

The following are extracts from the draft work programme for FOOD, AGRICULTURE and BIOTECHNOLOGY. Topics that might be of interest to Socio-economic Sciences and Humanities (SSH) researchers were selected. Kindly note that some detail contained in the draft work programme may still change before the final call is launched, in July 2008.

For more information, please contact the NCP for Food, Agriculture and Biotechnology.

KBBE-2009-1-2-09: Impact and development of Conservation Agriculture techniques in developing countries – SICA (Africa) Call: FP7-KBBE-2009-3

Agroecology is the science of applying ecological concepts and principles to the design, development, and management of sustainable agricultural and food systems. It includes the socio-economic and environmental dimensions of sustainable development. Agroecology has already generated agricultural systems that increase productivity while preserving and restoring the environment, and they are extensively used in some developed (e.g. USA) and developing & emerging countries (e.g. Brazil). However, it has had a much more limited impact in Africa for various biophysical and socioeconomic reasons which need to be analysed. Existing biophysical & socioeconomic models will be used and needs for improvement of those models defined in order to better understand and develop conservation agriculture in Africa. Participation of policy makers, farmer organisations and private sector will be essential to ensure success.

The project should include a training component with the aim to increase the research capacities in the participating developing countries. This could include, for example, participation to training programmes, short exchanges of staff, training workshops.

Funding scheme: Coordination and Support Action (supporting action)

Additional information: SICA – minimum number of participants: *to be defined following consultation with EFARD and FARA.*

Expected impact: While networking major research players for Africa in this field of research, up-to-date knowledge and better understanding on 1/ impacts of conservation agriculture techniques in Africa (successes and limitations) 2/ available biophysical & socioeconomic models to analyse those techniques 3/ need for research to improve those models in order to provide decision making tools to policy makers and farmers that will help them develop conservation agriculture in Africa. Thus the project will address global issues including natural resources management and land use, and foster cross-border regional cooperation.

KBBE-2009-1-4-02: Spatial analysis of rural development measures for effective targeting of rural development policies

Call: FP7-KBBE-2009-3

With the advancement of GIS techniques, an ever growing amount of spatial data is available today. At the same time econometrics has been developed further which will allow to analyse such extended cross-sectional data sets (e.g. with `spatial econometrics`). Stronger accountability requirements and EU budget constraints will increase the pressure towards policies targeted to specific objectives. The provision of public benefits (environmental, rural, social) is such an objective.

For the EU's rural development programmes 2007-2013 Member States are requested to collect indicators on characteristics, needs, expenditures and results. Additionally, managing authorities in some Member States have created GIS-based databases with a huge amount of data related to area-based measures. What is lacking is analysis in which these data sets are combined with other indicators at a high level of regional

disaggregation. Given these advances in econometrics and data availability, the scope of the project would be to develop quantitative models based on spatial econometrics (and other relevant econometric methods) for the assessment of the various rural development measures in the EU-27. The modelling approach should be combined with a user-friendly interface. The main objective of such a modelling tool would be to enable policy analysis to look into the causal relationships between characteristics, needs, expenditures and results of rural development measures in a spatial dimension.

Funding scheme: Small Collaborative Project. The requested European Community contribution shall not exceed EUR 2 000 000.

Expected impact: The project results will allow a better targeting of rural development programmes

KBBE-2009-1-4-03: A common data exchange system for agricultural systems

Call: FP7-KBBE-2009-3

Farming is faced with increasing requirements for data handling. Tools have to be developed which allow the exchange of different data families, to meet requirements arising from standards and norms (cross compliance), quality assurance schemes or geo-data handling as needed for precision farming.

Funding scheme: Coordination and Support Action (supporting action)

Expected impact: By the networking and sharing of data handling tools, the project results will lead to efficiency gains and cost reductions in the farming sector.

KBBE-2009-1-4-06: Agricultural Innovation Systems & Traditional knowledge – SICA (Sub-Saharan Africa)

Call: FP7-KBBE-2009-3

Agricultural Innovation Systems, including multiple stakeholders linked together in a dynamic process of research-development, is emerging as a major concept to build on the innovative capacity of stakeholders with their traditional knowledge and to provide tailor-made research contributions. Research could play a stronger role in innovation systems, but is not always effectively integrated with other components of these systems. In many countries, research agendas are still largely decided by scientists, with too little involvement of citizens, consumers, producers, and policy makers. This limits the beneficial impacts of agricultural research on development, particularly in complex and diverse situations of small-scale farming in developing countries. Research activities will be developed to deepen understanding of the potentials and limitations of current innovation processes involving different actors (farmers, researchers, private sector, policy makers, extension agents etc) in small-scale farming in Sub-Saharan Africa. An objective is to analyze interconnections between production activities, new rural dynamics and consumers' behaviour, with a view to guaranteeing food quality, economic, social and environmental sustainability of local agri-food systems as well as livelihood security for producers taking into account also knowledge to maintain plant and animal biodiversity. Territorial networks for agricultural research and development and associated education and training must be taken into account. The role of good linkages between traditional knowledge and formal research in these innovation processes will be analysed. Finally, further needs for research in this area of Agricultural Innovation Systems to benefit small-scale farming will be defined. The projects should include a training component with the aim to increase the research capacities in the participating developing countries. This could include, for example, participation to training programmes, short exchanges of staff, training workshops.

Funding scheme: Coordination and Support Action (supporting action)

Additional information: SICA – minimum number of participants: *to be defined following consultation with EFARD and FARA.*

Expected impact: While networking major research players in this field of research, up-to-date knowledge and better understanding on 1/ the current innovation processes for small-scale farming (successes and limitations), 2/ the role of traditional knowledge in these innovation processes, and, 3/ the need for further research on agricultural innovation systems to benefit small-scale farming. The project will thus contribute to sustainable agriculture and support rural development.

KBBE-2009-1-4-07: Globalisation and trade impact on developing countries – SICA (Sub-Saharan Africa)

Call: FP7-KBBE-2009-3

Support measures under the Common Agricultural Policy are progressively moving away from price or market support, towards income support to farmers. Other major agricultural producers, for example the US, also have significant income support measures. One of the aims of these CAP reforms, especially since 2003, is to make EU agriculture more competitive and market-oriented. The objective of this Coordination Action is to analyse the impact of the reformed CAP and of the US Farm Bill on international agricultural markets, where products of EU, US or other origins compete with products from developing countries and to determine the effects they have on the relative competitiveness of products of different origins (EU – US – Emerging countries - Developing countries) on different markets. The effects of certified schemes (organic, fair trade, Global GAP) on market access and livelihood of resource poor families should also be taken into account. The projects should include a training component with the aim to increase the research capacities in the participating developing countries. This could include, for example, participation to training programmes, short exchanges of staff, training workshops

Funding scheme: Coordination and Support Action (supporting action)

Additional information: SICA - minimum number of participants: *to be defined following consultation with EFARD and FARA.*

Expected impact: Will network major research players in this area, providing up-to-date knowledge and better understanding of the impacts of EU policy choices in the CAP on developing countries' agricultures, and hence will contribute to the policy coherence commitments of the EU.

KBBE-2009-1-4-08: Agricultural Research for Development - ERANET¹

Call: FP7-ERANET-2009-RTD

An ERA-NET (ERA-ARD) has been developed under FP6 in order to better coordinate European and Member States' agricultural research programs for developing and emerging countries (including the outermost regions of the EU). Based on its significant achievements to date, new activities will be developed in order to 1/ enlarge the coordination to a broader based of European & Members States (some important international players in this research field like Finland, Portugal, Sweden are not currently involved) 2/ to sustain current coordination efforts in terms of joint activities (e.g. capacity development in developing countries), and trans-national programs (Food & Energy); 3/ to answer to strong political demands to better coordinate ARD programs in critical domains (e.g. climate change, fisheries). Furthermore, a key objective will be to explore possible convergence and synergy between developmental agricultural research programs and European agricultural based research programs as recommended by SCAR and EIARD

¹ This topic is subject to a coordinated call for ERA-NETs across the Themes. – Complete and detailed information on funding scheme, special eligibility criteria and expected impact of ERA-NETS can be found in annex 4.

(e.g. on climate change, bioenergies). Involvement of representatives from developing countries will thus be necessary.

Funding scheme: Coordination and Support Action

Additional information: ERANET

Expected impact: A greater contribution and visibility of Europe towards achieving the Millennium Development Goals, through an increase in the effectiveness and efficiency of its research for development programs will be established along with the development of a more coherent European ARD and a facilitated access of developing countries to European ARD expertise.

KBBE-2009-2-1-01: Determinants of food habit formation/breaking

Call: FP7-KBBE-2009-3

Some food habits and eating patterns develop already in infancy, when there is no real evidence of a conscious choice, and they are influenced by the child environment and possibly by sensorial perception. Research is needed to understand the process of food habit and eating patterns formation and to identify the key determinants of behavioural changes (food habit-breaking).

Funding scheme: Small Collaborative Project

Expected impact: European added value is to take advantage of the variety and diversity of food choice within Europe. Research in this area is rather limited in Europe, and the results would support the development of European policy towards healthier food habits. It will help understanding the critical ages and periods in infants and children when food habits and eating patterns form and support the implementation of effective intervention strategies for habit breaking and behavioural change toward healthier food choices.

KBBE-2009-2-1-03: Behavioural models for the prevention of obesity, with a particular focus on children

Call: FP7-KBBE-2009-3

Behavioural research on nutrition and physical activity has started to develop recently. A better understanding of why people eat the foods they eat or do (not) participate in physical activity will help designing more effective programmes to fight obesity. Strategies should be developed that are aimed at influencing behaviour, particularly of children, based on the assessment of existing behavioural models, the development of insights from the combination of different models and the conduct of new behavioural research.

Funding scheme: Small Collaborative Project

Expected impact: The European added value will be to compile experiences at local level and develop new behavioural models that could be applied at European scale. It will allow developing strategies aimed at influencing behaviour, particularly of children at European level. Research will increase collaboration between different scientific fields, contribute to the activities of the EU Platform on Diet, Physical Activity and Health, and support European public health policy, such as the White Paper on Nutrition, Overweight and Obesity.

KBBE-2009-2-2-01: Stress, addiction and eating behaviour

Call: FP7-KBBE-2009-3

Eating behaviour and addiction share common neurobiological regulations, brain regions of action, neurochemical pathways as well as reward reinforcement systems. They are strongly interfered by mood and socio-psychological stress situations. The aim of this topic is to broaden our basic knowledge on the complex neurological and (socio) psychological inter-relations between stress, eating behaviour, and addiction (including alcohol). In particular, strong links should be built between human nutritionists and research communities working on the basic principles of eating disorders and addiction. Research shall particularly

contribute to better understanding the addictive properties of individual food components and/or their combination in certain foods or diets, the potential effects of food components on the prevention of addiction, and the socio-psychological reasons leading to eating disorders. It shall also be elucidated how typical stress situations of 'modern life' provoke disadvantageous eating patterns and addiction to certain foods.

Funding scheme: Large Collaborative Project

Expected impact: The European added value will be to gather the necessary critical mass in several fields of expertise and to strengthen European research capacities in this area to provide the sound scientific support to European public health policies. The European dimension is critical to the development and use of new and harmonised methodologies in this area. The socio-psychological analysis of determinants of food addiction, and among others, current trends and motivations for youth drinking, will provide scientific support to European public health policies. European cultural diversity needs to be taken into account and links need to be established between health, social and economic developments at European level for a better understanding of addictions patterns and their potential adverse effects.

KBBE-2009-2-2-05: Strategies for sustainable eating habits

Call: FP7-KBBE-2009-3

The new eating habits and the actual trends in production and consumption have a health, environmental and social impact. In the last decades, important changes have occurred in lifestyles (move towards urban settings, dietary imbalances with excess of certain nutrients and unhealthy dietary habits), food production, and global exchanges. The project will investigate the current food consumption patterns and trends in Europe and their environmental and socio-economical impact world-wide. The main objective is to develop strategies to improve the quality of the diet while reducing the adverse environmental and socio-economical effects. Research needs and initiatives or actions to support related policy development should be identified. Expertise in nutrition, food chain, life cycle analysis, ecology, economy and social sciences is needed to support the multidisciplinary character of the work.

Funding scheme: Coordination and Support Action (supporting action)

Expected impact: The European dimension of the project is necessary to identify and communicate best practices in the area of sustainable food consumption. Promotion of healthy diets minimising the ecological footprint will be made possible by the generation of knowledge in nutrition ecology and the development of strategies to improve sustainable eating habits in Europe.

KBBE-2009-2-3-03: Sustainable food and feed processing

Call: FP7-KBBE-2009-3

Food and feed production and processing chain systems have considerable potentials for increased sustainability. The aim is to develop alternatives to current processes or to optimise them with respect to energy savings or energy sources, water savings, improved efficiency including optimised raw material use, and minimised effluent streams (except recycling or recovery of waste), with particular emphasis on smart energy and resource-saving technologies in SMEs. Sustainability indicators have to be defined and validated, and have to be applied together with integrated assessment models (energy balance, life cycle inventories, environmental analyses, economic assessments). Processing should not be seen separately; the assessment should cover the whole production chain from raw material to the product ready for consumption.

Funding scheme: Small Collaborative Project

Expected impact: The European added value is given by the need to define and validate sustainability indicators, which goes beyond the sole private sector interests. A European project helps combine the diverse approaches available in the different Member States.

Innovation-driven increase of the competitiveness of food producers and food equipment manufacturers, in particular SMEs, in a field with much environmental impact. Measurable decrease of water use, energy use and effluent streams for selected processes without loss of food safety and quality.

KBBE-2009-2-4-04: Perspectives for novel foods

Call: FP7-KBBE-2009-3

This project will promote forward-looking debate on research and developments in the area of novel foods and novel food technologies, including bioethical aspects and societal needs. Anticipation of research needs with the involvement of key stakeholders from the food chain will support the building of the Knowledge Based Bio-Economy (KBBE).

Funding scheme: Coordination and Support Action (supporting action)

Expected impact: European added value by contributing to identifying and addressing future challenges in the field of novel foods, including novel technologies. Focused input into European strategies for new and emerging research needs and recasting research agendas. Helping European society to anticipate and manage change. Supporting policy in the area of Novel Foods (European Commission Health and Consumer Protection Directorate General).

KBBE-2009-2-5-01: International food trade: anticipating the impact of climate change on the safety of European and global food markets – SICA

Call: FP7-KBBE-2009-3

Climate change is projected to have significant impacts on European and global food and feed markets. At present Europe is the largest importer and exporter of food products. Climate change could make Europe more dependent of food imports of non-European origin but conversely, offers new opportunities to the European food business through the exploitation of new crops and animals originating from areas with an ecology similar to that expected for Europe in future. The aim of this topic is dual. It aims at exploring new food and feed contamination pathways from natural and man-made chemicals and micro-organisms in Europe and, secondly, to investigate opportunities and risks for mutually beneficial international food trade, addressing all relevant factors to support and secure food commerce, inclusive appropriate packaging technologies, transport efficiency and logistics.

Funding scheme: Large Collaborative Project

Additional information: SICA – Minimum Number of Participants: 3 from different Member States or Associated Countries and 3 from different ICPC.

Expected impact: High European added value is expected from this topic in the area of safety of food in Europe and from non-European origin through increased ability to identify, monitor and prevent global food safety risks. A long term vision and strategy on international food trade ensuring the European customer of the safety and quality of food and feed of European and non-European origin. Shared life-cycle quality assurance methodologies and processes as well as risk assessment methods with Europe's third country partners that take into account their production and processing specificities. Enhanced competitiveness of the Union's food industry in the global marketplace. Identification of non-tariff barriers and adaptation requirements to the European food chain in order to harness trade opportunities for enhanced intra-European and international food trade. Promotion of international RTD cooperation with third countries of strategic importance to Europe together with opportunities for setting up economic joint ventures

KBBE-2009-2-5-03: Barriers to network learning in SMEs

Call: FP7-KBBE-2009-3

The large number of SMEs in the food sector constitutes a structural problem for further contributing to economic growth, employment and sustainable development. Their ability to innovate and interact successfully with larger and multinational food companies will depend on cooperation efforts and coordination support initiatives by the sector to stimulate networking between SMEs. The objective of this research priority is to gain a better understanding about behavioural differences between food companies, their network preferences and required instruments to manage the network. Understanding the integration need and barriers is a first step towards the development of sustainable business networks. However, as shown by several network initiatives, it is essential to know better the success factors in managing an efficient network.

Funding scheme: Small Collaborative Project

Expected impact: Increased availability of exploitable know-how regarding European SME networks is seen as the major European added value. The development of business tools to allow SMEs to assess their own network needs, interests and preferences as well as to enable for organisational change and strategic management leading to competitive and sustainable business networks. The emergence of dynamic and sustainable SME networks capable of promoting and sustaining innovation in the food sector. A data base on network behaviour and -preferences of European food SMEs. Information and advice to policy makers and regulatory bodies regarding SME factors of success in business. Support long-term strategies of the KBBE in the European Research Area.

KBBE-2009-3-6-04: Analysis of the ethical, safety, regulatory and socioeconomic aspects of nanobiotechnology

Call: FP7-KBBE-2009-3

The main objective of this action is to support the scientific assessment of the potential risks associated with nanobiotechnology based materials and products (excluding nanomedicine). This support action should make a survey of the relevant issues, analyse the implications above looking at mid to long-term impacts and foresee scenarios on the possible consequences for the citizens, society and economy. Scientists, experts on ethical, regulatory, social and economic issues, policy makers and company representatives should be involved in the analysis. Conclusions should be drawn and recommendations should be issued.

The action should, in parallel to the above described activity, support the coordination of the different projects funded as result of this 2008 nanobiotechnology coordinated call.

Funding scheme: Coordination and Support Action (supporting action)

Additional information: This topic is implemented via a coordinated call with Theme Nanosciences, Nanotechnologies, Materials and new Production Technologies (see previous footnote). See the call fiche in section XX

Expected impact: Promote safe, integrated and responsible nanobiotechnology research and pave its way to its successful implementation. The project will also support coordination of nanobiotechnology FP7 funded projects.