Basic information

2007/0132(CNS) CNS - Consultation procedure Regulation	Procedure completed
Common agricultural policy CAP: measures to be undertaken making use of the remote-sensing applications, 2008-2013 **Subject** 3.10.30 Agricultural statistics	

Key players

European Parliament

Committee responsible	Rapporteur	Appointed
AGRI Agriculture and Rural Development	GRAEFE ZU BARINGDORF Friedrich-Wilhelm (Verts/ALE)	12/09/2007

Council of the European Union

Council configuration	Meetings	Date
Agriculture and Fisheries	2843	2008-01-21

European Commission

Commission DG	Commissioner
Agriculture and Rural Development	FISCHER BOEL Mariann

Key events

Date	Event	Reference	Summary
05/07/2007	Legislative proposal published	COM(2007)0383	Summary
24/09/2007	Committee referral announced in Parliament		
18/12/2007	Vote in committee		Summary
20/12/2007	Committee report tabled for plenary, 1st reading/single reading	A6-0508/2007	
15/01/2008	Debate in Parliament		
16/01/2008	Decision by Parliament	T6-0010/2008	Summary
16/01/2008	Results of vote in Parliament		
21/01/2008	Act adopted by Council after consultation of Parliament		
21/01/2008	End of procedure in Parliament		
30/01/2008	Final act published in Official Journal		

Technical information

Procedure reference	2007/0132(CNS)
Procedure type	CNS - Consultation procedure
Procedure subtype	Legislation
Legislative instrument	Regulation
Legal basis	EC Treaty (after Amsterdam) EC 037-p2
Stage reached in procedure	Procedure completed
Committee dossier	AGRI/6/51418

Documentation gateway

European Parliament

Document type	Committee	Reference	Date	Summary
Committee draft report		PE394.188	06/11/2007	
Amendments tabled in committee		PE398.320	28/11/2007	
Committee report tabled for plenary, 1st reading/single reading		A6-0508/2007	20/12/2007	
Text adopted by Parliament, 1st reading/single reading		T6-0010/2008	16/01/2008	Summary

European Commission

Document type	Reference	Date	Summary
Legislative proposal	COM(2007)0383	05/07/2007	Summary
Commission response to text adopted in plenary	SP(2008)1176	27/02/2008	
Follow-up document	COM(2010)0436	16/08/2010	Summary
Follow-up document	SEC(2010)0984	16/08/2010	
Follow-up document	COM(2011)0639	10/10/2011	Summary
Follow-up document	SEC(2011)1170	10/10/2011	
Follow-up document	COM(2013)0553	29/07/2013	Summary

Additional information

Source	Document	Date

National parliaments	IPEX	
European Commission	EUR-Lex	

Final act
Regulation 2008/0078 OJ L 025 30.01.2008, p. 0001 Summary

Common agricultural policy CAP: measures to be undertaken making use of the remote-sensing applications, 2008-2013

2007/0132(CNS) - 16/01/2008 - Text adopted by Parliament, 1st reading/single reading

The European Parliament adopted a resolution based on the report drawn up by Friedrich-Wilhelm **GRAEFE zu BARINGDORF** (Greens/ALE, DE), and amended the proposal for a Council regulation on the measures to be undertaken by the Commission in 2008-13 making use of the remote-sensing applications developed within the framework of the common agricultural policy. The resolution was adopted by 594 votes for, 23 against, and 54 abstentions.

Members felt that the remote-sensing activities should be financed by a proper budget instead of the agriculture guarantee fund. An amended clause states that the financial framework for the implementation of the programme for the period 2008 to 2013 is set at EUR 9.2 million. The annual appropriations will be authorised by the budgetary authority within the ceilings of the budget headings in the financial framework,

Parliament proposed, furthermore, the creation of an inventory of all spatial data, remote-sensing and agro-meteorological projects and consolidation of existing spatial data infrastructure and websites. It also proposed, as an objective, the improvement of the JRC Agriculture Unit website making all relevant research data freely available to the public.

A new recital underlines that only the MARS pilot project, which falls within the scope of Decision No 2066/2003/EC on the continued application of aerial-survey and remote-sensing techniques to the agricultural statistics for 2004 to 2007fell within the scope of this Regulation. More specifically, only the operational measures undertaken by the Commission which make use of remote-sensing applications within the framework of the common agricultural policy fell within the scope of the Regulation.

Common agricultural policy CAP: measures to be undertaken making use of the remote-sensing applications, 2008-2013

2007/0132(CNS) - 21/01/2008 - Final act

PURPOSE: to proceed with the application of operational measures for monitoring agricultural markets.

LEGISLATIVE ACT: Council Regulation (EC) No 78/2008 on the measures to be undertaken by the Commission in 2008-2013 making use of the remote sensing applications developed within the framework of the common agricultural policy.

CONTENT: Remote sensing has thus demonstrated that it provides a response tailored to the management needs of the CAP, and that the needs identified cannot be met by the traditional agricultural statistics and forecasting systems. It has also enhanced the accuracy, objectivity, speed and frequency with which observations are made, and has helped perfect agricultural forecasting models, in particular by establishing regionally based models. Finally, remote sensing has facilitated the development of specific and ancillary applications for the establishment and collection of agricultural statistics, and has enabled savings to be made in the costs of monitoring and control of agricultural expenditure.

This Regulation therefore provides for the continuation of these remote sensing applications, using financing from the European Agricultural Guarantee Fund (EAGF) in the period 2008-2013.

The measures undertaken by the Commission making use of remote-sensing applications within the framework of the common agricultural policy (CAP) may be financed by the EAGF, where their aim is to give the Commission the means to:

- manage agricultural markets;
- ensure agro-economic monitoring of agricultural land and of the condition of crops, to enable estimates to be made, in particular as regards yields and agricultural production;
- promote access to the estimates referred to in the previous point;
- ensure technological follow-up of the agro-meteorological system.

The measures referred to shall be in particular:

- collection or purchase of data needed to implement and monitor the CAP, in particular satellite data and meteorological data;
- creation of a spatial data infrastructure and a website;
- carrying out specific studies on climatic conditions;
- updating agro-meteorological and econometric models.

Not later than 31 July 2010 and 31 July 2013 respectively, the Commission shall submit an interim and a final report to the European Parliament and to the Council on the implementation of the remote-sensing measures and on the use of the financial resources made available to it under this Regulation. Where appropriate, the final report shall be accompanied by a proposal to continue these measures within the framework of the CAP.

ENTRY INTO FORCE: 30/01/2008

APPLICATION: from 01/01/2008 to 31/12/2013

Common agricultural policy CAP: measures to be undertaken making use of the remote-sensing applications, 2008-2013

2007/0132(CNS) - 10/10/2011 - Follow-up document

The Commission presents a second interim report on the implementation of the remote sensing applications and on the use of the financial resources made available to it under Council Regulation (EC) No 78/2008, which provides the legal framework for these remote-sensing activities for the period 2008-2013. The provides that the Commission shall submit a final report no later than 31 July 2013 on the implementation of the remote-sensing measures and on the use of the financial resources made available to it under the Regulation. This second interim report is drawn up in view of a continuation of these measures within the framework of the CAP beyond 31 December 2013.

The report elaborates on a possible scenario for continuation of the existing MARS Crop Yield Forecasting System for the EU and of an extension to a wider global coverage with the objectives of further improving yield forecasts for the EU and of contributing to the international initiatives launched by G20 agricultural ministers.

The Mars Crop Yield Forecasting System (MCYFS) started in 1988 as a 10-year pilot project to produce crop yield and harvest forecasts. The activity, which was then called Monitoring Agriculture with Remote Sensing (abbreviated MARS), concentrated on the assessment of crop yields and production volumes of various crops within the EU, on the basis of meteorological analysis, agro-meteorological simulated crop growth indicators, low-resolution satellite data and statistical analysis.

Assessment: the activity delivers independent, timely, scientific and traceable crop yield forecasts for all Member States and EU neighbouring countries for selected arable crops. This information is utilised by the Commission services for the following main purposes:

- update of crop supply balance sheets;
- assessment of climatic conditions and potential impacts of particular weather events in the Member States or regions (e.g. impact of a late frost event);
- monitoring of crop conditions in third countries.

AGRI4CAST yield forecasts are also provided to the Early Estimate System of Eurostat. Independence and reliability of the outputs prepared by AGRI4CAST are viewed as important assets by the Commission services. The statistical analysis performed with the crop growth indicators is transparent, traceable and stored for all crop simulations and years. A set of statistical indicators is provided for each of the models. At the end of the forecasting campaign, an error analysis compares the crop yield forecasts with the actual observed yields to quantify the forecast error and to evaluate the forecasting performance.

For information, the overall error, measured as the mean absolute percentage error of the end-of-campaign forecast for the EU-27 across all months and for all cereals together, has been 1.6% for 2007, -3.3% for 2008, -1.2% for 2009, and 1.2% for 2010, respectively, with negative values indicating an underestimation, positive values an overestimation of reported yields (reported yields of 2009 and 2010 are still preliminary).

The report states that the MARS System has provided effective and timely information and objective data in support to the decision making process for the deployment of the Common Agricultural Policy (CAP). Beyond the primary objective of producing harvest yield and production forecasts, the system also provides useful insights into other fields relevant to EU agriculture such as climate change issues. Moreover, the MARS agro-meteorological system and remote-sensing applications have provided useful information not only to the European Commission but also to interested Member States, research institutes and other users, through the dissemination of products.

Future of the activity: the possible continuation of the MARS Crop Yield Forecasting System could include new activities to follow the needs of the CAP, which evolves and adapts to a changing global economic environment. In this context, independent and reliable information at world level is a basic requirement to ensure the correct and effective decision-making process within the EU. The new activities would include certain factors:

- a MCYFS enlarged to other main production areas of the world and to additional relevant crops;
- a modelling tool extended to EU crops other than those currently covered (e.g. to rye, oats, triticale);
- a more complete modelling of pasture systems able to provide quantitative estimates of biomass production.

The report notes that in 2011 DG AGRI launched a project called GLOBCAST (GLOBal Crop Monitoring and ForeCASTing) through an Administrative Arrangement with the JRC that will end in 2013. The aim of the GLOBCAST project is to study the enlargement of the MCYFS to other areas of the world (Russia and CIS countries, Argentina, Brazil, China, India, Australia, Canada and the USA) and to other crops of interest, like soybean and sugar cane. In the first year the JRC will re-visit the existing data and will adapt the software and modelling tools to organise and implement the future pre-operational system in the years 2012 and 2013. According to the assessment of the GLOBCAST project, the resulting activities could be thereafter included in the MARS programme for yield forecasts.

The GLOBCAST project aims to provide a major contribution of the EU to the recent G-20 initiative on food security and price volatility, in particular to the Agriculture Market Information System (AMIS), included in the "Action Plan on Food Price Volatility and Agriculture" adopted by the G-20 Agriculture Ministers. An extended MARS Crop Yield Forecasting System will contribute to AMIS via the Group on Earth Observation (GEO), which has as an objective to reinforce the capacity to produce and disseminate timely and accurate crop production forecasts on a national, regional and global scale. The EU is committed to participate in those initiatives with data and information on markets, stocks and productions. Deliverables of the existing MCYFS implemented under Council Regulation (EC) No 78/2008 and results of the GLOBCAST project are already and could continue to be contributions to the AMIS system.

Common agricultural policy CAP: measures to be undertaken making use of the remote-sensing applications, 2008-2013

2007/0132(CNS) - 05/07/2007 - Legislative proposal

PURPOSE: the continued application of measures that make use of remote-sensing techniques to monitor agricultural markets.

PROPOSED ACT: Council Regulation

BACKGROUND: the EU’s agricultural policy takes account of the social structure of agricultural and the natural disparities between the various agricultural regions of the EU. Hence there is a need for information on land condition and crop use. Remote sensing applications help provide some of this information. Between 2003 and 2007 a pilot project on remote-sensing techniques, under the auspices of Council Decision No 2066/2003/EC, was initiated. This project has enabled the agro-meteorological system for forecasting yields and monitoring land and crop conditions to achieve an advanced stage. Remote sensing provides a tailored response to the management needs of the common agricultural policy – needs that can not be met by traditional agricultural statistics and forecasting systems alone. It has also enhanced the accuracy, objectivity, speed and frequency with which observations are made and helped perfect agricultural statistics and forecasting models. The system has also enabled savings to be made in terms of monitoring agricultural expenditures.

CONTENT: the purpose of this proposal, therefore, is to continue making use of remote-sensing techniques in order to monitor agricultural markets. The project will apply from 1 January 2008 for a six-year period. The remote-sensing application will be a tool for the Commission to: manage agricultural markets; allow for agro-economic monitoring such as crop condition in order to estimate yields; promote information access; and ensure technological follow-up of the agro-meteorological system.

The system will also collect, or purchase, data needed to implement and monitor the CAP (in particular satellite data and meteorological data); create a spatial data infrastructure and website; carry out specific studies on climatic conditions; and update agro-meteorological and econometric models.

All information will be made available to the Member States electronically and the Commission is expected to work closely with national bodies and laboratories.

Common agricultural policy CAP: measures to be undertaken making use of the remote-sensing applications, 2008-2013

2007/0132(CNS) - 16/08/2010 - Follow-up document

The Commission presents its interim report on the implementation of the remote sensing applications and on the use of the financial resources made available to it under Council Regulation (EC) No 78/2008.

The MARS crop yielding forecasting system: the system of production of crop harvest yield forecasts started in 1988 as a 10-year pilot project. The activity, which was then called Monitoring Agriculture with Remote Sensing (then abbreviated as MARS-STAT, now the acronym is AGRI4CAST), concentrated on the assessment of crop yields and production volumes of various crops within the EU, on the basis of meteorological analysis, agro-meteorological simulated crop growth indicators, low-resolution satellite data and statistical analysis using the Mars Crop Yield Forecasting System (MCYFS).

From 2008 and until 2013, this activity is implemented under Council Regulation (EC) No 78/2008. The system is operated in the Institute for the Protection and Security of the Citizen (IPSC) of the Joint Research Centre (JRC) at Ispra.

The MCYFS is a complex, integrated analysis tool addressing the objectives which are spelled out in the Regulation, specifically the monitoring of crop conditions, yields and agricultural production.

The system consists of several independent modules, which are integrated to monitor crop behaviour and produce crop yield forecasts. From a technical point of view, the MCYFS includes: 1) the maintenance of a meteorological database; 2) the application of agro-meteorological models; 3) the processing of low resolution satellite data; 4) statistical analyses and yield forecasts of the main crops at national level across the EUas well as visualisation tools.

The MCYFS is run operationally on an area covering the whole European Continent, the Maghreb countries and Turkey. The crops covered by the simulation models are soft wheat, durum wheat, winter and spring barley, grain maize, rapeseeds, sunflower, potato, sugar beet, field beans, pastures and rice.

Overall implementation: for the continuation of the operational services from 2008 until 2013a new project, called MARSOP3, was launched. In August 2007 a call for tender was published. After evaluation of the offer for Lot I (meteorological data) and Lot II (acquisition and processing of satellite data), a contract was signed with a consortium led by Alterra BV.

On the basis of the operational products delivered within this contract, the JRC carries out the analysis of crop conditions and prepares the yield and production estimates. These are made available to the European Commission, Member States and EU citizens.

The report describes the implementation of the specific measures undertaken in order to fulfil the objectives with regard to remote-sensing measures. These are (a) management of agricultural markets; (b) monitoring of crop conditions and estimates; (c) promotion of access to the estimates; (d) ensuring the technological follow-up of the agro-meteorological system. The Commission stresses that independence and reliability of the outputs prepared by AGRI4CAST are viewed as important assets by Commission services. The statistical analysis performed with the crop growth indicators is transparent, traceable and stored for all the crop simulation and years.

The report also describes the measures to be implemented: (a) collection and purchase of meteorological and satellite data; (b) spatial data infrastructure and website; (c) specific studies on climatic conditions; d) updating of agro-meteorological and economic models.

Lastly, the document deals with deliverables and costs: the Commission Member States and other interested stakeholders are provided with different deliverables which can be grouped into reports and bulletins on the one hand and information services and data on the other hand. All products are made available electronically and partially on paper format.

3) **Budget resource use** : the total financial resources under Council Regulation (EC) No 78/2008 in 2008 and 2009 (payment credits) amounts **to EUR 97.298 (2008) and EUR 2.370.340 2009) :**

- Lot 1 covers the procurement of meteorological and weather forecast data (including the densifying of network of meteorological stations). It covers the operational run and maintenance of the crop growth models operated within the MCYFS. Results in the form of database updates and maps are delivered to the database at the JRC daily or every ten days. Appropriate tools for exploitation of the results are maintained and developed. Maintenance and improvement of MARSOP website is also part of this lot together with overall coordination and management;
- Lot 2 covers the processing of remote-sensing data. The work performed covers all data enhancement steps between the acquisition of the raw imagery and the delivery of 10-daily composites (data ingestion, calibration, etc.).

Mars database and IT support: the MCYFS calls for the provision of IT services to ensure a timely production of bulletins. Work performed covers the management and maintenance of the database with all the remote sensing data, the meteorological data and the agro-meteorological indicators. Development and maintenance of analysis tools and websites are part of this component.

Common agricultural policy CAP: measures to be undertaken making use of the remote-sensing applications, 2008-2013

2007/0132(CNS) - 29/07/2013 - Follow-up document

This Commission report concerns the **implementation of the remote sensing applications** and on the use of the financial resources made available to it under Council Regulation (EC) No 78/2008. This Regulation provides the legal framework for these remote-sensing activities for the period 2008-2013.

The report's **main conclusion** is that the **MARS Crop Yield Forecasting System (MCYFS)** has provided effective and timely information and objective data in support to the decision making process for the deployment of the CAP. Beyond the primary objective of producing harvest yield and production forecasts, the system also provides useful insights into other fields relevant to EU agriculture, such as climate change issues.

The Commission has proposed to **continue the MCYFS** via Article 22 of the proposed Regulation of the European Parliament and the Council on the financing, management and monitoring of the common agricultural policy on which a political agreement among the Institutions was reached on 26 June 2013.

The continuation of the MCYFS could include **new activities** to follow the needs of the CAP, which evolves and adapts to a changing global economic environment. These new activities might include:

1. a MCYFS enlarged to other main production areas of the world and to additional relevant crops;
2. a modelling tool extended to EU crops other than those currently covered (e.g. to rye, oats, triticale, sugar cane, soy bean);
3. a more complete modelling of pasture systems able to provide quantitative estimates of biomass production.