot villages grow olive trees). There is an existing register created in 1999-2000 which was updated in 2003. It covers 27,297 applicants, 2.3M olive trees and 6218 ha. Due to drought in the last years, there is a 5-years national plan for drought resistant crops (olive trees, almond trees and caroub trees).

The olive parcels are identified using cadastre. By cross-checking register data vs. cadastre on a pilot test (Arradipou) it was found that 68% were correct and 32% were wrong (old cadastre numbers, errors..). For the implementation of the Olive GIS VHR images will be used (acquisition in progress) because it is not possible to fly the country due to military restrictions. A new declaration will be sent to farmers and the applications will be cross-checked with photo-interpretation. An ITT is being prepared and should be launched by October 2003. The Olive GIS should be completed by May 2004.

(Presentation)


OLI-GIS Experts Meeting
2st workshop on the Implementation of Olive GIS
in the Member States
OLI-GIS Implementation in Cyprus
Michalis Constantinides
Ministry of Agriculture, Natural Recourses
and Environment
Department of Agriculture

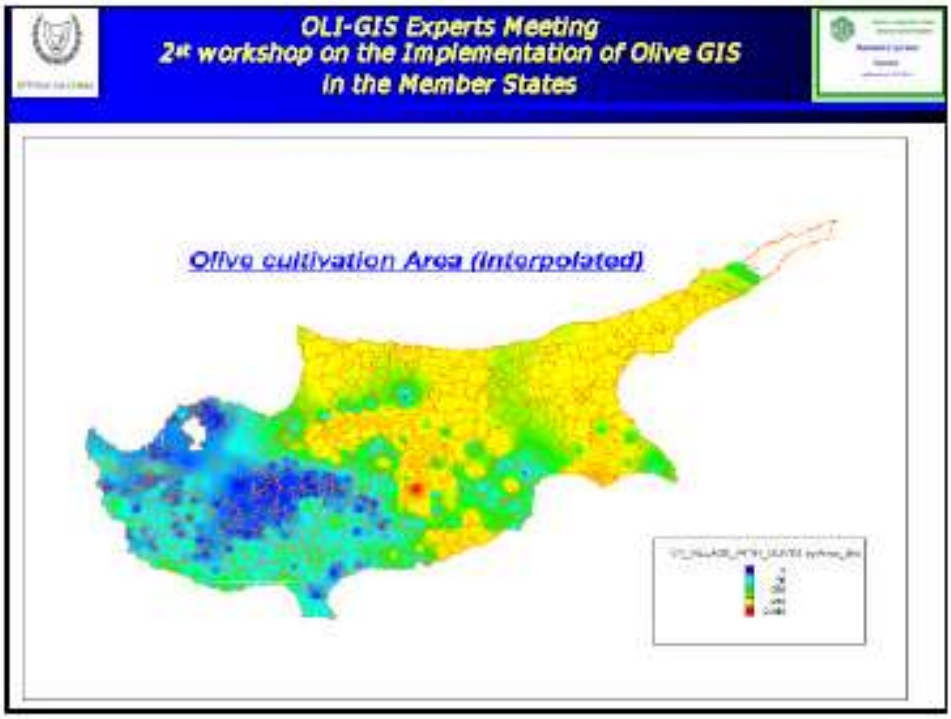

OLI-GIS Experts Meeting
2st workshop on the Implementation of Olive GIS
in the Member States
Cyprus divided in six
agricultural areas

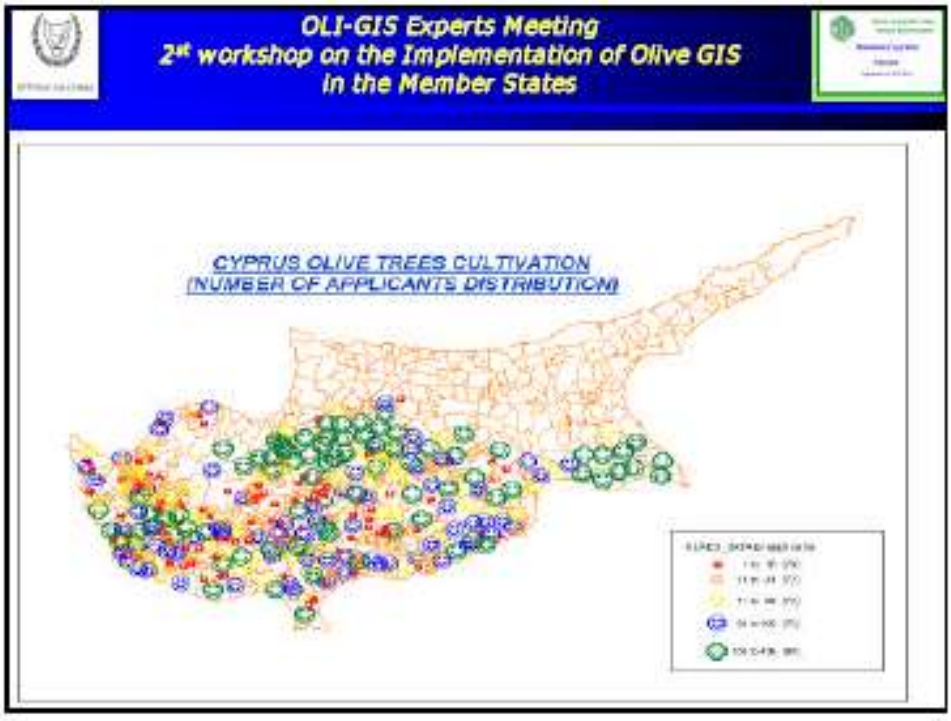
OLI-GIS Experts Meeting
2st workshop on the Implementation of Olive GIS
in the Member States

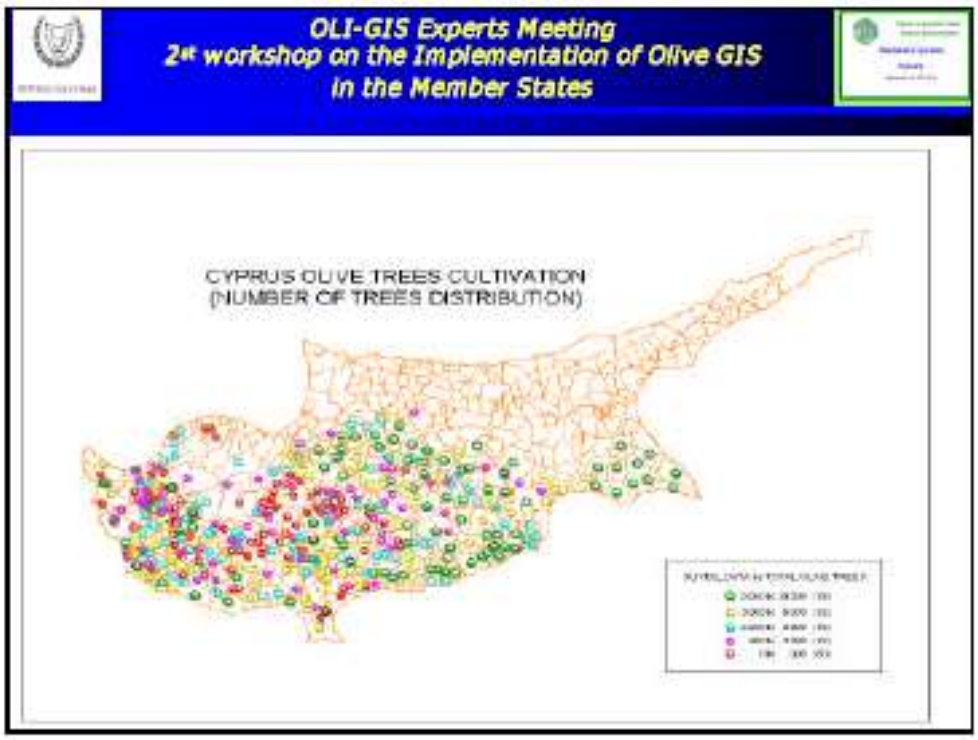
INFORMATION OF OLIVE TREES SECTOR (DATA BASE INFORMATION)

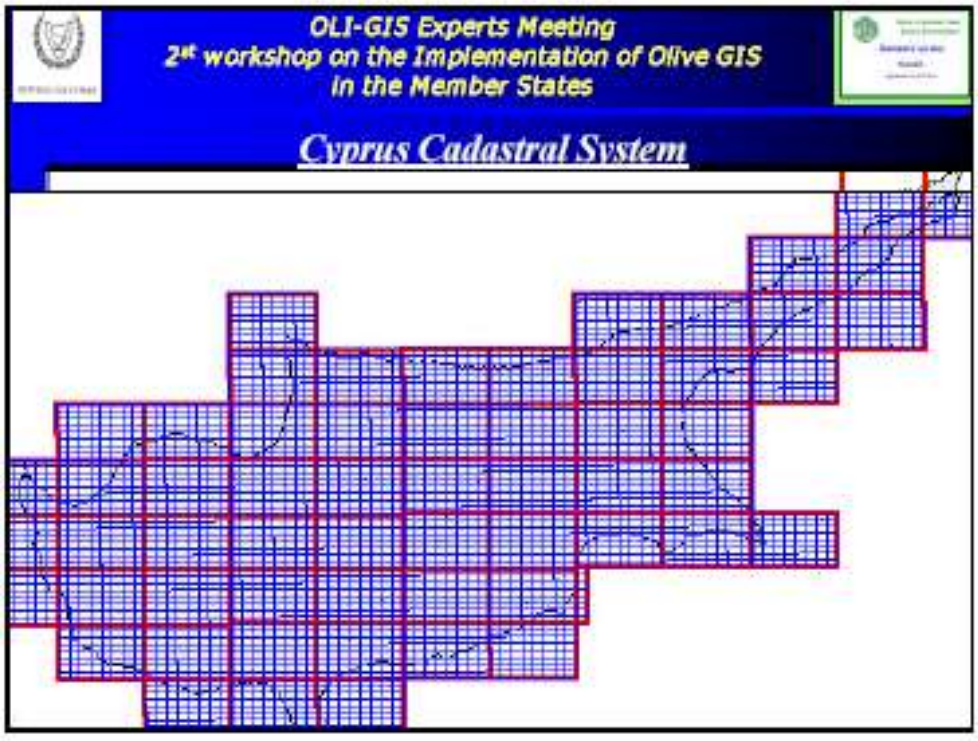
YEAR 2003

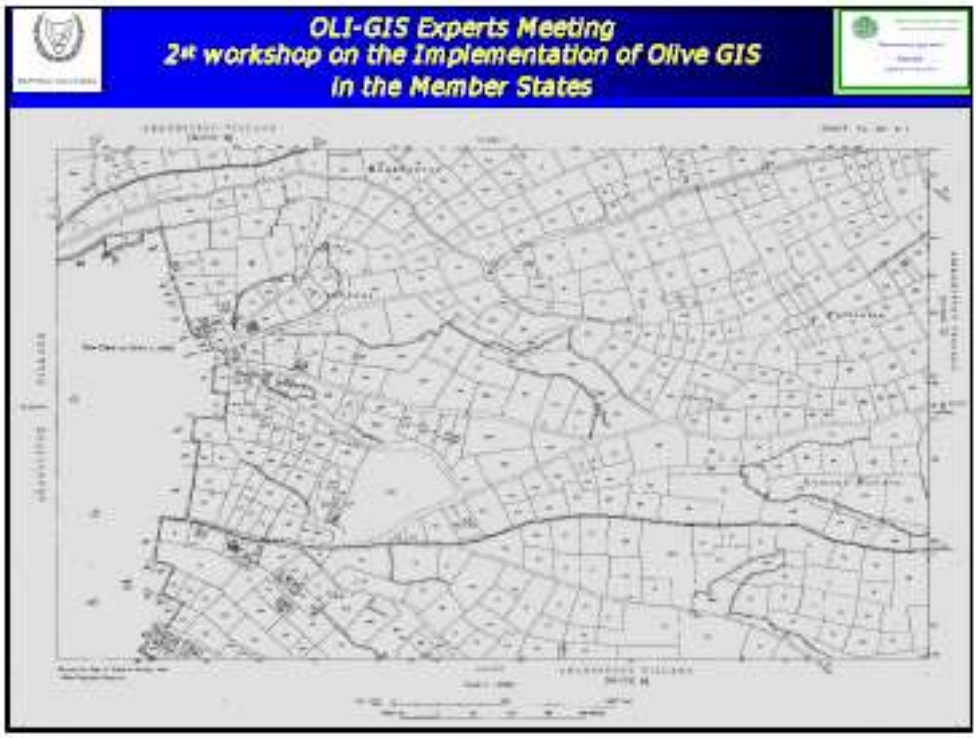
DISTRICT	NUM OF VILLAGES	NUM OF REGIONS	NUM OF APLICANTS	COMMERCIAL PLANTATION		SCATTERED	TOTAL
				(Ha)	No of trees	No of trees	Trees
NICOSIA	70	8	8221	1839,8	661944	22493	574437
FAMMAGUSTA	9	1	1670	360,2	108060	27726	135785
LARNACA	50	4	3466	1485,0	439600	79300	518800
LIMASSOL	88	6	6340	978,8	293640	108206	401845
PAFOS	124	8	8460	976,7	292710	138956	431666
PITSILIA	42	4	3140	598,8	179640	65900	245540
TOTAL	383	31	27297	6218,3	1865494	442579	2308073


OLI-GIS Experts Meeting
2st workshop on the Implementation of Olive GIS
in the Member States
Olive cultivation Area (interpolated)

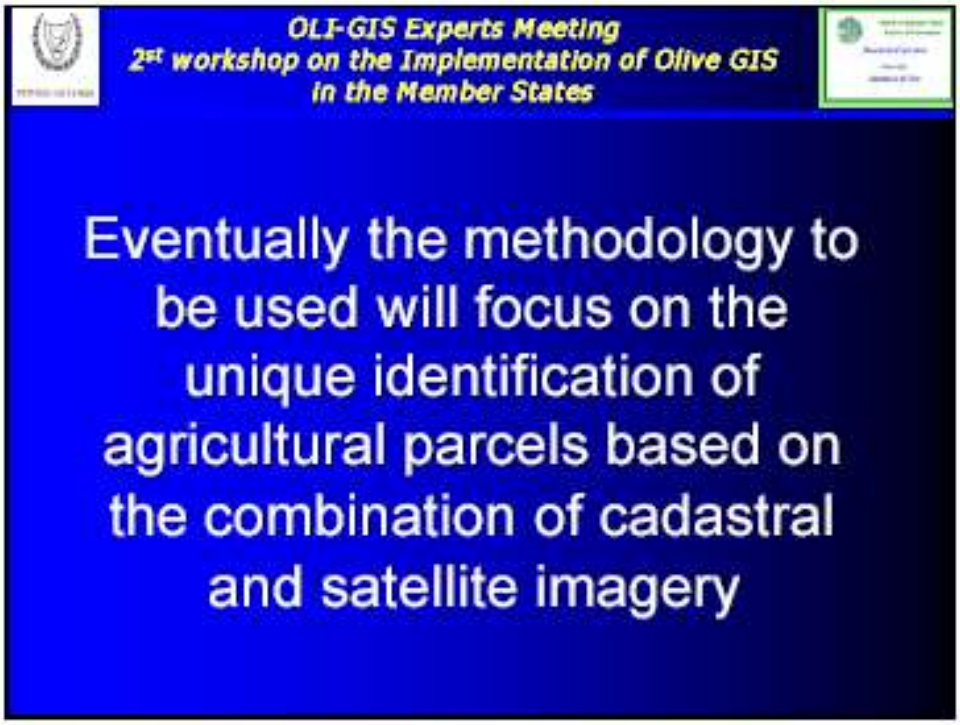

OLI-GIS Experts Meeting
2st workshop on the Implementation of Olive GIS
in the Member States
CYPRUS OLIVE TREES CULTIVATION
(NUMBER OF APPLICANTS DISTRIBUTION)


OLI-GIS Experts Meeting
2nd workshop on the Implementation of Olive GIS
in the Member States
CYPRUS OLIVE TREES CULTIVATION
(NUMBER OF TREES DISTRIBUTION)

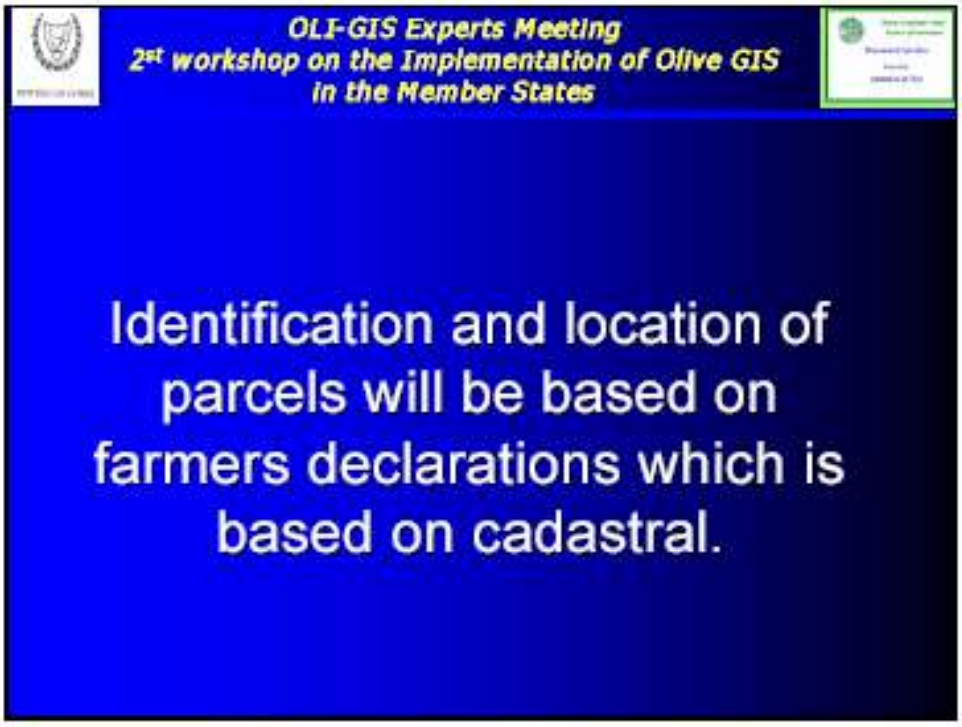

OLI-GIS Experts Meeting
2nd workshop on the Implementation of Olive GIS
in the Member States
Cyprus Cadastral System

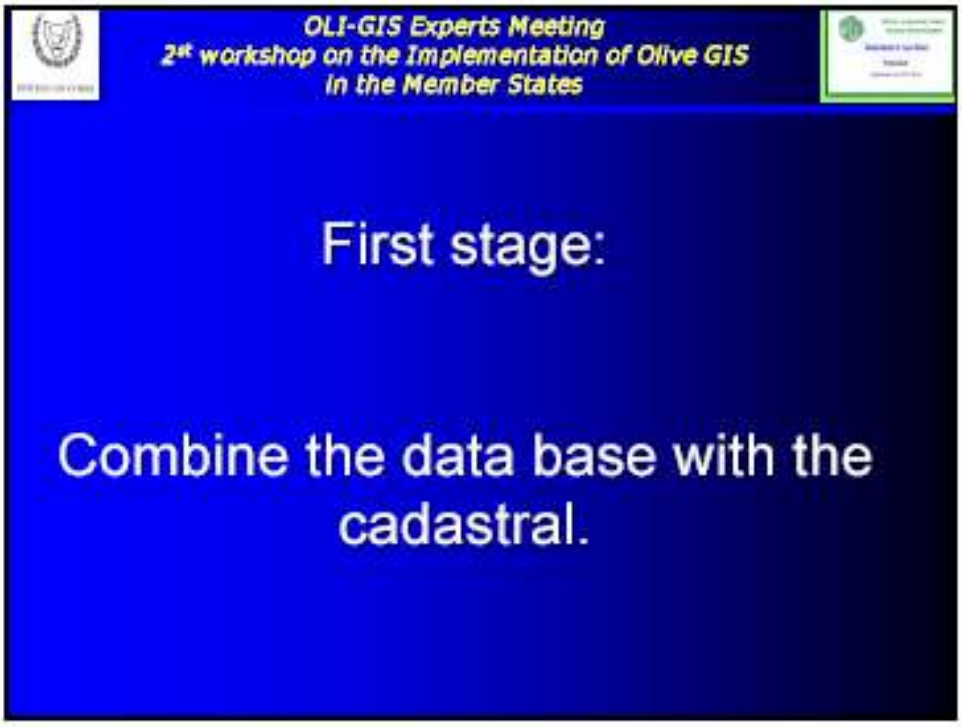

OLI-GIS Experts Meeting
2st workshop on the Implementation of Olive GIS
in the Member States

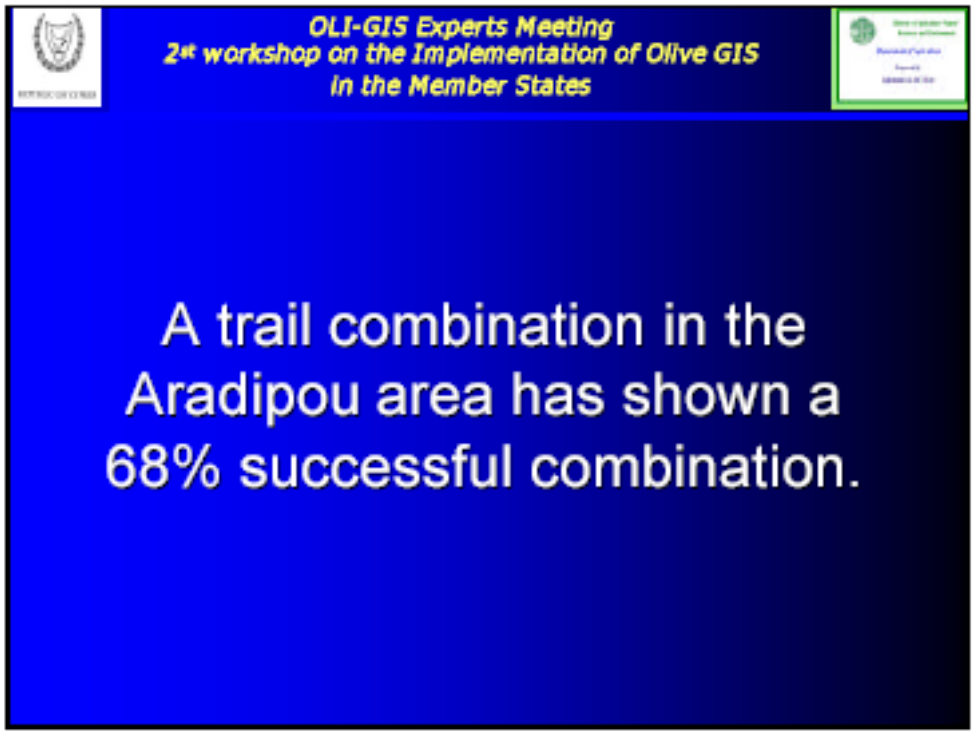

OLI-GIS Experts Meeting
2st workshop on the Implementation of Olive GIS
in the Member States
Lines of cadastral plot
Lines of Agricultural parcel
Block Boundaries

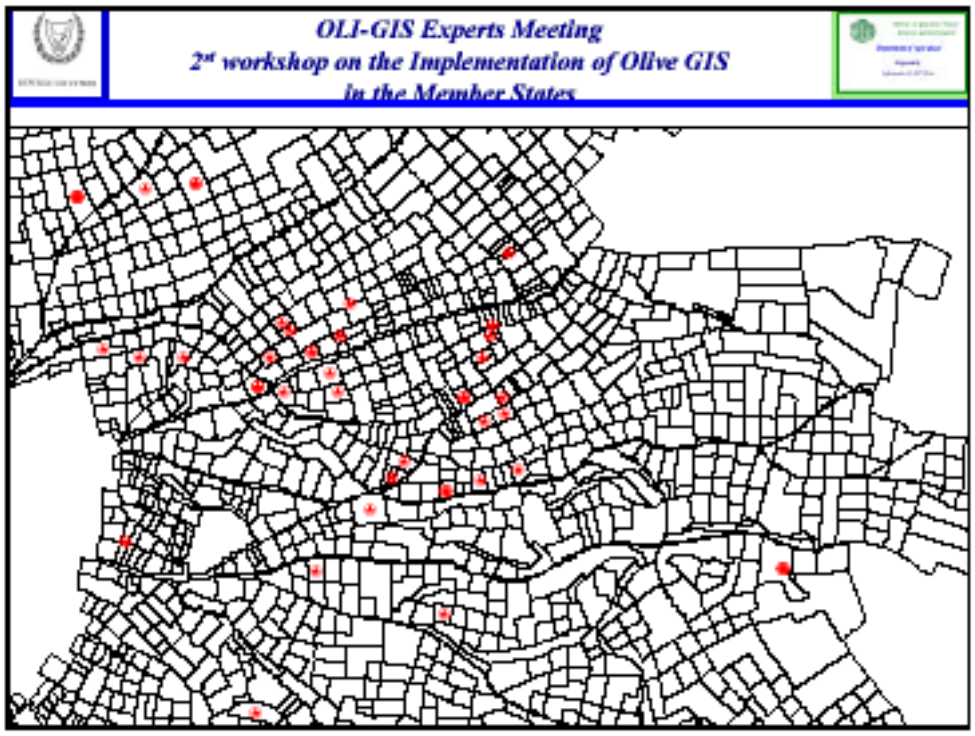

OLI-GIS Experts Meeting
2st workshop on the Implementation of Olive GIS
in the Member States
Eventually the methodology to be used will focus on the unique identification of agricultural parcels based on the combination of cadastral and satellite imagery

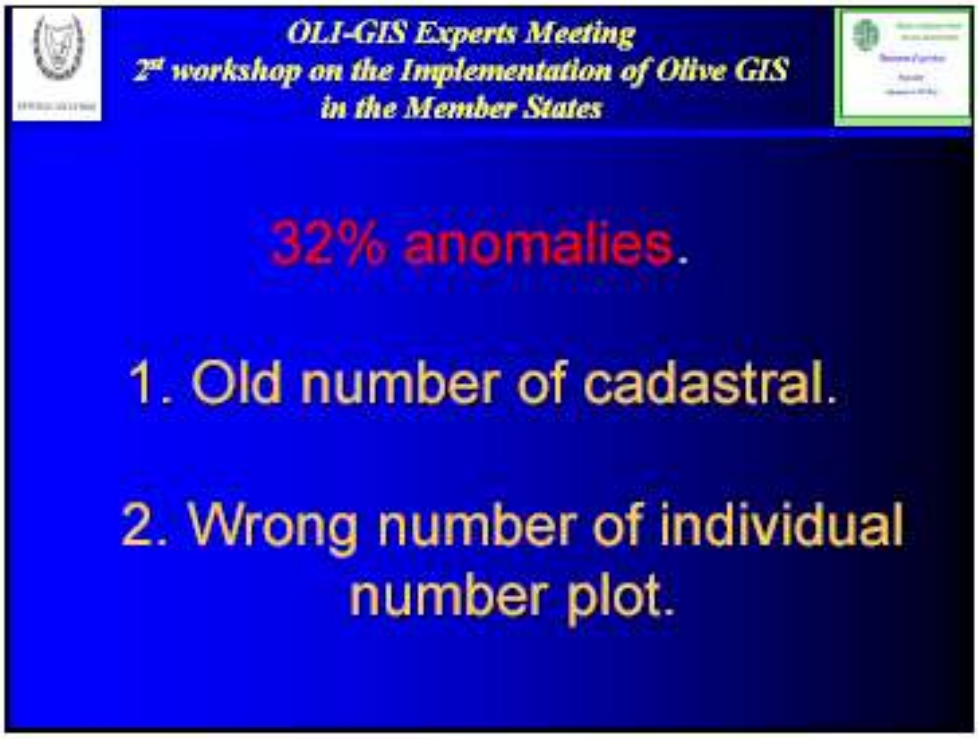

OLI-GIS Experts Meeting
2st workshop on the Implementation of Olive GIS
in the Member States
An updated olive register is already taking its course

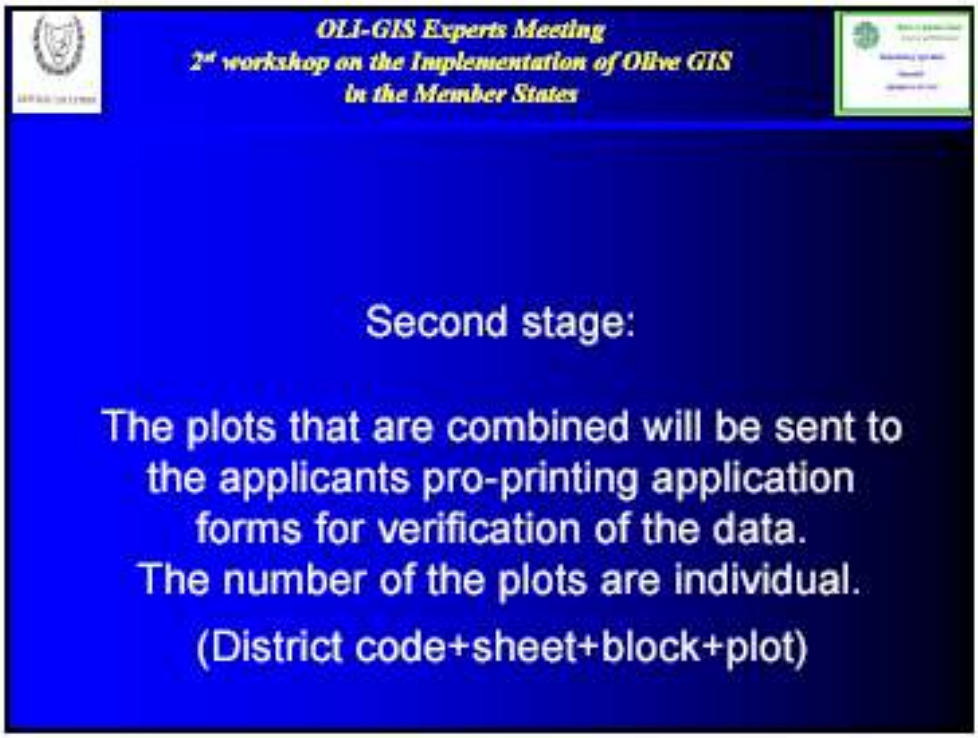

OLI-GIS Experts Meeting
2st workshop on the Implementation of Olive GIS
in the Member States
Identification and location of parcels will be based on farmers declarations which is based on cadastral.

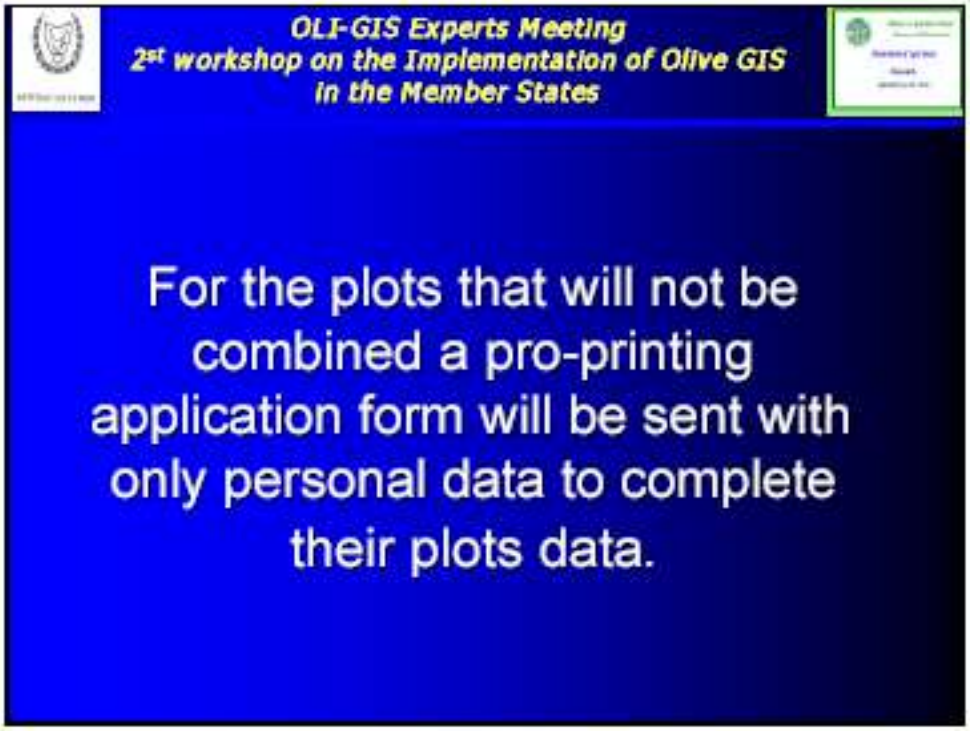

OLI-GIS Experts Meeting
2st workshop on the Implementation of Olive GIS
in the Member States
First stage:
Combine the data base with the cadastral.

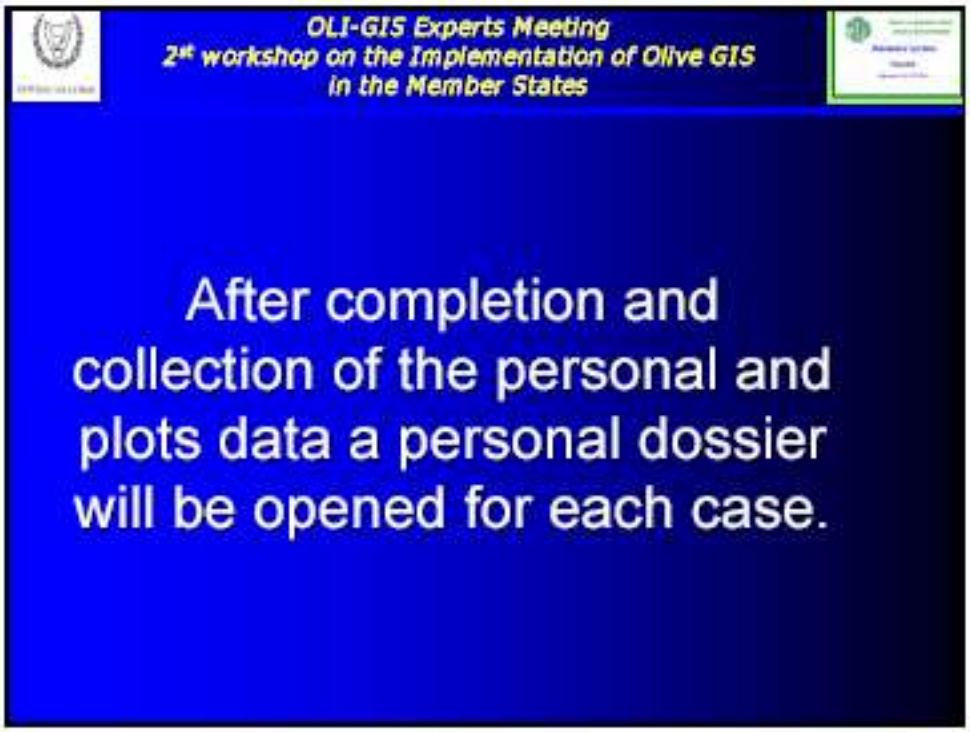

OLI-GIS Experts Meeting
2st workshop on the Implementation of Olive GIS
in the Member States
A trail combination in the
Aradipou area has shown a
68% successful combination.

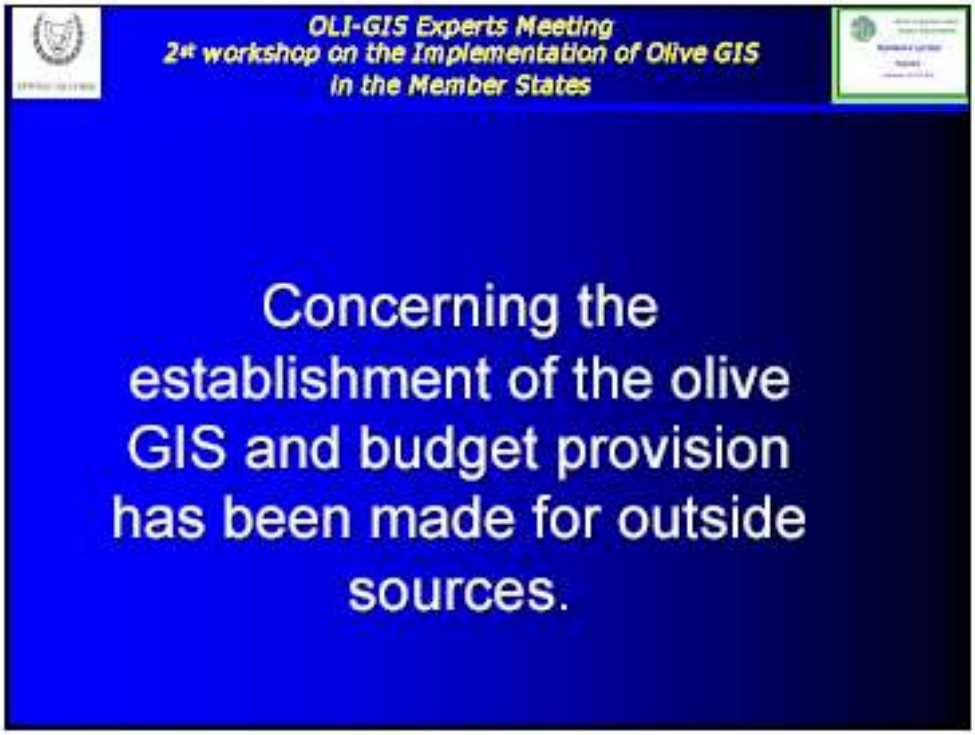

OLI-GIS Experts Meeting
2st workshop on the Implementation of Olive GIS
in the Member States

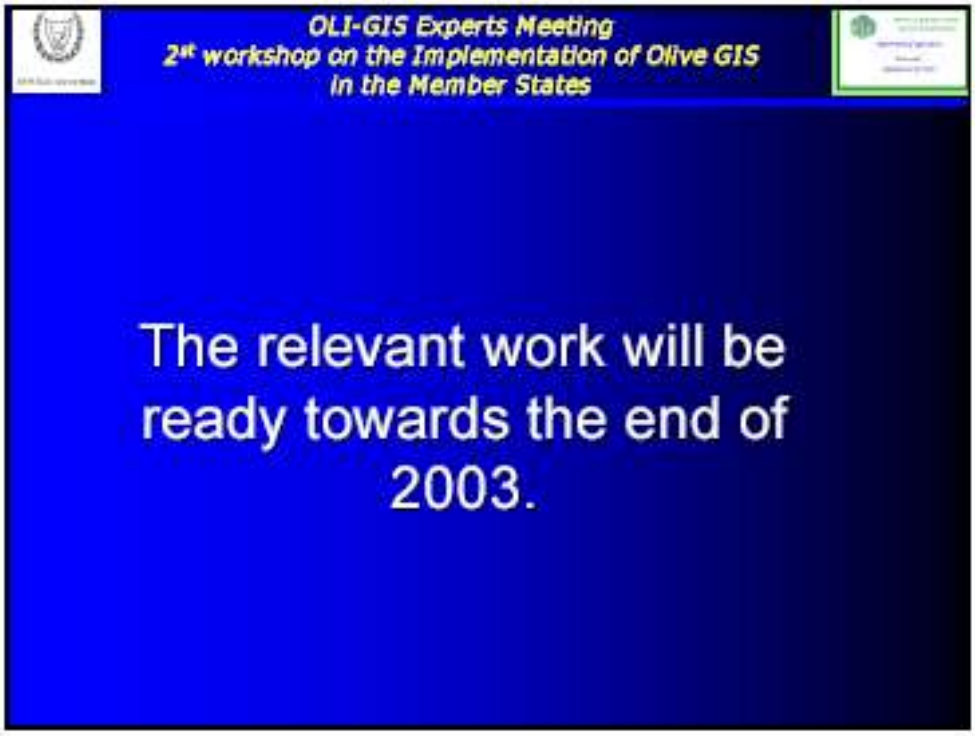

OLI-GIS Experts Meeting
2nd workshop on the Implementation of Olive GIS
in the Member States
32% anomalies.
1. Old number of cadastral.
2. Wrong number of individual number plot.


OLI-GIS Experts Meeting
2nd workshop on the Implementation of Olive GIS
in the Member States
Second stage:
The plots that are combined will be sent to the applicants pro-printing application forms for verification of the data.
The number of the plots are individual.
(District code+sheet+block+plot)


OLI-GIS Experts Meeting
2st workshop on the Implementation of Olive GIS
in the Member States
For the plots that will not be combined a pro-printing application form will be sent with only personal data to complete their plots data.


OLI-GIS Experts Meeting
2st workshop on the Implementation of Olive GIS
in the Member States
After completion and collection of the personal and plots data a personal dossier will be opened for each case.


OLI-GIS Experts Meeting
2st workshop on the Implementation of Olive GIS
in the Member States
Concerning the establishment of the olive GIS and budget provision has been made for outside sources.


OLI-GIS Experts Meeting
2st workshop on the Implementation of Olive GIS
in the Member States
The relevant work will be ready towards the end of 2003.


OLI-GIS Experts Meeting
2st workshop on the Implementation of Olive GIS
in the Member States
At this stage the tender of documents and technical specifications are being prepared.
Expected to be launched by October 2003.


OLI-GIS Experts Meeting
2st workshop on the Implementation of Olive GIS
in the Member States
Integrated OLI – GIS we hope that it will be ready sometime in May 2004.

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MARS Unit

Session 3 - Progress status of Olive GIS and link with IACS in Slovenia, *Alenka Marjetic, Ministry of Agriculture, Food and Forestry of Slovenia*

Summary

The regulation on the Register of Olive Growers (ROG) and the registry of olive groves was adopted on 5th June 2003. All the producers growing more than 0.1ha or submitting subsidies claims have to be in the ROG.
With 2,955 olive growers, 1,136 ha and 284,500 olive trees, olive growing is a small production in Slovenia. Olive groves are mostly located on the Adriatic coast (99% in Istria).

In Slovenia the ROG is a part of the integrated database of the MAFF:

- *the Register of agricultural holdings or Farm Register*
- *Land Use map from DOP5 (Digital Orthophotos)*
- *the permanent crops registers and cadastres (vineyard register, olive register, register of fruit growers, register of hop growers...)*
- *Soil maps*
- *LFA (less favoured areas)*
- *DEM 25*25m ....*

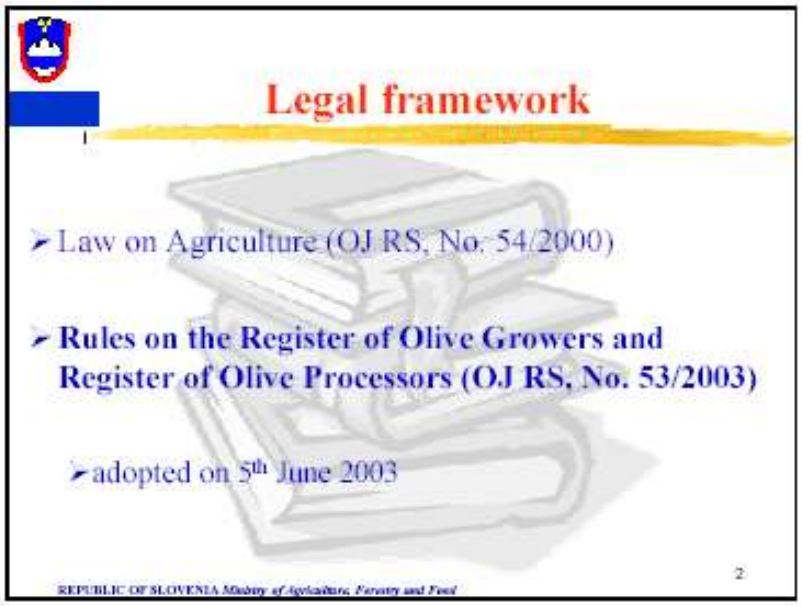
To date DOP5 (orthophotos) and digital land use maps are available for 100% of the country and the digital cadastral maps are available for 71% of the country.

The ROG contains alphanumeric data at holding's level and at parcel's level. The olive groves are identified by the cadastral parcel id.

The graphic data are based on DOP (digital orthophotos) combined with DCM (digital cadastral maps). The olive growers were requested to locate the boundaries of their olive groves and olive trees on a print out. The documents are being entered in the ROG database. Then graphic data will be cross-checked with alphanumeric data and compared with other registers data as well. In case of discrepancy the olive grower will be interviewed to correct the ROG. In July 2003, about 10% of dossiers were completed in the ROG.

(Presentation)


Progress status of Olive GIS in the Republic of Slovenia
Alenka Marjetic, MAFF
Athens, 24-25 June 2003
REPUBLIC OF SLOVENIA Ministry of Agriculture, Forestry and Food


Legal framework
Law on Agriculture (OJ RS, No. 54/2000)
Rules on the Register of Olive Growers and Register of Olive Processors (OJ RS, No. 53/2003)
adopted on 5th June 2003
2
REPUBLIC OF SLOVENIA Ministry of Agriculture, Forestry and Food

Definitions - 1

- »**Olive grower**« is a holder of the agricultural holding (KMG_MID), i.e. a single authorized natural or legal person, which cultivates olive trees on this agricultural holding (ownership / renting of the land) recorded in the register of agricultural holdings and which is recorded in the register of olive growers

REPUBLIC OF SLOVENIA Ministry of Agriculture, Forestry and Food

Definitions - 2

- »**Olive grove**« is a continuous track of agricultural land with one ID number (O_MID), area of which is at least 0,01 ha, operated by one olive grower, planted with olive trees, each of which is less than 20 metres from another olive tree
- »**Area of an olive grove**« is an area of agricultural land planted with olive trees, increased by maximum 2 metres from crowns of olive trees planted on the edges of an olive grove

REPUBLIC OF SLOVENIA Ministry of Agriculture, Forestry and Food

Definitions - 3

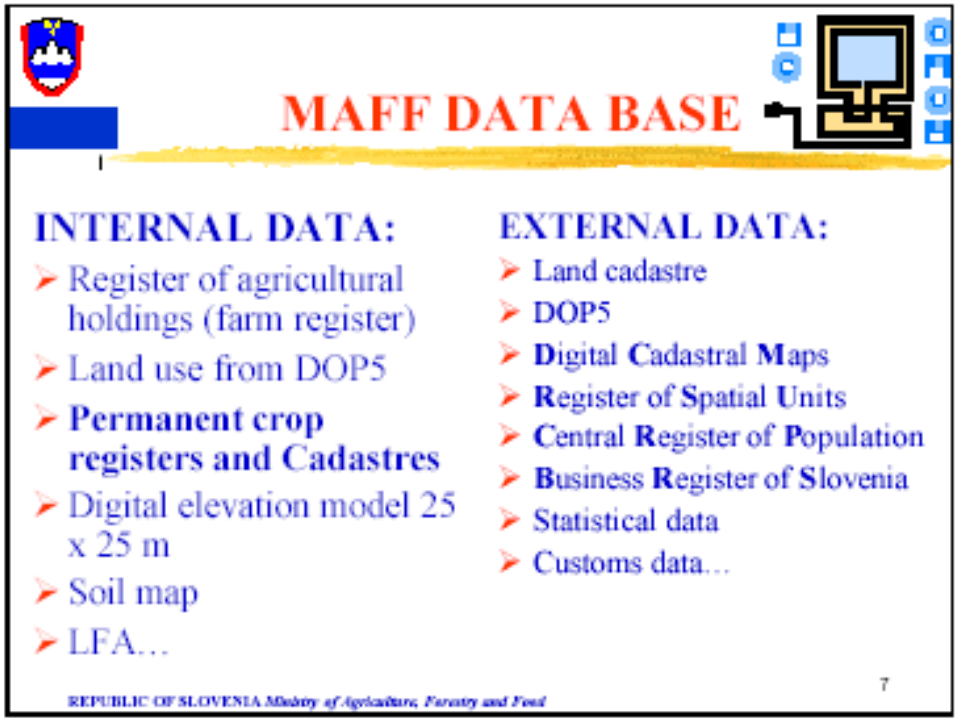
- **»Scattered olive trees«** are olive trees of one olive grower which don't fulfil conditions for an olive grove
- **»Area of a scattered olive tree«** is an area at the most 1 a; area of scattered olive trees, each of which is more than 20 metres from another olive tree is **always 1 a**

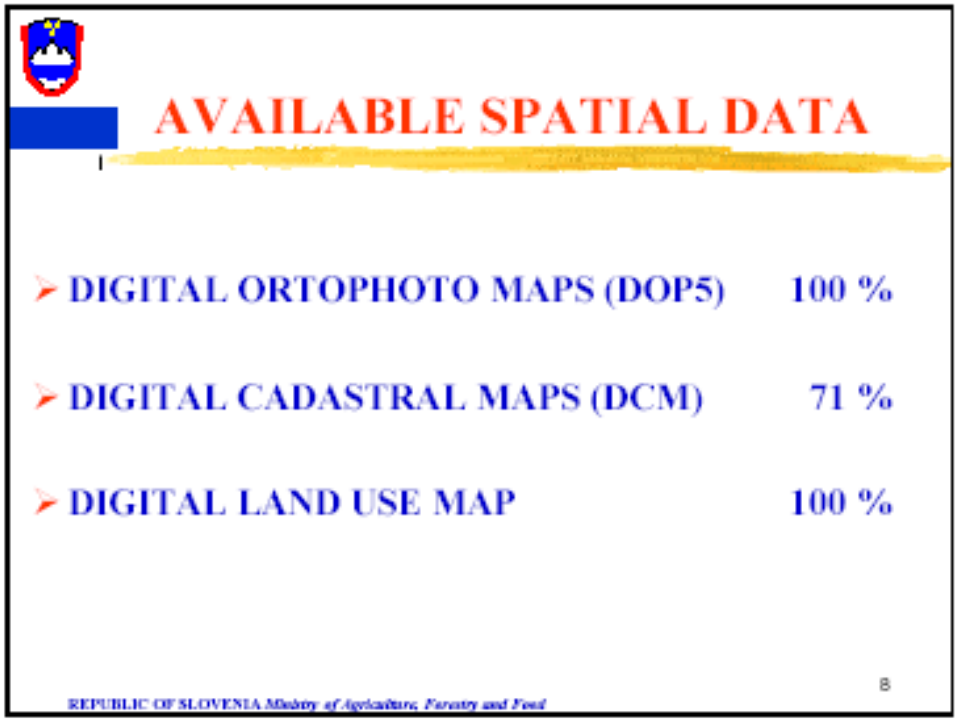
REPUBLIC OF SLOVENIA *Ministry of Agriculture, Forestry and Food* 5

Who is obliged to enter the Register of Olive Growers?

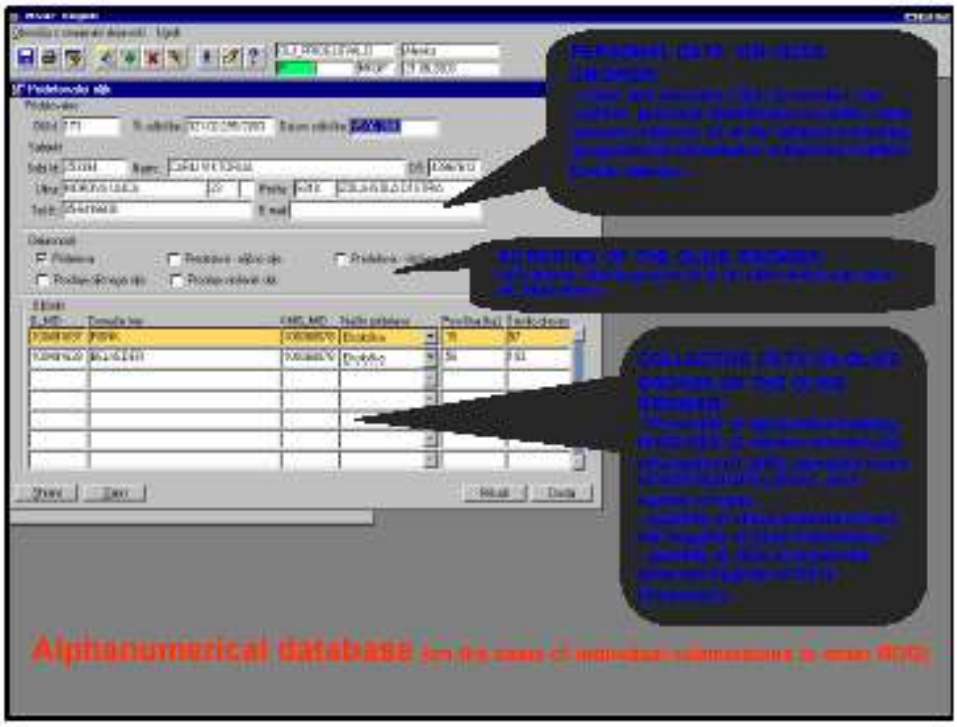
- holders of agricultural holdings which cultivates an area of **at least 0,1 ha** of olive groves or scattered olive trees
- holders of agricultural holdings which cultivates an area of **less than 0,1 ha** of olive groves or scattered olive trees if they lodge an aid application under any agricultural policy aid scheme

REPUBLIC OF SLOVENIA *Ministry of Agriculture, Forestry and Food* 6


MAFF DATA BASE
INTERNAL DATA:
Register of agricultural holdings (farm register)
Land use from DOP5
Permanent crop registers and Cadastres
Digital elevation model 25 x 25 m
Soil map
LFA…
EXTERNAL DATA:
Land cadastre
DOP5
Digital Cadastral Maps
Register of Spatial Units
Central Register of Population
Business Register of Slovenia
Statistical data
Customs data…
7
REPUBLIC OF SLOVENIA Ministry of Agriculture, Forestry and Food


AVAILABLE SPATIAL DATA
DIGITAL ORTOPHOTO MAPS (DOP5) 100 %
DIGITAL CADASTRAL MAPS (DCM) 71 %
DIGITAL LAND USE MAP 100 %
8
REPUBLIC OF SLOVENIA Ministry of Agriculture, Forestry and Food


Register of Olive Growers
Uniform computer aplication
Alphanumerical database
Graphical reference database
MAFF keeps the Register of Olive Growers


Alphanumerical database

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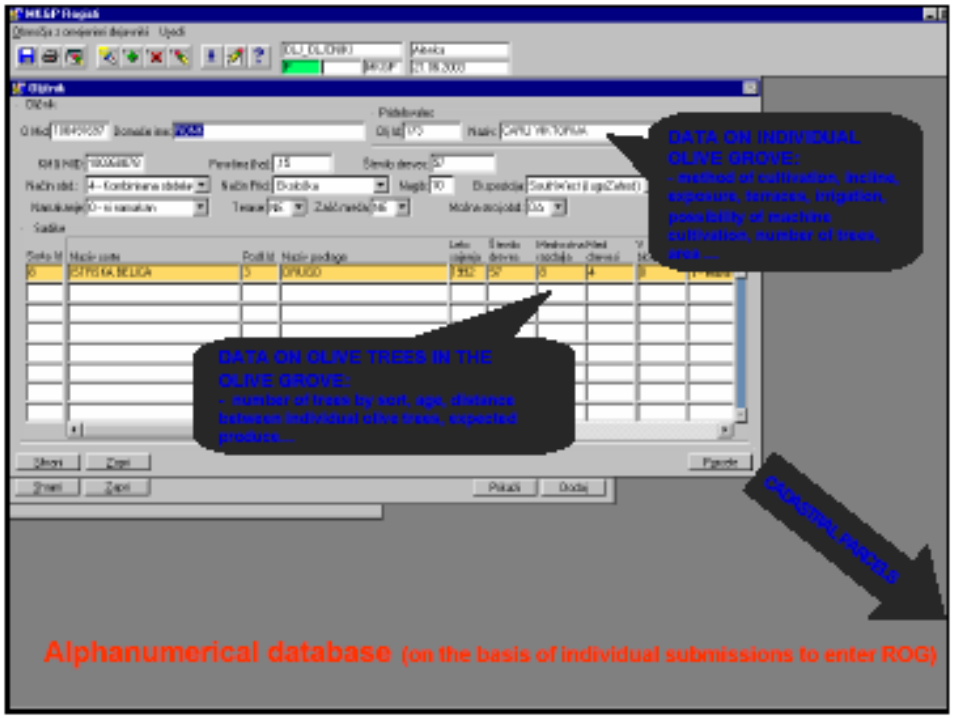
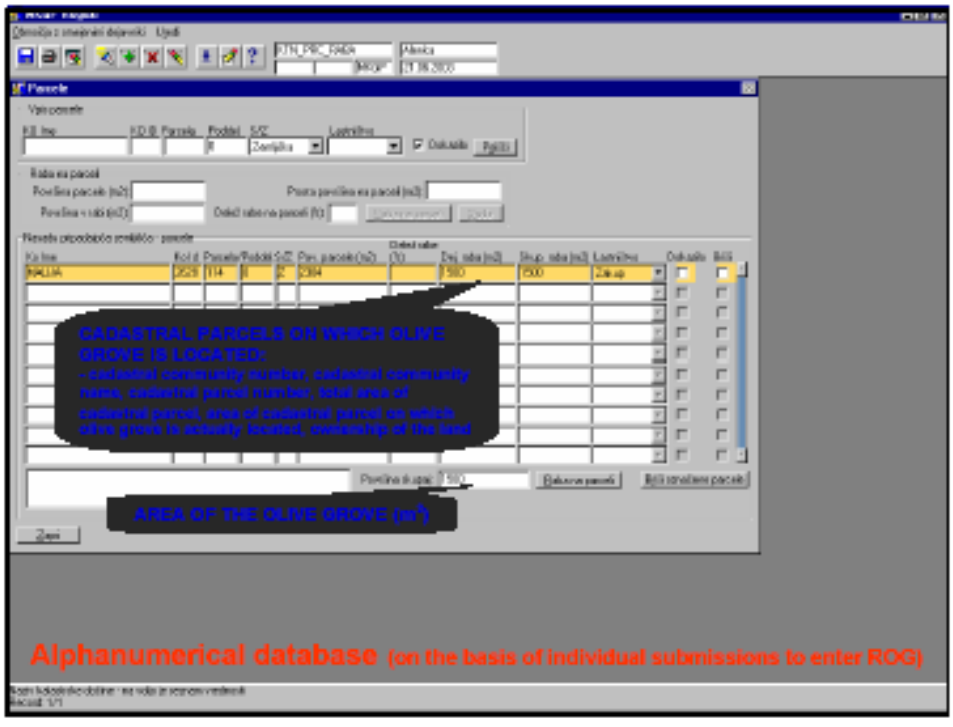
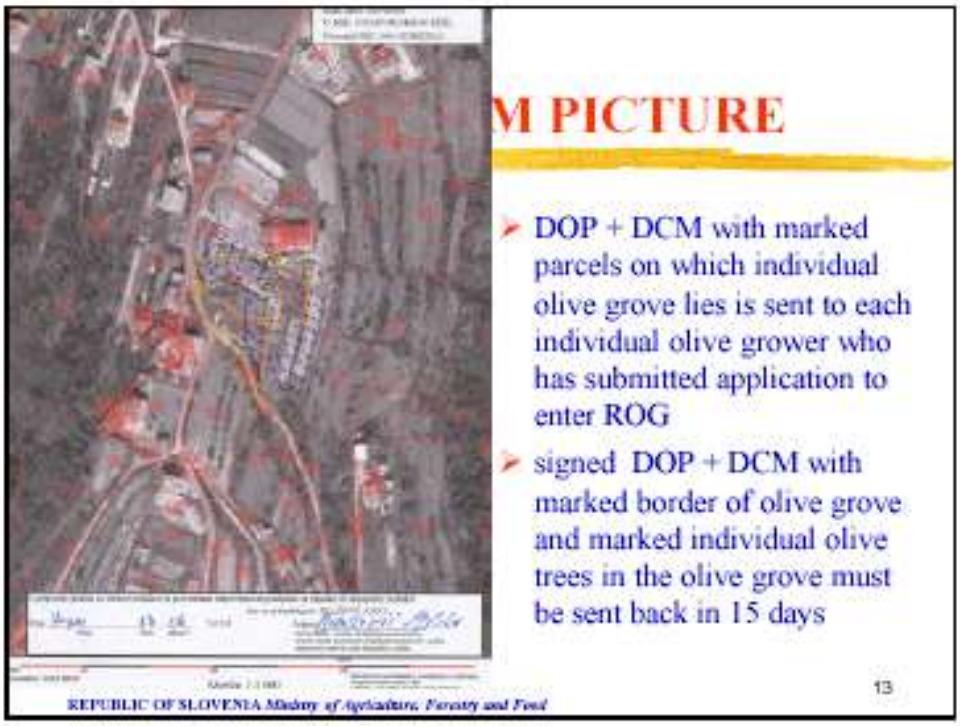
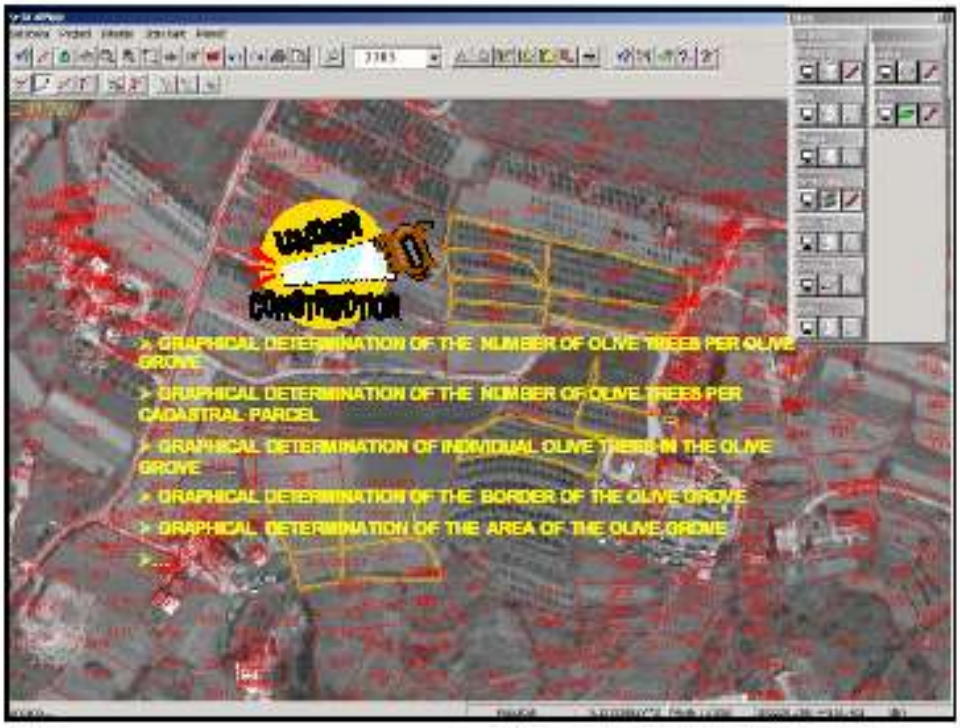
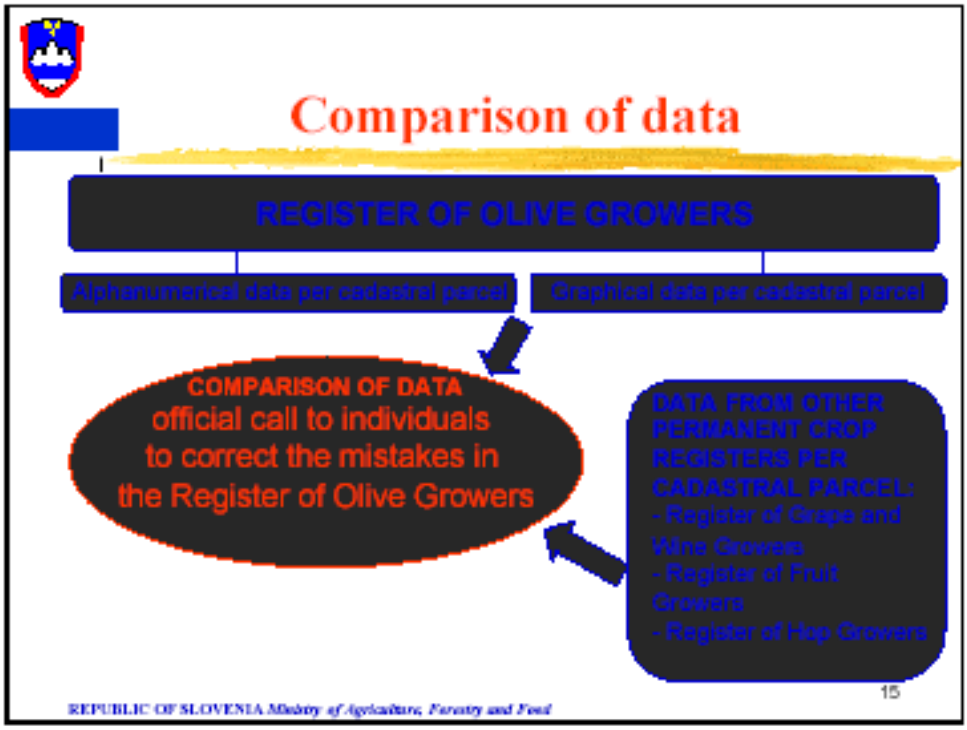
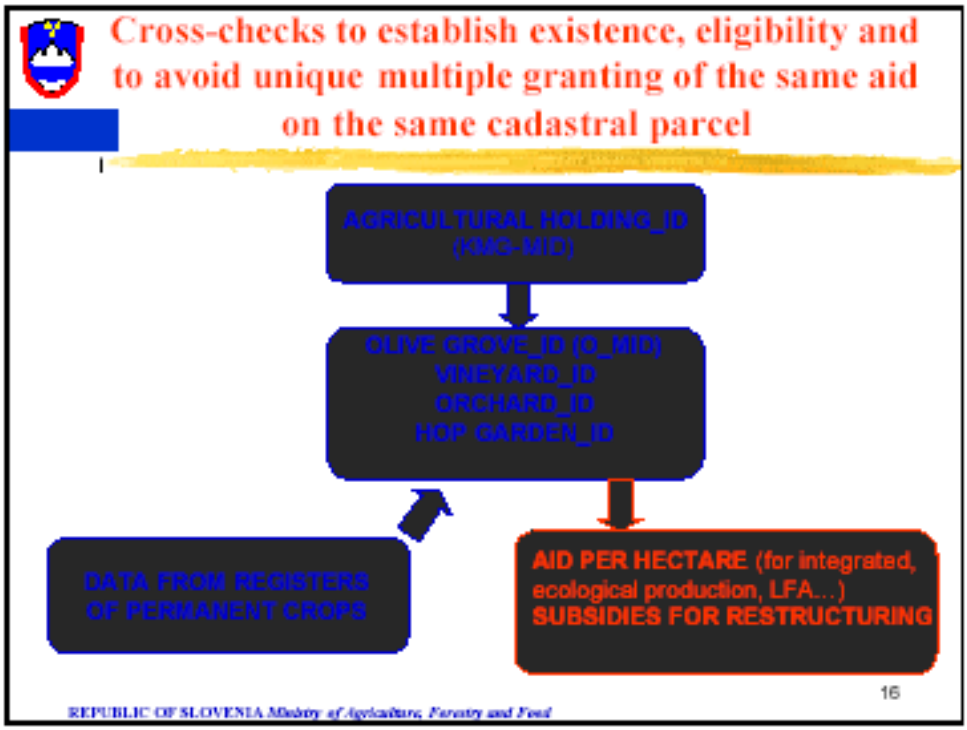


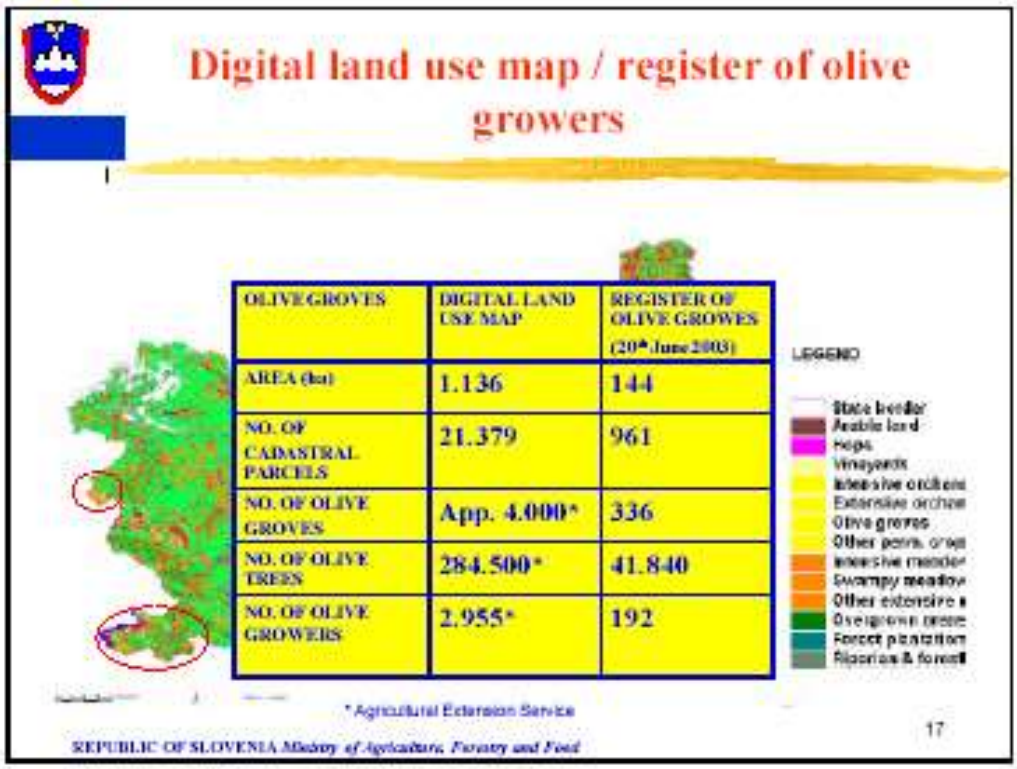



M PICTURE
DOP + DCM with marked parcels on which individual olive grove lies is sent to each individual olive grower who has submitted application to enter ROG
signed DOP + DCM with marked border of olive grove and marked individual olive trees in the olive grove must be sent back in 15 days
13
REPUBLIC OF SLOVENIA Ministry of Agriculture, Forestry and Food


UNDER CONSTRUCTION
GRAPHICAL DETERMINATION OF THE NUMBER OF OLIVE TREES PER OLIVE GROVE
GRAPHICAL DETERMINATION OF THE NUMBER OF OLIVE TREES PER CADASTRAL PARCEL
GRAPHICAL DETERMINATION OF INDIVIDUAL OLIVE TREES IN THE OLIVE GROVE
GRAPHICAL DETERMINATION OF THE BORDER OF THE OLIVE GROVE
GRAPHICAL DETERMINATION OF THE AREA OF THE OLIVE GROVE


Comparison of data
REGISTER OF OLIVE GROWERS
Alphanumerical data per cadastral parcel
Graphical data per cadastral parcel
COMPARISON OF DATA
official call to individuals
to correct the mistakes in
the Register of Olive Growers
DATA FROM OTHER PERMANENT CROP REGISTERS PER CADASTRAL PARCEL:
- Register of Grape and Wine Growers
- Register of Fruit Growers
- Register of Hop Growers
15
REPUBLIC OF SLOVENIA Ministry of Agriculture, Forestry and Food


Cross-checks to establish existence, eligibility and to avoid unique multiple granting of the same aid on the same cadastral parcel
AGRICULTURAL HOLDING_ID (KMG-MID)
OLIVE GROVE_ID (O_MID)
VINEYARD_ID
ORCHARD_ID
HOP GARDEN_ID
DATA FROM REGISTERS OF PERMANENT CROPS
AID PER HECTARE (for integrated, ecological production, LFA…)
SUBSIDIES FOR RESTRUCTURING
16
REPUBLIC OF SLOVENIA Ministry of Agriculture, Forestry and Food


Digital land use map / register of olive growers
OLIVE GROVES
DIGITAL LAND USE MAP
REGISTER OF OLIVE GROWES (20th June 2003)
AREA (ha)
1.136
144
NO. OF CADASTRAL PARCELS
21.379
961
NO. OF OLIVE GROVES
App. 4.000*
336
NO. OF OLIVE TREES
284.500*
41.840
NO. OF OLIVE GROWERS
2.955*
192
LEGEND
* Agricultural Extension Service
17
REPUBLIC OF SLOVENIA Ministry of Agriculture, Forestry and Food

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Session 3 - Progress status of Olive GIS in Malta, Randall Caruana, Ministry of Agriculture and Fisheries of Malta

Summary

The olive production is very limited in Malta but it was decided to build an olive GIS. The implementation of Olive GIS is already well advanced: a National Census of olive groves (called NSO) was carried out in 2001 and the Olive GIS (called NOVO) was built in 2003, through a twinning project with Italy. It was derived from crop declarations, a land use survey (april 2000) and aerial photos.

The next plan for Olive GIS is:

- *Training the staff*
- *Link to IACS-LPIS*
- *Link to vineyard register*
- *Link to MALSIS (Malta Soil Information System)*
- *Build an integrated system*


The Olive Register
Malta
Randall Caruana
National Office for Vitiviniculture & Oleiculture
Athens 2003


Geographical Position

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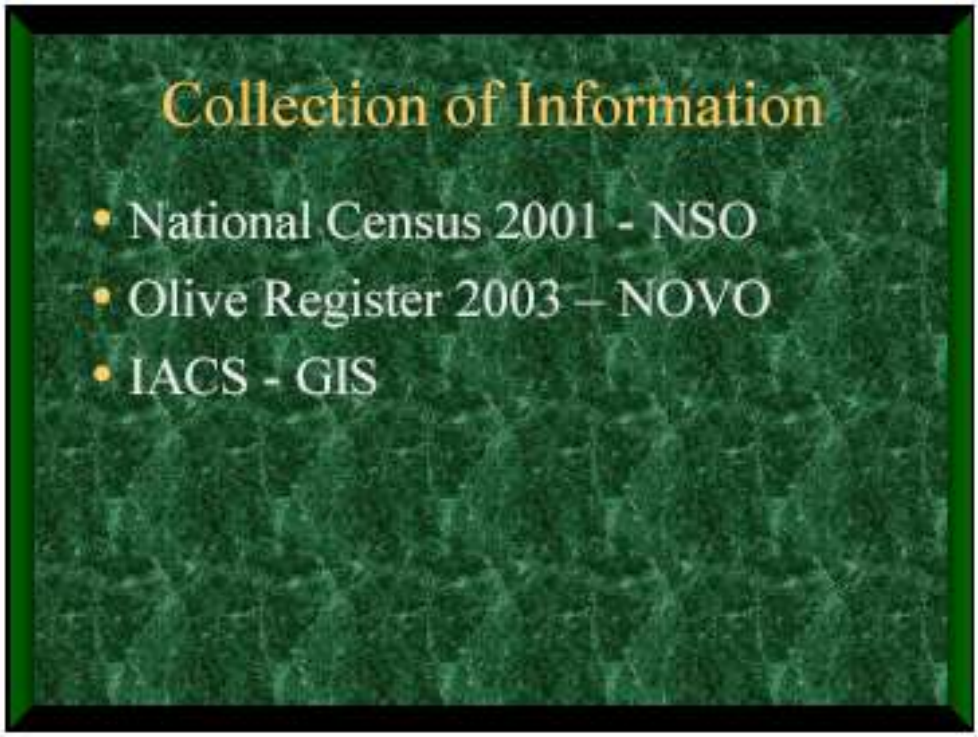
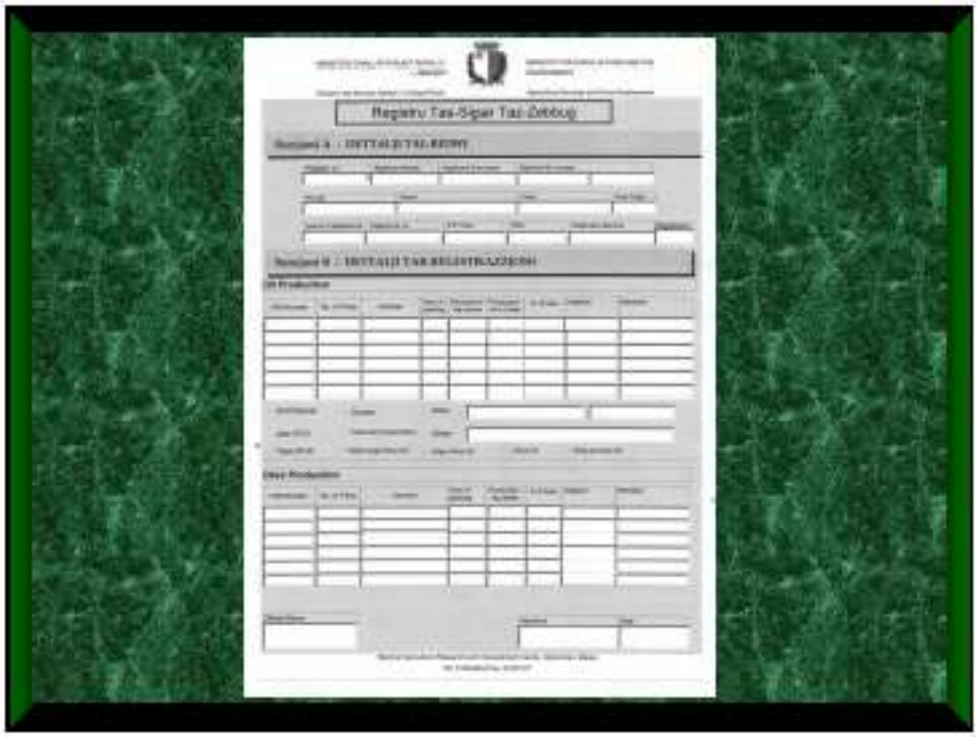
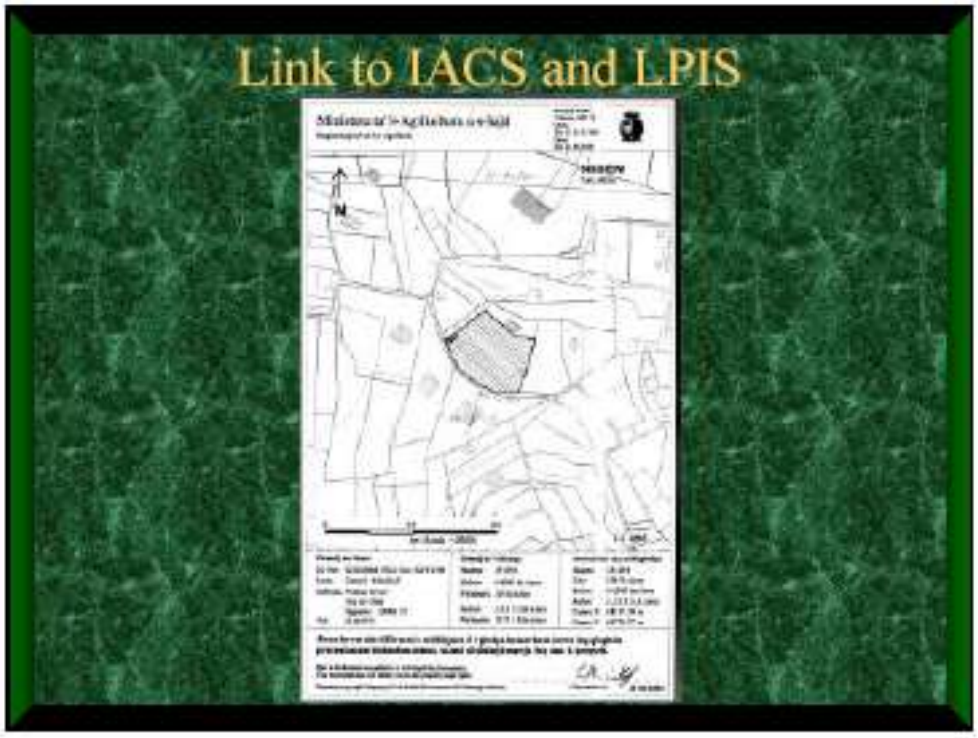
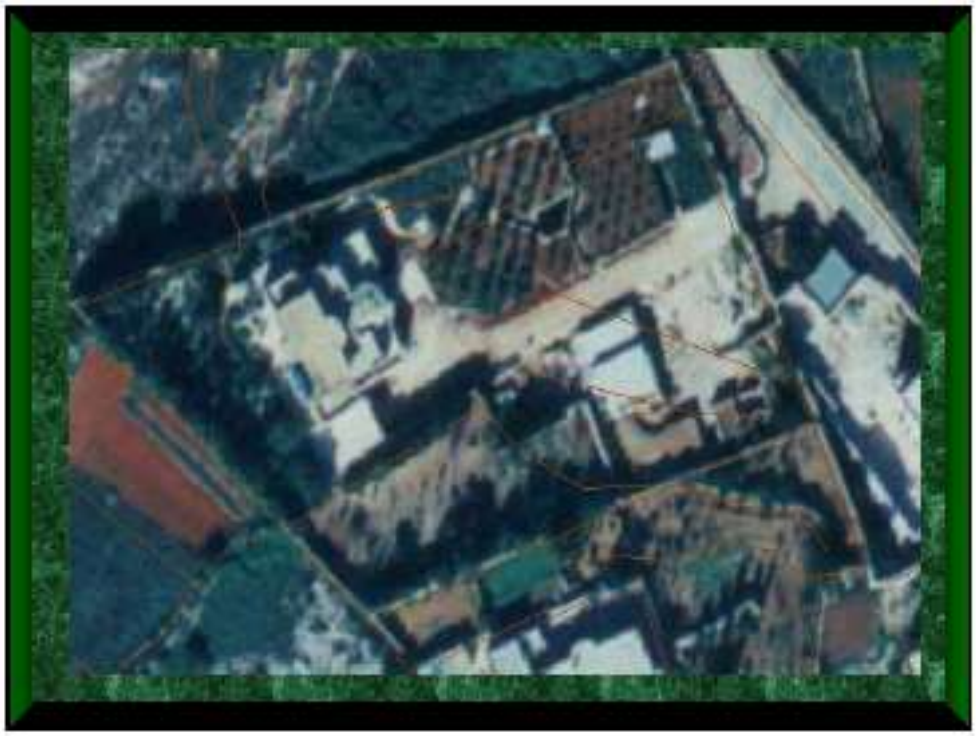

Collection of Information
• National Census 2001 - NSO
• Olive Register 2003 – NOVO
• IACS - GIS


Set up
• Creation of a Database
➢Searchable – queried
➢Updatable
➢Georeferenced
➢Compatible with Council Regulation (EC) No. 2366/98

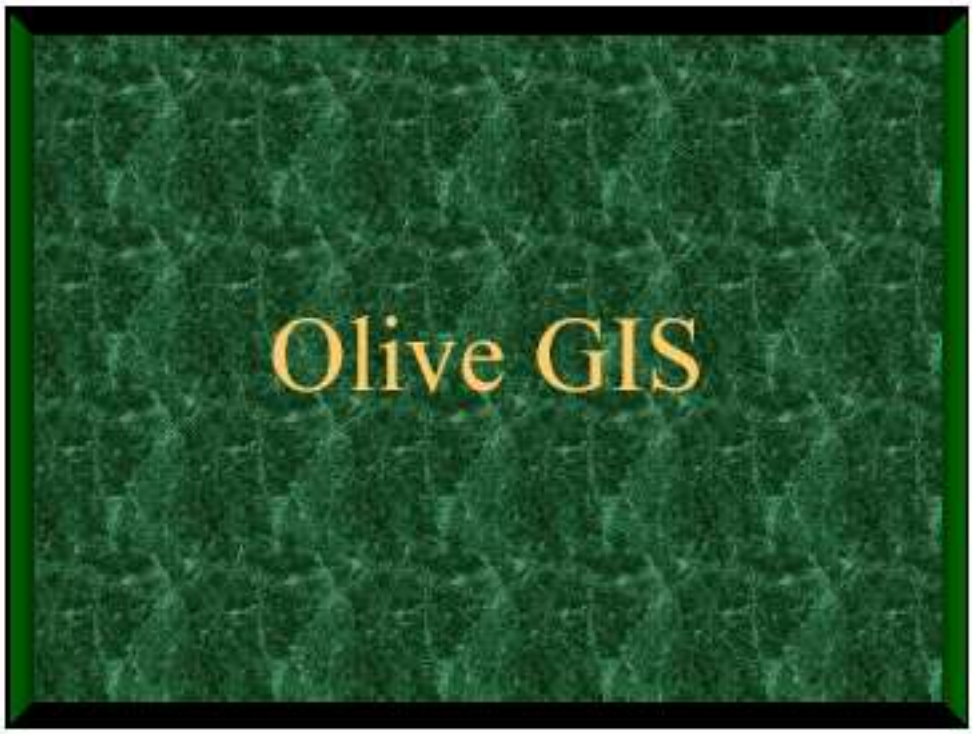

Registru Tax-Sigar Taz-Zebbuġ


Link to IACS and LPIS

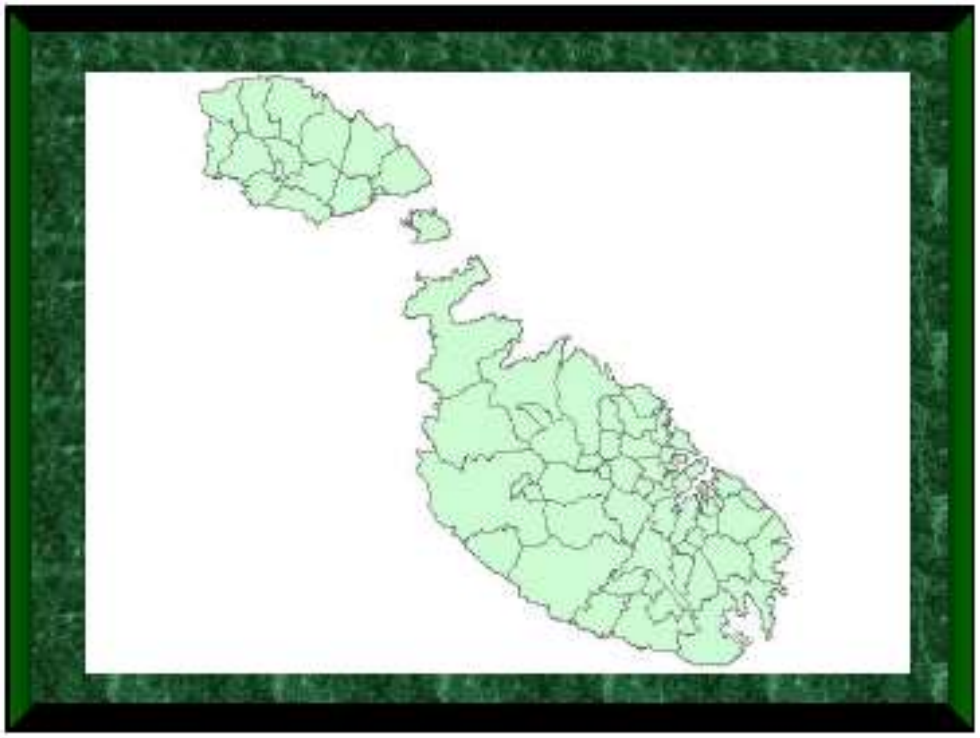


Olive Register Updates

- Yearly Producer Declarations – Harvest and production
- Yearly Declarations by Oil Producers
- Site Inspections
- Aerial Photography

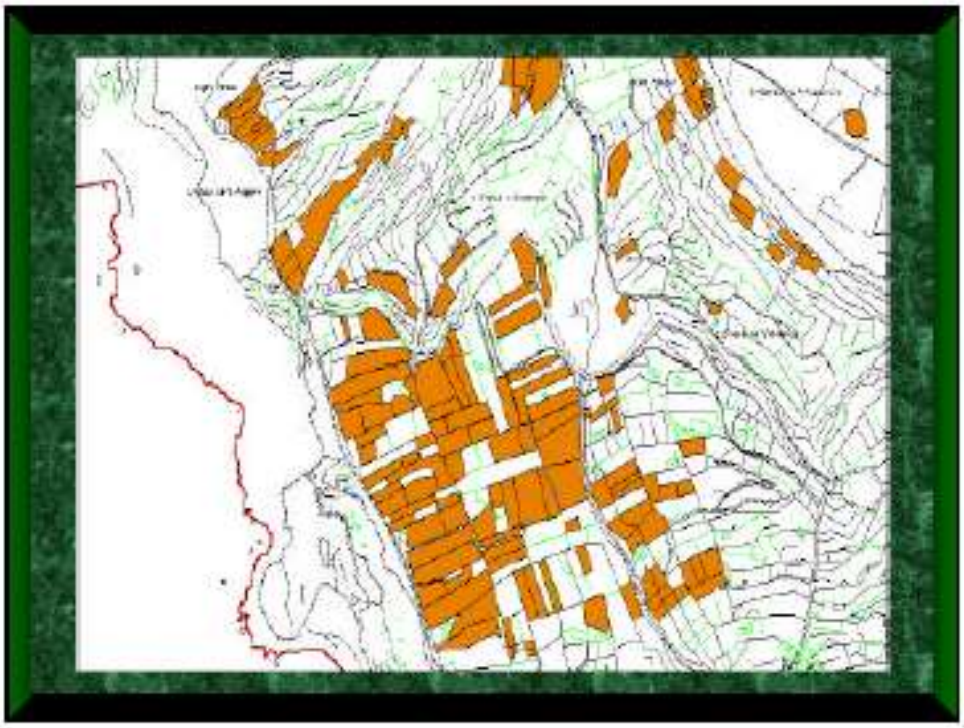

Olive GIS


The Olive Register and GIS
• Survey of Land Use – April 2000
• Aerial Photos
• Digitisation of Photos
• On Site Confirmations
• Base Maps / Orthophotos

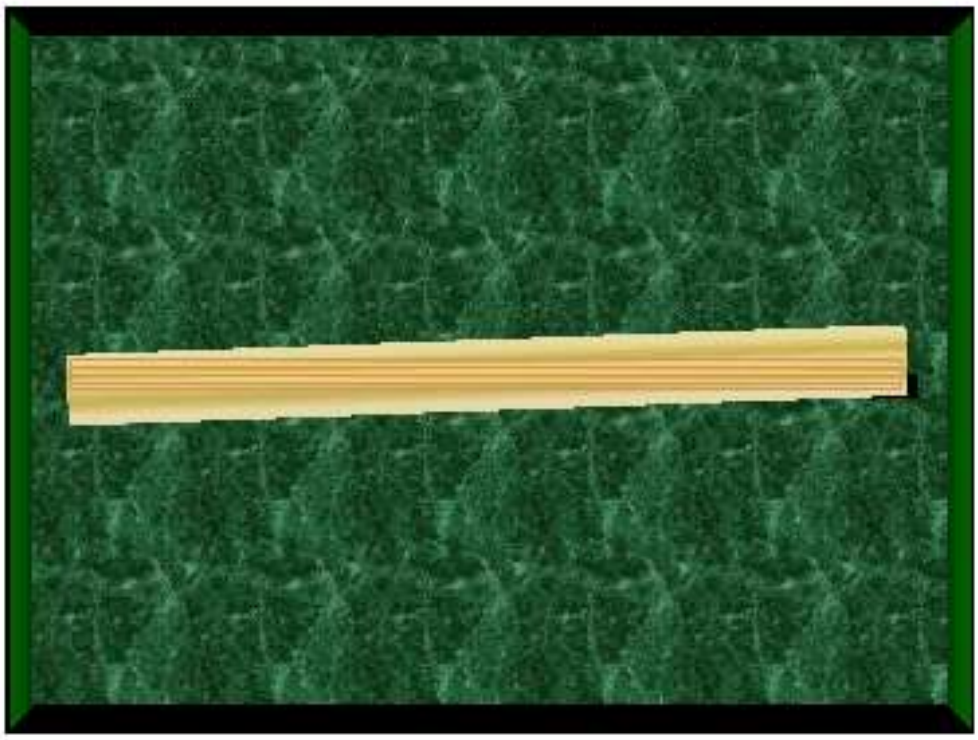



Orthophotos


Wied ta' Has-Saptan




GIS Developments
Training of Personnel
Integrated System
Layers of Information
Links to other systems
Link to IACS
Integrated Administration Control System
Link to Vineyard Register
Link to MALSIS
Malta Soil Information System




Thank You

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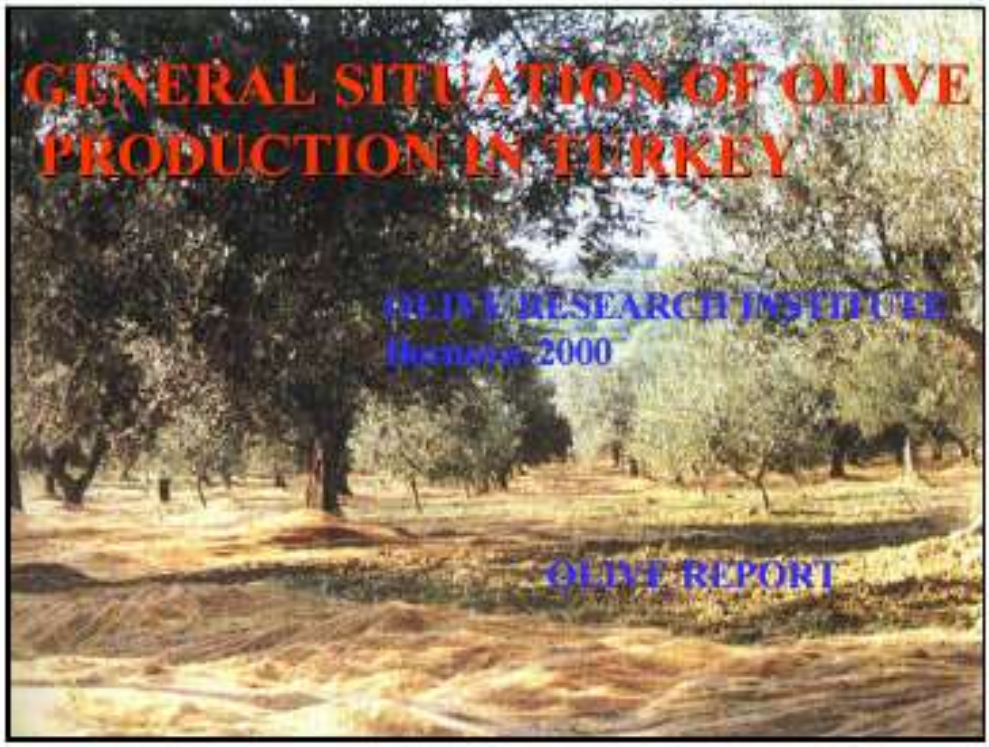
MARS Unit

Session 3 – Situation in Turkey, Nihal Ceylan, Ministry of Agriculture

Summary

Since there is no plan for the moment on Olive GIS in Turkey, Nihal Ceylan presented an overview of the olive sector in Turkey. She recalled that Turkey is the 4th olive producer of the world, but the production is very seasonal (1/3 production every 2 years). 75% of olive groves are located in sloppy areas and cover 2.2% of agricultural area in Turkey. In 1998 the olive area was ***600,000 ha*** *with* ***93 M olive trees****. In 1991 there were* ***323,986 olive growers*** *in Turkey most of them being small size (1.25 ha olive groves/holding).The main olive growing regions are on the Eastern part: Egean and Marmara regions (87% of olive production). To date there is not direct subsidies related to olive oil production in Turkey. The olive growers get some aids in means of production: fertilizers, agricultural chemicals (pesticides, phytosanitaire...), equipments, etc. There is also some financial support through agricultural loans.*



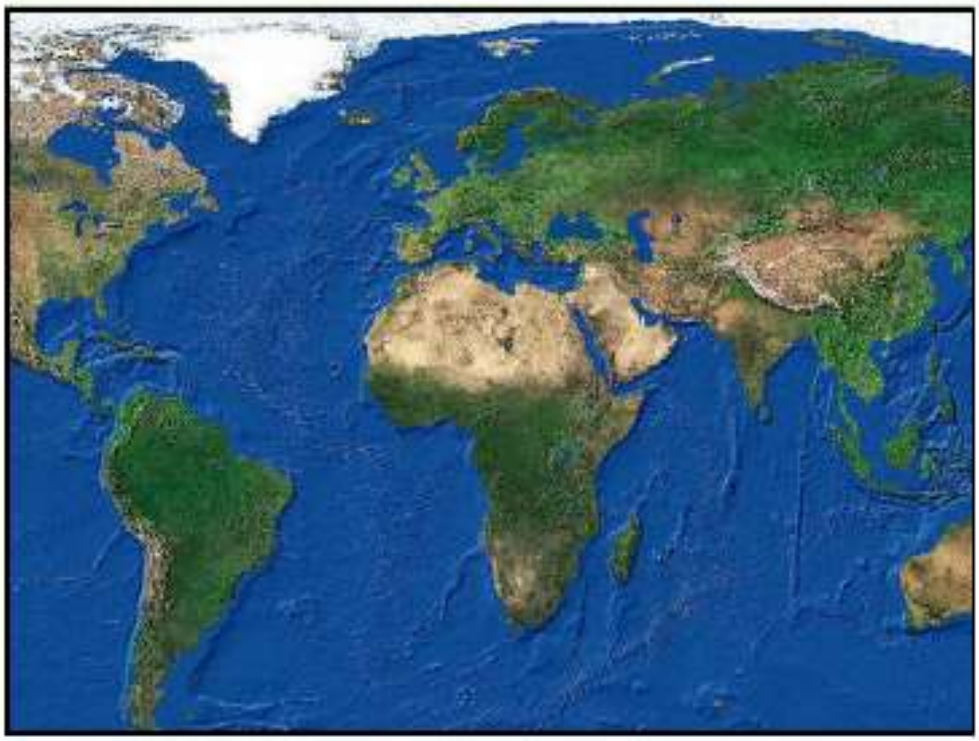
GENERAL SITUATION of TABLE OLIVE PRODUCTION in the WORLD (1989-1997)

-There is 37 olive grower countries in the world. 29 of these countries are in Northern Hemisphere and 8 of them are in Southern Hemisphere.
-Olive production areas are mostly located in the Mediterranean Region in Northern Hemisphere and 97% of olive trees are present in this Region.
-92% of world olive production are used to exctract oil and 8% of this production are consumed as table olive.
-World olive production is 13 millions tons and 80% of this production is obtained from 5 Mediterranean countries. These countries are: Spain, Italy, Greece, Turkey and Tunisia respectively.

Table 1. Olive Procution and Areas in the World (1989-1997)

Countries	Production (1.000 Tons)							Area 1000 ha 1998	Yield Kg/ha 1998
	1989-91	1994	1995	1996	1997	1989-97 ort.	%		
1.Spain	3.099	2.727	1.773	4.467	3.840	3.181	28.6	2.227	1428.5
2.Italy	2.639	2.640	3.289	2.195	3.081	2.769	23.1	1.141	2426.5
3.Greece	1.560	1.933	1.731	1.950	1.700	1.775	14.8	719	2468.4
4.Turkey	**747**	**1.400**	**515**	**1.800**	**450**	**982**	**8.2**	**881**	**1115.1**
5.Tunisia	933	950	350	1.250	1.550	887	7.4	1.624	545.9
6.Morocco	532	900	436	800	450	544	4.5	480	1132.5
Others	1.329	1.754	1.786	2.319	1.992	1.836	15.3	1.668	1100.7
WORLD	**10.838**	**11.304**	**9.880**	**14.781**	**13.063**	**11.973**	**100.0**	**8.740**	**1369.9**

Source: FAO, Production Yearbook, 1997



GENERAL LAND CHARECTERISTICS OF OLIVE GROVES:

75% of olive grove's are generally located the areas ;

-having poor plant nutritions,
-sloping and
-un-irrigated

25% of olive grove's are located the areas ;

- relatively flat,
-gentle sloping,
-irrigatted

In general 8% of olive groves are irrigated in Turkey.

Table 2. Land Use of Turkey's Agricultural Areas (1998)
(X1000)

Land use	Ha	%
1. Agricultural Land		
Planted	18 748	69.5
Fallowing	4 890	18.2
TOTAL	23 638	87.7
2. Vegetables	783	2.9
3. Vineyards	541	2.0
4. Fruits	1 389	5.2
5. Olive	600	2.2
Total(2,3,4,5)	3 313	12.3
TOTAL	26 951	100.0

Source:DIE, Agriculture Statistics Summary (1979-1998).

2.2% of total agricultural areas is covered by olive groves which is approximately 600.000 ha.

Table 3. Olive Production, Area, and Olive Trees Number of Turkey (1993-1998)

Years	Area (Ha)	Trees (1000 Number) TOTAL	Bearing	Non bearing	Production (Tons)	Production (Kg/Tree)
1993	872 000	87 163	81 703	5 460	550 000	6.3
1994	881 000	88 147	82 192	5 955	1 400 000	15.9
1995	556 000	87 581	81 437	6 144	515 000	5.9
1996	568 000	89 740	83 200	6 540	1 800 000	20.0
1997	658 000	95 730	85 780	9 950	510 000	5.3
1998	600 000	93 450	85 850	7 600	1 650 000	17.7
Average	689 167	90 297	83 347	6 950	1 072 500	11.9
%		100.0	92.3	7.7		

Source: DIE, Agriculture Statistics Summary.

UTILIZATION OF OLIVE

Graph 1.Olive oil and table oil production of Turkey (1993-1998)
(Source: DIE. Agriculture Statistics Summary)

OLIVE GROWING REGIONS OF TURKEY

Olive groves constitute 2.2% of agricultural areas and 18.1% of hoticultural areas.

Egean and Marmara Regions are main olive growing areas of Turkey.

According to 1998 statistics 86.6% of gross olive production belong to these two regions.

In addition to these two Regions, Mediterranean Region has 11.3%, South-East Region has 2.0%, and Black Sea Region has 0.2% proportion of gross olive production.

Olive is produced for extracting oil in Egean Region but in Marmara Region it is produced for table olives.

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Table 4. Geographical Distribution of Olive Numbers and Production

Olive Groves Regions	Number of trees				Production		Production
	TOTAL	%	Bearing	Non bearing	Tons	%	(Kg/Tree)
1.Egean	83 233 815	67.7	56 984 548	4 249 267	1 243 627	75.4	19.7
2. Marmara	14 573 556	15.6	13 581 335	992 220	183 849	11.1	12.6
3. Mediterranean	10 530 675	11.3	9 196 561	1 334 114	187 126	11.3	17.6
4. South-East	4 722 403	5.1	3 781 141	941 262	32 898	2.0	7.0
5. Black Sea	389 552	0.4	306 415	83 137	2 500	0.2	6.4
TURKEY	93 450 000	100.0	85 850 000	7 600 000	1 650 000	100.0	17.7

Source: DIE Agriculture Statistics Summary

Table 5. Size of Olive Producer Enterprises in Turkey (1991)

Enterprises Size	Number of Enterprises		Area	
(ha)	Number	(%)	(ha)	(%)
<0.5	19 728	6.1	4.03	1.0
0.5-0.9	33 609	10.4	12.64	3.1
1-1.9	67 666	20.9	41.50	10.2
2-4.9	120 779	37.3	125.15	30.8
5-9.9	56 568	17.5	111.91	27.6
10-19.9	20 452	6.3	72.70	17.9
20-49.9	4 515	1.4	20.83	7.4
50-99.9	256	0.0	7.05	1.7
100+	413	0.1	1.27	0.3
TOTAL	323 986	100.0	406.12	100.0

Average Enterprises Size (ha)	
Olive	**1.25**
Fruits	**0.84**
General	**5.76**

Source: DIE.1991 General Agriculture Statistics

Table 6. Distribution of Enterprises in terms of Regions

Regions	Number of enterprises	%
Egean Region	228 000	70
Mediterranean Region	60 584	19
Marmara Region	28 470	9

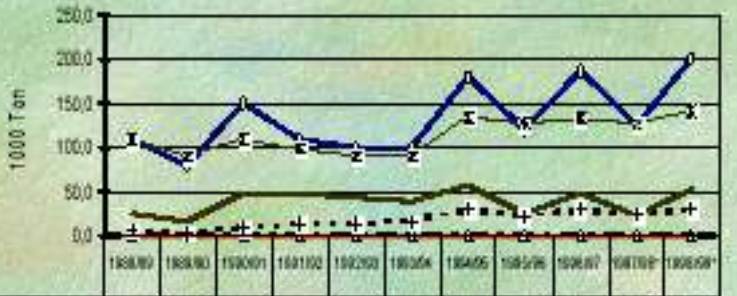
Egean Region has the largest enterprises on an average 1.4 ha in size
Black Sea Region has the smallest enterprises on an average 0.1 ha in size

Graph 2. Olive Oil Balance of Turkey

	1988/89	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99*
Production	90,0	35,0	80,0	60,0	50,0	49,0	160,0	45,0	200,0	40,0	190,0
Imports	0,0	2,0	0,0	0,0	1,5	0,0	0,0	0,0	0,0	0,0	0,0
Consumption	50,0	44,0	55,0	50,0	50,0	54,0	55,0	60,0	75,0	75,0	80,0
Exportation	35,0	2,5	10,0	10,5	5,5	9,0	55,0	10,0	40,0	35,0	100,0
Remaining Stock	15,0	5,5	20,5	20,0	22,0	7,0	57,0	10,0	89,5	29,5	23,5

Source: from International Olive Oil Council Data

Graph 3. Table Olive Balance of Turkey



	1988/89	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98*	1998/99*
Production	110,0	80,0	150,0	110,0	100,0	100,0	160,0	120,0	185,0	124,0	200,0
Imports	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Consumption	110,0	80,0	110,0	98,0	88,0	88,0	135,0	129,0	132,0	127,0	140,0
Exports	0,0	2,0	8,0	12,0	13,0	15,0	29,0	22,0	33,0	33,0	50,0
Remaining Stock	26,0	14,0	46,0	46,0	43,0	30,0	55,0	24,0	47,0	31,0	51,0

Source: from International Olive Oil Council Data

SUBSIDIES

In olive growing sector at the stage of table olive growing provided subsidies takes part in two groups;

Aids in kinds:
- -fertilizers,
- -agricultural chemicals for plant pests and diseases,
- -various equipments and materials,
- -saplings.

Aids in cash:
- -agricultural loans

Table 7. Number of Sprayed Trees Against Olive Fruit Fly

Provinces	1993/94	1994/95	1995/96	1996/97
Balikesir	10 000 000	10 000 000	10 000 000	10 000 000
Çanakkale	3 400 000	3 400 000	3 400 000	3 310 000
Izmir	2 665 000	10 000 000	-	1 200 000
Manisa	2 000 000	2 000 000	-	2 500 000

Source : Plant Protection Research Institute Izmir/Bornava

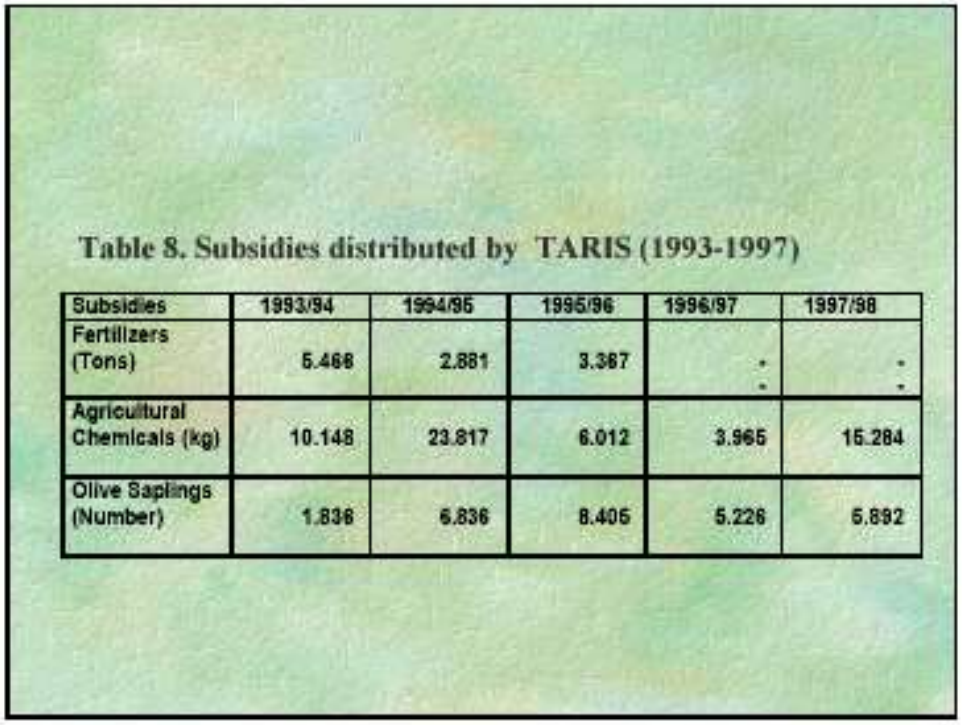


Table 8. Subsidies distributed by TARIS (1993-1997)

Subsidies	1993/94	1994/95	1995/96	1996/97	1997/98
Fertilizers (Tons)	5.468	2.881	3.387	. .	. .
Agricultural Chemicals (kg)	10.148	23.817	6.012	3.965	15.284
Olive Saplings (Number)	1.836	6.836	8.405	5.226	6.892

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Session 4: Future developments

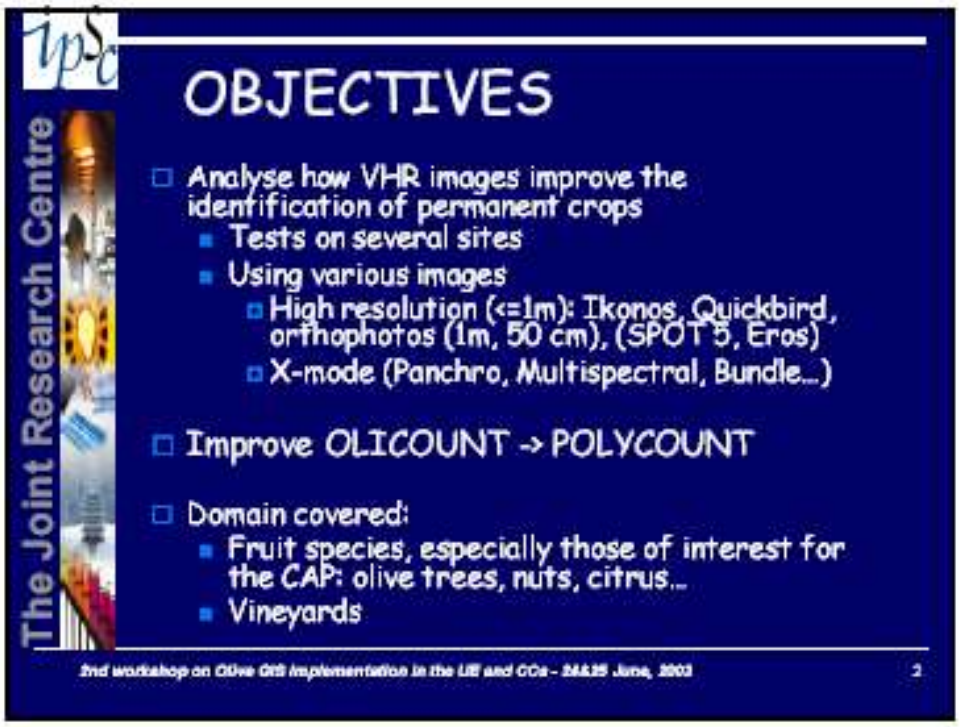
Session 4 – Presentation of the tests on VHR (Very High Resolution) images for the identification of permanent crops, *Josiane Masson, MARS Unit (IPSC, JRC Ispra)*

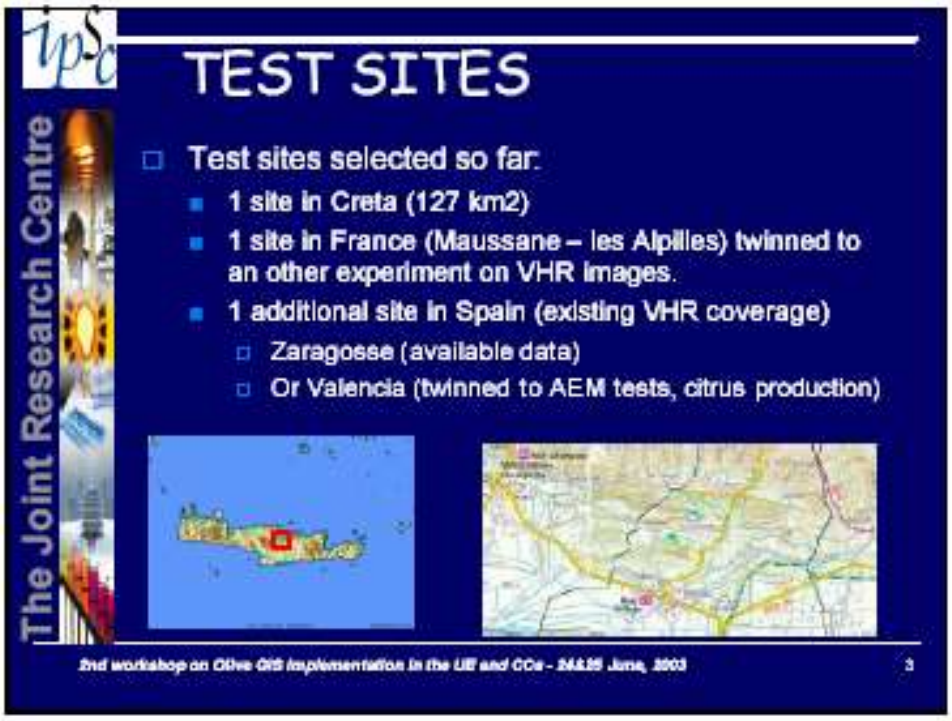
Summary

Josiane Masson is in charge of activities related to Olive, Vineyard and permanent crops at the JRC, MARS Unit. The JRC started this year a series of tests on VHR imagery to analyze how does it improve the identification of permanent crops. Several test sites were selected for those tests: in Creta, in France (Maussane-les Alpilles) and in Spain (Zaragossa and Valencia). The objective is also to upgrade and improve the OLICOUNT software to be able to handle various types of images (Panchro and multi-spectral mode, <= 1m resolution, pixel >= 8 bits etc.) and also to be able to handle several types of fruit species and possibly to separate them. The test protocol includes bibliography, algorithm and software development, field survey to get ground truth data, photo-interpretation using automatic counting and analysis of results. The new software will be free available on our web site. In June 2003, the algorithm and software development started and some data have already been collected: images and field survey on the Creta site. The CAPI started on the Creta site as well (May 2003): 70 parcels were surveyed, 4235 trees have been counted, of which 10 vineyards, 59 olive parcels, 1 parcel of figue trees. The first results from CAPI is that it is very difficult to separate species (specially olive, almond and caroub trees), the characteristics of parcels vary very much according to the age of trees, the irrigation, the distance of plantation, crown size, the soil, the green cover etc. The Quickbird images appear to be very good for identification of trees, even small ones (above 1.2m crown diameter). Compared to existing orthophotos (1m resolution) the Ikonos images are also much better. It is expected to finish the test by the end of the year and to publish the results.

(Presentation)


The Joint Research Centre
2nd WORKSHOP ON THE IMPLEMENTATION OF OLIVE GIS IN THE EU
ATHENS, 24-25th June 2003
Tests on VHR
for the identification of permanent crops
Presentation by Josiane MASSON, JRC
2nd workshop on Olive GIS implementation in the UE and CCs - 24&25 June, 2003
1


The Joint Research Centre
OBJECTIVES
Analyse how VHR images improve the identification of permanent crops
Tests on several sites
Using various images
High resolution (<=1m): Ikonos, Quickbird, orthophotos (1m, 50 cm), (SPOT 5, Eros)
X-mode (Panchro, Multispectral, Bundle...)
Improve OLICOUNT -> POLYCOUNT
Domain covered:
Fruit species, especially those of interest for the CAP: olive trees, nuts, citrus...
Vineyards
2nd workshop on Olive GIS implementation in the UE and CCs - 24&25 June, 2003
2


TEST SITES
The Joint Research Centre
Test sites selected so far:
1 site in Creta (127 km2)
1 site in France (Maussane – les Alpilles) twinned to an other experiment on VHR images.
1 additional site in Spain (existing VHR coverage)
Zaragosse (available data)
Or Valencia (twinned to AEM tests, citrus production)
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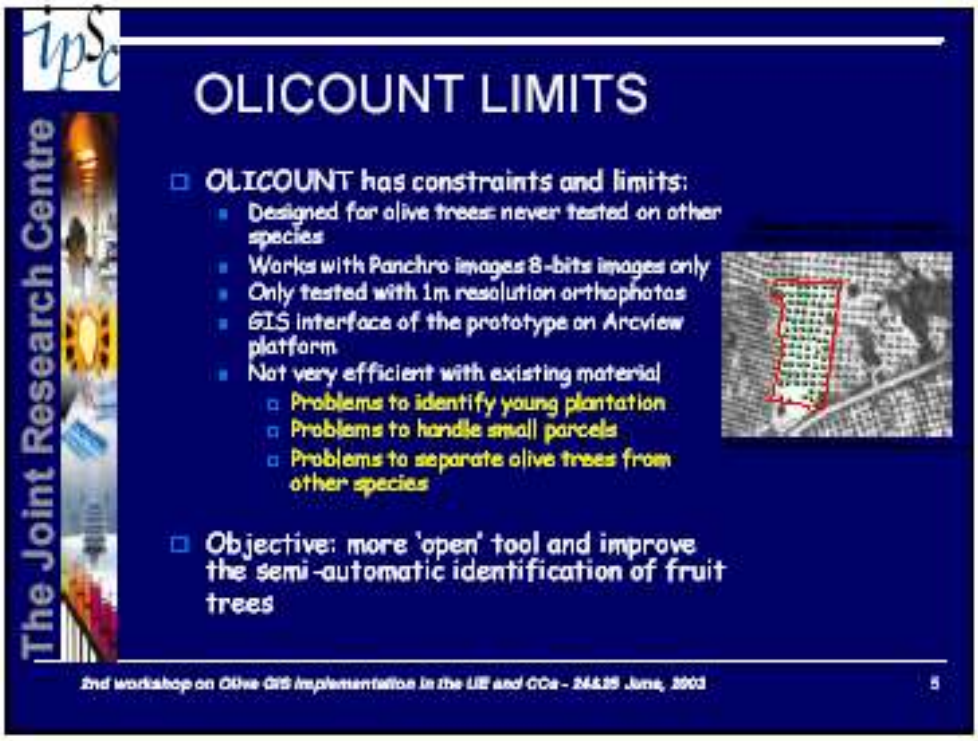
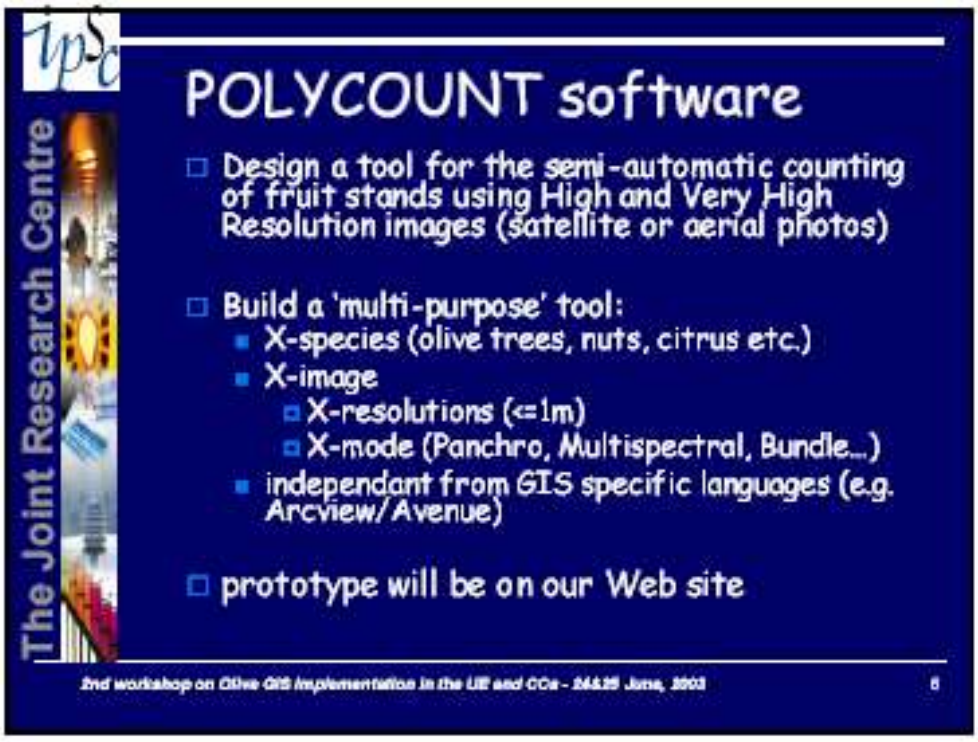
3


PROTOCOLE
The Joint Research Centre
Bibliography : investigation on methodology and other tree species
POLYCOUNT Algorithm & software development (Exploratory Research)
Tests on real sets of data
Data collection (images, existing GIS data…)
Selection of test parcels
STEP1: Field survey to identify trees of interest
STEP2: 'Blind' CAPI by 2-3 independent operators on X-images
STEP3: Analysis of results
Final report and publication
POLYCOUNT Prototype available on our web site
Field survey
Independent CAPI
2nd workshop on Olive GIS implementation in the UE and CCs - 24&25 June, 2003
4


The Joint Research Centre
OLICOUNT LIMITS
OLICOUNT has constraints and limits:
Designed for olive trees: never tested on other species
Works with Panchro images 8-bits images only
Only tested with 1m resolution orthophotos
GIS interface of the prototype on Arcview platform
Not very efficient with existing material
Problems to identify young plantation
Problems to handle small parcels
Problems to separate olive trees from other species
Objective: more 'open' tool and improve the semi-automatic identification of fruit trees
2nd workshop on Olive GIS implementation in the UE and CCs - 24&25 June, 2003
5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POLYCOUNT software
Design a tool for the semi-automatic counting of fruit stands using High and Very High Resolution images (satellite or aerial photos)
Build a 'multi-purpose' tool:
X-species (olive trees, nuts, citrus etc.)
X-image
X-resolutions (<=1m)
X-mode (Panchro, Multispectral, Bundle...)
independant from GIS specific languages (e.g. Arcview/Avenue)
prototype will be on our Web site
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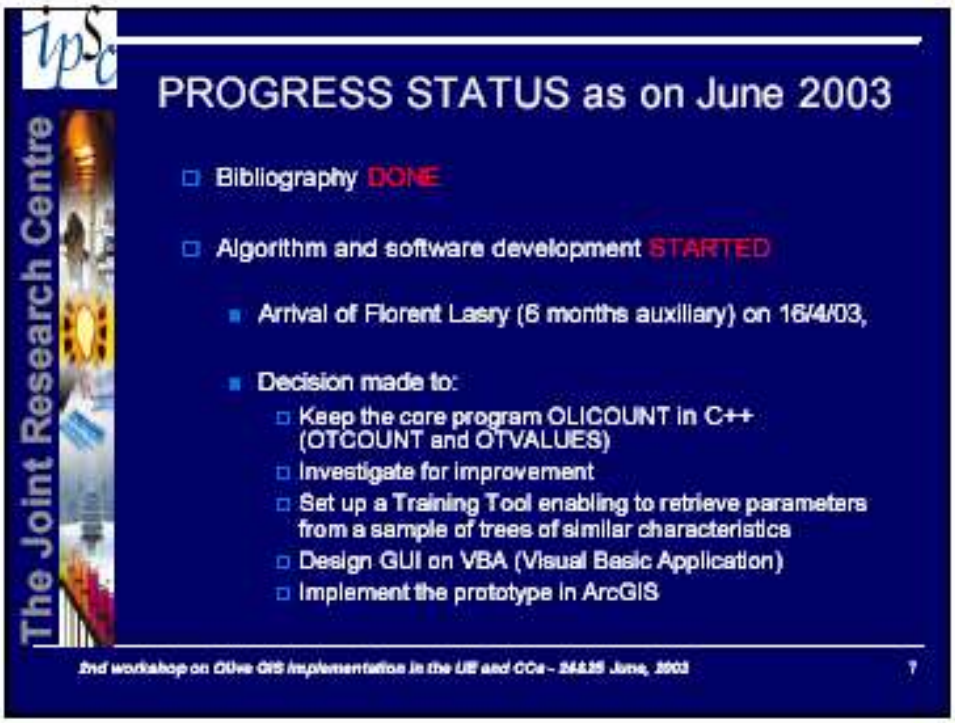
6


The Joint Research Centre
PROGRESS STATUS as on June 2003
Bibliography DONE
Algorithm and software development STARTED
Arrival of Florent Lasry (6 months auxiliary) on 16/4/03,
Decision made to:
Keep the core program OLICOUNT in C++ (OTCOUNT and OTVALUES)
Investigate for improvement
Set up a Training Tool enabling to retrieve parameters from a sample of trees of similar characteristics
Design GUI on VBA (Visual Basic Application)
Implement the prototype in ArcGIS
2nd workshop on Olive GIS implementation in the UE and CCs – 24&25 June, 2003
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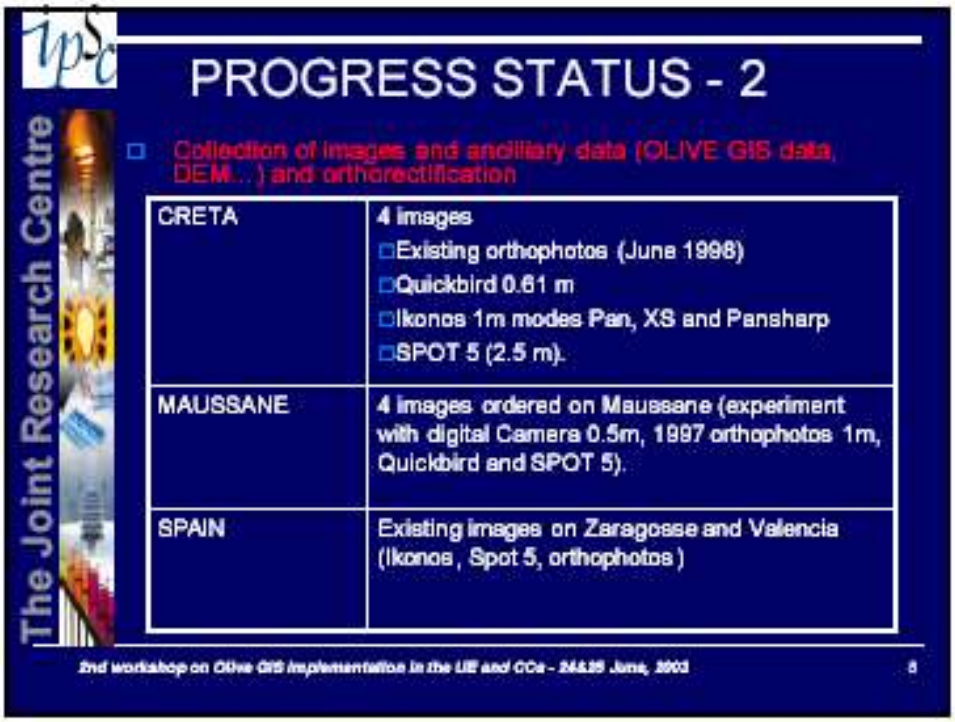
The Joint Research Centre
PROGRESS STATUS - 2
Collection of images and ancillary data (OLIVE GIS data, DEM...) and orthorectification
CRETA
4 images
Existing orthophotos (June 1998)
Quickbird 0.61 m
Ikonos 1m modes Pan, XS and Pansharp
SPOT 5 (2.5 m).
MAUSSANE
4 images ordered on Maussane (experiment with digital Camera 0.5m, 1997 orthophotos 1m, Quickbird and SPOT 5).
SPAIN
Existing images on Zaragosse and Valencia (Ikonos, Spot 5, orthophotos)
2nd workshop on Olive GIS implementation in the UE and CCs – 24&25 June, 2003
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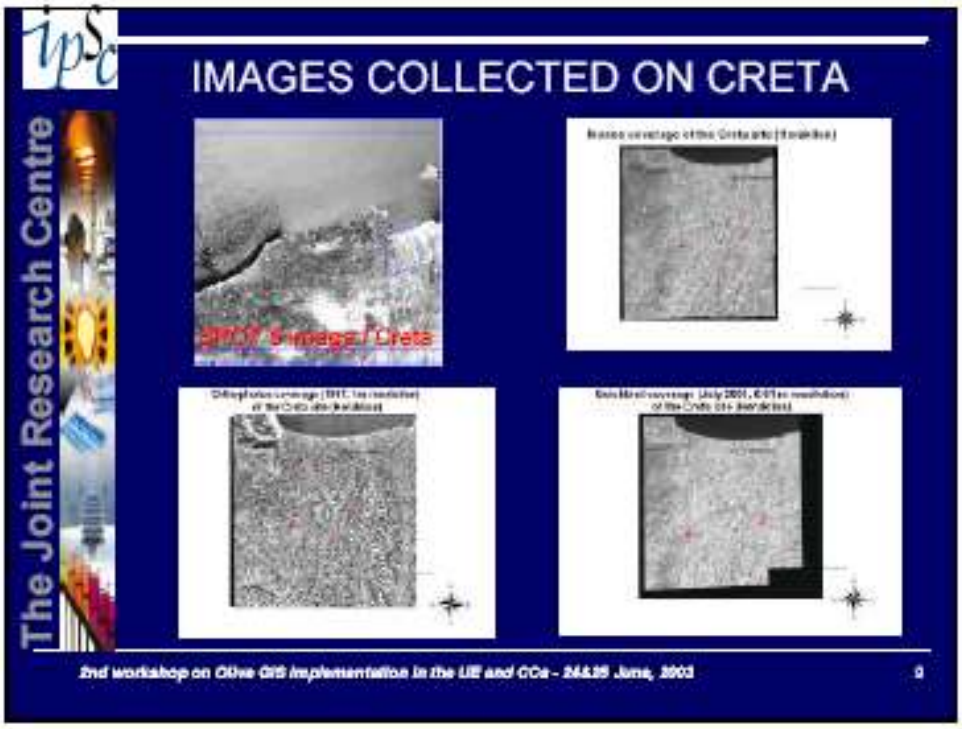
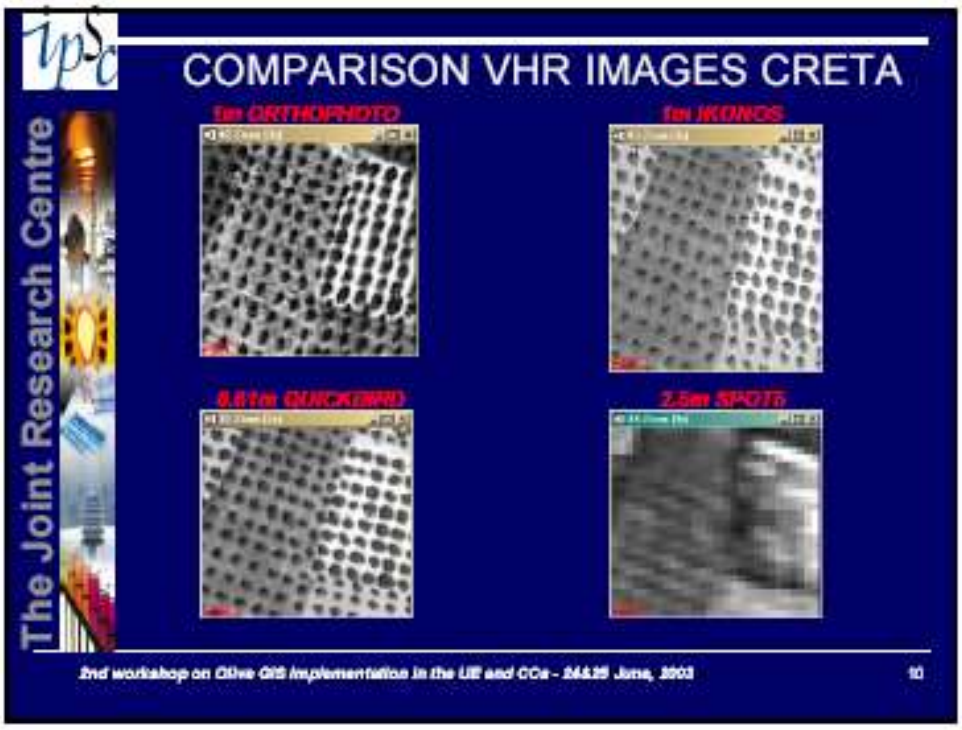

IMAGES COLLECTED ON CRETA
The Joint Research Centre
2nd workshop on Olive GIS implementation in the UE and CCs - 24&25 June, 2003


COMPARISON VHR IMAGES CRETA
1m ORTHOPHOTO
1m IKONOS
0.61m QUICKBIRD
2.5m SPOT5
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PROGRESS STATUS - 3
FIELD SURVEY:
DONE on CRETA on 29/4 – 5/5/2003(70 parcels, mostly olive trees collected)
planned for Maussane (July 2003)
CAPI: WILL START VERY SHORTLY ON CRETA.
Independent CAPI image by image, by 3 operators :
CAPI 1: JRC (pure photo-interpretation)
CAPI 2: Geoapikonisis (pure photo-interpretation)
CAPI 3: JRC (semi-automatic counting using POLYCOUNT)
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PROGRESS STATUS - 4
The CAPI covers
Trees location and counting
Agro-morphological parameters: irregular/regular plantation, traditional/intensive practice, well/badly maintained parcel, joint crowns, bare soil/green cover....
Measurements on a sub-sample of parcels: distance of plantation, crown diameter
Area measurement, calculation of density and distance of plantation (automatic)
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Location of the parcels collected in Creta
The Joint Research Centre
Benchmark VHR Creta - General overview
2nd workshop on Olive GIS implementation in the UE and CCs - 24&25 June, 2003
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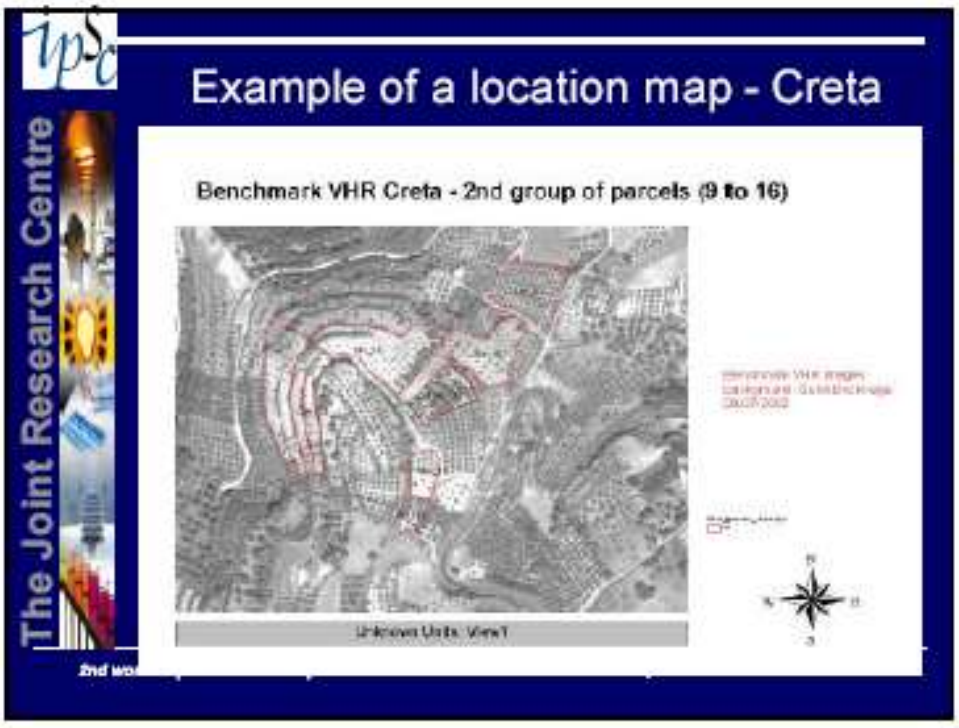
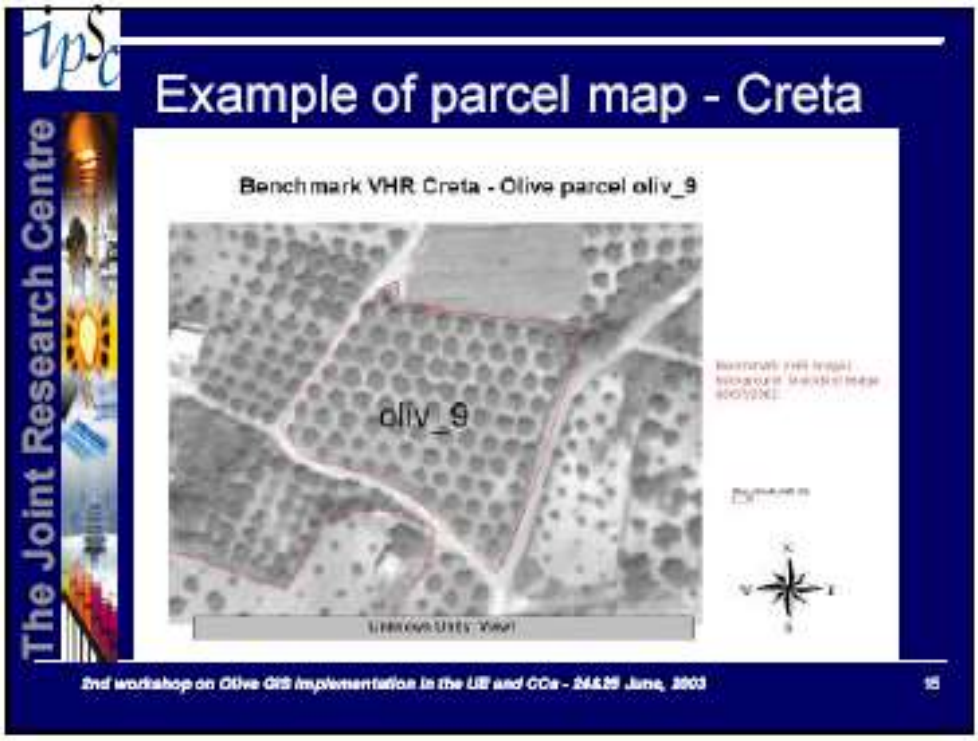

Example of a location map - Creta
The Joint Research Centre
Benchmark VHR Creta - 2nd group of parcels (9 to 16)


The Joint Research Centre
Example of parcel map - Creta
Benchmark VHR Creta - Olive parcel oliv_9
oliv_9
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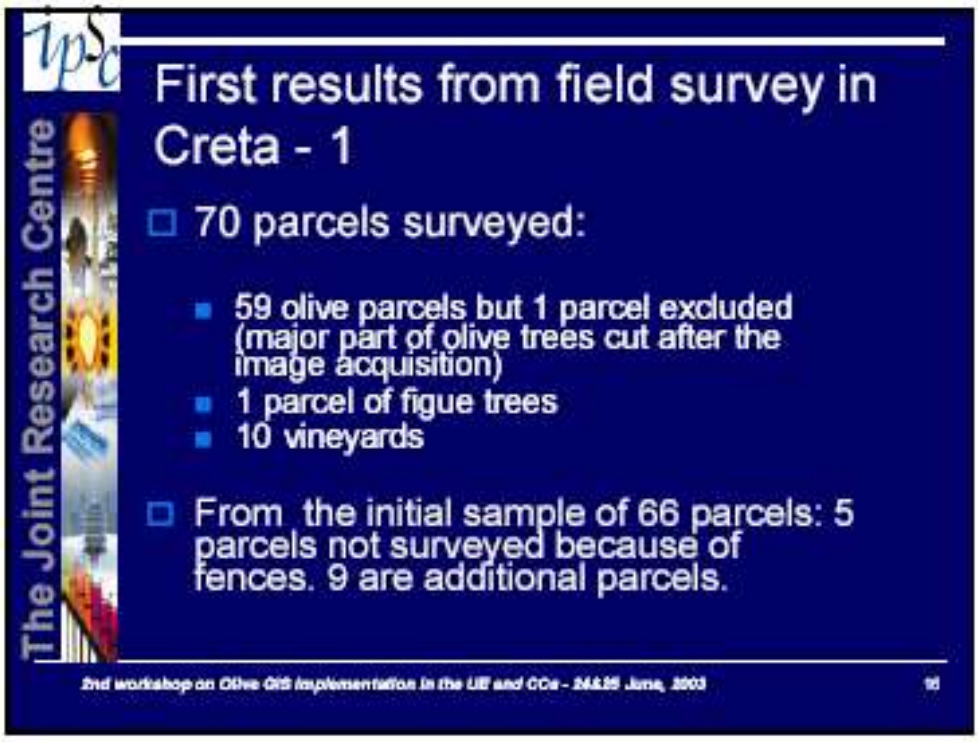
The Joint Research Centre
First results from field survey in Creta - 1
70 parcels surveyed:
59 olive parcels but 1 parcel excluded (major part of olive trees cut after the image acquisition)
1 parcel of figue trees
10 vineyards
From the initial sample of 66 parcels: 5 parcels not surveyed because of fences. 9 are additional parcels.
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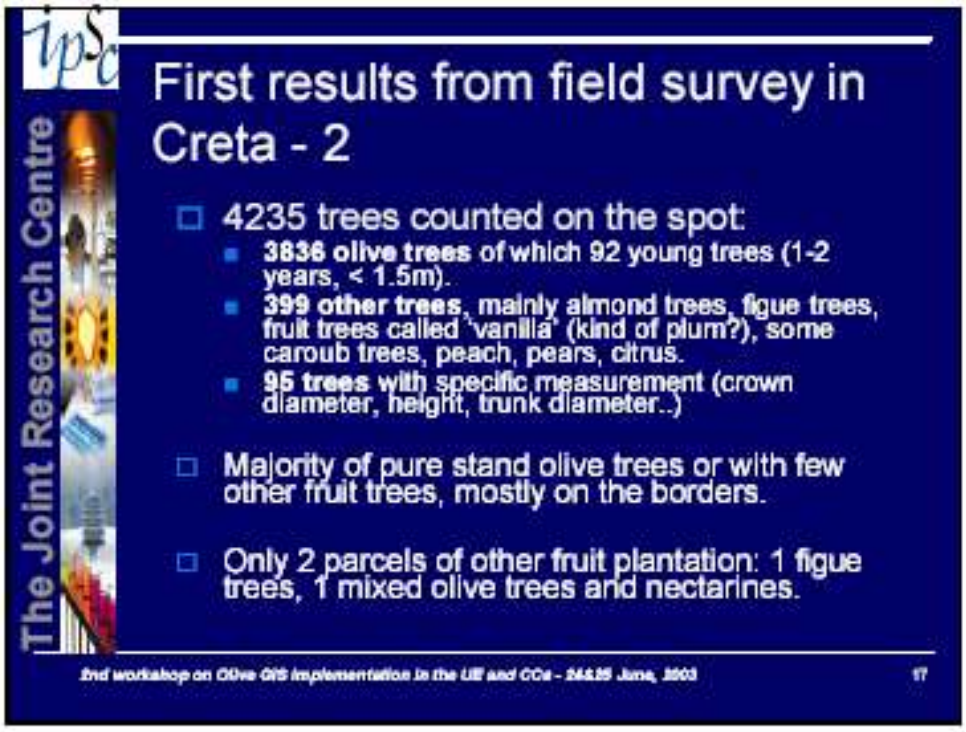
The Joint Research Centre
First results from field survey in Creta - 2
4235 trees counted on the spot:
3836 olive trees of which 92 young trees (1-2 years, < 1.5m).
399 other trees, mainly almond trees, figue trees, fruit trees called 'vanilla' (kind of plum?), some caroub trees, peach, pears, citrus.
95 trees with specific measurement (crown diameter, height, trunk diameter..)
Majority of pure stand olive trees or with few other fruit trees, mostly on the borders.
Only 2 parcels of other fruit plantation: 1 figue trees, 1 mixed olive trees and nectarines.
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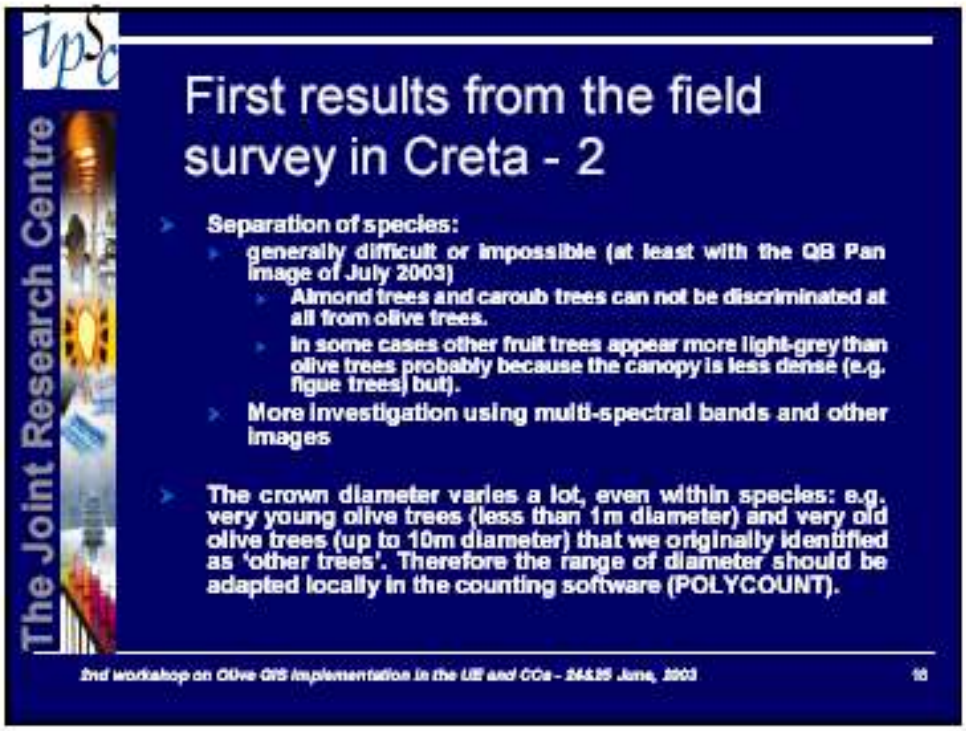
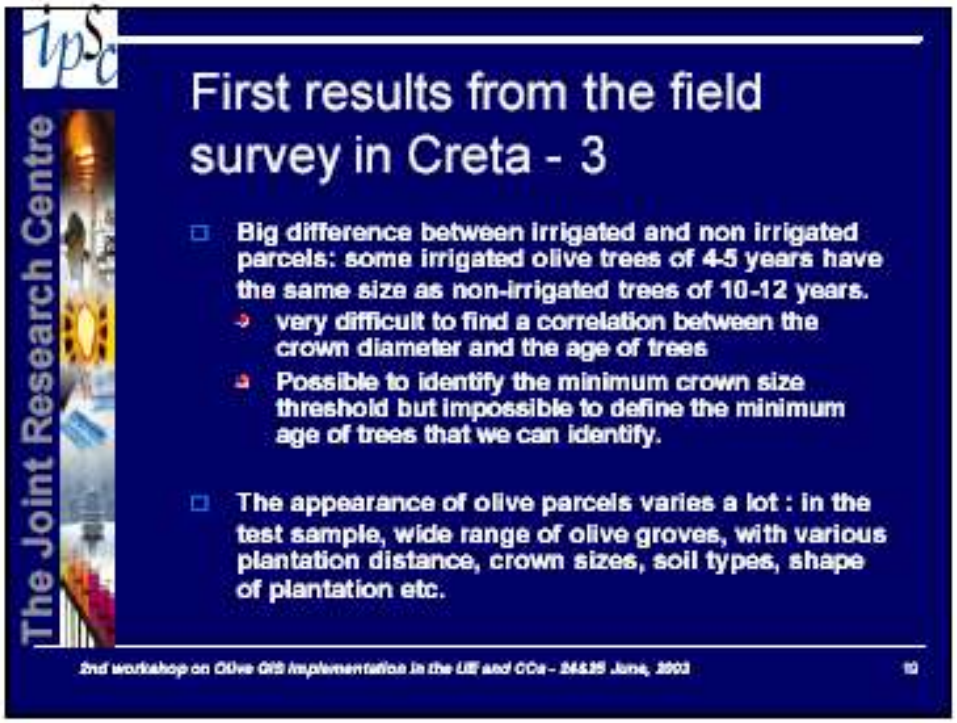
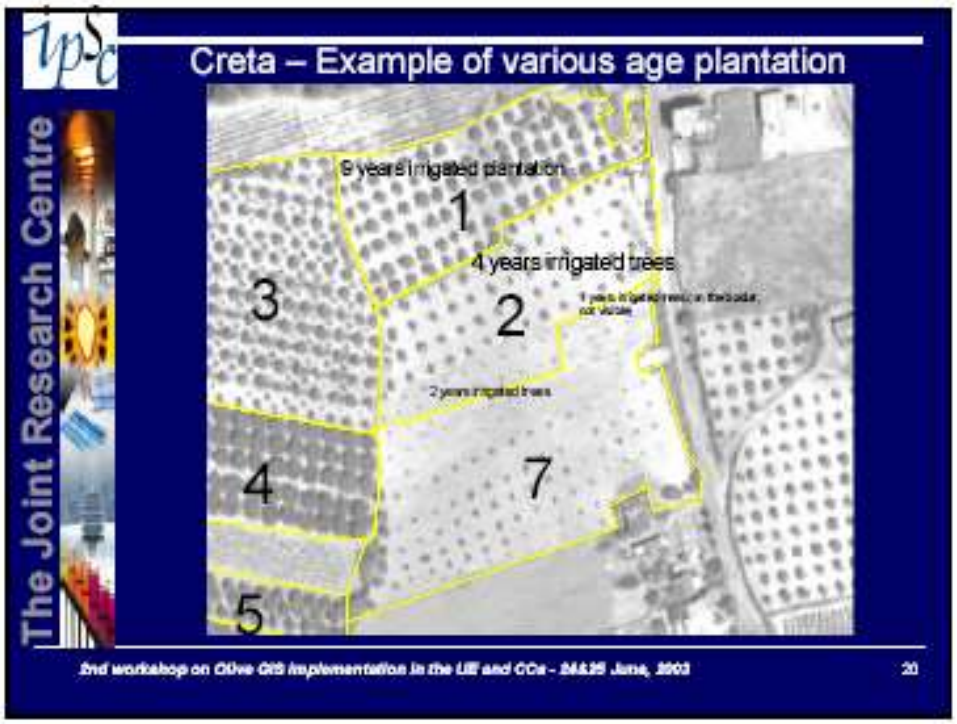

The Joint Research Centre
First results from the field survey in Creta - 2
Separation of species:
generally difficult or impossible (at least with the QB Pan image of July 2003)
Almond trees and caroub trees can not be discriminated at all from olive trees.
In some cases other fruit trees appear more light-grey than olive trees probably because the canopy is less dense (e.g. figue trees) but).
More investigation using multi-spectral bands and other images
The crown diameter varies a lot, even within species: e.g. very young olive trees (less than 1m diameter) and very old olive trees (up to 10m diameter) that we originally identified as 'other trees'. Therefore the range of diameter should be adapted locally in the counting software (POLYCOUNT).
2nd workshop on Olive GIS implementation in the UE and CCs - 24&25 June, 2003
16


The Joint Research Centre
First results from the field survey in Creta - 3
Big difference between irrigated and non irrigated parcels: some irrigated olive trees of 4-5 years have the same size as non-irrigated trees of 10-12 years.
very difficult to find a correlation between the crown diameter and the age of trees
Possible to identify the minimum crown size threshold but impossible to define the minimum age of trees that we can identify.
The appearance of olive parcels varies a lot : in the test sample, wide range of olive groves, with various plantation distance, crown sizes, soil types, shape of plantation etc.
2nd workshop on Olive GIS implementation in the UE and CCs - 24&25 June, 2003
19


The Joint Research Centre
Creta – Example of various age plantation
9 years irrigated plantation
1
4 years irrigated trees
3
2
2 years irrigated trees
4
7
5
2nd workshop on Olive GIS implementation in the UE and CCs - 24&25 June, 2003
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The Joint Research Centre
First results from the field survey in Creta - 4
From a 1st quick interpretation the Quickbird image appears very good for trees identification, even very small ones: possible to identify olive trees as small as 1.2 m crown diameter (# 2 years old) when the background is bare soil.
A deeper analysis will be carried out in order to define identification limits for various types of images.
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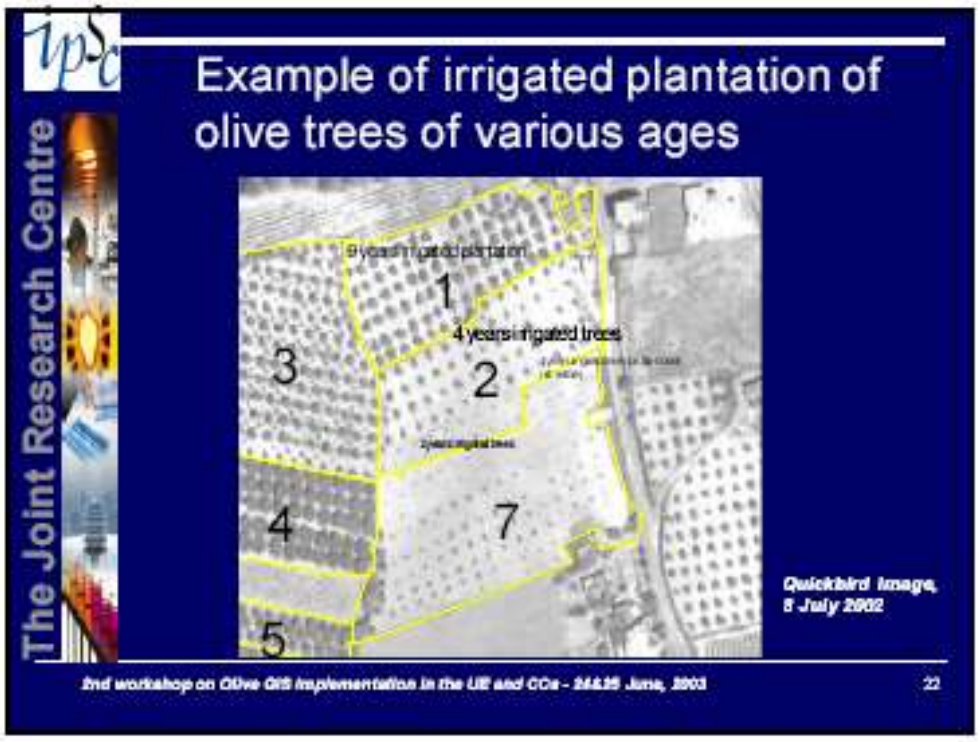
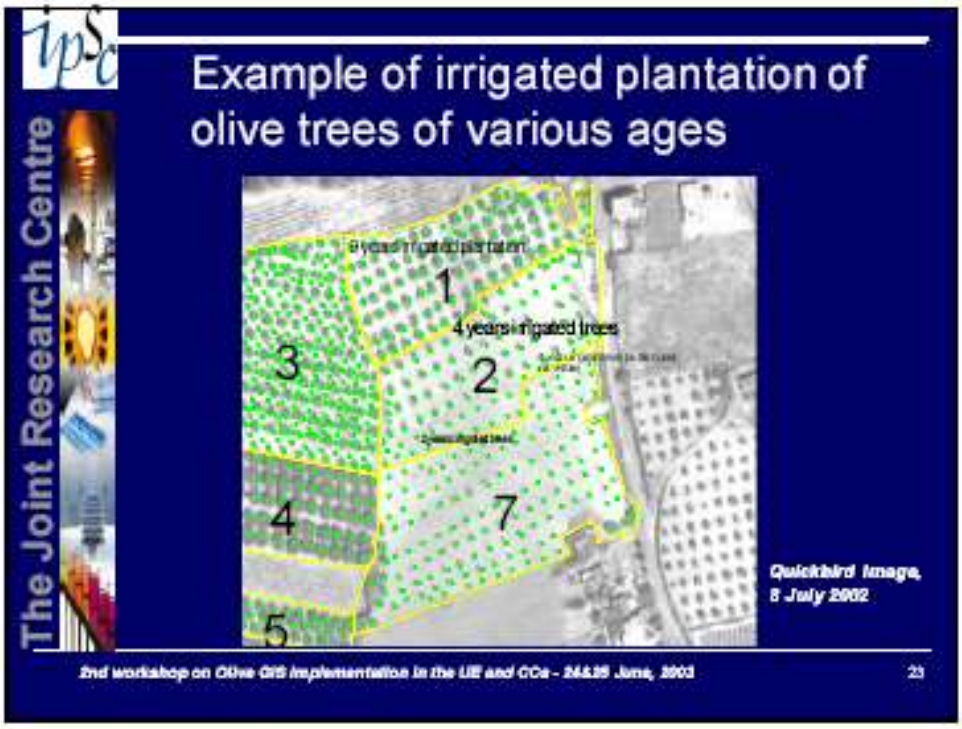
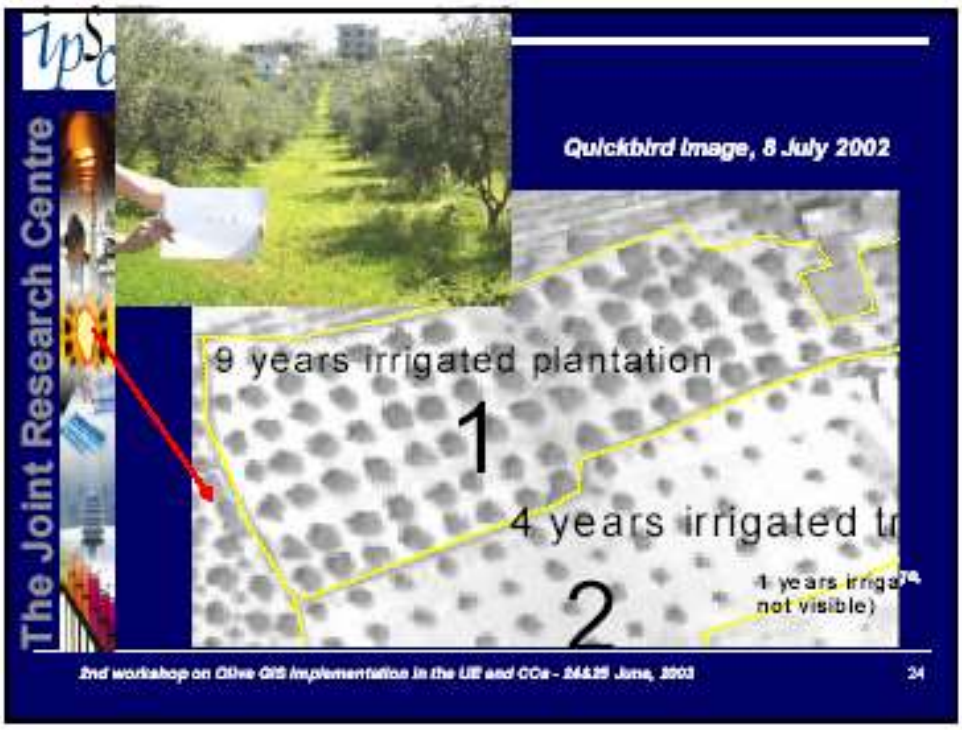
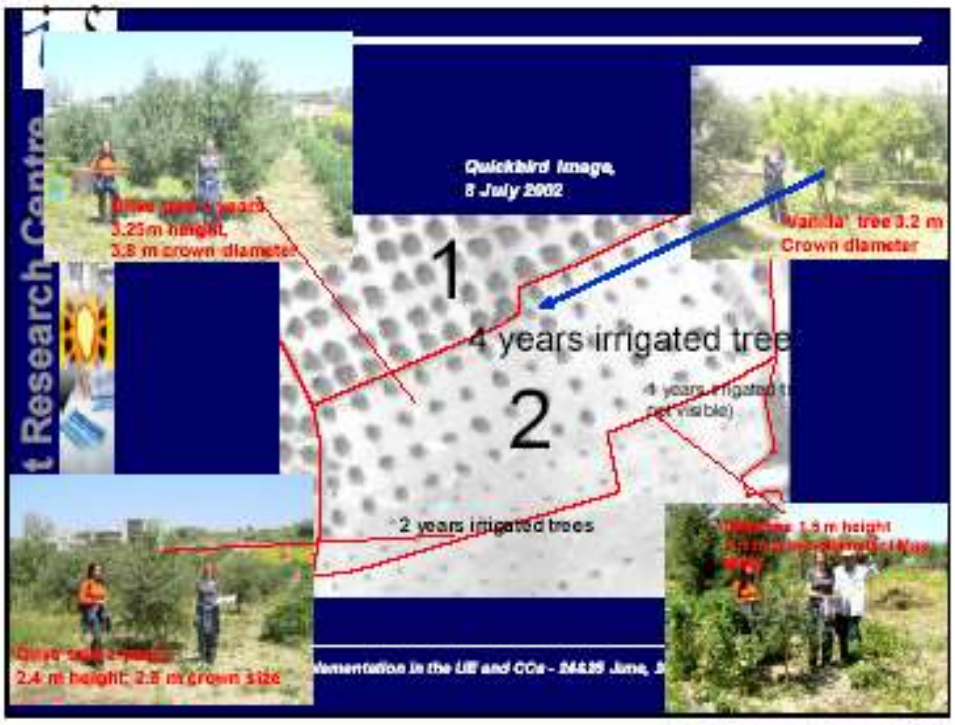
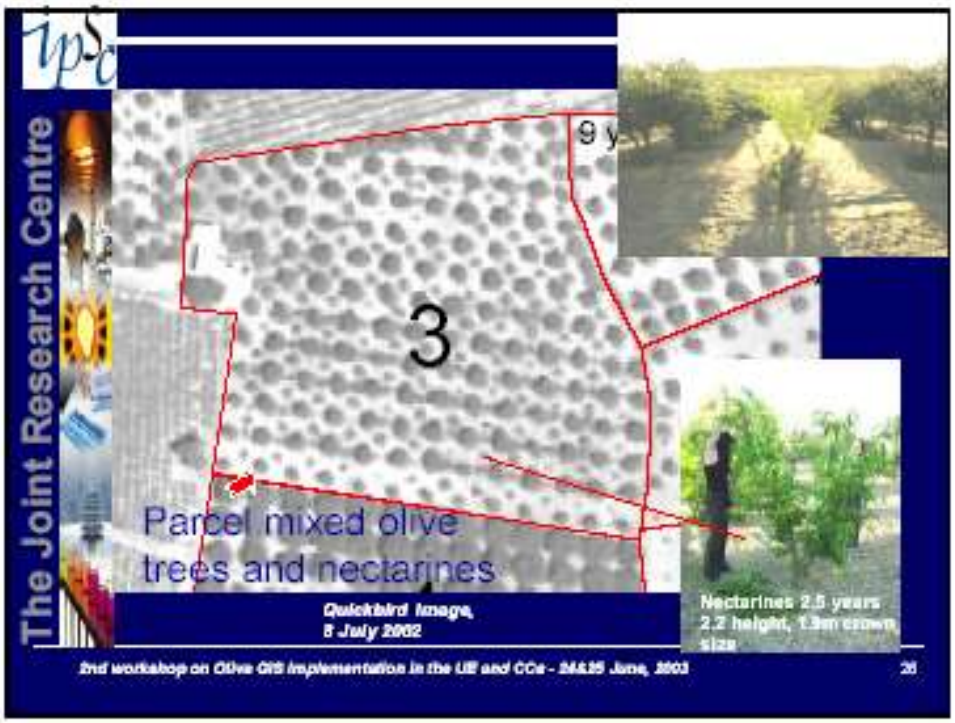
21

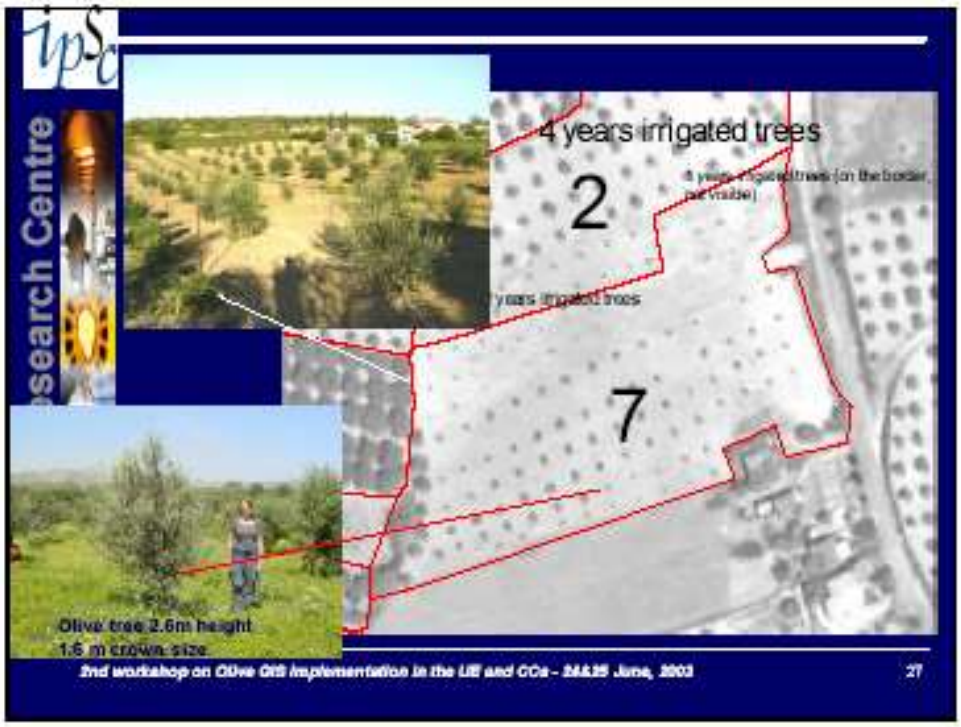

The Joint Research Centre
Example of irrigated plantation of olive trees of various ages
1
4 years irrigated trees
2
3
4
7
5
Quickbird Image, 8 July 2002
2nd workshop on Olive GIS implementation in the UE and CCs - 24&25 June, 2003
22


Example of irrigated plantation of olive trees of various ages
The Joint Research Centre
1
4 years irrigated trees
2
3
4
7
5
Quickbird Image, 8 July 2002
2nd workshop on Olive GIS implementation in the UE and CCs - 24&25 June, 2003
23


The Joint Research Centre
Quickbird Image, 8 July 2002
9 years irrigated plantation
1
4 years irrigated tr
2
not visible)
2nd workshop on Olive GIS implementation in the UE and CCs - 24&25 June, 2003
24


Quickbird Image,
8 July 2002
1
4 years irrigated tree
2
2 years irrigated trees
Vanilla' tree 3.2 m
Crown diameter
2.4 m height; 2.5 m crown size


The Joint Research Centre
3
Parcel mixed olive
trees and nectarines
Quickbird Image,
8 July 2002
Nectarines 2.5 years
2.2 height, 1.3m crown
size


4 years irrigated trees
2
7
Olive tree 2.6m height
1.5 m crown size
2nd workshop on Olive GIS implementation in the UE and CCs - 24&25 June, 2003
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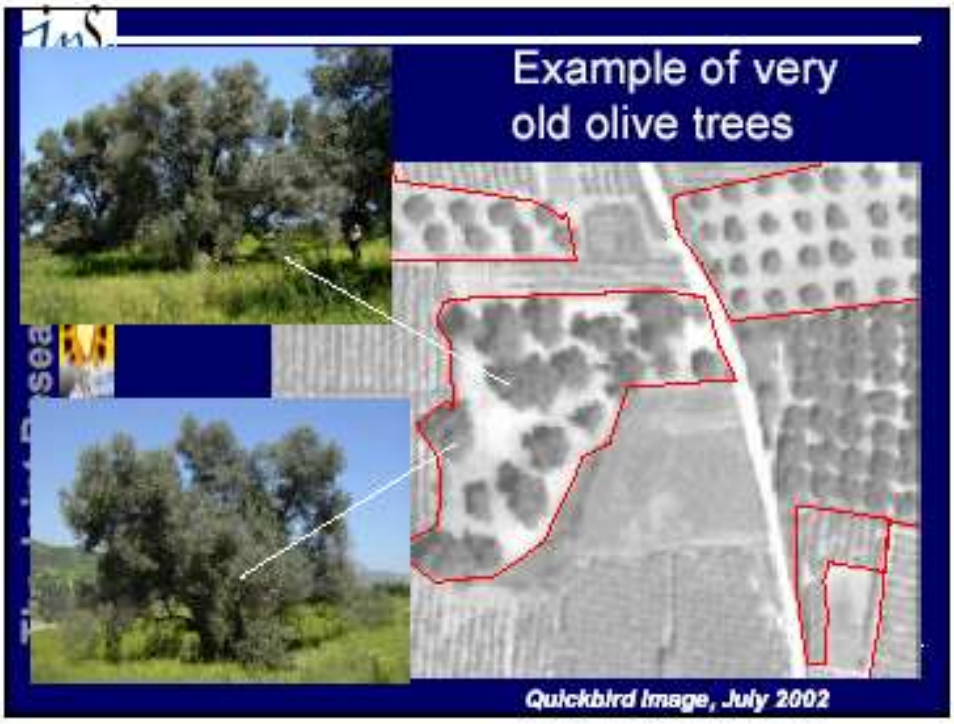
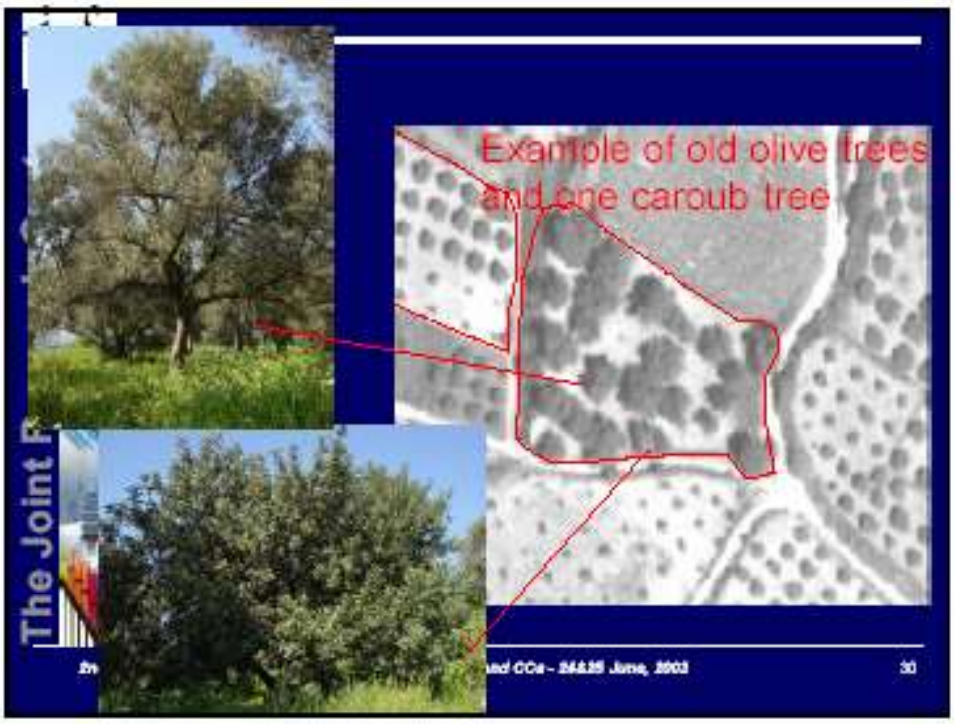
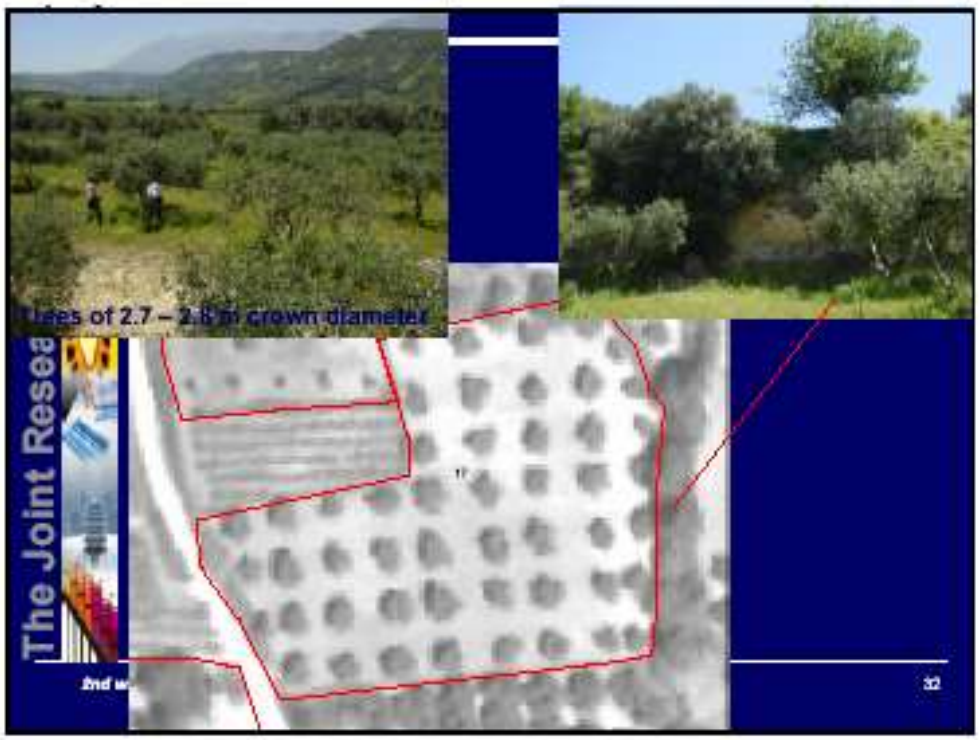
Ikonos Pan, July 2002
4 years irrigated trees
2
7
2nd workshop on Olive GIS implementation in the UE and CCs - 24&25 June, 2003


Example of very
old olive trees
Quickbird Image, July 2002


Example of old olive trees
and one caroub tree


The Joint Research Centre
2nd workshop on Olive GIS implementation in the UE and CCs - 24&25 June, 2003
31


Trees of 2.7 – 2.8 m crown diameter
The Joint Resea
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MARS Unit

Session 4 – Presentation of Ikonos products, Adrian Zevenbergen, Director International of Sales, Space Imaging

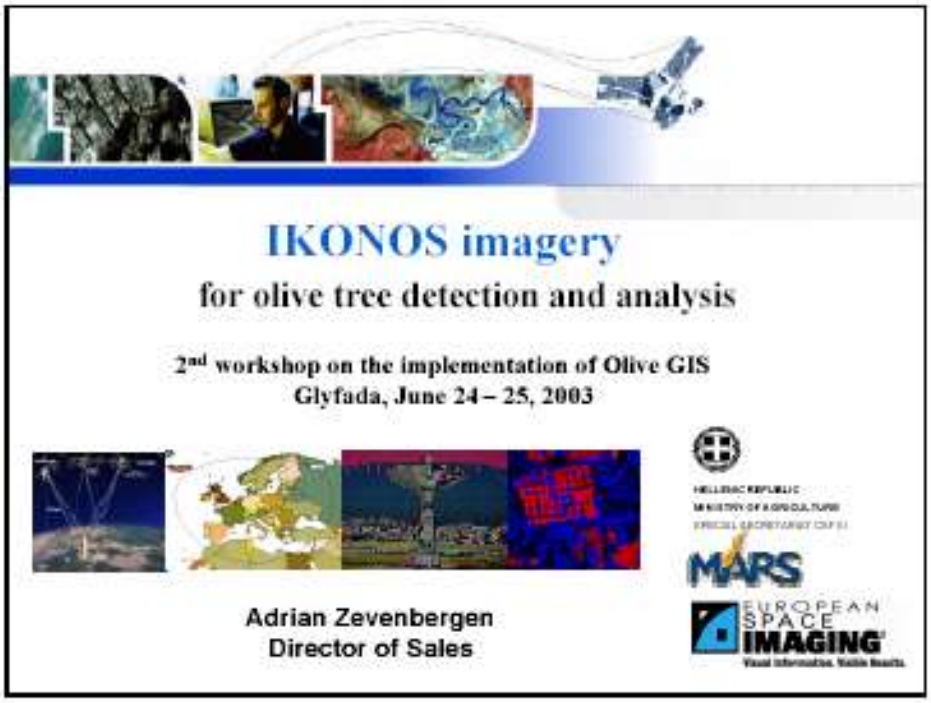
Summary

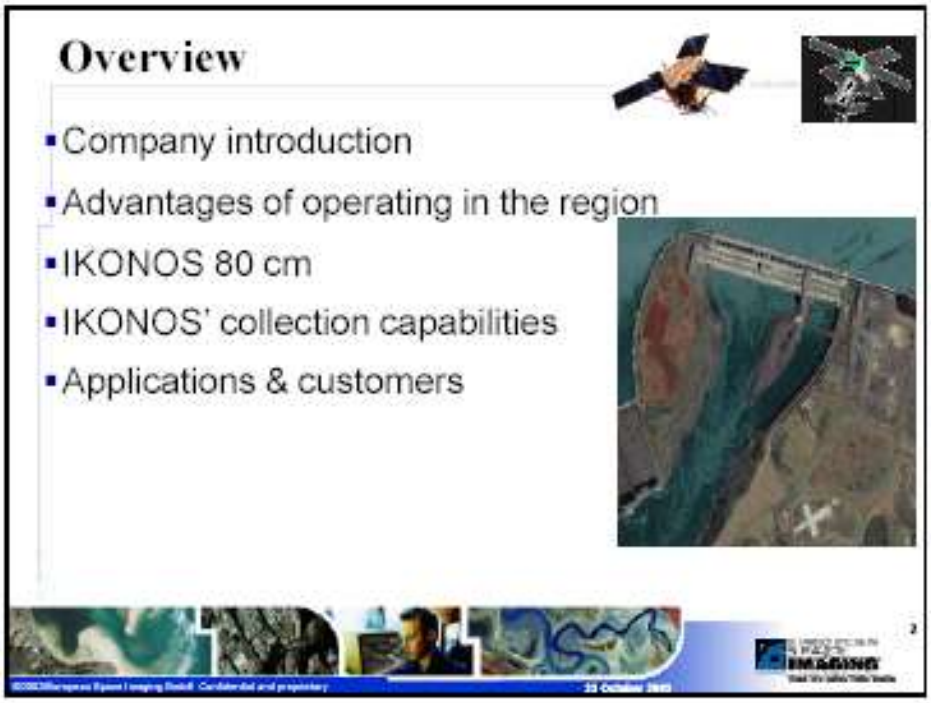
Space Imaging was established in October 2002 with 2 shareholders, GAF and DLR. It started to sell images in November 2002. The ground station is operated by DLR. Ikonos images have a 80 cm resolution at the nadir. For Europe the acquisition are generally in the morning, the programming is very flexible, it can be shift up to 90mn before the planned acquisition, according to meteo conditions.

There are 65,500 images in the archive. There is already a large area collection for Greece (25% covered in 2002-03). M. Zavenbergen estimates that Ikonos has the capacitiy to do a full coverage in less than 2 months (providing that there is no cloud cover at this period). The orthorectified product has an accuracy of 5m RMSE (more or less a 1:12,000 scale standard), the Precision plus product has an accuracy of 0.90m RMSE (fit to 1:2,500 scale standard). However for covering large area the new Standard Ortho product or the Geo product are the most appropriate.

He stressed that GAF R&D department performed some olive trees mapping using e-Cognition software. Some examples were presented. He claimed that Ikonos images are as suitable as Quickbird images for the identification of trees.

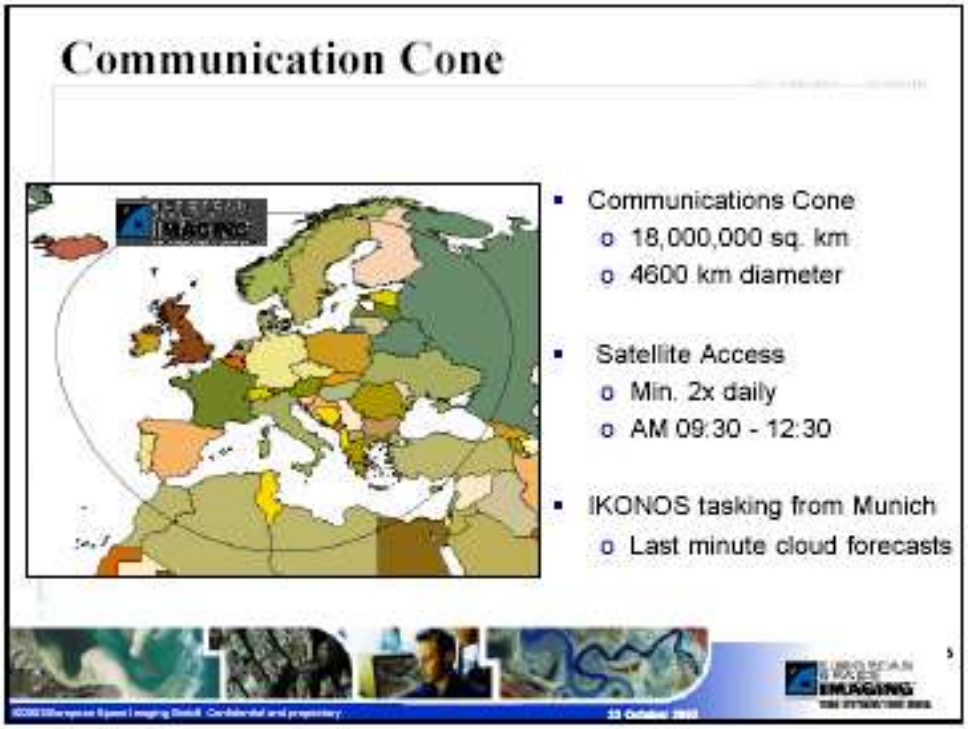
(Presentation)

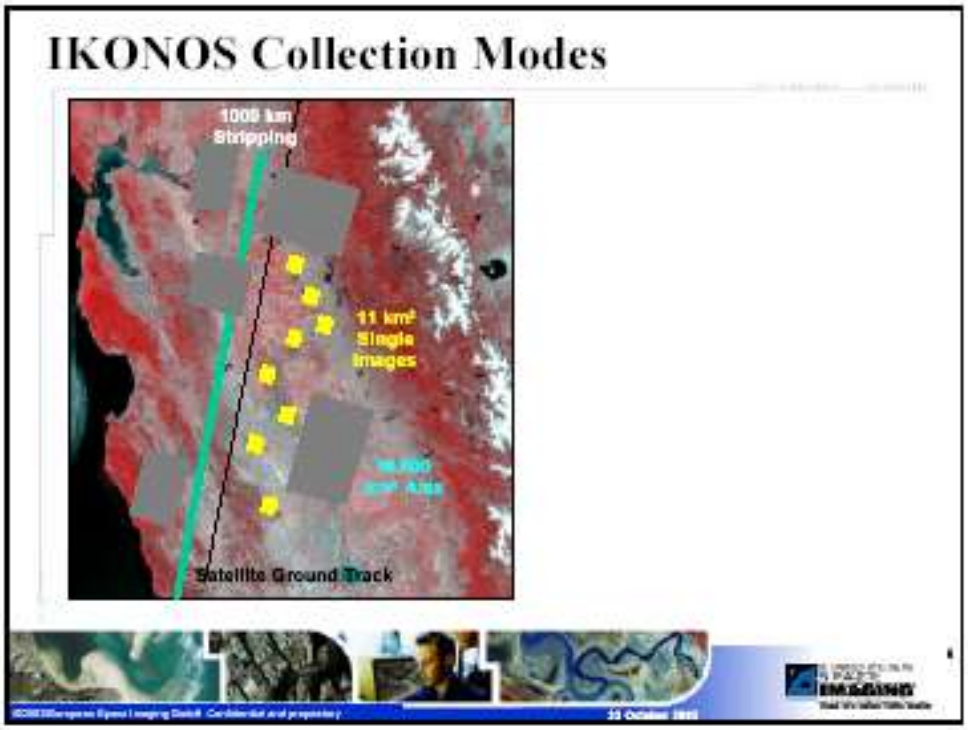

IKONOS imagery
for olive tree detection and analysis
2nd workshop on the implementation of Olive GIS
Glyfada, June 24 – 25, 2003
Adrian Zevenbergen
Director of Sales
MARS
EUROPEAN SPACE IMAGING


Overview
Company introduction
Advantages of operating in the region
IKONOS 80 cm
IKONOS' collection capabilities
Applications & customers


Introducing
European Space Imaging
EUROPEAN SPACE IMAGING

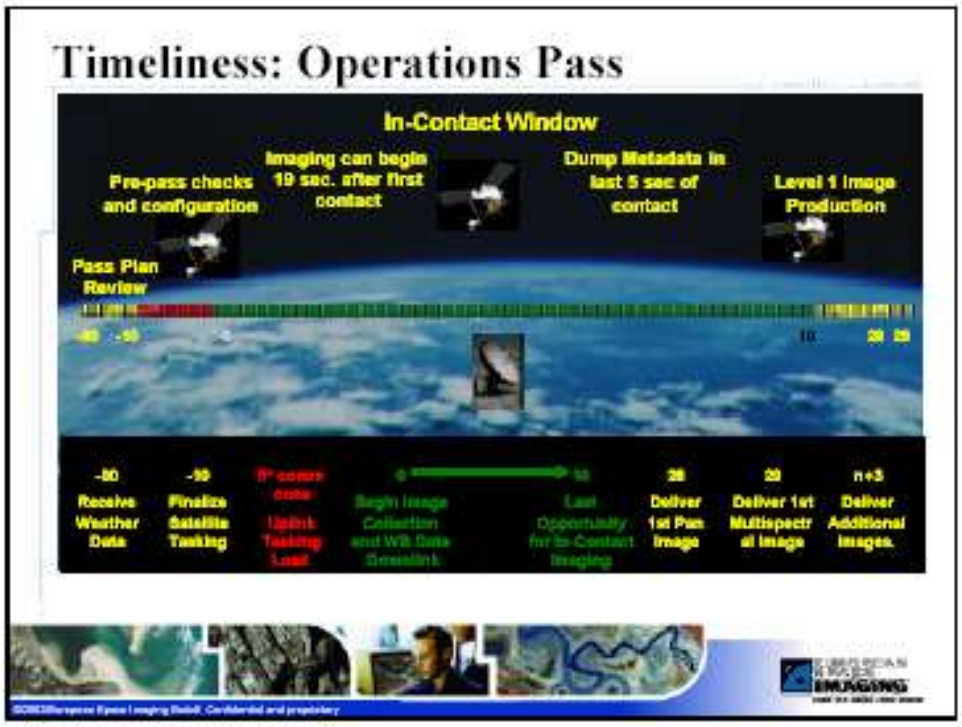

About Us
European Space Imaging
Established October 2002
IKONOS sales since November 2002
Continuation of IKONOS program
Two technology partners
GAFAG
DLR
EUSI groundstation operated by DLR


Communication Cone
Communications Cone
18,000,000 sq. km
4600 km diameter
Satellite Access
Min. 2x daily
AM 09:30 - 12:30
IKONOS tasking from Munich
Last minute cloud forecasts


IKONOS Collection Modes
1000 km
Stripping
11 km²
Single
Images
Satellite Ground Track


IKONOS in action over Europe


Single Channel Program
Access to Global Imagery
Through the combination of EUSI's and SIME's comm cones
Through Space Imaging's Global Network (SIGN)
Through on-board recorder
Most Advantegeous Prices
Fast Delivery


Timeliness: Operations Pass
In-Contact Window
Pre-pass checks and configuration
Imaging can begin 19 sec. after first contact
Dump Metadata in last 5 sec of contact
Level 1 Image Production
Pass Plan Review
-90
Receive Weather Data
-10
Finalize Satellite Tasking
0
Begin Image Collection
10
Deliver 1st Pan Image
20
Deliver 1st Multispectral Image
n+3
Deliver Additional Images.


Global IKONOS Archive: 65,500 images
0
100
200 Miles

Advantages of a regional ground station

- Local tasking
  - Control IKONOS while over Europe
- Direct access to the satellite
  - Last minute consideration of weather
- In house production
  - Same day production and shipment / FTP

⇒Fast tasking, production and delivery

⇒Customer-tailored Production

⇒Efficient Collection

Large area collections: e.g. Greece

- Size: 131,940 sq km
  - 25% covered 2002-2003
- IKONOS collection capacity
  - 1.9 mo for Geo (60-90 deg)
  - 2.3 mo for 67-90 deg

(Cloud cover delay not factored in)

- Collection capacity far superior to any other VHR system


IKONOS Products
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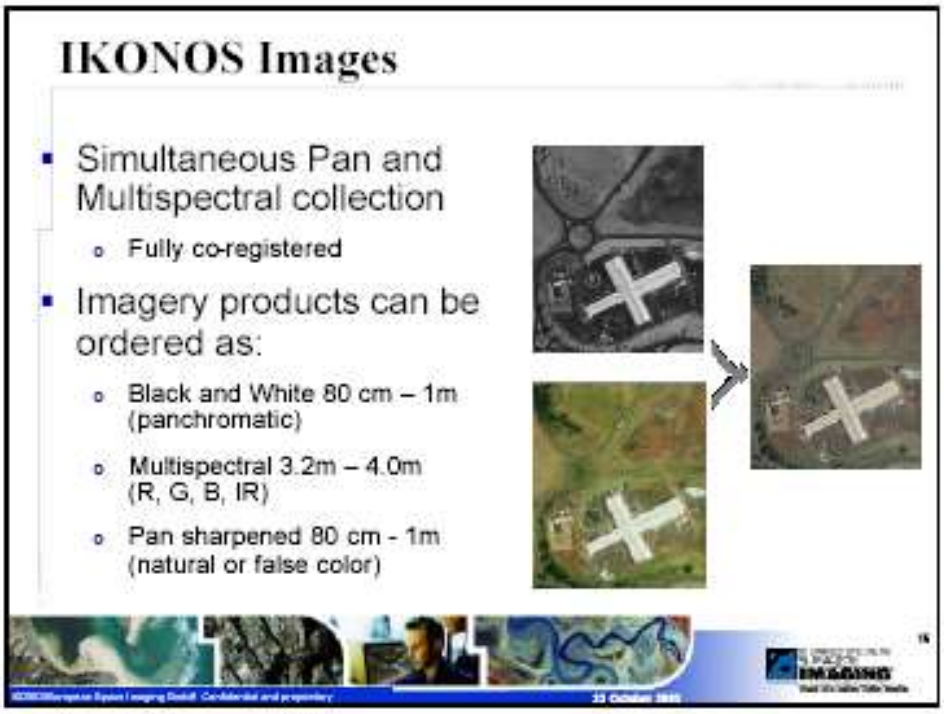

IKONOS Images
Simultaneous Pan and Multispectral collection
Fully co-registered
Imagery products can be ordered as:
Black and White 80 cm – 1m (panchromatic)
Multispectral 3.2m – 4.0m (R, G, B, IR)
Pan sharpened 80 cm - 1m (natural or false color)

Products

Name	Rectification	Mapping scale	CE90	RMS	GCP	DEM	RPC
Geo	Geo		15m*	7			
Ortho-Kit	Geo		15m*	7			✓
Reference	Ortho	1:50,000	25m	12		✓	
Pro	Ortho	1:12,000	10m	5		✓	
Precision	Ortho	1:5000	4m	2	✓	✓	
Precision Plus	Ortho	1:2500	2m	0.90	✓	✓	
Reference Stereo	Epi-polar (LE90)		25m 22m	12 14			✓
Precision Stereo	Epi-polar (LE90)		4m 6m	2 4	✓		✓
ITM	DEM (LE90)		12m	7			

(*) Georectified images accuracy is exclusive of terrain displacement.

New: Standard Ortho

- Useful for large area mapping and GIS
- 50m CE90 (24m RMSE)
- Orthorectified but not mosaicked
- Suitable for mapping at 1:100,000 scale
- Applications: GIS applications that don't require high positional accuracy: Base mapping at 1:100,000

Geo

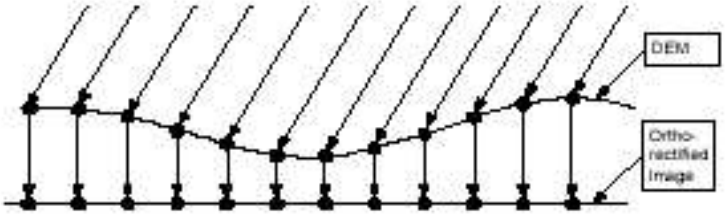
- Radiometrically corrected
- Rectified at constant height; not terrain-corrected
- 15-meter CE90 (7m RMSE), excluding terrain effects
- Collection: 60º - 90º
  72º to 90º option
- Applications:
  Projects with limited budgets, Disaster response, reconnaissance & media, low cost, quick look product for visual interpretation

Geo Ortho Kit

- 15m CE 90 (7m RMSE); not including effects of terrain
- Collection: 60º to 90º
  72º to 90º option
- Not Mosaicked
- IGM included
- Improve accuracy with GCP(s), Orthorectify with DEM
- Applications:
  Photogrammetric block adjustment & Mono image feature extraction

Orthorectification

- Orthorectification with Digital Elevation Model
  - Corrects for terrain displacement
  - Products: Reference, Pro, Precision, Precision Plus



Reference

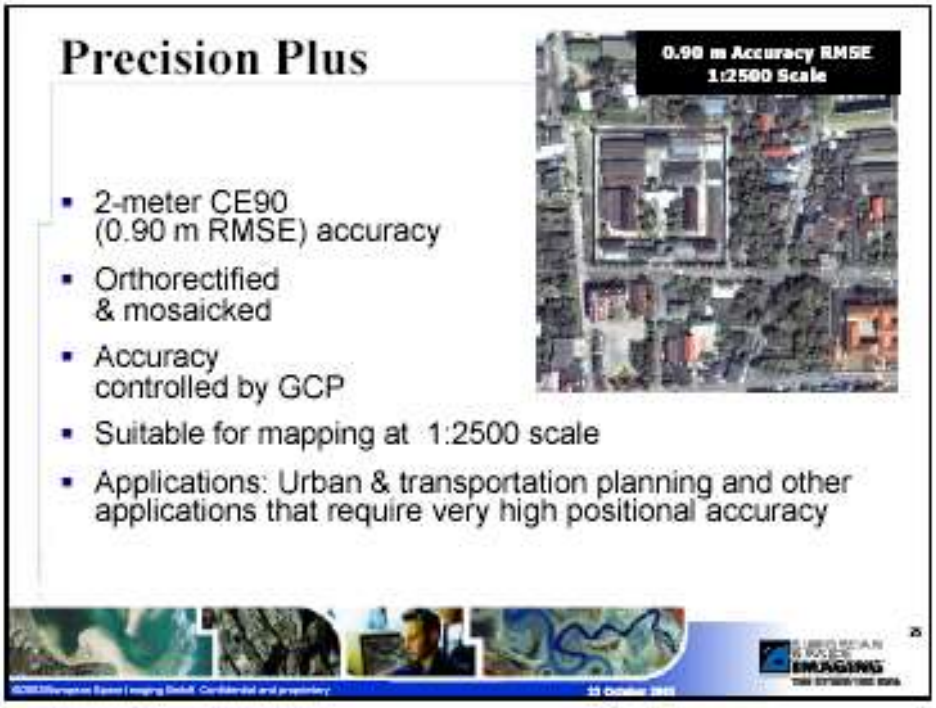
- Useful for large area mapping and GIS
- 25m CE90 (12m RMSE)
- Orthorectified & mosaicked
- Suitable for mapping at 1:50,000 scale
- Applications: GIS applications that don't require high positional accuracy: Real estate, insurance & base mapping at 1:50,000

Pro

- 10-meter CE90 (4.8m RMSE)
- Orthorectified & Mosaicked
- Suitable for 1:12,000 scale mapping
- Does not require GCP. Best IKONOS accuracy without GCP
- Applications: Transportation and infrastructure planning, economic development and site evaluations and base mapping at 1:12,000

Precision

- High positional accuracy 4-meter CE90 (2m RMSE)
- Orthorectified & mosaicked
- Accuracy controlled by GCP
- Applications: Urban mapping, cadastral mapping, facility mapping, precision agriculture and other applications at 1:5,000 scale


Precision Plus
0.90 m Accuracy RMSE
1:2500 Scale
2-meter CE90
(0.90 m RMSE) accuracy
Orthorectified
& mosaicked
Accuracy
controlled by GCP
Suitable for mapping at 1:2500 scale
Applications: Urban & transportation planning and other applications that require very high positional accuracy

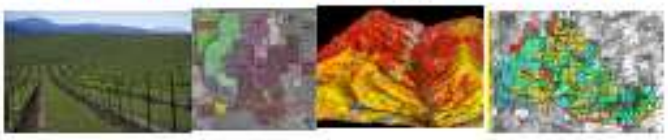

Stereo
Asymmetric Collection
72°– 90° / 60° – 90°
Reference Stereo
25 m CE90 (11.6 m RMS), 22 m LE90
No ground control required
Precision Stereo
4 m CE90 (1.9 m RMS), 5 m LE90
Ground Control required

Recent NIMA Evaluation of IKONOS

Product	Specification	Measurement	Cases
Pro Ortho	10m CE90	9.4m CE90	12
Precision Ortho	4.0m CE90	3.6m CE90	5
Reference Stereo	25m CE90 horiz 22m LE90 vert.	7.9m CE90 horiz 7.5m LE90 vert	13

- "Accuracy of individual stereo strips under 10 meters" ... "well under accuracy specification"
- IKONOS "can replace NTM for mapping applications"
- 4.5 NIIRS evaluation

Customers & Applications



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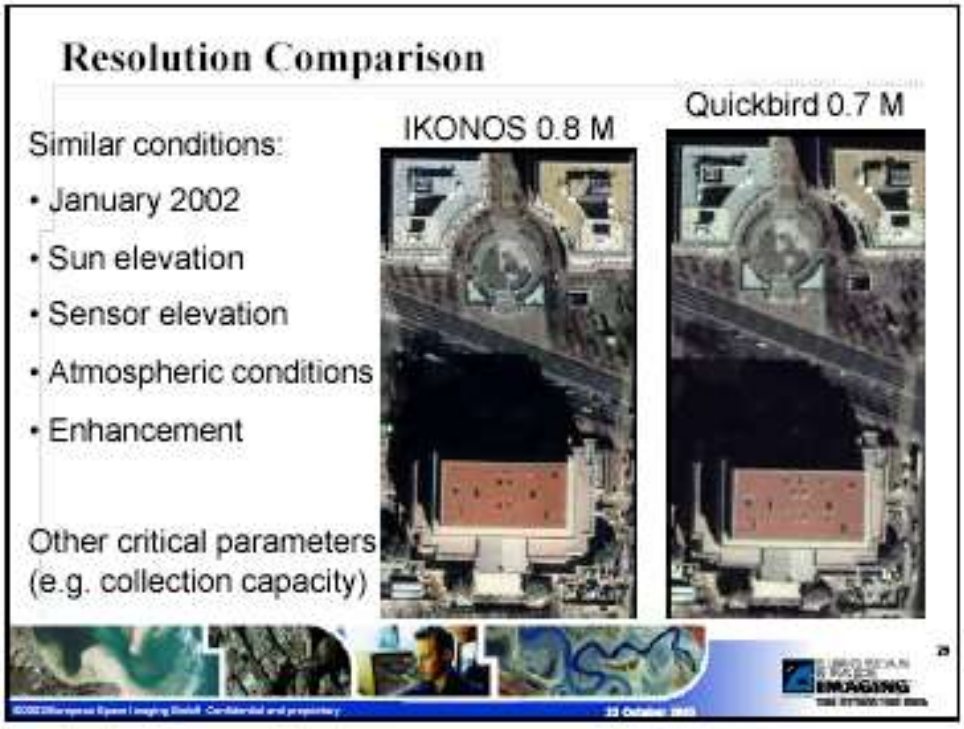
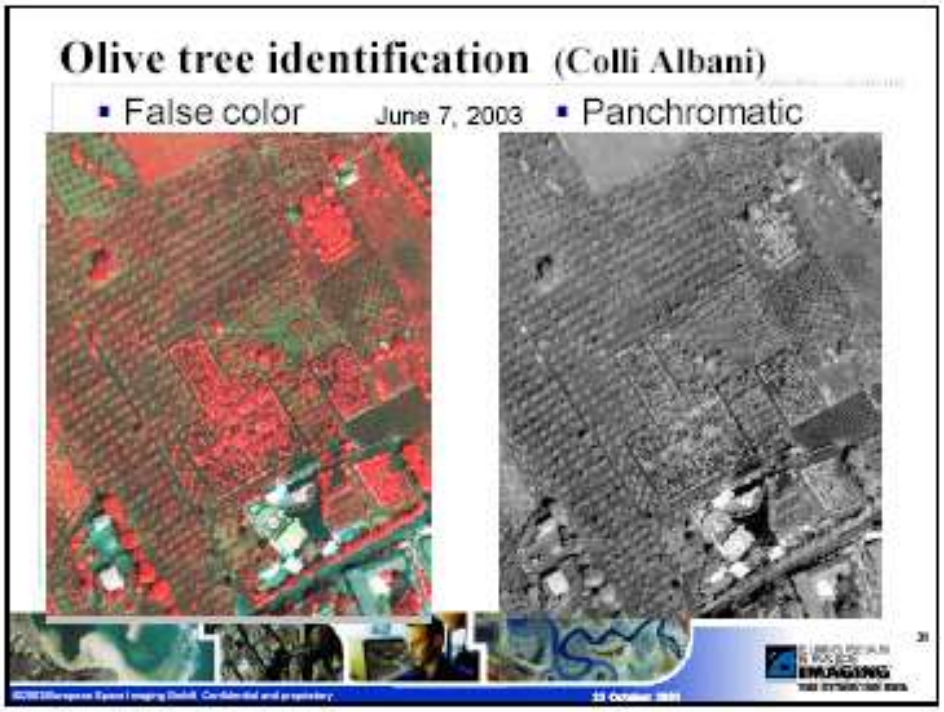
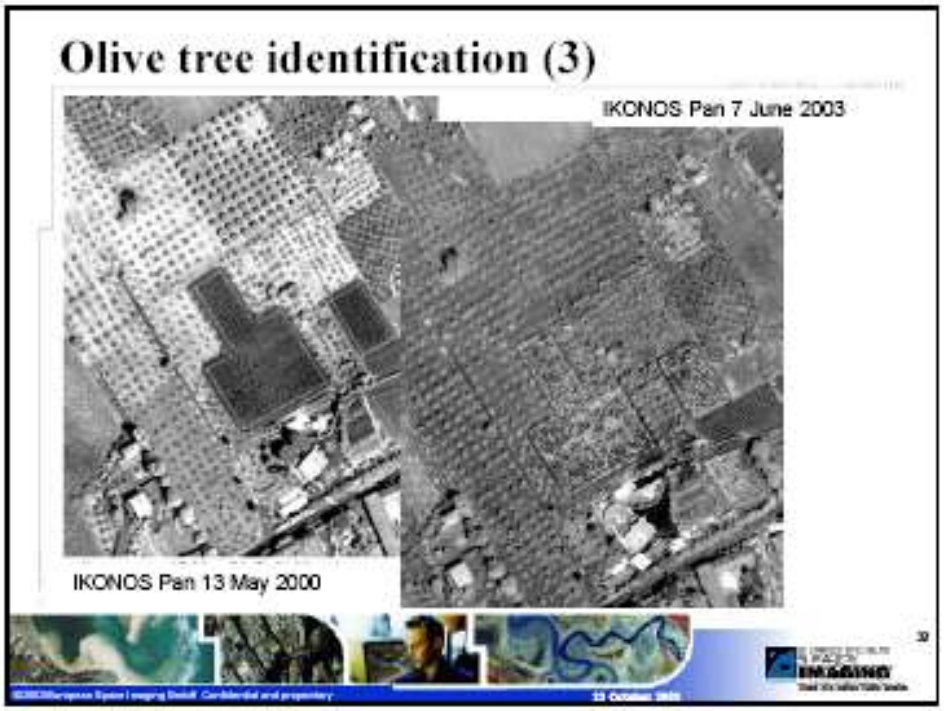
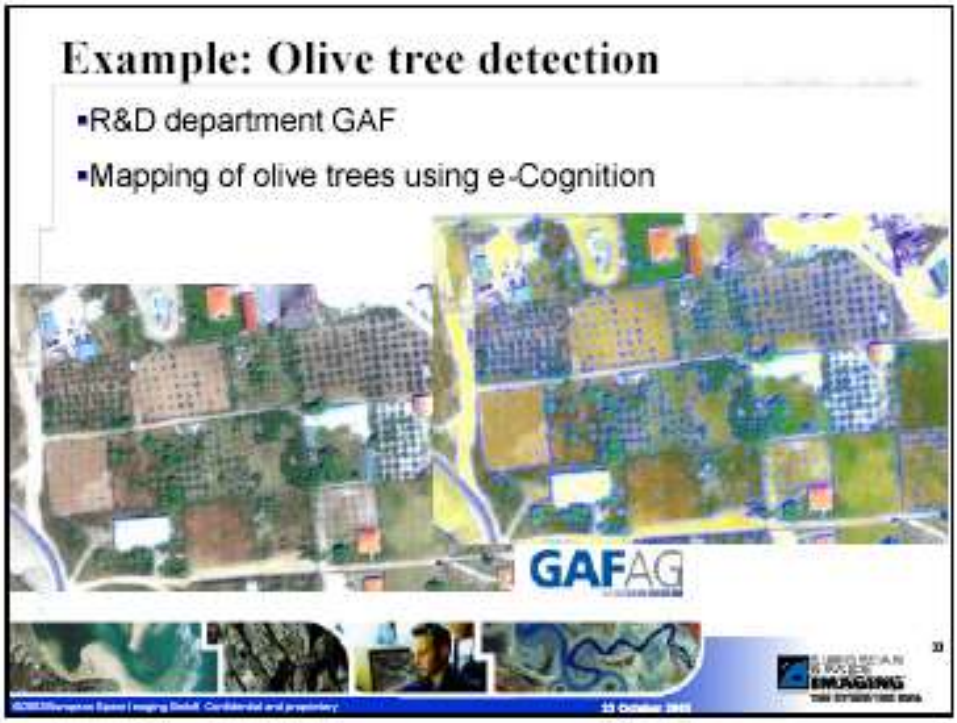
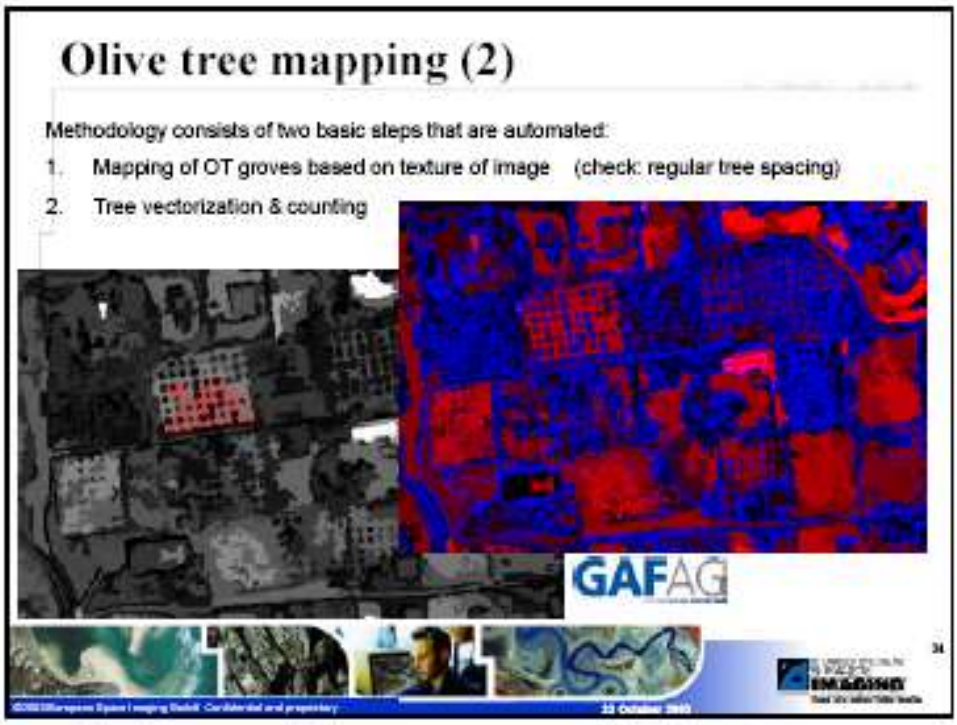

Resolution Comparison
Similar conditions:
• January 2002
• Sun elevation
• Sensor elevation
• Atmospheric conditions
• Enhancement
Other critical parameters
(e.g. collection capacity)
IKONOS 0.8 M
Quickbird 0.7 M

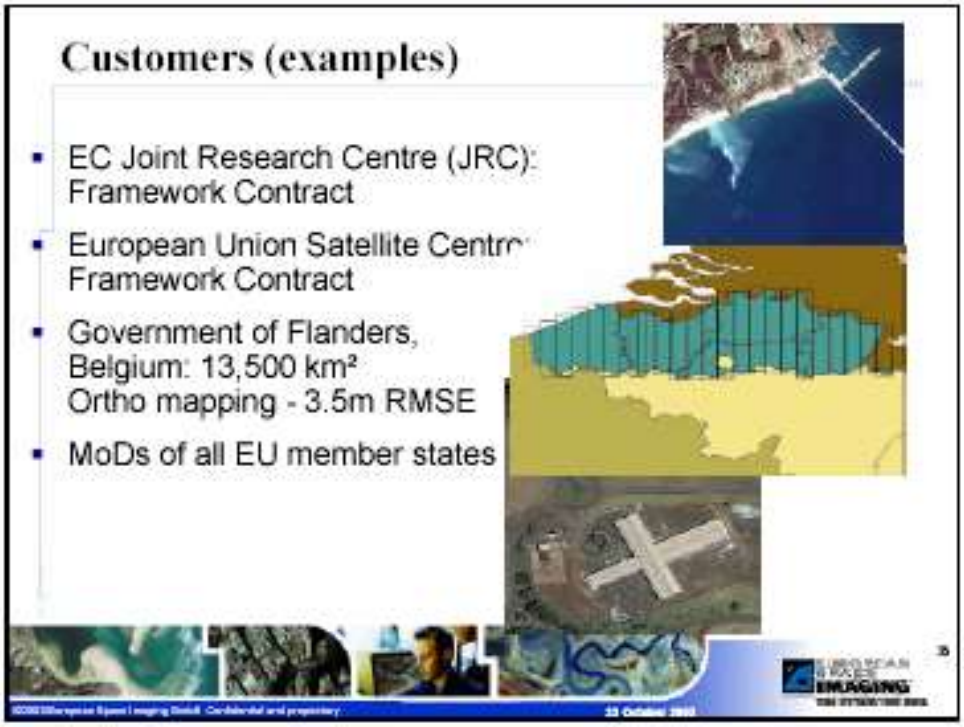

Olive tree identification with VHR imagery
Quickbird pan 5 March 02-Colli Albani
Ikonos pan 13 May 01-Colli Albani
•Compare the right products
•Collection date (2 year difference)
•Same time of year (sun elevation)
•Similar sensor elevation angle


Olive tree identification (Colli Albani)
False color
June 7, 2003
Panchromatic


Olive tree identification (3)
IKONOS Pan 7 June 2003
IKONOS Pan 13 May 2000


Example: Olive tree detection
▪R&D department GAF
▪Mapping of olive trees using e-Cognition
GAFAG


Olive tree mapping (2)
Methodology consists of two basic steps that are automated:
1. Mapping of OT groves based on texture of image (check: regular tree spacing)
2. Tree vectorization & counting
GAFAG


Customers (examples)
EC Joint Research Centre (JRC): Framework Contract
European Union Satellite Centre Framework Contract
Government of Flanders, Belgium: 13,500 km²
Ortho mapping - 3.5m RMSE
MoDs of all EU member states


Applications (examples)
Agriculture
Civil Government
Environmental
Exploration/Resources
Forestry
Mapping
Media
Nat'l/Global Security
Real Estate/Insurance


IKONOS Continuity – Block II
EUROPEAN SPACE IMAGING


Block II Leverages from Successful Block I Design & LM900A Bus
Block I
Block II
▪Common (~40%)
ACS - (added agility)
Ground Architecture
Product Order Management
Product Generation
▪New /Modified /LM900A (~60%)
Bus Structure (LM900A)
Focal Plane
– detector size- line rate - number of detectors
Telescope Optics
– aperture - field of view - focal length
Communication System – 1.2 Gbps
Data Storage Unit – 1.4 TBits
Power Subsystem – Solar Array & Battery (LM900A)
Propulsion (LM900A) – Improved Orbit Adjust
MYK-15 Encryption + Centurion – NSA > 2006
Multiple Satellite Mission Planning
Block II takes advantage of technology improvements since Block I and Maximum Commonality to LM900A BUS


1.1 Meter Aperture IKONOS Block II
1.1m Aperture on LM900A Bus
Altitude: 680 km
GSD: 0.4 Meter Nadir
GSD: 0.5 Meter 60 deg elevation
Swath Width: 15.4 km Nadir
Swath Width: 20.5 km @ 0.5m GSD
Provides 2X the Area Collect of Block 1
and at 2X Improved Resolution


Improved Collection Coverage:
Field of Regard, Swath Width, & GSD
Block I
0.7m Aperture
Block II
1.1m Aperture
Strip width
15 km
Strip width
21 km
Point targets
15 x 15 km
Point targets
21 x 21 km
Nadir GSD = 0.4
Nadir GSD = 0.8

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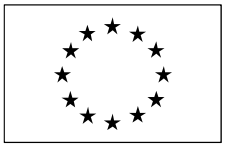
Session 4 – Presentation of Quickbird products, *Bruno Biagini, Eurimage*

Summary

M. Biagini works for Eurimage which is the exclusive distributor for DigitalGlobe for Europe. He first presented the specification of Quickbird images: 0.61m resolution for Panchro at Nadir, and 2.44m for XS images at nadir. The radiometric dynamic range is 11 bits, each image covers at least 64km2. Several products are delivered: standard imagery, basic imagery and ortho products. For the orthorectification it is recommended to use basic products (radiometric corrections, sensor corrections but no geometric corrections) instead of standard level (radiometric and sensor corrections, geometric corrections,application of a rough DEM for correction of altimetric distorsions, map projected product). There is also the Orthoready product with the same characteristics as the standard product but without application of the rough DEM, it is appropriate for customers who want to make their own orthorectification. M. Biagini showed many examples of images with olive trees and other trees. On some images it is possible to separate the species.

(Presentation)



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www.eurimage.com

2nd Workshop on Olive GIS

QuickBird

Bruno Biagini
JRC Account Manager

QuickBird Overview

- **QuickBird**
  - QuickBird System and Products
  - QuickBird for olive and vineyard detection
  - Commercial Overview

QuickBird System and Products

QuickBird Spacecraft Specifications

- 0.61-meter panchromatic resolution (at nadir, 0.72 m at 25° off-nadir look angle)
  - 450-900 nm (grayscale)
- 2.44-meter multispectral resolution (at nadir, 2.88 at 25° off-nadir look angle)
  - 450-520 nm (blue)
  - 520-600 nm (green)
  - 630-690 nm (red)
  - 760-900 nm (near IR)

System Characteristics

Orbit altitude	450 Km (walking orbit)
Orbit time	93.6 min
Max resolution	61 cm (nadir) 72 cm (25° off-nadir)
Swath width	16.5 Km (nadir) 20.8 Km (25° off-nadir)
Radiometric dynamic range	11 bit
On-board storage	128 Gbit (approx. 57 scenes)
Revisit time (@ 45° latitude)	approx. 4 days (0-25°) approx. 7 days (0-15°)

QuickBird Basic Imagery

- **"RAW" product**
  - Radiometric corrections
  - Sensor corrections
  - No geometric corrections
  - No mapping
- **GSD varies with off-nadir angle**
  - 61 cm (nadir) to 72 cm (25°) Pan
  - 2.44 m (nadir) to 2.88 m (25°) MS
- **No mosaicing or pansharpening**
- **Scene-based product**
  - Minimum size 1 Full scene (272 km^2 at nadir)
  - 14x14 km largest size to fit in a single scene

QuickBird Standard Imagery

- **"System Corrected" product**
  - Radiometric and sensor corrections
  - Geometric corrections
  - Map projected
- **Fixed GSD:**
  - 60 cm Pan, 2.4 m MS
  - 70 cm Pan, 2.8 m MS
- **Geolocation Accuracy Spec (excluding topographic displacement & viewing angle)**
  - 14 m RMSE (23 m CE90%)
- **No mosaicing**
- **Area-based product**
  - Minimum size 64 km² (25 Km² from archive)

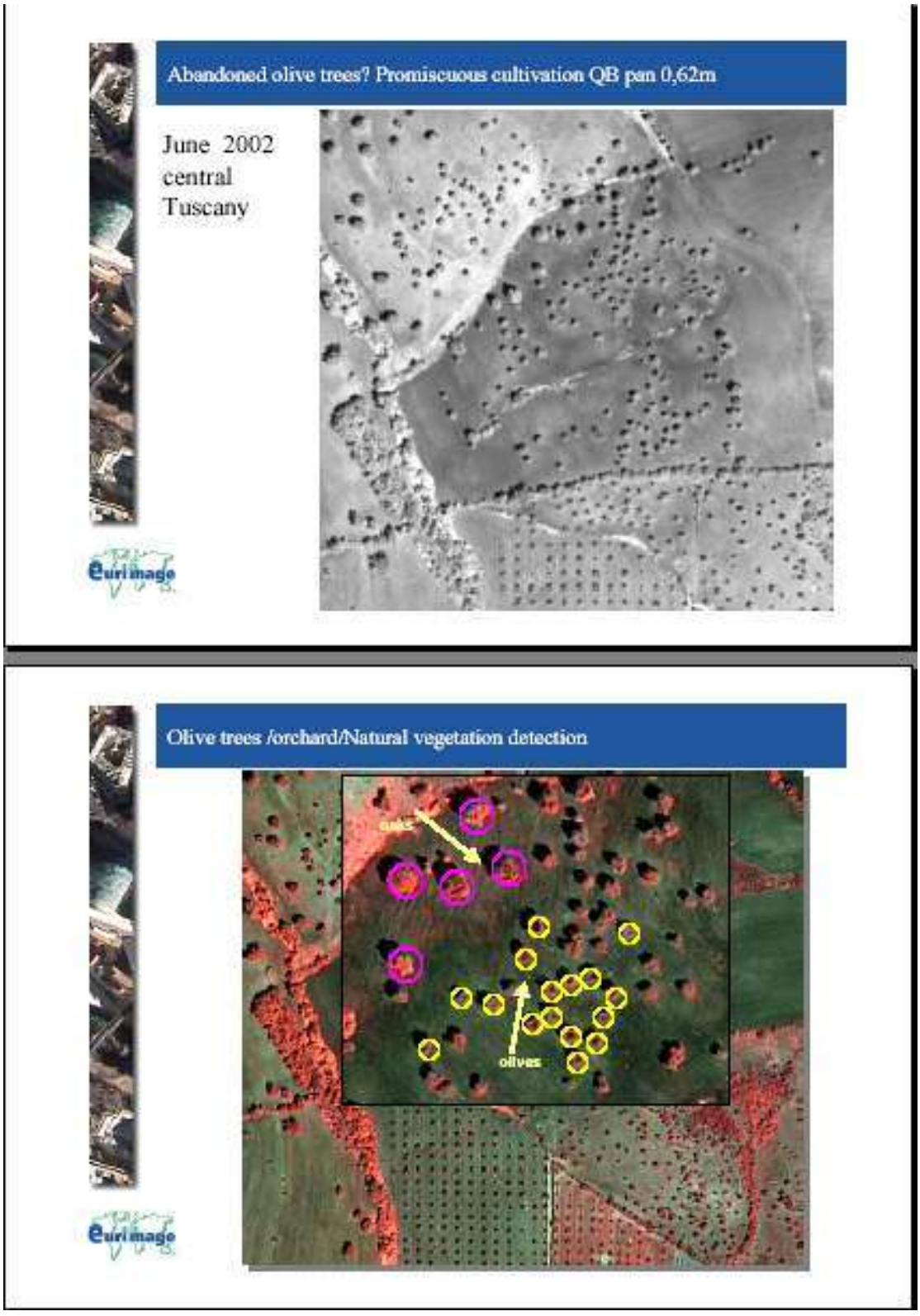
QuickBird Ortho-ready Imagery

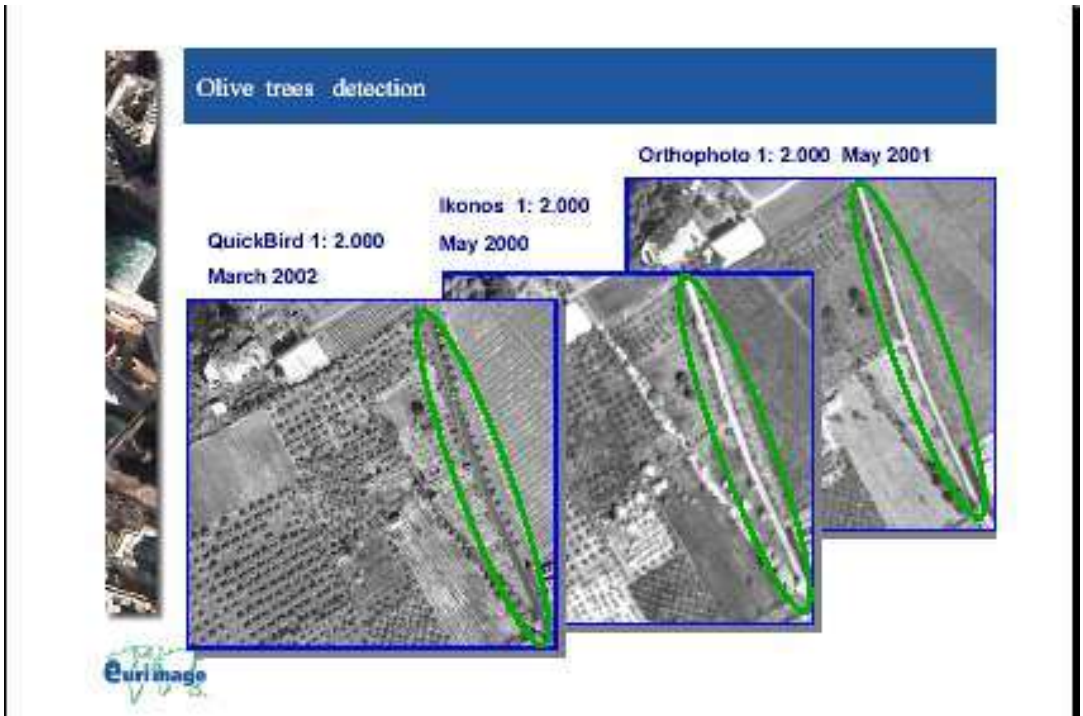
- **Same characteristics as Standard product, but without application of rough DEM (GTOPO30) for altimetric distorsion corrections**
- **Advantages:**
  - Higher location accuracy achievable with further processing (comparable to Basic products)
  - Order on a Km² basis (less money and less bytes to work on)
  - Availability of Pansharpened images or Bundle with Pan and MS co-registered

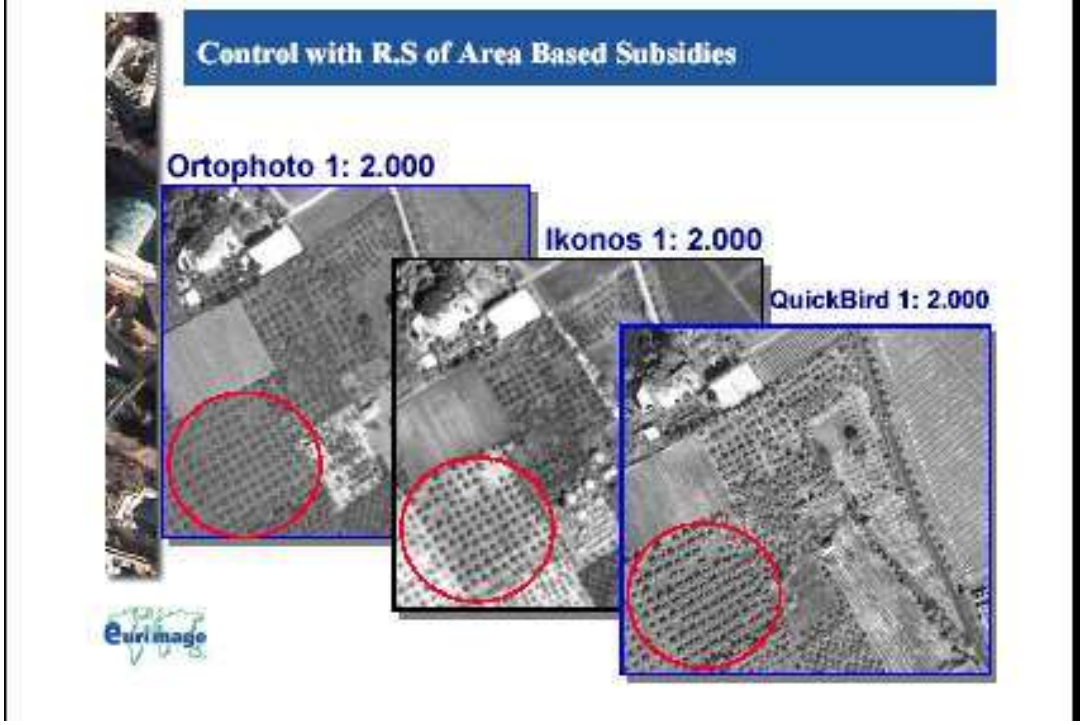
QuickBird Imagery Overview

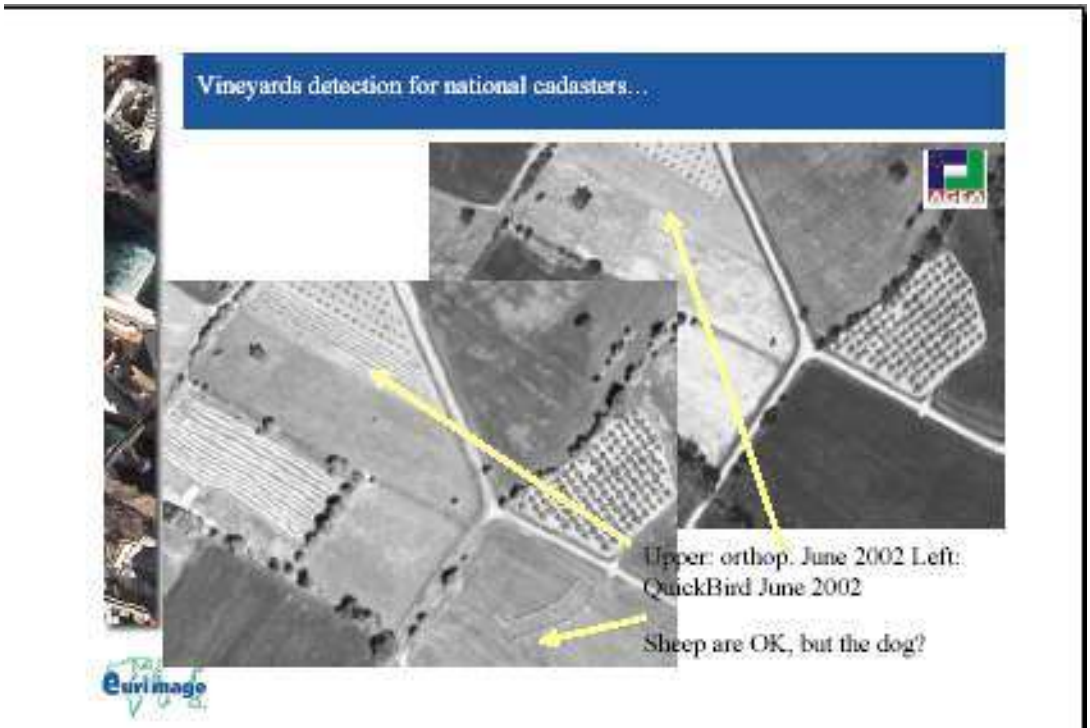
- **Basic imagery**
  - Customers can have complete control over final product
  - Rigorous orthorectification available through IP software partners (camera model and ephemeris availability)
  - Ideal for large coverages
- **Standard Imagery**
  - Image registered and georeferenced
  - RPCs available at no extra cost
  - "Ortho-ready" product for further image processing
- **Ortho Imagery**
  - Suitable for GIS applications or wherever need of high accuracy
  - Eventually DEM and GCPs to be provided

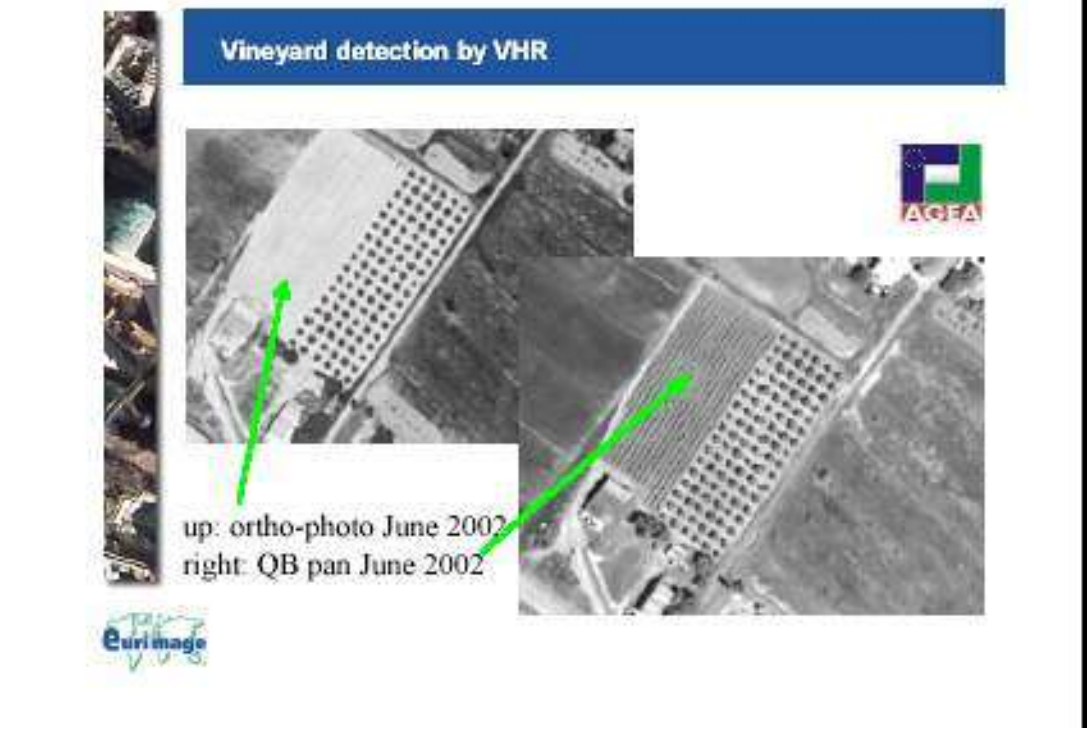
Olive and Vineyard Detection


Abandoned olive trees? Promiscuous cultivation QB pan 0,62m
June 2002
central
Tuscany
Euri mage
Olive trees /orchard/Natural vegetation detection
olives
olives
Euri mage

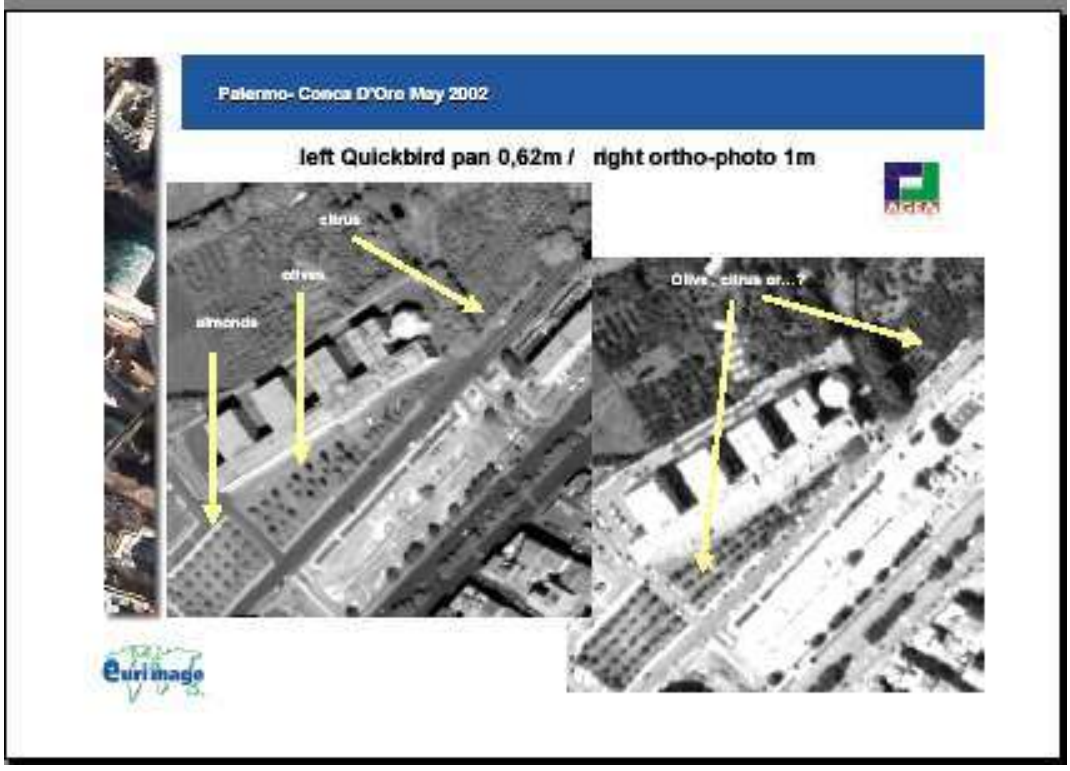

Olive trees detection
Orthophoto 1: 2.000 May 2001
Ikonos 1: 2.000
May 2000
QuickBird 1: 2.000
March 2002
eurimage


Control with R.S of Area Based Subsidies
Ortophoto 1: 2.000
Ikonos 1: 2.000
QuickBird 1: 2.000
eurimage


Vineyards detection for national cadasters…
Upper: orthop. June 2002 Left: QuickBird June 2002
Sheep are OK, but the dog?
eurimage

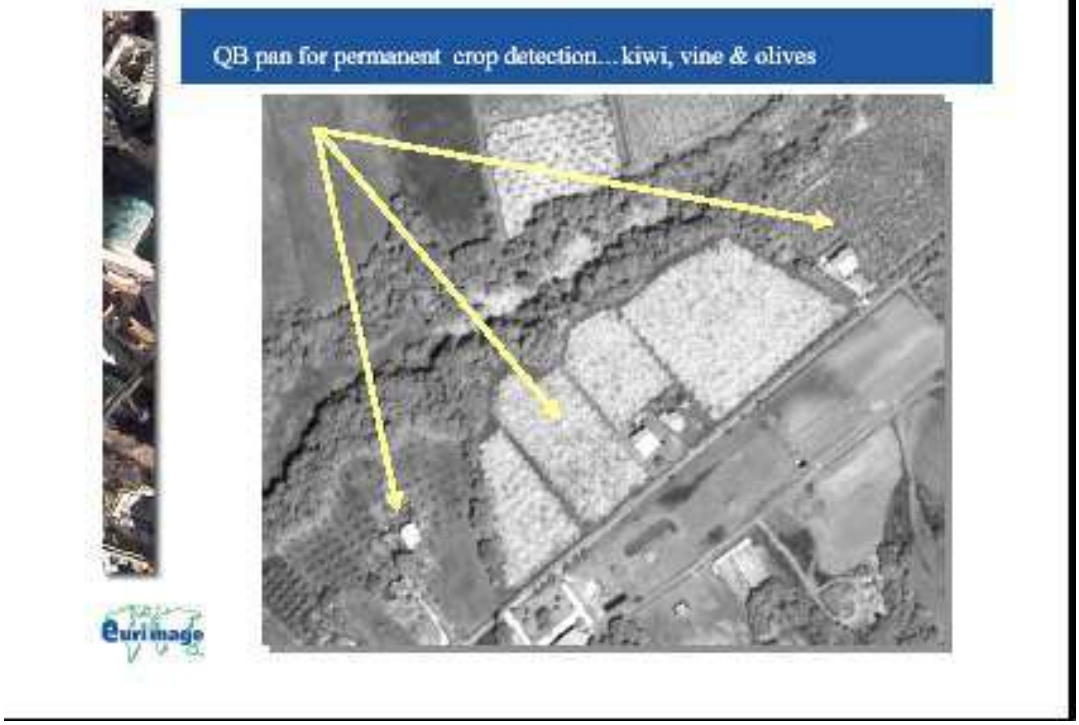

Vineyard detection by VHR
up: ortho-photo June 2002
right: QB pan June 2002
eurimage

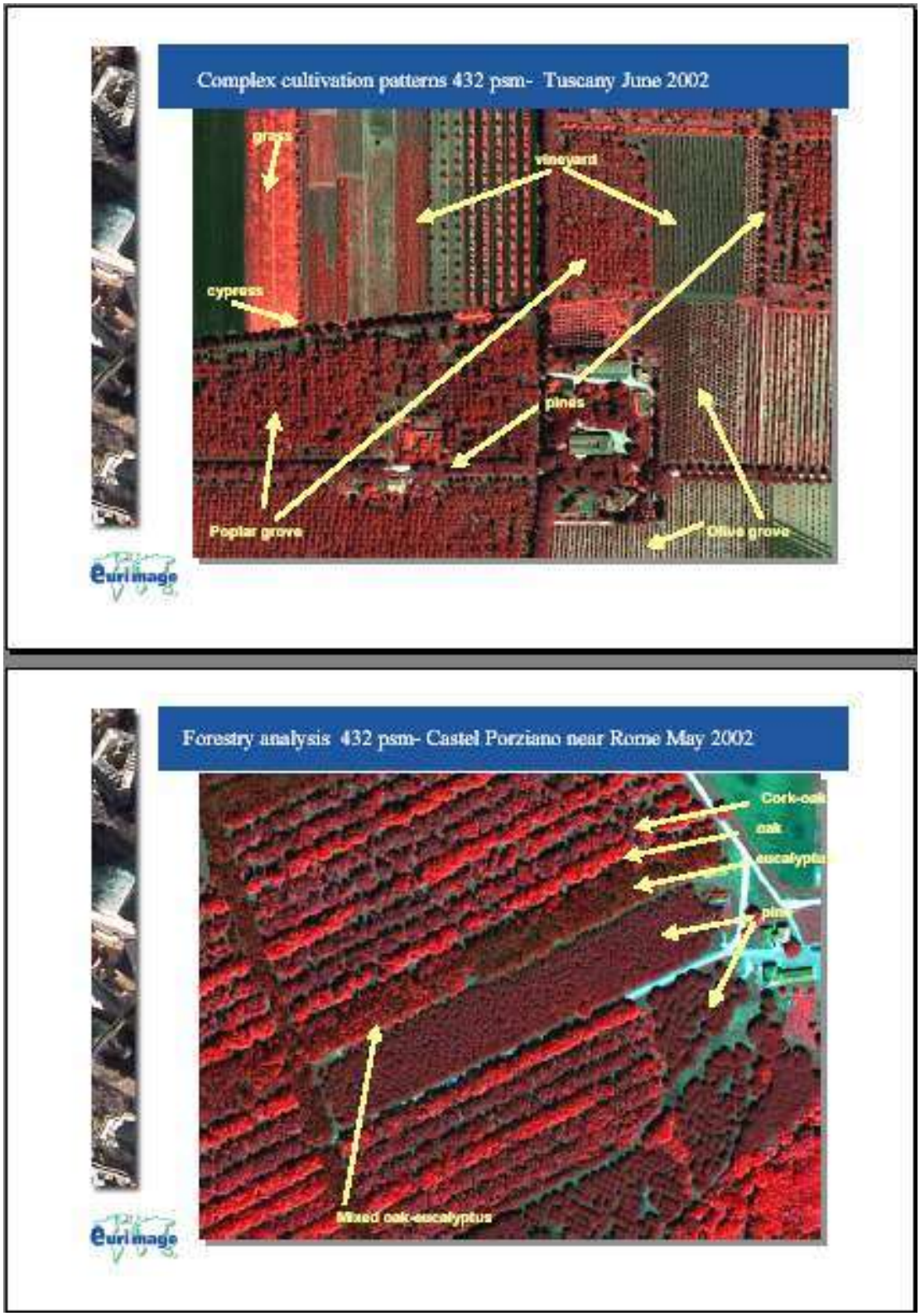

Permanent vegetation Detection
QuickBird
Pansharpened
false colour,
13 June 2002
Tuscany
pines
oaks
robinia
olives
oaks
Horse riding field
cypresses
eurimage


Palermo- Conca D'Oro May 2002
left Quickbird pan 0,62m / right ortho-photo 1m
citrus
olives
almonds
Olive, citrus or...?
eurimage


IR pan also allows natural colours analysis
Palermo- Conca D'Oro May 2002 Quickbird 321 psm 0,62m
Palermo- Conca D'Oro May 2002
left ortho-photo 1m
right Quickbird pan 0,62m
olives
Citrus with olives
Olive/citrus?
Citrus


Quickbird 2002 0,61m - Agdal- Morocco- pan towards NIR
Eurimage


QB pan for permanent crop detection.... kiwi, vine & olives
Eurimage


Complex cultivation patterns 432 psm- Tuscany June 2002
grass
vineyard
cypress
pines
Poplar grove
Olive grove
eurimage
Forestry analysis 432 psm- Castel Porziano near Rome May 2002
Cork-oak
oak
eucalyptus
pine
Mixed oak-eucalyptus
eurimage

Commercial Overview

QuickBird Commercial Standard Pricing

- Eurimage prices are in line with DigitalGlobe US policy

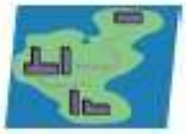
Product	Pan	MS	Bundle (Pan + MS)	Pansharpened 3-bands	Pansharpened 4-bands
Basic	6,120 $/scene	6,800 $/scene	6,180 $/scene	N/A	N/A
Ortho-Ready	22.5 $/Km2	25 $/Km2	30 $/Km2	22.5 $/Km2	30 $/Km2
Standard	22.5 $/Km2	25 $/Km2	30 $/Km2	22.5 $/Km2	30 $/Km2

- Archive Data older than 60 days - 20% price reduction
- Priority uplift + 50% on base price

Eurimage

QuickBird End User License Overview

- **Right-to-use Licenses (all non-exclusive):**



Single Organization (included):

multiple users solely within one corporation or government agency at multiple locations within a single country(*)

Multiple Organization (+25% price uplift) :

(to be identified at time of order)

- up to 10 commercial organisations (not incl. subsidiaries) in the same country(*), or
- single commercial organisation with up to 10 subsidiaries in the same country(*), or
- two distinct levels of government entity

(*) the 15 EC countries are considered as a single country

Eurimage Contact Point

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

Session 4 – The challenge of using and maintaining the Olive GIS in an operational environment, *Pr. Miguel Miranda, University of Lisbon*

Summary

M. Miranda is professor at the University of Lisbon. He has been involved in MARS-PAC activities since the beginning of those projects. He is currently appointed as senior expert by the JRC to provide the Greek Ministry of Agriculture with some technical support for the implementation of Olive-Viti GIS.

He first recalled the history of the project: from the pilot project started in 1993 a methodology based on digital orthophotos, CAPI, farmers' declarations and field surveys, for the collection of data, and GIS technology for the graphic data management, was defined. The main problem for these project was the time constraint, in spite of the fact that a lot of time was spent in bureaucracy and arguing… The level of field work was underestimated at the beginning. Another problem was to deal with very tight technical tolerances which produced a lot of discordances because of the limits of identification of trees on 1m orthophotos. Main problems were very similar between countries: very small parcels, sometimes scattered, difficult natural conditions , large amount of old and irregular plantations, problems with young plantation as well. All of these problems conducted to a very large proportion of field work in a very short period of time and with small budget.

10 years after the requirements are more sophisticated which is very demanding in terms of resources. It makes also updating and management tasks more complex and also very costly. We moved from a 'parcel based approach' to a 'tree based approach' because some problems have to be solved at tree level (eg. age of plantation, not always consistent, trees shared by several producers etc.). The only way to minimize the costs of GIS updating is to use what Pr Miranda called 'connection opportunities', ie. through access/input by the farmers (annual crop declarations, tree replacement, regional programs…), by the controllers, by the administration. Every type of IT architecture can be used provided that it helps to achieve this objective. The implementation of a multi-layer GIS (trees, vineyard, Annual crops, AE etc.) is the future

of Olive GIS; it is already being implemented in several countries. The technology-oriented approach is not relevant any more, ***the most important is to have a system made for farmers****.*

(Presentation)

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The challenge of using and maintaining the Olive GIS in an operational environment

J MIGUEL MIRANDA
UNIVERSITY OF LISBON

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ONCE UPON A TIME ...

In 1993 several pilot projects were conducted in Europe to study the feasibility of remote sensing techniques for the establishment of the Olive Register. Among its conclusions we can recall:

- Good quality field documents can be produced using photogrammetric techniques with good quality digital terrain models,
- Both trees and parcels can be iddentified in most situations,
- Video photointerpretation work on orthocorrected images can be the basis of semi-automatic procedures,
- Only if trees are represented in the system robust updating can be implemented.

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ONCE UPON A TIME ...

Volume evaluations made in 1993 were consistent with our present knowledge of the SIG-OL.

DATA FOR PORTUGAL

	PLOT	REAL
Farmers	177,341	164,450
Olive Parcels	990,335	821,000
Olive Trees	?	41,135,000

« On compte environ 2 240 000 producteurs d'huile d'olive dans l'UE [...] Le Portugal et la France, producteurs plus modestes, en comptent respectivement 90 000 et 20 000 »

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BASIC STRATEGY ...

- To rely on digital orthophotos as cartographic basis,
- To rely on CAP I and farmer's declarations to built the register database,
- To rely on GIS technology for data management,
- To assure a significant amount of field controls in order to get a reliable description of the reality.

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ADDITIONAL STRATEGY ...

- Variable importance of automatic detection techniques,
- Variable use of in situ computer infrastructure,
- Methodological adaptations foreseen as a function of local agronomical and socio-economic variability.

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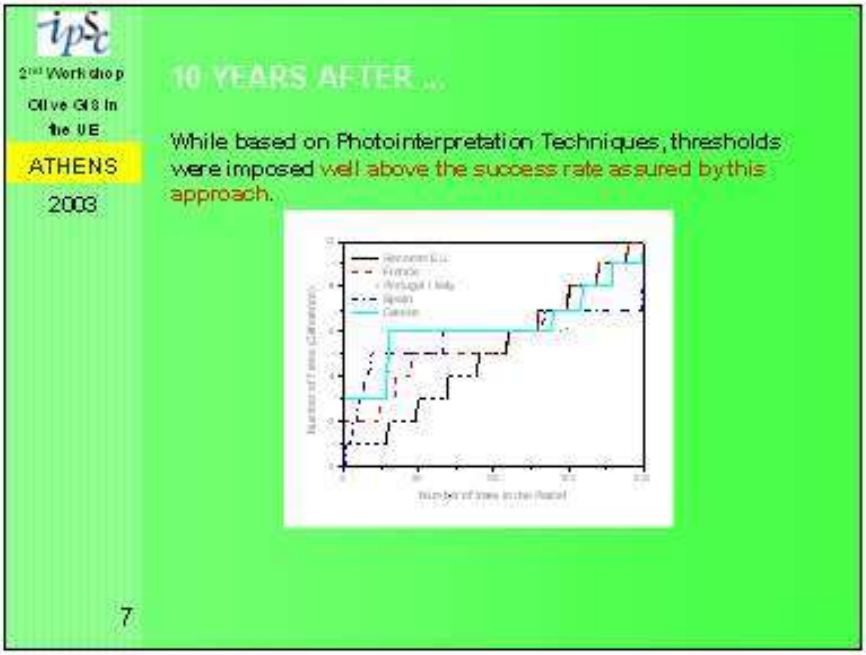
10 YEARS AFTER ...

System Implementation was made sligthly ahead of (unexpensive) technology. In most cases the time schedule for field work and CAPI was too short.

The 1993-2003 period corresponded to sligthly more than one year of real work and more than eigth years of burocracy and arguing. However, time was the biggest constrain ...

6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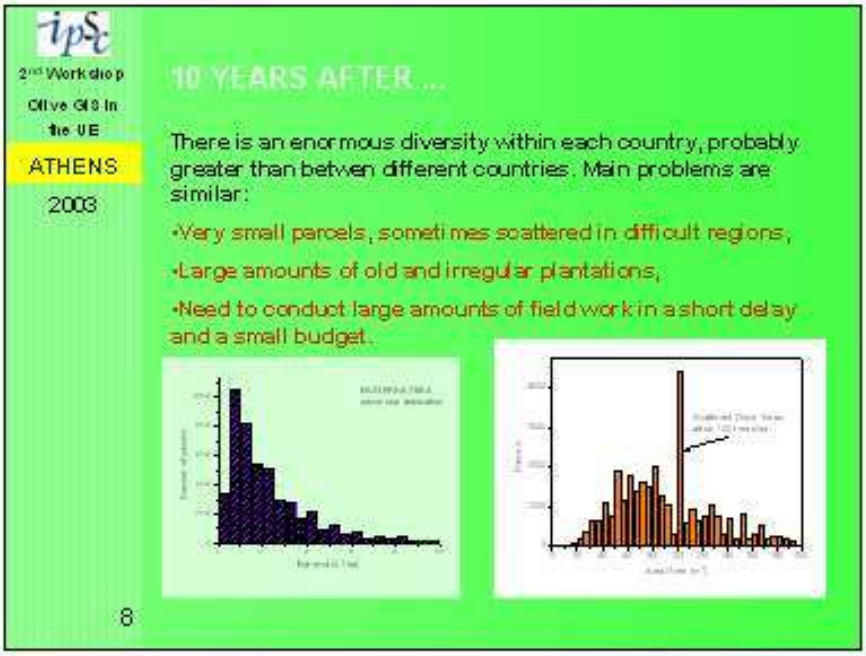
10 YEARS AFTER ...
While based on Photointerpretation Techniques, thresholds were imposed well above the success rate assured by this approach.
7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10 YEARS AFTER ...
There is an enormous diversity within each country, probably greater than betwen different countries. Main problems are similar:
•Very small parcels, sometimes scattered in difficult regions;
•Large amounts of old and irregular plantations;
•Need to conduct large amounts of field work in a short delay and a small budget.
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10 YEARS AFTER ...

System is evolving from a CAPI-based system (potential olive trees) to a field based system (real olive trees), in the same sense that IACS moved from a system able to check the likelihood of declarations (ilots) to a cadastral-type system.

Now,

- the overshoot is not accepted,
- the thresholds are only possible with a large amount of direct inspections,

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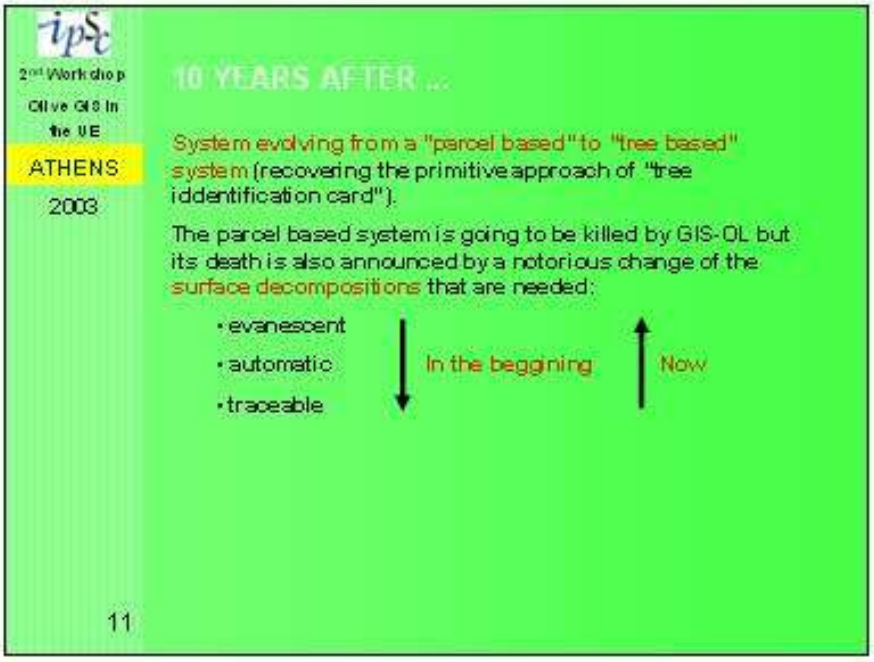
10 YEARS AFTER ...

Also ...

- Need to manage the age of plantation in a sohisticated way,
- Need to manage parcel share between farmers and an acceptance criterion based on the farm level,
- Need to combine alphanumeric and graphical queries, requiring a link between parcels and trees,
- Need to manage different ways to account for the trees inside a single parcel,
- Need to establish the accuracy of the iddentification (distinguish between CAPI and field visit).

10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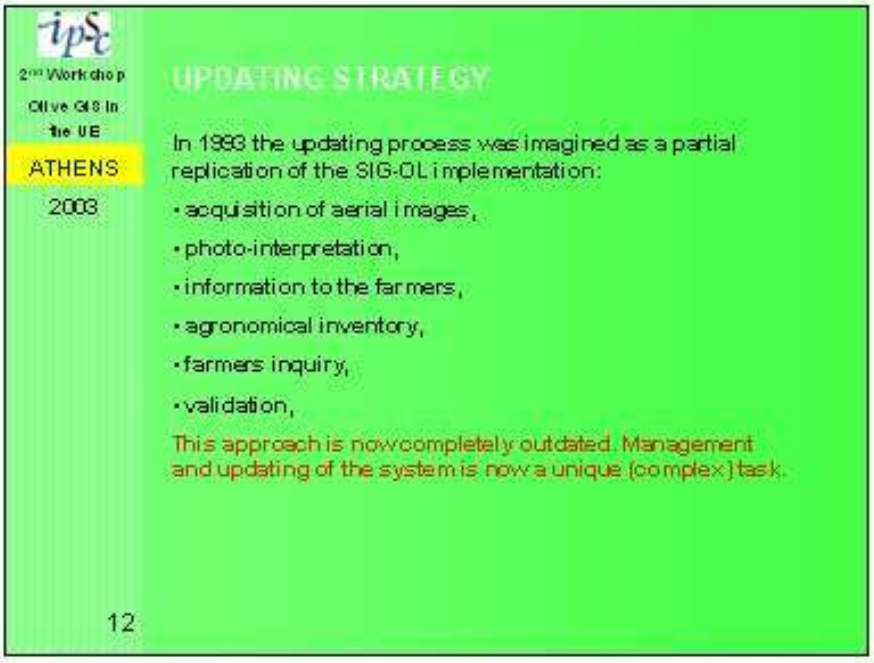
10 YEARS AFTER ...
System evolving from a "parcel based" to "tree based" system (recovering the primitive approach of "tree iddentification card").
The parcel based system is going to be killed by GIS-OL but its death is also announced by a notorious change of the surface decompositions that are needed:
• evanescent
• automatic
• traceable
In the beggining
Now
11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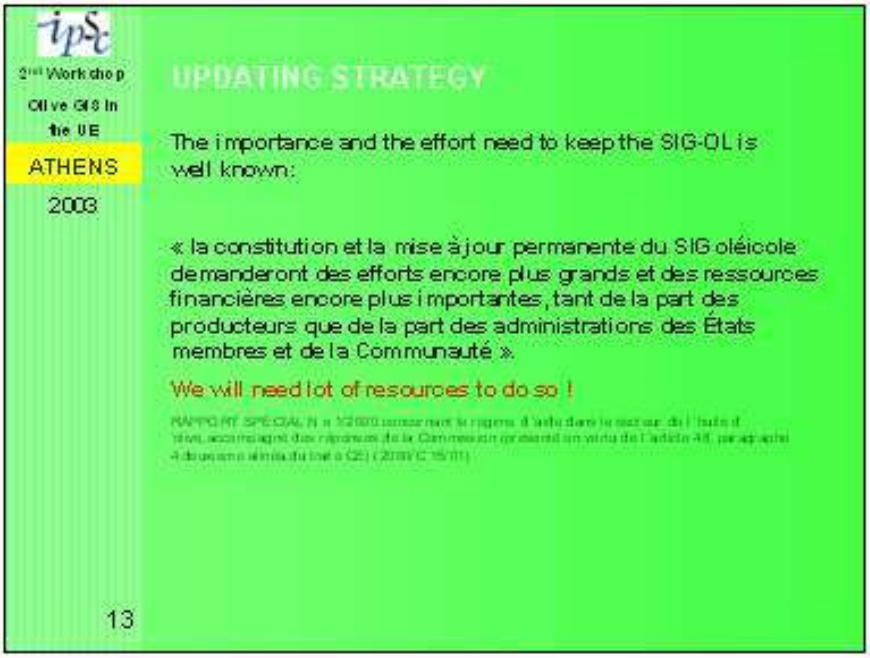
UPDATING STRATEGY
In 1993 the updating process was imagined as a partial replication of the SIG-OL implementation:
• acquisition of aerial images,
• photo-interpretation,
• information to the farmers,
• agronomical inventory,
• farmers inquiry,
• validation,
This approach is nowcompletely outdated. Management and updating of the system is now a unique (complex) task.
12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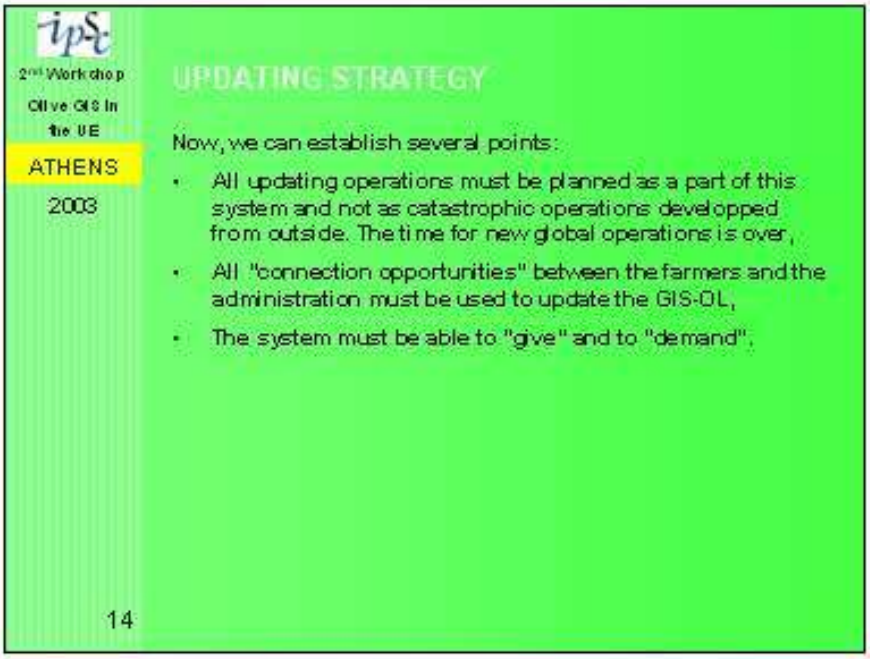
UPDATING STRATEGY
The importance and the effort need to keep the SIG-OL is well known:
« la constitution et la mise à jour permanente du SIG oléicole demanderont des efforts encore plus grands et des ressources financières encore plus importantes, tant de la part des producteurs que de la part des administrations des États membres et de la Communauté ».
We will need lot of resources to do so !
13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UPDATING STRATEGY
Now, we can establish several points:
• All updating operations must be planned as a part of this system and not as catastrophic operations developped from outside. The time for new global operations is over,
• All "connection opportunities" between the farmers and the administration must be used to update the GIS-OL,
• The system must be able to "give" and to "demand",
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UPDATING OPPROTUNITIES

Several opportunities can be easily identified:

- By farmer's Initiative
- During Declarations
- From Control
- By administration initiative

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UPDATING BY FARMER'S INITIATIVE

When making significant changes in its parcels the farmer can send a demand for change to SIG-OL. To do so he must have a way

- To know the previous situation;
- to describe the changes made and
- to determine the consequences of the changes made.

These need are not trivial. In some countries the farmer is supposed to deal with incompatibilities before declaration.

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SIG OL by Internet in Spain

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UPDATING DURING DECLARATIONS

Whenever a declaration is made by the farmer that affects with the SIG-OL,

- Annual crop declaration;
- Tree replacement;
- Regional program;

- He can be asked to confirm or change the information existing in the SIG-OL. While this is a declaration probably un-verified at that stage, it is crucial to keep the stress on the need to keep information updated (there are no irrelevant changes....).

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UPDATING FROM CONTROL

The importance of control data for SIGOL update depends strongly on the percentage of control operations developed yearly. In case of 5% to 10% it will become a very important approach. Control can provide high quality information and indirectly constrain farmer declarations.

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UPDATING BY ADMINISTRATION INITIATIVE
In all cases where there is a risk concerning the reliability of the information existing on the system there is a need to trigger updating by the initiative of the administration.
These updating procedures can include CAPI techniques and complementary field work.
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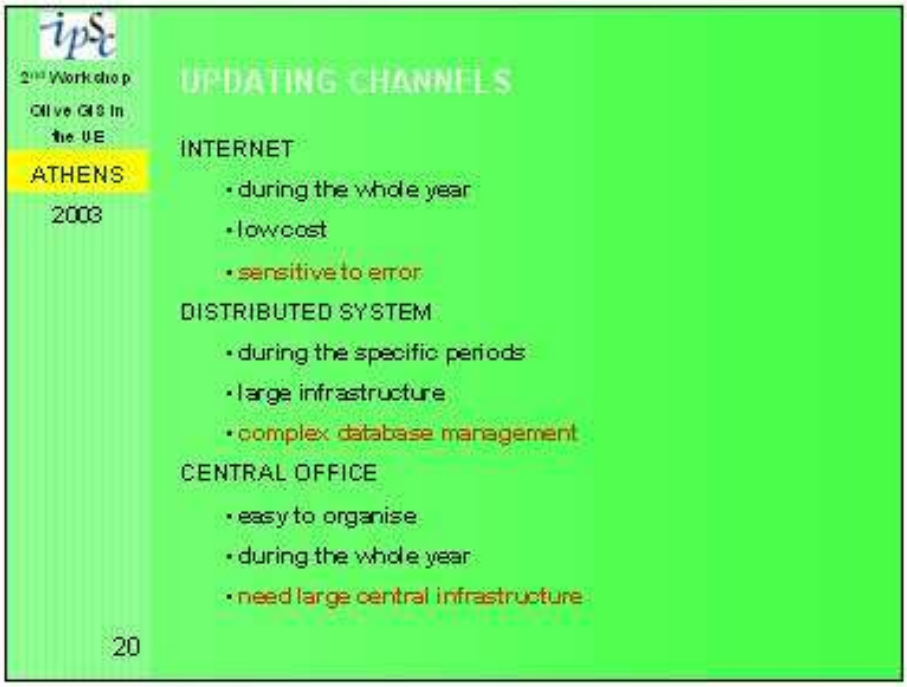
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UPDATING CHANNELS
INTERNET
• during the whole year
• low cost
• sensitive to error
DISTRIBUTED SYSTEM
• during the specific periods
• large infrastructure
• complex database management
CENTRAL OFFICE
• easy to organise
• during the whole year
• need large central infrastructure
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WHICH CHANNELS ?

	FARMER'S INITIATIVE	DURING DECLARATIONS	FROM CONTROL	ADMINISTR. INITIATIVE
INTERNET	YES	YES		
DISTRIBUTED SYSTEM		YES	YES	YES
CENTRAL OFFICE			YES	YES

Any combination is possible as long as it maximizes the input of information into the system and minimizes the cost.

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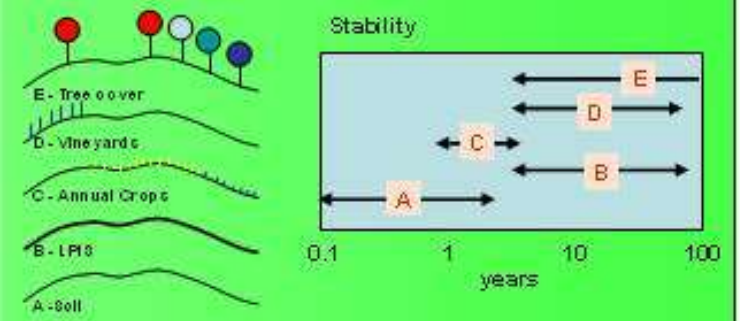
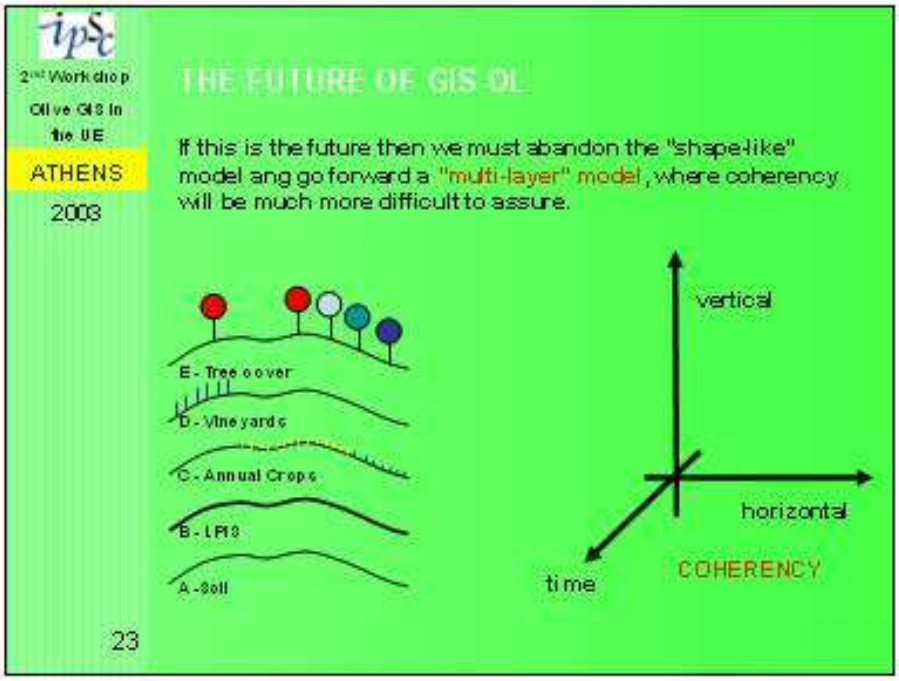
THE FUTURE OF GIS-OL

GIS-OL is a part of an agriculture management system (AMS). It is an important component but still a component. To keep with existing rules we will need design adaptations its individuality must be lost.



22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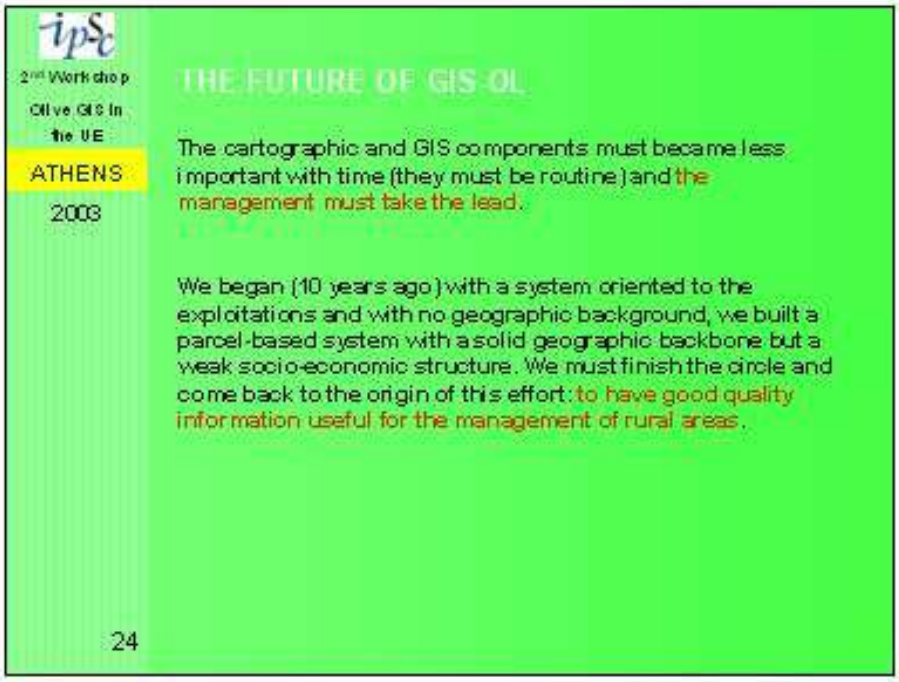
THE FUTURE OF GIS-OL
If this is the future then we must abandon the "shape-like" model ang go forward a "multi-layer" model, where coherency will be much more difficult to assure.
E - Tree cover
D - Vineyards
C - Annual Crops
B - LPIS
A - Soil
vertical
horizontal
time
COHERENCY
23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THE FUTURE OF GIS-OL
The cartographic and GIS components must became less important with time (they must be routine) and the management must take the lead.
We began (10 years ago) with a system oriented to the exploitations and with no geographic background, we built a parcel-based system with a solid geographic backbone but a weak socio-economic structure. We must finish the circle and come back to the origin of this effort: to have good quality information useful for the management of rural areas.
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THE FUTURE OF GIS OI

We are arriving at the end of the agriculture "meter-scale" information systems and the society (as a whole) must benefit from the investments made before a new downscale is foreseen.

We need to,

- identify clearly new uses of the system from the point of view of the farmer !
- Define where to stop in our voyage from remote sensing to the detailed description of the land use !

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A SYSTEM FOR THE FARMERS

Simple as possible (avoid the tendency to manage too much information that is impossible to keep updated);

Easy to understand (avoid the use of "technical" concepts that an average farmer can not understand);

Easy to update (assure high quality orthophotographic background);

Useful for farm management (particularly for the follow up of the quality and environmental EU policies).

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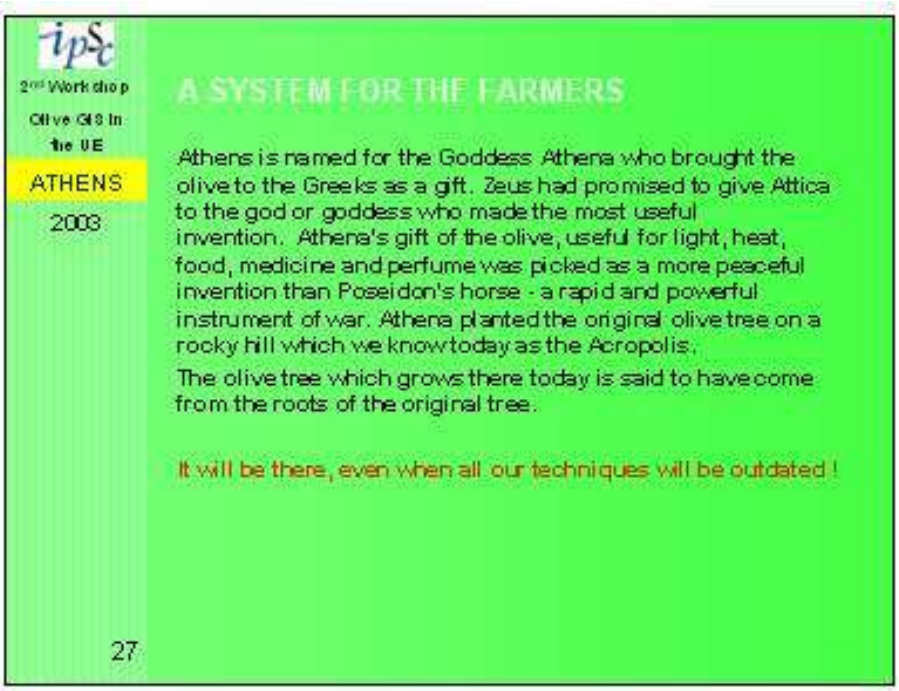
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2003
A SYSTEM FOR THE FARMERS
Athens is named for the Goddess Athena who brought the olive to the Greeks as a gift. Zeus had promised to give Attica to the god or goddess who made the most useful invention. Athena's gift of the olive, useful for light, heat, food, medicine and perfume was picked as a more peaceful invention than Poseidon's horse - a rapid and powerful instrument of war. Athena planted the original olive tree on a rocky hill which we know today as the Acropolis.
The olive tree which grows there today is said to have come from the roots of the original tree.
It will be there, even when all our techniques will be outdated !
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