



I & CLC2000 INFO

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Foreword.

The purpose of this newsletter is to exchange information between the different partners of the IMAGE2000&CLC2000 project.

Most national teams are in place to start and we are now entering the last acquisition campaign of satellite images, which will be decisive for the success of the project..

We hope you will welcome positively this initiative of the JRC and that this *INFO-letter* will provide you with useful inputs and contribute to a better communication of our network .

Vanda PERDIGAO and Chris STEENMANS

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INTRODUCTION. This issue of I&CLC2000 INFO, will provide you with an overview of the project activities, and an image status of selected, ordered and processed images. Finally some practical information about the acquisition campaign 2001, Image2000 catalogue and quality control is also given. If you need more information, or want to contribute with topics for our next issues, please don't hesitate to contact us.

A Complete Mosaic of Europe

Approximately 300 scenes Landsat 7 are required to have a full cloud free coverage of Europe. To get a time consistent image coverage, a three- year acquisition period from 1999 to 2001 was defined.

The year 2000 was set as the reference year.

Image acquisition in 1999-2000

While weather conditions were rather difficult in 1999, year 2000 was much more favorable with 124 cloud free images. After two years of image acquisition, a total of 140 cloud free images are available. At European level this represents 45 % of the full coverage.

In the same period another 88 partly cloudy scenes, were acquired, which gives an **estimated image coverage of approximately 76 %.**

However image availability varies greatly from one country to another. For instance, while a full coverage was obtained in Portugal within one year, no images were acquired during a two-year period in Ireland !

A detailed description at country level is given on page 2.

I&CLC2000 PROJECT

Image2000 and CLC2000 are two joint projects between the European Environment Agency and the Joint Research Center, for the updating of the CORINE Land Cover database. The activities are co-funded by the Member States and the European Commission services and will take three years. IMAGE2000 will provide an ortho-rectified Landsat 7 mosaic covering Europe, which will be used as basic reference data for the updating of CORINE Land Cover (CLC2000). IMAGE2000 project was launched with the kick off meeting the 22 Th of March 2000, in Kiruna, Sweden.

Project partnership & role :

- ▶ EEA, in charge of CLC2000;
 - ▶ JRC, in charge of Image2000;
 - ▶ National Administration, management of national CLC2000 projects;
 - ▶ Swedish Space Corporation (SSC) acquisition and ortho-rectification (contractor).
- ## Image provider
- ▶ Eurimage, provider of Landsat 7 data for EU coverage;
 - ▶ SPOT image, provider of Spot data for additional coastal coverage.



GLOBAL IMAGE STATUS - 05.07.01

Country	Estimated no for full coverage	Available data 1999-2000 narrow and extended		Selected by MS	Ordered by SSC	Processed SSC	Delivered
		0 % CC	> 5 % CC				
AUS	9	4	2	4	4	2	1
BE	6	3	3	6	4	3	1
DK	9	7			3	3	3
FIN	28	6	9	1	2	1	1
F	43	17	15	24	22	22	22
D	31	22	5	9	11	11	11
GR	25	15	8		1		
IRL	11		1	3	3		
IT	32	20	8		1	1	1
LUX	1	1		1	1	1	1
NL	5	2	2		3	1	1
POR	8	8			2	1	1
Isl.	2						
ES	41	23	10	43	32	26	24
Isl.	7			4			
SWE	30	11	13	17	10	8	8
UK	23	1	12	3	3	1	1
	311	140	88	112	99	80	76

Glossary

Available: existing landsat 7 data, made available by SSC in Image2000 catalogue

Narrow: optimal acquisition window defined by MS

Extended: enlarged time span for image acquisition defined by MS

CC: cloud coverage

Selected: images approved by MS, from Image2000 catalogue

MS: Member State

Processed: ortho-rectified images

IMAGE SELECTION

The National Administrations are responsible for selecting images available in the image 2000 catalogue, managed by SSC. The criteria for image selection are described in the document "Image2000-procedure for image selection", prepared by the JRC. The document was distributed to the National Administrations during the month of April 2001 (also available soon on the web).

At this stage not all countries have responded to the image selection, so only 30 % of required images, have been selected, ordered and ortho-rectified.

Administrations who have not yet proceeded with the Image selection, are urgently invited to consult the Image2000 web catalogue and send their list of selected images, to the JRC and SSC:

- ✉ susan.christensen@jrc.it
- ✉ Marianne.Orrmalm@lm.se

The list will be validated by the JRC, who will notify the SSC in charge of image ordering and ortho-rectification.

Image Deliverable note. Once the scenes have been ortho-rectified, SSC will notify by "Image Deliverable Notification" form (e-mail) the JRC and the National Administrations about the date of expedition of delivered images.

Countries who already proceeded with the image selection, the first geo-rectified images were delivered in April 2001. The status of image selection is illustrated in table below.

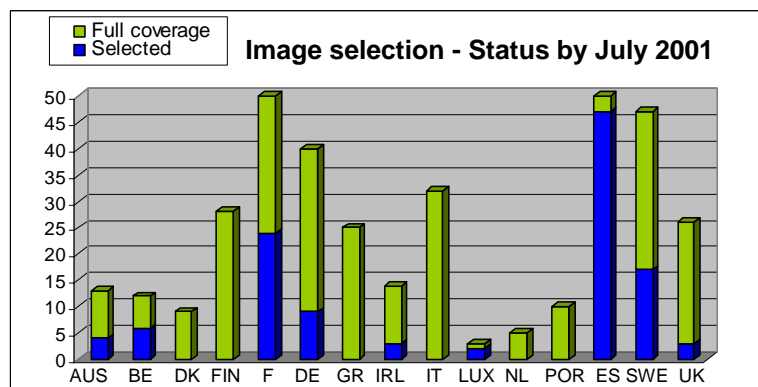




IMAGE 2000 Web CATALOGUE

At the end of year 2000, the Envicat management tool for visualisation of quick looks, was replaced with a more user friendly web solution. The web-based image catalogue, developed and hosted by SSC, allows to visualise, print and save selected quick looks. The contractor SSC is responsible for the image availability of the 3 campaigns 1999, 2000, 2001, and for the updating of the image2000 catalogue. The catalogue is structured by country, scene frame, year (1999-2001), time frame (restricted/extended acquisition window) and cloud coverage (cloud free and more than 5 %). Based on information on acquisition windows (narrow and extended) defined by National Administration, Landsat 7 quick looks are selected and integrated into the catalogue. In the catalogue you will also find information about status of each scene: selected, processed and delivered. The image2000 web catalogue can be consulted on following address:

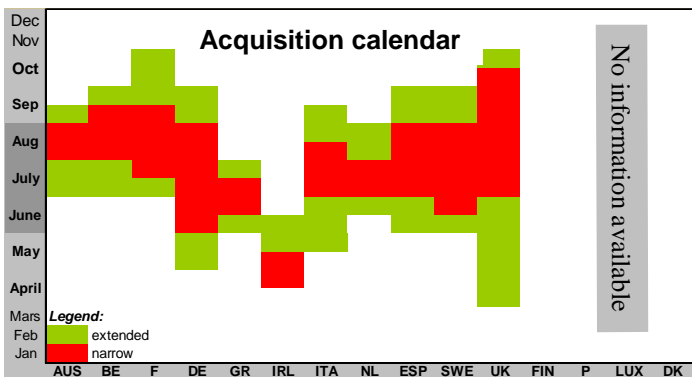
<http://www.envicat.com/projects/image2000/overview>

The CHALLENGE of 2001

2001 is the last campaign for the project and a real challenge to complete the full coverage of Europe. For most countries, the 2001 campaign will take off during July, with the opening of narrow acquisition frame, *see acquisition calendar*. To facilitate and accelerate the image selection by National Administration, the updating of the 2001 campaign, will be done on a regularly basis,

three times a month, the 1 St., 10 Th. and 20 Th.

You will not receive notification on updating, so you are kindly invited according to the calendar regularly to consult the catalogue, and proceed with your image selection.



QUALITY ASSESSMENT

Test images. Before launching the operational ortho-rectification of a country, one test image per country is selected and validated by the JRC. This is to avoid error propagation related to parameters or transformations used for geometric correction of the images. In the table below you will find the list of selected test images, and their current status.

Quality control. In addition to the test images and to the internal quality control performed by SSC, a standard accuracy assessment of the ortho-rectified images is performed. Based on a sample of approximately 300 images, about 10 % of the images will be subject to an external quality control. The sample procedure will contain at least one image per country, and enhance difficult topographic areas, where the quality requirements are more difficult to reach. The results of the quality control are part of the Image2000 metadata. They will soon be available on the web.

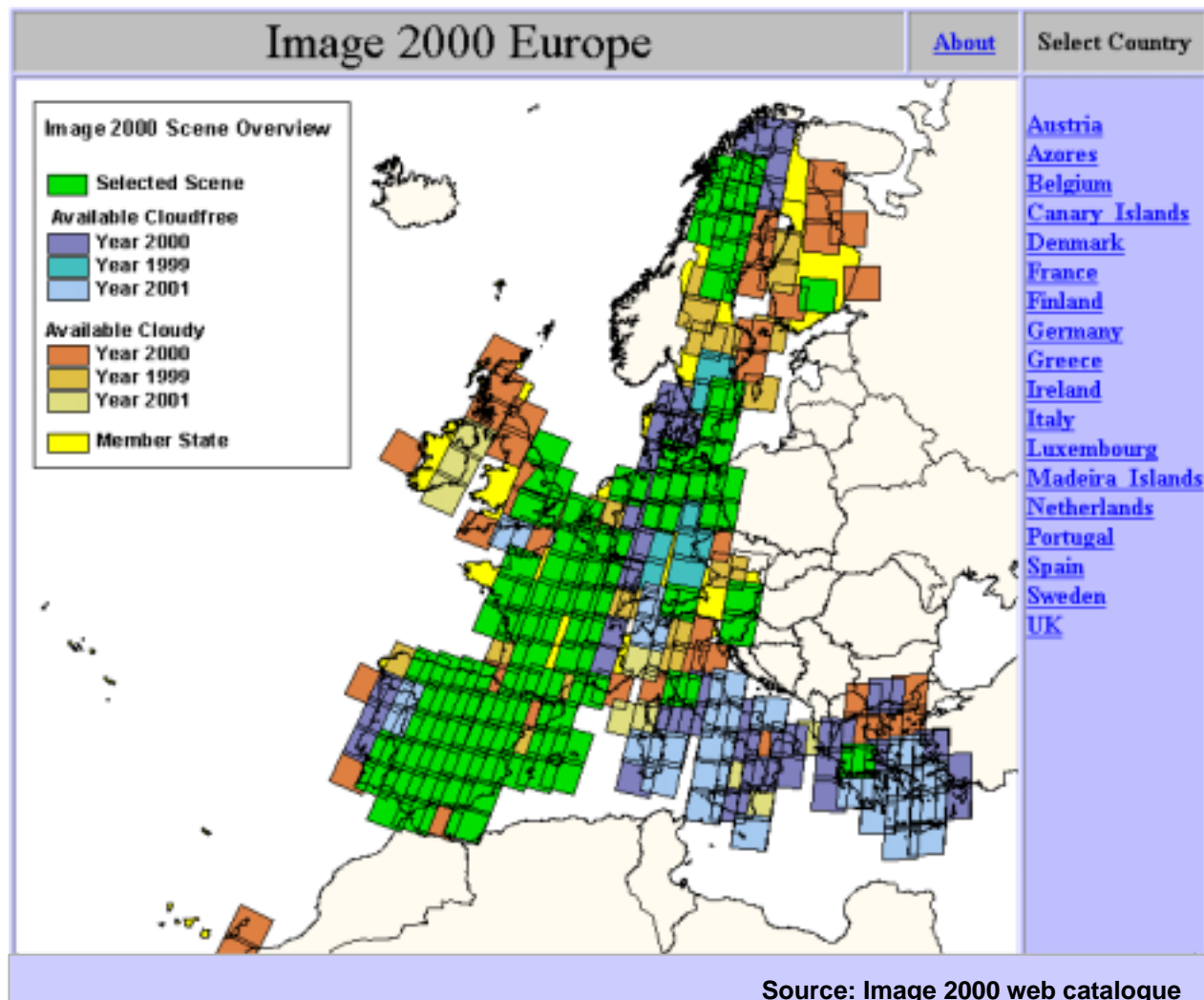
The documentation on sampling approach and methodology for quality control is currently under elaboration. Administrations will be informed when the documents are available.

Collaboration. National teams performing image quality control at country level, are encouraged to contact the JRC for further exchange of information.

SELECTED TEST IMAGES			
Country	Path/Row	Date	Validated
AUS	190-27	000910	yes
B	197-25	000911	in process
DE	193-23	000814	yes
DK	195-22	000609	yes
ES	201-32	000806	yes
FIN	188-17	000827	yes
F	199-28	000909	yes
GR	184-33	000628	in process
IT	192-30	000706	yes
LUX	197-25	000911	yes
NL	197-23	000826	yes
POR	203-33	000719	yes
SWE	195-15	000727	yes
IRL	206-23	010524	in process
UK	201-24	000619	in process



Image 2000 - A Mosaic of Europe



For further information please contact

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