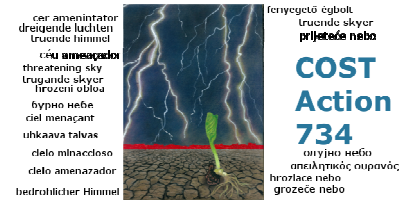




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Document COST734.09

DRAFT MINUTES OF THE FIFTH MANAGEMENT COMMITTEE MEETING OF COST ACTION 734

Impacts of Climate Change and Variability on European Agriculture: CLIVAGRI

**Larisa, Greece
27-28 March 2008**

1. Welcome to participants

The MC Chair S. Orlandini welcomed the participants to Larisa, thanked the local organizer L. Toullos and opened the meeting. The List of participants is in **Annex 1**, an updated List of MC members is in **Annex 2**.

2. Adoption of agenda

Further presentations of ADAGIO and MODERATE were added to the AOB point.

MCM5/D1 Agenda as listed in **Annex 3** was adopted unanimously.

3. Approval of the minutes 4th MCM

MCM5/D2 Minutes of MCM4 were adopted without any notice.

4. Review of the decisions of 4th MCM

MCM5/D3 Decisions of MCM4 were adopted without any notice.

5. Presentation of the new delegations

MCM5/D4 The MC approved following participations to Action 734:

- Belgium and Sweden as COST members
- St. Petersburg University, Russia and University of Nebraska, USA as non COST participants

6. Status of the Action

- Basic information from the COST Office /EC-ESF contract, Grant System +/-
A power point presentation was prepared by the Science Officer Carine Petit. Following main points were communicated:
 - the Open Call is continuing twice per year, 25 new Actions were approved in November 2007
 - Actions are encouraged to use Brussels premises for meetings
 - new Annual contract in between the ESF and the EC will be signed by the end of March 2008
 - migration to the Grant system will be done step by step by moving two Actions per month
 - Annual Progress Report should be elaborated before 15 May 2008
 - the Actions are asked to follow the COST rules when publishing

For further details see **Annex 4**.

- Number of Signatories to COST 734 is 25 and two more countries have expressed the intention to sign the MoU.

The Action entered second phase of its working plan. The first phase will be completed by issuing the scientific report

The Action is in the second phase according to the MoU. The report from this phase is prepared for the publication. In year 3 main scientific work with the respect to the deliverables to be done by the WGs./.

-To update the personal info on 734 web site /everybody/.

-presentation of Simone about the grant system arrangement under Italian conduct

- Number of Signatories 25
- Budget Status, budget allocation process (Annex 5)

7. Web site

Federica => Logo – the use of van Gogh logo should be paid. Next logo was suggested and approved by MCM (**Annex 6**). To send the CVs and photos and other items to Federica, and EoC.

8. Status of the publication

All WGs sent their reports which were distributed to the participants by Simone.
/To check possible English correction by external English lecturer. The offers from two publishers for publishing the report were received by the MC.

MCM5/D5 The publisher of the Survey Report will be selected by S. Orlandini from 2 offers.

J. Eitzinger: each country has to check the country description and to send it to Josef.

N. Dalezios – the contributors should be added in some cases as authors. Nicolas will send a contribution to WG1 and WG2.1.

T. Halenka will add some text to the chapter about scenarios.

9. Final discussion about the publication

The drafts of all chapters were prepared. The editors were asked to collect all contributions and to complete the publication with respecting following schedule:

- April 9 – all authors will deliver the final version of the chapters
- April 11 – the editors will edit the chapters into one unit
- April 15 – the editors will distribute a completed version for final check
- April 30 – collection of the notices and final check
- First half of May – preparation and submit for the print

10. Status and organization of workshop in Norway

The preparation of the workshop follows the schedule from Vienna. Cca 40-50 participants are expected to come to Oscarborg. 5-7 experts from CAgM OPAG3 will participate to the workshop. The 6th MCM will be organized on June 3rd and the workshop will follow on June 4-6. S. Orlandini together with T. Sivertsen will prepare the list of reimbursed participants from COST734 members and invited experts. Meeting request will be submitted before April 15 in order to enable the payment of the invoices for the accommodation and boarding.

11. Plan of future activities presented by WG leaders

WGs plans for future activity were done at the WGs meetings. The outlines of the WGs scientific plans are given in **Annexes 7-11**.

12. Status of external contacts

-A report from CECILIA project was given by the project co-ordinator Tomas Halenka. The project is in time with the first cumulative results of calculated parameters in the grid points in this year. For further info see <http://www.cecilia-eu.org/WP4.htm>.

-COST725 is in the final phase. The form of the European phenological database was completed and the first data were recorded. The data policy who and how can use the data was formed. WG1 is in the point of publishing a book on the history and presence of European phenology.

13. Short term scientific mission(s)

MCM5/D6 The MC approved following STSMs:

-M. Trnka, CR to the University of Nebraska, USA from 15 September to 15 October 2008 /2250 €/

-V. di Stefano, IT to Istituto Nacional de Meteorologia, ES from 18 to 25 May 2008 on Evaluation of SoilClim Model with Observational Data

-V. di Stefano, IT to National Institute of Meteorology and Hydrology, BG from 1 to 15 October 2008 on homogenization and the statistical analysis of SPI

14. Time and place of next meeting

MCM5/D7 There will be no MCM in Autumn 2008. One Core Group meeting will be organized in conjunction with a WG meeting instead. The place and date to be decided at the next MCM.

MCM5/D8 MCM6 will be organized in Oscarborg, NO on 3rd June 2008

MCM5/D9 MCM7 in early March 2009, place to be decided.

MCM5/D10 MC approved an Expert meeting in Vienna, Austria for 5 participants on 16 and 17 April 2008..

15. AOB, internal administration

-D. Mihailovic gave a presentation on the intended proposal for FP7 – MODERATO (**Annex 12**).

-A presentation “On Satellite Vegetation Indices Data Use when Designing the Statistical Models of Crops Productivity Anomalies” was prepared by Gennady Menzhulin (**Annex 13**).

-A. Mestre informed about the International Workshop on Advances in Operational Weather Systems for Fire Danger rating, ET of CAgM meeting in Edmond, Canada on 14-16 July 2008.

-COST 734 abstract submitted by Simone for a presentation at the 18th Congress of ISB has been accepted.

-The numbering of the Action's documents will continue as suggested before. Only the MC Minutes, CG Minutes and some occasional documents which include relevant MC decisions will be numbered.

16. Closure of the meeting

The chair of the Action thanked the members for their active participation and closed the meeting.

List of decisions

MCM5/D1 Agenda as listed in Annex 3 was adopted unanimously.

MCM5/D2 Minutes of MCM4 were adopted without any notice.

MCM5/D3 Decisions of MCM4 were adopted without any notice.

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List of Annexes

Annex 1 List of participants

Annex 2 List of MC members

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Annex 4 Information from the COST Office

Annex 5 Budget plan

Annex 6 New Logo

Annex 7 WG1 plans for phase 2 of the Action

Annex 8 WG2 plans for phase 2 of the Action

Annex 9 WG2.1 plans for phase 2 of the Action

Annex 10 WG3 plans for phase 2 of the Action

Annex 11 WG4 plans for phase 2 of the Action

Annex 12 MODERATO project – hints for a proposal

Annex 13 On Satellite Vegetation Indices Data Use in Statistical Models of Crops Productivity

Annex 1 List of participants

1	Josef	EITZINGER	Austria
2	Vesselin	ALEXANDROV	Bulgaria
3	Valentin	KAZANDIJEV	Bulgaria
4	Visnja	VUCETIC	Croatia
5	Miroslav	TRNKA	Czech Republic
6	Tomas	HALENKA	Czech Republic
7	Jorgen Eivind	OLESEN	Denmark
8	Kurt Christian	KERSEBAUM	Germany
9	Leonidas	TOULIOS	Greece
10	Nicolas	DALEZIOS	Greece
11	Manolis	???	Greece
12	Janos	MIKA	Hungary
13	Zoltan	DUNKEL	Hungary
14	Pirjo	PELTONEN-SAINIO	Finland
15	Emanuel	CLOPPET	France
16	Valentina	di STEFANO	Italy
17	Simone	ORLANDINI	Italy
18	Federica	ROSSI	Italy
19	Arne Oddvar	SKJELVAG	Norway
20	Tor Hakon	SIVERTSEN	Norway
21	Jerzy	KOZYRA	Poland
22	Malgorzata	KEPINSKA-KASPRZAK	Poland
23	Piotr	STRUZIK	Poland
24	Ana	MONTEIRO	Portugal
25	Georghe	STANCAILE	Romania
26	Genadij	MENZHULIN	Russia
27	Pavol	NEJEDLIK	Slovakia
28	Dragutin	MIHAILOVIC	Serbia
29	Antonio	MESTRE BARCELO	Spain
30	Pierluigi	CALANCA	Switzerland
31	Mark	DANSON	United Kingdom

Annex 2 List of MC members

Country	MC Member
Austria (Member)	<u>Mr. Josef EITZINGER</u>
Belgium (Member)	<u>Dr. Anne GOBIN</u>
Bulgaria (Member)	<u>Dr. Vesselin ALEXANDROV</u>
Bulgaria (Member)	<u>Professor Valentin KAZANDJIEV</u>
Croatia (Member)	<u>Dr. Cedomir BRANKOVIC</u>
Croatia (Member)	<u>Ms. VIŠNJICA VUCETIC</u>
Cyprus (Member)	<u>Dr. Petroula MAVRIKIOU</u>
Czech Republic (Member)	<u>Dr. Miroslav TRNKA</u>
Denmark (Member)	<u>Mr. Iver THYSEN</u>
Denmark (Member)	<u>Professor Jørgen Eivind OLESEN</u>
Finland (Member)	<u>Professor Pirjo PELTONEN-SAINIO</u>
Finland (Member)	<u>Dr. Heikki TUOMENVIRTA</u>
France (Member)	<u>Dr. emmanuel CLOPPET</u>
France (Member)	<u>Dr. Bernard SEGUIN</u>
Germany (Member)	<u>Dr. Christian KERSEBAUM</u>

Germany (Member)	<u>Professor Hans-Joachim WEIGEL</u>
Greece (Member)	<u>Mr. Leonidas TOULIOS</u>
Greece (Member)	<u>Dr. Nicolas R. DALEZIOS</u>
Hungary (Member)	<u>János MIKA</u>
Hungary (Member)	<u>Dr. Zoltan DUNKEL</u>
Ireland (Member)	<u>Dr. Gerard KIELY</u>
Ireland (Member)	<u>Dr. Suresh KUMAR</u>
Italy (Chair)	<u>Professor Simone ORLANDINI</u>
Italy (Member)	<u>Ms. Federica ROSSI</u>
Luxembourg (Member)	<u>Dr. Klaus GÖRGEN</u>
Luxembourg (Member)	Dr. Klaus GOERGEN (full details not available)
Netherlands (Member)	<u>Dr. Jan VERHAGEN</u>
Netherlands (Substitute)	<u>Dr. Ronald W.A. HUTJES</u>
Netherlands (Member)	Mr. Joop KROES (full details not available)
Norway (Member)	<u>Professor Arne Oddvar SKJELVAG</u>
Norway (Member)	<u>Dr. Tor Håkon SIVERTSEN</u>

Poland (Member)	<u>Dr. Jerzy KOZYRA</u>
Poland (Member)	<u>Ms. Malgorzata KEPINSKA-KASPRZAK</u>
Portugal (Member)	<u>Professor Ana MONTEIRO SOUSA</u>
Romania (Member)	<u>Dr. Elena MATEESCU</u>
Romania (Member)	<u>Dr. GHEORGHE STANCALIE</u>
Serbia (Member)	<u>Professor Dragutin MIHAILOVIC</u>
Serbia (Member)	<u>Branislava LALIC</u>
Slovak Republic (Member)	<u>Dr. Jozef TAKAC</u>
Slovak Republic (Vice Chair)	<u>Mr. Pavol NEJEDLIK</u>
Slovenia (Member)	<u>Ms. Andreja SUSNIK</u>
Slovenia (Member)	<u>Professor Lucka KAJFEZ BOGATAJ</u>
Spain (Member)	<u>Mr. Antonio MESTRE BARCELO</u>
Spain (Member)	<u>Dr. LUIS GIMENO</u>
Sweden (Member)	<u>Dr. Henrik ECKERSTEN</u>
Switzerland (Member)	<u>Dr. Pierluigi CALANCA</u>
United Kingdom (Member)	<u>Mr. Mark DANSON</u>

United Kingdom (Member)	<u>Dr. David VINER</u>
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Other participants

Country	MC Member
Russian Federation (Member)	<u>Dr. Gennady MENZHULIN</u>

Annex 3 Agenda

Draft Agenda
5th Management Committee Meeting
COST Action 734
Impacts of Climate Change and Variability on European Agriculture:
CLIVAGRI
Larissa, (Greece) from 27/03/2008 to 28/03/2008

University of Thessaly, Medicine School, Papakiriazzi street 18, Larissa (GR)

The meeting starts on 27/03/2008 at: 9:00

Thursday 27/03/2008 9:00-12:00

1. Welcome to participants
2. Adoption of agenda
3. Approval of the minutes 4th MCM
4. Review of the decisions of 4th MCM
5. Presentation of the new delegations
6. Status of the Action
 - Basic information from the COST Office /EC-ESF contract, Grant System +/
 - Number of Signatories
 - Budget Status, budget allocation process
7. Web site
8. Status of the publication

13:00-17:00

9. Final discussion about the publication
10. Status and organization of workshop in Norway

Friday 28/03/2008 9:00-12:00

11. Plan of future activities presented by WG leaders

13:00-17:00

12. Status of external contacts
13. Short term scientific mission(s)
14. Time and place of next meeting
15. AOB, internal administration /MODERATO, ADAGIO,
16. Closure of the meeting

Annex 4 Information from the COST Office



European Cooperation in the field of Scientific and Technical Research



COST Office News and Managing Your COST Action up to May 2009

By Carine Petit
ESSEM Science Officer
Brussels, March 2008



COST is supported by
the EU RTD Framework Programme

ESF provides the
COST Office through an EC contract



Annex 5 Budget plan

Action 734											
	16/03/2008										
2008 Budget											
Total Action Budget								93000.00			
Remaining Action Commitment								-1261.00			
Meetings											
Meeting Type	Date	Place	Avg per p	Total Paid	Planned t	Requeste	Paid part	Cost	Status	Total	
Others	02/10/2007	El Escorial (ES)	640					10510	paid		
Others	04/10/2007	Brussels (BE)	640					521	paid		
Management Committee	22/10/2007	Vienna (AT)	640					21734	paid		
Others	29/10/2007	London (GB)	640					863	paid		
Others	31/01/2008	Bratislava (SK)	640					8153	paid		
Management Committee	01/03/2008	Larissa (GR)	640		35			24515	paid		
Others	10/04/2008	Firenze (IT)	640		2			1150	paid		
Others		Vienna (AT)	640		4			3290	paid		
										70736	
STSM											
Beneficiary	Date	From					To	Cost	Status	Total	
Valentina Di Stefano	May 2008	Florence (I)					Madrid (E)	1400	approved		
Dr Reimund Roetter	01/09/2007	Wageningen (NL)					FI	2475.00	approved		
greece to Italy and denmark								5000	APPROVED	8875.00	
Workshops											
Title	Date	Place						Cost	Status	Total	
MC4 + WGs	22/10/2007	Vienna (AT)						2700.00	paid		
MC5	March 2008	Larissa (GR)						2950.00	paid		
										5650.00	
General Support Grants											
Title	Date							Cost	Status	Total	
gasc	10/03/2008							2000.00	planned		
										2000.00	
Schools											
Title	Date	Place						Cost	Status	Total	
										0	
Publications	COST intermediate report									APPROVED	7000
										Action Total 94261	

Annex 6 New Logo

cer amenintator
dreigende luchten
truende himmel

céu ameaçador
threatening sky
trugande skyer
hrozeni oblaka

бурно небо
ciel menaçant

uhkaava taivas

cielo minaccioso

cielo amenazador

bedrohlicher Himmel



fenyegető égbolt
truende skyer
prijeteće nebo

COST
Action
734

олужно небо
απειλητικός ουρανός
hroziace nebo
grozeče nebo

Annex 7 WG1 plans for phase 2 of the Action

**COST734 - WG 1 meeting
Larissa, 27th March 2008**

Title of WG1 – report :

Review of models and indices for operational applications and climate change impact studies

Decisions about planned WG1 activities for the next period :

1) Investigate crop yield relations of different indices

(including analyses of available results)

(managed by Nicholas)

2) How different crop models and indices can be combined for gathering better information on climate change impact assessments

(managed by Dragutin/Branislava)

3) Sensitivity analyses of climate change impact models

(related to extremes and adaptation measures)

In coop. with WG4 (managed by Josef)

4) To gather information about available phenological models/indices

(managed by Pavol)

How the work should be carried out ?

Based on actual literature / state of art to be supported or giving examples from national case studies. Details will be discussed in Working Group Meetings ! Working Group Meeting together with WG4.

Annex 8 WG2 plans for phase 2 of the Action

COST734 - WG 2 meeting Larissa, 27th March 2008

Key deliverables of WG2

- a collection of climatic data for several European regions according to agroclimatic indices, simulation models and hazards;
- verification of data and solving of problems arising from missing, non-homogeneous and erroneous data;
- assessment of required resolution for practical agroclimatological applications as a function of variables, areas and agricultural aspects;
- definition of statistical protocols to analyse the climatic series, in order to evaluate mean and variability patterns;
- determination of current trend of agroclimatic indices, simulation model outputs and hazards;
- determination of interannual variability of agroclimatic conditions

The work will be done through the countries with the following concrete points of performance:

Bulgaria - next year

- Data quality control, homogenization data, Dec 2008
- Agroclimatic indices: various ; variability during the 20th century up to 2007, Feb 2009
- Model simulations of soil water balance – long-term variability of evapotranspiration, Mar 2008
- Crop model yield simulations (eg 1961-2000) and assessing possible trends, Apr 2009
- Outputs: maps, graphs, animation, report, web page

Poland - next year

- Agroclimatic water balance :prec-evaporation for 2 different periods, Oct 2008
- Trend in water balance elements in the Poznan Area, Dec 2008
- More in the future (in 3 weeks) what else could be done

Spain - next year

- Frost data analyses, Aug 2008
- Drought SPI ETP, Nov 2008
- Water balance, Mar 2009
- Mediterranean data, homogenization, indices (together with Valentina) autumn 2008

Russia - next year

- Meteo data 100 stations EU part Russia: statistical models related to vegetable indices as predictors in order to obtain high resolution indices(A short presentation?), spring 2009
- Agro-production data: too coarse resolution
- 60 statistical models for crop yield anomalies from St.P to Krasnodark; from Ukraine to Ural, autumn 2008

- DSSAT model simulations for the Novgorod oblast, spring 2009

Annex 9 WG2.1 plans for phase 2 of the Action

Report of COST 734 / WG2.1. Meeting, Larissa, 28 March 2008

Participants: Leonidas Toullos (GR), Mark Danson (UK), Zoltan Dunkel (HU), George Stancalie (RO), Piotr Struzik (PL), Emmanouil Tsiros (GR)

WG 2.1 Objective

How the study of climate change and variability impact on agriculture can benefit from space. Analysis of the role of satellite data in the suitable models and indices for assessing the impact of climate change and variability on European agriculture

WG 2.1 working plan

Task 1:

Study of satellite data availability and their resolution in time and space, for the assessment of climate change and variability impacts on agriculture.

Responsible: Piotr Struzik, George Stancalie, Mark Danson, Leonidas Toullos, Zoltan Dunkel, Manolis Tsiros.

- Inventory of available long-term satellite data archives useful for agro-climatic analysis (NOAA/AVHRR, MODIS, other ?).
- Evaluation of indicators of vegetation status, derived from multispectral remotely sensed observations, which can be retrieved from long-term satellite data archives for further trend analysis.

Task 2:

Analysis of potential for assimilation of satellite data into models for the determination of current trends in agroclimatic indices based on spectral data

Responsible: Manolis Tsiros, George Stancalie, Leonidas Toullos, Mark Danson, Piotr Struzik, Zoltan Dunkel,

- Use of NOAA and MODIS derived indices for determination of vegetation conditions as an input to models.
- Analysis of trends for the last 20 years (NOAA) and last 9 years (MODIS) for selected European regions.
- Collaboration with other working groups required.

Task 3

Use of satellite remotely sensed data together with ground measurements to improve the crop growth modelling

COST734, MC meeting, Larissa 26-28 March 2008

Minutes of the WG3 meeting

- Participants.

Pierluigi Calanca, Tomas Halenka, Emmanuel Cloppet, Janos Mika

- Preparation of the COST report on questionnaires.

The draft for the WG3 contribution prepared by Pierluigi Calanca is discussed. Content and structure of the draft are approved. However, Tomas Halenka notices that there is only little practical information concerning the EU projects ENSEMBLES, CECILIA and CLAVIER. He notices that these projects will represent a main source of information for COST 734. He therefore proposes to extend section 3.1, while Pierluigi Calanca will complete section 3.2 (currently missing). A final version of the draft will be sent to the editors of the report (Simone Orlandini, Pavol Nejedlik and Lucka Kajfez Bogataj) by April 8, 2008.

- Future activities.

In view of the limited human resources available to WG3 it is decided to adopt a similar strategy as in other WGs, that is to say develop the practical work around case/country studies. Pierluigi Calanca recalls that the main deliverables of WG3 as stated in the MoU are the collection of future climate scenarios for various European regions, the assessment of future trends in agroclimatic conditions and hazards, and the evaluation of climate scenario reliability. Based on the discussion the following working plan is proposed for the time span covering the rest of year 2 and year 3 of COST 734: (a) Janos Mika will provide a summary of his assessment of differences in regional climate projections for Hungary, focusing in particular on differences arising from climate model developments during the last decade; (b) Tomas Halenka, Emmanuel Cloppet and Pierluigi Calanca will provide summaries of future trends in agroclimatic indices or variables needed to evaluate agroclimatic indices based on new generation scenarios (ENSEMBLES, CECILIA, CLAVIER and regional scenarios for France).

Pierluigi Calanca, March 31, 2008

Minutes

WG4-group meeting in Larisa 27th March 2008

Participants:

Jørgen Olesen, Denmark (chair)
Mirek Trinka, Czech Republic
Federica Rossi, Italy
Jerzy Kozyra, Poland
Arne Skjelvåg, Norway
Christian Kersebaum, Germany
Pirjo Peltonen-Sainio, Finland (secretary)

1 Manuscript of the paper for joint COST734-book

Paper has to be finished within couple of days/weeks. The latest, revised version of the manuscript will be sent to all WG4-members, who comment it within about one week and pay attention that no key-references are missing. It was also agreed that WG4-group members are (co-)authors of the paper and they also take care that all the contributors are added to the list sent together with the manuscript.

2 Preparation of an additional scientific paper

WG4 members agreed to continue the writing process also beyond the book article by targeting e.g. European Journal of Agronomy. Such scientific paper would be based on the same questionnaire dataset, but it takes further steps by indicating with already documented cases that such changes support the findings of climate change impacts and/or adaptation measures. This will be carried out by e.g. analysing yield trends: increasing, declining and levelling-off trends and especially changes in yield variability.

It was agreed that Jørgen and Mirek write the outline of the paper and others contribute thereafter. As one of the possible cases, Pirjo will give an example case of oilcrop trends in Finland with drastic changes recorded in 2000's (yield, hectares, crop species domination). Federica will bring up the relevant information on horticultural crops from questionnaire data, which will be presented to target group of horticultural experts.

3 Near future WG4 activities

Jørgen will send to all WG4 members the presentation showing all the proposed and agreed steps of further collaboration aiming at preparing reports and scientific papers.

- Analysis of the present and expected agro-meteorological conditions through environmental zones "AgriClim study": analysis of high quality, daily meteorological datasets (max and min temp, precipitation, mean wind speed, relative

humidity, global radiation, height of measurement) for period of 1961-2000 with yield data available on couple of the major arable crops of the region (e.g. barley, wheat, tuber and/or root crops) from such meteorological stations that represent each country's environmental zones (or favourable versus marginal production areas); linkage to questionnaire data; analysis of present and future conditions.

- Weather-crop yield relationship: results collected from local (barley and wheat variety) tests and monthly data since 1990 to present; analysis of present weather-crop yield relationships; generalisation of results and preparation of conclusions; joint evaluation.
- Inter-model comparison: comparison of the model performance with the experimental data; focus on the reliability of yield and phenology estimates on winter wheat and spring barley; run of selected crop models over the same area using same weather scenarios.

- 4 Next WG4 meeting was agreed to be held in Berlin on 19th and 20th November 2008 and it concentrates on the processes described in point 3 in particular. Arrival on evening 18th November. Approval of MCM needed.

Tentative project name

MODERATO

Risk assessment for crop and fruit damages and yield loss induced by non-ionizing radiation and plant diseases as a consequence of the climate change in Central and Southern Europe

JOB 1:

Please, make suggestions about title having in mind scientific and practical interest of your institution and country (The final title will include opinion which will be dominant in the group as a whole)

Abstract for the project proposal

The plant (crop and fruit) damages and yield loss can be strongly induced by non-ionizing (UV) radiation and plant diseases as a consequence of the climate changes. Interaction of the UV radiation with plant can also provide conditions for development of plant diseases rapidly increasing the risk of serious damages in orchards and fields. That risk can be estimated on the basis of outputs obtained by running climate model, regional model, UV radiation model, model for forecasting the occurrence of plant diseases and crop model. This assessment is particularly important for the Central and Southern Europe potentially the most vulnerable region in the Europe regarding to climate change.

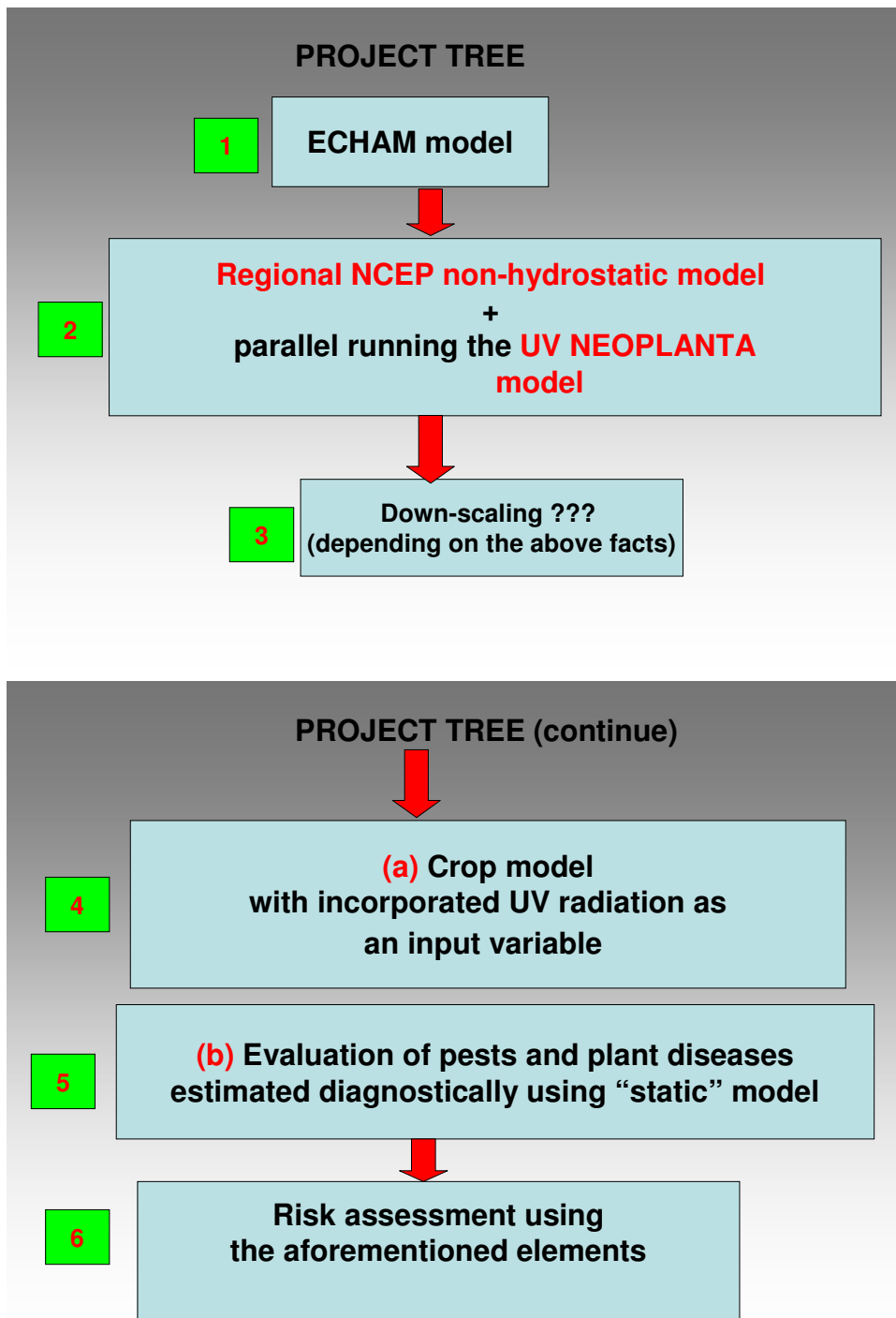
MY COMMENTS REGARDING THE JOB 2 :

We can choose some cultivars (crops, fruit and vegetable) which are economically important and which are sensitive on the UV radiation and some plant diseases. Also, we can make an optimal selection of pests and plant diseases in your countries highly dependent on the climate change. After discussion we will make a final decision. In this moment, in the focus of agricultural and physical community, is interaction plant diseases and UV radiation, particularly attacking the grape. This issue is very useful to be included in the project tasks.

JOB 2:

Please, fill the table up on the lower place and make additional suggestions (set the plants in a hierarchical order following their economical importance in your country)

Crop/Fruit/Vegetable	UV sensitive (Yes/No)	Disease



MY COMMENTS REGARDING THE JOB 3 :

The Serbian crew can provide run of the ECHAM model and Regional one on the 300 processor cluster computer. We can run the regional model by double nesting (20x20 km then 4x4 km) for the domain of the interest. Since the ECHAM model is dealing with the ozone we will run the NEOPLANTA UV model or another one if it is available. Also, somebody should incorporate UV inputs in the crop model.

JOB 3:

Please, fill the table up on the lower place and make additional suggestions. If the space is not enough you can do that together with the helpful suggestions on the separate page.

Number of the job from the Project Tree you want to deal with	Short description of the job you want to deal with	Summary of human and facility resources to be included in the project

References

If you decided to go further, please, provide the list of relevant references in the last then years which are related to the job you have to do.

Strategy

Our strategy is to prepare project making its completely defined in all segments. Then we will find the corresponding call. Hopefully, we expect to do that this year. In order to speed up the iteration in the preparing the project proposal we can organised one day “kick-off” meeting in May in Novi Sad. Certainly, this year.

For information about our institution please visit web site

http://cmep-serbia.if.ns.ac.yu/index.php?option=com_content&task=view&id=16&Itemid=44

The communication entry points are

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Enjoy in your work

Annex 13 On Satellite Vegetation Indices Data Use in Statistical Models of Crops Productivity

On Satellite Vegetation Indices Data Using when Designing the Statistical Models of Crops Productivity Anomalies

Gennady V.Menzhulin, Felix N. Kogan, and Gleb N.Peterson

As earlier the development and modernization of crop productivity prediction techniques in the weather conditions of concrete growth year continue to be the most urgent problem of modern agrometeorology. In spite of the fact that the advanced mechanistic model of the crop growth imitation intensively introduced to the forecasting methodologies, the statistical models continue to remain one of the basic instrument using for these purposes. When designing of such models the surface input meteorological information is commonly used. In some cases for such purposes the combinations of meteorological parameters expressed in the form of agrometeorological indices are often used as predictors.

About 25 years ago the first satellite systems for surface vegetation monitoring were designed. The development of such systems has resulted that now the continuous series of satellite data for relatively long periods (more then 20 years) became available. Because at a first approximation such long series can be considered as already sufficient for designing of statistical crop productivity models there was the question about the perspectives of using the satellite information on vegetation indices in agrometeorological prediction techniques. To the present time the many researches were devoted to the questions of satellite information using are carried out but the problem of development of such type of forecasting models continues to remain rather urgent. The presentation will be devoted to discussion the question on estimation of the efficiency of using the satellite monitoring data on crops state dynamics for designing the new productivity statistical models basing on multivariate algorithms of selection the best regressions formula from their complete ensemble. Such approach is free from many a priori hypotheses earlier limiting a selection of the most statistically authentic models.

The main conclusions on which the authors would like to stimulate the interest of the Larissa COST734 Meeting are:

- Multifactor crop productivity regression models using as independent predictors the satellite vegetation indices can be strongly recommended to include to the modern agrometeorological forecasting techniques.
- The statistical indicators of accuracy and certainty of such models are significantly higher than the corresponding indicators of the models commonly used in agrometeorological practice especially in the case of carefully designed algorithms of its predictors selection.
- It will be very desirable if COST734 among its activity purposes set as important object the creating the all-European data banks of long-term satellite vegetation indices as well as the historical series of the most important crop production and areas for small administrative regions of European countries.