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**RESEARCH JOINT PROGRAMMING INITIATIVE ON 'A HEALTHY DIET FOR A
HEALTHY LIFE': MOTIVATIONS AND STATE OF PLAY OF RESEARCH AT
EUROPEAN LEVEL**

Accompanying document to the

**COMMISSION RECOMMENDATION ON THE RESEARCH JOINT
PROGRAMMING INITIATIVE 'A HEALTHY DIET FOR A HEALTHY LIFE'**

C(2010)2587 final

EXECUTIVE SUMMARY

The Commission proposes more strategic cooperation between EU Member States on research and development to address major societal challenges. One way to do this is the new 'joint programming' (JP) approach¹. Joint programming involves Member States engaging on in defining, developing and implementing strategic research agendas (SRA). 'A healthy diet for a healthy life'² has been proposed as one such joint programming initiative (JPI).

Health is a key driver for Europe's growth and prosperity. Putting in place cost-effective measures to improve citizens' state of health will result in economic benefits for society and improvements in future productivity and competitiveness.

The last three decades have seen the levels of overweight and obesity in the EU population rise dramatically, particularly among children. This is indicative of a worsening trend of poor diet and low physical activity across the EU population which will increase the prevalence of chronic conditions.

In the long term, this will have a negative impact on life expectancy in the EU and reduce quality of life, not to mention the associated health costs.

1. TOWARDS JOINT PROGRAMMING

In 2008 the Commission proposed a new approach called JP for large-scale joint public research initiatives at European level. This was one of the five policy initiatives following-up the Green Paper on "The European Research Area: New Perspectives"³ and an important process to realise the 2020 Vision for the European Research Area adopted by the Council in December 2008.⁴ It is also acknowledged as an important process to contribute to the "Innovation Union" initiative proposed by the European Commission as part of the Europe 2020 Strategy for smart, sustainable and inclusive growth⁵.

Joint programming developed in the context of the Lisbon strategy, which recognised research and development as one of the key drivers to growth and jobs. It is the process by which Member States engage on a variable-geometry basis in defining, developing and implementing common SRA based on a common vision of how to address major societal challenges that no Member State is capable of resolving alone.

Within CREST (the EU Committee for Scientific and Technical Research), the High-Level Group on JP (GPC) identified and substantiated various themes for JPIs, one of which was 'Health, food and prevention of diet-related diseases'.

¹ The Joint programming approach is detailed in the Commission Staff Working Document "Putting Joint Programming in Research into Practice: Structuring Europe's Response to the Grand Challenges", SEC (2010)...

² The provisional title of this joint programming initiative, when it was presented to the Competitiveness Council on 3 December 2009, was 'Health, food and prevention of diet-related diseases'. This title was later changed by the consortium of proposing countries.

³ COM(2007)161 of 4.4.2007

⁴ Concil conclusions of 2.12.2008, Definition of a "2020 Vision for the European Research Area", 16767/08

⁵ COM(2010)2020 of 3.3.2010

2. A HEALTHY DIET FOR A HEALTHY LIFE

A major issue for public research targeting prevention of diet-related diseases

The last three decades have seen the levels of overweight and obesity in the EU population rise dramatically, particularly among children, where the prevalence of overweight was estimated at 30 % in 2006.

Prevalence of adult obesity was estimated to be 15.7 % in 2005 for the EU-27. If no action is taken, the prevalence of obesity in the EU-27 will reach around 20 % by 2020⁶.

This is indicative of a worsening trend of poor diet and low physical activity across the EU population which will increase the prevalence of chronic conditions, such as cardiovascular disease, hypertension, type 2 diabetes, strokes, certain cancers, musculo-skeletal disorders and even a range of mental health conditions.

According to the WHO, largely preventable chronic diseases cause 77 % of the disease burden in the WHO EURO region⁷, where six of the top seven risk factors for ill health are linked to poor nutrition and lack of physical activity⁸.

In the long term, this will have a negative impact on life expectancy in the EU and reduce quality of life.

Moreover, the cost of obesity can be extrapolated to €40.5 billion a year for the EU-25, rising to €81 billion if overweight is added⁹. Complications resulting from type 2 diabetes alone account for between 5 % and 10 % of total health care spending in the EU¹⁰.

A substantial research effort is needed

A substantial European research effort is needed to tackle prevention of diet-related diseases.

Food and health research is a very complex field involving biological systems and the interaction between many different substances. Long term investigations, especially clinical trials and large cohorts, need to be better exploited. Research results are often ambivalent due to differences in scientific methods.

Advancing the understanding of the interaction between food, nutrition, genetics, lifestyles and health, including health determinants, is key to combating diet-related chronic diseases.

There is a need to develop advanced methods based on new and cross-cutting technologies (system biology, bioinformatics, cognitive science, imaging) as well as advanced approaches and methods in social sciences (sociology, economics, psychology and cultural anthropology) in order to, for instance, optimize the implementation dietary guidelines.

Contribution to the prevention of diet-related diseases should be based on a multidisciplinary scientific approach, merging fundamental and translational research at all levels with innovative technologies and economic and social sciences.

⁶ SEC(2007) 706/2

⁷ Comprising 53 countries (including the EU-27).

⁸ http://who.int/dietphysicalactivity/publications/facts/en/gsf_ppt_rf.pdf.

⁹ Fry, J., Finlay, W. 'The prevalence and costs of obesity in the EU'. In: 'Proceedings of the Nutrition Society', 2005, 64 (3):359-362.

¹⁰ 'The cost of diabetes in Europe –Type 2 survey' (CODE-2).

Action at European level

Over the last twelve years, the 5th, 6th and the current 7th European Framework Programmes for Research and Technological Development and Demonstration Activities¹¹ (FP5, FP6, FP7) have provided a range of opportunities for European research to address the challenges posed by diet-related diseases.

Within the context of research on food and related areas investment in elucidating the mechanisms for prevention and development of nutrition-related diseases and disorders and for understanding key factors linked to diet, dietary habits and genetic factors totalled about €101 million for five years (1998-2002) in FP5, approximately €178 million for five years (2002-2006) in FP6 and approximately €81 million in the first four years (2007-2010) of FP7.

In FP6 and FP7 approximately €36 million were allocated to projects on allergies, €81 million to prevention of obesity, of which about half was for prevention of obesity in children, and approximately €66 million to identification of bioactive compounds in food and of the mechanisms governing the way they act and to related improved processing.

The nutritional needs of an ageing population were studied intensively in FP5 with funding of €22 million (but €170 million were allocated to age-related research) and continued. This work continued in FP6 and FP7. The 2010 Work Programme (2010 WP) included a focus on the role of diet in prevention of functional decline in the elderly.. Under FP5 the Key Action on ageing saw €190 million on projects addressing healthy ageing and quality of life.

The immune system and gut microbiota are being targeted by two FP7 projects, taking a systems biology approach.

Several projects in FP7 develop new tools for nutrition science (nutrigenomics, food composition database at EU level), EURRECA (nutrient recommendations), EFCOVAL (dietary assessment tool) and DREAM (development of food models) with the 2010 WP addressing the development of the concept of personalised nutrition.

In FP5 €17 million were invested in research projects on consumer needs and behaviour, in FP6 €21 million and in FP7 so far €11 million. Vulnerable population subgroups have been addressed. The WP2010 is addressing production of food for the low-income population.

An ERA-NET focused on food safety in FP6.

A European Technology Platform on 'Food for life' set up within FP6 delivered a SRA and an implementation plan on nutritional, food and consumer sciences and food chain management.

Within the context of health research, FP6 provided approximately €23 million to projects addressing diabetes and excess weight with a further €5.8 million under the 'Scientific support to policies' activity to generate evidence for policy in the areas of the determinants of obesity, physical activity and prevention campaigns. In FP7 the Health theme provides so far €50 million to projects addressing diabetes/obesity and related areas as well as projects on

¹¹ **FP5 1998-2002:** Quality of Life and Management of Living Resources, Key Actions: Food, Nutrition & Health; Ageing Population and Disabilities; Generic Activities; Socio- Economic Research. **FP6 2002-2006** Thematic Areas: Food Quality and Safety; Life Sciences, Genomics & Biotechnology for Health; Activity: Scientific Support to policies; Information Society Technologies; Citizens & Governance; Structural links: Science and Society. **FP7** Cooperation Specific Programme Themes: Health; Food, Agriculture and Fisheries, and Biotechnology; Information & Communication Technologies; Socio-Economic Sciences & the Humanities.

preventive interventions, healthy behaviours and energy balance in the young and health determinants – nutritional factors - for the elderly population.

EU socio-economic research has also contributed with research on the quality of life of European citizens, in particular the balance between employment and well-being in FP5, and the image of obesity and overweight in FP6. Under the FP6 Thematic priority ‘Citizens and governance in a knowledge-based society’ further research was conducted on quality of life, including lifestyles, health and medicine. In FP7 societal trends and lifestyles are also covered by the theme ‘Research in socio-economic sciences and humanities’.

The ‘ICT for health’ research programme in FP6 and FP7 addresses different aspects of e-health systems, including support for collaborative care and data-sharing for chronic disease management and disease prevention, long-term infrastructure for integrative research and personal health systems.

Action at Member State level

The information on the state of research in food and health in Member States is fragmented and non-homogeneous.

Very few countries have developed an ‘integrated’ food and health programme, such as the Irish cross-sectoral Programme for Food and Health Research, or the Food and Nutrition Delta Innovation Programme – Food and Health (2006-2011) in the Netherlands.

Joint research programmes on food and health at national level are more common, such as the UK National Prevention Research Initiative on chronic diseases.

With the exception of the Scandinavian countries (cooperation programmes with NordForsk and the Nordic cooperation committees for agriculture and for forestry), there are no transnational programmes in place at country level.

EuroAgri-Foodchain is an international thematic network within EUREKA with the main objective to support the competitiveness of agri-food sector through the promotion of "market-driven" co-operative Research and Technological Development projects.

The EU-funded project FAHRE will map key players in the food and health sector in Europe by the end of 2010. It will also identify gaps in and overlaps between research needs and give advice for achieving better coordination.

The European Commission established an Expert Group on Food and Health Research in 2008 to share current practice on integration or coordination of research programmes on food and health. The possibility to tackle large-scale challenges is seen as one of the main incentives for coordination. Formal structures seem necessary for exchanging ideas, combined with commitment at a very high level, at least at the beginning of the process.

There have been repeated calls from the Council for the Commission to develop action in the field of nutrition and physical activity, including Council conclusions on obesity, on promoting heart health and on diabetes¹².

¹² Council conclusions of 2 December 2002 on obesity (OJ C 11, 17.1.2003, p. 3), of 2 December 2003 on healthy lifestyles (OJ C 22, 27.1.2004, p. 1), of 2 June 2004 on promoting heart health (Press release 9507/04 (Presse 163)), of 6 June 2005 on obesity, nutrition and physical activity (Press release: 8980/05 (Presse 117)) and of 5 June 2006 on promotion of healthy lifestyles and prevention of type 2 diabetes (OJ C 147, 23.6.2006, p. 1).

Experience with other coordination schemes suggests that looking into possible forms of consultation and cooperation on this subject with scientifically advanced groupings at international level is an important part of solving global challenges.

This JP initiative could foster cooperation at international level. Interested non-EU countries would be able to join the initiative at a later stage, once the common vision and strategic agenda have been formulated between the countries participating and in accordance with the rules on participation in the JP initiative based on specific international arrangements.

The food industry

Food and beverages is the leading manufacturing sector in Europe in terms of employment (13 % of the workforce) and turnover (13 % of the total turnover by manufacturing)¹³.

Prevention of diet-related diseases is not feasible without cooperation with the agro-food industry. Consumption of food and drink still takes up a large proportion of household spending¹⁴.

The research and development of innovative products and production processes are important for the entire food supply chain and aim at satisfying the ongoing changes in consumer preferences while ensuring product diversification. Furthermore R&D also increases both the efficiency and productivity of the sector through technological progress. Nevertheless the level of R&D investments at 0.24% of the total output of EU15 in 2003¹⁵ is considered to be low. There are clearly further opportunities to be exploited which should take into consideration the fact that the European agro-food industry is dominated by SMEs (0.86 % of the firms employ 250 people or more¹⁶) that often lack resources and qualified personnel to invest on research and innovation.

Better structuring of public research programmes and investment will leverage private investment.

Main relevant related policy initiatives

Health and Consumers' protection policy

The Directorate-General for Health and Consumers has been financing projects and other actions in the field of public health through its Health Programmes¹⁷. The first Health Programme financed over 300 projects while the current one will allocate €321.5 million to improving citizens' health.

In May 2007, the European Commission adopted the White Paper 'A Strategy on Nutrition, Overweight and Obesity-related Health Issues' focusing on action that can be taken to reduce the risks associated with poor nutrition and limited physical exercise.

The EU Platform on Diet, Physical Activity and Health was set up in March 2005 to provide a forum for stakeholders at European level, whereas the High-Level Group on Nutrition and Physical Activity strengthens the role of governments in counteracting overweight and obesity.

¹³ Eurostat for the EU-27 from 2006.

¹⁴ Eurostat data — taken from 'Data and trends of the European food and drink industry', CIAA Report 2006.

¹⁵ Data and trends of the European Food and Drink Industry 2007, CIAA

¹⁶ 'Patterns and Performance of Sectoral Innovation, Manufacture of Food and Beverages', Europe Innova, innova watch, October 2009, Final report, Task 1.

¹⁷ http://ec.europa.eu/health/programme/policy/index_en.htm

In 2009, the Commission launched the European Partnership for Action Against Cancer¹⁸, to support Member States and other stakeholders in their efforts to tackle cancer more efficiently and in a comprehensive way.

In January 2008, the Commission adopted a proposal for a Regulation¹⁹ on the provision of food information to consumers requiring key nutritional information to be provided on the majority of processed foods to empower consumers to make informed dietary choices.

In December 2006, the Regulation on nutrition and health claims made on foods was adopted by the Council and Parliament²⁰. It harmonises across the European Union rules including the need for scientific substantiation on nutrition and health claims.

Entreprise policy

The High-Level Group (HLG) on the Competitiveness of the Agro-Food Industry was set up in 2008²¹ as one of the instruments to implement the Commission's modern industrial policy²². The HLG endorsed the report²³ on the competitiveness of the European agro-food-industry including 30 recommendations²⁴ and actions to be taken by the European institutions, the Member States and stakeholders.

The current EU innovation policy aims to lower barriers to bringing new products or services onto the market with the aid of an action plan combining regulation, public procurement, standardisation and support activities.

Agriculture policy

In the context of the September 2007 reform of the common market organisation for fruit and vegetables, a European school fruit scheme was set up to provide fruit and vegetables to European children from the start of the 2009/2010 school year. The Commission put aside €90 million which co-financing increased to €157 million. An additional €8 million budget will be allocated to schools, hospitals and charities.

The European school milk scheme²⁵ encourages consumption of dairy products by children. In the 2006/2007 school year the equivalent of 305 000 tonnes of milk was distributed in schools, with Community expenditure of more than €50 million.

Promotion of agricultural products can be supported in an EU scheme, in particular for Member States to raise awareness of the beneficial effects of consuming fruit and vegetables.

The main recommendations made in the Commission Communication on agricultural product quality policy²⁶ were that action is needed to improve communication about the quality of agricultural products, including quality labelling schemes.

¹⁸ Communication from the Commission COM (2009) 291final, available at http://ec.europa.eu/health/major_chronic_diseases/key_documents/index_en.htm#anchor1
¹⁹ COM(2008) 40.

²⁰ Regulation (EC) No 1924/2006.

²¹ Commission Decision of 28 April 2008 (2008/359/EC).

²² Communication 'Mid-term review of industrial policy. A contribution to the EU's Growth and Jobs Strategy' (COM(2007) 374).

²³ http://ec.europa.eu/enterprise/sectors/food/files/high_level_group_2008/documents_hlg/final_report_hlg_17_03_09_en.pdf.

²⁴ http://ec.europa.eu/enterprise/sectors/food/files/high_level_group_2008/documents_hlg/final_recommendations_hlg_17_03_09_en.pdf.

²⁵ www.drinkitup.eu.

The EU finances information and promotion campaigns²⁷ about its farm products, manufactured foodstuffs and production methods to keep consumers fully informed about their quality, nutritional value and safety.

²⁶ COM(2009) 234 final.

²⁷ Council Regulation (EC) No 3/2008 of 17 December 2007 on information provision and promotion measures for agricultural products on the internal market and in third countries.