



European Statistical  
Advisory Committee

## **The Users of Statistics and their role in the European Society**

**Authors: Maurizio Vichi, Maria João Valente Rosa  
Co-author: Frances Ruane**

# The Users of Statistics and their role in the European Society

(Approved by ESAC, 20<sup>th</sup> Meeting, Brussels, 1.07.2015)

Maurizio Vichi, Maria João Valente Rosa, Frances Ruane  
European Statistical Advisory Committee (ESAC) members

## 1. Introduction: The need of a Communication Strategy

The European Statistical System Committee has identified three “*key areas*” for delivering their Vision of the European Statistics for 2020 (ESS, Vision 2014):

- *Cooperation with stakeholders of statistics, by identifying user needs and engaging a regular dialogue with users* to understand deeper their needs. A strategic alliance with public and private partners is recommended;
- *Total quality in management, organisation, and governance of European Statistics*, with products and services that are fit for purpose for different users and meet their needs.
- *Dissemination and a communication of European Statistics with a new strategy that satisfies the divergent and ever-changing user needs at both national and European level.*

The European Statistical Advisory Committee (ESAC) fully endorses the need to develop these three key areas of the ESSC Vision 2020. ESAC observes, with great appreciation and satisfaction, that the ESSC Vision places users of statistics in the central position in the ESS Vision process of the modernisation of the European Statistics.

ESAC notes that for the successful implementation of these three fundamental actions of the ESS Vision 2020, it is essential to:

- a) identify and classify different types of users according to their needs and statistic proficiency.
- b) create a strong communication strategy and new forms of interaction between users and producers to understand users’ needs;

Section 2 of this paper suggests a classification of users around which planning for improved communication might be centred, and suggests a framework for better engagement between users and producers of statistics. Section 3 sets out ESAC’s recommendation, using the frameworks in Section 2, in relation to possible next steps and actions in promoting the central role of users in the implementation of the ESS Vision.

## 2. The Classification of Users

It is clear that a good consultation and an efficient communication infrastructure have to identify the typology of users. This allows us to focus on the different sets of users and different contexts. Each class of users is likely to have a different and specific set of competences in terms of statistical literacy, interests and influence in society. These different competences have to be represented in the design of the new communication infrastructure. Furthermore, users’ expectations regarding the priority of statistical quality criteria (relevance, accuracy, timeliness, comparability etc.) have to be addressed in relation to the utilisation of statistics for policy making purposes (Radermacher, 2014).

A first example of a user classification reported in Appendix 1 (Vichi 2014) divides users into two major categories: Institutional Users and Non-Institutional Users, with each set of users

differentiated according to their interests. This distinction is *a priori* important for several reasons. Institutional users generally need data for governmental and administrative decision making. Their data needs are considerable and usually have priority in terms of demands that are met by data producers. Furthermore, data for Institutional Users typically need to allow for comparison over time and space in order to verify the impact of decisions. Non-Institutional users, for example journalists, have different needs, focused particularly on having statistics ready for communication and diffusion to wider audiences. For them it is important to be able to show new trends of interest and importance on developments in the everyday life of European citizens. It is clear that users may have several interests so they might actually belong to different classes. However, here they are assigned to classes with the criterion of the most frequent and/or prevalent interest<sup>(1)</sup>.

In territorial terms, the classification reported in Appendix 1 has, for Institutional Users, a European level of aggregation of users. This is certainly the most aggregated classification, where users are represented at European level. However, the same classification can be produced at national and regional level. These are not reported here for reasons of space. Indeed, a territorial location of users is highly recommended also because needs frequently differ according to the national or regional interests of users.

The **Institutional users** include European organisations, such as the European Parliament and Council, European Economic and Social Committee, European Central Bank, Committee of the Regions, European Statistical System Committee, European Trade Union Confederation, Confederation of European Business, European Data Protection Supervisor, and the European Association of Craft, Small and medium-sized Enterprises. As underlined by Lamel (2002) Article 1 of Regulation (EC) No 322/97 establishes a legislative framework for the systematic and programmed production of Community statistics. Hence the policies of the Community determine what European-level statistics should cover, and the EU Institutions that are the main users.

**Non-institutional** users, individuals belonging or not to institutions, include the following groups, according to their interest on statistics:

1. *Users with a general interest (e.g., economic growth)*
  - Journalists and media
  - Citizens
  - Students (by level of education, or age) and Teachers (by level of teaching education)
2. *Users with a specific subject/domain interest (e.g., health)*
  - Other decision makers
  - Policy analysts
  - Marketing analysts
  - Experts in a specific field
3. *Users with a research interest (e.g., innovation in enterprises)*
  - Scientific community – academics and researchers at universities and research institutions
  - Consultants and researchers in Governmental Agencies and private sector

---

<sup>1</sup> Technically the classification has a fuzzy logic form, that is, the users to be classified may actually have different interests and therefore belong to different classes with a certain degree of membership. For example, journalists may have specific interests in economy and finance, and also in other fields; however, they have specific needs so they are characterised into a distinctive class.

Another useful taxonomy, disaggregated at individual level, identifies users according to their frequency of statistical usage and proficiency:

- a) **Heavy users:** researcher, specialist, politically or civically-engaged citizen, and others that use statistics on a daily basis. Typically this is the person who knows where to find data and how to interpret it. Within this category we can distinguish the **Very heavy users:** researchers who would be routinely engaged in using disaggregated and micro data (AMFs and RMFs) in their research and who could contribute to the improvement of data quality by engaging with data producers
- b) **Light (occasional) users:** user who from time to time checks some figures. He/she would know the National Official Statistics and Eurostat websites but would find some difficulty in getting the data he/she needs and would not be looking for metadata.
- c) **Non-users who might be Potential-users:** all people who do not go looking for data believing it is something hard to understand and not being aware of data's relevance and richness.

Of course, as it is often the case, these typologies - institutional users /non institutional and heavy/light/non users - overlap: institutional users would be more of heavy users; non-users are potential users with a general interest. It is possible to make a schematic table combining the two classifications (Table 1):

	1. Institutional Users	2. Non institutional Users		
		a. Users with a general interest (2.a)	b. Users with specific interest (2.b)	c. Users with research interest (2.c)
Heavy users	X		X	X
Light users		X	X	
Non users		X		

Table 1: Users classification by frequency and interest

The purpose of this classification system is to assist in designing communications methods to meet the needs of very different users in an effective and efficient way. We use this classification in Section 3 where we set out ESAC's recommendations in relation to building user engagement that will allow users to be more involved at the centre of the development and modernisation of European statistics.

It is important to recall that other users different from European Institutions are only mentioned in parenthesis in Article 10 of Regulation (EC) No 322/97 (Lamel, 2002), in which the principle of impartiality is defined: "[impartiality also] implies the availability of statistics, with a minimum delay, to all users (Community institutions, governments, social and economic operators, academic circles and the public in general)"

It is also important to recall that official statistics belong to the public infrastructure of modern states and mirror the specific relationship between the state and its citizens. The interaction between users and producers with regard to the decision of how to prioritise statistical products or services needs to respect the accepted general principles of transparency and democratic control/supervision. In particular the 'what' is seen as a result of a democratic decision making process, at the end of which a choice is made ideally in favour of the 'pareto-optimal' composition of statistical tasks<sup>2</sup>.

<sup>2</sup> Pareto optimality is a state of allocation of resources in which it is impossible to make any one individual better off without making at least one individual worse off.

Priority setting in this context has an important role to play, as it has to facilitate the adaptation of the existing or planned statistical program to changes in user needs. At present, the way in which this consultation and decision making is organised relies more or less entirely on the functioning of 'official' procedures concerning the preparation of legislation and political decisions. However, modern societies ask for more; more in terms of wider consultation (more room for all active contributions from civil societies), new forms (collection of user needs through social media) and speed (quicker adaptation of the program).

### 3. ESAC Recommendations

ESAC believes that it is timely to look closely at how the diversity of users (as outlined in Section 2) can interact effectively with producers of statistics, who face real pressures in delivering on growing and diverse needs. In this section ESAC proposes several ways in which it should be possible to make progress, starting in Section 3.1 with how to engage in wider consultation with users who have specific or research interests. Section 3.2 looks at how to improve collaboration between statistical stakeholders while Section 3.3 examines how to strengthen the culture of statistics.

#### 3.1 Wider Consultation of Users (mainly for “2.b” and “2.c” users – Table 1)

The EUROSTAT website provides an indication of the number of users of statistics in Europe. On a monthly basis, the website records more than 3 million visits, over 4 million page views, some 700,000 pdf downloads and more than 1 million extractions of data. These metrics rank the site amongst the top 5 websites of the European Commission (Bautier, et al. 2014).

**ESAC Proposal 1:** ESAC recommends that ESS and Eurostat establish a *Portal for Statistics Users*, with the specific aim of identifying efficiently the ever changing needs of users. It is fundamental to realising this objective that we have information on what users were looking for but did not find. To do this requires that we describe more fully the phenomena already analysed by official statistics with indications on what is missing and that we identify priorities and level of quality required. Users in the Portal will be able to propose and give their opinions on the importance of new statistical products, for example, regarding: economic, financial and political crises, new forms of economic production with global value chains, global demographic trends, migrations, poverty and goals of sustainable development.

This Portal differs from the “user support network” currently provided by Eurostat that guarantees assistance to users who encounter difficulties in finding or understanding European Statistics.

In summary, an effective Portal will be able to :

- a) Identify the very broad community of users of statistics;
- b) Segment the users’ community into broadly homogeneous groups with similar interests (using the typology set out in Section 2);
- c) Communicate efficiently with groups of users and make them aware of the ESS activities dedicated to them;
- d) Ask questions particularly to;
  - i. identify missing information on existing datasets;
  - ii. identify new thematic needs;
  - iii. assist work program prioritisation.

The leadership and management of the Portal should be the responsibility of ESS and Eurostat. ESAC, representing users, will be particularly interested in proposing questions related to issues (i), (ii), (iii), which it believes will help it to make evidence based recommendations to the ESS.

The portal should be an infrastructure working as a social statistical network for users of statistics, to share comments on specific statistics and data, share relevant scientific papers or articles in newspapers on statistics, ask and answer to questions of users. It should include a user profile, messages that can be public or private, and a search option to help identify users interested in some topics and increase communication and collaboration among users. This should be similar to a social network for researchers (Van Noorden, 2014). This social network will be a “statistical” network in the sense that the information on the profile of users will be used to post-stratify the survey analyses and incorporate population distributions of variables (questions) into survey estimates.

The Portal should be organised as follows: users will have to register in the Portal after a *Call for Registration* campaign, launched at the end of 2015 and a promotion of the Portal at conferences at national and international level (e.g., NTTS, CESS, etc.).

The Portal will communicate with users by means of modern methods of social networking, availing of an automatic system that - on the questions submitted to users – collects and publishes on the website metrics on the questions asked and answered in real time. These metrics should help users to see the importance of responding immediately to the questions asked.

The portal will allow questions on different topics to be proposed on a continuous basis (e.g., weekly) to the users. Questions will be collected by Eurostat within the ESS and also proposed by ESAC.

In order to reduce the response burden, that is, the effort of the respondents to answer frequently to questions, users that actively participate in the Portal will be selected into small, but representative samples and these will be involved in handling one or more questions. Thus, statistical sampling methods will be used to identify many small, but representative samples of users.

The portal for Statistics Users will also play a key role in helping to design the unique knowledge infrastructure named Statistics 4.0 (Radermacher, 2015). New forms of public administration and decision making based on evidence and measurement also imply understanding the new data needs, both in terms of relevance and quality.

### **3.2 Collaboration among statistics stakeholders (mainly for “2.c” users– Table 1)**

The European Statistical System Committee has also identified other two technical key areas for the modernisation of the European Statistics

- *New Data Sources in order to base production both on traditional surveys and newer sources, including administrative data, geospatial and, where possible, big data.*
- *Efficient and Robust Statistical Processes by implementing standards for statistical production*

For these technical areas ESAC observes that a strong, systematic and specific collaboration between producers of statistics and the scientific users of statistics (methodologists and researchers) is essential and is likely to have the strong support of the key Institutions (international organisations, government administrations).

**ESAC Proposal 2:** ESAC proposes a *Memorandum of Understanding for a Strategic Collaboration between Official Statistics and Research Community*, that will guide a common approach towards the definition of a set of principles based on the Code of Practice and on the Open Science (open data, open methodology, open source), to be agreed between the Statistical Research Community and Official Statistics. This new level of collaboration would need to be translated into a concrete action plan to be proposed to and later recognised and endorsed by the policy-makers at national, European and international level.

In particular ESAC suggests the following action:

Organisation of the *Conference of European Statistics Stakeholders* (CESS 2016). The first CESS conference was held in Rome, November 23-24 2014 with the co-organisation of ESAC, Eurostat and the Federation of European Statistical Societies (FENStatS). A large number of methodologists, producers and users of statistics participated.

The *Memorandum of Understanding for a Strategic Collaboration between Official Statistics and Research Community 2020* should be prepared by ESAC, Eurostat, FENStatS and other European Institutions having statistics research interests (e.g., JRCs) in official statistics, and launched in the CESS 2016 conference, including concrete proposals of collaboration based on European projects already prioritised (for example, Big Data, Digital Communication). The memorandum should also cover topics such as: 1. impartial (open) access to the data; 2. the agreement to use “sound methodology”, and the best methodological practices (benchmarking); and 3. the cooperation with scientific community to improve methodology. Thus, the memorandum has also the intent to help to operationalise the EUROSTAT’s *Quality Assurance Framework* as regards indicators 7.2 and 7.7.

### **3.3. Promotion the culture of statistics (mainly for “2.a” and “2.b” users - Table 1)**

To foster the major modernisation process of the European Statistics, defined in the ESS Vision 2020, ESAC endorses a policy approach based on the need to create stronger engagement with official statistics by users and especially by new potential users.

The alliance between (potential) users of statistics and those who produce official statistics has to be founded on the trust that users have in official statistics and on the high perception of usability of the official statistics. Thus, there is a need for greater awareness among citizens that official statistics can enhance their capacity to decide for themselves in their daily life and provide them with a better understanding of the complex and fast evolving reality at global level. However, this awareness can only be achieved in practice if the potential statistics stakeholders and citizens in general receive a basic training in data handling (The Data Manifesto, 2015), that is, have a basic education in the types of quantitative methods necessary to read and understand statistics (information-processing skills, PIAAC OECD 2013). ESAC strongly recognises the need to create an alliance among producers, users and the scientific community (statistics stakeholders) to ensure that statistics is a *key competence* of a modern education, and becomes an important element in up-skilling courses *for lifelong learning*.

This alliance needs to be translated into a concrete action plan to be proposed to and further decided by the policy-makers at national, European and international level.

**ESAC Proposal 3:** ESAC proposes to further the development of this alliance with the *Declaration for the Statistics of a Modern Society*, prepared jointly by ESAC, Eurostat, FENStatS, and other European Institutions (e.g., Unece OECD, and ECB) to be presented on 20 October 2015, the

celebration at the second World Statistics Day 2015. The proposed declaration will show that the alliance is generally supportive of the efforts to improve statistical literacy as a major factor in innovation, productivity and competitiveness, proposing Statistics as a key competence being particularly necessary for personal and social inclusion in the knowledge society, active citizenship and employment. The declaration should also propose Statistics as a language necessary to read, interpret and manage information produced in the European digital agenda. The declaration should position European citizens and their needs for information at the centre of the activities of the European Statistics. The translation of the declaration, to guarantee a wider spread of the message, in all European languages, and the adaptation to national contexts should be encouraged.

**ESAC Proposal 4:** To be successful, and in order to obtain concrete results, this cultural campaign and the connected actions need to be systematically repeated. For example,

**Event:** Celebration of a *European Statistics Day*, starting from 2016, in the years when there is no World Statistics Day, with the specific objective of developing the awareness of European citizens (institutional and non-institutional) to the importance and relevance of official statistics.

**Materials** to be available from 2017 onwards

- **Videos**

- development of short online training videos on statistical literacy, mainly for specialist disseminators (journalists and media) but also available to the wider public, based on deceptively simple questions (e.g.: what is the meaning of a percentage?; how to read a ratio?; official data is what?....),
- development of webinars , i.e., interactive learning with large groups on line,
- development of 2 videos, to be disseminated on TV: (1) explaining that each person is part of European statistics and how are statistics produced; and (2) describing what it would mean to have a world without statistics.

- **Curricula Modules**

- Development of short online thematic modules, to be used in schools, based on European statistics, to be integrated in curricula programs (e.g.: some history facts about population trends, urbanisation, environment issues). Those modules – language and contents - should be prepared so that they can be used at different stages of the education system.

These materials should be available in each of the European Union languages. A first step should be – with the help of Eurostat – to make an inventory of videos and curricula already available at national NSIs.

**ESAC Proposal 5: Improvement in Metadata:**

The aim is to reinforce the understanding of data by the general public. To do this, ESAC suggests that EUROSTAT should complement the existing metadata on Eurostat’s Dataset with a light and shorter version, using a language understandable to the wider public and focusing on essential information. The work that is being done at Pordata Europa (<http://www.pordata.pt/en/Europe>) can be seen as an example of a more ‘user-digestible’ metadata.

*In a era of ‘data deluge’, European Union bodies have already useful resources to turn data into knowledge and knowledge into action. To go further, to keep innovating. That shall be our challenge.*

**References**

Bautier P., Laevaert, C., Le Goff B. (2014). *Tracking users for a targetted dissemination*, Paper presented at the Conference of European Statistics Stakeholders.



Blanc M., Radermacher, W., Körner T. (2001) Quality and Users - Chapter of the final report of the LEG on Quality, Statistics Sweden 2001,  
[http://www.scb.se/Grupp/Produkter\\_Tjanster/Kurser/Tidigare\\_kurser/q2001/Session\\_15.pdf](http://www.scb.se/Grupp/Produkter_Tjanster/Kurser/Tidigare_kurser/q2001/Session_15.pdf)

ESS Vision 2020, (2014). Document approved by the European Statistical System Committee.  
<http://ec.europa.eu/eurostat/documents/10186/756730/ESS-Vision-2020.pdf/8d97506b-b802-439e-9ea4-303e905f4255>

Lamel, Joachim (2002) Statistics for the Citizens of Europe. Paper presented at the 88th DGINS CONFERENCE “The future of the European Statistical System”. Palermo, September 2002.

PIAAC (2013). *The Survey of Adult Skills*,  
[http://skills.oecd.org/documents/SkillsOutlook\\_2013\\_Chapter1.pdf](http://skills.oecd.org/documents/SkillsOutlook_2013_Chapter1.pdf)

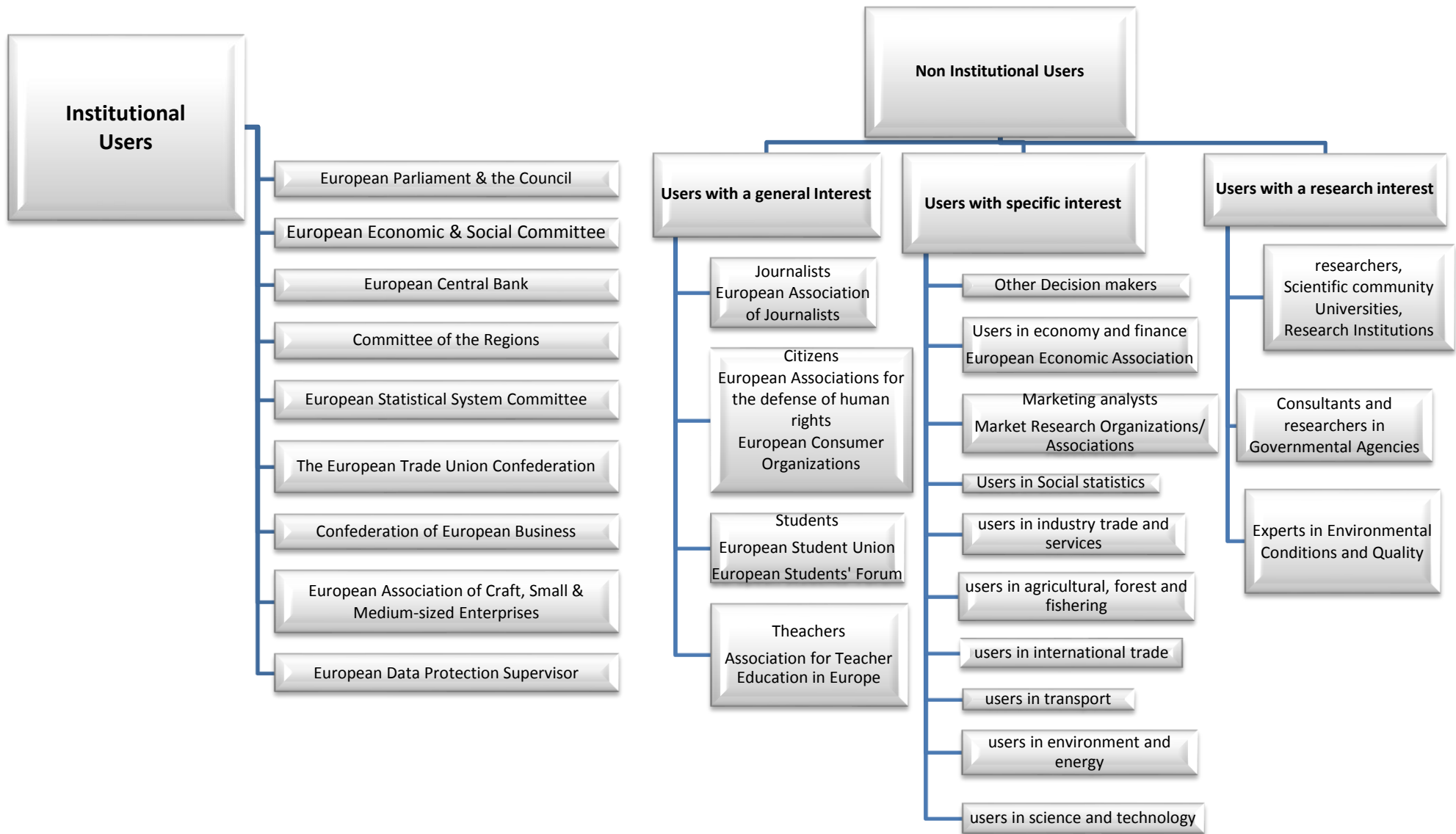
Radermacher W. (2014). Do we need natural capital accounts, and if so, which ones? Joint IEA/ISI Strategic Forum 2014 and Workshop of the High-Level Expert Group on the Measurement of Economic Performance and Social Progress on Intra-generational and Inter-generational Sustainability, Rome, September 2014  
[https://www.researchgate.net/profile/Walter\\_Radermacher/publications?sorting=newest](https://www.researchgate.net/profile/Walter_Radermacher/publications?sorting=newest)

Radermacher W. (2015). *OFFICIAL STATISTICS: UNDERSTANDING THE SOCIETY AND PREPARING DECISIONS*, paper presented at the meeting in Vienna 10 February 2015.

Royal Statistical Society (2015). *THE DATA MANIFESTO*,  
<http://www.statslife.org.uk/news/1789-society-launches-data-manifesto-for-general-election>

Van Noorden R. (2014). Online collaboration: Scientists and the social network, *Nature*.

Vichi M. (2014) . Paper presented at the Conferenc eof European Statistics Stakeholders.



(\*) Technically the classification has a fuzzy logic form, that is, users to be classified may actually have different interests and therefore belong to different classes with a certain degree of membership. For example journalists may have specific interests in economy and finance, and also in other fields, however they have specific needs so they are characterised into a distinctive class.

Table 1: Institutions representing users of statistics		
Austria	Statistics Council Technical subcommittees on particular subject matter areas	Federal Act on Federal Statistics (Federal Statistics Act 2000) no. 163/1999, as amended by BGBl. I, no. 136/2001, by BGBl. I, no. 71/2003, by BGBl. I, no. 92/2007, by BGBl. I, no. 125/2009 and by BGBl. I, no. 111/2010. Articals 44 to 47
Belgium	High council of Statistics	Royal decree of 31 March 1998 (published on 6 May 1998)
Bulgaria	National Statistical Council (NSC)	Law on Statistics (amend. SG 97/10 Dec 2010)
Cyprus	Statistical Advisory Council	Statistics Law of the Republic of Cyprus which entered into force on 4.2.2000
Czech Republic	The Czech Statistical Council	Section 6 of Act No. 89/1995 Coll. on the State Statistical Service, as amended
Denmark	Statistics Denmark	Act on Statistics Denmark
Estonia	Statistical Council	The first (and current) membership was given powers on 13.01.2011. Advisory body for the producers of statistics – Statistics Estonia and the Bank of Estonia – and for the Ministry of Finance. Established by the order of the Government of the Republic issued on the basis of the Official Statistics Act.
Finland	The Advisory Board (None of the boards or other bodies is actual national user group)	Legal status is based on Council of State Decree on Statistics Finland no. 1063, section 3, promulgated on 11 December 2002. The Advisory Board is appointed by Ministry of Finance for four year periods.
France	Cnis (Conseil National de l'Information Statistique) - National Council for Statistical Information	Act n° 51-711 of June 7th 1951 on Legal Obligation, Coordination and Confidentiality in the Field of Statistics (article 1bis), as modified by the Act n° 2008-776 of August 4th 2008 for modernisation of economy
Germany	Statistischer Beirat (Statistical Advisory Committee) European Industrial Branch federation (FIBE)	Law on Statistics for Federal Purposes (Federal Statistics Law) of 22.01.1987, modif. 03.09.2007
Greece	Council of the Hellenic Statistical System	Established in February 2011, following the provisions of Statistical Law 3832/2010, article 3.
Hungary	National Statistical Council	Act XLVI of 1993 (Act CVIII of 1999), Section 7 'The National Statistical Council'
Iceland		Act on Statistics Iceland and Official Statistics
Ireland	National Statistics Board	Statistics Act 1993
Italy	CUIS (Commissione degli utenti dell'informazione statistica) - Commission of Users of Statistical Information	Presidency decision, 16 December 2011 and April 20, 2012
Latvia		
Liechtenstein	No NUC	No NUC but a Statistical Committee (Statistics Act 2008 and former Statistics Act 1976)
Lithuania	The Statistical Council	Resolution of the Government of the Republic of Lithuania No. 573 of 18 May 2011 on the Approval of the Regulations of the Department of Statistics Lithuania , the Composition of the Statistical Council and the Regulations of the Statistical Council (Official Gazette, 2011, No. 61-2900).
Luxembourg	No NUC	CCS (Conseil supérieur de la statistique)
Malta	The Malta Statistics Authority	Act of 2000
Netherlands	No NUC	Central Commission for Statistics (CCS), established in 1892, Act of 20 November 2003
Norway	Statistics Norway	The Statistics Act from 1989
Poland	The Statistical Council CSO Scientific Statistical Council	The Statistical Council legal base is the Law on Official Statistics of 29 June 1995.
Portugal	Statistical Council (CSE)	Law No 22/2008 of 13 May - National Statistical System's Law
Romania	Consiliul statistic national (the National Statistical Council)	Law n° 226/2009 of 11.06.2009 modified by Law n° 211/2010 of 11.11.2010
Slovakia	Statistical Council; Advisory group for strategy and development of statistical information system I	Act No. 540/2001 Coll. on state statistics (in force since 1Jan.2002) Statute and Rules of procedure of the Council (internal legal measures of the SOSR)
Slovenia	Statistical Council	Statistical Act - OJ RS, No. 45/95 and 9/2001
Sweden	Swedish National Agency for Higher Education	1995 - created by decision of the University Chancellor (Director General of the Swedish National Agency for Higher Education).
Spain	High Council on Statistics	Established by the Law 12/1989 of 9th May 1989.
Switzerland	Federal Statistics Committee	Decree on the Organization of the Federal Statistics of 30.06.1993
United Kingdom	Statistics User Forum	The Statistics User Forum (SUF), 2004