

GLAMUR

Global and local food assessment:
a MULTIdimensional performance-based approach



The research leading to these results has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement n° 311778



Report on the 2nd Expert meeting of Glamur (Deliverable 3.3)

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GLAMUR is an EU FP7 project that aims at integrating advancement in scientific knowledge about the impact of food chains to practice, to increase food chains sustainability through public policies and private strategies.

This general objective will be pursued through the following specific objectives:

To develop and validate a performance criteria matrix for assessment and comparison of food chains operating at a range of geographical scales through analysis of how food chain impacts are communicated in different spheres of society.

To build a database of quantifiable indicators of impact and a set of 20 case studies aimed at understanding how impacts are generated within specific food chains.

To advance knowledge on methodological problems and trade-offs arising when measuring and comparing the impact of food chains within and between sectors.

To assess how performance is perceived by stakeholders in different national contexts through participatory assessment and multi-criteria analysis of the different typologies of food chains.

To assess the actual and potential role of public and private policies addressing food chains and to turn assessment into policy recommendations.

To build a network that turns the advancement of scientific knowledge into decision making tools for domestic and public consumers, producers, citizens, scientists, policy makers, civil society organizations.

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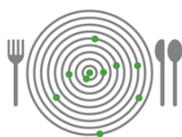


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Report on the 2nd Expert meeting.

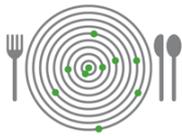
Deliverable 3.3

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1. Introduction

Partners of the GLAMUR project attended a meeting in Belgrade, from the 12th to the 14th of November, for which national teams had finalized their case description and advanced data collection (WP3). Comparative analysis and methodology evaluation (WP4) will be the next steps. Moreover, the report on policy analysis (WP6) has been delivered after the Rome meeting (February 2014), so it was worth to be discussed.

1.1. Aims

The aims of this second expert meeting in Belgrade were:

- * To discuss the Policy analysis report;
- * To discuss the content of case studies, their methodological implications, and the comparative analysis;
- * To support the teams in identifying the points to highlight to improve the societal and scientific impacts of the project.

1.2. Welcome and Presentation (Zaklina Stojanovic)

After a short presentation of the program and goals of the meeting by Zaklina Stojanovic, the experts present at the meeting introduced themselves:

Ružica Brečić	University of Zagreb
Maria Partalidou	University of Thessaloniki
Robert Pederson	Agriculture and Rural Convention (ARC 2020), Bruxelles
Bent Mikkelsen:	Aalborg University, Copenhagen
Murat Boyaci	Ege University Izmir
Sara Rodrigues	Porto University
Krzysztof Górlach	Jagiellonian University, Krakow
Luca Ruini	Barilla
Angela Zinnai	University of Pisa



2. First Session (Chair: Rudolf van Broekhuizen)

2.1. GLAMUR, an overview (Gianluca Brunori)

Gianluca Brunori reminded that the project takes the perspective of decision makers and consumers: indeed there are a growing number of consumers willing to follow sustainable consumption principles. This is GLAMUR starting point. Then comes the debates around the definition of local and concerning the performance of global and local chains: is local more sustainable than global? After a state of the art, it appears that the performance of food chains is multidimensional. Our goal is to turn knowledge into practice, in order to give decision makers some tools: what do they need in terms of knowledge?

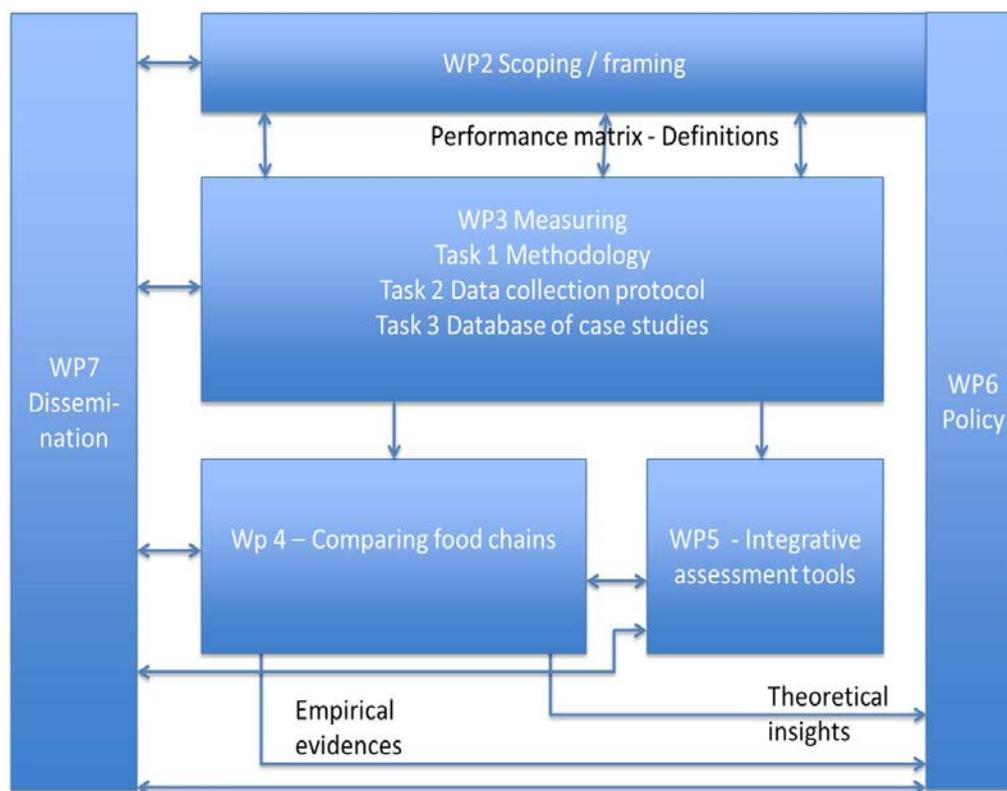


Figure 1: The project Work Flow

Methodologies in current state need updates and transdisciplinarity, just like the cost-benefit analysis. Another emerging debate is how a methodology such as footprint or LCA can be turned into a governance tool. Our goals are thus normative, methodological, and empirical. Two important objectives are to finalize the performance criteria matrix and decision making tools.

Figure 1 represents the workflow of the project with the articulation of all the work packages (WP). The scoping and framing step (WP2) led to a performance criteria matrix with 24 attributes, turned into several indicators. WP3 is about data collection, database development and development of the method. WP4 and WP5 are starting now and aim at comparing food



chains, methods, sectors and countries, and making assessments. Finally, this meeting is also part of WP6 as we will discuss the policy report and policy recommendations, and part of WP7 which is about dissemination.

The experts are expected to evaluate our work with 7 questions:

1. To what extent do case studies help to assess the different performance of short and global food chains?
2. Are GLAMUR case studies innovative with regard to the current research on food supply chains?
3. Are methodologies appropriate and sound?
4. What are the main points of strength?
5. What are the main points of weakness?
6. What are the recommendations in relation to the scientific quality?
7. What are the recommendations in relation to the societal relevance?

2.2. WP6 Policy Analysis and recommendations (David Barling)

Most teams are members of WP6 but will be involved later. The main objective for work package 6 is to assess the actual and potential roles of public and private policies addressing food chains- with reference to economic, social, health, environmental, ethical policy fields, and to translate this assessment into policy recommendations. Deliverable 6.1 (Policy Analysis Report) is about providing the background and context to identify how policies and governance impact upon food chains. That is to say that it maps the policy terrain. In the project workflow, WP6 is parallel to WP5 (Figure 1). The structure of the report 6.1 is articulated in four sections:

1. Analysis of European Union policies and governance in relation to food chains: global and local. The aim is to understand what is the competency of the EU.
 - The EU food policy is organized in different layers: agricultural and rural development policy and market policy instead of an integrated policy. Policy changes involve actors, institutions and ideas and views are thus taken up by actors who use them differently (instead of using evidence). Moreover, the consequence of the multilevel governance is that each level influences the others.

The five dimensions are present in EU policies. The economic dimension is in the European Commission and Food Chain competitiveness. The health dimension is in Food safety and public health. The ethical dimension is in animal welfare. The environmental dimension is in Environmental action programmes and sustainable development strategies and foods chains. Finally, the social dimension is in Corporate Social Responsibility, labour rights and working conditions in the food chains.

About the EU flagship policies, Europe 2020 aimed at an economic growth including resource efficiency and sustainable development strategy, with a high level of competitiveness. Different strategies for a better functioning of food provision are



used such as business-to-business relationships, monitoring prices, sustainable food consumption and production (SCP). SCP cross departmental food chain governance platforms have been set up by different Directorate Generals to co-ordinate aspects of food chain policy and performance, covering: food waste, retailers (environmental role), social forum for food employment conditions, European Food Sustainable Consumption Production Roundtable. Those are some examples of public-private governance interface.

EU policies promote local food chain, for example by giving financial support through Rural Development Programs (RDP). RDP aim to increase the capacity of Small and Medium sized Enterprises to compete as exporters as well. Also, the EU Public Procurement emitted new rules promoting policy instrument for the promotion of local food chains. Short food supply chains and local food systems are identified as important drivers for rural economic, social and cultural development within Europe's regions. The European Innovation Partnership "Agricultural Productivity and Sustainability" (EIP-AGRI) is cited as an innovative short food supply chain management and Geographical Indications are cited as important policy instruments for local food. Moreover, the Common Agricultural Policy (CAP) reforms the marketing supports for producers' organizations (POs) in food chains across more commodities (e.g. contract clauses).

2. International food trade agreements. Multilateral and bilateral trade agreements are impacting food chains, but there are also International food trade agreements between EU and developing countries.

International trade agreements shape the nature of food chains, paramount examples being the World Trade Organisation rules on agriculture and food safety standards. There are conflicts over the interpretation of these rules, e.g. regulation of technology applications to feed and food products, which can be interpreted as a non-tariff trade barrier.

A current example of bilateral trade agreements, under negotiation between the US and the EU is the Transatlantic Trade and Investment Partnership (TTIP). It seeks greater regulatory convergence and impacts on the current application of some EU regulations upon food.

The Africa-Caribbean-Pacific Economic Partnership Agreements (ACP EPA) between the EU and developing countries have an important impact upon both imports to the EU and the position of food producers in these developing world economies.

Recent revisions have eroded preferential access to EU markets for some countries and their produce and impact on trading relations between developing countries and the EU.

3. Private Governance of food chains. This includes standards setting and grading of produce, process- and product-based food assurance schemes, contractual specifications from food manufacturers and retailers to growers, or from retailers to manufacturers through own-brand labelled foods.



Private governance forms throw up new power relationships along supply chains, particularly through the extraction of economic value.

- The major food manufacturers and retailers have a global reach through Foreign Direct Investment (FDI) in a large number of countries.
 - Private governance also emerges from civil society as 'alternative food networks' arise to challenge the dominant supply chains, setting new criteria, e.g. fair trade.
 - European Commission has recognised the dynamic element of these private food and drink sustainability schemes and decided not to intervene with market regulation, but guidance should be provided under the EU's public procurement rules for the purchase of such sustainable goods under public contracts.
4. Developing countries' perspectives on regulatory and private governance determinants of local (and global) food chains. The EU Policy supports local food chains, but there is also a European promotion of global food chains, driven by private sector strategy, that impacts on the performance of developing country food chains.
- The 'global' is turning up in the 'local', for example with agrifood imports and Foreign Direct Investment (FDI) in production, processing and retailing. For regulating FDI in agricultural production in the interest of equitable and sustainable development, countries can put policies in place to ensure local control over: land and resources, land access conditions, regulation of investment, oversight of contract farming and supply chain relations.
 - The impacts of consumption on developing countries are as important as the impacts of production. They slow down emergence of commercial domestic production and processing sectors.
 - Elaboration of national strategies for protecting local markets, for example by managing imports in sensitive sectors for local sector development, has become a priority across a number of sub-Saharan African countries.

For WP6, the next steps are divided into two tasks: Task 6.1.4 is about identifying key policy finding from WP3 and WP4 case studies and cross national comparisons, and fitting into EU policy actions and agendas whereas task 6.2 is about implementation of road map and policy recommendations.

2.3. Discussion introduced by Robert Pederson and Bent Mikkelsen

Robert Pederson: The presentation is very Euro-centric, probably because we are in a European project. EU policies are developed nationally and regionally. Public procurement policy tries to get local food into market. Moreover, rural development policy is used to develop local food chains or to improve access to small or regional markets. EU policy highlights priorities and members see how they take measures. It would be good to see how members take up these priorities. However there is a tendency to forget to connect policies.



Indeed, reinforcing local food chains as rural development policy needs connecting different policies. Bilateral trade agreements (TTIP) will be increasingly important for food and others. Concerning local/global, these are intertwined. It is not correct to talk about local VS global, this subject being a huge debate. What we are actually looking at is a better balance between local and global, rather than local versus global. However, we should rather talk about regional food systems and how they can deliver values to region and global levels. Some questions emerged such as: Should we develop a new frame for local food procurement in order to develop resilient local communities? How can we achieve a more equitable distribution of resources around the globe? This is the main policy challenge. Maybe we need a more integrated policy.

Damian Maye: why would bilateral agreements be more important in the future?

Robert Pederson: It's a prediction. The TTIP would contain 40% of trade and leave China with less influence than it could have.

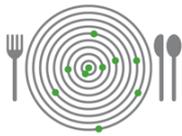
Bent Egberg Mikkelsen: Advances and transition towards more sustainable food supply chains throw up further inequalities between those who are integrated into the industrial efficient supply chain and those who are not. Indeed developing countries see such standards as no tariff barriers. How countries relate and adopt EU policies is very different. In Europe, key public interventions such as circular public food economies, organic scheme, school schemes are carried on to improve the Smart Public Procurement. Networks, people, relations and governance are key aspects to take into account because non-public procurement promotes local food chains. It is also essential to have a Sustainable Development Strategy (SDS) together with a Sustainable Consumption & production (SCD) and Product Environmental Footprints (PEFS). For that, understanding crowd and urban movements, non-public or dual governance (multi-stakeholders communities) is essential, as well as more "foresight" research and better "remote sensing". However, it is difficult for the EU system to consult all these initiatives.

Luca Colombo highlighted that climate change policy will influence food chains policy and structures. Nowadays, there is an EU climate change agreement concerning the meat sector.

Luca Ruini confirmed that climate change policy would have a significant impact on agri and food sectors. The goal of reducing CO₂ will impact agriculture heavily. Thus, it will be effective to promote different products and use this kind of projects and the recommendations.

Krzysztof Gorlach noticed that in GLAMUR the description of the power of national actors that regulate the governance of food chains is missing. There must be some actors with different power. In the report conflicts and possible cooperation should appear.

Filippo Arfini said that the politico-economic dimension should be considered in global change, including environmental aspects. However, we can emit policy recommendations but if politico-economic actors don't consider them, nothing changes.



Bent Mikkelsen agrees with Krzysztof Gorglach, and thinks we shouldn't underestimate the value of some actors. Indeed, NGOs and civil societies have legitimacy and power too.

David Barling added that we should not forget that a lot of funding comes from governments.

Gianluca Brunori asked how knowledge affects power. Because in local chains there is less access to instruments and tools that allow having data. Local chains have a lot of initiatives but can't document impacts or power. In this case, the debate is around power versus knowledge and power in knowledge is a key element in the evaluation of performance.

Bernd Annaert underlined education as a way to promote food consumption: He thinks education is important to initiate food sustainable consumption. Are links between sustainable consumption and education identified?

Yuna Chiffolleau added that we should take into account social cohesion policy too. The retailer sector and production do not work together enough.

Bent Mikkelsen said that we need education at every level: university, schools. Education for sustainability is a very important tool.

Robert Pederson stated that education is not enough: We have to think about production, education and everything all together.

Krzysztof Gorglach summed up that, as said before, big differences in power exist, and thus they should be included in the policy analysis, as well as conflicts and cooperation.

Robert Pederson commented that a lot of member states make policies on their own.

Damian Maye stated that it is important to identify good examples where power imbalances exist. Tools such as Geographical Indications can balance power.

David Barling added that producers' organizations have received more power in the new Common Agricultural Policy. Voluntary initiatives are present but only too few signed.



3. Second Session (Chair: Mario Giampietro)

3.1. From WP3 to WP4 (Erik Mathijs)

The Objectives of WP3 are the collection, analysis and organization of data on the performance of food chains into a database of qualitative and quantitative indicators, and a set of case studies. The design of the set of data –aiming at covering all performance dimensions (economic, health, environment, social, ethical) – is based on the performance criteria matrix developed in WP2.

The objectives of WP4 are, drawing on the results of WP3, to compare and contrast the economic, environmental, health, social and ethical impact of the identified typologies of food chains, and to discuss the conditions of validity of comparison. During this WP we will compare and evaluate the methods used in WP3.

There are in total 36 cases in GLAMUR studied through 5 dimensions, divided into 24 attributes. During WP3 we had to answer what indicators should we measure for each attribute, how to score indicators, how to contextualise the cases. Descriptors were defined to set the context, which is essential to understand each case. For each sector (grain, meat, dairy, fruits and vegetables, wine), research teams are working in pairs. This will enable us to make within countries comparisons of food chains, but also cross-country comparisons.

As results from WP3, some attributes were under-selected by research teams, which can be explained by country-specificities and overlapping between attributes.

There are three deliverables for WP4. Deliverable 4.1 are all the food chain comparative reports, written by each thematic group on the comparison between local and global chains of the same product category. Deliverable 4.2 is a synthesis of all comparative reports. Deliverable 4.3 is a methodology evaluation and comparison report that will be finalized after the third expert meeting.

Associated with those deliverables, the tasks to fulfil for WP4 are: Task 4.1 is about the assessment of chain performance, which includes choosing which evaluation approaches are applied to which cases; composing five international teams of researchers or thematic groups; drawing up research questions guiding the comparison choosing the sustainability dimensions that will be investigated; setting up guidelines to guide the comparative work; carrying out the comparative work; and make a synthesis of all findings. Task 4.2 is about Comparing and evaluating methodologies, which includes drawing up guidelines for evaluating methodologies; carrying out and reporting on evaluation of methodologies; and getting feedback from experts during the second meeting.

WP4 brings some challenges. Indeed the purpose of food chain comparison is to support actors (e.g. consumers) in their decision making processes, but when making decisions, actors use implicit decision processes that involve evaluating and weighing dimensions in a subjective way. That's why comparison involves a multi-dimensional value judgment based on:

- A set of descriptors representing the context of value chains (WP3). Descriptors are necessary and must be taken into account.



- A set of indicators representing an evaluation of the relevant attributes within each dimension (ordinal or continuous information) relative to a context-specific benchmark (WP3)
- A set of scoring-rules prescribing whether or not differences in performance are significant (WP4) (e.g. t-test)
- A weighing procedure taking into account trade-offs between attributes (WP3&4 – cost approach; WP5 – multi criteria)

Then the challenges brought are: Finding common attributes; harmonising indicators; translating data into ordinal indices; harmonising benchmarks; dealing with high variability due to the uncertain and dynamic nature of the underlying processes; and keeping descriptors on board.

To undertake the WP4 challenges, the GLAMUR method used is inspired by FAO's Sustainability Assessment of Food and Agricultural systems (SAFA). SAFA proposes 4 dimensions of sustainability, 21 themes, 58 sub-themes and 118 indicators. It also provides an example of visualisation of the performance (see Figure 2).

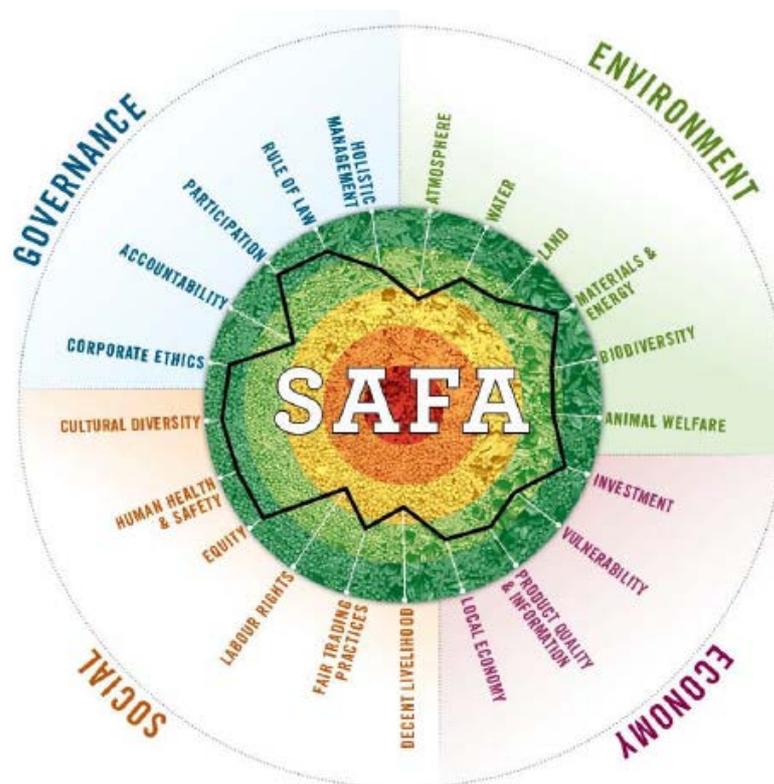


Figure 2: FAO's example of visualisation of the performance in SAFA systems (FAO, 2013)



Here is the proposed summary table that each research team is invited to fill in by the 21st of December 2014:

	Indicator description	Supply chain A	Supply chain B	Evaluation
Attribute 1: Name				
Indicator 1.1: Name	definition	value	value	statement
Indicator 1.2: Name	definition	value	value	statement
...				

Table 1: Proposed summary table

For task 4.2 “methodology evaluation”, a questionnaire was filled by the participants, based on Hartmut Bossel’s systems-based approach to monitor sustainable development (International Institute for Sustainable Development, 1999), and on Research quality indicators (Lincoln and Guba, 1985). This questionnaire consisted in 10-points Likert scales from “completely disagree” to “completely agree” with comments.

The methodology used facilitates decision-making at different levels. Then, it represents relevant dimensions of sustainability. It also encompasses a small but sufficient amount of dimensions to be manageable and easy to communicate. It selects dimensions in a participatory way. Moreover, it is standardised in order to generate reproducible and unambiguous results. It is sensitive to the relevant dimensions of sustainability in order to measure differences or change. Finally, it entails a process that includes a vision and criteria for finding dimensions and indicators.

The methodology used has to fit to some criteria. It must use indicators that correspond to what we want to measure in theory, can be generalized to other contexts. It has to be reliable (i.e. research can be repeated by other researchers) and objective (i.e. repetition by the same or other researchers leads to the same results). It must ensure that all perspectives of all actors represented in a fair way, help the actors to better understand their context, to respect other perspectives in their context, and to engage into action. Finally, the results from the method have to be credible (i.e. interpretations are based on multiple sources (triangulation) and/or the respondent confirms the interpretation of the researcher), transferable to other contexts, dependable (i.e. results can be judged by peers), and confirmable (i.e. interpretations are as free as possible from personal values or inclinations).

3.2. Discussion (chair: Luca Ruini)

Luca Ruini commented that perception and results should be discussed together because everything is a question of perception, even what we measure or what we analyse of the



results. Results will be interesting because the method is interesting. Moreover, it would be interesting to study local products on global markets: Which kind of descriptor we can use to make the difference but also to put things together?

Julie Smith added that it is important to grasp the perception of consumers but also of other actors in the chain.

Mario Giampietro replied that reality is not measurable anyway: we are measuring perception. We are seeing the diversity of perceptions across the countries, and measuring the types of perception. We are thus producing better scientific information for policy decision-making. The EU will decide and impose its perception on other perceptions. The idea that we will tell EU the truth is naïve and an impossible mission.

Rudolf van Broekhuizen answered that perceptions have real consequences.

Damian Maye commented that we are looking for objective data and not everything is perception, for example environmental indicators which are quantitative. He also added that our project is consumer-oriented but it is difficult to know what they want when we didn't ask them.

Mario Giampietro replied that we should be careful with "scientifically proven" because with experiment you don't look at reality but one example at one time/place and context so you measure one perception being not the same as one you look at a thousand years span. Even experiments depend on a perception, a way to measure what you measure, so even a scientific result is a perception.

Damian Maye agrees but thinks that for some indicators, we measure more than perception. We thus need to be aware if indicators are based on data or measuring perception.

Erik Mathijs completed that the construction of the method is thus important and defines not only local and global but all kinds of things.

Gianluca Brunori concluded saying that it is important to locate the discussion on perception because of potential implications. For example ten years ago, food miles were seen as a way to constrain consumers' choice. But limitations to the concept were found: the number was scientifically reliable but the context used can be dangerous. So there is a number but how to use it? How to analyse it? How do we understand the context? Reality is complex but we are looking for a way to look at complexity and practical implications. However complexity can't be reduced to one number: this is why we have to be careful with our method, and not consider it as a final work.



3.3. Case Studies presentations in groups

3.3.1. Cheese-bread group

Cheese, UK

Daniel Keech presented the cheese UK case arguing the following points:

- The UK team is working closely with Swiss team: there is a high level of agreement
- The Research objectives reflect the attributes selected. The first objective reflects the local-global continuum; the last two objectives are about consumers understanding and behaviour.
- It is extremely difficult to distinguish local and global. However, after discussing with industry it has been possible to define the farmhouse-creamery distinction.
- Presentation of the „local“ and „global“ cases
- Description of the data collection
- First findings (local chain, focus group)
- Selection of attributes and indicators
- Damian Maye commented on benchmarks (some are trend benchmarks, some are target benchmarks and for some, descriptive text is needed to support them)
- Difficulties and next steps (more data needed)

Andrea Marescotti asked how indicators and attributes were selected and how participatory approach has been used.

Daniel Keech answered that the research started from the Quick Scan document talking with a group of stakeholders about the appropriateness of indicators. They started with 72 indicators and went down to 25 recently.

Damian Maye added that participatory approach is a bit overrated: they have a medium level of participatory, so the approach would be more consultative.

Daniel Keech said that the team will have a workshop with stakeholders later.

Francesca Galli thus asked in which way Focus groups are useful in the analysis.

Daniel Keech explained that the point of the project is how consumers are changing their perception on food and local food. Focus Group is thus conducted in urban and rural areas to get consumers' understanding about sustainability. They have found some awareness in some aspects but it is not always coherent with consumers' behaviour.



James Kirwan added that GLAMUR wants to give to consumers a tool to make better decisions so it is necessary to know how they make decisions.

Cheese, Switzerland

Anaëlle Tanqueray-Cado presented the Swiss cheese cases:

- Description of the global cheese
- Description of the local cheese
- Description of the methodology used
- Description of the data collection
- First results
- Next steps

Andrea Marescotti asked why not compare worldwide cheese price and argued that there is a problem if both products are PDO and one is considered as global.

David Barling thus answered that PDO are global features in terms of policy.

Damian Maye argued that PDO are a tool of governance that can help territorial cheeses to enter in export markets while keeping properties.

Julie Smith then asked how the teams have calculated qualitative indicators benchmarks.

Anaëlle Tanqueray-Cado answered that categories have been made after discussions between teams. She explained consequently the calculation done.

Luca Colombo then asked if both Gruyère (global) and Etivaz (local) are made from raw milk and if the Codex Alimentarius for Cheddar could be a good benchmark.

Francesca Galli said that concerning the affordability index, the Italian team is trying to build an index of premium price relative to generic equivalent.

David Barling then asked what is the “acceptable price” for indicator “Ability to provide food at acceptable prices” in attribute Affordability.

Damian Maye answered that they use the average from industry and then it is necessary to figure the two other ends linearly.

Julie Smith asked if national averages are used and the answer was yes but only for specific indicators. It could be possible to check the European price monitor, diet or household budget statistics.



James Kirwan finally added that in the end the difference UK/CH might be bigger than the Local-Global distinction: For example, the uses of PDO as a governance tool are very different in the two countries. For the cheese case study, there are key features delimitating the distinction between local and global such as the volumes produced, the number of the different steps, the PDO scheme, the integration of the export markets and the means of internal and external communication. Moreover, the contextualization is more important for certain attributes/indicators than others (like when a European regulation exists, there is a common benchmark between countries for delimitating the performance).

Bread, Italy

Francesca Galli presented the Bread Italian case:

- Issues regarding local-global distinction according to the four GLAMUR criteria
- Problems of sourcing
- Description of the governance
- Description of the technology (90% of bread consumed in Italy is craft bread)
- Territory identification
- Description of the global, regional and local cases
- Research questions according to three major attributes (biodiversity, technological innovation, nutrition).
- Methodology and presentation of the attributes and indicators (common with UK). The list was shared with stakeholders for feedback.
- Feasibility is a critical issue in the local vs global. „At the end it's all a matter of feasibility“ as quote from a global actor.
- Weakness & limits (consumers not considered)

Daniel Keech asked if consumers are considered for the nutrition attribute.

Francesca Galli answered that they have indicators about information and health claims, but these are only partial because bread is something that you always eat with other products.

Sara Rodriguez argued that in the EU, bread is considered the main source of sodium, so it would be important to take it into account.

Francesca Galli replied that in Tuscany no salt is used while baking bread so if you benchmark that, the local chains perform the best not because the bread is local but because it is a Tuscany recipe! On the other side, some global bread brands are making efforts to reduce salt content.

Julie Smith presented the UK bread case:

- Presentation of the cases: significantly the reverse of the Italian cases
- Global bread eaten by 71% of population, highly processed and with fortified wheat



- In-store regional bakery
- Craft bakery (local bread only 3% of market): 3 types of flour, one with some from Canada (some global into the local). This is a complex chain.
- Perception of the local and global is very important. Stakeholders' perception is also important as a data.
- Critical issues
- Research questions
- Methodology (people are aware of things but they interpret them in their own way)
- Indicators selection: most of them are yes/no indicators but the team is worried about losing a lot of information.

James Kirwan asked if there is any proof of the benefits of the flour fortification to people's health.

David Barling answered that it is necessary for all bread.

Julie Smith argued that therefore there is a willingness to reduce the quantity of salt used. Moreover, a balance between nutritional and technological issues is needed.

David Barling thus said that this is a typical challenge case for historical reasons (war and comeback of white flour bread afterwards).

Julie Smith answered that making judgement about it becomes political.

Daniel Keech asked about the nutritional aspect about sourdough. In addition, it is very interesting to have regulatory fortification but voluntary reduction of salt.

Julie Smith replied that a recent consortium decided to keep the fortification because otherwise poor people might not access the required vitamins.

Murat Boyaci commented that maybe instead of having yes/no indicators, it could be better to have a scale from 1 to 5.

Luca Colombo asked what the trend in bread consumption in the UK is. Is the gluten discussion affecting consumption?

Julie Smith answered that there is an issue about gluten intolerance and it becomes marketing. There is also a debate whether the additives in bread are a cause of intolerance. Bread is in decline but still is the major staple food.

There is a lack of common indicators between the two teams. Agreement has been found to focus on three main attributes, and a common list of indicators.



The expert **Angela Zinnai** presented:

- What is bread
- Biological process
- Tuscan bread
- Types of sourdough
- Effects of sourdough (positive on celiac people, as no additives) and nutritional aspects and benefits

David Barling asked if it was possible to merge the sourdough and salt content indicators.

Professor Zinnai answered no. She added that they should be able to reward this bread for the no salt content being also important to find what is good in tradition so that it becomes the best in innovation.

3.3.2. Menus, pork and wine groups

Menus, Denmark

Anne Grarup presented the Danish Menus cases:

- Issues of diet in public procurement
- In schools children are also cooking
- Organic food is eaten but this is not necessarily seasonal and local
- Food miles is not the most important point when measuring pollution, resource use, GHG emissions.

The indicators used for differentiating local – global come from procurement agreements, governance influence, EU legislations, nutritional recommendations, organic objectives and subsidies. The weak point appears when measuring the indicators because working with a menu is a complex issue, together with the fact that it is not possible to work with other countries (maybe Pisa) and there is little availability of data.

Kees de Roest argued that it is important to compare food miles related to seasonality.

Luca Ruini added that it is not possible to compare a single menu. However it is possible to compare single diets, with the same nutritional values. Red meat also can be compared with vegetables' proteins.

Robert Pederson then argued that the main worry is that menus or diets make it more complex. For this reason, it is important to select reliable secondary data without taking into account the food miles perspective because the importance of transport is limited. He added that diets within the same budget should be taken into account.



Luca Ruini answered that Barilla made an evaluation of diets' costs demonstrating that sustainable diets are more expensive than conventional ones. Indeed, it is possible to eat better and pay less. He also asked how the group will measure nutrition.

Anne Grarup answered that this point is still in progress.

Robert Pederson suggested that you can have a look at patterns and behaviour measuring some biometric issues.

Dominique Barjolle also suggested including the dimension of education in the objectives. Moreover, global and local dimensions interfere with education.

Luca Ruini thus replied that it is not about local or global because what matters is the seasonality. However, a good solution could be to find some extreme menus to point out the paradox of the discussions: One more local and one more global.

Robert Pederson suggested comparing a big food service operator with a school menu and having a look at the differences.

Pork (ham), Italy

Kees de Roest presented the Italian ham case study:

- Presentation of the local supply chain: Cinta Senese ham
- Presentation of the global supply chain: ham from Dutch pigs transformed in Italy
- Presentation of the regional supply chain: PDO Parma ham
- Heavy pig means a high added value per kilogram of meat
- The WFSC framework (see quickscan) is very effective and useful
- Added value is related to the quality of the product or the quality of tools and scheme mechanisms used (organic)

Critical issues related with this sector are: The participation of farmers in total value added and the influence of consortia. The added value per kg of meat is higher for the Parma ham. The key attributes for the Dutch team are: value added, resilience, chain governance and resource efficiency. For the Italian team, other key attributes are: animal welfare and biodiversity.

Davide Menozzi argued that the demand for Parma ham is declining due to the crisis. For that, prices come closer to each other.

Robert Pederson thought that all Parma ham had a geographical indication. He also asked if the team looks at price or at incomes together with the externalities that are not involved in the price and how they are integrated.



Davide Menozzi answered that they are just looking at quantity and prices and not incomes. For this, a consumers survey would be necessary.

Luca Ruini commented that graphs used in the presentation are a good way to represent the local and global chains.

Resilience is still a fuzzy concept with many indicators. The team analysed the literature identifying categories of factors to measure these indicators: price volatility, diversification marketing channels and in geographical terms, vertical integration and societal acceptance (to have the capacity to get the legitimacy to produce).

Pork, the Netherlands

Rudolf van Broekhuizen presented the Netherland ham case study:

- Presentation of the local supply chain: Lupine Pork. Under construction. Only one farm. Aim for special pig with special taste, with higher value.
- Presentation of the global supply chain: Global good farming pork (VION). Low added value/kg product, focus on efficiency.
- Presentation of the intermediate supply chain: Sustainable Pork Chain (HoeveBV). Compared to VION, the final product is slightly less affordable and accessible with a little more added value/kg, working on 'fair' distribution of added value within the chain, better environmental performance, trust and cooperation within the chain. The governance of the chain is local.
- Strong influence of the economic dimension
- Participatory checklist methods used

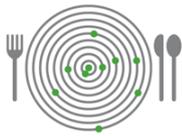
Luca Ruini asked if lupine is a new chain because there is no similar case.

Rudolf van Broekhuizen answered that there are other small initiatives but this is a special one because the woman who took the initiative is the former chairlady of the farmers union. She moved from the industrial chain to the other side of the spectrum. VION has one shareholder, which is also a farmers union. **Rudolf Van Broekhuizen** also added that there is no clear division between local and global.

Luca Ruini asked then if any subsidies exist for the pig farmers or for waste valorisation.

Van Broekhuizen answered that he doesn't think so (in a later sheet it was shown that this is two cents per kg of meat (Van Drunen et al, 2010)).

Luca Ruini then advised to check this point because it is very important, due to exports to the US.



Robert Pederson added that it is interesting that the tail is the global part of the chain. Also in this case there are several interactions between local and global chains. Concerning external costs, he argued that they make the affordability analysis interesting.

Rudolf Van Broekhuizen answered that Van Drunen states that the externalities are two euro per kg.

Virginia Cravero asked then if the team included the analysis of input such as feed.

Rudolf Van Broekhuizen answered that yes, the results being expressed (i.e. CO2 emission) per kg added value.

Wine, Switzerland

Virginia Cravero presented the Swiss wine case study:

- Presentation of the local supply chain in Switzerland
- Presentation of the global supply chain in France
- Critical issues when defining global and local supply chains
- Criteria of distinction between local and global supply chains
- Methodology
- Attributes and indicators
- First results
- Limits

There is no global wine chain in Switzerland. The local chain is characterised by high level of communication between producers and consumers. The wine is mostly distributed by wine shops and restaurants, linked with the territory. The weak point is that interviews' time has been during harvest time provoking constraints to collect data in time.

Robert Pederson asked why the team took into account the health and nutrition aspects, and if it was because of the project proposal or for specific interest. It might be useful to have a look on sulphite consumption and volume of intake (lifestyle diseases). Public health is an important issue related to pesticides use. He also thinks that the idea of increasing agro-biodiversity is the real issue related to soil quality, biodiversity in the soil, etc. However it is important to take ethical aspects into account as well.

Dominique Barjolle emphasised that the global supply chain is represented by French wine but this one is less global than for instance wine from South America. That is a bias because French has a strong regulation of wine being linked to the area of production.

Luca Ruini added that he does not think that global wine exists.



Giovanni Belletti argued that agro-biodiversity should not be taken as an indicator because it is a sub-attribute. The real attribute is what you can measure, for instance 'how many different cultivars do you have in your winery'.

Wine, France

Jean Marc Touzard presented the French wine case study:

- Presentation of local supply chain in Switzerland: managed by the wine growers, involved in wine tourism.
- Presentation of global supply chain in France: bulk and bottled wines. Bulks are sold to global trader-bottler. Wine merchants control the chain. Governance by a central actor.
- Methodology
- Attributes and indicators
- First results

Global chains are based on strong local identities in the French case. There is no other issue for French wine, as the quantities produced are exceeding the capacity of local markets by 80% and the quality is based on territoriality. European (and global) levels of regulations are key for establishing the trust and therefore the relation between the consumers, the grape producers and the wine makers located in a given territory.

The critical issues are: impacts of pesticides/alcohol/sulphites on health, soil and water, preservation of the biodiversity on farm, dependency on fossil energy and GHG emissions, and fraudulent activities.

In the discussion among the buyers of wine (intermediaries, and consumers), organic is a stronger argument than local because of the key attributes selected: territoriality, resources use (water use, pesticides, herbicides), creation and distribution of added value along the chain, pollution. Two indicators are related to health: sulphites and alcohol. Governance is an important topic when studying the wine sector: Inter-professions, independent wine makers are an important issue. Innovation and varieties production is also important to take into account regarding adaptation to climate change but is influenced by governance, as inter-professions are reluctant to change. Climate change thus will have a strong influence on the quality of wine and varieties cultivated.

Dominique Barjolle added that in Switzerland wine makers are producing new varieties of grapes adapted to climate change. Thus, techniques are not changing, whereas in France, they change to other techniques because of 'respect' to older varieties.

Jean-Marc Touzard replied that this issue is maybe important at some local level. They take into account the effect of the innovation on the environment and acceptability for the society.

Kees de Roest then suggested that this aspect might be interesting under the attribute 'resilience'.



Robert Pederson grew up in the US where they produce high volume of wine. There are thus differences between value chain at European level and at big third country producer.

Jean-Marc Touzard replied that his team wrote an article on that subject: In the case of California, wine estates are investing in scientific events, managing local resource etc.

Luca Ruini added that it is important to take into account the whole system, not only the producer because the latter is selling not only wine, but also part of the area, of the community, as well.

Giovanni Belletti commented that governance is at the same time an axe of differentiation between local and global and an attribute. Because of that, attention needs to be paid.

3.3.3. Fruits and vegetables group

1st round:

The meeting started with the discussion of the cases selected and the criteria for selection. However, confusion still exists about how to interpret attributes retrospectively. Moreover, the main question addressed is: Are attributes used to identify Global/Local chains or to measure chain performance? An agreement is made to use attributes to measure chain performance. Moreover, the group agreed to reduce a number of commonly used attributes selecting only one attribute if indicators fall in several attributes.

Concerning the measures and scales to be used for indicators, the options are: cardinal numerical data, qualitative assessments along the scale '1-0' and the basis of SAFA guidelines on scale '1-5'. In subsequent discussion they agreed on measurement of quite a number of indicators by 'yes – no' and 'high – medium –low' grades. The discussion led to a more informed and mutually agreed commonality of attributes (and indicators) to be used by all 3-4 teams, and possibly also commonly used scales and numerical indicators.

Some attributes are common for all 3-4 teams (like 'contribution to economic development', 'creation and distribution of value added', 'labour relations'). Some attributes are specific only for one or two teams. Some 'new' attributes from WP2 were highlighted as relevant, e.g. nutrition, and were taken on-board. Even if an attribute is essential for only one team, parallels and comparative issues can emerge from this attribute at later stages of analysis in WP4 and 5.

Concerning the attribute Nutrition: nutrition is an important attribute in the school menu case (Denmark), although not articulated in other cases, but it could be taken up by other teams. For example, it can be articulated in Latvian blueberries local chains.

Traceability drew the attention as an interesting attribute. A question emerged thus: Are there sufficient attributes for all 5 dimensions? Perhaps we have less evidence and attributes for the assessment of the health performance.

Comparison along dimensions could be done as reflexive evaluative statements (based on data) that later could be compared between global and local chains and between countries.

The discussion continued regarding various comparative possibilities:



- Aggregate typologies of chains and characterise them by qualitative indicators and also 'statements'
- Agree on quantitative 'numerical' indicators for specific indicators
- Agree on scales for comparison 1-0; 1-5; yes-no; high-medium-low
- Do we aim to evaluate Global and Local chains' performance as representative for the country / sector or only as individual chain cases ?

2nd round – Seven attributes and respective indicators were discussed and agreed

1. Affordability (Serbia, Belgium apple, Spanish apple, Latvia blueberries)

- Price for consumer. Measured in absolute value: Euro per kg for country comparison; Euro per kg per average salary for cross country comparisons
- Convenience (in terms of time for shopping and preparation). Measured: shopping in minutes; preparation in minutes.

-

2. Creation and distribution of added value

- Profit distribution. Measured as percentage of gross revenues across chain actors (farmers-intermediaries-processors-retailers)

-

3. Contribution to economic development

- Added value. Measured as total revenues minus costs at the level of farms, retail or the whole chain, in Euro
- Total volume produced. Measured as absolute figures per chain / sector
- Jobs created. Measured as total number of FTE (full time equivalent)

-

5. Governance

- Subsidies (no – low – medium - high)
- Traceability regulations (strong – medium – weak)
- Involvement of state institutions in regulating the chains (low - medium – high)
- Existence of internal regulation in chains (standards, codes of practices (yes, no)
- The concentration of power to enforce standards, codes of practice. Measured as: Low - medium – high

-

15. Labour relations

- Wage level
- Job contracts
- Inclusive jobs/hiring

-



16. Resource use (productivity of production factors)

- Productivity/yields per hectare/ hour/kwh of electricity/water used...

19. Nutrition (DK)

- How the nutrition value is affected by the structure of food supply chains? Measured as: mostly fresh – mostly processed foods
- Food miles / distances of transportation estimate in km per Global and Local chains

Final remarks

All teams will try to work out these seven attributes to achieve a possibly high degree of homogeneity between reports (using the same indicators and measures). But it is up to teams to reduce or expand a bit on attributes and indicators based on specificity of cases and data available.

There is a willingness to set a 'minimum basket' – a set of attributes and indicators to be done by all teams and presented in a clear, if possible explicit visual form, that instantly captures differences between global and local.

It is important to produce qualitative assessments and statements (short analytical texts, paragraphs) about attributes and indicators and especially in their relation to the five dimensions. These qualitative statements – short narratives could be later used for comparison at a more integrative level.

4. Experts' report and discussion

James Kirwan announced the decision that the next experts meeting will be in Montpellier in June 2015. Currently, we are behind on schedule.

4.1. First experts' feedback (reported by Krzysztof Gorglach)

Experts discussed all the questions in details and **Krzysztof Gorglach** only reported to address some key points. A report of the experts' full evaluation will be sent to experts for feedbacks the week after the meeting. The final report will be available on the website.

The questions answered by the experts are the following:

1. To what extent do case studies help to assess the different performance of short and global food chains?
 - They help to make the distinction between Local and Global
 - The cases show us that local and global are very interlinked
2. Are GLAMUR case studies innovative with regard to the current research on food supply chains?



- Case studies show that simple data collection is not enough. Dependencies on quantitative data does not help understanding and analyzing.
- Case studies are inovative in the sense that they help to formulate the application resulting from the analysis, and generate new understanding from the issue.
- Case studies as a method is not innovative but connected to some more quantitative methods then they can support each other for the understanding.

3. Are methodologies appropriate and sound?

- Generally, the project is very well designed for the methodology point of view.
- The methodology stresses the need to go to the field extensively. That is good for gathering data but also for building experience with people involved, to get in direct touch with the objects of research.
- The negative point is that in the execution of the methodology, not all ideas are followed by all teams. For that, more consistency (also for analysis and consistent results) is needed.

4. What are the main points of strength?

Experts noticed more weaknesses but this is their role. The improvement that the project can take into account is:

- In research teams, people and experts of nutrition issues are missing
- Two or three experts suggested that research teams should not just follow the methodology but need after a first round of analysis to go back to the field again and point out the main issues in the case.
- Network analysis is used by some research teams. Experts stressed that we need more focus on the exchange of these networks. Knowledge might be the key resource in these networks.
- Very good idea to bring together several disciplines, countrie and sectors.

5. What are the main points of weakness?

The answer is present in the question number 4.

6. What are the recommendations in relation to scientific quality ?

Experts had very positive remarks. The methodology of data collection needs to take the people under study into account.

7. What are the recommendations in relation to societal relevance

One citation: "certainly the GLAMUR project needs the best Public Relation person". The experts already want to attract attention into the issue of Public Relation person, without which nothing works.



Robert Pederson wanted to add that some results are generated by the interaction between Local and Global. One aspect of food systems is that they are met by many challenges; thus, we need to think about what are the challenges we trying to solve. Solving them will help politicians but also logistics.

4.2. Open floor

Maria Partalidou précised that experts did not receive the whole report that is why they have many points to discuss.

Francesca Galli asked if they can precise what are the bad signs of the project.

Krzysztof Gorlach answered that the main problem comes from the methodology application. The vegetable and fruits group including apples seemed to follow all the methodology steps but other groups do not follow each one of them, so he wanted to stress the weak consistency of the project. Consistency should be possible on the whole project by following the methodology.

James Kirwan added that this discussion brings back the matrix discussed in Brussels. At the end of the project it would be appropriate to come back to the meaning of attributes.

Julie Smith argued that the apple study has been selected for the LCA study, this is why they use different and maybe more appropriate methodology.

Erik Mathijs added that he should have highlighted more the fact that all methodologies are not applied to all cases. So the apples case study is not representative.

Maria Partalidou added that a massive work has been done with attributes to choose the common attributes per sector. However she doesn't see any attribute concerning the risk distribution along the chain, which is related to resilience. She asked if it is the point to bring more attributes but finally came to the point that the project tries to reduce the number of attributes.

Mario Giampietro answered that in the WP2 matrix, resilience exists.

Maria Partalidou continued with some other points regarding exchanges in networks: knowledge and information are important, not only money. Thus, what about trust within the network? Who has the information?

Damian Maye answered that some case studies will study the information and communication attribute.

Dominque Barjolle argued that it is too difficult to take a new attribute now, but it will be included in reflections in the future when comparing the chains.



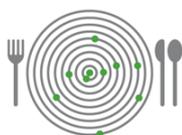
James Kirwan agreed saying that WP2 is closed. Moreover, Delphi survey showed up that power distribution was a key issue; nevertheless we need to rely on the matrix at the end as a result of the process.

Krzysztof Gorlach argued that when listening to the presentations sometimes there were data on local-global chains that were not taken up later in the analysis, for example concerning the participants in the study. The idea is to pay attention on the self-reflective process on collecting data instead of just taking the numbers available.

Gianluca Brunori commented on societal relevance and public relation. In addition, remarks should help us to identify what are the really important messages to give to the outside. We should think about what is new in relation to the methodology and what are the messages in the finalization of the case studies. To think about an effective message is a filter to select the data to present. It is important to start interdisciplinary work on that. Part of the work could be dedicated to what we will do with the results.

4.3. Logistical communication

Introduction of **Niels Heine Kristensen**: He is new to the project, taking over for **Armando Perez** in Denmark. He is based in Copenhagen for food scale innovation and networks. He has management skills from earlier that he wants to add to the project.



5. Annexes

5.1. Program of the meeting

9.00-9.15	Welcome to experts and their presentation	Zaklina Stojanovic
First session	Chair: Rudolf van Broekhuizen	
9.15-9.30	GLAMUR: Where we are	Gianluca Brunori
9.30-10.00	Policy analysis report: main results	David Barling
10.00-10.30	A discussion of the policy analysis report in the light of recent trends in the global food systems (*)	Introduction to discussion: * Robert Pederson * Bent Mikkelsen
10.30-11.00	Coffee break	
Second session	Chair: Mario Giampietro	
11.00-11.30	From WP3 to WP4: case studies, indicators, comparison	Erik Mathijs
11.30-12.00	From WP3 to WP4: discussion	Chair: Luca Ruini
12.00-13.00	Case studies presentation: work in groups (experts will be distributed among groups) - group 1: bread and milk - group 2: pork and wine - group 3: fruits, vegetables & menus	
13.00-14.00	Lunch	
14.00-15.30	Case studies presentation: work in groups (experts will be distributed among groups)	
15.30-16.00	Coffee break	
16.00-17.00	Experts' evaluation meeting	Chair: Krzysztof Gorlach
17.00-18.00	Expert evaluation report and discussion	
18.00	End of expert meeting	
±19.00	GLAMUR diner	