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Report on proposals for the development,
harmonisation and quality assurance of organic
data collection and processing systems (DCPS)

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Responsible for D3:

“Report on proposals for the development, harmonisation and quality assurance of organic data collection and processing systems (DCPS)”

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List of Abbreviations

CA.....	Concerted Action
CBS	Statistics Netherlands
CN	Combined Nomenclature
COICOP	Classification of Individual Consumption by Purpose
EAN	European Article Number
ECHP.....	European Community Household Panel
ECR.....	Efficient Consumer Response
EEA	European Environment Agency
ERA	European Research Area
EU-CEE-OFPP	Further Development of European Organic Farming Policy
FADN.....	Farm Accountancy Data Network
FAO	Food and Agriculture Organisation of the United Nations
FSS.....	Farm Structure Survey
DCPS.....	Data Collection and Processing System
HBS	Household Budget Survey
IFOAM	International Federation of Organic Agriculture Movements
NACE.....	Classification of Economic Activities in the European Community
NOP.....	National Organic Program
NSI.....	National Statistical Institutes
OECD	Organisation of Economic Co-operation and Development
OFCAP	Organic Farming and the Common Agricultural Policy
OMIARD	Organic Marketing Initiatives and Rural Development
P	Partner
RD	Research and Development
SBS	Supply Balance Sheets
TNS	Taylor Nelson Sofres
WP.....	Workpackage

1 Introduction

European markets for organic products are developing fast. In Europe, as other parts of the world, more and more farmland is being converted to organic production. In order to adjust production and consumption levels, detailed market information is needed, especially where decisions with a long-term impact need to be taken, e.g. on converting specific land or livestock enterprises requiring high levels of investment in glasshouses, housing, processing facilities, etc. Since public subsidies (regional / national / European) are heavily involved in these investments, valid, accurate and up-to-date information is essential not only for farmers and growers, but also for policy makers, consultants, processors, etc.

EU-research projects such as OFCAP (Organic Farming and the Common Agricultural Policy, FAIR3-CT96-1794) and OMIaRD (Organic Marketing Initiatives and Rural Development, QLK5-2000-01124) have shown that regional or national data gathering takes place in many countries, but often only very basic data, such as certified organic holdings, land areas and livestock numbers, are reported. Important market data, e.g. the amount of production, consumption, international trade or producer and consumer prices, do not exist in most European countries. In some European countries there are only rough estimates of the levels of production and consumption. There is no standardisation and data are seldom comparable. Furthermore, detailed information on specific commodities is missing. Another problem related to the analysis of European Organic Data Collection and Processing Systems is the difficulty of data comparison due to the lack of harmonisation, although significant steps are being taken to include organic farming data in existing international systems, key examples being the Farm Accountancy Data Network (FADN/RICA) and the Farm Structure Survey (FSS).

Hence, investment decisions are taken under conditions of great uncertainty. Likewise, if policy makers want to support organic agriculture, they do not know whether it would be better to support production or consumption or to address problems in the marketing channel. Therefore, information is a crucial issue for both the organic supply-chain and policy makers. Producers, processors and traders require information in order to plan their marketing strategies. Therefore, market transparency is an important precondition to be able to act and react adequately to changes in the market. At present, no official statistics are available on the sales of organic products and trade data are not available, given that no differentiation is made between organic and non-organic products by customs authorities.

The European Action Plan for Organic Food and Farming highlights a lack of available statistical information about organic markets and organic farming. As this information is crucial for the decisions of policy makers and market actors, action point 3 expresses that the collection of statistical data on both production and market of organic products should be improved (CEC, 2004). It has been mentioned further that in addition to intensify the collection of the relevant information and economic data with the existing tools, it is necessary to prepare harmonised methods for collecting additional official statistics on organic farming, organic food and its markets (CEC, 2004).

Regarding data quality, there is a need for the development of a mechanism by which national bodies can ensure the quality of collected data, and for special quality standards for organic farming data. The quality of statistical information is the primary aim for national statistical agencies as for all other kind of data collectors.

Nowadays, the information is a matter of primary importance and it is necessary to warrant its independence, correctness and transparency, in brief, its quality.

The EU concerted action EISfOM (European Information System for Organic Markets, QLK5-2002-02400) is attempting to take the first steps in solving these problems. The aim of this concerted action is to build up a framework for reporting valid and reliable data for relevant production and market sectors of the European organic sector in order to meet the needs of policy makers, farmers, processors, wholesalers and other actors involved in organic markets.

In this first phase of the project, the aim has been to assess current data collection practices and the potential for integration and further development. This was carried out as part of workpackages 2 and 3 of the project, which focused on relevant data collection and processing systems (DCPS) for general agriculture and for organic farming respectively. The aim was to define a reference model for the development of organic DCPS based on the general systems, and to identify the potential for the integration of both types of systems. The analysis was conducted in 32 European countries and country reports summarising the current situation have been produced for each of them. The results have been summarised in an overview report (Deliverable D2).

In workpackage 4, the results from the earlier work packages, previous research projects such as OFCAP and OMIARD, and contributions from stakeholders and experts were reviewed at the first EISfOM European seminar in Berlin (Recke *et al.*, 2004). Issues relating to improving the scope and quality of data collected, harmonisation of systems and the potential for integration with existing systems for general agriculture were debated and ideas for future development were proposed.

This report represents the conclusion of workpackage 4 as well as the first phase of the project. In the first chapter the objectives and general approach of this workpackage will be described. Chapter 2 focuses on quality assurance, the main results of WP2 and WP3 and the European Seminar in Berlin. Furthermore, the strengths and weaknesses of organic DCPS are analysed and the chapter closes with proposals for the development of organic DCPSs. Chapter 3 focuses on results of expert interviews on the main barriers for the implementation of improved organic statistical data collection and processing systems. Chapter 4 gives a summary and some general conclusions are drawn. This report provides perspectives on how the above mentioned issues of the European Action Plan might be implemented.

1.1 Objectives of workpackage 4

The specific objectives of WP4 are:

- to further develop the proposals for harmonising data collection and processing systems for organic and conventional markets by means of a European seminar for national and international experts and stakeholders
- to develop proposals for ensuring the quality of collected data.

Partner (P)10, the University of Kassel, Germany, was mainly responsible for this work package with assistance of Partner (P)1 (University of Wales, Aberystwyth, UK) and Partner (P)6 (University of Ancona, Italy). Partner (P)5 (ZMP, Germany) assisted with the seminar organisation.

1.2 Approach and methods

1. A European seminar was organised in Berlin by P5 (ZMP) (supported by a sub-contractor), P1 (University of Wales, Aberystwyth) and P10 (University of Kassel) involving governmental and non-governmental experts and stakeholders from the 32 countries covered by the concerted action. Working papers, invited and offered papers from participants and first results of WP2 and WP3 were presented. Working groups debated issues relating to the development, harmonisation and quality assurance of organic DCPS. P2 (FIBL) produced the proceedings (Recke *et al.*, 2004) as part of WP7.
2. Based on experiences from former and ongoing research studies on the European market for organic products (among others, the EU-funded projects OFCAP (FAIR3-1996-1794) and OMIaRD (QLK5-2000-01124), there is a need for the development of a mechanism by which national bodies can ensure the quality of collected data. To achieve this:
 - P10 (University of Kassel) prepared a working paper for presentation to the first European seminar on quality assurance issues in DCPS for agricultural commodities, based on an analysis of theoretical and analytical tools and methods used in the assessment of data quality.
 - P6 (University of Ancona) prepared a working paper containing an analysis of current data collection practices based on the results of WP2, WP3 and the European seminar.
 - P10 (University of Kassel) prepared a working paper evaluating the proposals for development and harmonisation of organic DCPS resulting from WP2 and WP3 and the European seminar with respect to ensuring data quality, and developed specific proposals for quality assurance of organic DCPS.
 - P1 (University of Wales, Aberystwyth) prepared a working paper identifying the main bottlenecks for the introduction of the proposed organic DCPS at international and national level, based on interviews with experts and stakeholders participating in the European seminar.

These working papers and the results from earlier workpackages have been integrated into this final report for Phase 1 (Deliverable D3) to produce specific proposals for the development, harmonisation and quality assurance of organic DCPS which will be evaluated in the next phase of the project.

2 Quality assurance, harmonisation and proposals for development of organic DCPS

In the first section of this chapter a definition of quality, the dimensions of quality, the process of harmonisation and quality assurance approaches are introduced. Practical experiences of Statistic Denmark are also described. It can be shown that quality assurance approaches play a central role in data management systems of most of the national and international institutions collecting and processing agricultural data. In the second section, results of WP2 and WP3 and of the European seminar with regard to quality and harmonisation are presented. In section three we point out strengths and weaknesses of organic DCPS at the different actor levels. In the last section proposals for the different actor levels are made.

Each part of the analysis has been conducted at the following actor levels:

- **Production (Farm) level**

Structural data about agriculture; price data on farm level; farm accountancy data; production volume and value data when gathered on farm level.

- **Intermediate supply-chain level**

- *Wholesaler / Processor level*

Production volume and value, price data, turnover, etc.

- *Import / Export level*

Import and export volumes

- **Retailer/ consumer level**

Data about sales volumes and values on retailer level

Data about food consumption, household expenditures and consumer prices for food

- **Supply Balance Sheets**

Data on volumes and prices, of both overall supply and demand components.

2.1 Quality assurance

2.1.1 Data quality

The quality of statistical information is the primary aim for national statistical agencies as for all other kind of data collectors. Nowadays, the information is a matter of primary importance and it is necessary to warrant its independence, correctness and transparency, in brief, its quality.

In the last 20 years, the interest towards the quality of data has been growing continuously in all sectors and, at the same time, we have seen many attempts to define the quality and to find ways to improve it. Lyberg *et al.* (1998) described this wide tendency as a "revolution".

Many instances are leading national statistical agencies to consider with growing interest the problem of quality during the statistical data production process. It is

useful in this part of this working paper to remember the most important aspects that showed the problem of data quality (Filippucci *et al.*, 2000):

1. The growing complexity of general events is emphasising the need for information inside society. The national institutional organisations and the private actors need reliable statistical data and indicators to orientate their actions correctly.
2. Users are always more careful, well prepared and demanding because they have to face up to even more complicated situations and they need refined and reliable information that can help them to decide.
3. The production of data is not a monopoly and, on the contrary, thanks to new technologies, we have good competition in estimating different events (market surveys, life conditions' surveys, price surveys). This competition would extend to most parts of the current production of statistical data.
4. Many aspects of lifestyle and of the operating way of firms are changing, making the design of surveys more difficult in general.

Because of many changes, the respect of the principle of accuracy of data only is not sufficient anymore. We need a more complete and wider concept of quality. The attention towards the quality of statistical information requires a new and more intense effort to transfer this concept of quality from collecting data to the entire measurement system. The concept of quality is vague and it assumes different connotation in different contexts. For a long time, quality has only been considered as a problem of reducing the sampling error and other measurement errors. In the past ten years, the situation has rather changed and the concept of data quality has become progressively broader and differentiated. Recently, quality in statistics has been interpreted as a continuous improvement of the data production process introducing the concept of *Current Best Method* (Filippucci *et al.*, 2000). However, there are three common aspects that unify different approaches and give a common basis to quality analysis:

- data quality is determined by the capacity to satisfy a cognitive need;
- the idea that a statistical measure and the process of measurement are intimately bound;
- the evaluation of quality is generated by the twofold need to know the basic characteristics of a product and to improve it.

The quality control is placed in a dynamic context, the aim of which is the adaptation to the changes and to the emerging necessities. From the quality point of view, the statistical information can be considered, as any other goods and services, to apply any developed quality concepts.

In 1999, Statistics Sweden proposed the formation of a Leadership Group (LEG) on Quality to attain improved quality in the European Statistical System (ESS). Two issues were explicitly mentioned in the proposal: Total Quality Management (TQM) philosophies and Current Best Methods (CBM). Statistics Sweden had worked extensively in these areas for a number of years; other countries had shown interest in these areas as well. The main purpose of the proposal was, however, to let the LEG define its task in more detail and to provide a number of recommendations for the ESS regarding its quality work.

In such a context, the Leadership Group on Quality has adopted the definition of quality proposed in the norms ISO 8402-1986 of goods or services: "The totality of features of characteristics of a product or service that bear on its ability to satisfy stated or implied needs of customers". The analytic identification of quality dimensions helps to define the reference context to control and evaluate the quality of a statistical system and of a source. These have been defined as (Eurostat, 2003):

- *Relevance*: A statistical product is relevant if it meets users' needs. The identification of users and their expectation is therefore necessary. It refers to whether all statistics needed are produced and the extent to which concepts are used (definitions, classifications etc.) which reflect user needs.
- *Accuracy*: Accuracy which includes completeness is defined as the closeness between the estimated value and the (unknown) true population value (Mariott, 1990).
- *Timeliness and punctuality*: This dimension refers to a frequent and a pre-established date upgrading. Timeliness of information reflects the length of time between its availability and the event or phenomenon it describes. Punctuality refers to the time lag between the release date of data and the target date when it should have been delivered.
- *Accessibility and clarity*: Accessibility refers to the physical conditions in which users can obtain data: where to order, delivery time, etc. Clarity refers to the environment of statistics information: appropriate metadata provided with the statistics; graphs, maps and other illustrations; availability of information on the statistics and their quality and the assistance offered to users by the National Statistical Institutes (NSIs). Statistical data have most value when they are easily accessible by users, are available in a format users desire and are adequately documented. Assistance in using and interpreting the statistics should also be made available by the providers.
- *Comparability*: Statistics for a given characteristic are most useful when they enable reliable comparisons of values taken by the characteristic across space and over time. The comparability component stresses the comparison of similar statistics between countries in order to evaluate the meaning of aggregated statistics at the European level.
- *Coherence*: When originating from a single source, statistics are coherent in those elementary concepts and can be combined reliably in more complex ways. When originating from different sources, and in particular from statistical surveys of different frequencies, statistics are coherent insofar as they are based on common definitions, classifications and methodological standards. The coherence between statistics is orientated towards the comparison of different statistics, which are generally produced in different ways and for different primary uses.

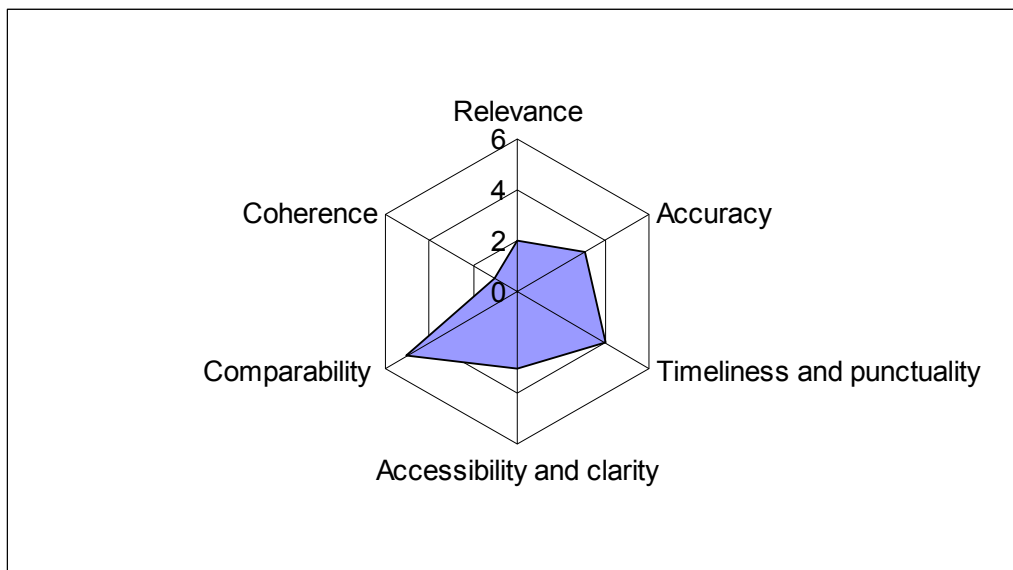
Problems may arise because there is a trade-off between these dimensions. For example, there can be a trade-off between accuracy and timeliness. Other statistical institutions like OECD, Statistics Canada, etc., use, in most cases, similar definitions or dimensions of data quality. These definitions are not static and will change with new issues coming up over time. In addition, cost-efficiency is an important factor to be considered in the possible application of quality dimensions.

Table 2-1: Quality dimensions and selected indicators

<i>Quality dimension</i>	<i>Indicator selected</i>
Relevance	User satisfaction index
Accuracy	Coefficient of variations for key statistics Unit response rate Item response rate Editing rates and ratio Imputation rates and ratio Frame error rate Revision rate
Timeliness and punctuality	Punctuality of time schedule of effective publication Average time between the end of reference period and the date of the first results Average time between the end of reference period and the date of the final results
Accessibility and clarity	Number and types of means used for disseminating statistics
Comparability	Number and proportion of the statistical products that have indicated differences in concepts or/and measurement from the European norm Length of comparable time series
Coherence	Differences between annual and short-term statistics

Source: Eurostat (2003), Handbook "How to make a quality report"

In Table 2-1, indicators are given for every quality dimension. To get an easy-to-handle index of quality, these quality dimensions (Figure 2-1) have to be weighted to get an overall quality index. A big problem of such a quality index is that not all indicators can be measured and reduced to numbers because they are qualitative. Proxy quantitative measures have to be incorporated but as a result the definition of the measures has an impact on the quality index. The use of such a quality index should therefore be limited for internal use in the statistical institutions.

**Figure 2-1: Quality dimensions**

Source: Own illustration

2.1.2 Quality assurance concepts

In management literature, a whole range of quality management concepts is described. These are concepts that are adapted to the needs of the national statistics institutions. Most of the national statistics institutions take the total quality management (TQM) system as an approach to improve the quality of their statistics. TQM is an approach that can be taken in several organisations to continuously improve the quality of all processes, products and services. The strength of TQM lies in the overall contemplation of processes aiming at adding value to the customer through continuous improvement, in which all members of an organisation have to be involved. However, quite different ways are possible to apply this approach in practice. TQM offers no guidance on its practical implementation. Furthermore, this concept has to be adapted to a situation of a statistics chain from the countries to international institutions like Eurostat. This weakness leads to other models.

The European Foundation for Quality Management (EFQM) developed a TQM-based quality model. This is an applied quality model with 9 criteria and 32 sub-criteria covering all aspects of TQM.

Other approaches are the Balanced Score Card (BSC), a tool to measure the quality of an organisation, DIN ISO systems with a focus on documenting, certifying and checking, Business Process Redesign (BPR), an approach used for fundamental changes in organisation, and Six Sigma, an approach on continuous improvement to shorten cycle times and increase yields. All these approaches can be used as basis for the development of a quality assurance concept for data on organic agricultural markets.

On the basis of a discussion about standardisation of methods used to satisfy the quality of statistics, a choice should be made between four concepts:

- Current best methods pointing out the best way for a certain process.
- Minimum standards that are quality guidelines providing guidance on what is important and what is not.
- Quality guidelines aiming to provide general good quality principles.
- Recommended practices which are a collection of proven good methods.

2.1.3 Harmonisation

Harmonisation comprises comparability of statistical data and results and therefore is a very important part of every quality management concept of national and international statistics institutions engaged in data collection, processing and dissemination, like Eurostat. The aim of harmonisation is to get data and statistical results that are comparable with regard to time, space and facts. Harmonisation is forced by the statistical institutions in the countries of the European Union to provide policy makers with comparable European wide data and results. For an international institution like Eurostat, harmonisation is a key issue of a quality management system.

In Table 2-2, the general advantages and disadvantages of harmonisation are compared. It shows that harmonisation has great advantages like comparability and reliability of data but on the other side there are disadvantages like high cost of additional data collection and difficulties to modify existing surveys or to establish additional surveys, especially if a harmonisation of input is chosen.

Table 2-2: Advantages and disadvantages of harmonised data

<i>Advantages</i>	<i>Disadvantages</i>
Data sources normally are well known.	Many data gaps exist.
Data comparability normally is high.	Costs of additional data collection are high.
Crosschecks between data from different countries are possible (e.g. Intra-EU- Trade).	Modification of existing surveys or establishing of additional surveys is difficult.
Data reliability is high.	
Data availability in the future is assured.	

Source: http://esl.jrc.it/envind/sip/ag/Sip_ag05.htm

To get harmonised data the process should start at the phase of planning of data collection. One general problem with harmonisation is that the structures can vary from country to country due to historical developments, law and other issues like political aspects. The process of harmonisation must start with an analysis on what has to be measured and if this can be integrated in an international framework so that a universal reference concept can be developed. National institutions can use this and adapt it to their national system in an efficient way (Ehling *et al.*, 2004).

To proceed in the harmonisation process different harmonisation methods exist. From a methodical point of view harmonisation of input, also known as harmonisation of methods, is the best strategy. In an ideal case, all countries and every involved institution use the same approaches for data collection and processing. In contrast to the harmonisation of input, the harmonisation of output focuses mainly on the data and not on the approach for data collection. The way the data is collected can differ from country to country and is usually under the responsibility of the institutions in the various countries. In statistics there are two approaches of harmonisation of output: the ex-ante harmonisation and the ex-post harmonisation. In the ex-ante strategy, the harmonisation process is part of the planning of data collection, so that at an early stage similar structures can be built up in different countries. Only very limited conversion between the processed data of the countries is necessary. In contrast, ex-post harmonisation is a conversion of existing statistics to get comparable statistics on an international level. The processed data can be the result of different methods of data collection and processing and has to be converted so that it is comparable between countries (Ehling *et al.*, 2004).

From a methodical point of view harmonisation of input should be preferred because it will give the most comparable and coherent statistics. The advantage of the output harmonisation is that this strategy is more flexible and less expensive.

For example, on the European level a research project financed by the European Commission CHINTEX (The Change from Input Harmonisation to Ex-post Harmonisation in National Samples of the European Community Household Panel – Implications on Data Quality) is trying to develop new concepts and approaches for harmonisation and statistical methods to improve results of ex-post harmonisation.

2.1.4 Practical experiences of Statistics Denmark

As a practical experience Larsen of Statistics Denmark (in Recke *et al.*, 2004) describes the way quality control is done on a micro and macro level for turnover data of organic products in retail shops for the year 2003.

On the micro level, Statistics Denmark has reports from 10 respondents of which 7 are from supermarket chains and 3 are wholesalers. When they record volume and value for specific products, price per volume is calculated. Average prices for all respondents per product are then calculated. Subsequently, for each respondent the statistical office checks the deviance from the average price per product. If the deviance is too big, they contact the respondent. Furthermore, as a rule, wholesaler prices must be lower compared with supermarket prices.

Prices and assortment are checked against the supermarket's weekly advertising. If there is a discrepancy, the respondent is contacted. Up to now, all respondents have been very positive when they were asked for further information. Hereafter, wholesalers' information is transformed into volume and value on retail level.

On the macro level, Statistics Denmark checks its information with various sources:

- Information from various stakeholders,
- The new Statistics on Foreign Trade of Organic Products from Statistics Denmark,
- National Account from Statistics Denmark,
- Household Budget Survey from Statistics Denmark,
- Statistical information from other sources: The Danish Dairy Board, The Danish Veterinary and Food Administration, OMIARD report (Hamm *et al.*, 2002), etc.

In most cases the data from the above mentioned sources cannot be used directly for validation purposes, but after calculation assessment, it will give an impression about the quality of the data and, if necessary, then how to impute data from some of the above mentioned sources.

As this small example shows, in organic agriculture Statistics Denmark faces the problem that only very little information is available and often there is a lack of resources to do a good analysis.

2.2 Results of WP2, WP3 and the European seminar in Berlin

2.2.1 Introduction

This section analyses the current data collection practices in the organic sector, with specific focus on data quality and quality assurance in organic DCPSs. The analysis is based on information collected from the results of Workpackages 2 and 3 (Wolfert *et al.*, 2004), and during the first EISfOM European Seminar held in Berlin on April 2004 (Recke *et al.*, 2004).

The overall objective of WPs 2 and 3 was to review the existing systems of data collection and processing for organic as well as conventional markets in order to understand their characteristics and identify opportunities for development and improvement. This working paper is intended as a contribution to develop the key recommendations and conclusions on the development, harmonisation and quality assurance of organic DCPSs. In this section we use the previous listed criteria to define the qualitative characteristics of the European DCPSs related to organic agriculture. We refer to the single actor's level such as the farm, the supply chain, the consumer/retailer and the supply balance sheets.

The multiplicity of farm level DCPSs, and the importance that those data assume in the organic market and between users, makes it possible to acquire a more detailed analysis compared to the other levels. Although we are conscious of the importance that the data at this level assume in definition of both policies and firm market strategies, the supply balance sheets level is the one on which we have faced major problems because of the limited information available, especially regarding the quality dimensions of the data.

2.2.2 Supply of and demand for organic sector data

Statistical information can be provided both as a public or a private good (Eurostat, 2002). When statistics are public goods they are characterised by non-excludability and non-rivalry in consumption. The market fails in providing sufficient levels of statistical data when they are characterised as public goods. Statistical information is a private good when it can be traded on the free market and can be provided on demand for a given price, like tailor-made surveys. In a similar way, we can define two categories of statistics users:

- public users – e.g. state/government agencies and the general public;
- private users – e.g., companies, organisations and individuals who can bargain the conditions of use, the timing of delivery and the quality/quantity of results.

As a consequence, “public” producers of statistical information are – usually – the only ones offering public goods, while statistical information as a private good can be supplied by all producers, irrespectively of their being public or private bodies.

Users and producers put on a complex interaction aimed to find best solutions to satisfy user needs and to make optimal use of producers’ capabilities. In this “user-producer dialogue” we can define four steps. In the first one, the negotiation between user and producer defines the working system, with respect to quality characteristics of data and the framework of the DCPS, including the organisation and the applied methods of data collection and processing as well. In the second step, the producer, based on decisions taken at the first step, aims at obtaining the statistical information in accordance with the agreement negotiated with the user, and tries to produce its output in the most transparent way as possible, using documentation of quality standards, audits, peer reviews and internal quality checks. Once the statistical information has been produced, the dialogue starts again. In the third step, the raw material (data and figures) are turned into statistical information, i.e. a ready-to-use product which is interpreted and assessed by the user. Eventually, the producer goes back to step 2 until the information reaches the user requirements. In the fourth step, the statistical information is applied by the user in order to satisfy his/her own needs.

In the negotiation process between user and producer, an agreement is reached regarding the “quality” of the statistical product. Quality of statistical information can be considered a complex item that must be understood as the result of an optimisation process in which both the user needs and the current external conditions of the data production process are addressed (Eurostat, 2002).

In this section, we try to transfer these general criteria about type and quality of data users and producers to the analysis of a current organic agricultural information system. It is possible to identify the European users and producers of information

systems at different actors' level, using results of EISfOM's deliverable of working packages 2 and 3 and of the first European Seminar in Berlin.

As shown in Table 2-3 and Figure 2-2 most of data producers are concentrated at farm level, due to the actual amount of information in production sector and the stakeholders involved with; more than 60% are public organisations collecting most of all structural and economic farming data. At supply chain level, wholesaler and processing data are mostly (76%) collected by public DCPS. Almost all National Statistical Institutes (NSIs) collect data on trade but only few of them focus on organic products, too.

Only few DCPSs of governmental institutions collect data on retailer and consumer level. Most DCPSs at this level are run by private companies. At public level, the Household Budget Survey of Eurostat does not provide data on organic consumption in most countries, if we exclude Switzerland and Bulgaria where organic consumption is covered as well.

Table 2-3: Type of organisations at different actor levels

<i>Actor level</i>	<i>Organisations</i>	
	<i>Private</i>	<i>Public</i>
Farm	33,8	66,2
Supply chain	23,5	76,5
Consumer/retailer	48,7	51,3
Supply balance	-	100,0

Statistic data producers

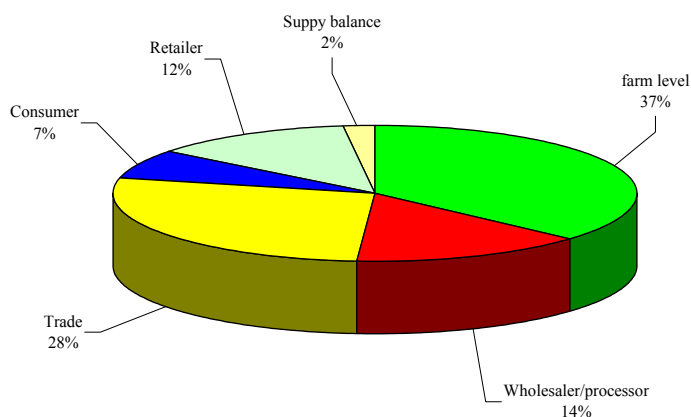


Figure 2-2: Producers of statistics in the organic market

As shown in Figure 2-2 public data collection currently focuses mainly on structural data collected by the Farm Structure Survey (FSS) and administrative sources (public certification bodies, in countries which have opted for a public inspection system). Most of the data is collected at the national level by statistical offices of Ministries of Agriculture and NSIs. Administrative meta-data are also collected by public agencies, which summarise and process raw data collected by private

organisations such as organic farming associations and certification/inspection bodies.

Other private institutions focus mainly on data on the organic market: organic consumption, sales volumes and values, prices. These kind of data producers are mainly commercial market research companies, and the data collected is treated as a private good and is sold for an often (very high) price. In some countries public institutions or farm associations buy data from commercial providers and make them accessible for the general public. In other countries, these data only are bought by private companies (e.g. retailers, processors or wholesalers) and are not available for a broad audience.

The information available from the earlier EISfOM project deliverables (D2 and country reports) does not allow a deep analysis of users, but it is nevertheless possible to discuss here briefly their aims and general characteristics. At farm level, all private and public research institutions show deep interest in understanding the developing path of organic farming. Policy makers are probably – among all users – those most interested in having a broad overview of the sector, possibly allowing some dynamics and trend analyses. Farm level data are therefore crucial for these users, generally involved in regulating supply via agricultural policies, although there is an increasing interest for market and consumption data, given the recent revival of demand-side policy especially in the European organic sector¹.

Other levels are characterised by little demand due to the weight that organic products have in the total agrifood system. Apart from institutional researchers, main users are those involved in market research or business opportunities, focusing their attention on other aspects of public demand. Due to the high costs of data collection systems, usually users of consumer and retailer (panel) data are paying clients.

2.2.3 Data quality at specific actor levels

Farm level

Relevance: Data regarding organic farm structures are generally highly demanded by stakeholders, policy makers and researchers, which means that the relevance is quite high. As has been seen in the first chapter of this paper, users of farm-level data are characterised by different types of organisations and public and private users.

Accuracy: At this level data are collected on a representative basis. So it means that the estimated parameters are close to the true population parameters. This is, however, not true for all European countries. By analysing the country reports of WP2 and WP3 and using information available from another EU-funded RTD project (EU-CEE-OFP – Further development of European organic farming policy - QLK5-2002-00917), it is quite evident that a lot of problems exist regarding the accuracy of data, especially for the years before 2000. Only in a few countries – namely Switzerland, Denmark, Austria and Norway – has the availability of accurate data has been in place since 1995. The lack of data accuracy is partially due to the

¹ Demand-side policy has been almost neglected by European policy makers in the food and agricultural sector in the last twenty years. In the USA, demand policy is still used as an instrument for fighting poverty and malnutrition of the marginal social classes (e.g. *food stamps*). The recent interest for a pull-strategy (Hamm *et al.*, 2002, Dabbert *et al.*, 2003) in the organic sector is a novelty in European agricultural policy.

difficulties of data collection, given the existence of multiple data owners such as inspection bodies, and to the variability of data types available in the various databases. Data are not complete because many DCPSs contain essentially only structural data (often only farm numbers and utilisable agricultural area (UAA), while the crop and livestock structure is not always available). Production data, both in volume and value, and prices are seldom available. The breakdown of data is often insufficient both in terms of product categories and of territorial units considered (NUTS2 and NUTS3 regional data are available only in a few countries).

Timeliness and punctuality: Due to the often sparse sources of information, the process of collecting and processing data is quite cumbersome and leads to delays in data availability and dissemination. In any case, farm-level DCPSs are more developed compared to other levels since most organisations collect data at least once a year. At the time of writing, the data available for most of the EU countries are nearly two years old.

Accessibility and clarity: Data are not available in all countries at the same depth and detail. In some countries only national data are available while in other countries regional breakdown is also accessible. Besides, the level of detail varies: in some countries only aggregate data are available for UAA at crop category (e.g. cereals) while in other countries a higher level of detail is available (e.g. winter wheat, durum wheat, oats, barley, etc.). When data are easily available and clear enough, language problems and other semantic issues (e.g. differences in definitions) limit the data accessibility by a wide public at the EU level.

Comparability: At this level, the comparison of similar statistics between countries across space is relatively easy, while comparability across time is more difficult due to different availability of statistics in the last few years. At country level it often creates a lot of problems to compare similar statistics because of different methodologies used by different organisations. The lack of harmonisation does not allow comparability among different DCPSs even at national level, where the large number of data owners (often inspection bodies) have different means of data storage (in some cases data are still only stored on paper). In countries like Denmark or Finland, where a unique public inspection system that collect all data exists, the issue of national comparability is not relevant, but still there is the problem of comparing data across countries.

Coherence: DCPSs cannot be considered coherent because they are not based on common definitions, classifications and standard methodologies. There is a great coherence problem between different DCPSs, both at national and European level. One important example is the lack of coherence between data collected according to EU Reg. 2092/91 and those collected in the FSS. The results of the Berlin seminar demonstrated the need to find a solution to these problems with common criteria of collecting and processing data. The data collected by the FSS relate only to farms above a minimum farm size and minimum livestock units, which renders the data incomparable to those collected according to EU Reg. 2092/91.

Furthermore, due to the sampling stratification framework within the FADN method the data have only limited value, for they only represent the specific farm types chosen. FSS data also are up to now not representative in some cases, as data of mixed organic and conventional holdings are often not recorded accurately. Thus to optimise the usefulness of these data, the survey method has to be adapted first.

Supply chain (wholesaler / processor level and import / export level)

Relevance: This level is characterised by a limited demand due to the weight that organic products have in a total agri-food system.

Accuracy: With respect to wholesaler / processor level, many of the DCPSs are representative because they are based on the whole population or a representative sample. Types of data collected at this level are not the same in every DCPSs; they are not able to give complete information on the supply chain level. If we consider levels of data collection on wholesaler / processor level (large wholesaler market, small / medium sized wholesaler market, processing industry, farmers and certification bodies), our survey shows that certification bodies are rarely involved in data collection at this level. In general, large wholesale markets, small / medium sized wholesale markets, the processing industry and farmers are the most important levels for collecting wholesale and processing data both for total and organic products. Referring to data provided for product groups, organic data is most often provided for fruit and vegetables. For meat, milk and dry goods there is only one organic DCPS for each instance in the whole of Europe. At import / export level, as the organic sector in Italy, Turkey and Hungary is export-oriented, only data on organic exports are registered there. In UK and Switzerland it is the other way round. These are organic import countries and the organisations mostly collect data on organic imports. SGS in Bulgaria, CBS in the Netherlands, TIKE in Finland and Debio in Norway collect both data on organic imports and exports. All export-oriented DCPSs segment the data referring to product or product group and country of destination. The import-oriented countries segment data both on product or product group and country of origin. The DCPSs which collect both data on import and export carry information on both the country of origin and destination and only these DCPSs allow a direct comparison between organic and conventional product trade data. Data are generally collected at harbours and other custom-relevant borders.

Timelines and punctuality: Both data regarding wholesaler/processor and trade are collected periodically; in general, at an aggregate level (organic and conventional), they are available on an annual basis, often more frequently, too (weekly or monthly). Organic data, when available separately, are often estimated annually or even less frequently.

Accessibility and clarity: Data are disseminated mostly on website and in reports: often the information is confidential. In most cases, organic data are not distinguishable from total data in official DCPSs. Our survey has shown that on 40 known DCPSs on wholesaler / processor level, only 17 are separate DCPSs for organic data. At 12 DCPSs organic data are integrated in a total DCPS, but only with four of these are organic data distinguishable from a total one. Most often the institutions answered that there was little or no demand from users for separate organic data. Methodological and financial aspects are mentioned as main barriers for the distinction/collection of separate organic data.

Comparability: The lack of harmonisation does not allow comparability in space and time among different DCPSs, both at national and European level. Most of the DCPSs are on a national basis. Only three of the German DCPSs are international. Almost all DCPSs on wholesaler/ processor level are not harmonised to a European system. Only one DCPS is harmonised. In general, there is a need for further development of the DCPSs in terms of harmonisation and comparability. The DCPS by Statistics Netherlands (CBS) could be an interesting case study and good example for organic data collection and processing on import and export level. This

DCPS on trade covers both the total and organic sector. It is harmonised to Eurostat External Trade Statistics Database Comext.

Coherence: The issue of coherence could be easily resolved if a common nomenclature could be used to distinguish organic data. At the moment, the data collected are not coherent since the method of estimation of the organic component varies from source to source.

Consumer/retailer level

Relevance: Available data are usually collected by private market research companies by means of surveys of single product or category. Large market research companies such as Databank, ACNielsen, GfK, etc. run these surveys since the information is sought after. Relevance is therefore assured. ACNielsen is planning to extend his survey to more products. BioVista started a specialised retailer panel for organic food shops in Germany in 2003. Data is collected on a wide range of products. In Germany, the ZMP-Handelspanel exists which covers retail prices for organic and conventional products on a representative basis. Most surveys refer to single national markets and there is no European-wide public or private sector DCPS reporting on organic markets. The number of countries with a national organic DCPS on retailer level is limited. Only Switzerland, Germany, the Czech Republic, Italy and Denmark report DCPSs on that level. Concerning the consumer level, we can distinguish between public and private DCPSs. The Household Budget Survey (HBS) is a sample survey of private households carried out regularly under the responsibility of the National Statistical Offices (NSIs) in each of the 25 Member States of the EU belonging to the European Statistical System. The HBS has not had a legal basis and therefore it was run as a “gentleman’s agreement” among the Member States, some EFTA countries and Eurostat. So far, the HBS does not provide separate data on organic markets, with the exception of Switzerland and Bulgaria. Private market research companies such as GfK, ACNielsen and TNS operate household panels in many European countries. In some of the countries, organic products are surveyed separately. For some of the countries, detailed information on organic market data is available.

Accuracy: Usually the data cover representative samples of population but the data are not complete because they often do not cover out-of-home consumption (restaurant, canteens, etc.) and small purchases. With respect to the retail level, we can notice the limited representation of point of purchase (store types) other than supermarkets, e.g. specialised organic shops, butchers, bakeries and discounters. If we exclude the last category, the reason given for the scarce representativity of many marketing channels is the lack of scanner till systems in small shops. In some countries, like Germany or Italy, where the market share of e.g. specialised organic shops is still quite high, this lack of representativity of the samples can lead to severe biases in data collection.

Timeliness and punctuality: In most countries, data are customised to special purposes and therefore do not exist as time series.

Accessibility and clarity: Private market research reports are usually marketed at a relatively high price; therefore, albeit theoretically accessible to everyone, these are only available to those (generally companies) who can afford the price. In some cases, though, survey data are available only to the specific clients who have commissioned it. Concerning clarity, it is with no doubt at high levels.

Comparability: As data on consumer and retailer panel are mostly gathered by private companies, there is no interest in harmonising them with those of other (competitor) companies. Given the data are often tailor-made to the research question to be answered, no comparison across space and over time is generally feasible.

Coherence: These DCPSs cannot be considered coherent since, in most cases, they are not based on common definitions, classifications and standard methodologies. It will be difficult to reach a harmonisation on consumer level since this sector is pre-dominated by private companies competing on the same markets. Nevertheless, the dominating companies should be encouraged to exchange experience and develop a standard for comparing results at an international level, at least within each of the companies. In the long run, they should be encouraged to develop a common standard.

Supply balance sheet level

Relevance: In nearly all European countries, supply balance sheets for the total supply exist, but there are no complete supply balance sheets for organic products. The lack of separate foreign trade data for organic products is the main reason for it: The relevance of supply balance sheets for organic products for policy makers is unquestionable, giving the opportunity to get specific information about the domestic production and market development as well as the import and export activities and the degree of self-sufficiency of organic products.

Accuracy: Currently, there is not enough organic data available to draw up organic supply balance sheets in any European country. Existing data are based upon estimates. Data available are not complete: data of production, processing and stocks do not exist in most countries; for external trade, there are no specific nomenclature codes for organic products.

Timeliness and punctuality: Supply balance sheets for organic products do not exist.

Accessibility and clarity: See above.

Comparability: See above.

Coherence: At this level, there are a lot of problems of coherence because existing statistical systems are not based on common definitions, classifications and methodological standards.

2.3 Strengths and weaknesses of organic DCPSs in Europe

2.3.1 Introduction

In order to improve the performance of a statistical system, it is customary to define its strengths and weaknesses. According to the model of the European Statistical System (ESS) (Eurostat, 2002) we can consider three different types of strengths:

- External, due to
 - regulation, i.e. the capability of proposing legislation for the improvement of statistics to the relevant authorities;
 - the existence of a statistical programme;
 - the capability of funding its activities.

- Internal, due to
 - commitment to evolve and improve the system performances through a culture of partnership with other organisations and the willingness to learn from others;
 - development and implementation of a harmonised methodology;
 - production of comparable statistics across each country and the EU;
 - continual training of statisticians.
- Others, due to
 - best understanding of the importance of statistical information as tools for policy makers, especially with respect to EU policies;
 - interest in Research and Development (RandD) statistics and help in the exploitation of expert knowledge in statistics.

The weaknesses considered are also divided into

- External, when they depend on
 - different ways of producing data;
 - excess bureaucracy and lack of resources for obtaining/processing data
- Internal, when they depend on
 - organisational view point, e.g. lack of communication user/producer; lack of funding, etc.;
 - production, e.g. lack of harmonised data and analysis, need for better marketing, etc.;
 - human resources, e.g. difficulties in people's turnover, no further methodological training, etc.
- Others, e.g. cultural differences.

By analysing the responses to the EISfOM surveys as reported in D2 and country reports, we can summarise the strengths and weaknesses of statistical information systems on organic agriculture at different actors' levels.

2.3.2 Farm level

Strengths

External

- legal acts concerning collection of administrative data exist
- FADN has a more consolidated legal basis, and is recently being extended to organic data.

Internal

- farm level DCPSs that contain organic data seem to be more developed in comparison to other actor levels;
- FADN is represented most frequently and its data quality and representativeness are usually rather good;

- in many DCPS it is possible to make clear distinctions between converted and in conversion farms;
- several DCPSs, especially FADN, are harmonised to an international DCPS;
- in most FADN systems, organic data are distinguishable from total data;

Other

- some countries (e.g. France and Finland) developed good practice in DCPS management that may be a useful example for other countries.

Weaknesses

External

- the European Action Plan for Organic Food and Farming explicitly mentions the weakness in production data collection that has to be improved;
- data are not always made publicly available or are not reported at all;
- most national and regional governments report the data on a voluntary basis rather than a compulsory basis. This also poses problems of coherence and consistency of the data collection systems (e.g. data are not available at the same depth all years, etc.);
- different formats (e.g. produced animals/stock of animals) and often several collectors of data from organic farms in one country;
- in many countries at farm level, no distinction is made between in conversion and fully converted organic farms, or the definitions of converted, (fully or partly) and in conversion farms (1st year, 2nd year, partly or fully in conversion) and farm products are not clear;
- certification bodies disseminate the data freely on a voluntary base only in a few countries at present
- even when certification bodies would be able to provide the most precise figures about the national organic farm structure, the certification bodies are not obliged to report the data of certified organic farms;
- the disclosure of data available at certification bodies is often limited by their close partnerships to organic farm associations which try to keep data of their associated farms confidential.

Internal

- lack of harmonisation to a European system;
- in some cases, no consistent definition of organic farming is used by different data sources (e.g. farm structure survey vs. administrative data);
- in several systems small farms (usually < 2 ha) are not taken into account, which sometimes means that a substantial part of organic farming activity is left out;
- some systems do not distinguish many product groups, which makes them less valuable;
- data is not always up-to-date;

- the representativeness is often a problem, even in harmonised Eurostat systems like FADN: theoretically they should be representative, but in reality this is sometimes hard to accomplish;
- data quality is also a recurring problem: many systems are only visually checked by experts, but this is not very good;
- many DCPSs are still stored in “primitive” electronic formats, like Excel sheets;
- only FADN seems to have – in most cases - a quality management system in place;
- the information on organic farming is still rather incomplete: in most countries time series are hardly available before 2000, regional breakdown is quite poor, and even the production structure is rather basic, allowing to distinguish only among very aggregate crops (e.g. cereals, pastures, etc.);
- different software is used and many ‘databases’ will lack an appropriate data definition;
- lack of communication between different data collection systems
- different DCPSs are not harmonised or even simply “communicating” between each other (e.g. FSS and EC2092/91);
- extra-collection of data when administrative data are not available is often claimed to be too expensive;
- there are only a few systems for production and price statistics in which organic data is distinguishable;
- data quality of the national organic farm structure based on information using the FSS is hard to interpret;
- published organic food and farming data are often not very up-to-date: data are often released with a delay of 2 to 3 years.

2.3.3 Supply chain (wholesaler/processor and import/export level)

Strengths

Internal

- in countries where they exist (only very few), most DCPSs on wholesaler and processor level are representative because the whole population or a representative sample is the basis for data collection;
- data are collected quite frequently (e.g. often on a weekly or monthly basis), especially at wholesaler / processor level;
- most of the data collected are checked by a quality management system (wholesaler /processor level);
- most of the trade DCPSs are harmonised to the European System.

Weaknesses

External

- traceability and control of sales of organic as organic by inspection bodies is still not uniform throughout Europe: the need of new (electronic?) systems to improve integrity and traceability of organic systems (which should come into force in the coming year) is a useful opportunity to comply with statistical needs as well.

Internal

- there are only few DCPSs present at this level, mainly at wholesaler / processor level;
- DCPSs at the wholesaler /processor level are not harmonised to a European system;
- in most of the DCPSs at this level, organic data are not distinguishable from total data;
- only few DCPSs exist which collect data both on organic and total foreign trade;
- most of the organic market data are unreliable and inaccurate and are based on expert estimates rather than collected by proper statistical surveys on representative samples;
- most of the data are not available for public use;
- most of the data are stored in a often poorly structured electronic format.

2.3.4 Consumer and retailer level

Strengths

External

- some legal acts exist concerning the collection of consumer data (e.g. Household Budget Survey - HBS).

Internal

- organic products are included in DCPSs covering the total markets. Therefore, organic data is usually comparable with total data;
- figures provided by consumer and retailer panel usually have a high validity.

Weaknesses

External

- the European Action Plan for Organic Food and Farming explicitly mentions market data collection to be improved;
- organic consumption and retail data could be extracted by market research companies quite easily from their databases, but these data are usually not publicly available;

Internal

- systems are not harmonised to an international level: besides, as data on consumer and retailer panels are mostly gathered by private companies, there is no real interest in harmonisation;
- often consumer panels do not collect data on all product groups when surveying organic expenditures;
- therefore, there is a limited representation of different store types, e.g. panels do not cover specialised organic shops;
- data collection and processing at retailer and consumer level are very expensive, and the sector and the market size for organic products are still small;
- the demand for organic product data by paying users is limited;
- most data are stored in an often poorly structured electronic format.

2.3.5 Supply balance sheet**Strengths***External*

- legal acts exist concerning data collection of supply balances in national and international economic accounts.

Weaknesses*External*

- no official data collection for organic products.

Internal

- no complete supply balance sheets for organic products in any European country;
- deficiency in the DCPSs of production data is also hampering the availability of supply balance sheets;
- external trade: no specific nomenclature codes for organic products exist, which renders difficult data collection on organic trade;
- no organic data are available for input-output flows in processing and stocks;
- quality management done only by visual check by experts.

2.3.6 Summary for all levels

Strengths and weaknesses of organic DCPSs at all levels can be summarised as follows: Organic DCPSs are mostly developed at farm level due to a more substantial and detailed demand for farming data (often for non-statistical purposes, e.g. inspection) which influences the complexity and structure of data supply. At the same time, the main problem at farm level seems to be the harmonisation of raw data. As we have seen, there are often many different sources of information (in most cases not NSIs), which provide data, not easily comparable given the different methodologies used in data collection. This is true at national level and, even more so, at the EU level.

At supply chain level, the main weakness is the impossibility of distinguishing organic data from the total. In general, at this level there is more a need to develop DCPSs than to harmonise existing data sets. Consumer and retailer data have often high quality but are not easily available for public users. Most data are collected by different private companies, so there is little harmonisation.

At supply balance sheet level, the problem is that there are no data in any country. In general, the major cause for the weaknesses identified is the low overall importance (in terms of contribution to Gross National Product (GNP)) that the organic sector has. However, GNP is not a very good measure of socio-economic welfare, and it is well demonstrated that organic farming and its related supply chain provide public goods which are not valued in GNP calculations (Dabbert *et al.*, 2004). Therefore, the relevance of the organic sector is much beyond its actual size and weight in the European economy.

2.4 Proposals for the different actor levels

In this section, proposals for the different actor levels are formulated and, in the last part, key conclusions of the European seminar are formulated.

2.4.1 Farm and processor level

There is a need for the reporting of organic production and processing data under EC Regulation 2092/91 to be mandatory, with the methodology and definition of categories fully harmonised, and the process to be supported by public authorities. In addition, there should be improved collaboration between the ministries responsible for the Farm Structure Survey and responsible authorities and certifiers (according to EC Regulation 2092/91), with the setting up of a common system to avoid overlap and harmonise definitions and methodology. This registration could form the basis of a data collection on organic markets. In this system, the problems of on-farm use and sales of organic products as organic or conventional have to be solved. Furthermore, FADN data is not enough and should be extended. Currently, the organic sample in FADN is not representative, so an increasing number of organic farms and the integration of additional variables on organic issues in the current FADN could be a basis for an improved system. The integration of organic data collected by other organisations into an existing data collecting system should be considered, but harmonisation requires a common approach with a lot of flexibility. The example of Denmark shows that an organic sub-sample with a high number of organic farms (sample rate) might be a solution. However, up to now there is no harmonised system existing how the data are to be processed. To improve the situation in accordance to the quality dimensions, a coordination of different systems is necessary. The process should be facilitated by the development of electronic data collection tools, for quality assurance and reduced workload of data collectors and operators as well as for the development of a harmonised system for dissemination of (electronic) reports. The experience of Finland and Denmark shows that a single identification number system (one farm has one number) can help to simplify administrative problems. If only few processors exist, the secrecy of their data has to be guaranteed.

2.4.2 Supply chain (wholesaler and import/export level)

In 2005, wholesalers will be obliged to register data according to EU regulation 2092/91. As well as on the farm and processor level, this registration could form the basis of data collection on organic markets. In advance of registration, a harmonised

system should be developed to process and to improve the quality of the data. Electronic data collection and processing tools should be an integral part of a quality management system and may lead to a reduced workload of data collectors and operators as well as for the development of a harmonised system for dissemination of (electronic) reports. Privacy issues need to be tackled in order to be sure that data is really available to users (user rights). As some stakeholders do not cooperate with each other, an authority will introduce a new DCPS more easily. Official initiatives, however, are not welcomed everywhere, which can affect the feasibility of data collection. Experiences of different countries show that the feasibility of mandatory data collection varies from country to country.

If the existing data collection on the Intra- and Extra-EU-Trade level is extended to a differentiation between organic and conventional data, most of the organic market data needed by market actors and policy makers can be provided. In the existing system where data is collected in the countries and sent to Eurostat, an additional digit (organic/non-organic) needs to be included to the records. This will allow distinguishing between conventional and organic products. In addition certification bodies should be obliged to deliver their information about trade to the national statistical institutions, so that the data of the above proposed extended system could be checked.

Recovery of trade data can be approached at relatively low cost without the need of new activity / product classification by matching existing information, as done in Denmark. The Danish example provides an alternative low cost strategy for the recovery of trade / supply-chain data, facilitated by a single identification number for each operator used by every organisation dealing with them. The more widespread adoption of this approach would simplify data harmonisation and quality assurance. Raw data collected by stakeholders often have to be processed for the supply chain members so that the relevance of data can be improved. For the supply chain, scanner data are of very high quality (accurate, timely, relevant, etc.). If they can be combined and harmonised with other databases, the information would be very relevant.

2.4.3 Consumer/retailer level

In Europe, no harmonised system exists for collecting and processing data on the retailer level for organic products. As the introduction of a new representative system on this level in a time of limited resources will cost a great deal, it will be almost impossible to convince policy makers and the responsible statisticians in Europe to introduce such a system. In Denmark in 2004, it has been planned to survey turnover data of organic products of retailers. As the Danish system to collect data is based on an identification system, every retailer can be identified which makes it easier to bring the information on different levels together for further calculation.

In addition, private companies engaged in data collection and processing might be asked to work together to develop a harmonised European wide system. At the European Seminar the supply-chain group recommended that further intensive expert information exchange is required, which could be facilitated by the establishment of a European working group for this topic. As the companies on the retailer level, however, compete on the market, there is only very little chance that a harmonised system based on private companies will be developed without financial support.

At the consumer level, the only harmonised system available is the Household Budget Survey. As the example of Switzerland shows, this system can be extended to a system where organic products can be distinguished. Due to the high costs to implement a representative system, it will be very difficult to convince policy-makers and leading statisticians in every country to introduce such a system. Therefore, the possibility of creating ad-hoc surveys analysing the consumption of organic products should be considered seriously, rather than trying to adapt the existing HBS.

In addition, the leading private companies engaged in panel surveys at this level can be asked to work together to build up a harmonised system. As these companies however, compete on the market, experts presume without financial support they will not work together to develop a harmonised system.

2.4.4 Supply balance sheets

On the supply balance sheet level additional data collection and harmonisation are needed. Production data for organic crops can be supplied by a test farm survey implemented similarly to the conventional data. This system will be very costly. Discussion at the European seminar showed that much data could be available from the certification bodies. However, up to now, certification bodies are not obliged to provide statistical institutions with data. For the production level, it was proposed that data should be collected by certification bodies and should be delivered to national statistical institutions. On the trade and the consumption level, data collection can be carried out similarly to the total statistics by adding a digit (organic/non organic) in the report forms. On the consumption level, the problem of organic products sold as conventional was discussed and several options to solve this problem were mentioned (extra survey or additional column in existing forms).

In general, legal enforcement for data collection on organic products from European countries and the countries on the third country list has to be developed. Until the legal enforcement is implemented, the data collection should be done on the basis of a gentleman's agreement as a pilot project to gather experiences. Quality assurance can be easily done by using the current procedure of Eurostat, and in the first few years, validation of the collected organic data is needed by national and international experts of organic markets. Experiences from Eurostat indicated that data collection via online-forms is an option, which causes less work and costs than others.

3 Barriers to the implementation of improved organic statistical data collection and processing systems

The aim of this section is to identify the main bottlenecks or barriers for the introduction of the proposed improved organic DCPS at international and national level, based on interviews with experts and stakeholders who participated in the Berlin seminar.

3.1 Approach

P1 (University of Wales, Aberystwyth), P6 (University of Ancona) and P10 (University of Kassel) prepared a draft list of recommendations emerging from the results of WPs 2 and 3 as well as the Berlin seminar (WP4.1). This list was circulated (by e-mail) to 27 participants of the Berlin seminar, as well as to nine others who were aware of the seminar but had not been able to participate, with a request for them to agree to a telephone interview to discuss the recommendations, potential barriers or bottlenecks and possible solutions.

The recipients were selected to represent a range of national and international statistical agencies as well as stakeholders, data users and commercial market research firms. In order to maximise willingness to be open, comments were obtained on a non-attributable and informal basis, so that it is not possible to identify the individuals contacted, but the breakdown by number in each category is given in the table below. The results are based on 27 interviews and e-mail responses.

Table 3-1: Results of the interviews

<i>Category</i>	<i>Contacted</i>	<i>Responses</i>
International agencies	9	5
National statistical agencies	10	7
Commercial/semi-public agencies	9	8
Stakeholders, users, others	8	7
Total	36	27

3.2 Results

After each recommendation, reference is made to the relevant level(s), which relate to the different levels of activity discussed earlier in this report. These are:

1. Production structure and output;
2. Farm incomes and prices;
3. Supply chain;
4. Import/export;
5. Consumer/retailer;
6. Supply balances

1. Establish common protocols for data processing and exchange to ensure harmonised quality management and improved timeliness (all levels)

The purpose of this recommendation is to achieve a common European basis for data processing and exchange at each level so as to facilitate data sharing and combination and thereby ensure quality and timeliness. Opinions were divided on whether this is desirable, at least in the short term. In certain situations, such as FADN, this already exists, but trying to achieve it in other areas might be too ambitious, particularly at the consumer/retailer level. It is more important to agree a standard requirement for the *delivery* of data (outcomes), as current Eurostat practice, rather the *process* by which it is collected, as each national statistical agency or commercial market research company will develop its own procedures to suit its own circumstances. Diversity of approach should not be discouraged, as the reasons for collecting and using data can be very different (the stage of development of the organic sector and resulting data needs can vary widely) and the creativity of individual operators to find new solutions to problems etc. should be encouraged. Another significant issue would be the willingness of the inspection/certification (control) bodies to co-operate with an initiative of this type. A system of incentives and legal requirements could be required to achieve this (see Recommendation 3 below), and this would require resources not currently available. To the extent that common agreement on *outcomes* is desirable, the use of expert group meetings as proposed under recommendation 15 below to determine these outcomes would be desirable. A necessary precondition would be agreement on a common definition of organic farming (see Recommendation 19.a)

2. Development of information technology (IT) solutions to facilitate recommendation 1, including use of on-line forms for data collection (all levels)

The underlying consideration for this recommendation was that considerable amounts of data are collected by inspection/control bodies as part of the annual returns and inspection process which then remain inaccessible, often in paper files. With a developed IT framework, the data could be caught electronically, and its use for statistical purposes could be greatly facilitated. Also in other specific levels, such as price data collection, the possibility to submit information using on-line forms could help reduce the costs of data collection and processing. Such an initiative could prove useful particularly in countries where it is currently difficult to obtain consistent data from regional authorities.

The potential benefits of IT solutions are recognised, but a number of risks were also identified. Again, concern was expressed that an 'all encompassing' approach at this stage would be too ambitious, given the early stage of development of organic farming statistics. For some levels, such as farm income data, a new standardised IT approach was less relevant as other data collection approaches have been applied for some time – similarly, for market research companies, with existing procedures well established, this recommendation was considered to have little relevance. In some countries, the level of uptake of IT by producers and processors is still very limited, so that inspection/certification bodies and national administrations are likely to be the key entry point for the data, but it would be necessary to avoid duplicating input of information (e.g. separate producer returns to statistical agencies and inspection/certification bodies). Resources are also a key issue to enable inspection/certification bodies to modify their existing systems – without their

willingness to co-operate there will be little advantage to be gained, apart from perhaps the speeding up of data transmission between parties.

To the extent that IT approaches can be applied for specific levels, they would need to be focused on national situations – the existence of some initiatives in this direction (e.g. Austria, France, Switzerland) illustrates how this might be done, but a significant problem is that there is no common system/numbering that would allow communication between agencies (both to enable data combination but critically also to identify products from other countries). This would require co-ordination and agreement at the European level. This does not preclude the use of national classification systems, so long as codes can be translated into a common European standard. Alternatives to official statistical classifications, such as a barcode database (see Recommendation 19.c), might also be possible, but this issue needs to be resolved before there can be significant further development of IT systems.

3. Compulsory (legal) requirement, with appropriate financial compensation, for certification bodies to supply specified administrative (2092/91) data, based on common definition of variables, and for member states to collate and report this data (levels 1, 3, 4, 6)

There was strong support for this from various respondents representing owners, users and processors of data, particularly at the production level (1), although the key question of whether resources would be made available to inspection/certification bodies to enable them to meet any legal obligation was raised frequently. The system used in France, of paying inspection/certification bodies a specific amount per record of defined data, was suggested as a possible option, with the potential to adopt a common European approach to the data collected and possibly compensation. If not, the further costs would need to be imposed directly on producers who already (in most countries) carry the financial burden of certification and inspection processes, although the costs may well be mitigated by organic farming/agri-environmental support programmes.

Several respondents stated that it would be necessary for this to be backed by a formal, possibly legal (e.g. via Reg. 2092/91), requirement on member states to supply the data and that there needed to be a central EU (Commission) lead on this. The combination of legal requirement and compensation to the certification bodies was strongly supported by some respondents. Given a lead of this type, which could be a focus of the EU organic action plan, most, but not all countries, would be able to implement it. In some, this type of data gathering remains a sensitive issue and may be harder to implement. A voluntary approach might help address this, but whether all countries would be willing to allocate sufficient priority and resources to organic farming data under a voluntary system remains in doubt.

It was stressed that common guidelines for completion of the Eurostat/DG Agri 2092/91 returns should be developed to provide guidance to certification bodies and others returning data. The current absence of such guidelines is a significant factor contributing to poor returns in some countries. The development of guidelines should be done in a participatory approach to ensure that they are clear and appropriate to those organisations. The guidelines should clearly define the data required from/about producers and processors, as well as the minimum requirements that certification bodies are expected to meet in terms of data collection, processing and handling (as is currently the case for their inspection functions).

An initiative of this type was considered to have very little relevance at the consumer/retailer level (5) or for supply balances (there is not even a legal requirement for data for conventional SBS), and there were some doubts about whether it could be applied successfully also at the supply chain level (3/4). A key problem here is that, despite traceability requirements, not all certification bodies collect data on quantities purchased and sold by firms, and in many cases, even if the data are provided, the inspected businesses would not want the data to be released on commercial confidentiality grounds – in many cases there are not enough businesses active to ensure that aggregated published data cannot be tracked back to an individual firm. In these situations, traditional (commercial) market research might be the only solution, but the situation does vary from country to country.

4. Harmonise Farm Structure Survey (FSS) and administrative (2092/91) data collection and reporting, including more accurate identification of organic activities in FSS (level 1)

Although current FSS procedures identified holdings which are organic, in conversion or part organic/part conventional status, normally the surveys implemented by member states do not get more detailed information on whether individual enterprises, crop hectares or livestock numbers are organic, and this can lead to significant differences in the results obtained. However, the FSS procedures have now been defined for the 2005 and 2007 surveys, so significant change will only be possible with respect to the full census in 2010 and subsequent surveys. There was general support for the idea of harmonising/integrating FSS and 2092/91 data, in particular to avoid having to ask producers to give similar data twice and to ensure that the FSS data is as accurate as possible. A further benefit would be to be able to obtain standardised regional data (at NUTS 2/3 level) rather than the current NUTS 0 reporting of 2092/91 data to the Commission.

Some countries, e.g. Denmark, France and UK, are now using the administrative (2092/91) data to provide the necessary information for FSS returns to Eurostat, supplemented by additional survey data, e.g. labour, where necessary, illustrating the concept of using national solutions to obtain data to meet the requirements of a common European output framework. This also provides an intermediate solution to the limited possibilities for change in the FSS defined procedures. In Denmark and France, the link works easily due to the common operator identifier system (see Recommendation 6 below). In the UK, it has proved more difficult to implement, due to the fact that certification bodies do not always record the official holding numbers, but postcode matching has been used.

The integration of administrative data from organic farming support schemes should also be considered. This is particularly important in countries such as Sweden, where significant areas of land are managed organically and receive financial support but are not certified.

5. Ensure organic samples in existing surveys (e.g. FADN, FSS) are correctly identified and representative (levels 1, 2)

This recommendation covers two key issues – firstly how organic holdings are identified, and secondly how samples are selected to ensure that they are representative of the organic sector. With respect to identification, there is a basic problem that the way the definition is phrased in particular countries may lead to incorrect attribution of the status of holdings, which undermines the reliability of the

data, but this needs to be reviewed and addressed at national level. Further problems arise where holdings which have both conventional and organic enterprises, as it is considered not to be possible to duplicate all the questions, requiring separate answers for organic and conventional activities. In the absence of separate questions, then Recommendation 4 to utilise/integrate administrative data provides a partial solution, but does not address the problem, for example, with respect to FADN data, as financial information cannot be obtained from administrative sources. For FADN, a partial solution might be to require the area of organic land to be identified, so that the percentage of a mixed organic/conventional holding that is managed organically, can be calculated. Alternatively, the organic status of each main production activity in the business could be identified, given that constraints on parallel cropping would reduce the likelihood of two activities of the same type being managed organically and conventionally on the same holding. However, the introduction of further changes to FADN procedures of this type is considered to be unlikely due to rigidities in the system and in particular the reluctance of member states to supply additional information – they would need to be convinced that there is a real need to do this and that the cost of change would be justified.

The second key issue is whether samples are representative of the organic sector. While it was generally agreed that this would be desirable, it is more difficult to achieve. The sampling stratification frameworks for official statistical surveys are based on economic variables (farm type, size, region), not the management system, and therefore organic holdings etc. would only appear to the extent that they match the relevant criteria. It would be difficult to justify the need for, let alone to implement, a stratification based on farming methods. On the other hand, typologies exist to support policy decisions and organic farming in the sense of the 2092/91 regulation and rural development policy is more than just a management system, and there should be scope to in FSS/FADN to differentiate organic and non-organic within farm types. This issue should be given further consideration.

In practice, for the FSS in full census years when all holdings are included, the organic data can be considered to be representative. For FSS/FADN surveys, in general terms the proportion of organic farms selected does represent the proportion of organic holdings in agriculture in total, but their distribution by farm type and size does not necessarily reflect the structure of the organic sector. Although it is very difficult to get change at EU level, some change may be possible as a result of CAP Reform (some argue that serious revision is required), because the current classification may not fit in future, particularly because of the impact of the single farm payment on the definition of standard gross margins. With the CAP Reform, specific production types (dairy, arable etc.) are politically less interesting – more relevant might be classification such as industrial, extensive or life-style. These considerations may lead to revision of stratification procedures, but there is no guarantee that organic farming will be included. However, there is certainly a need for the organic farming issue to be considered when these discussions take place.

One option might be to make the weighting system more flexible to take account of the member states that place more emphasis on organic farming. At present, some member states collect additional data on organic farming, but these cannot be integrated into the FADN database because the overall sample for that country would become unbalanced, and therefore the data is rejected and is not subsequently available for analysis of organic farming results at the European level. If the weighting system was modified, it would allow the data to be included in the

FADN database, but given a lower weighting so as not to unbalance the overall samples. Such a change would make it possible for Recommendation 9 to be fully implemented. From September 2004, a new internal study within DG Agri is planned to review the weightings and feasibility of alternative options, either to implement national weights or use the existing FADN system more flexibly. However, even if the weightings are modified, the EU cannot impose a requirement on member states to include more organic farms, and therefore utilisation of any new flexibility will depend entirely on member state initiatives. Some of the national observatories are already trying to address this.

6. Establish common operator identification number to enable linking of administrative and statistical data (all levels)

The Danish approach of having a single operator identifier for all interactions with government bodies, including certification, and the ability to use this to generate statistical data, proved attractive during the Berlin seminar, and was considered to be very important by some respondents. Similar systems can be found in other countries, too. However, the likelihood of changing national statistical systems to suit organic data collection seems low, and the best that can be hoped for is that inspection/certification bodies are required to record and report the official identifier(s) used by government. This integration might be easiest to achieve in countries where the government is also responsible for certification, as in Denmark. The UK is currently examining the possibility of introducing standardised business identifiers to replace the current holding number system which might provide an opportunity to facilitate change. Perhaps the most significant step in this direction could come from current discussions within Eurostat concerning the possibility of introducing a farm register with links to various types of data. However, this is at a very early stage of discussion, with the first feasibility studies expected to be commissioned in 2005, and would take some time to implement if it happens at all. A key problem in achieving international agreement would be the differing laws in each country concerning confidentiality and use of sources, which restricts access from other agencies. But the revision of NACE will adapt classification concerning agriculture (see also recommendation 11) to make it closer to current typology and this might make member states more willing to adapt their current systems.

7. Establish procedures to use expert yield estimates as basis for estimating outputs from production areas and livestock numbers (levels 1 and 6)

Although in theory this type of production data might be expected to be recorded by inspection/certification bodies, in practice it is not done by all and therefore administrative data does not provide a reliable source. The preparation of estimates based on the crop areas and livestock numbers which are recorded would provide a possible solution. In a few countries, the capacity to make production estimates already exists, although it is not widely used. In others, the development of systems to use expert input could be considered. There was support for further development of this idea, but some were concerned about situations where such procedures resulted in serious over-estimates, with potential impacts on the market, with a survey approach recommended as an alternative. Alternatively, better regional differentiation of yield estimates would be required. Although data from certification bodies are not comprehensive, they could be used to help inform estimates made. To ensure that data are comparable on an international basis, it would be necessary to ensure that the estimates were made according to common guidelines.

8. Develop legal enforcement for institutions which are already obliged to collect data (e.g. slaughterhouses) to distinguish between conventional and organic products (levels 3, 4, 6)

There was little support for this recommendation, which was felt to have limited application, particularly at the consumer/retailer and supply balance level. The achievability would depend on the extent to which national laws already compel data to be provided or whether this is done currently on a voluntary basis. In some countries, it would not be a significant problem to implement, given an appropriate legal requirement, and there was interest in pursuing this option, but in others it was felt that it would be very difficult to implement other than possibly on a voluntary basis. While it was also considered that such additional reporting could also support certification control procedures, there were concerns that there should not be too many additional burdens imposed on conventional business that might deter them from getting involved in organic production – certification itself is often a big enough deterrent with out the added burden of extra statistical reporting.

9. Integrate available national data to strengthen EU-wide samples (e.g. FADN) where otherwise insufficient sample size or representativity would be a problem (level 2)

In principle, it should be possible to integrate additional national data into EU samples to improve organic data availability and sample size for special analyses. The key issue is the weightings that are then applied to these samples (see Recommendation 5) to ensure that organic farms are not over-represented in the total sample. Some concerns were expressed about the reliability of other data at national level, at least if all EU countries are to be included, and that it might be better to focus initially on a sub-set for which good data exists.

10. Integrate data from third country import approvals and certification body data in trade statistics (levels 3, 4, 6)

A number of countries are implementing or considering implementing these procedures in order to improve the availability of trade data, but the third country import approval system does not cover exports or intra-EU trade. Several respondents considered this recommendation to be useful and feasible to implement. However, there is a concern that if data on import quantities is published, this can be linked to the (separately) published notifications of import approvals, and that commercially sensitive information relating to specific firms will then become public. For some countries, there are also legal restrictions on sharing of data of this type between agencies which could prove problematic. Commercial sensitivity also applies to data held by certification bodies and may be a factor in discouraging these organisations from providing further data. With the establishment of OFIS by DG Agri as a means for collating import approvals across member states, some co-ordination of national initiatives might be achievable. It would be essential to ensure that anonymity and commercial confidence can be maintained in any such process.

11. Make selective adjustments to official nomenclature to achieve appropriate balance between data requirements and administrative costs (levels 3, 4, 6)

Much trade, consumption and price data beyond the farm gate depends on the economic activity and product classification systems, such as NACE, implemented by the international statistical agencies. It has been argued by many, including some national statistical agencies, and repeated in responses to this survey, that separate

identifiers for organic products could help address the significant data deficiencies at this level, particularly with respect to intra-EU trade. However, presentations from the international agencies at the Berlin seminar indicated that there was strong resistance from many member states to classification of organic farming as a separate economic activity and also to separate classification of organic products. Part of the problem lies in continuing confusion about how to define organic farming (see Recommendation 19.a). The key concern is the resource implications of making a change of this type, although some argued that this was only a significant problem during the changeover period. It was also suggested that the sheer number of products classified already undermine the quality of trade data obtained, and that the answer must be to work in a much more targeted way, for example by working directly with certification bodies, to reduce substantially the number of operators required to provide data. These concerns mean that a comprehensive, official classification of organic products is unlikely to be achieved in the foreseeable future.

The purpose of the recommendation proposed here was to make the case for a more limited classification change, focusing on a few key products, but there was a general perception that this would be difficult to achieve, at least in an official context. However, at the global level there is still some chance of change in the CPC commodity classification, which will be considered at a meeting later this year, but some preparatory work is needed. There would be a need to focus on 10 to 15 major crops where the distinction organic/non-organic could be made. Eurostat has the potential to contribute to this process as its support for any proposals would be critical for success.

Some countries have developed their own nomenclature solutions, and might also be willing to support an international agreement, but it may be that for the time being, national solutions are the best that can be achieved. Alternatively, other solutions, such as the barcode database for organic products, could be envisaged (see Recommendation 19.c below).

12. Conduct regular EU-wide survey of operators and experts (soft data) to meet specific data requirements (levels 3, 4, 6)

The idea of a survey as a way of targeting relevant operators more closely and helping overcome some of the problems with integrating organic farming in official statistics was supported by some, but others felt that there was a need to be much more specific about what data would be covered by a survey of this type before practical comments could be made. It was suggested that a survey of this type might be better conducted as a research project, as it did not fit so well in a formal statistical context, but also that surveys of this type could provide an 'easy way out' for statistical agencies not keen to address the needs of the organic sector – moving from the use of 'soft' estimates to 'hard' statistical data should be seen as a priority. Concerns were also expressed about how respondents would be selected, and how the data to be collected would be identified and prioritised. It might be better to use commercial market research companies to carry out this type of work (see Recommendation 13), as businesses may be more willing to communicate information in a business-to-business context, although it was recognised that this does not necessarily guarantee high quality data. Despite this, some positive experiences have been achieved with the use of expert surveys as a low cost option to generate data.

13. Obtain relevant retailer/consumer data directly from commercial providers working to a common European standard to ensure a) relevant variables covered and b) time series data generated (levels 5, 6)

This recommendation represents recognition of the role which commercial market research companies and stakeholder organisations are already playing in obtaining data about the organic sector. The use of commercial providers might also provide a mechanism for improving the availability of price data in the supply chain and at retail level, although they have not tended to focus on this specifically in the past. But current activities are limited by (in some cases) poor data quality and by the high costs of results which prevent wider distribution and use of information – only large companies can afford to buy the data collected. Organic farming organisations should also be considered as potential contractors / recipients of funding in this context, given the expertise and access to data and contacts that they have, and this option might be substantially less expensive than traditional market research conducted by commercial market research institutes.

Eurostat has already requested member states to start collecting more consumer data from next year and is in the process of defining the scope of this work. Although Eurostat would be unlikely to commission work from commercial organisations directly, it would be open to national authorities to do so, and Eurostat is currently reviewing the data collected by these organisations to identify options for future work. It is, however, considered important that organic data should be reported in same way as for conventional farming in order to guarantee quality.

The main advantage to using commercial market research companies is that they already have well established procedures for collecting retailer and consumer data through the use of retail/consumer panels (see also Recommendation 14) and barcode databases (see Recommendation 19.c), classifying products to ECR standards.

One respondent raised the issue that financing commercial market research organisations could potentially result in public funds being used to finance activities where the results do not end up in the public domain and preferred the process to remain with public institutions. However, there is sufficient experience of this type of activity in some countries to suggest that this need not be the case and that there could be positive benefits in terms of the willingness of businesses to release data (see Recommendation 19.e). It was also suggested that using non-public institutions to collect and report data could help reduce the risk that political pressure would be applied to put a positive spin on results, but the opposite concern, that specialist groups could deliver results that are not close to reality due to their desire to paint a positive picture, was also expressed.

Subject to appropriate contractual arrangements, market research companies (and organic farming organisations) would permit data to be placed in the public domain, although if such firms can also resell some of the data, then this might reduce the requirement for public funds. In such cases, there may need to be some agreement on delays in publication to permit commercial value to be extracted. The potential for this would very much depend on the use to be made of the data.

There needs to be a strong steering group, including stakeholders, to ensure that the approach used, the quality of data obtained and the interpretation of the results is appropriate. Some respondents argued for specialist bodies in the organic sector to be given a direct role in commissioning this research, still with the assistance of public funds. The investment of public resources could help achieve this, as well as

providing market research companies with a degree of financial security to become (or remain) involved in the field, given the long learning curve and the still somewhat limited commercial demand for organic farming data.

Of course, none of this is possible in the way suggested without the commitment of public funds (see Recommendation 18) and some reservations were expressed about the willingness of public institutions to provide funds for this purpose.

14. Integrate organic food consumption issues in household budget (HBS) or food expenditure surveys (levels 5, 6)

This is seen as a possibility to obtain further information on consumption patterns and consumer characteristics. The responses to this recommendation were mainly negative, particularly among statistical agencies, reinforcing comments made during the Berlin seminar. A key concern is that it is believed only a small proportion of consumers buy organic products, and therefore these are unlikely to be adequately represented in national HBS samples, making any data obtained of little value (although some market studies indicate that a significant proportion of consumers buy at least some organic products, so perhaps this problem is not as serious as suggested). It was argued that the sample size would need to be increased in order to get meaningful results, with significant cost implications, and there may be cheaper ways of getting results by more targeted surveys. Despite this, some countries are testing the inclusion of organic farming data (for example in the Food Expenditure Survey diaries in the UK) and interest has been expressed in other countries. A further problem identified is the lead-in time for changes to take place and the delays before data become available, particular in countries where the surveys are conducted only every five years.

For this reason some respondents considered it better to place more emphasis on recommendation 13 above, as many market research companies operate their own consumer (and retailer) panels, some on behalf of public bodies and some already including organic products. Different panels may be used to assess consumption/diet and perception issues, so that one does not bias the results of the other. One problem identified with this option is that most of the current panels do not cover out of home consumption for either conventional or organic products, although some companies, such as Taylor Nelson Sofres (TNS), do cover out of home consumption (in the UK only) using food use diaries, which also enable a better tie up between purchases and actual use.

15. Establish mechanisms to facilitate statistical agency, external expert and stakeholder communication and involvement in data collection and processing, e.g. via specialist expert groups/networks and observatories, with key individuals given responsibility to promote/develop initiatives (all levels)

This was considered to be an excellent idea by several respondents, although the resourcing and the organisation of such working groups are key problems. Some considered it so important that every effort should be made to solve the problems. During the discussions, a number of different options to enable such meetings to take place were proposed.

Firstly, various agencies (Eurostat, FADN, European Environment Agency etc.) have expert working groups which meet on a regular basis to discuss issues relevant to the development of the subject area. These consist of representatives of the relevant international organisation and the member states, as well as invited experts on

specific topics, and more use could be made of this mechanism to develop organic farming statistics. This could be supplemented between meetings by e-mail discussions or informal meetings with the responsible individuals in the international agencies.

An alternative view was put forward that such meetings were often very constrained by formalities and that the open discussion with stakeholders stimulated in the Berlin seminar would not be possible in such contexts. From this perspective, it would be necessary to organise meetings, possibly more narrowly focused on specific issues (levels), with full participation from private as well as public agencies as well as stakeholders.

A key question is how such meetings would be co-ordinated and resourced, since the EISfOM project has a limited life and a defined workplan and therefore cannot be used to sustain new initiatives. A possible model for this exists with the PACIOLI network for FADN managers (www.pacioli.org), a follow-up of an earlier concerted action but now operating using the participant's own resources, with the possibility that organic farming data issues could be raised and discussed in this framework. It was suggested that an EU secretariat as part of the EU organic action plan could provide a lead, but another option might be for such meetings to be supported by a network of the organic farming observatories that are being developed in some countries (see Recommendation 19.b). There might also be a role for the recently agreed organic farming research ERA-Net, funded under the 6th framework, to include organic farming statistics in its remit.

Another question is how to ensure wide participation representing the different interest groups, also at national level. The participation of market actors could be stimulated by linking their contribution to some form of reward (not necessarily financial) or public recognition. At the very least, such participants would need to feel that they are making a real contribution to the proceedings, and this would depend in part on who else is participating. From the perspective of commercial market research companies, participation in such meetings might be less likely, as they tend to expect the task to be well defined before they get involved – they see their role as data collectors rather than defining data collection needs. However, the steering groups for such contracts could provide a mechanism to bring interested parties together to debate approaches and data interpretation.

16. Facilitate easy access to and timely/rapid dissemination of available data (all levels)

This recommendation was considered to be very important. Some initiatives both at national and EU level were reported, but the lack of initiatives in some countries was also seen as a major problem. The organic farming organisations and observatories have a particular role to play in this context, potentially permitting access to (publishable) information on registered operators as well as statistical data. One specific suggestion (see Recommendation 19.f) is the publication of an annual European organic farming statistics yearbook, which is being proposed by some of the current EISfOM project partners. The need for financial resources to assist with stakeholder and other organisations with publication and dissemination should not be forgotten in this context. Detailed specialist information might be needed more rapidly and its value might lead to this data being directly traded, with only overview/summary information available in the public domain.

Online access to data, particularly at the EU level, was also seen as important. The developments in DG Agri (OFIS) and Eurostat to make more organic farming data available online were welcomed. It was recommended that Eurostat should provide a strong lead on this. The IRENA agri-environmental indicators, including organic farming data, will also be available on-line in the near future (<http://webpubs.eea.eu.int/content/irena/index.htm>). Despite the advantages of on-line access, material needs to continue to be available in hard copy form for businesses, particularly producers who do not have access to IT resources (see Recommendation 19.e).

It was suggested that the FADN online database should also be upgraded to permit organic farms to be selected directly (although confidentiality restrictions mean that samples of less than 15 farms cannot be released and therefore in some cases results aggregated across farm types, or no results at all, might be available for specific countries). Such an initiative should not be delayed until all EU countries have data available, as there is already significant value to be obtained from those countries that are submitting suitable data. Whether or when this can be achieved, will depend on the extent of the modifications to the IT application that would be required and on contractual and resource issues, as the FADN database (RICA-3 website) was developed by an external company. Since, however, only one variable (organic/non-organic) would need to be added, the costs are likely to be minor compared with the costs of implementing changes resulting from the new CAP arrangements.

17. Aim to establish coherent, durable system to avoid frequent changes to requirements with consequential (software, labour, data quality) costs for providers (all levels)

While there is clearly the potential for staff and expenditure costs resulting from data collection and processing system changes, as well as the frustration and demotivation that can arise, organic farming statistics are at an early stage of development and some respondents considered that it was more necessary to learn by doing, and that this would imply changes, in order for improvements to be made (indeed, there is danger that avoiding changes might be used as an excuse not to make necessary improvements). The situation is further complicated by the fact that 25 to 30 countries are involved, each with their own systems and need to update processes and software at different times. However, it may be easier with a new system such as for organic farming compared with a mature, long-established system which is less easy to adapt. A further issue raised was whether national initiatives should be delayed pending any European level initiatives, but given the uncertainties and time lags associated with co-ordinated European action, this might be inadvisable.

18. Ensure sufficient resources available for implementation of proposals, based on coherent justification of needs and benefits (all levels)

It was widely agreed that lack of resources, both staff and financial, was the most important barrier to the further development of organic farming statistics. Although in many countries there is a strong desire to progress matters, that desire is not necessarily shared by the higher levels of national ministries, particularly in the context of general efforts to cut budgets for statistical work, leading to significant frustration on the part of individuals who are attempting to introduce changes. Organic farming is not really seen as important relative to other competing demands for resources (which increasingly includes other competing approaches to

environmentally friendly production). For this to be addressed requires a strong case to be made – one which may well be easier in countries with a high proportion of organic farming and continuing growth, compared with countries where organic farming is unimportant and/or is stagnating. A key output from the EISfOM project should be a clear statement of the case which can be used to support proposals being made by individuals from within their organisations (see Recommendation 19.a below).

There is also a need to clarify the extent to which resources could be made available at European as well as national level, particularly in the context of organic action plans, several of which make reference to the development of statistics and the need for resources to be committed, but without identifying what level of resources might be involved or where they will come from. Supplementary resources from these sources, if they can be identified, could be very helpful in bringing about a shift of priorities in statistical agencies. A European Commission lead on this could well be helpful in supporting developments in countries where organic farming is still at a relatively low level of development. But within the Commission, there is also still a need to persuade the senior levels in Eurostat to make organic farming a higher priority, and this will depend on support from DG Agri as well as member states for any initiatives that might be proposed. Even if resources can be identified, it should be recognised that they will never be sufficient to support all desired activities.

19. Further recommendations

The following recommendations arose during the interviewing process and therefore have not been subjected to the comments of all interviewees, but it is considered that they merit further debate.

a. Establish and disseminate widely the case for developing organic farming statistics

Several respondents suggested it should be a key output from the EISfOM project to establish the case of developing organic farming statistics, in collaboration with Eurostat and DG Agri, and for this case to be disseminated widely within the EU and other international *fora*. This should involve more specific details on how information obtained will be used (e.g. for policy or for markets) in order to focus and better justify data collection. If companies are already collecting their own data commercially, how can public sector involvement be justified?

There is also a need to clearly define what is organic farming or what is an organic product, as differences in organic regulations and standards, particularly outside the EU where regulation 2092/91 provides a common definition (although it is not clear how far even this regulation is used as a basis for defining organic farming within Eurostat). This issue needs to be addressed particularly by the FAO to ensure that there is a consistent basis for international statistics. A process of agreement that local/regional regulations such as the US NOP or the EU Reg. 2092/91 are consistent (sufficiently equivalent) with the Codex organic definition of organic farming in the Codex Alimentarius is required.

b. Establishment of national/international observatories

Several countries have established organic farming observatories as a means of co-ordinating statistical and other information on organic farming. These private

and public sector networks provide a focus for developing initiatives and for interaction with stakeholders and are seen to make a valuable contribution which could be encouraged elsewhere.

The possibility of establishing a similar observatory at EU level, possibly co-ordinated by DG Agri, was raised in the context of preparing the EU action plan. It might be difficult for an organisation such as Eurostat to have a leading role in an initiative of this type because of the legal implications associated with extending its functions. It was suggested that it might be easier for the national observatories to agree to work together in an international consortium, and that this might also provide the basis for supporting the working groups proposed in Recommendation 15 above. Even so, the links between Eurostat and an international observatory functioning as a network of national observatories should be close, so that the observatories can contribute to the work of definition, prioritisation and harmonisation of data collection.

An informal network based on stakeholder organisations, the European Network of Organic Farming Organisations, has already taken steps in this direction with the establishment of an international fruit and vegetable price observatory, Biomonitor, led by AIAB in Italy, with EU financial support. The aim is to monitor prices around Europe so as to increase transparency and enable both consumer organisations and suppliers to get fair prices, although there is concern similar to that expressed elsewhere in this survey that greater transparency could lead to downward price pressure or indexing of conventional prices to conventional. Prices monitored include those attained by producers, distributors and consumers, with different supply chains, including supermarkets, specialist shops, weekly markets and direct marketing compared. The first international survey is scheduled for July 2004; results will be documented on the www.prezzibio.it website. Several of the organic farming organisations participating in this initiative are already operating their own price monitoring initiatives at national level. It would be desirable to see how such stakeholder-led services can be integrated with public sector initiatives.

c. Identification of organic products and development of barcode database

The identification of organic products in the market place has been highlighted several times as a key issue. (This also applies to the categorisation of products as organic, given the different logos and trade names used, as well as the identification of specialist marketing channels for organic products, including out-of-home consumption). It was suggested that a comprehensive database of barcodes for organic products could facilitate the collection and exchange of data and act as an alternative to modifying international classification systems. Barcode data analysis is also a key approach used by market research companies and this already provides the potential, for example, to report on consumer price trends for many organic products. However, barcodes are not uniquely applied to all products – many fresh products, in particular fruit and vegetables are classified on the basis of random weight barcodes, which would not allow organic products to be separately identified. In certain channels, e.g. direct marketing or out-of-home consumption, they may not be used at all. (With consumer panels, additional steps can be taken to identify whether or not a product is organic in such cases) This should not prevent the barcode database option being explored for products where it is relevant, given the potential to link

to databases of companies (retailers and their suppliers) trading these products, but this should build on a basic classification/numbering system agreed at the European level (see also recommendation 2) that can integrate products not (or inadequately) covered by barcodes.

d. Making fuller use of organic farming organisations and stakeholder expertise

Some respondents made the case for more use to be made of the organic farming organisations (and IFOAM at the international level), with their accumulated knowledge and stakeholder links, rather than trying to establish duplicate systems in official agencies.

e. Establishing an appropriate balance between data in the public domain and commercial confidentiality

The issue of commercial confidentiality and encouraging businesses to release data arose in response to several of the recommendations. Although some argued that the use of commercial market research organisations would be more likely to overcome this, the issues were more complex. One key issue was appropriate targeting of data requests - for example, supermarkets would be unlikely to supply data on how much of specific products is sold, because they would not be able to justify the effort of supplying the data, and it would be better to target suppliers directly for this information. Suppliers might be more willing to contribute data because they can use better datasets to enhance the case for their products in negotiations with buyers. (For a firm, particularly retailers, the value of releasing data might also be influenced by whether publication of that data can help maintain a positive public image relative to its competitors – this might also be used as a basis for targeting data requests.) Secondly, it may be that a trade organisation could act as an ‘honest broker’ to assemble data from members, so that confidentiality for individual firms can be maintained, but only if the data is non-attributable. However, the problem with this is that the resulting data may be reduced to the lowest common denominator, and the data seriously devalued in terms of reliability and accuracy as a consequence. Thirdly, there is an issue that the release of price and other financial benchmarking data could enable buyers to place additional pressure on suppliers to reduce prices – alternatively, the situation may be seen to be unsustainable leading to a relaxing of pressure from buyers. Overall, there needs to be confidence in the independence and neutrality of any data, and the procedures implemented need to ensure this. There is a need for all these issues to be debated more widely by market actors in order to achieve a consensus about the proper balance between release of data into the public domain and the need to maintain commercial confidentiality. There is also a need for ongoing policing of data collection, to ensure that suppliers of data are comfortable with how it is being used.

f. Development of national and international yearbooks

The possibility of publishing an annual yearbook of European organic farming statistics is being examined by the Research Institute of Organic Agriculture (FIBL) and the University of Wales, Aberystwyth, both partners in the EISfOM project. The yearbook would be produced in collaboration with other organisations and would build on the experience gathered with the organic-europe.net website and the ‘Organic Agriculture Worldwide’ reports published

each year at Biofach. It was suggested that Eurostat would be unlikely to take a lead in publishing such a yearbook itself, but that it might be willing to collaborate in supplying data.

One key problem with this and similar recommendations may be the funding of such reports. Existing reports at national and international level have problems covering expenditure on research, writing, design and print simply through sponsorship and report sales, particularly as commercial sponsors prefer to put their limited marketing budgets into supporting business to consumer rather than business to business activities. Costs can be reduced by publishing electronically, on CD-ROM or internet sites, but this also restricts access to the data for those without appropriate IT resources.

g. Make proposals realistic and avoid being too ambitious

Some respondents saw a big risk in trying to be too ambitious in developing a comprehensive statistical system from the outset – it would be better to make small steps forwards and get them right even if it takes some time to get where we would like to be, especially in a context where organic farming is low on the priority list. Too much harmonisation was also seen as a risk in the short term, because of the need for development and for participants to go through a learning curve in each country, although this could be reduced by the sharing of information between countries. Others commented that although ambitious the proposals were worthwhile and should be pursued.

4 Summary, conclusions and recommendations

The aim of this report is to present the main findings of the first part of the EISfOM project. The goal of this first phase was to develop proposals for harmonising data collection and processing between countries and for ensuring high data quality, which is essential for the decisions of producers, processors, traders and policy-makers. The results of this report are based on methodological analysis and empirical research carried out in 32 countries which are summarised in the Deliverable 2 report of the EISfOM project (Wolfert *et al.* 2004). In addition, this report sums up results of the first EISfOM European Seminar in Berlin (Recke *et al.* 2004), as well as of interviews with experts and stakeholders within the organic market, and presents conclusions and recommendations as to how the general aims can be attained.

The **main findings** of this report can be summarised as follows:

1. For the European organic sector there is a **strong need for more detailed market information** on all levels from production to consumption. This was not only stated by nearly all participants of the first European seminar in Berlin but is also highlighted as one of the main topics in the European Action Plan for Organic Food and Farming by the EU Commission (CEC 2004).
2. The **supply of data on the organic market is very different** between the 32 investigated countries. In some countries (as e.g. in Austria, Denmark, Germany and Switzerland) some data are available from different national institutions. However, these data are often not comparable with the data of other countries so that comparisons between countries and an overall European view are not possible. For countries already collecting and processing data, an *output* harmonisation strategy (see chapter 2) is the necessary solution to produce comparable data sets about the organic market.

In most of the investigated European countries (especially in Southern and Eastern European countries) there are no other data on the organic market apart from the number of organic farms, their acreage and, in some cases, their land-use for different crops and the number of animals. For these countries, an *input* harmonisation strategy is a necessary strategy, i.e. that the same data collection and processing system (DCPS) is introduced. Such a uniform DCPS can be based on a well-functioning system of a country (such as the tried and tested system developed in Denmark), or a new system needs to be developed for these countries by a group of experts, preferably under the lead of Eurostat.
3. As human and financial resources to build-up a new statistical system for organic markets are very limited, **low cost solutions** have to be found using information technology to introduce, improve and speed up all steps from data collection to data processing and further on to information dissemination. Taking into consideration that according to EC Regulation 2092/91 a lot of data on organic products (on the production and processing level, and in future on the wholesale and catering level) are already collected, most of the experts which took part in the EISfOM European seminar in Berlin and most of the interviewed experts agreed that certification bodies should be obliged to collect and process their data in a uniform way and deliver their information to a central national agency. However, the majority of experts also considered

that the certification bodies should be funded for their extra workload. A voluntary system will not lead to a harmonised system with a defined minimum standard of data quality. It was also agreed that an EU-Commission leadership for implementation is needed. As part of the ongoing development of these issues, the importance of expert and stakeholder involvement was highlighted.

4. The detailed analysis of existing data on the actor level showed that the **situation is best at the farm level**. The main problem at farm level is harmonisation of raw data. Data from national statistical institutions are not easy to compare because no input harmonisation strategy is used. At supply chain level, the main weakness is that organic data cannot be distinguished from total data. Consumer and retailer data are of high quality but are not accessible for public users as these data are mostly collected by private companies and there is almost no harmonisation between the data collections of the different private companies. At the supply balance sheet level, there is no organic data from official institutions available.
5. Most of the interviewed experts stated that, at the production level, the harmonisation and **integration of existing data collection systems** such as the Farm Structure Survey (FSS) and the data collection according to EC-Regulation 2092/91 would be of great importance to prevent duplication. In addition, problems related to the number of investigated farms and the representativeness of national Farm Accountancy Data Network (FADN) samples must be solved, if the FADN data should also be an important source of information. On the consumer and retailer level, the supply-chain level and the intra-EU-trade level, a key problem will be that, because of commercial confidentially reasons, firms will refuse to make their data public. Household Budget Surveys (HBS) or food expenditure surveys were not seen as a solution to get data on the consumer level, as costs are very high to get a representative sample for the organic market. A solution might be to use data from commercial market research companies.
6. The analysis of methodological issues shows that **quality assurance concepts** are a key issue for improving the quality of data collection, processing and dissemination. In many statistical institutions like Eurostat, quality assurance concepts are used to improve the overall quality of services they provide. Total Quality Management (TQM) and other concepts are an integral part of quality management. Furthermore, harmonisation in a quality management approach on international level will be an important point. Depending on the situation, the appropriate harmonisation approach has to be chosen. The experiences of Statistics Denmark with common operator identification numbers should be a basis for discussion in other countries to develop similar systems. Besides the results of Denmark show that low cost, simple and robust quality controls can be used to get reliable and accurate data.
7. Finally, it became clear that much effort has to be made to convince key persons in the European Commission (DG Agri and Eurostat) and also in the national institutions of the European countries that collecting data on organic markets should become high priority, making additional resources available so that organic farming statistical systems can be developed to **meet the needs of policy makers and market actors**.

The results summarised in the above list were discussed and analysed by the partners of the EISfOM project and led to the following **list of recommendations** as a basis for a new European Information System for Organic Markets:

1. To proceed on the production, processor and wholesaler level, **certification bodies should be obliged to collect and supply data** on these levels. This should be supported by the development of electronic data collection tools for quality assurance and reduced workload of data collectors and operators, as well as for the development of a harmonised system for dissemination of (electronic) reports. Inspection bodies should be funded for their extra workload. Besides, the introduction of an identification system, which gives one identification number to all market actors in every country of the EU, could help to simplify administrative problems.
2. On the **trade level**, the existing data collection on intra- and extra-EU-trade should be extended to a **differentiation between organic and conventional data**. This will provide the basis for organic market data, which market actors and policy makers require. On the retailer and consumer level, the only solution seems to be to develop data collection and processing systems parallel to the existing systems for total data.
3. For all actor levels, it is recommended that **easy and timely access to data**, especially online access, is important. This is in accordance with the new dissemination practice of Eurostat to allow free access to data.
4. An easy to implement, **low cost quality management system** should be the basis for developing a complete TQM concept with a standard above the minimum standard. This will be an important part of building-up a harmonised system in an enlarged Europe, with Eurostat as the central statistical unit providing leadership and co-ordination. The basis of a quality management concept should be the recommendations of the leadership group on quality in the European Statistical System (ESS).
5. For the development and implementation of an internationally harmonised quality management system for a European Information System for Organic Markets, **a special leadership group**, similar to the leadership group on quality in the ESS, **should be established**. This group should be in contact with the leadership group of the European Statistical System to keep up-to-date with the development and implementation of quality management systems. National and international experts on organic market data should be incorporated in this special leadership group.
6. In a comment on the first European Seminar in Berlin the Norwegian participants wrote: "Our fear is that development of different national systems and methods for data collection, on a later stage can result in difficulties in building up a common framework for reporting valid and reliable organic data for the European sector as a whole. At this stage, it is our opinion that there is a need for central co-ordination and supervisory guidelines from a European level. Such guidelines should be developed as soon as possible, before the different nations "get locked" into their own individual systems". Thus, the chance has to be taken now to develop a harmonised system in all countries.
Out of practical, financial and political reasons **two different strategies** to reach this aim should be followed at the same time. There is no question that the optimum solution would be a so-called **input-harmonised system**. Such a system defines one unique approach of data collection and processing in all

countries. While most of the countries in which there is no developed system of data collection on organic markets existing are expected to appreciate the development of such a system, there could be resistance in countries which have already made some progress in developing their own system. Because of the high costs of changing existing systems and because of the independence of the statistical institutions, an ex-post approach of **output harmonisation** will be more appropriate for those countries as a first step. In a next step both systems, input harmonisation for some countries and output harmonisation for others have to be harmonised.

7. It was further proposed that meetings and **working groups integrating national and international experts** should be established to discuss possible solutions to develop and harmonise further data collection, processing and dissemination. For all the expert groups to be built, it would be important to act quickly to prevent a situation where all countries are locked in their own system impeding harmonisation.

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Annex – EISfOM project Phase 1 (02/2003-07/2004) outputs

D1: Final report for workpackage 1:

Lux, S. (ed.) (2003) *Project initiation and guidelines for the evaluation of existing data collection and processing systems*

D2: Final report for workpackages 2 and 3:

Wolfert, S., Kramer, K. J., Richter, T., Hempfling, G., Lux, S. and Recke, G. (eds.) (2004). *Data collection and processing systems for the conventional markets and data collection and processing for organic markets*. Includes country report appendices for 32 European countries.

D3: Final report for workpackage 4 and Phase 1:

Recke, G., Hamm, U., Lampkin, N., Zanolli, R., Vitulano, S. and Olmos, S. (eds.) (2004) *Report on proposals for the development, harmonisation and quality assurance of organic data collection and processing systems (DCPS)*.

D7: Proceedings of the the first EISfOM European seminar:

Recke, G., Willer, H., Lampkin, N. and Vaughan, A. (eds.) (2004). *Development of a European Information System for Organic Markets – Improving the Scope and Quality of Statistical Data*. Proceedings of the 1st EISfOM European Seminar, held in Berlin, Germany, 26-27 April, 2004. Research Institute of Organic Agriculture (FiBL), Frick, Switzerland.

D9: EISfOM internet, membersnet discussion forum and intranet site:

www.eisfom.org

D11: First annual progress report:

Lampkin, N. and Vaughan, A. (eds.) (2004) *European Information System for Organic Markets (EISfOM) Progress Summary and Report for the Period 1st February 2003 - 31st January 2004*.