Consumers’ New Demand on Sustainable Traceability

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   (GeoTraceAgri, GTIS-CAP, PETER & GEO FAIR TRADE)

Abstract

As a coordinator of 4 European Research projects on traceability, Michel Debord has come to learn the true importance of geo-traceability in authenticating the origin of food products (an important component that is increasingly being demanded by consumers).

Michel Debord will also explain the new concept of sustainable traceability that is underlined by the European project GEO FAIR TRADE.

Finally, he will propose to the key players in Asia in the field of traceability to set up a platform called PATER (Promoting Asian Traceability Excellence & Research). This platform will be based on its European counterpart PETER (Promoting European Traceability Excellence & Research)- a project that has already been implemented on the European market.

The starting point of our approach

The GeoTraceability concept, which we were the first to develop, stems from two requirements:

1. Develop traceability tools useful to promote well-known local products from the South-West rural territories of French. Gascony is the location where foie gras, Armagnac, and poultries, deeply appreciated by consumers, are produced. Certification of the geographical origin of these products is a promotion tool useful to producers and also to the region of production-which hopefully then can attract tourists looking for authentic products.
2. Most of the time, traceability relies on a declarative approach: the designation of origin, quality labels created from the declarations of producers who commit themselves to respecting good professional practices. Along with the declarative approach, it is important to stress the importance of a factual approach: geographical certification of origin associates geographical coordinates with geo-indicators and geo-identification which are all undeniable proofs of origin (easy to visualize on maps).

These two requirements « promotion of products » and « the introduction of factual data in traceability » led us to develop 4 research projects funded by the European Commission between 2001 and 2008.

GeotraceAgri in the field of European INFORMATION SOCIETY INITIATIVE R&D program (2001-2004) (www.geotraceability.net)
With the globalisation of trade, consumers have become increasingly concerned to know much more about the origins of their food and about the way agricultural land is used. This is reflected in the demand for improved traceability from "farm to plate". Thus, the objective of the project is to find out how and to what extent we can trace the geographic origin of food at all stages of the food process: production, storage, processing and distribution.

Based on the example of agricultural geomatics applied to precision farming, the GeoTraceAgri project consortium proposes developing the relevant indicators, tools and methods for geographic information that will provide credible information for:

- Anyone concerned about food security and environmental protection.
- Farmers who are striving for farm sustainability, to ensure that their farms remain viable and profitable.
- Middlemen who want to secure supplies.

The purpose of the GeoTraceAgri project, then, was to define a methodology for the sampling, acquisition, utilization, and processing of georeferenced data that will be used to generate agro-environmental indicators at various geographical scales.

The first step is to define the indicators and determine the indicator classes that are relevant to geographical traceability in agriculture. The various geographical scales to be considered are the plot, the field, the catchments, and the region for which the origin of the product is certified (Region d'Appellation Contrôlée or AOC).

In the second stage, a reference system for geographical traceability will be constructed for selected agricultural sectors.

Then the third stage will involve the development of the computer infrastructure which will ensure the geographical traceability of the agricultural products.

And finally, the results will be disseminated in such a way in which the GeoTraceAgri approach can be successfully transferred to other agricultural sectors.


The aim of GTIS CAP was to define and to validate an integrated information system that can serve both the European and national administrative bodies in charge of the Common Agricultural Policy and the producers of vegetal products for consumers and for livestock. GTIS CAP intended to complete the IACS/LPIS data with other data obtained from remote sensing and will define simple geo-traceability indicators aimed at the management, control and monitoring of the CAP and which can also be used in integrated agricultural management systems.

GTIS CAP aimed at facilitating online access to this geo-traceability data and ensuring greater efficiency in checking and conformity of good agricultural practices, in line with CAP recommendations.

The GTIS CAP project comprised of four different work tasks:
1. The evaluation of new functionalities necessary for the integration of geo-traceability into existing tools and for it to become a CAP management, follow up and monitoring tool which will also be useful for producers.

2. Definition of norms and standards that will enable the interoperability of IACS/LPIS geo-referenced data and functionalities for CAP management, follow up and monitoring.

3. Definition of simple and easy-to-use geo-indicators provided by satellite images.

4. Implementation and validation of the evolution of the integrated system in two test regions in order to produce, after experimentation by producers groups, a recommendation for European and national administrative bodies.

**Promoting European Traceability Excellence & Research** (PETER 2006-2008 www.eu-peter.org)

The general objectives of PETER were to:

1. Provide an international forum for focusing, disseminating and exploiting EU research on food & feed traceability

2. Improve collaboration between European projects

3. Reduce potential duplication among ongoing projects

4. Maximise the effectiveness of project activities with reference to shared objectives and results

5. Create added value within PETER by providing information about gaps, redundancies and research needs after comparing the project complementarities

6. Achieve a higher level of dissemination and exploitation involving all projects (422 partners) through targeted stakeholder dissemination activities using a combination of dissemination vehicles (website, e-brochure, workshops, conferences and documents.)

Traceability is perceived as being a solution to technological problems where the necessary analysis for applying a detection method is not available.

However, traceability cannot be restricted to some papers forwarded from one stakeholder to another one. The current ISO standardization process is a good example of such technological needs in the traceability area.

Traceability relies on the information that is transmitted, both in terms of its structure as well as its content, to ensure inter-operability of traceability among stakeholders using generally proprietary technical solutions such as EAN/ISBN barcodes.

The objective of PETER was to work on content, structure and transmission concepts and systems, necessary for implementing reliable and cost-effective traceability.

The PETER project addresses several sectors:
1. product specific sectors, i.e. vertical, such as GMOs (Co-Extra) or fish (Seafoodplus)

2. methodological sectors, such as DNAtack or, in even more generic terms, TRACE.

The purpose of PETER was to provide/determine the common technological aspects between these different traceability concepts and systems.

PETER will then determine the most appropriate information systems exchange for all types of stakeholders starting from the paper sheet system, used by farmers in developing countries, to central internet databases.

All projects within PETER had data that needs to be recorded and integrated into a traceability system and therefore have obvious synergies with the key generic activities within the TRACE project and the FoodTrace guidelines and recommendations.

PETER addressed the information exchange of concepts and systems as well as provide guideline prototypes (resulting from comparisons between the information systems used by each project) for the best methods, applicable to all types of stakeholders, to exchange traceability information.

For example, the GeoTraceAgri and GTIS CAP projects provide food traceability support through geomatic technology. This technology could be an added value to the traceability of GMOs or any sign of quality related to production origin, for domestic but also for imported commodities, as studied in the Co-Extra project. Textbook cases like the US Starlink and Bt10 issues for GMOs may also be of interest.

Mapping of food origin is one of the key activities in TRACE and could benefit from the expertise and experience developed in GeoTraceAgri. More generally speaking, all quality signs derived from regional production, and thus difficult to trace by analytical methods, should benefit from such experience.

**Geotracing for Fair Trade** (GEO FAIR TRADE 2009-2011) is a new research project in the European field of the ENVIRONNEMENT R&D program.

Beyond quality and food safety, consumers now want to know exactly what are the socio-economic and environmental conditions in which their food products are being manufactured.

Fair Trade is an actively pursued concept where Civil Society Organisations (CSO) and Non-Governmental Organizations (NGO) play a key role. Fair Trade promotes the best social, economic and environmental practices for sustainable development. Unfortunately, CSOs do not have the means to develop concerted strategies in Research and Technology Development all alone. Their short term concerns often prevent them from having the necessary hindsight. The main objective of the GEO FAIR TRADE project is to bring together Fair Trade CSOs and Research and Technology Developers (RTD). Discussions concerning Fair Trade stakeholders and actors have shown that their basic needs to win new markets and new consumers are Transparency and Traceability.
Taking advantage of the results obtained in two (FP5 and FP6) research projects, the CCI of Gers and its partners CRA-W and CIRAD, together with six Fair Trade CSOs, have defined the main objectives of the project which are:

1. To select sustainable development indicators with a spatial component and related to the three dimensions of Fair Trade (social, economic and environmental).
2. To adapt the Geo-Traceability Integrated System, set-up in the previous research projects, enabling finding and browsing of all relevant information corresponding to the needs of Fair Trade actors.
3. To validate this approach with five case studies to be chosen by CSOs.
4. To develop training and education tools to disseminate this approach.

The GEO FAIR TRADE project is based on a permanent communication between RTDs and CSOs, to validate the results or to reorientate the Research and Technology Development activities. The final expected result is a reference framework built on the sustainable development of Geo-Indicators that can be used in all the traceability systems already implemented in Fair Trade. This reference framework will improve the certification of the best practices implemented by Fair Trade actors.

**New demands from consumers in the field of traceability**

The globalization of world markets has triggered two new kinds of demand from consumers:

1. The want to know the source of the products they buy (it is here where GeoTraceability plays a large role to reassure consumers).
2. They worry about the conditions in which their food is being manufactured
   a. correct remuneration to producers
   b. working conditions (or exploitation) of women and children
   c. Environmental best practices in production areas

These new demands from consumers have led us to develop the Geo Fair Trade concept which should naturally strengthen traditional commerce. TRANSPARENCY and TRACEABILITY will very soon be two in dissociable keywords along with QUALITY and FOOD SAFETY.

**Our proposal: Five worldwide PETER & PATER exchange platforms**

The PETER project has been a perfect example of the considerable advantages received by researchers as a result of knowledge sharing.

The eight coordinators, of some of the most important European research projects, worked together for two years in order to realise the added value achieved through cooperation.

In South America, the International Centre for Cooperation in Agronomics Research for Development (CIRAD) has carried out the ALCUEFOOD project; a project applied to Latin American countries which shared several of the same priorities from PETER.

The ALCUE-Food project proposes a “European fork to Latin American farm” approach, to:

i) meet EU safety and quality requirements;
ii) develop safer food and feed chain production;
iii) and provide high quality and health-enhancing foods.
Promoting in Latin American Countries (LAC) a “total food chain approach” for EU exported products will subsequently contribute improved Latin American welfare. Therefore, it must be considered as an important impact on cooperation and mutual benefit.

In our opinion the time has come for us, as researchers, to promote, in the field of traceability, the creation of PATER (Promoting Asian Traceability Excellence & Research, Promoting American Traceability Excellence & Research, Promoting African Traceability Excellence & Research and Promoting Australian Traceability Excellence & Research).

Those platforms would be focusing on consumers’ new demands in transparency and traceability. This approach will be based on the model project GEO FAIR TRADE which associates GeoTraceability and social, economical and environmental transparency.

If you have the same vision as I have on the issue, you can get in touch with me at michel.debord@wanadoo.fr