

MODERNISATION
OF ESS BUSINESS
ARCHITECTURE

STATISTICAL
METHODOLOGY

DISSEMINATION
AND
COMMUNICATION

SOCIAL
STATISTICS

NEW DATA
SOURCES

European Statistical Training Programme

ENVIRONMENTAL
STATISTICS AND
ACCOUNTS

ECONOMIC
STATISTICS

INFORMATION
MODELS AND
STANDARDS
FOR DATA AND
PROCESSES
(INCLUDING
QUALITY)

2016

Foreword

The European Statistical Training Programme (ESTP) is an essential part of the ESS - Learning and Development Framework. The ESTP aims at raising the overall quality of European statistics, enhancing the qualification of statisticians in the ESS in order to promote their independence in line with the Code of Practice, enabling both theoretical and practical learning and development and encouraging the exchange of best practices, know-how, and experience.

Training courses for European Statisticians have always been an important tool for improving the quality of national and European statistics by transmitting methodological know-how and fostering the exchange of good practices among countries. A rich and up-to-date training offer will not only contribute to ensuring the quality of future European statistics, but will also help to attract and bind young and qualified staff in the long run. The current economic and financial challenges should therefore not prevent the ESS from investing in an area that is likely to be essential in terms of return in the future.

55 training courses will be on offer in 2016. New to the 2016 programme are several training courses in the field of New Data Sources and Statistical Methodology as well as Social Statistics. These courses have been developed to meet needs identified as a result of a fruitful cooperation between Eurostat and the National Statistical Institutes forming part of the European Statistical System (ESS). The training programme offer ranges from courses in Information Models and Standards for Data and Processes (including Quality), Modernisation of ESS Business Architecture to Dissemination and Communication, Environmental Statistics and Accounts, and Economic Statistics. A balanced combination of theory and practice and a variety of didactical approaches guarantee high-quality training.

I very much hope that European statisticians and national statistical offices will make the most of the courses on offer and that the knowledge gained through attending lectures and sharing experience will be highly beneficial.



Walter Radermacher
Director General

Chief Statistician of the European Union

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What you need to know

ESTP: What does it stand for?

ESTP stands for the European Statistical Training Programme. The purpose of the programme is to provide European statisticians with continuous training in new methods, techniques and best practices and integrate the application of European concepts and definitions. The ESTP is part of the European Statistical System – Learning and Development Framework (ESS-LDF)¹ managed by Eurostat.

The programme is tailored to meet the specific needs of the European Statistical System (ESS)² by taking into account the different levels of statistical knowledge and working experience. The training offer ranges from Information Models and Standards for Data and Processes (including Quality), Modernisation of ESS Business Architecture to Dissemination and Communication, Environmental Statistics and Accounts, and Economic Statistics. Through a balanced combination of theory and practice and a variety of didactical approaches, such as workshops, group discussions, lectures and exercises, the training intends to provide adequate solutions, including, in some cases, the simulation of real work situations. Courses tend to focus on harmonised European concepts and legislation as well as implementation practices at national level.

The ESTP offers statistical training that complements national training schemes and meets the challenges of comparable statistics at European and international level.

The overall programme is coordinated by Eurostat and courses are delivered either internally in Eurostat premises in Luxembourg or at other training sites in the EU and European Free Trade Association (EFTA) countries.

2016 is the first year of the ESTP III programme (2015-2019) which is based on an offer more adapted to the new challenges of the ESS. The ESTP III comprises alternative didactical approaches and new subject areas. The aim is to respond to new requirements and developments in an appropriate way.

Who may apply?

Officials and employees of National Statistical Institutes or corresponding Competent National Authorities (CNA) of the EU Member States, EFTA countries, Eurostat and, candidate countries and potential candidates are the core target group for this programme.

Occasionally, on an individual basis, applicants from other administrations, international organisations and statistical offices of non-European countries may be admitted.

What are the general conditions for admission?

The nature of the ESTP and its target group determine the admission of candidates to individual courses.

As all ESTP courses are delivered in English, applicants should have a good command of the English language. They should be prepared to give presentations and actively participate in discussions.

¹ The ESS-LDF is striving to improve the quality of European statistics by developing a series of learning and development tools (e-learning, portal, competence profiles, impact of learning assessment, etc.).

² The European Statistical System (ESS) comprises Eurostat and the statistical offices, ministries, agencies and central banks that collect official statistics in EU Member States and EFTA countries. It was legally recognised as such by the Statistical Law (Regulation (EC) No 223/2009 on European Statistics).

A selection procedure is carried out for all courses where more applications are received than places available. This selection is done on the basis of the information provided in the prerequisite application form. The quality of the information provided in the application form plays therefore a very important role. Also, the correspondence between the applicant's profile and the target group indicated in the course description, as well as the relevance of the training for the applicant's job will be taken into consideration. Finally, a homogeneous geographical distribution of the course participants is assured where possible.

Candidates will usually receive a reply to their application within two weeks after the deadline has expired and at least six weeks before the course takes place.

How to apply?

Interested candidates are requested to send their completed application form to the ESTP contact point in their NSI before the indicated deadline (see Overview of ESTP courses). The application form can be downloaded from the ESS ESTP website <http://ec.europa.eu/eurostat/web/ess/about-us/estp>.

Applications received after the deadline may be refused by the course organisers.

What are the costs involved?

Participation in all ESTP training courses is free of charge since the programme is financed and supported by the European Commission (Eurostat) and the European Free Trade Association (EFTA).

Therefore, no registration or other fees are charged to participants. Travel and daily allowances are to be paid for by the participant's home organisation.

Candidates are strongly advised not to make any arrangements for travel and accommodation until written confirmation has been received. No costs incurred in relation with the participation or non-participation in the courses will be covered by the European Commission.

Whom to contact?

For all further questions concerning the programme and the registration procedure, please refer to the contact point in the National Statistical Institute of your home country.

The annual course programme

The selection of courses included in the annual core programme is based on the training needs expressed by Eurostat and the National Statistical Institutes forming part of the European Statistical System, as well as on an assessment of courses delivered in the past.

The annual programme comprises a core of general and specialised courses in important fields. Newly emerging needs from key users are also addressed by the programme. All national contact points will be informed in case of a change of date or venue of an ESTP course.

For more detailed information, consult the ESS ESTP website.

Overview of 2016 ESTP courses

DATE	COURSE TITLE	VENUE	COURSE ORGANISER	APPLICATION DEADLINE
25 – 27 January 2016 3 days	Relations with the media – Introductory course	Luxembourg, Luxembourg	SOGETI	14.12.2015
26 – 28 January 2016 3 days	Introduction to Seasonal Adjustment and JDEMETRA+	Eurostat, Luxembourg	EUROSTAT	16.12.2015
24 – 26 February 2016 3 days	Time Series Econometrics	Valencia, Spain	DEVSTAT	24.12.2016
29 February - 2 March 2016 2.5 days	Introduction to big data and its tools	Rome, Italy	EXPERTISE FRANCE	04.01.2016
29 February - 4 March 2016 4.5 days	Desk Profiling – Hands On	Eurostat, Luxembourg	EUROSTAT	08.01.2016
2 - 4 March 2016 3 days	Behavioural Economics	Valencia, Spain	DEVSTAT	06.01.2016
14 - 15 March 2016 2 days	SDMX standard for data and metadata exchange, basics course	Eurostat, Luxembourg	EUROSTAT	18.01.2016
16 - 18 March 2016 3 days	SDMX workshop: possibilities for national implementation and National Accounts case study	Eurostat, Luxembourg	EUROSTAT	20.01.2016
4 - 8 April 2016 5 days	Combining data from different sources and modes	Oslo, Norway	EFTA	05.02.2016

DATE	COURSE TITLE	VENUE	COURSE ORGANISER	APPLICATION DEADLINE
5 - 8 April 2016 3.5 days	Statistical Disclosure Control	Eurostat, Luxembourg	EUROSTAT	09.02.2016
5 - 7 April 2016 3 days	The Use of R in Official Statistics: model based estimates	Vienna, Austria	DEVSTAT	09.02.2016
11 - 14 April 2016 4 days	Compiling cyclical composite indicators	Eurostat, Luxembourg	EUROSTAT	15.02.2016
11 - 14 April 2016 4 days	National Accounts - Introductory course	Luxembourg, Luxembourg	SOGETI	15.02.2016
12 - 15 April 2016 3.5 days	The European Statistical System (ESS) – active participation in ESS meetings	Madrid, Spain	ICON- INSTITUT Public Sector GmbH	16.02.2016
13 - 15 April 2016 3 days	Introduction to Social Statistics	Ljubljana, Slovenia	EXPERTISE FRANCE	17.02.2016
18 - 20 April 2016 3 days	Water Statistics and Accounts	Vienna, Austria	SOGETI	22.02.2016
19 - 22 April 2016 3.5 days	Information standards and technologies for describing, exchanging and disseminating data and metadata	Rome, Italy	ICON- INSTITUT Public Sector GmbH	23.02.2016
10 - 13 May 2016 3.5 days	Quality management in statistical agencies – Introductory course	Helsinki, Finland	ICON- INSTITUT Public Sector GmbH	15.03.2016
11 - 12 May 2016 2 days	Balance of Payments - Introductory course	Luxembourg, Luxembourg	SOGETI	16.03.2016
11 - 13 May 2016 3 days	SDMX standard for data and metadata exchange, IT tools course	Eurostat, Luxembourg	EUROSTAT	16.03.2016

DATE	COURSE TITLE	VENUE	COURSE ORGANISER	APPLICATION DEADLINE
12 – 13 May 2016 2 days	Physical Energy Flow Accounts (PEFA)	Luxembourg, Luxembourg	SOGETI	17.03.2016
23 – 24 May 2016 2 days	Environmental Goods and Services Sector Accounts (EGSS)	Vienna, Austria	SOGETI	29.03.2016
25 – 27 May 2016 3 days	Environmental Protection Expenditure Accounts	Vienna, Austria	SOGETI	30.03.2016
25 – 27 May 2016 3 days	Economic and social classifications: methodology and application – Introductory course	Paris (Malakoff), France	ICON- INSTITUT Public Sector GmbH	30.03.2016
30 May – 3 June 2016 5 days	ESA 2010 National Accounts	Eurostat, Luxembourg	EUROSTAT	04.04.2016
1 – 3 June 2016 3 days	Spatial information and maps in statistics	Brussels, Belgium	SOGETI	06.04.2016
6 – 7 June 2016 2 days	COMEXT – Information system for International Trade in Goods Statistics	Eurostat, Luxembourg	EUROSTAT	11.04.2016
6 – 10 June 2016 5 days	Government finance statistics and excessive deficit procedure - Part I	Riga, Latvia	CSB of Latvia and EUROSTAT	11.04.2016
8 – 10 June 2016 3 days	Can a Statistician become a Data Scientist?	Valencia, Spain	DEVSTAT	13.04.2016
21 – 24 June 2016 4 days	Hands-on immersion on Big Data tools	Rome, Italy	EXPERTISE FRANCE	26.04.2016
29 – 30 June 2016 2 days	Compiling official statistics on crime and criminal justice	Eurostat, Luxembourg	EUROSTAT	29.04.2016

DATE	COURSE TITLE	VENUE	COURSE ORGANISER	APPLICATION DEADLINE
11 – 15 July 2016 5 days	Government finance statistics and excessive deficit procedure - Part I	Eurostat, Luxembourg	EUROSTAT	17.05.2016
6 – 7 September 2016 2 days	The EuroGroups Register (EGR)	Eurostat, Luxembourg	EUROSTAT	12.07.2016
12 – 15 September 2016 4 days	Big data sources - Web, Social media and text analytics	The Hague, Netherlands	EXPERTISE FRANCE	18.07.2016
13-15 September 2016 3 days	JDEMETRA+ for Advanced Users and Hobby Developers	Eurostat, Luxembourg	EUROSTAT	19.07.2016
15 – 16 September 2016 2 days	Cognitive interviewing	Vienna, Austria	DEVSTAT	21.07.2016
19 – 21 September 2016 3 days	Statistical matching and record linkage	Valencia, Spain	DEVSTAT	01.08.2016
3 – 12 October 2016 8 days	National Accounts in Practice – Advanced course	Luxembourg, Luxembourg	SOGETI	08.08.2016
4 – 7 October 2016 4 days	Rapid Estimates	Eurostat, Luxembourg	EUROSTAT	09.08.2016
11 – 14 October 2016 4 days	Enterprise Architecture and the different EA layers, application to the ESS context	Rome, Italy	ICON- INSTITUT Public Sector GmbH	16.08.2016
13 – 14 October 2016 2 days	Output Checking	Eurostat Luxembourg	EUROSTAT	18.08.2016

DATE	COURSE TITLE	VENUE	COURSE ORGANISER	APPLICATION DEADLINE
17 – 19 October 2016 3 days	SDMX standard for data and metadata exchange, IT tools course	Eurostat, Luxembourg	EUROSTAT	22.08.2016
19 – 21 October 2016 3 days	Dissemination and communication – Introductory course	Madrid, Spain	EXPERTISE FRANCE	24.08.2016
24 – 27 October 2016 4 days	Survey methodology and sampling techniques	Neuchâtel, Switzerland	EFTA	01.07.2016
7 – 9 November 2016 3 days	Balance of Payments - Advanced course	Luxembourg, Luxembourg	SOGETI	12.09.2016
7 – 10 November 2016 4 days	Advanced big data sources - Mobile phone and other sensors	Heerlen, Netherlands	EXPERTISE FRANCE	12.09.2016
7 – 11 November 2016 5 days	Government finance statistics and excessive deficit procedure - Part II	Riga, Latvia	CSB of Latvia and EUROSTAT	12.09.2016
15 – 17 November 2016 3 days	Annual to Quarterly to Monthly data	Eurostat, Luxembourg	EUROSTAT	20.09.2016
16 – 18 November 2016 3 days	Development and use of indicator systems for evidence-based decision making	Neuchâtel, Switzerland	EFTA and EUROSTAT	16.09.2016
21 – 24 November 2016 4 days	Activity and product classifications: description, use and implementation – Advanced course	Budapest, Hungary	ICON- INSTITUT Public Sector GmbH	26.09.2016

DATE	COURSE TITLE	VENUE	COURSE ORGANISER	APPLICATION DEADLINE
24 – 25 November 2016 2 days	Advanced course on Quality reporting	Eurostat, Luxembourg	EUROSTAT	29.09.2016
28 - 30 November 2016 3 days	Common Statistical Production Architecture	Rome, Italy	ICON- INSTITUT Public Sector GmbH	03.10.2016
1 - 2 December 2016 2 days	Macroeconomic Imbalances Procedure (MIP)	Eurostat, Luxembourg	EUROSTAT	06.10.2016
5 - 9 December 2016 5 days	Government finance statistics and excessive deficit procedure - Part II	Eurostat, Luxembourg	EUROSTAT	10.10.2016
6 - 7 December 2016 2 days	Waste Statistics	Vienna, Austria	SOGETI	11.10.2016

RELATIONS WITH THE MEDIA – INTRODUCTORY COURSE

COURSE LEADER	Isabelle LÉONARD
TARGET GROUP	All staff working in direct contact with the media, especially those with limited experience in media relations. Other staff likely to be required to communicate with the media. Staff members that have worked with dissemination or can influence the development of dissemination policy.
ENTRY QUALIFICATIONS	<ul style="list-style-type: none"> ▪ Sound command of English. Participants should be able to make short interventions and to participate actively in discussions ▪ Basic familiarity with media relations. Employees able to influence the development of dissemination policy.
OBJECTIVE(S)	<ul style="list-style-type: none"> ▪ The course will introduce the theoretical and practical knowledge of media relations approaches. ▪ The main focus will be on writing for and talking to the media and Organising briefings and interviews, as well as discussions on dissemination tools.
CONTENTS	<p>Courses will focus on one topic or cover several of the following:</p> <ul style="list-style-type: none"> ▪ Understanding the media and their needs ▪ Writing for the media ▪ Talking to the media ▪ Organising briefings and interviews ▪ Dissemination tools to reach the media ▪ Communicating in a crisis ▪ Other related topics
EXPECTED OUTCOME	Participants will gain basic understanding of the relations with the media and be able to steer and further develop the dissemination policy. There will be a mixture of presentation and practical work for participants to reinforce their learning.
TRAINING METHODS	Combination of theoretical lessons, practical training with the computer, and discussion of practical problems.
REQUIRED READING	Copies of the presentation materials

SUGGESTED READING	None
REQUIRED PREPARATION	None
TRAINER(S)/ LECTURER(S)	Isabelle LÉONARD (independent expert)

PRACTICAL INFORMATION				
WHEN	DURATION	WHERE	ORGANISER	APPLICATION VIA NATIONAL CONTACT POINT
25 - 27.01.2016	3 days	Luxembourg, Luxembourg	SOGETI	Deadline: 14.12.2015

INTRODUCTION TO SEASONAL ADJUSTMENT AND JDEMETRA+

COURSE LEADER	Dario BUONO
TARGET GROUP	Staff of national statistical institutes (including newcomers) involved in the production process who want to acquire a good understanding of Seasonal Adjustment (SA) methods and practices
ENTRY QUALIFICATIONS	<ul style="list-style-type: none"> ▪ Sound command of English. Participants should be able to make short interventions and to actively participate in discussions; ▪ Sound knowledge of Time series analysis would be an advantage; ▪ Familiarity with the seasonal adjustment methods and software is not required.
OBJECTIVE(S)	<ul style="list-style-type: none"> ▪ To provide the participants with a basic understanding of the main concepts of seasonal and calendar adjustment, trend cycle, irregular components and related time-series issues; ▪ To introduce the participants to the use of software JDEMETRA+.
CONTENTS	<ul style="list-style-type: none"> ▪ Brief review of time series analysis, and ARIMA modelling; ▪ Seasonality and its determinants; ▪ Calendar effect and its components; ▪ Why seasonal and calendar adjustment? ▪ Identification of type of outliers; ▪ Use of additive and multiplicative decomposition; ▪ Interactive introductory sessions with JDEMETRA+; ▪ Revised ESS guidelines on seasonal adjustment.
EXPECTED OUTCOME	Trained people will be able to identify outliers, decompose time series, adjust series for the seasonal and calendar effects. They will be able to recognise series which need calendar and/or seasonal adjustment and carry out the related procedures by using the latest version of JDEMETRA+ tool.
TRAINING METHODS	<ul style="list-style-type: none"> ▪ Presentations and lectures ▪ Case studies on real data sets (also provided by the participants) ▪ "Show and tell" by the participants
REQUIRED READING	Participants should be familiar with the content of the website http://www.cros-portal.eu/content/seasonal-adjustment
SUGGESTED READING	Revised ESS guidelines on seasonal adjustment.

REQUIRED PREPARATION	Participants are requested to write a short summary of their activities in their organisation. They are requested to express the reasons and motivation for applying to this training activity and to describe the practices, problems and experiences they face in the field of the course. Participants can also bring a set of time-series related to their interest, should they wish to do so.
TRAINER(S)/ LECTURER(S)	Dario BUONO (EUROSTAT) and Veronique ELTER (STATEC).

PRACTICAL INFORMATION				
WHEN	DURATION	WHERE	ORGANISER	APPLICATION VIA NATIONAL CONTACT POINT
26 - 28.01.2016	3 days	Eurostat, Luxembourg	EUROSTAT	Deadline: 16.12.2015

TIME SERIES ECONOMETRICS	
COURSE LEADER	Alain HECQ
TARGET GROUP	Statistical production units of NSIs.
ENTRY QUALIFICATIONS	<ul style="list-style-type: none"> ▪ Sound command of English. Participants should be able to make short interventions and to actively participate in discussions; ▪ Intermediate knowledge of econometrics, statistical and quantitative methods (e.g. multivariate regression, t-tests, R², inference); ▪ Basic knowledge of economic mechanisms (money demand, consumption function); ▪ Basic knowledge of economic system (national accounts, data revisions).
OBJECTIVE(S)	The goal of the course is to provide to participants with a basic knowledge of modern time series econometrics both for univariate and multivariate time series. So doing the participants would be able to understand most applied econometric papers published in the literature and hence to conduct in an adequate and accurate way their own research.
CONTENTS	<ul style="list-style-type: none"> ▪ Introduction to time series analysis. ▪ Forecasting with time series models: types of forecasting. Uncertainty and confidence in forecasting; ▪ Univariate time series modelling: Introduction to non-seasonal ARIMA, ARCH and GRACH models; ▪ Multivariate time series modelling: Introduction to cointegration theory and VAR and VECM models; ▪ Other developments in time series forecasting: nowcasting, combination of forecasting, etc. ▪ Brief introduction to state space modelling.
EXPECTED OUTCOME	After this training activity, participants will develop a basic knowledge on modern time-series forecasting techniques (both univariate and multivariate) and how these approaches are currently applied in the ESS. This knowledge will be completed with practical skills to carried out and report basic analysis using these modern forecasting methods.
TRAINING METHODS	<ul style="list-style-type: none"> ▪ Presentations and lectures; ▪ Practical exercises; ▪ Case studies of application of these methods in the ESS.
REQUIRED READING	None

SUGGESTED READING	<ul style="list-style-type: none"> ▪ Very basic: Diebold, F. (2007), Elements of Forecasting; Thomson. Freely available at http://www.ssc.upenn.edu/~fdiebold/Teaching221/BookPhotocopy.pdf ▪ A bit more: Diebold, F. (2015), Forecasting, Freely available at http://www.ssc.upenn.edu/~fdiebold/Teaching221/Forecasting.pdf ▪ Econometrics: Diebold, F. (2015), Econometrics, Freely available at http://www.ssc.upenn.edu/~fdiebold/Teaching104/Econometrics.pdf ▪ Time series: Franses, Ph., van Dijk, D. and A. Opschoor (2014), Time Series Models for Business and Economic Forecasting, Cambridge university press. ▪ Wooldridge, J. (2013), Introductory econometrics: A modern approach, South-Western.
REQUIRED PREPARATION	None
TRAINER(S)/ LECTURER(S)	Alain HECQ (School of Business and Economics, Maastricht University) and Pedro REVILLA (National Statistical Institute of Spain).

PRACTICAL INFORMATION				
WHEN	DURATION	WHERE	ORGANISER	APPLICATION VIA NATIONAL CONTACT POINT
24 – 26.02.2016	3 days	Valencia, Spain	DEVSTAT	Deadline: 24.12.2015

DESK PROFILING – HANDS-ON	
COURSE LEADER	Levente SZEKELY
TARGET GROUP	NSI statisticians performing profiling of multinational groups and NSI statisticians planning to move into profiling.
ENTRY QUALIFICATIONS	<ul style="list-style-type: none"> ▪ Sound command of English. Participants should be able to follow presentations closely, to follow instructions in exercises, to make short interventions and to actively participate in discussions. ▪ At least a basic understanding of the profiling methodology, statistical units and business registers.
OBJECTIVE(S)	<p>To provide the participants with an improved skillset on tackling practical issues related to profiling multinational groups, including:</p> <ul style="list-style-type: none"> ▪ a better understanding of the statistical units and the technical concepts derived from them; ▪ a better understanding of the profiling methodology; ▪ searching and using information from administrative data sources for profiling purposes and related data confidentiality aspects; ▪ understanding business accounting concepts and in particular those referring to the International Financial Reporting Standards (IFRS) that are useful for profiling; ▪ applying said accounting concepts to find information in annual reports that are useful for profiling; ▪ how to use the Interactive Profiling Tool (IPT), as developed by Eurostat.
CONTENTS	<p>The training course is aimed at statisticians who are performing profiling of multinational groups or are planning to do so in the near future. The course starts with theoretical concepts related to statistical units, the profiling methodology and accounting (including IFRS) and continues with practical examples and exercises.</p> <p>The course will assume at least basic knowledge in statistical units, business registers and the profiling methodology. (Please refer to the section on “Suggested reading”.)</p> <p>The broad contents includes:</p> <ul style="list-style-type: none"> ▪ further clarifications on concepts related to and derived from the statistical units and highlighting some practical aspects related to the statistical units and the profiling methodology; ▪ examples on how to obtain data from administrative data sources, useful for profiling; ▪ concepts and rules of business accounting; ▪ ways to “read” annual financial statements and in particular those

	<p>which contain consolidated information on the multinational groups, in order to gather useful information for profiling purposes;</p> <ul style="list-style-type: none"> ▪ practical examples of performing desk (light) profiling for multinational groups active in different industries; ▪ overview of the features of the IPT.
EXPECTED OUTCOME	At the end of the course, participants should be able to have a better understanding of the many concepts underpinning their future profiling work, as well as in applying those concepts and should have gathered further skills which improves the effectiveness and efficiency of their profiling work.
TRAINING METHODS	<ul style="list-style-type: none"> ▪ Presentations and lectures ▪ Exchange of views/experiences on national practices/discussion ▪ Exercises
REQUIRED READING	Participants are expected to familiarize themselves with material sent out prior to the start of the course.
SUGGESTED READING	Participants are expected to familiarize themselves with material sent out prior to the start of the course.
REQUIRED PREPARATION	Bring laptop or tablet which can connect to the internet through WiFi. (user/password to be given during the training course).
TRAINER(S)/ LECTURER(S)	Eurostat staff.

PRACTICAL INFORMATION				
WHEN	DURATION	WHERE	ORGANISER	APPLICATION VIA NATIONAL CONTACT POINT
29.02 - 04.03.2016	4.5 days	Eurostat, Luxembourg	EUROSTAT	Deadline: 08.01.2016

INTRODUCTION TO BIG DATA AND ITS TOOLS	
COURSE LEADER	Carlo VACCARI
TARGET GROUP	Official statisticians (including managers) who will start to work on big data and with no specific knowledge on this subject; Official statisticians (including managers) who, without going to work on big data sources, need basic knowledge on big data.
ENTRY QUALIFICATIONS	<ul style="list-style-type: none"> ▪ Sound command of English. Participants should be able to make short interventions and to actively participate in discussions.
OBJECTIVE(S)	<p>Main objectives of the course are:</p> <ul style="list-style-type: none"> ▪ Introducing the participants to the concepts of Big Data, the associated challenges and opportunities, and the statistical methods and IT tools needed to make their use effective in official statistics; ▪ Analyse in detail statistical methods and IT tools available for Big Data usage in Official Statistics.
CONTENTS	<ul style="list-style-type: none"> ▪ Big data and the several digital traces people leave behind them; ▪ Overview of big data sources: sensor and the IoT, process-mediated data; human-sourced data; ▪ The implication of big data for official statistics; ▪ Big Data initiatives in official statistics at international level; ▪ Privacy and personal data protection; ▪ Examples of the use of big data for producing statistics (relevant for official statistics); ▪ Methodological challenges of big data for official statistics, e.g. over-fitting, multiple inference, and model based inference; ▪ Visualisation and its importance in the analysis of big data; ▪ Data science and its role in big data analytics; ▪ Overview of big data tools, e.g. distributed computing.
EXPECTED OUTCOME	<p>At the end of the course, participants will be able to:</p> <ul style="list-style-type: none"> ▪ Have a good understanding of Big Data technologies and methods to process Big Data for Official Statistics purposes. ▪ Have a complete overview of the current state of the art of Big Data in Official Statistics with respect to international activities and concrete projects.
TRAINING METHODS	<ul style="list-style-type: none"> ▪ Presentations and lectures ▪ Exchange of views/experiences on national practices, if any ▪ Exercises

REQUIRED READING	None
SUGGESTED READING	<ul style="list-style-type: none"> ▪ Scheveningen Memorandum on Big Data, DGINS, 25-26 Sep 2013, The Hague http://www.cros-portal.eu/content/scheveningen-memorandum ▪ UNECE: Big Data in Official Statistics http://www1.unece.org/stat/platform/display/bigdata/Big+Data+in+Official+Statistics ▪ PhD Thesis "Big Data in Official Statistics" (2014) http://www.academia.edu/7571682/PhD_Thesis_on_Big_Data_in_Official_Statistics ▪ Monica Scannapieco, Antonino Virgillito, Diego Zardetto (2013): Placing Big Data in Official Statistics: A Big Challenge? http://www.cros-portal.eu/sites/default/files//NTTS2013fullPaper_214.pdf ▪ D. Florescu, M. Karlberg, F. Reis, P. Rey Del Castillo, M. Skaliotis, A. Wirthmann (2014): Will 'big data' transform official statistics? http://www.q2014.at/fileadmin/user_upload/ESTAT-Q2014-BigDataOS-v1a.pdf ▪ The White House (2014): Big Data: Seizing Opportunities, Preserving Values: http://www.whitehouse.gov/sites/default/files/docs/big_data_privacy_report_may_1_2014.pdf ▪ Peter Struijs, Barteld Braaksma and Piet JH Daas (2014): Official Statistics and Big Data: http://bds.sagepub.com/content/1/1/2053951714538417 ▪ Analysis of methodologies for using the Internet for the collection of information society and other statistics, Eurostat contract(2014): http://www.cros-portal.eu/content/analysis-methodologies-using-internet-collection-information-society-and-other-statistics-1 ▪ Feasibility Study on the Use of Mobile Positioning Data for Tourism Statistics, Eurostat contract(2014): http://ec.europa.eu/eurostat/web/tourism/methodology/projects-and-studies
REQUIRED PREPARATION	None
TRAINER(S)/ LECTURER(S)	Monica SCANNAPIECO (ISTAT), S. DE FRANCISCI (ISTAT), Antonino VIRGILLITO (ISTAT), Diego ZARDETTO (ISTAT), Piet DAAS (Statistics Netherlands).

PRACTICAL INFORMATION				
WHEN	DURATION	WHERE	ORGANISER	APPLICATION VIA NATIONAL CONTACT POINT
29.02 – 02.03.2016	2.5 days	Rome, Italy	Expertise France	Deadline: 04.01.2016

BEHAVIOURAL ECONOMICS	
COURSE LEADER	José VILA
TARGET GROUP	The course is targeted to any NSIs staff, in different kinds of positions, wishing to understand the objectives, certain tools and the role of behavioural economics and statistics in economic society, with an intermediate knowledge of economic theory (microeconomics).
ENTRY QUALIFICATIONS	<ul style="list-style-type: none"> ▪ Sound command of English. Participants should be able to make short interventions and to actively participate in discussions ▪ Intermediate level of microeconomics: expected utility theory and markets. ▪ Basic knowledge of game theory: Nash equilibrium ▪ Familiar with the European Statistical System
OBJECTIVE(S)	The goal of this activity is to provide the participants with (1) the basic knowledge on behavioural economics; (2) the understanding of the role of behavioural insights in European policy-making and the European Statistical System and (3) the skills to apply BE good practices to enhance data collection and dissemination in their NIS or other institutions.
CONTENTS	<ul style="list-style-type: none"> ▪ From Conventional Economics to Behavioural Economics. ▪ Behavioural Economics for individual decision-making. ▪ Behavioural Economics for strategic decision-making. ▪ Experiments in Behavioural Economics. ▪ Behavioural Economics and policy-making: the European approach ▪ Application of Behavioural Economics in an NSI: data collection and dissemination.
EXPECTED OUTCOME	After the course, participants will be familiar with the behavioural economics approach to decision-making, and specifically the European approach for its application in policy-making. Participants will be provided with the skills and the tools to apply behavioural economics in their daily work to enhance the cooperation of different stakeholders (i. e. respondents) and improve the effectiveness of dissemination.
TRAINING METHODS	<ul style="list-style-type: none"> ▪ Presentations and lectures ▪ Participation and analysis of experimental sessions ▪ Case studies on behavioural applications
REQUIRED READING	<ul style="list-style-type: none"> ▪ Van Bavel, R., Herrmann, B., Esposito, G. & Proestakis, A. (2013). Applying Behavioural Sciences to EU Policy-making. JRC scientific and policy reports. ▪ World Bank. (2015). World Development Report 2015: Mind,

	Society and Behaviour. Washington, D.C.: World Bank.
SUGGESTED READING	<ul style="list-style-type: none"> ▪ Kahneman, D. (2011). Thinking fast and slow. London: Penguin Books. ▪ Thaler, R., & Sunstein, C. (2008). Nudge: improving decisions about health, wealth, and happiness. New Haven: Yale University Press.
REQUIRED PREPARATION	None
TRAINER(S)/ LECTURER(S)	Jose Vila (DevStat - LINEEX) and Carlo Capuano (University of Naples Federico II).

PRACTICAL INFORMATION				
WHEN	DURATION	WHERE	ORGANISER	APPLICATION VIA NATIONAL CONTACT POINT
02 - 04.03.2016	3 days	Valencia, Spain	DEVSTAT	Deadline: 06.01.2016

SDMX STANDARD FOR DATA AND METADATA EXCHANGE, BASICS COURSE

COURSE LEADER	Edward COOK
TARGET GROUP	Statisticians and IT professionals working in a statistical domain without SDMX knowledge.
ENTRY QUALIFICATIONS	<ul style="list-style-type: none"> ▪ A sound command of English is required; participants should be able to follow presentations closely, to follow instructions in exercises, to make short interventions and to actively participate in discussions ▪ Experience in one or more statistical subject matter areas for data or metadata collection, reporting, exchange, or dissemination is required.
OBJECTIVE(S)	<p>To enable participants to understand the scope, architecture, and features of SDMX, in particular those features that support more efficient processes for reporting, exchanging and disseminating statistical data and metadata, so that they can:</p> <ul style="list-style-type: none"> ▪ Assess how to take advantage of SDMX in their day-to-day work; ▪ Understand what a DSD and MSD are and how they reflect requirements for data and metadata exchange; ▪ Work together (statisticians and IT specialists) in the organization and planning for SDMX in their domain; ▪ Understand the relationship between SDMX and the process of the production of statistics. Understand the mapping between business process activities and the implementation of SDMX; ▪ Understand the different roles of the organizations in the collection and production of statistics and the relationship with SDMX, and ▪ Understand (in broad terms) the different tools that Eurostat can provide.
CONTENTS	<p>The training session is aimed at people who are or will be in charge of managing SDMX-based transmission and dissemination of data and metadata, possibly using existing tools. For this reason, the course is also recommended as an introduction to SDMX for people who intend to follow the advanced course "SDMX for IT developers" at a later stage.</p> <p>It is important to understand that the course will start with the theory of SDMX and then moves into practical exercises.</p> <p>The broad contents are:</p> <ul style="list-style-type: none"> ▪ The origin and purpose of SDMX: what problems is it trying to solve? What opportunities is it trying to take advantage of?

	<p>What is the historical background and context of SDMX?;</p> <ul style="list-style-type: none"> ▪ An overview of SDMX: an overview of the SDMX components (the SDMX Information Model, the Content-Oriented Guidelines and the IT architecture for the data and metadata exchange); ▪ Details on main SDMX objects: introduction to and importance of concepts and concept schemes, code lists, Data Structure Definitions (DSDs), data sets and Metadata Structure Definitions (MSDs); ▪ An overview of the SDMX architecture and IT tools: the SDMX registries (Euro- and Global-), Data Structure Wizard (DSW) tool, the SDMX converter tool, the SDMX Reference Infrastructure (SDMX-RI) and the SDMX Census Hub. ▪ An overview of the SDMX implementation process: who is involved in what stages, facing what kinds of challenges? What kind of business processes need to be addressed in an implementation project? ▪ An overview of SDMX governance; who manages artefacts and why they might change? ▪ Practical use cases of SDMX: depending on availability, examples may be on National Accounts and the Balance of Payments, on a 'live' project or on a use case of SDMX from a national perspective; ▪ Standardisation within the ESS ▪ SDMX: present and future
EXPECTED OUTCOME	<p>At the end of the course the participants should be able to:</p> <ul style="list-style-type: none"> ▪ Discuss with their management, colleagues and implementation staff, the role of SDMX and related technologies, tools, and standards in the work of their statistical unit or statistical office ▪ Understand better the responsibilities and activities required in order to introduce SDMX into the working environment of a statistical business unit ▪ Assist in the preparation of Data and Metadata Structure Definitions ▪ Identify the available Eurostat tools to assist the participant implementing SDMX
TRAINING METHODS	<p>Training will be based on a series of presentations that are reinforced with practical examples.</p> <p>The course trainers will ensure that the participants are comfortable with the exercises by monitoring the progress of the trainees and assisting where required. Where appropriate, the trainers will remind participants of where they are in the learning process.</p> <p>At the end of the course there will be an open session where any topic can be discussed in more detail. Often these topics arise from questions asked during the course.</p>
REQUIRED READING	None

SUGGESTED READING	<i>Introduction to SDMX: A general introduction to SDMX in terms of its history and main components</i> https://webgate.ec.europa.eu/fpfis/mwikis/sdmx/index.php
REQUIRED PREPARATION	None
TRAINER(S)/ LECTURER(S)	Eurostat staff and an NSI expert.

PRACTICAL INFORMATION				
WHEN	DURATION	WHERE	ORGANISER	APPLICATION VIA NATIONAL CONTACT POINT
14 - 15.03.2016	2 days	Eurostat, Luxembourg	EUROSTAT	Deadline: 18.01.2016

SDMX WORKSHOP: POSSIBILITIES FOR NATIONAL IMPLEMENTATION AND NATIONAL ACCOUNTS CASE STUDY	
COURSE LEADER	Daniel SURANYI
TARGET GROUP	<p>National Accounts staff preparing ESA 2010 data transmissions.</p> <p>Statistical staff working in other domains planning to implement SDMX (e.g. BOP, FDI, HICP, Education...).</p> <p>IT staff supporting national SDMX implementation projects.</p> <p><i>Note: it is recommended that IT and subject matter staff from the same organisation participate in the course together if possible.</i></p>
ENTRY QUALIFICATIONS	<ul style="list-style-type: none"> ▪ Sound command of English. Participants should be able to make short interventions and to actively participate in discussions.
OBJECTIVE(S)	To introduce the participants to SDMX in general and the National Accounts / ESA 2010 use case in particular.
CONTENTS	<ul style="list-style-type: none"> ▪ Introduction to SDMX; ▪ SDMX in National Accounts and relation to other domains; ▪ SDMX tools overview; ▪ SDMX tools demonstrations; ▪ SDMX implementation workshop (ESA 2010 use case <i>or</i> custom use case brought by the participant).
EXPECTED OUTCOME	<p>Participants understand the benefits of using an international standard for exchange of statistical data and know how the standards are applied in ESA 2010 for National Accounts.</p> <p>They will be able to organise or contribute to a national project to implement SDMX in the organisation for National Accounts or other statistical domains.</p>
TRAINING METHODS	<ul style="list-style-type: none"> ▪ Presentations and lectures ▪ Exchange of views/experiences on national practices ▪ Demonstrations of software and best practices ▪ Exercises
REQUIRED READING	<p>"Welcome to SDMX" and "Introduction to SDMX" learning videos and/or student books, published by Eurostat on https://webgate.ec.europa.eu/fpfis/mwikis/sdmx</p> <p>(or alternatively following the ESTP course "SDMX Basic Course")</p> <p><i>Note: the SDMX Basic course is organised as well back to back</i></p>

	<i>with this workshop on 14 - 15 March 2016.</i>
SUGGESTED READING	Basic knowledge about ESA 2010 and the ESA 2010 Transmission Programme might be an advantage: http://ec.europa.eu/eurostat/web/esa-2010 .
REQUIRED PREPARATION	None
TRAINER(S)/ LECTURER(S)	Eurostat units B3, B5 and C2; NSI experts.

PRACTICAL INFORMATION				
WHEN	DURATION	WHERE	ORGANISER	APPLICATION VIA NATIONAL CONTACT POINT
16 - 18.03.2016	3 days	Eurostat, Luxembourg	EUROSTAT	Deadline: 20.01.2016

COMBINING DATA FROM DIFFERENT SOURCES AND MODES	
COURSE LEADERS	Øyvvin KLEVEN, Dag F. GRAVEM and Li-Chun ZHANG
TARGET GROUP	Staff at NSIs who are involved in the design, management and quality assurance/improvement of statistical production processes that use data from different sources and/or modes of collection.
ENTRY QUALIFICATIONS	Command of English, both written and spoken. Participants should be able to actively participate in discussion and group work.
OBJECTIVE(S)	<ul style="list-style-type: none"> ▪ To provide the participants with a coherent conceptual framework; ▪ To kindle an awareness of methodological issues and challenges; ▪ To fortify a scientific attitude to statistical production.
CONTENTS	<ul style="list-style-type: none"> ▪ General introduction and historical review; ▪ Life-cycle of integrated statistical data and sources of error; ▪ Similarity and difference between data sources and data modes; ▪ Mixed sources/modes or not mixed sources/modes? ▪ Basic elements of mixed-mode survey methodology: Sampling, questionnaire design, survey administration and inference; ▪ Examples of statistics based on combination of sources; ▪ Statistical uses of administrative data: Trend and future; ▪ Different roles of data in play; ▪ Overview of techniques for data integration: Record linkage, data fusion / statistical matching, micro integration; ▪ Statistical accuracy of integrated micro data; ▪ Examples of methods for estimation and analysis; ▪ Mining unstructured and big data.
EXPECTED OUTCOME	<ul style="list-style-type: none"> • Understanding of potential errors and statistical uncertainty; • Ability to apply relevant concepts in practice; • Appreciation of future opportunities and obstacles.
TRAINING METHODS	<ul style="list-style-type: none"> ▪ Lecture; ▪ Group work and presentation; ▪ Discussion of experience / national practice.
REQUIRED READING	To be specified at the time of course announcement.

SUGGESTED READING	All literature on relevant topics.
REQUIRED PREPARATION	The participants will be asked to fill out a questionnaire in English regarding their NSI's contemporary and planned use of different sources and modes in the production of statistics.
TRAINER(S)/ LECTURER(S)	Øyvin KLEVEN (Statistics Norway); Li-Chun ZHANG (Statistics Norway); Dag F. GRAVEM (Statistics Norway).

PRACTICAL INFORMATION				
WHEN	DURATION	WHERE	ORGANISER	APPLICATION VIA NATIONAL CONTACT POINT
04 – 08.04.2016	5 days	Statistics Norway, Oslo	EFTA	Deadline: 05.02.2016

STATISTICAL DISCLOSURE CONTROL	
COURSE LEADER	Aleksandra BUJNOWSKA
TARGET GROUP	Staff dealing with statistical confidentiality.
ENTRY QUALIFICATIONS	Sound command of English. Participants should be able to make short interventions and to actively participate in discussions.
OBJECTIVE(S)	The objective of this course is to provide the participants with an overview of Statistical disclosure theory and methods related to tabular data protection and microdata protection, as well as the respective software. Case studies from Member States (MS) will be discussed.
CONTENTS	<ul style="list-style-type: none"> ▪ Main theoretical principles of SDC concerning tabular data and microdata protection and output checking; ▪ Methods of tabular data protection; ▪ Methods of microdata protection; ▪ Output checking issues; ▪ Software SDC tabular data and microdata protection; ▪ Practical case studies from MS.
EXPECTED OUTCOME	Better understanding of the theory, methods and software used in statistical disclosure for tabular data and microdata protection.
TRAINING METHODS	<p>The course programme is a mix of theoretical background and practical application provided through:</p> <ul style="list-style-type: none"> ▪ Lectures and presentations; ▪ Manual exercises; ▪ Practical exercises using Tau Argus and Mu Argus software; ▪ Discussion of Case studies from Member States; ▪ Group discussions.
REQUIRED READING	None
SUGGESTED READING	<ul style="list-style-type: none"> ▪ Statistical Disclosure Control (2012) by A. Hundepool, J. Domingo-Ferrer, L. Franconi, S. Giessing, E. Schulte Nordholt, K. Spicer and P.P. de Wolf, Wiley Series in Survey Methodology, ISBN 978-1-1199-7815-2 ▪ Tau Argus manual; ▪ Mu Argus manual; ▪ Manuals are available from the CASC website, at the following link: http://neon.vb.cbs.nl/casc

REQUIRED PREPARATION	Participants will be required to prepare a presentation of practical or methodological problems with micro data or tabular data protection or output checking (so called User cases from Member States); for discussion during the training.
TRAINER(S)/ LECTURER(S)	Aleksandra BUJNOWSKA (Eurostat); Peter-Paul DE WOLF (Statistics Netherlands); Eric Schulte NORDHOLT (Statistics Netherlands).

PRACTICAL INFORMATION				
WHEN	DURATION	WHERE	ORGANISER	APPLICATION VIA NATIONAL CONTACT POINT
05 - 08.04.2016	3.5 days	Eurostat, Luxembourg	EUROSTAT	Deadline: 09.02.2016

THE USE OF R IN OFFICIAL STATISTICS: MODEL BASED ESTIMATES

COURSE LEADER	Alexander KOWARIK
TARGET GROUP	Statistical production units and methodologist of NSIs.
ENTRY QUALIFICATIONS	<ul style="list-style-type: none"> ▪ Sound command of English. Participants should be able to make short interventions and to actively participate in discussions; ▪ Basic statistical knowledge; ▪ Basic programming experience in any programming language.
OBJECTIVE(S)	The goal of this activity is to provide participants with basic knowledge about the syntax and basis of the R programming language and to provide an overview of the main packages which are important for the statistical production process. The activity will pay special attention to these packages devoted to management of large databases and the analysis of complex surveys.
CONTENTS	<ul style="list-style-type: none"> ▪ Essentials of R; ▪ Descriptive statistics with R; ▪ Data visualization with R; ▪ Programming with R; ▪ Applications of R in an NSI.
EXPECTED OUTCOME	After this course, participants will be able to develop basic R code and use R packages to perform some of the data analysis and visualization carried out in their NSIs, including the management of large databases and the analysis of complex surveys.
TRAINING METHODS	<ul style="list-style-type: none"> ▪ Brief presentations and lectures; ▪ Hands-on practical exercises of data analysis and visualization with R.
REQUIRED READING	None
SUGGESTED READING	<ul style="list-style-type: none"> ▪ Online information on the use of R packages provided by CRAN (https://cran.r-project.org) ▪ Cookbook for R (http://www.cookbook-r.com) ▪ Field, A., Miles, J. and Field, Z. (2012) 'Discovering statistics using R'. Sage. ▪ Lumley, T. (2011) 'Complex surveys: a guide to analysis using R'. Wiley.
REQUIRED	None

PREPARATION	
TRAINER(S)/ LECTURER(S)	Alexander KOWARIK (Statistics Austria), Matthias TEMPL (Statistics Austria) and Bernhard MEINDL (Statistics Austria).

PRACTICAL INFORMATION				
WHEN	DURATION	WHERE	ORGANISER	APPLICATION VIA NATIONAL CONTACT POINT
05 – 07.04.2016	3 days	Vienna, Austria	DEVSTAT	Deadline: 09.02.2016

COMPILING CYCLICAL COMPOSITE INDICATORS

COURSE LEADER	Gian Luigi MAZZI
TARGET GROUP	Junior and experienced statisticians with interest in business cycle analysis, macroeconomic analysis, now/forecasting having a good background in time series analysis.
ENTRY QUALIFICATIONS	<ul style="list-style-type: none"> ▪ Sound command of English. Participants should be able to make short interventions and to actively participate in discussions; ▪ Good background in macroeconomics, time series analysis and possibly business cycle analysis.
OBJECTIVE(S)	<ul style="list-style-type: none"> ▪ To make participants familiar with the most advanced techniques for compiling cyclical composite indicators; ▪ To make participants able to develop and analyse cyclical composite indicators based on their own data; ▪ To make participants able to read, critically analyse and interpret cyclical composite indicators.
CONTENTS	<ul style="list-style-type: none"> ▪ Classification and taxonomy of cyclical composite indicators; ▪ Cyclical composite indicators for estimating cyclical patterns; ▪ Cyclical composite indicators to detect turning points; ▪ Cyclical composite indicators to estimate the pattern of main macroeconomic variables.
EXPECTED OUTCOME	After the training, people are expected to be able to perform all the necessary steps, through the construction of cyclical composite indicators, to compare alternative cyclical composite indicators, to critically read, analyse and interpret them.
TRAINING METHODS	<ul style="list-style-type: none"> ▪ Presentations and lectures; ▪ Exchange of views during open discussion sessions; ▪ Exercises and practical examples.
REQUIRED READING	A list of required reading will be communicated before the training.
SUGGESTED READING	A list of suggested reading will be communicated before the training.
REQUIRED PREPARATION	Participants are requested to write a short summary of their activities in their organisation. They are requested to express the reasons and motivation for applying to this training activity and to describe the practices, problems and experiences they face in the field of the course. Participants can also bring a set of time-series related to their interest, should they wish to do so.

TRAINER(S)/ LECTURER(S)	Gian Luigi MAZZI (Eurostat); Jacques ANAS (private expert); Laurent FERRARA (Banque de France and Université Paris 10).
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PRACTICAL INFORMATION				
WHEN	DURATION	WHERE	ORGANISER	APPLICATION VIA NATIONAL CONTACT POINT
11 - 14.04.2016	4 days	Eurostat, Luxembourg	EUROSTAT	Deadline: 15.02.2016

NATIONAL ACCOUNTS - INTRODUCTORY COURSE	
COURSE LEADER	Anders NORDIN
TARGET GROUP	Junior statisticians of National Accounts (NA) departments or statisticians of other statistical departments dealing with NA statistics and wishing to understand better the system and overall framework of NA.
ENTRY QUALIFICATIONS	<ul style="list-style-type: none"> ▪ Sound command of English. Participants should be able to make short interventions and to participate actively in discussions ▪ Familiarity with Balance of Payments ▪ Experience in National Accounts
OBJECTIVE(S)	<p>The course will introduce the theoretical and practical knowledge of National Accounts approaches.</p> <p>The main focus will be on concepts and definitions of NA and discussions on General features of the System of National Accounts (SNA, ESA), basic concepts, supply and Use Tables, non-financial sector accounts and financial sector accounts.</p> <p>The course will introduce Quarterly national accounts, Satellite Accounts as well as Regional Accounts.</p> <p>The course will explore the European perspective and a view on harmonisation efforts within Europe.</p>
CONTENTS	<ul style="list-style-type: none"> • General features of the System of National Accounts (SNA, ESA); • History and future of National Accounts; • Basic concepts; • Supply and Use Tables; • Volume measurement; • Non-financial sector accounts; • Financial sector accounts; • Quarterly national accounts; • Satellite Accounts; • Regional Accounts; • Administrative use of NA in the EU Changes from SNA93/ESA95 to SNA2008/ESA2010.
EXPECTED OUTCOME	Participants will gain basic understanding of the conceptual framework underpinning National Accounts, together with the main sources and methods used to compile the accounts in the EU. There will be a mixture of presentation and practical work for participants to reinforce their learning
TRAINING	Combination of theoretical lessons, practical training with the computer,

METHODS	and discussion of practical problems.
REQUIRED READING	Copies of the presentation materials.
SUGGESTED READING	ESA 2010
REQUIRED PREPARATION	None
TRAINER(S)/ LECTURER(S)	Anders NORDIN (Sogeti) Francis MALHERBE (independent expert)

PRACTICAL INFORMATION				
WHEN	DURATION	WHERE	ORGANISER	APPLICATION VIA NATIONAL CONTACT POINT
11 - 14.04.2016	4 days	Luxembourg, Luxembourg	SOGETI	Deadline: 15.02.2016

THE EUROPEAN STATISTICAL SYSTEM (ESS) – ACTIVE PARTICIPATION IN ESS MEETINGS

COURSE LEADER	Antonio SALCEDO GALIANO
TARGET GROUP	Staff members wishing to understand the framework and functioning of the European Statistical System (ESS) as well as staff who participate or will be participating in committees, ESS working groups, task forces and council working party meetings.
ENTRY QUALIFICATIONS	<ul style="list-style-type: none"> ▪ Sound command of English - participants should be able to make short interventions and to actively participate in discussions. ▪ Some experience in participating in statistical forums would be an advantage. ▪ Being familiar with the course documentation (see below).
OBJECTIVE(S)	<p>The aim of the course is to:</p> <ul style="list-style-type: none"> ▪ give an overview of the ESS, including ESS procedures and concepts; ▪ create understanding of the requirements originating from the EU cooperation (relations with EU institutions, decision-making process, cooperation among stakeholders, etc.); ▪ prepare participants and enable them to tackle the day-to-day challenges of the ESS system for the purpose of strengthening efforts and thereby increasing their involvement; ▪ provide practical insight and the possibility for practicing negotiation skills in an ESS context.
CONTENTS	<p>During the course, participants should be introduced to:</p> <ul style="list-style-type: none"> ▪ structure and functioning of the ESS; ▪ ESS institutional set-up, decision-making procedures and working methods; ▪ ways of ensuring active participation in ESS meetings; ▪ European Statistics Code of Practice and peer reviews; ▪ The modernisation of the ESS: the ESS Vision 2020, its implementation and its governance. <p>The course will be organised in accordance with the structure following the process for a new legal act in the legislation process taking its point of departure in three phases:</p> <p>Preparation phase (corresponding to the organisation of work within the Commission (committees, working groups, task forces, etc.);</p> <p>Decision-making phase (handling of ESS dossiers through the decision-</p>

	<p>making process in the Council and the European Parliament);</p> <p>Implementation phase (corresponding to the work within the NSIs and the Commission);</p> <p>For each of the three phases, the course will deal with the actors involved, the organisation of work among actors, and implications for the national statistical institutes involved. Negotiation skills as well as active participation in statistical meetings throughout the ESS decision-making process will, additionally, be trained during the course. On the basis of the decision-making process, the course will also deal with the issue of working within the ESS which includes sessions on:</p> <ul style="list-style-type: none"> ▪ Internal co-ordination of national positions ▪ European Statistics Code of Practice ▪ Relations with other international fora ▪ The modernisation of the ESS: the ESS Vision 2020, its implementation and its governance; ▪ Access to EU information.
EXPECTED OUTCOME	<p>Participants will be:</p> <ul style="list-style-type: none"> ▪ made familiar with the institutional and procedural context in which they take part and its implications for day-to-day work conditions; ▪ trained in preparation and participation in ESS meetings; ▪ trained in the decision-making process; ▪ trained in the interactions among all ESS partners and external stakeholders; ▪ trained in negotiation skills with colleagues from other European countries; ▪ made familiar with the European Statistics Code of Practice; ▪ made acquainted with the future challenges of the ESS.
TRAINING METHODS	<ul style="list-style-type: none"> ▪ Presentations combined with different kind of exercises and discussions in subgroups; ▪ Individual exercises; ▪ Group work; ▪ Role plays where participants will have to prepare, undertake and evaluate ESS meetings dealing with an authentic statistical file.
REQUIRED READING	<p>It is expected that participants read/familiarise themselves with the material for the role plays before the course.</p>

SUGGESTED READING	<p>The course material will be available on CIRCA prior to the course with which participants are recommended to familiarise themselves.</p> <p>In particular, it is recommended to read the following basic information:</p> <ul style="list-style-type: none"> ▪ <i>The ESS report 2014.</i> <p>Besides, it is an advantage to review the main aspects of the next two publications:</p> <ul style="list-style-type: none"> ▪ <i>EU in 12 lessons.</i> ▪ <i>How the European Union works: Your guide to the EU institutions.</i> <p>At the course participants will be provided with a master binder containing the relevant course material.</p>
REQUIRED PREPARATION	See 'Required reading'.
TRAINER(S)/ LECTURER(S)	Antonio SALCEDO GALIANO (INE Spain), Ana Carmen SAURA (INE Spain), Yolanda GÓMEZ (INE Spain), Mónica CEÑAL (INE Spain), Kim Voldby PEDERSEN (Statistics Denmark)

PRACTICAL INFORMATION				
WHEN	DURATION	WHERE	ORGANISER	APPLICATION VIA NATIONAL CONTACT POINT
12 - 15.04.2016	3.5 days	Madrid, Spain	ICON- INSTITUT Public Sector GmbH	Deadline: 16.02.2016

INTRODUCTION TO SOCIAL STATISTICS	
COURSE LEADER	Irena SVETIN
TARGET GROUP	<p>Statisticians in National Statistical Institutes or other national authorities, as well as central banks.</p> <p>Introductory course: staff with limited experience (or no experience) of working with the European social surveys, on survey organization, data processing or data analysis.</p>
ENTRY QUALIFICATIONS	Sound command of English. Participants should be able to make short interventions and to actively participate in discussions.
OBJECTIVE(S)	The course aims at familiarizing participants' theoretical knowledge of social statistics, with a special focus on EU legislation, EU-SILC, LFS and Population and household census. Participants will learn how the EU social surveys are organised, what coordination and standardization tools are used as well as what common reporting tools apply to this area. The participants will discover a complete picture of the different approaches to census comparing traditional and register-based census.
CONTENTS	<ul style="list-style-type: none"> ▪ Characteristics of the main EU social surveys; ▪ EU-SILC; ▪ EU-LFS; ▪ Population and housing census ▪ EU legal framework; ▪ Characteristics of social statistics based on business sources; ▪ Use of data, relation with the data users, evolution of EU social surveys.
EXPECTED OUTCOME	<p>General overview over the social statistic domain. Participants should become familiar with the legal framework of social statistics domain, with the conducting of three most comprehensive surveys: LFS, EU-SILC and Population and household census and should get an overview over the characteristics of the other social statistical surveys.</p> <p>They should also get some knowledge about the output, i.e. about the usage of the data.</p>
TRAINING METHODS	<ul style="list-style-type: none"> ▪ Presentations and lectures; ▪ Screening of movies.
REQUIRED READING	None

SUGGESTED READING	<ul style="list-style-type: none"> ▪ EU legislation on LFS (Council regulation (EC) No 577/1998) ▪ EU Labour Force Survey Explanatory notes (to be applied from 2016 Q1 onwards)
REQUIRED PREPARATION	None
TRAINER(S)/ LECTURER(S)	Ludmila IVANCIKOVA (Statistical Office of the Slovak Republic), Martin Zelený (Czech Statistical Office), Danilo DOLENC (Statistical Office of the Republic of Slovenia), Irena SVETIN (Statistical Office of the Republic of Slovenia)

PRACTICAL INFORMATION				
WHEN	DURATION	WHERE	ORGANISER	APPLICATION VIA NATIONAL CONTACT POINT
13 - 15.04.2016	3 days	Ljubljana, Slovenia	Expertise France	Deadline: 17.02.2016

WATER STATISTICS

COURSE LEADER	Jörg HANAUER
TARGET GROUP	Staff involved in the production of official water statistics as well as other quantitative information under Union law on water. Open for participants with no or limited experience in the production of water statistics.
ENTRY QUALIFICATIONS	<ul style="list-style-type: none"> ▪ Sound command of English. Participants should be able to make short interventions and to actively participate in discussions ▪ Current or future responsibility for producing water statistics/accounts or involvement in a reporting process under EU water law or e-PRTR
OBJECTIVE(S)	<ul style="list-style-type: none"> ▪ The course should enhance the theoretical and practical knowledge related to the collection, transmission, validation and aggregation of official water statistics and the application of different direct and indirect methods such as measurements, surveys, models and estimations. The main domains are water resources, water use, wastewater treatment as well as generation and discharge of pollutants to water. ▪ Participants should become familiar with different possible data sources which include administrative data reported regularly under EU law (e.g. EU Water Framework Directive (WFD), EU Urban Wastewater Treatment Directive (UWWTD), e-PRTR etc.) and their strengths and weaknesses with regard to use in official water statistics. ▪ With regard to the WFD the course shall also give guidance for the establishment and aggregation of water statistics at the level of river basin districts (RBD) and sub-units, which are covered by Eurostat's data collections (REQ) as well. ▪ In addition to the well established Eurostat water statistics participants should get an overview on the closely related topic of water accounting (e.g. SEEA-Water and the latest European developments on water accounting) and its links to classical water statistics. ▪ The course shall as well provide a platform and starting point for cooperation in method development within and among the countries. An overall goal is to explore possible ways of avoiding inconsistencies in the European water statistics and to obtain a more effective statistics production.
CONTENTS	<ul style="list-style-type: none"> ▪ OECD/Eurostat Joint Questionnaire on Inland Waters (JQ-IW): Main tables, terms, definitions, flow schemas, potential stumbling

	<p>blocks;</p> <ul style="list-style-type: none"> ▪ REQ (Eurostat Regional Environmental Questionnaire), section on water; ▪ Repetition of most relevant terms and their definitions (e.g. water consumption, water use, wastewater etc.); ▪ Related EU law, reporting processes and links to Eurostat water statistics: WFD and WISE, UWWTD, e-PRTR, INSPIRE; ▪ International recommendations on water statistics and links to UN Agencies work (UNSD, FAO-Aquastat...); ▪ Direct and indirect methods and data sources for the different domains (i.e. tables of the JQ-IW): water resources, water use, wastewater treatment, sewage sludge; ▪ Plans for the establishment of water accounts at European scale.
EXPECTED OUTCOME	<ul style="list-style-type: none"> ▪ The participants will be made familiar with the concept of European water statistics, the most relevant terms and definitions as well as the links to water-related reporting processes under EU law. ▪ The participants will be made familiar with the water statistics manual through presentation and demonstration of practical data generation methods and their strength and weaknesses for the different thematic domains. Participants will be trained with practical exercises with a view to provide them tools to promote and enhance their NSI role in the water sector and improve response rates and a higher data quality for the OECD/Eurostat JQ-IW as well as for other related European water statistics (e.g. regional statistics, future water accounts etc.). ▪ The participants should be able to select and develop appropriate methods for their specific national situation in order to provide Eurostat with water data of high quality.
TRAINING METHODS	<ul style="list-style-type: none"> ▪ Lectures and presentations; ▪ Questions and answers; ▪ Practical examples used as basis for discussion and exchange of views; ▪ Test exercises to check the learning success; ▪ Group work.
REQUIRED READING	<ul style="list-style-type: none"> ▪ OECD/Eurostat Joint Questionnaire on Inland Waters; ▪ REQ.
SUGGESTED READING	<ul style="list-style-type: none"> ▪ Data Collection Manual for the OECD/Eurostat Joint Questionnaire on Inland Waters Tables 1 – 7 (Version 2.3): http://ec.europa.eu/eurostat/ramon/coded_files/OECD_ESTAT_JQ_Manual_version_2_21.pdf ;

	<ul style="list-style-type: none"> ▪ Water Framework Directive (2000/60/EC); ▪ Urban Wastewater Treatment Directive (91/271/EEC); ▪ e-PRTR Regulation (166/2006); ▪ INSPIRE Directive (2007/2/EC); ▪ UN (2007), System of Environmental-Economic Accounting for Water: http://unstats.un.org/unsd/envaccounting/seeaw/ ; ▪ UN-IRWS (International Recommendations for water statistics).
REQUIRED PREPARATION	The participants will be invited to come at least with a partial overview of statistical methods applied in the official water statistics in their own country and the current results/outcome. A basic familiarity with the Eurostat/OECD Joint Questionnaire is considered useful.
TRAINER(S)/ LECTURER(S)	<p>Arnulf SCHÖNBAUER (Environment Agency Austria)</p> <p>Benoît FRIBOURG-BLANC (Office International de l'Eau)</p>

PRACTICAL INFORMATION				
WHEN	DURATION	WHERE	ORGANISER	APPLICATION VIA NATIONAL CONTACT POINT
18 – 20.05.2015	3 days	Viena, Rome	SOGETI	Deadline: 23.02.2016

INFORMATION STANDARDS AND TECHNOLOGIES FOR DESCRIBING, EXCHANGING AND DISSEMINATING DATA AND METADATA

COURSE LEADER	Francesco RIZZO
TARGET GROUP	Subject-matter and metadata experts without specialist IT knowledge, and IT Staff working in supporting dissemination, reporting and metadata management.
ENTRY QUALIFICATIONS	Participants should have a sound command of English and should be able to make short interventions and to actively participate in discussions.
OBJECTIVE(S)	<p>The main objectives of the course are:</p> <ul style="list-style-type: none"> ▪ illustrate how to define a standardization strategy compliant with the ESS vision 2020; ▪ focus on the main conceptual, logical and technical statistical standards detailed in the ESS Enterprise Architecture Reference Framework (GSBPM, GSIM, CSPA, SDMX, DDI, RDF linked data); ▪ highlight the main aspects related to the quality management in the statistical process and presents the ESS standards for reference metadata and quality reporting (ESMS, ESQRS, SIMS, etc); ▪ explain the suitable steps for implementing a standardization strategy based on a metadata-driven architecture that implements more efficient processes related to the dissemination, reporting and more in general to the data and metadata sharing; ▪ provide guidelines and best practices on how to use tools developed by Eurostat or available within the statistical community.
CONTENTS	<p>The main topics are:</p> <ul style="list-style-type: none"> ▪ Introduction to Information Models and Standards: <ul style="list-style-type: none"> – Basic notions – Relevance in the context of the statistical production – Metadata-driven statistical business process ▪ Overview of some global overarching standards: <ul style="list-style-type: none"> – Generic Statistical Business Process Model (GSBPM) – Generic Statistical Information Model (GSIM) – Common Statistical Production Architecture (CSPA)

	<ul style="list-style-type: none"> ▪ Overview of some main implementation-level standards: <ul style="list-style-type: none"> – Statistical Data and Metadata eXchange (SDMX): standard, guidelines, IT architecture and implementation scenarios – Data Documentation Initiative (DDI): describing, managing and archiving unit-record data – Semantic Web Standards, such as RDF linked data (e.g. RDF Data Cube vocabulary, XKOS, SPARQL) – Information standards for description of business processes (BPMN) and on-going work on standard descriptions of data validation and transformation (VTL) ▪ Quality management in the statistical business process <ul style="list-style-type: none"> – ESS standards for reference metadata and “quality” reporting ▪ Hands-on sessions: <ul style="list-style-type: none"> – data/metadata modelling (Data Structure Wizard, Metadata Repository/Registry, ESS Metadata Handler) ▪ Standardizing the dissemination/reporting business process through SDMX tools (National Account and SDDS Plus use cases).
EXPECTED OUTCOME	<p>At the end of the course, participants will be able to:</p> <ul style="list-style-type: none"> ▪ propose and encourage a standardization process, within their respective organisations, in line with the ESS vision 2020; ▪ compare capabilities between different standards; ▪ drive the data/metadata reporting towards International Organisations; ▪ facilitate harmonized data/metadata sharing exercises.
TRAINING METHODS	<p>Trainees will be able to experiment the theoretical explanations through suitable “real life” use cases, while several case studies will illustrate experiences performed within the statistical communities.</p>
REQUIRED READING	<p>None</p>
SUGGESTED READING	<ul style="list-style-type: none"> ▪ SDMX user Guide: http://sdmx.org/?page_id=38 ▪ SDMX guidelines: http://sdmx.org/?page_id=11 ▪ Getting started with DDI: http://www.ddialliance.org/getting-started ▪ GSIM communication paper: http://www1.unece.org/stat/platform/display/gsim/GSIM+Communication+Paper ▪ Profiles of GSBPM: http://www1.unece.org/stat/platform/display/GSBPM/Profiles+of+GSBPM ▪ Single Integrated Metadata Structure Technical Manual:

	http://ec.europa.eu/eurostat/documents/64157/4373903/03-Single-Integrated-Metadata-Structure-and-its-Technical-Manual.pdf/6013a162-e8e2-4a8a-8219-83e3318cbb39
REQUIRED PREPARATION	None
TRAINER(S)/ LECTURER(S)	Francesco RIZZO (ISTAT), Alessio CARDACINO (ISTAT), Mauro SCANU (ISTAT), Giorgia SIMEONI (ISTAT), Monica SCANNAPIECO (ISTAT), Mogens GROSEN NIELSEN (Statistics Denmark)

PRACTICAL INFORMATION				
WHEN	DURATION	WHERE	ORGANISER	APPLICATION VIA NATIONAL CONTACT POINT
19 – 22.04.2016	3.5 days	Rome, Italy	ICON- INSTITUT Public Sector GmbH	Deadline: 23.02.2016

QUALITY MANAGEMENT IN STATISTICAL AGENCIES – INTRODUCTORY COURSE

COURSE LEADER	Sirkku MERTANEN
TARGET GROUP	Employees of national statistical agencies involved in quality management, measurement and reporting.
ENTRY QUALIFICATIONS	<ul style="list-style-type: none"> ▪ Sound command of English. Participants should be able to make short interventions and to actively participate in group working and discussions. ▪ Knowledge of basic quality issues; basic knowledge of statistics production.
OBJECTIVE(S)	Participants will understand different quality concepts, European Statistical System (ESS) quality criteria, the European Statistics Code of Practice, and know how to apply methods to measure quality concepts.
CONTENTS	<p>The course relates to the quality framework of the European Statistical System and studies the European quality tools and their implementation. The purpose of the course is to focus on commonly accepted and widely used quality methods in the European context to enable the development to harmonize the statistics production in the European Statistical System.</p> <ul style="list-style-type: none"> ▪ Definition of quality in statistics; ▪ European Statistics Code of Practice (CoP); ▪ Main concepts of quality dimensions; ▪ Quality management and quality frameworks: Quality Assessment Framework (QAF), Total Quality Management (TQM)/ European Foundation for Quality Management (EFQM), Balanced Scorecard (Management tool) (BSC), International Standards Organisation (ISO9001); ▪ Product quality and quality reporting; ▪ Tools for measuring product quality; ▪ Process quality; ▪ Tools for measuring process quality components (brainstorming, current best methods, technical tools, auditing, and benchmarking); ▪ Tools for measuring perceptions of various actors (self-assessments, auditing, customer satisfaction, public opinion , and staff opinion);

	<ul style="list-style-type: none"> Strategic management and policy.
EXPECTED OUTCOME	Participants will understand different quality concepts, the European Statistics Code of Practice, and quality criteria, and know how to apply methods to measure quality concepts.
TRAINING METHODS	<ul style="list-style-type: none"> Lectures and examples Group works, discussions Participant presentations (few) and discussion together Exchange of experiences on national practices
REQUIRED READING	None
SUGGESTED READING	<ul style="list-style-type: none"> European Statistics Code of Practice ESS QAF ESS quality definition
REQUIRED PREPARATION	None
TRAINER(S)/ LECTURER(S)	Sirkku MERTANEN (Statistics Finland), Ville KOSKINEN (Statistics Finland), Kari DJERF (Statistics Finland); Johanna LAIHO-KAURANNE (Natural Resources Institute Finland); Mária DOLOGOVÁ (Statistics Slovakia)

PRACTICAL INFORMATION				
WHEN	DURATION	WHERE	ORGANISER	APPLICATION VIA NATIONAL CONTACT POINT
10 - 13.05.2016	3.5 days	Helsinki Finland	ICON- INSTITUT Public Sector GmbH	Deadline: 15.03.2016

BALANCE OF PAYMENTS – INTRODUCTORY COURSE

COURSE LEADER	Simon HUMPHRIES
TARGET GROUP	Staff members in the field of National Accounts (NA) and Balance of Payment (BoP) departments in National Statistical Offices and National Banks.
ENTRY QUALIFICATIONS	<ul style="list-style-type: none"> ▪ Sound command of English. Participants should be able to make short interventions and to participate actively in discussions ▪ Familiarity with Balance of Payments ▪ Experience in National Accounts
OBJECTIVE(S)	<p>The course will introduce the theoretical and practical knowledge of BOP approaches.</p> <p>The main focus will be on concepts and definitions of BoP, discussions of the financial accounts and the International Investment Position.</p> <p>The course will explore the European perspective and a view on harmonisation efforts within Europe.</p>
CONTENTS	<ul style="list-style-type: none"> ▪ Concepts and definitions of BoP – discussions of problematic areas; ▪ Deeper presentation and discussions of the financial accounts and International Investment Position; ▪ European perspective – aggregates for economic and currency unions. Harmonisation efforts (past, present and future) within Europe. Discussions about national experiences; ▪ Data sources and compilation methods. More in-depth discussions; ▪ Quality issues. Presentation of national methods practice and approaches; ▪ Analysis of BoP.
EXPECTED OUTCOME	Participants will gain basic understanding of the conceptual framework underpinning BoP, together with the main sources and methods used to compile the accounts in the EU. There will be a mixture of presentation and practical work for participants to reinforce their learning
TRAINING METHODS	Combination of theoretical lessons, practical training with the computer, and discussion of practical problems.

REQUIRED READING	Copies of the presentation materials.
SUGGESTED READING	ESA 2010
REQUIRED PREPARATION	None
TRAINER(S)/ LECTURER(S)	Simon HUMPHRIES (independent expert)

PRACTICAL INFORMATION				
WHEN	DURATION	WHERE	ORGANISER	APPLICATION VIA NATIONAL CONTACT POINT
11 - 12.05.2016	2 days	Luxembourg, Luxembourg	SOGETI	Deadline: 16.03.2016

SDMX STANDARD FOR DATA AND METADATA EXCHANGE, IT TOOLS COURSE	
COURSE LEADER	Alvaro DIEZ SOTO
TARGET GROUP	<p>IT specialists - Advanced course</p> <ul style="list-style-type: none"> ▪ The course is aimed at IT involved in the reporting, exchange, and dissemination of data and metadata. ▪ The principal target audience is IT specialists or statisticians with a very good level of IT knowledge, involved in implementations (reporting, production, exchange, and dissemination).
ENTRY QUALIFICATIONS	<ul style="list-style-type: none"> ▪ Sound command of English. Participants should be able to make short interventions and to actively participate in discussions ▪ IT experience in the development of systems using statistical databases and/or metadata repositories for data or metadata collection, reporting, or dissemination ▪ Experience in one or more statistical subject matter areas for data or metadata collection, reporting, exchange, or dissemination ▪ Be acquainted to the use of Integrated Development Environment (IDE tools) and experience with Java and/or .NET development
OBJECTIVE(S)	<p>To enable participants to understand and to use the Eurostat tools which are available to support more efficient processes for reporting, exchanging and disseminating statistical data and metadata. Furthermore, to enable participants to understand the scope, architecture, and features of SDMX, in particular those features that support more efficient processes for reporting, exchanging and disseminating statistical data and metadata, so that they can:</p> <ul style="list-style-type: none"> ▪ Be in a position to build their future systems based on the SDMX Information model and to understand the design of a component-based architecture that implements this model; ▪ Better understand the tools made available by Eurostat to work with SDMX and how to use them in relation to the different processes in the collection and production of statistics; ▪ Understand the common architecture of the SDMX tools that have been developed and the design principle, in order to foster the reusability of the tools; ▪ Know where to find the existing tools; ▪ Perform installations and configurations of the Eurostat tools in an autonomous way and make use of them in a real use case

	scenario.
CONTENTS	<p>The course is concerned principally with the IT aspects of the SDMX standard. The course comprises discrete but linked modules, many of them practical exercises using Eurostat tools. The broad contents are:</p> <ul style="list-style-type: none"> ▪ SDMX Information Model, SDMX structures and messages ▪ Introduction to Eurostat tools: where to find them and how to use them in the process of the production and dissemination of statistics ▪ SDMX Reference Infrastructure (SDMX-RI) and the Mapping Assistant ▪ SDMX Web services: installation and configuration of the java and .NET versions ▪ SDMX registry, Data Structure Wizard, SDMX Converter ▪ Hands-on sessions for the installation and configuration of the tools following real use cases of the tools <p>The course is organised as follows:</p> <ul style="list-style-type: none"> ▪ Introductory session: historical background and context of SDMX; SDMX components: Information Model, Content-Oriented Guidelines, IT components; where to begin; scenarios for the implementation; SDMX messages; presentation of available tools and technologies; ▪ IT practical session: SDMX architectures and supporting tools; how to install SDMX tools; use cases and main functionalities; ▪ Hands-on session: Reflections on experiences gained during the practical session; hands-on installation and configuration of Eurostat tools; open discussion, conclusions, future work, and course evaluation.
EXPECTED OUTCOME	<p>At the end of the course the participants should be able to:</p> <ul style="list-style-type: none"> ▪ Understand better the responsibilities and activities required in order to introduce SDMX into the working environment of a statistical business unit; ▪ Identify the Eurostat tools available in assisting participants to implement SDMX and understand how to use them, according to the statistical process; ▪ Understand the common architecture of Eurostat tools and its reusability principle; ▪ Install and configure Eurostat tools in an autonomous way.
TRAINING METHODS	<p>The course comprises:</p> <ul style="list-style-type: none"> ▪ Pedagogical lectures on SDMX from a conceptual model perspective, reinforced with practical exercises based on a variety

	<p>of statistical domains;</p> <ul style="list-style-type: none"> ▪ Practical exercises using Eurostat tools based on a set of typical implementation scenarios (these form the majority of the exercises). Exercises are documented using presentation material and notes so that participants can complete these at their own pace; ▪ Course lecturers ensure that trainees are comfortable with the exercises by monitoring the progress of the trainees and assisting where required; ▪ Where appropriate the trainer will remind participants of where they are by relating the presentation material to the input required for the current exercise; ▪ Throughout the course participants are encouraged to ask questions and to discuss their experiences or plans. In order to determine understanding, participants are prompted to provide input during the presentations; ▪ At the end of the course there is an open session where any topic can be discussed in more detail. Often these topics arise from questions asked during the course.
REQUIRED READING	None
SUGGESTED READING	<ul style="list-style-type: none"> ▪ SDMX website - www.sdmx.org ▪ Follow links to Standards and SDMX Standards version 2.1 (suggested Sdmx21Changes, UserGuide, TechnicalNotes) ▪ Follow links to Standards and SDMX Standards version 2.0 (suggested ImplementorsGuide, UserGuide) ▪ Eurostat SDMX WIKI space - https://webgate.ec.europa.eu/fpfis/mwikis/sdmx/index.php/Main_Page
REQUIRED PREPARATION	<p>General knowledge on SDMX/XML and understanding of data reporting and dissemination processes.</p> <p>Participants are given all of the course material (documentation, presentations, exercises and solution), so that the course software can be used after the course, background files etc.).</p>
TRAINER(S)/ LECTURER(S)	Nadezhda VLAHOVA (Eurostat) and Eurostat staff

PRACTICAL INFORMATION				
WHEN	DURATION	WHERE	ORGANISER	APPLICATION VIA NATIONAL CONTACT POINT
11 – 13.05.2016	3 days	Eurostat, Luxembourg	EUROSTAT	Deadline: 16.03.2016
17 – 19.10.2016	3 days			Deadline: 22.08.2016

PHYSICAL ENERGY FLOW ACCOUNTS

COURSE LEADER	Jörg HANAUER
TARGET GROUP	Environmental statisticians or staff working on environmental accounts departments and involved in data compilation of Physical Energy Flow Accounts (PEFA). Introductory and advanced level.
ENTRY QUALIFICATIONS	<ul style="list-style-type: none"> ▪ Sound command of English. Participants should be able to make short interventions and to actively participate in discussions ▪ Basic knowledge on energy statistics, national accounts, environmental economic accounting on national level
OBJECTIVE(S)	The course will provide participants with theoretical and practical training on the compilation of PEFA. Focus is given to the use of Eurostat's IT tool ("PEFA-Builder") supposed to facilitate the compilation of PEFA based on five Annual Questionnaires for energy statistics.
CONTENTS	<ul style="list-style-type: none"> • Conceptual foundations of (PEFA) and relation to System of Environmental-Economic Accounts (SEEA); • Introduction to and overview of the set of PEFA tables: <ul style="list-style-type: none"> ◦ Table A – Physical supply table for energy flows, ◦ Table B – Physical use table for energy flows, ◦ Table C – Table of emission-relevant use of energy flows, ◦ Table D – Derived indicators; • Table E – Bridge table Introduction to five IEA/Eurostat Annual Questionnaires for energy statistics. • Introduction to compilation tool ("PEFA-Builder"), <ul style="list-style-type: none"> ◦ Brief overview (flow chart), ◦ Brief overview on the various modules of the "PEFA-Builder"; • Detailed guidance on how to use the "PEFA-Builder" with focus on data inputs (possible national data sources required to provide auxiliary information beyond the IEA/Eurostat Annual Questionnaires for energy statistics); • Discussion of problems in compiling Energy Accounts.
EXPECTED OUTCOME	Experts should be able to compile PEFA tables with the help of the IT tool ("PEFA-Builder").
TRAINING	Combination of theoretical lessons, practical training with the computer,

METHODS	and discussion of practical problems.
REQUIRED READING	Copies of the presentation materials.
SUGGESTED READING	Physical Energy Flow Accounts Manual 2014. video tutorial for PEFA-builder
EQUIPMENT REQUIRED	Understanding IEA/Eurostat Annual Questionnaires for energy statistics
TRAINER(S) LECTURER(S)	Course leader: Jörg HANAUER (Sogeti); Wolfgang BITTERMANN (Statistics Austria); Nuno BAPTISTA (Sogeti).

PRACTICAL INFORMATION				
WHEN	DURATION	WHERE	ORGANISER	APPLICATION VIA NATIONAL CONTACT POINT
12 - 13.05.2016	3 days	Luxembourg, Luxembourg	SOGETI	Deadline: 17.03.2016

ENVIRONMENTAL GOODS AND SERVICES SECTOR (EGSS)

COURSE LEADER	Jörg HANAUER
TARGET GROUP	Statisticians of environmental statistics or environmental accounts departments involved in compiling data on the Environmental Goods and Services Sector (EGSS).
ENTRY QUALIFICATIONS	Sound command of English. Participants should be able to make short interventions and to actively participate in discussions
OBJECTIVE(S)	The course should provide participants with theoretical and practical training on the compilation of EGSS statistics. A focus will be on the data submission via Eurostat's questionnaire currently used for the data collection on EGSS and the future EGSS module of Regulation 691/2011 on European environmental economic accounts.
CONTENTS	<ul style="list-style-type: none"> ▪ Applications and political needs; ▪ Definition of the EGSS and of green jobs; ▪ Types of environmental products; ▪ Producers of environmental products and principal, secondary and ancillary activities; ▪ Classifications (CEPA, CReMA, NACE); ▪ Basic approaches towards measuring the EGSS; ▪ Data sources; ▪ Methods for the identification and classification of components of the EGSS; ▪ Introduction to compilation tools; ▪ Discussion of problems in compiling EGSS; ▪ Practical examples; ▪ Eurostat data requirements: EGSS questionnaire and how to fill it, future module for Regulation 691/2011.
EXPECTED OUTCOME	Experts should be able to compile and improve EGSS statistics and fill in the Eurostat questionnaire.
TRAINING METHODS	Combination of theoretical lessons, practical training, and discussion of practical problems.
REQUIRED	System of integrated Environmental-Economic Accounting (SEEA)

READING	<p>2012) – chapter 4 – sections 4.1 – 4.3 – http://unstats.un.org/unsd/envaccounting/White_cover.pdf</p> <p>Latest Eurostat EGSS questionnaire – http://ec.europa.eu/eurostat/web/environment/methodology</p> <p>Eurostat practical guide towards compiling EGSS statistics – latest version: http://ec.europa.eu/eurostat/documents/1798247/6191549/Practical-guide-towards-compiling-EGSS-statistics-March2015.pdf/f0f8c6c1-0ae9-4f53-9c94-afcc190cc5ba</p> <p>Regulation (EU) 538/2014 amending Regulation (EU) No 691/2011 on European environmental economic accounts – http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014R0538&qid=1446739768611&from=EN</p>
SUGGESTED READING	<ul style="list-style-type: none"> • The Handbook on EGSS: http://ec.europa.eu/eurostat/web/products-manuals-and-guidelines/-/KS-RA-09-012 • Eurostat's dedicated website: http://ec.europa.eu/eurostat/web/environment/environmental-goods-and-services-sector • Economic indicators for the Dutch Environmental Goods and Services Sector, 1995-2009: (http://www.cbs.nl/NR/rdonlyres/6048B589-C79F-416E-A5E2-BD93E3DCA29C/0/2012EGSSCBSbackground.pdf) • Info on the Statistics Austria website on EGSS: http://www.statistik.at/web_en/statistics/energy_environment/environment/eco_industries_environmentally_goods_and_services/index.html
REQUIRED PREPARATION	<p>Before the course participants are invited to investigate possible national data sources for EGSS, both within and outside of the national statistical system.</p>
TRAINER(S)/ LECTURER(S)	<p>Course leader: Jörg HANAUER (Sogeti)</p> <p>Sacha BAUD (Statistics Austria)</p> <p>Marco ORSINI (ICEDD)</p>

PRACTICAL INFORMATION				
WHEN	DURATION	WHERE	ORGANISER	APPLICATION VIA NATIONAL CONTACT POINT
23 - 24.05.2016	2 days	Vienna, Austria	SOGETI	Deadline: 28.03.2016

ENVIRONMENTAL PROTECTION EXPENDITURE ACCOUNTS	
COURSE LEADER	Jörg HANAUER
TARGET GROUP	Statisticians of environmental statistics, environmental accounts or national accounts departments involved in data compilation of environmental economic accounts.
ENTRY QUALIFICATIONS	<ul style="list-style-type: none"> ▪ Sound command of English. Participants should be able to make short interventions and to actively participate in discussions ▪ Basic knowledge of economics and environmental economic accounts is required.
OBJECTIVE(S)	The course will provide participants with theoretical and practical training on the compilation of environmental protection expenditure statistics and accounts as well as on the data submission to Eurostat via the new Eurostat questionnaire on Environmental Protection Expenditure Accounts (EPEA).
CONTENTS	<ul style="list-style-type: none"> ▪ Environmental protection expenditure statistics and accounts and related topics - methodologies ▪ Discussion of approaches and principles for compiling environmental protection expenditure statistics and accounts ▪ Eurostat data requirements in the area of economic environmental accounts (based on the requirements of Regulation 691/2011 on European environmental economic accounts) ▪ Source data in the area of environmental protection expenditure ▪ How to fill in the new Eurostat questionnaire on EPEA
EXPECTED OUTCOME	Experts of National Statistical Institutes should be able to understand the aim of each module included in the current environmental economic accounts and to compile environmental protection expenditure statistics and accounts. Furthermore, participants should be able to fill in the new Eurostat questionnaire on EPEA .
TRAINING METHODS	Combination of theoretical lessons and discussion of practical problems.
REQUIRED READING	<ul style="list-style-type: none"> ▪ New Eurostat questionnaire on Environmental Protection Expenditure Accounts – latest available questionnaire; ▪ Chapter 4 of the SEEA 2012; ▪ SERIEE – Environmental Protection Expenditure Accounts – Compilation guide, 2002 version; ▪ SERIEE – Environmental Protection Expenditure Accounts –

	<p>Conversion guide, 2005 version;</p> <ul style="list-style-type: none"> Regulation (EU) No 691/2011 on European environmental economic accounts <p>http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1416221752426&uri=CELEX:02011R0691-20140616</p>
SUGGESTED READING	<ul style="list-style-type: none"> Environment Expenditure Statistics – Industry data collection handbook, 2005 version; Environment Expenditure Statistics – General Government and Specialised Producers data collection handbook, 2007 version.
REQUIRED PREPARATION	Before the course participants are invited to check national data sources for EPEA.
TRAINER(S)/ LECTURER(S)	<p>Course leader: Jörg HANAUER (Sogeti)</p> <p>Marco ORSINI (ICEDD), Eva MILOTA (Statistics Austria)</p>

PRACTICAL INFORMATION				
WHEN	DURATION	WHERE	ORGANISER	APPLICATION VIA NATIONAL CONTACT POINT
25 - 27.05.2016	3 days	Vienna, Austria	SOGETI	Deadline: 30.03.2016

ECONOMIC AND SOCIAL CLASSIFICATIONS: METHODOLOGY AND APPLICATION – INTRODUCTORY COURSE

COURSE LEADER	Marie-Madeleine FUGER
TARGET GROUP	Any statistician of a National Statistical Institute (including newcomers) dealing with any statistical domain and wishing to understand better the system of classifications used.
ENTRY QUALIFICATIONS	Sound command of English (passive and actively). Participants should be able to make short interventions and presentations and to actively participate in discussions and group exercises (e.g. PowerPoint or flip chart presentations).
OBJECTIVE(S)	The course should provide participants with a better understanding of the underlying principles and concepts of European and international economic and social classifications, their content and use.
CONTENTS	<ul style="list-style-type: none"> ▪ Basic principles of classifications; ▪ International system of linked economic classifications and family of international economic classifications; ▪ International and European economic classifications: <ul style="list-style-type: none"> – ISIC Rev. 4 and NACE Rev. 2 – CPC Version 2.1, CPA 2.1. ▪ Harmonised system, Combined Nomenclature, PRODCOM ▪ Functional/purpose classifications: COICOP and EU-COICOP, COPNI, COFOG and COPP ▪ Social classifications: ISCO, ESeG project, ISCED, ICATUS ▪ Geographical classifications: ISO, UN, EU ▪ Interpretation and classification guidelines and rules ▪ Tools and sources: RAMON, UN classification registry and other classification databases <p>The course content focuses on the principles, concepts and applications of the main economic classifications that are applied in the European Statistical System. Reference is also given to the international classifications from which the European classifications are derived from.</p>

EXPECTED OUTCOME	<ul style="list-style-type: none"> Participants will be familiar with statistical classifications, their content and their links. Improved knowledge and understanding of the main issues related to classifications and their use.
TRAINING METHODS	<ul style="list-style-type: none"> Presentations and lectures; Exercises; Group discussions.
REQUIRED READING	None
SUGGESTED READING	None
REQUIRED PREPARATION	Participants are required to write a short summary of their own activity as well as that of the organisation regarding practises, problems and experiences in the subject.
TRAINER(S)/ LECTURER(S)	<p>Marie-Madeleine FUGER (INSEE France)</p> <p>Hans VAN HOOFF (Statistics Netherlands)</p>

PRACTICAL INFORMATION				
WHEN	DURATION	WHERE	ORGANISER	APPLICATION VIA NATIONAL CONTACT POINT
25 - 27.05.2016	3 days	Paris (Malakoff), France	ICON-INSTITUT Public Sector GmbH	Deadline: 30.03.2016

ESA 2010 - NATIONAL ACCOUNTS

COURSE LEADER	Andreas DOLLT
TARGET GROUP	<p>Staff working in National Statistical Institutes and Competent National Authorities (CNA) on the compilation of National Accounts (NA).</p> <p>The course is targeted at junior statisticians with at least one year's experience in NA through to staff with several years' experience.</p>
ENTRY QUALIFICATIONS	<ul style="list-style-type: none"> ▪ Sound command of English, participants will be required to actively engage in discussions. ▪ First experience of around one year's practical work in the area of national accounts.
OBJECTIVE(S)	<p>The aim of the course is:</p> <ul style="list-style-type: none"> ▪ To improve the capacity of national statistical services to produce high quality ESA 2010 national accounts ▪ To achieve an understanding of the theoretical basis and structure of ESA 2010 national accounts, together with sources and methodology ▪ To provide a general overview and an understanding of the links of the different areas of the system of NA (excluding financial accounts).
CONTENTS	<ul style="list-style-type: none"> ▪ Use of national accounts; ▪ Principles and accounting rules of ESA 2010; ▪ Classifications, statistical units, institutional sectors and types of output; ▪ Transactions in goods and services in NA; ▪ Distributive transactions; ▪ The sequence of accounts; ▪ Quarterly National Accounts; ▪ Principles of supply and use tables and the input output framework; ▪ Price and volume measures.
EXPECTED OUTCOME	Improved knowledge of the system of national accounts and the main issues involved in their compilation.
TRAINING METHODS	<ul style="list-style-type: none"> ▪ Presentations and lectures; ▪ Exercises;

	<ul style="list-style-type: none"> ▪ Group discussions on specific topics; ▪ Exchange of views/experiences on national practices.
REQUIRED READING	<ul style="list-style-type: none"> ▪ ESA2010, chapter 1 ▪ SNA2008, chapter 2
SUGGESTED READING	<ul style="list-style-type: none"> ▪ <i>ESA2010, chapters 2,3,4</i> ▪ <i>Manual on the changes between ESA 2010 and ESA 95</i>
REQUIRED PREPARATION	See required/suggested reading. Hand held calculator for the exercises.
TRAINER(S)/ LECTURER(S)	Andreas DOLLT (Eurostat), Eurostat staff and an external expert

PRACTICAL INFORMATION				
WHEN	DURATION	WHERE	ORGANISER	APPLICATION VIA NATIONAL CONTACT POINT
30.05. – 03.06.2016	5 days	Eurostat, Luxembourg	EUROSTAT	Deadline: 04.04.2016

SPATIAL INFORMATION AND MAPS IN STATISTICS

COURSE LEADER	Hilde WILLEMSSEN
TARGET GROUP	Statisticians involved in the production and analysis of statistical data. Focus on map making and basic spatial analysis.
ENTRY QUALIFICATIONS	<ul style="list-style-type: none"> ▪ Sound command of English. Participants should be able to make short interventions and to participate actively in discussions. ▪ Basic IT knowledge is required. This includes basic knowledge on how to work with a computer (opening/closing files and applications, knowledge of basic applications such as Microsoft Office products, ...). ▪ Familiarity with basics of statistical data treatment is advisable, i.e. basic skills for working with excel or access or other database systems. ▪ Some knowledge on GIS or spatial data treatment is an asset, but not required.
OBJECTIVE(S)	<ul style="list-style-type: none"> ▪ The course will introduce the theoretical and practical knowledge of spatial information and maps in statistics. ▪ The main focus will be on the techniques and tools for creating maps, on the presentation of statistical information with maps, and on publishing statistical maps using online tools. ▪ Gain own experience with GIS and map making
CONTENTS	<ul style="list-style-type: none"> ▪ Basic principles on the nature of geographic information and the relation to statistical data; ▪ Basic cartographic principles to represent statistical information on maps, based on best practices (mainly from official statistics); ▪ The techniques and tools for creating statistical maps within statistical offices: <ul style="list-style-type: none"> ○ Assessing statistical and geographical data used for statistical maps (scale, temporal aspects, how to represent footnotes and other meta-information, etc.); ▪ Introduction to spatial analysis techniques (proximity analysis tools and overlay tools); ▪ Overview of geographic data available and overview of current European policies on geographical information.
EXPECTED OUTCOME	Participants will gain basic understanding of concepts on spatial information and maps and be able to further develop the visualisation

	policy. There will be a balanced mix of presentation and practical work for participants to reinforce their learning
TRAINING METHODS	Combination of theoretical lessons, practical training with the computer, and discussion of practical problems.
REQUIRED READING	Copies of the presentation materials.
SUGGESTED READING	None
REQUIRED PREPARATION	None
TRAINER(S)/ LECTURER(S)	Hilde WILLEMSSEN (GIM) Barbara DUMONT (GIM)

PRACTICAL INFORMATION				
WHEN	DURATION	WHERE	ORGANISER	APPLICATION VIA NATIONAL CONTACT POINT
01 – 03.06.2016	3 days	Brussels, Belgium	SOGETI	Deadline: 06.04.2016

COMEXT – INFORMATION SYSTEM FOR INTERNATIONAL TRADE IN GOODS STATISTICS

COURSE LEADERS	Evangelos PONGAS
TARGET GROUP	Officials working with data analysis, international trade in goods statistics, national accounts.
ENTRY QUALIFICATIONS	<ul style="list-style-type: none"> ▪ Sound command of English. Participants should be able to make short interventions and to actively participate in discussions.
OBJECTIVE(S)	Learning COMEXT system and data analysis of international trade statistics.
CONTENTS	<ul style="list-style-type: none"> ▪ Introduction to international trade in goods statistics (ITGS); ▪ COMEXT architecture; ▪ Easy COMEXT; ▪ Analytical COMEXT; ▪ Using ITGS data for analysis and data integration with other statistical domains.
EXPECTED OUTCOME	Deep knowledge of COMEXT System. Expertise in managing ITGS Data.
TRAINING METHODS	<ul style="list-style-type: none"> ▪ Presentations; ▪ Exercises.
REQUIRED READING	ITGS User Guide (http://epp.eurostat.ec.europa.eu/newxtweb/setuplistmeta.do?keepsessionkey=true)
SUGGESTED READING	<ul style="list-style-type: none"> ▪ <i>ETSC documentation</i> ▪ <i>Quality report</i> (http://epp.eurostat.ec.europa.eu/newxtweb/setuplistmeta.do?keepsessionkey=true)
REQUIRED PREPARATION	Create a user account at Eurostat's site (to access public COMEXT). Request a user account at Unit G5 (to access Commission's COMEXT).

TRAINER(S)/ LECTURER(S)	Evangelos PONGAS (Eurostat); Benoit FAES (Eurostat); Anna MAQUENDA (Eurostat).
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PRACTICAL INFORMATION				
WHEN	DURATION	WHERE	ORGANISER	APPLICATION VIA NATIONAL CONTACT POINT
06 - 07.06.2016	2 days	Eurostat, Luxembourg	EUROSTAT	Deadline: 11.04.2016

GOVERNMENT FINANCE STATISTICS AND EXCESSIVE DEFICIT PROCEDURE - PART I AND PART II

COURSE LEADER	Luiza Cristina MUNTEANU
TARGET GROUP	Participants from National Statistical Institutes, National Central Banks and Ministries of Finance working on Government Finance Statistics (GFS) and Excessive Deficit Procedure (EDP).
ENTRY QUALIFICATIONS	<ul style="list-style-type: none"> ▪ Sound command of English. Participants should be able to make short interventions and to actively participate in discussions; ▪ Significant knowledge of and practical experience in national accounts and/or government finance statistics (including EDP).
OBJECTIVE(S)	<ul style="list-style-type: none"> ▪ To improve the capacity of national statistical services to produce high quality on GFS and EDP-statistics; ▪ To examine the theoretical basis and structure of the European System of Accounts (ESA 2010) based GFS and EDP-data.
CONTENTS	<ul style="list-style-type: none"> ▪ Basic concepts of ESA 2010, tailored toward GFS and EDP; ▪ Delimitation of general government; ▪ Transactions/stocks relevant for government; ▪ Definition EDP-concepts, EDP-tables and the Questionnaire.
EXPECTED OUTCOME	Improved knowledge of ESA 2010, GFS- and EDP-concepts.
TRAINING METHODS	<ul style="list-style-type: none"> ▪ Presentations and lectures by external and Eurostat experts; ▪ Exchange of views/experiences on national practices and theoretical cases; ▪ Exercises, examples and case studies.
REQUIRED READING	The ESA 2010 and the Manual on Government Deficit and Debt (latest version).
SUGGESTED READING	ESA 2010, chapters 1 – 7, 15, 17 and 20.
REQUIRED PREPARATION	None
TRAINER(S)/	Course leader: Luiza Cristina MUNTEANU (Eurostat);

LECTURER(S)	Eurostat staff; Martin KELLAWAY (independent expert); Helen SHANKS (independent expert).
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PRACTICAL INFORMATION				
WHEN	DURATION	WHERE	ORGANISER	APPLICATION VIA NATIONAL CONTACT POINT
<p>* This course consisting of 2 full weeks is delivered twice, in Luxembourg and in Latvia.</p> <p>** Participation in Part II would be solely possible after having followed Part I.</p>				
Part I: 11-15.07.2016 Part II: 05-09.12.2016	Twice 5 days	Eurostat, Luxembourg	Eurostat	Deadline: 17.05.2016
Part I: 08-10.06.2016 Part II: 07-10.11.2016	Twice 5 days	Riga, Latvia	NBS of Latvia and Eurostat	Deadline: 11.04.2016

CAN A STATISTICIAN BECOME A DATA SCIENTIST?

COURSE LEADER	José Luis CERVERA-FERRI
TARGET GROUP	All NSIs staff, with some background in statistics.
ENTRY QUALIFICATIONS	<ul style="list-style-type: none"> ▪ Sound command of English. Participants should be able to make short interventions and to actively participate in discussions ▪ Background in mathematics, statistics or similar studies ▪ Experience in multivariate data analysis ▪ Knowledge of data extraction, transformation and loading techniques
OBJECTIVE(S)	The objective of the course is to demonstrate innovative techniques and applications of data sets, to identify the skills needed for statisticians working in National Statistical Institutes to effectively test the use of Big Data and other non-traditional sources of data for the production of Official Statistics.
CONTENTS	<ul style="list-style-type: none"> ▪ Methods of statistical inference: design-based, model-based and algorithm-based estimation ▪ Statistical learning ▪ Geo-spatial analysis ▪ Network analysis and Web analytics ▪ Graph database and advanced data visualisation
EXPECTED OUTCOME	Good understanding of the recent trends and developments in innovative methods to analyse large databases, discussing their strong and weak points, and highlighting its applications to official statistics within the ESS.
TRAINING METHODS	<ul style="list-style-type: none"> ▪ Presentations and lectures ▪ Practical exercises ▪ Cases of study with practical examples of application of these methods
REQUIRED READING	None
SUGGESTED READING	<ul style="list-style-type: none"> ▪ Social Network Data Analytics. Charu C. Aggarwal. Springer. http://www.springer.com/us/book/9781441984616 ▪ Networks, Crowds and Markets: Reasoning about a Highly

	<p>Connected World. David Easley and Jon Kleinberg. Cambridge University Press.</p> <p>https://www.cs.cornell.edu/home/kleinber/networks-book/</p> <ul style="list-style-type: none"> ▪ Graph Databases. Ian Robinson, Jim Webber and Emil Eifrem. O'Reilly. ▪ http://neo4j.com/books/graph-databases/ ▪ D3 Tips and Tricks. Malcolm Maclean. https://leanpub.com/D3-Tips-and-Tricks ▪ James G. et al. (2013). An Introduction to Statistical Learning with Applications in R. Springer Verlag, NY. (http://www-bcf.usc.edu/~gareth/ISL/ISLR%20Fourth%20Printing.pdf) ▪ Buelens, B. et al. (2012). Shifting paradigms in official statistics: From design-based to model-based to algorithmic inference. Discussion Paper 201218. Statistics Netherlands. ▪ (http://www.cbs.nl/NR/rdonlyres/A94F8139-3DEE-45E3-AE38-772F8869DD8C/0/201218x10pub.pdf) ▪ Fattore, M. et al. (2014). Visualizing Partially Ordered Sets for Socioeconomic Analysis. Revista Colombiana de Estadística, vol. 37no. 2. ▪ (http://www.revistas.unal.edu.co/index.php/estad/article/view/47948) ▪ Marta Blangiardo, Michela Cameletti (2015). Spatial and Spatio-temporal Bayesian Models with R – INLA, Wiley. ISBN: 978-1-118-32655-8. ▪ Sudipto Banerjee, Bradley P. Carlin, Alan E. Gelfand (2015). Hierarchical Modeling and Analysis for Spatial Data, Second Edition. Chapman and Hall.
REQUIRED PREPARATION	None
TRAINER(S)/ LECTURER(S)	José L. CERVERA-FERRI (DevStat), Iván ARRIBAS (University of Valencia), David CONESA (University of Valencia) and Francisco RANGEL

PRACTICAL INFORMATION				
WHEN	DURATION	WHERE	ORGANISER	APPLICATION VIA NATIONAL CONTACT POINT
08 - 10.06.2016	3 days	Valencia, Spain	DEVSTAT	Deadline: 13.04.2016

HANDS-ON IMMERSION ON BIG DATA TOOLS	
COURSE LEADER	Antonino VIRGILLITO
TARGET GROUP	Official statisticians with IT skills, who already have basic knowledge about big data and who will start to work in practice on big data sources. The course is not meant to be targeted exclusively at IT specialists, but familiarity with at least one data manipulation tool-language is required.
ENTRY QUALIFICATIONS	<ul style="list-style-type: none"> ▪ Sound command of English. Participants should be able to make short interventions and to actively participate in discussions; ▪ The participants should have intermediate level skills of at least one programming and/or data manipulation language (e.g. R, Java, Python, SQL...). The required level of programming skills can be acquired via the ESTP course "The use R in Official Statistics: model based estimates".
OBJECTIVE(S)	<p>Main objectives of the course are:</p> <ul style="list-style-type: none"> ▪ Introducing the participants to the state-of-the-art IT tools required to process datasets of large size; ▪ Giving the opportunity to test in practice the tools, with a training approach strongly focused on hands-on work with the tools on real-world big data sets.
CONTENTS	<ul style="list-style-type: none"> ▪ Overview of Big Data technologies and tools; ▪ Hadoop and MapReduce; ▪ Languages for processing and analyzing data in Hadoop: Pig and Hive; ▪ NoSQL databases; ▪ Techniques and tools for extracting data from the web; ▪ Implementing MapReduce programs in R with RHadoop; ▪ Techniques for efficient processing of large scale datasets; ▪ Advanced distributed programming with Spark.
EXPECTED OUTCOME	<p>At the end of the course, participants will be able to:</p> <ul style="list-style-type: none"> ▪ Process data with different tools specialized for treating large data sets; ▪ Position the tools in a general framework and understand the differences among each other; ▪ Know the next steps to make to acquire a more in-depth

	knowledge of tools and techniques.
TRAINING METHODS	<ul style="list-style-type: none"> ▪ Presentations and lectures; ▪ Exchange of views/experiences on national practices; ▪ Hands-on sessions.
REQUIRED READING	None
SUGGESTED READING	<ul style="list-style-type: none"> ▪ Lam, Chuck. "Hadoop in Action". Manning, 2010; ▪ Karau, Holden, et al. "Learning Spark: Lightning-Fast Big Data Analysis.", O'Reilly Media, Inc., 2015; ▪ Gates, Alan, "Programming Pig" http://chimera.labs.oreilly.com/books/1234000001811/index.html, 2011; ▪ Capriolo, Edward, Dean Wampler, and Jason Rutherglen. "Programming hive.", O'Reilly Media, Inc., 2012; ▪ Scheveningen Memorandum on Big Data, DGINS, 25-26 Sep 2013, The Hague, http://www.cros-portal.eu/content/scheveningen-memorandum ; ▪ UNECE: Big Data in Official Statistics, http://www1.unece.org/stat/platform/display/bigdata/Big+Data+in+Official+Statistics ; ▪ Carlo Vaccari, PhD Thesis "Big Data in Official Statistics" (2014) http://www.academia.edu/7571682/PhD_Thesis_on_Big_Data_in_Official_Statistics ; ▪ Monica Scannapieco, Antonino Virgillito, Diego Zardetto (2013): Placing Big Data in Official Statistics: A Big Challenge?, http://www.cros-portal.eu/sites/default/files//NTTS2013fullPaper_214.pdf ; ▪ D. Florescu, M. Karlberg, F. Reis, P. Rey Del Castillo, M. Skaliotis, A. Wirthmann (2014): Will 'big data' transform official statistics?, http://www.q2014.at/fileadmin/user_upload/ESTAT-Q2014-BigDataOS-v1a.pdf ; ▪ Peter Struijs, Barteld Braaksma and Piet JH Daas (2014): Official Statistics and Big Data, http://bds.sagepub.com/content/1/1/53951714538417.full.pdf+html .
REQUIRED PREPARATION	None
TRAINER(S)/ LECTURER(S)	Lorenzo DI GAETANO (ISTAT), Marco PUTS (Statistics Netherlands), Monica SCANNAPIECO (ISTAT), Donato SUMMA (ISTAT), Antonino VIRGILLITO (ISTAT)

PRACTICAL INFORMATION				
WHEN	DURATION	WHERE	ORGANISER	APPLICATION VIA NATIONAL CONTACT POINT
21 - 24.06.2016	4 days	Rome, Italy	Expertise France	Deadline: 26.04.2016

COMPILING OFFICIAL STATISTICS ON CRIME AND CRIMINAL JUSTICE

COURSE LEADER	Steve CLARKE
TARGET GROUP	Staff responsible for coordinating or compiling the annual Eurostat - UN Office on Drugs and Crime (UNODC) data collection at a national level. Staff in national criminal justice authorities (e.g. police, prosecution services, courts, prisons) responsible for providing crime or criminal justice statistics for the annual Eurostat-UNODC data collection.
ENTRY QUALIFICATIONS	Sound command of English. Participants should be able to make short interventions and to actively participate in discussions.
OBJECTIVE(S)	<p>The course aims to:</p> <ul style="list-style-type: none"> ▪ inform participants about the requirements of the annual Eurostat-UNODC data collection; ▪ share national experiences in compiling and coordinating data from the different national criminal justice authorities; ▪ identify ways in which the quality of the annual published data could be improved.
CONTENTS	<p>The course covers the following topics:</p> <ul style="list-style-type: none"> ▪ development of the Eurostat-UNODC annual collection of statistics on crime and criminal justice; ▪ coordination role of the Eurostat national contact point; ▪ how to map criminal offences to the categories in the questionnaire; ▪ using metadata to explain different national concepts and definitions; ▪ strategies for ensuring data consistency and reducing the amount of missing data; ▪ areas in which the annual data collection could be improved in the future.
EXPECTED OUTCOME	Participants will be aware of the key issues that need to be addressed when compiling the annual statistics for the Eurostat-UNODC data collection.
TRAINING METHODS	The course will be in the form of a workshop: different trainers will introduce a topic and then participants will discuss the issues in more

	detail, asking questions, sharing experiences and good practices. To facilitate interaction, the participants may be divided into relevant sub-groups to discuss issues before reporting back to the full group.
REQUIRED READING	<p>Instructions, guidance and questionnaires issued for the annual Eurostat-UNODC data collection available at https://circabc.europa.eu</p> <p>International Classification of Crime for Statistical purposes, published by the UNODC, March 2015:</p> <p>https://www.unodc.org/documents/data-and-analysis/statistics/crime/ICCS/ICCS_final-2015-March12_FINAL.pdf</p>
SUGGESTED READING	<p>International Statistics on Crime and Criminal Justice (HEUNI, 2010): https://www.unodc.org/documents/data-and-analysis/Crime-statistics/International_Statistics_on_Crime_and_Justice.pdf</p> <p>European Sourcebook of Crime and Criminal Justice Statistics (HEUNI, 2014): http://www.heuni.fi/material/attachments/heuni/reports</p>
REQUIRED PREPARATION	Participants must be familiar with the annual data collection instructions, guidance and questionnaires. Participants should identify the key challenges experienced at the national level in providing the information requested and where possible highlight any solutions and good practices that have been developed. Participants should also prepare in advance any suggestions for improving the way the data collection could be undertaken at either the national or EU level.
TRAINER(S)/ LECTURER(S)	The trainers will be selected from National Statistical Institutes, UNODC, Eurostat and the contractor responsible for carrying out the annual data collection for Eurostat.

PRACTICAL INFORMATION				
WHEN	DURATION	WHERE	ORGANISER	APPLICATION VIA NATIONAL CONTACT POINT
29 - 30.06.2016	2 days	Eurostat, Luxembourg	EUROSTAT	Deadline: 03.05.2016

THE EUROGROUPS REGISTER (EGR)

COURSE LEADER	Zsolt VÖLFINGER
TARGET GROUP	<ul style="list-style-type: none"> ▪ National Statistical Business Register (SBR) staff; ▪ Statisticians working in Foreign Affiliate Statistics (FATS) in NSIs and/or Central Banks.
ENTRY QUALIFICATIONS	<ul style="list-style-type: none"> ▪ Sound command of English. Participants should be able to make short interventions and to actively participate in discussions; ▪ At least two years of working experience with business statistics; ▪ Experience in the EGR production will be an appreciated asset.
OBJECTIVE(S)	To provide the participants with advanced knowledge of the EGR 2.0 system and its applications. To present the EGR 2.0 business process, its links to the national SBR, its role and integration into the production of statistics. The new features of the EGR 2.0, the advanced functionalities of the EGR applications will be also part of the course.
CONTENTS	<ul style="list-style-type: none"> ▪ The EGR 2.0 business process; ▪ EGR-SBR data exchanges and data validation; ▪ The EGR Identification Service; ▪ The EGR Interactive Module user interface; ▪ The EGR FATS user interface; ▪ Data quality management in EGR 2.0.
EXPECTED OUTCOME	The participants understand the business process of EGR 2.0, the roles of the national SBR, the data exchanges, the data validation procedures, the use of EGR for business statistics. Participants get advanced knowledge about the use and functionalities of the EGR 2.0 applications.
TRAINING METHODS	<ul style="list-style-type: none"> ▪ Presentations and lectures ▪ Exchange of views/experiences on national practices ▪ Practical demonstrations ▪ Individual and group exercises
REQUIRED READING	Participants are expected to be familiar with the main concepts of EGR and its applications. Details on EGR can be found on the Statistics Explained website of Eurostat and on the related articles which can be found under the links at "See also".

	http://ec.europa.eu/eurostat/statistics-explained/index.php/EuroGroups_register
SUGGESTED READING	<ul style="list-style-type: none"> ▪ Eurostat Business registers Recommendations manual (in particular chapter 21 on Enterprise Groups) http://ec.europa.eu/eurostat/en/web/products-manuals-and-guidelines/-/KS-32-10-216 ▪ Regulation (EC) No 177/2008 establishing a common framework for business registers for statistical purposes ▪ Commission Implementation Regulations 192/2009 and 1097/2010
REQUIRED PREPARATION	None
TRAINER(S)/ LECTURER(S)	Zsolt VÖLFINGER (Eurostat), Enrica MORGANTI (Eurostat), Dimitar NENKOV (Eurostat)

PRACTICAL INFORMATION				
WHEN	DURATION	WHERE	ORGANISER	APPLICATION VIA NATIONAL CONTACT POINT
06 - 07.09.2016	2 days	Eurostat, Luxembourg	Eurostat	Deadline: 12.07.2016

BIG DATA SOURCES – WEB, SOCIAL MEDIA AND TEXT ANALYTICS

COURSE LEADER	Piet DAAS
TARGET GROUP	Official statisticians who already have knowledge about big data and its tools and who will start to work in practice on the use of web, social media and other natural language content for the production of statistics
ENTRY QUALIFICATIONS	<ul style="list-style-type: none"> ▪ Sound command of English. Participants should be able to make short interventions and to actively participate in discussions; ▪ Preferentially the participants should have followed the ESTP course “Hands-on immersion on big data tools”; ▪ The participants should be computer literate and able to programme in R and/or Python.
OBJECTIVE(S)	<p>Main objectives of the course:</p> <ul style="list-style-type: none"> ▪ Learn how to apply web scraping and other techniques to collect texts from the web; ▪ Learn how to analyse and mine texts in order to determine their content and sentiment; ▪ Learn how to deal with privacy and personal data.
CONTENTS	<ul style="list-style-type: none"> ▪ Text from the web and social media messages as a potentially rich big data source; ▪ Web scraping and other techniques to collect texts from the web; ▪ Text mining techniques applied to the content of web pages and social media; ▪ Sentiment and other emotion determination in texts; ▪ Extract and profile units to assess selectivity; ▪ Examples of the use of information derived from texts relevant for official statistics; ▪ Exercises and demonstrations.
EXPECTED OUTCOME	<p>At the end of the course, participants will be able to:</p> <ul style="list-style-type: none"> ▪ Apply web scraping techniques to extract texts from web pages and use API's to collect social media data; ▪ Mine texts to determine their content and sentiment;

	<ul style="list-style-type: none"> ▪ Study and profile units to assess selectivity; ▪ Initiate big data case studies; ▪ Prepare datasets to be used for network analysis and time-series analysis (so that the participant is prepared to, in combination with the type of skills acquired in the ESTP courses "Can a statistician become a data scientist" (for network analysis) and "Time-series econometrics", perform such analysis on these data sources on their own).
TRAINING METHODS	<ul style="list-style-type: none"> ▪ Presentations and lectures; ▪ Exchange of views and experiences on national practices; ▪ Exercises and demonstrations.
REQUIRED READING	<ul style="list-style-type: none"> ▪ I.H. Witten (2005) Text mining. Link: http://www.cs.waikato.ac.nz/~ihw/papers/04-IHW-Textmining.pdf
SUGGESTED READING	<ul style="list-style-type: none"> ▪ Ten Bosch, O. Windmeijer, D. (2014) On the use of internet robots for official statistics, Unece MSIS conference, Dublin. http://www.unece.org/fileadmin/DAM/stats/documents/ece/ces/ge.50/2014/Topic_3_NL.pdf ▪ Griffioen, R. de Haan, J., Willeborg, L. (2014) Collecting clothing data from the web. Paper for the Group of Experts on Consumer Price Indices meeting, Unece, Geneva. http://www.unece.org/fileadmin/DAM/stats/documents/ece/ces/ge.22/2014/UNECE-ILO_2014_Griffioen_deHaan_Willeborg.pdf ▪ Russel, M.A. (2015) Mining the Social Web, 2nd edition. O'Reilly, Sebastopol, USA. In particular Chapter 1. ▪ Abbott, D. (2013) Introduction to Text Mining. Presentation at the Virtual Data Intensive Summer School, July 10, 2013. http://www.vscse.org/summerschool/2013/Abbott.pdf ▪ Daas, P.J.H., Puts, M.J.H. (2014) Social Media Sentiment and Consumer Confidence. European Central Bank Statistics Paper Series No. 5, Frankfurt, Germany. https://www.ecb.europa.eu/pub/pdf/scpsps/ecbsp5.en.pdf ▪ Shah, D.V., Capella, J.N., Neuman, W.R. (2015) Toward Computational Social Science: Big Data in Digital environments. Special issue of the Annals of the American Academy of Political and Social Science, vol. 659, May.
REQUIRED PREPARATION	<ul style="list-style-type: none"> ▪ Create a Twitter account (if you not already have one), see: https://twitter.com/signup, and take a mobile phone with you to the course. Both are needed for some of the exercises in the course. ▪ Search the web for a list of 'stop words' specific for your language. The following page provides a good start: https://en.wikipedia.org/wiki/Stop_words. You will need the list for some of the exercises in the course.

TRAINER(S)/ LECTURER(S)	Piet DAAS (Statistics Netherlands), Olav TEN BOSCH (Statistics Netherlands), Martijn TENNEKES (Statistics Netherlands), Marco PUTS (Statistics Netherlands), Antonio VIRGILITTO (ISTAT).
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PRACTICAL INFORMATION				
WHEN	DURATION	WHERE	ORGANISER	APPLICATION VIA NATIONAL CONTACT POINT
12 – 15.09.2016	4 days	The Hague, Netherlands	Expertise France	Deadline: 18.07.2016

JDEMETRA+ FOR ADVANCED USERS AND HOBBY DEVELOPERS

COURSE LEADER	Dario BUONO
TARGET GROUP	Staff of national statistical institutes (including newcomers) involved in the production process who want to acquire a good understanding of Seasonal Adjustment (SA) methods and practices.
ENTRY QUALIFICATIONS	<ul style="list-style-type: none"> ▪ Sound command of English. Participants should be able to make short interventions and to actively participate in discussions; ▪ Sound knowledge of Time series analysis would be an advantage; ▪ Familiarity with the seasonal adjustment methods and software is not required.
OBJECTIVE(S)	<ul style="list-style-type: none"> ▪ To provide the participants with a basic understanding of the main concepts of seasonal and calendar adjustment, trend cycle, irregular components and related time-series issues; ▪ To introduce the participants to the use of software JDEMETRA+.
CONTENTS	<ul style="list-style-type: none"> ▪ Brief review of time series analysis, and ARIMA modelling; ▪ Seasonality and its determinants; ▪ Calendar effect and its components; ▪ Why seasonal and calendar adjustment? ▪ Identification of type of outliers; ▪ Use of additive and multiplicative decomposition; ▪ Interactive introductory sessions with JDEMETRA+; ▪ Revised ESS guidelines on seasonal adjustment .
EXPECTED OUTCOME	Trained people will be able to identify outliers, decompose time series, adjust series for the seasonal and calendar effects. They will be able to recognise series which need calendar and/or seasonal adjustment and carry out the related procedures by using the latest version of JDEMETRA+ tool.
TRAINING METHODS	<ul style="list-style-type: none"> ▪ Presentations and lectures; ▪ Case studies on real data sets (also provided by the participants); ▪ "Show and tell" by the participants.
REQUIRED	Participants should be familiar with the content of the website

READING	http://www.cros-portal.eu/content/seasonal-adjustment
SUGGESTED READING	Revised ESS guidelines on seasonal adjustment.
REQUIRED PREPARATION	Participants are requested to write a short summary of their activities in their organisation. They are requested to express the reasons and motivation for applying to this training activity and to describe the practices, problems and experiences they face in the field of the course. Participants can also bring a set of time-series related to their interest, should they wish to do so.
TRAINER(S)/ LECTURER(S)	Dario BUONO (Eurostat) and Jean PALATE (National Bank of Belgium)

PRACTICAL INFORMATION				
WHEN	DURATION	WHERE	ORGANISER	APPLICATION VIA NATIONAL CONTACT POINT
13 - 15.09.2016	3 days	Eurostat, Luxembourg	Eurostat	Deadline: 19.07.2016

COGNITIVE INTERVIEWING	
COURSE LEADER	Pamela CAMPANELLI
TARGET GROUP	NSI staff with some background in survey research.
ENTRY QUALIFICATIONS	<ul style="list-style-type: none"> ▪ Sound command of English. Participants should be able to make short interventions and to actively participate in discussions; ▪ Background in survey research.
OBJECTIVE(S)	<p>This course is designed to familiarise participants with this powerful and efficient method of piloting survey questions called Cognitive Interviewing. Cognitive Interviewing is a type of in-depth interviewing which focuses on respondents' thought processes in answering survey questions and uses specialised techniques such as thinking aloud, probing, observation and paraphrasing. Participants will learn what cognitive interviewing is as well as how to do it. This includes the following content:</p> <ul style="list-style-type: none"> ▪ Specific design for conducting cognitive interviews; ▪ How cognitive interviewing can be used to identify problematic questions prior to using the questionnaire in the field and practical group work in doing this; ▪ Sampling, analysis and reporting of the cognitive interview results; ▪ Practical insights from using cognitive interviewing in a statistical institute.
CONTENTS	<ul style="list-style-type: none"> ▪ Introduction to the background and purpose of Cognitive Interviewing; ▪ Basic Methods for doing Cognitive Interviews; ▪ Basic Methods for sampling, analysing and reporting Cognitive Interview; ▪ Analyses of the cognitive interview results; ▪ Application of cognitive interviews in NSIs.
EXPECTED OUTCOME	At the end of the course, participants will be able to apply, analyse and communicate the results of cognitive interviews in the production of questionnaires in their NSIs.
TRAINING METHODS	<ul style="list-style-type: none"> ▪ Presentations and lectures; ▪ Practical exercises of the application, analysis and communication of the results of cognitive interviews; ▪ Study cases of application of cognitive interviewing in official statistics

	and other domains of research based in sample surveys.
REQUIRED READING	None
SUGGESTED READING	<ul style="list-style-type: none"> ▪ Willis, G.B. (2005), Cognitive Interviewing: A Tool for Improving Questionnaire Design, Thousand Oaks, CA: Sage. ▪ Presser, S., and Blair, J. (1994), Survey Pretesting: Do Different Methods Produce Different Results?, Sociological Methodology, 73-104. ▪ Tourangeau, R., Rips, L.J., and Rasinski, K. (2000), The Psychology of Survey Response, Cambridge: Cambridge University Press. ▪ Fowler, F.J. Jr., (1995), Improving Survey Questions: Design and Evaluation, Applied Social Research Methods Series Volume 38, Thousand Oaks, CA: SAGE Publications. ▪ Blair, J. and Conrad, F. (2011), Sample Size for Cognitive Interview Pretesting, Public Opinion Quarterly, 75(4) 636–658. ▪ Willis, G. and Boeije, H. eds. (2013) Cognitive Interviewing Reporting Framework, Special Issue, European Journal of Research Methods for the Behavioral and Social Sciences, 3(9).
REQUIRED PREPARATION	None
TRAINER(S)/ LECTURER(S)	Pamela CAMPANELLI (Statistics Austria) and Marc PLATE (Statistics Austria)

PRACTICAL INFORMATION				
WHEN	DURATION	WHERE	ORGANISER	APPLICATION VIA NATIONAL CONTACT POINT
15 - 16.09.2016	2 days	Vienna, Austria	DEVSTAT	Deadline: 21.07.2016

STATISTICAL MATCHING & RECORD LINKAGE	
COURSE LEADER	Pier Luigi CONTI
TARGET GROUP	Statistical methodologists or researchers from National Statistical Institutes who are (or could be) involved in projects requiring the integrated use of more than one data source: e.g. two archives or one sample survey and one archive (record linkage problem) or two sample surveys with no units in common (statistical matching problem).
ENTRY QUALIFICATIONS	<ul style="list-style-type: none"> ▪ Sound command of English. Participants should be able to make short interventions and to actively participate in discussions; ▪ Basic knowledge about R is required.
OBJECTIVE(S)	The goal of this activity is to provide the participants with (1) the basic knowledge on the record linkage and the statistical matching problem; (2) the understanding of the uncertainty in the statistical matching; (3) the basic knowledge of the statistical matching problem for complex survey data (4) the skills to apply statistical matching methods.
CONTENTS	<ul style="list-style-type: none"> ▪ Basic concepts related to record linkage and statistical matching; ▪ Micro and macro approaches for statistical matching; ▪ Uncertainty in statistical matching; ▪ Statistical matching for complex surveys; ▪ Application of record linkage and statistical matching in the ESS.
EXPECTED OUTCOME	In this course, participants will develop the theoretical and practical skills required to apply statistical matching methods in their daily work at the NSIs.
TRAINING METHODS	<ul style="list-style-type: none"> ▪ Presentations and lectures; ▪ Practical exercises of statistical matching; ▪ Case Studies.
REQUIRED READING	<ul style="list-style-type: none"> ▪ D'Orazio, M., Zio, M. D., and Scanu, M. (2006). Statistical matching: theory and practice. Wiley, Chichester.
SUGGESTED READING	<ul style="list-style-type: none"> ▪ Conti, P. L., Marella, D., and Scanu, M. (2012). Uncertainty analysis in statistical matching. Journal of Official Statistics, 28, 69-88. ▪ Conti, P. L., Marella, D., and Scanu, M. (2015). Statistical matching for complex survey data with applications. Journal of the American

	Statistical Association. To appear.
REQUIRED PREPARATION	None
TRAINER(S)/ LECTURER(S)	Pier Luigi CONTI (Sapienza University of Rome) and Daniela MARELLA (University of Rome)

PRACTICAL INFORMATION				
WHEN	DURATION	WHERE	ORGANISER	APPLICATION VIA NATIONAL CONTACT POINT
19 - 21.09.2016	3 days	Valencia, Spain	DEVSTAT	Deadline: 01.08.2016

NATIONAL ACCOUNTS IN PRACTICE – ADVANCED COURSE

COURSE LEADER	Anders NORDIN (Administrative course leader)
TARGET GROUP	Statisticians of National Accounts departments, with more than one year's experience in the statistical field, wishing to understand better the overall system of National Accounts and its critical issues.
ENTRY QUALIFICATIONS	<ul style="list-style-type: none"> ▪ Sound command of English. Participants should be able to make short interventions and to participate actively in discussions; ▪ Familiarity with Balance of Payments; ▪ Experience in National Accounts.
OBJECTIVE(S)	<p>The course will broaden and in-deep the theoretical and practical knowledge of National Accounts approaches.</p> <p>The main focus will be on concepts and definitions of NA and discussions on General features of the System of National Accounts (SNA, ESA), basic concepts, supply and Use Tables, non-financial sector accounts and financial sector accounts.</p> <p>The course will further develop Quarterly national accounts, Satellite Accounts as well as Regional Accounts.</p>
CONTENTS	<ul style="list-style-type: none"> • General features of NA; • Supply and Use Tables; • Input-Output Tables; • Volume and price measurement; • Integrated compilation of data in current and constant prices; • Institutional Sector Accounts: <ul style="list-style-type: none"> 1/ Non-financial Accounts as well as Financial Accounts: Nonfinancial corporations, Financial corporations, Government (including EDP-related matters), Households, Rest of the World 2/ Labour Accounts; • Balancing the system with a fully integrated system; • Stiglitz commission and well-being; • Extensions of the core system: • Gross Domestic Product (GDP) and beyond, recommendations of the Stiglitz-commission;

	<ul style="list-style-type: none"> • Satellite accounts, e.g. National Accounting Matrix with • Environmental Accounts (NAMEA); Statistics Administration and Management (SAM); • Regional accounts; • What's new in ESA 2010?; • Administrative use of NA data; • The European management of NA data and quality; • International comparisons and Purchasing Power Parities; • Concepts and definitions of the European System of Accounts (2010). The guidelines of the ESA are explained in a general way. Much attention is also paid to the actual practice of compiling national accounts.
EXPECTED OUTCOME	Participants will gain in-deep understanding of the conceptual framework underpinning National Accounts, together with the main sources and methods used to compile the accounts in the EU. There will be a mixture of presentation and practical work for participants to reinforce their learning.
TRAINING METHODS	Combination of theoretical lessons, practical training with the computer, and discussion of practical problems.
REQUIRED READING	Copies of the presentation materials.
SUGGESTED READING	ESA 2010
REQUIRED PREPARATION	None
TRAINER(S)/ LECTURER(S)	<p>Administrative course leader: Anders NORDIN (Sogeti)</p> <p>Leonidas AKRITIDIS (independent expert)</p> <p>Martin KELLAWAY (independent expert)</p> <p>Roger AKERS (independent expert)</p>

PRACTICAL INFORMATION				
WHEN	DURATION	WHERE	ORGANISER	APPLICATION VIA NATIONAL CONTACT POINT
03 - 12.10.2016	8 days	Luxembourg, Luxembourg	SOGETI	Deadline: 08.08.2016

RAPID ESTIMATES	
COURSE LEADER	Gian Luigi MAZZI
TARGET GROUP	Junior and experienced statisticians with interest in rapid estimates, macroeconomic analysis, now/forecasting having a good background in time series analysis.
ENTRY QUALIFICATIONS	<ul style="list-style-type: none"> ▪ Sound command of English. Participants should be able to make short interventions and to actively participate in discussions; ▪ Good background in macroeconomics, time series analysis and possibly econometrics.
OBJECTIVE(S)	<ul style="list-style-type: none"> ▪ To make participants familiar with the most advanced techniques to produce rapid estimates of relevant macroeconomic variables; ▪ To make participants able to develop and evaluate rapid estimates based on their own data; ▪ To make participants able to discriminate among different kinds of rapid estimates, to judge on the appropriateness of them in practical cases and to analyse costs and benefits of various types of rapid estimates.
CONTENTS	<ul style="list-style-type: none"> ▪ Classification and taxonomy of rapid estimates; ▪ Overview of statistical and econometric techniques for rapid estimates; ▪ Advanced statistical and econometric techniques; ▪ Statistical evaluation of rapid estimates.
EXPECTED OUTCOME	After the training, people are expected to be able to perform all the necessary steps, through the construction of rapid estimates, to compare alternative kinds of rapid estimates, to critically analyse and evaluate them.
TRAINING METHODS	<ul style="list-style-type: none"> ▪ Presentations and lectures; ▪ Exchange of views during open discussion sessions; ▪ Exercises and practical examples.
REQUIRED READING	A list of required reading will be communicated before the training.
SUGGESTED READING	A list of suggested reading will be communicated before the training.

REQUIRED PREPARATION	Participants are requested to write a short summary of their activities in their organisation. They are requested to express the reasons and motivation for applying to this training activity and to describe the practices, problems and experiences they face in the field of the course. Participants can also bring a set of time-series related to their interest, should they wish to do so.
TRAINER(S)/ LECTURER(S)	Gian Luigi MAZZI (Eurostat) Dominique LADIRAY (INSEE) and James MITCHELL (WBs UK).

PRACTICAL INFORMATION				
WHEN	DURATION	WHERE	ORGANISER	APPLICATION VIA NATIONAL CONTACT POINT
04 - 07.10.2016	4 days	Eurostat, Luxembourg	EUROSTAT	Deadline: 09.08.2016

ENTERPRISE ARCHITECTURE AND THE DIFFERENT ENTERPRISE ARCHITECTURE LAYERS, APPLICATION TO THE ESS CONTEXT

COURSE LEADER	Giulio BARCAROLI
TARGET GROUP	National delegates representing their country in Working Groups, Task Forces and Committees of the European Statistical System (ESS) or in the Council Working Groups on Statistics.
ENTRY QUALIFICATIONS	Participants should have a sound command of English and should be able to make short interventions and to actively participate in discussions.
OBJECTIVE(S)	<p>The main objectives of the course are:</p> <ul style="list-style-type: none"> ▪ Illustrate the overall concepts of the Enterprise Architecture and models for the EA based on the "ESS EA Reference Framework" and the "ESS Statistical Production Reference Architecture"; ▪ Focus on the Business Architecture within an NSI; ▪ Explain how to map GSBPM to the statistical processes and the related quality management; ▪ Provide an overview of the main statistical and technical standards as pre-requisites for the implementation of the EA.
CONTENTS	<p>The course will focus on essentials of EA approaches, as far as possible based on real life use cases, covering the following topics:</p> <ul style="list-style-type: none"> ▪ Business-outcome driven Enterprise Architecture: why and how. ▪ Enterprise Architecture layers: <ul style="list-style-type: none"> ○ Business Architecture, ○ Information Architecture, ○ Application Architecture, ○ Technology Architecture. ▪ The Archimate modelling structures and their practical usage. ▪ Business Architecture concepts and components: <ul style="list-style-type: none"> ○ BA Business Lines, ○ BA Activity Model, ○ BA Process Flow (using Archimate modelling structures), ○ Shared Infrastructures,

	<ul style="list-style-type: none"> ○ Guiding Principles. ▪ Reference standards supporting Enterprise Architecture for Official Statistics: <ul style="list-style-type: none"> ○ Generic Statistical Business Process Model (GSBPM): standard model to map statistical processes, generic quality indicators for phases and sub-processes; ○ Generic Statistical Information Model (GSIM): introduction and case study; ○ Statistical Data and Metadata Exchange (SDMX); ○ Service Oriented Architecture (SOA) and Common Statistical Production Architecture (CSPA). ▪ Enterprise Architecture for the ESS Vision 2020, the ESS EA Reference Framework (EARF): <ul style="list-style-type: none"> ○ Objectives of the ESS EARF, ○ Review of the ESS EARF artefacts, ○ Statistical Production Reference Architecture (SPRA), ○ Examples of the use of the ESS EARF in ESS.VIP projects, ○ ESS EA principles, ○ Contacts for Enterprise Architecture in the ESS.
EXPECTED OUTCOME	<p>At the end of the course, participants will be able to:</p> <ul style="list-style-type: none"> ▪ Propose and encourage the adoption of an EA within their respective organisations; ▪ Design a suitable Business Architecture based on the GSBPM; ▪ Facilitate the development of an EA compliant with the "ESS EA Reference Framework" and the "ESS Statistical Production Reference Architecture"; ▪ Understand when and how to apply standards in order to facilitate industrialisation processes.
TRAINING METHODS	The theoretical explanation will be mixed with real use cases performed at the ESS and national level.
REQUIRED READING	None
SUGGESTED READING	<ul style="list-style-type: none"> ▪ UNECE/Eurostat/OECD (2013). Generic Statistical Business Process Model (GSBPM version 5.0). http://www1.unece.org/stat/platform/display/GSBPM/Generic+Statistical+Business+Process+Model http://www1.unece.org/stat/platform/display/gsim/Generic+Statistical+Information+Model

	<ul style="list-style-type: none"> Statistical Network Business Architecture Project (2013). http://www1.unece.org/stat/platform/display/statnet/Business+Architecture+Project http://www.opengroup.org/archimate/ http://www.archimatetool.com/ Eurostat (2015). European Statistical System Enterprise Architecture Reference Framework (ESS EARF) v1.0 http://www.cros-portal.eu/content/ess-ea-rf Eurostat (2015). Statistical Production Reference Architecture (SPRA) v0.4 http://www.cros-portal.eu/content/spra
REQUIRED PREPARATION	None
TRAINER(S)/ LECTURER(S)	Giulio BARCAROLI (ISTAT), Nadia MIGNOLLI (ISTAT), Francesco RIZZO (ISTAT), Monica SCANNAPIECO (ISTAT), Mauro SCANU (ISTAT), Marina SIGNORE (ISTAT), Ville KOSKINEN (Statistics Finland)

PRACTICAL INFORMATION				
WHEN	DURATION	WHERE	ORGANISER	APPLICATION VIA NATIONAL CONTACT POINT
11 - 14.10.2016	4 days	Rome Italy	ICON- INSTITUT Public Sector GmbH	Deadline: 16.08.2016

OUTPUT CHECKING	
COURSE LEADER	Aleksandra BUJNOWSKA
TARGET GROUP	Staff members dealing with statistical confidentiality, especially staff in Research Data Centres or Safe Centres. The course is intended for staff checking output that was created by external researchers or output from varying statistical analyses created by NSA colleagues.
ENTRY QUALIFICATIONS	Sound command of English. Participants should be able to make short interventions and to actively participate in discussions.
OBJECTIVE(S)	The objective of this course is to introduce participants to the practice of output checking. The course focuses on output that is generated starting from official microdata by researchers. In most cases researchers will have had access to microdata through the Research Data Centre of the data producer to produce the output. Case studies from Member States (MS) will be discussed.
CONTENTS	<ul style="list-style-type: none"> ▪ Review of statistical disclosure control methodology; ▪ Approaches for checking tabular output and non-tabular output; ▪ Researcher training; ▪ Practical case studies from MS; ▪ Software examples.
EXPECTED OUTCOME	Better understanding of theory and methods used when statistical output that has been created by researchers is checked for statistical confidentiality.
TRAINING METHODS	<p>The course programme is a mix of theoretical background, practical application and group discussion:</p> <ul style="list-style-type: none"> ▪ Presentations and lectures; ▪ Demonstration of examples; ▪ Manual exercises; ▪ Group discussions.
REQUIRED READING	None
SUGGESTED READING	<ul style="list-style-type: none"> ▪ Guidelines for the Checking of Output based on Microdata Research (2009) http://www.cros-portal.eu/content/guidelines-output-checking ▪ Statistical Disclosure Control (2012) by A. Hundepool, J. Domingo-

	Ferrer, L. Franconi, S. Giessing, E. Schulte Nordholt, K. Spicer and P.P. de Wolf, Wiley Series in Survey Methodology, ISBN 978-1-1199-7815-2
REQUIRED PREPARATION	Participants will be required to bring and present two examples of output for discussion in the training. These should be two outputs that they themselves or colleagues have checked in their Statistical Institute and found challenging or interesting or that illustrate a rule of output checking.
TRAINER(S)/ LECTURER(S)	Eric SCHULTE NORDHOLT (Statistics Netherlands); Peter-Paul DE WOLF (Statistics Netherlands).

PRACTICAL INFORMATION				
WHEN	DURATION	WHERE	ORGANISER	APPLICATION VIA NATIONAL CONTACT POINT
13 - 14.10.2016	2 days	Eurostat, Luxembourg	EUROSTAT	Deadline: 18.08.2016

DISSEMINATION AND COMMUNICATION – INTRODUCTORY COURSE	
COURSE LEADER	Adolfo GALVEZ MORALEDA
TARGET GROUP	Staff members working in dissemination units or those who are interested in these activities
ENTRY QUALIFICATIONS	Participants must have a solid command of English as group discussions and exercises will be used in the course
OBJECTIVE(S)	<ul style="list-style-type: none"> ▪ Introduce the participants to current European and international requirements and recommendations shaping and defining dissemination in the European Statistical System like the Code of Practice, the UN Fundamental Principles and the new ESS project DIGICOM to modernise communication and dissemination of European statistics; ▪ Demonstrate the use of quantitative measures of dissemination i.e. timeliness, punctuality, adherence to release schedules, media citations, various web metrics (sessions, hits bounce rates); ▪ Discuss and demonstrate how different types of content can be tailored to specific user groups and special audiences. ▪ Visualisation: Introduce best practices on how to present data visualisations on websites: tables, graphs, maps and other innovative ways to convey statistical information to the users like infographics, tree maps, statistical videos. etc.; ▪ Findability and comprehension: Describe the function and importance of metadata when users need to understand and find statistical information on the Internet; ▪ Introduce tools and methods for involving users in testing and development of new functionality and products; ▪ Discuss the ways of promoting European statistics using printed publications as a marketing tool, using social media, mobile apps, etc. to reach new audiences. Discuss future and present challenges in (mainly electronic) dissemination.
CONTENTS	<p><i>Legal requirements</i></p> <p>European and international requirements, guidelines and recommendations</p> <p>Open data</p> <p><i>Defining user requirements –Understanding what the users need</i></p>

	<p>Users and user groups – segmentation of the user population</p> <p>Usability testing</p> <p><i>Functionality requirements</i></p> <p>Designing tables, graphs, maps and other visualisations for websites</p> <p>Innovative visualisations</p> <p>Documentation of statistics</p> <p>Archiving of statistics</p> <p>Requirements for output databases</p> <p>Access requirements (APIs / Bulk download/ Batch access)</p> <p><i>Measuring dissemination</i></p> <p>Timeliness, punctuality, media impact, web metrics</p> <p><i>Future of dissemination</i></p> <p>Opportunities and challenges in social media and web 2.0</p> <p>Mobile devices</p> <p>New approaches – innovative tools and documentation.</p> <p>Visualisation tools will help users to discover new aspect of statistical data and get a more intuitive understanding of complex relations.</p> <p>The future of print</p> <p>Statistical Literacy</p> <p>The ESS.VIP.DIGICOM project.</p>
EXPECTED OUTCOME	<p>After the course participants will:</p> <ul style="list-style-type: none"> ▪ Understand how the European Code of Practice and UN Fundamental Principles of Official Statistics influence and shape dissemination practices of a national statistics institute; ▪ How the ESS will work in the coming years through a new strategy of dissemination and communication; ▪ Have experienced and discussed the “best practices” regarding presentation of tables, graphics, maps, other visualisation techniques and metadata on the Internet; ▪ Be able to participate in the formulation of a dissemination strategy and formulate strategic requirements for new dissemination tools/and new media. Understand various methods for monitoring the impact and effect of dissemination.
TRAINING METHODS	<p>Lectures, group discussions, practical exercises.</p>

REQUIRED READING	None
SUGGESTED READING	<ul style="list-style-type: none"> ▪ Making Data Meaningful Part 2 - UNECE 2009 UN Fundamental Principles of Official Statistics http://unstats.un.org/unsd/dnss/gp/fundprinciples.aspx ▪ European Statistics Code of Practice http://ec.europa.eu/eurostat/web/quality/european-statistics-code-of-practice ▪ Blog about Stats: http://blogstats.wordpress.com/ ▪ Innovative Approaches to Turning Statistics into Knowledge, OECD 2013: http://www.oecd.org/std/statknowledge.htm ▪ OECD's Privacy Policy Statement Generator: www.oecd.org/sti/privacygenerator ▪ Statistics Explained user statistics via Piwik: who is looking? http://www.unece.org/stats/documents/2011.06.dissemination.html www.visual-literacy.org ▪ Stephen Few: Show me the numbers. Designing Tables and Graphs to Enlighten ▪ Data Visualisation for the Citizen User: Making Better Graphics Quicker www.unece.org/fileadmin/DAM/stats/documents/ece/ces/ge.45/2013/Session_2 - Alan SmithFINAL.pdf ▪ The ESS Vision 2020 http://ec.europa.eu/eurostat/web/ess/about-us/ess-vision-2020 ▪ The Users of Statistics and their role in the European Society http://ec.europa.eu/eurostat/web/european-statistical-advisory-committee-esac/activities/esac-documents
REQUIRED PREPARATION	Participants are expected to be familiar with the dissemination strategy of their own organisation.
TRAINER(S)/ LECTURER(S)	Adolfo GALVEZ MORALEDA (INE Spain), Alicia FERNANDEZ SANZ (INE Spain), Maria Jesus VINUESA (INE Spain), Jose Alberto PINTO MARTINS (INE Portugal), Maria-Luz SEOANE (INE Spain).

PRACTICAL INFORMATION				
WHEN	DURATION	WHERE	ORGANISER	APPLICATION VIA NATIONAL CONTACT POINT
19 - 21.10.2016	3 days	Madrid, Spain	Expertise France	Deadline: 24.08.2016

SURVEY METHODOLOGY AND SAMPLING TECHNIQUES

COURSE LEADER	Jean-Marc NICOLETTI
TARGET GROUP	Staff using sample survey techniques in the production of statistics
ENTRY QUALIFICATIONS	<ul style="list-style-type: none"> ▪ Sound command of English. Participants should be able to make short interventions and to actively participate in discussions; ▪ Good knowledge of basic mathematical and statistical notions.
OBJECTIVE(S)	The aim of the course is to familiarise participants with the fundamental principles and main methods of survey sampling.
CONTENTS	<ul style="list-style-type: none"> ▪ Basic concepts of survey sampling; ▪ Simple random sampling; ▪ Use of auxiliary information; ▪ Stratified, cluster and multi-stage sampling; ▪ Ratio and regression estimators; ▪ Post stratification and calibration; ▪ Introduction to the problems, effects and treatment of non-response.
EXPECTED OUTCOME	<ul style="list-style-type: none"> ▪ Better understanding of the fundamental principles; ▪ Ability to apply the main methods of survey sampling in practice.
TRAINING METHODS	The course is based on lectures and practical exercises, for which computers and the SAS Enterprise Guide software are used.
REQUIRED READING	None
SUGGESTED READING	<ul style="list-style-type: none"> ▪ Sampling Techniques, 3rd edition, September 1977, William G. Cochran, or other basic introduction to sampling theory.
REQUIRED PREPARATION	None
TRAINER(S)/ LECTURER(S)	<p>Daniel ASSOULIN (Swiss Federal Statistical Office - FSO);</p> <p>Guillaume CHAUVET (National Statistical Institute - INSEE France);</p> <p>Jean-Marc NICOLETTI (Swiss Federal Statistical Office - FSO);</p> <p>Eric LESAGE (National Statistical Institute - INSEE France).</p>

	Eurostat MIP team and DG ECFIN MIP team
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PRACTICAL INFORMATION				
WHEN	DURATION	WHERE	ORGANISER	APPLICATION VIA NATIONAL CONTACT POINT
24 – 27.10.2016	4 days	Neuchâtel, Switzerland	EFTA	Deadline: 01.07.2016

BALANCE OF PAYMENTS – ADVANCED COURSE	
COURSE LEADER	Simon HUMPHRIES
TARGET GROUP	Staff members in the field of National Accounts (NA) and Balance of Payment (BoP) departments in National Statistical Offices and National Banks.
ENTRY QUALIFICATIONS	<ul style="list-style-type: none"> ▪ Sound command of English. Participants should be able to make short interventions and to participate actively in discussions; ▪ Familiarity with Balance of Payments; ▪ Experience in National Accounts.
OBJECTIVE(S)	<p>The course will further explore and in deepen the theoretical and practical knowledge of BOP approaches.</p> <p>The main focus will be on concepts and definitions of BoP, discussions of the financial accounts and the International Investment Position.</p> <p>The course will explore the European perspective and a view on harmonisation efforts within Europe.</p>
CONTENTS	<ul style="list-style-type: none"> ▪ Concepts and definitions of BoP – discussions of problematic areas, with special focus on International Trade in Services (ITS) and Foreign Direct Investment (FDI); ▪ Data sources and compilation methods. More in-depth discussions with emphasis on ITS and FDI; ▪ European perspective – aggregates for economic and currency unions. Harmonisation efforts (past, present and future) within Europe. Discussions about national experiences; ▪ Quality issues. Presentation of national methods practice and approaches; ▪ Analysis of BoP.
EXPECTED OUTCOME	Participants will gain profound and in-deep understanding of the conceptual framework underpinning BoP, together with the main sources and methods used to compile the accounts in the EU. There will be a mixture of presentation and practical work for participants to reinforce their learning.
TRAINING METHODS	Combination of theoretical lessons, practical training with the computer, and discussion of practical problems.
REQUIRED READING	Copies of the presentation materials.

SUGGESTED READING	ESA 2010
REQUIRED PREPARATION	None
TRAINER(S)/ LECTURER(S)	Simon HUMPHRIES (independent expert)

PRACTICAL INFORMATION				
WHEN	DURATION	WHERE	ORGANISER	APPLICATION VIA NATIONAL CONTACT POINT
07 - 09.11.2016	3 days	Luxembourg, Luxembourg	SOGETI	Deadline: 12.09.2016

ADVANCED BIG DATA SOURCES – MOBILE PHONE AND OTHER SENSORS

COURSE LEADER	Piet DAAS
TARGET GROUP	Official statisticians who already have knowledge about big data and its tools and who will start to work in practice on the use of mobile phone and other sensor data for the production of statistics.
ENTRY QUALIFICATIONS	<ul style="list-style-type: none"> ▪ Sound command of English. Participants should be able to make short interventions and to actively participate in discussions; ▪ Preferentially the participants should have followed the ESTP course "Hands-on immersion on big data tools"; ▪ The participants should be computer literate and able to programme in R and/or Python.
OBJECTIVE(S)	<p>Main objectives of the course:</p> <ul style="list-style-type: none"> ▪ Learn how to explore and analyse mobile phone and other sensor data and its metadata; ▪ Learn how to extract relevant information for statistical purposes from huge amounts of sensor data.
CONTENTS	<ul style="list-style-type: none"> ▪ The potential of big data from sensors for official statistics; ▪ Domain knowledge of mobile phone, road sensors, and vessel data; ▪ The importance of metadata and its quality; ▪ Exploration, analysis, and visualisation of sensor data; ▪ Editing and quality assessment of sensor data; ▪ Units and populations in the context of sensor data; ▪ Estimating with sensor data and auxiliary information; ▪ Geolocation analysis of remote sensing data; ▪ Examples of sensor data usage in official statistics.
EXPECTED OUTCOME	<p>At the end of the course, participants will be able to:</p> <ul style="list-style-type: none"> ▪ Process and extract information from huge volumes of sensor data; ▪ Explore, analyse, and visualise sensor data; ▪ Use sensor data as a major source for official statistics;

	<ul style="list-style-type: none"> ▪ Initiate big data case studies. ▪ Prepare datasets to be used for network analysis and time-series analysis (so that the participant is prepared to, in combination with the type of skills acquired in the ESTP courses "Can a statistician become a data scientist" (for network analysis) and "Time-series econometrics", perform such analysis on these data sources on their own).
TRAINING METHODS	<ul style="list-style-type: none"> ▪ Presentations and lectures. ▪ Exchange of views and experiences on national practices. ▪ Hands on exercises with sensor data.
REQUIRED READING	None
SUGGESTED READING	<ul style="list-style-type: none"> ▪ Puts, M., Daas, P., Tennekes, M. (2015) High Frequency Road Sensor Data for Official Statistics. Presentation at the 2015 New Techniques and Technologies for Statistics (NTTS) conference, Brussels, Belgium. http://www.cros-portal.eu/sites/default/files//Presentation%20S13AP4.pdf ▪ Tennekes, M., Puts, M. (2015) Projection of road sensors to the Dutch road network. Paper presented at the 2015 New Techniques and Technologies for Statistics (NTTS) conference, Brussels, Belgium. http://www.cros-portal.eu/sites/default/files//Presentation%20S13AP5.pdf ▪ Puts, M., Daas, P. (2015) Editing Big Data: an holistic approach. Paper for the Work Session on Statistical Data Editing, United Nations Economic Commission for Europe, Budapest, Hungary. https://www.unece.org/fileadmin/DAM/stats/documents/ece/ces/ge.44/2015/mtg1/WP_25_Netherlands_Editing_Big_data.pdf ▪ Tennekes, M., Offermans, M. (2014) Daytime Population Estimations Based on Mobile Phone Metadata. Presentation at the 2014 Joint Statistical Meeting (JSM), Boston, USA. http://www.von-tijn.nl/tijn/research/presentations/DTP_Martijn_Tennekes_JSM2014.pdf ▪ Feasibility Study on the Use of Mobile Positioning Data for Tourism Statistics, Eurostat contract (2014) http://ec.europa.eu/eurostat/web/tourism/methodology/projects-and-studies ▪ Törmä, M., Järvenpää, E., Härmä, P., Hallin-Pihlatie, L., Hatunen, S., Kallio, M. (2015) Experiences using LUCAS data in Finnish Land Cover monitoring - Current activities and future plans Presentation at the 2015 New Techniques and Technologies for Statistics (NTTS) conference, Brussels, Belgium. http://www.cros-portal.eu/sites/default/files//Presentation%20S13AP2.pdf

REQUIRED PREPARATION	None
TRAINER(S)/ LECTURER(S)	Marco Puts (Statistics Netherlands), Martijn Tennekes (Statistics Netherlands), Piet Daas (Statistics Netherlands), Antonino Virgillito (ISTAT).

PRACTICAL INFORMATION				
WHEN	DURATION	WHERE	ORGANISER	APPLICATION VIA NATIONAL CONTACT POINT
07 - 10.11.2016	4 days	Heerlen, Netherlands	Expertise France	Deadline: 12.09.2016

ANNUAL TO QUARTERLY TO MONTHLY DATA

COURSE LEADER	Dario BUONO
TARGET GROUP	Statistical production units of NSIs. Previous knowledge: Basics of time series analysis and regression model.
ENTRY QUALIFICATIONS	<ul style="list-style-type: none"> ▪ Sound command of English. Participants should be able to make short interventions and to actively participate in discussions; ▪ Previous knowledge: Basics of time series analysis and regression model.
OBJECTIVE(S)	Introducing to the theory and practice of temporal disaggregation, balancing and statistical reconciliation of systems of time series.
CONTENTS	<ul style="list-style-type: none"> ▪ Flow, index and stock series; ▪ Deriving high frequency data with and without proxies; ▪ Temporal and Accounting constraints; ▪ Theory and practice of temporal disaggregation and data reconciliation: <ul style="list-style-type: none"> ▪ The univariate case (main field of application: Quarterly National Accounts); ▪ benchmarking and temporal disaggregation by related series of a temporally constrained time series; ▪ two-step adjustment and optimal regression based techniques: Denton's benchmarking, Chow-Lin, Fernández, Litterman; ▪ The statistical reconciliation of systems of time series (main field of application: Quarterly National Accounts, Labour Force, Industrial Production Indices); ▪ RAS and Stone's Least Squares adjustment of a table with fixed marginal totals; ▪ dealing with negative entries (RAS-PM); ▪ Two-step reconciliation techniques: 2S-BB and 2S-ST; ▪ practice using JDemetra+ plug-ins.
EXPECTED OUTCOME	None
TRAINING METHODS	<ul style="list-style-type: none"> ▪ Presentations, lectures and exchange of views;

	<ul style="list-style-type: none"> ▪ Exchange of views/experiences on national practices ▪ Exercises
REQUIRED READING	None
SUGGESTED READING	None
REQUIRED PREPARATION	None
TRAINER(S)/ LECTURER(S)	Dario BUONO (Eurostat) and Riccardo GATTO (Eurostat)

PRACTICAL INFORMATION				
WHEN	DURATION	WHERE	ORGANISER	APPLICATION VIA NATIONAL CONTACT POINT
15 - 17.11.2016	3 days	Eurostat Luxembourg	EUROSTAT	Deadline: 20.09.2016

DEVELOPMENT AND USE OF INDICATOR SYSTEMS FOR EVIDENCE-BASED DECISION MAKING

COURSE LEADER	André de MONTMOLLIN and Nicola MASSARELLI
TARGET GROUP	Staff members working in the field of economic, social or environmental statistics who are or who will be involved in indicator systems or who need to extend their knowledge on how to use indicators and indicator systems.
ENTRY QUALIFICATIONS	<ul style="list-style-type: none"> ▪ Sound command of English. Participants should be able to make short interventions and to actively participate in discussions; ▪ University degree and/or significant experience in the field of statistics.
OBJECTIVE(S)	<ul style="list-style-type: none"> ▪ To provide participants with a theoretical and methodological background on the development of indicator systems; ▪ To build up a common understanding of terms, definitions, as well as the role and limits of official statistics in the construction and maintenance of indicator systems; ▪ To provide knowledge about the links between the users of indicators and the providers, especially the link between statisticians operating indicator systems and policy makers.
CONTENTS	<ul style="list-style-type: none"> ▪ Why indicators? What are indicators? Definition and typology ▪ For which purposes can indicators be used and which not (monitoring, controlling, evaluation); ▪ Establishment of an indicator system, role of the conceptual framework; ▪ Selection criteria and quality profile of indicators; ▪ Interaction NSI <-> stakeholders, how to guarantee the independence of the NSI; ▪ Communication through indicators, target audiences, how to communicate complexity; ▪ Indicator-based assessment methodologies.
EXPECTED OUTCOME	<p>The participants will be familiar with the steps required to develop an indicator system.</p> <p>The participants will be familiar with the use of statistical indicators in evidence-based decision making and with the role of NSI in this field.</p>

TRAINING METHODS	<ul style="list-style-type: none"> • Presentations/Exchange of views/experiences on national practices • Exercises
REQUIRED READING	<ul style="list-style-type: none"> • Towards harmonised methodology for statistical indicators - Part 1: Indicator typologies and terminologies - 2014 edition • Getting messages across using indicators. A handbook based on experiences from assessing Sustainable Development Indicators • Towards a Harmonised Practice in Using Statistical Indicators - Part 2: Communicating through indicators (Published by Eurostat) • 2013 and 2015 Monitoring report of the EU sustainable development strategy
SUGGESTED READING	<ul style="list-style-type: none"> ▪ Swiss Federal Statistical Office (2013): Revision of the indicator system for the Federal Council and the Parliament – Concept, methods and processes (PDF) ▪ Smarter, greener, more inclusive? - Indicators to support the Europe 2020 strategy - 2015 edition
REQUIRED PREPARATION	None
TRAINER(S)/ LECTURER(S)	<p>Trainers: André de MONTMOLLIN (Swiss Federal Statistical Office, FSO) and Nicola MASSARELLI (Eurostat).</p> <p>Lecturers : FSO and Eurostat staff.</p>

PRACTICAL INFORMATION				
WHEN	DURATION	WHERE	ORGANISER	APPLICATION VIA NATIONAL CONTACT POINT
16 - 18.11.2016	3 days	Neuchâtel, Switzerland	EFTA and Eurostat	Deadline: 16.09.2016

ACTIVITY AND PRODUCT CLASSIFICATIONS: DESCRIPTION, USE AND IMPLEMENTATION – ADVANCED COURSE

COURSE LEADER	Marie-Madeleine FUGER
TARGET GROUP	All staff responsible for the development and application of national activity and product classifications as well as for staff applying economic classifications in business registers or dealing with business statistics and National Accounts.
ENTRY QUALIFICATIONS	<ul style="list-style-type: none"> ▪ Broad knowledge of statistical classifications. ▪ Sound command of English (passive and actively). Participants should be able to make short interventions and presentations and to actively participate in discussions and group exercises.
OBJECTIVE(S)	<p>The course should provide participants with a better understanding of the underlying principles and concepts of European and international economic classifications, their differences and methods of harmonisation.</p> <p>The course should also provide participants with sound confidence for a current use of economic classification.</p>
CONTENTS	<ul style="list-style-type: none"> ▪ Relation between different basic concepts like population, statistical unit and classification; ▪ Principles of economic classifications; ▪ Conceptual aspects of the application of the economic classifications; ▪ International system of linked economic classifications and family of international economic classifications; ▪ Updates and revisions; ▪ International and European economic classifications: <ul style="list-style-type: none"> – ISIC Rev. 4 and NACE Rev. 2 – CPC Version 2.1, CPA 2.1. ▪ National versions of NACE Rev. 2 and CPA 2.1.; ▪ Interpretation and classification guidelines and rules; ▪ RAMON, UN classification registry and other classification databases; ▪ Any other business regarding classifications and their

	<p>implementation.</p> <p>The course content focuses on the principles, concepts and applications of the main economic classifications that are applied in the European Statistical System. Reference is also given to the international classifications from which the European classifications are derived from.</p>
EXPECTED OUTCOME	Ability to act as centre of knowledge on questions of classifications, both regarding theory and practice.
TRAINING METHODS	<ul style="list-style-type: none"> ▪ Presentations and lectures; ▪ Exercises and group work; ▪ Discussions; ▪ Exchange of views/experiences on national practices.
REQUIRED READING	None
SUGGESTED READING	None
REQUIRED PREPARATION	<ul style="list-style-type: none"> ▪ Participants are required to write a short summary of their own activity as well as that of the organisation regarding practises, problems and experiences in the subject. ▪ After registration, participants will be asked to provide either a short presentation on experiences carried out in the country or cases that could be dealt with in group exercises.
TRAINER(S)/ LECTURER(S)	<p>Marie-Madeleine FUGER (INSEE France);</p> <p>Zsofia ERCSEY (Hungarian Central Statistical Office);</p> <p>Hans VAN HOOFF (Statistics Netherlands).</p>

PRACTICAL INFORMATION				
WHEN	DURATION	WHERE	ORGANISER	APPLICATION VIA NATIONAL CONTACT POINT
21 - 24.11.2016	4 days	Budapest Hungary	ICON- INSTITUT Public Sector GmbH	Deadline: 26.09.2016

ADVANCED COURSE ON QUALITY REPORTING	
COURSE LEADER	Jacqueline MAIN
TARGET GROUP	Staff of National Statistical Institutes (including newcomers) involved in the statistical production process who want to acquire in-depth understanding of Quality reporting.
ENTRY QUALIFICATIONS	<ul style="list-style-type: none"> ▪ Sound command of English. Participants should be able to make short interventions and to actively participate in discussions; ▪ Knowledge of basic quality issues; previous participation to the course "Quality Management in Statistical Agencies – Introductory course" is preferable but not mandatory.
OBJECTIVE(S)	The course aims at enhancing participants' theoretical and practical knowledge of Quality reporting. Using the "ESS Handbook for Quality Reports (2014 edition)" as a reference, participants will develop understanding and will become acquainted with the practices of how to prepare detailed ESS quality reports for the different types of statistical processes. In addition, they will develop knowledge of and will receive an insight into the standard reporting structures (Single Integrated Metadata Structure and its ESMS and ESQRS components) and their metadata environment ESS Metadata Handler.
CONTENTS	<ul style="list-style-type: none"> ▪ Quality in the ESS, the European Statistics Code of Practice and the Quality Assurance Framework of the ESS; ▪ Introduction to reference metadata and quality reporting; ▪ Overview of ESS conceptual standards for quality reporting (SIMS, ESMS, ESQRS, ESS Handbook for Quality Reports, ESS Quality and Performance Indicators); ▪ Methodological focus on quality reports contents: <ol style="list-style-type: none"> 1. Conceptual and methodological metadata (e.g.: statistical presentation, statistical processing, etc.) 2. Quality dimensions (Relevance, Accuracy and reliability, Timeliness and punctuality, Coherence and comparability, Accessibility and clarity) 3. Quality indicators; ▪ ESS technical standards and tools for quality reporting (ESS metadata handler, hints on the use of SDMX for metadata exchange, the issue of interoperability between ESS-MH with national metadata system); ▪ The process of implementation of national quality reporting following ESS standards across statistical domains (timetable,

	strengths and achieved results, weaknesses and possible improvements).
EXPECTED OUTCOME	As a result of the course, participants will have an understanding and some practical experience on how to draft good Quality reports which are compliant with the ESS standards.
TRAINING METHODS	<ul style="list-style-type: none"> ▪ Presentations and lectures; ▪ Exchange of views/experiences on national practices; ▪ Practical exercises on quality reporting for the different types of statistical process; ▪ Case studies and examples relevant to the European Statistical System.
REQUIRED READING	The participants are invited to read the following documents: ESS handbook for quality reports: http://ec.europa.eu/eurostat/documents/64157/4373903/01-ESS-Handbook-for-Quality-Reports-2014.pdf/d6152567-a007-4949-a169-251e0ac7c655
SUGGESTED READING	<ul style="list-style-type: none"> ▪ European Statistics Code of Practice - revised edition 2011: http://ec.europa.eu/eurostat/web/products-manuals-and-guidelines/-/KS-32-11-955 ▪ Quality Assurance Framework of the European Statistical System: http://ec.europa.eu/eurostat/documents/64157/4392716/ESS-QAF-V1-2final.pdf/bbf5970c-1adf-46c8-afc3-58ce177a0646 ▪ Single Integrated Metadata Structure and its Technical Manual: http://ec.europa.eu/eurostat/documents/64157/4373903/03-Single-Integrated-Metadata-Structure-and-its-Technical-Manual.pdf/6013a162-e8e2-4a8a-8219-83e3318cbb39 ▪ ESS Quality and Performance Indicators (QPIs): http://ec.europa.eu/eurostat/documents/64157/4373903/02-ESS-Quality-and-performance-Indicators-2014.pdf/5c996003-b770-4a7c-9c2f-bf733e6b1f31
REQUIRED PREPARATION	None
TRAINER(S)/ LECTURER(S)	Jacqueline MAIN (Eurostat); Giorgia SIMEONI (ISTAT) and Remi PRUAL (Statistics Estonia).

PRACTICAL INFORMATION				
WHEN	DURATION	WHERE	ORGANISER	APPLICATION VIA NATIONAL CONTACT POINT
24 - 25.11.2016	2 days	Eurostat, Luxembourg	EUROSTAT	Deadline: 29.09.2016

COMMON STATISTICAL PRODUCTION ARCHITECTURE

COURSE LEADER	Carlo VACCARI
TARGET GROUP	IT Architects, Statistical Experts, NSIs' Managers – Introductory course.
ENTRY QUALIFICATIONS	Sound command of English. Participants should be able to make short interventions and to actively participate in discussions.
OBJECTIVE(S)	The main objective of the course is to introduce the participants to the new architecture concept for the production of official statistics, the associated challenges and opportunities, and on-going development at UNECE and Eurostat level and practical realization so far including the IT aspects.
CONTENTS	<p>The contents are:</p> <ul style="list-style-type: none"> ▪ Definition and usefulness of architecture concepts; ▪ Definition and benefit of CSPA and service oriented architectures (in broad sense); ▪ Use cases of this architecture; GSBPM and GSIM as a framework for describing statistical production process and supporting information, business process modelling and granularity of services; architecture pattern and models for implementing CSPA; ▪ Service communication and wrapping; current open challenges and perspective. <p>With its focus on concrete implementation (CORE platform, CSPA proof of concept), the course demystifies the sometimes abstract concept of SOA and demonstrates how SOA approach can meet the current challenge for official statistics.</p>
EXPECTED OUTCOME	<p>Participants will become familiar with the Common Statistical Production Architecture.</p> <p>In particular they will learn about:</p> <ul style="list-style-type: none"> ▪ technical aspects of the CSPA architecture; ▪ business aspects of sharing software; ▪ principles underlying a real implementation of a platform for the automated execution of statistical processes; ▪ international standards like GSBPM and GSIM; ▪ how to integrate applications in a CSPA environment; ▪ how to reuse IT tools possibly developed on different platforms

	and by different NSIs.
TRAINING METHODS	<ul style="list-style-type: none"> ▪ Theoretical sessions and presentation of case studies; ▪ Exercises.
REQUIRED READING	None
SUGGESTED READING	<p>GSBPM (Generic Statistical Business Process Model) ver. 5.0 2013 http://www1.unece.org/stat/platform/display/GSBPM/GSBPM+v5.0</p> <p>CSPA: http://www1.unece.org/stat/platform/display/CSPA/CSPA+v1.1</p> <p>HLG: http://www.unece.org/statistics/about-us/statstos/high-level-group-for-the-modernisation-of-statistical-production-and-services.html</p>
REQUIRED PREPARATION	None
TRAINER(S)/ LECTURER(S)	Carlo VACCARI (ISTAT), Mauro BRUNO (ISTAT), Marco SILIPO (ISTAT), Giulia VASTE (ISTAT).

PRACTICAL INFORMATION				
WHEN	DURATION	WHERE	ORGANISER	APPLICATION VIA NATIONAL CONTACT POINT
28 - 30.11.2016	3 days	Rome, Italy	ICON-INSTITUT Public Sector GmbH	Deadline: 03.10.2016

MACROECONOMIC IMBALANCES PROCEDURE (MIP SCOREBOARD)

COURSE LEADER	Kirsten WENTZEL-FROBERG
TARGET GROUP	Staff (including newcomers) of national statistical institutes (NSIs, NCBs and Ministries) involved in the production process of the MIP headlines indicators.
ENTRY QUALIFICATIONS	Sound command of English. Participants should be able to make short interventions and to actively participate in discussions. Interest in assessing macroeconomic imbalances.
OBJECTIVE(S)	<ul style="list-style-type: none"> To give participants an overview and explanation of the policy context and background of the MIP; To train participants so that they are able to define, describe and compare macroeconomic aggregates; To help participants understand basic economics and apply statistical methods for summarizing growth, development and convergence phenomena.
CONTENTS	<ul style="list-style-type: none"> The European Semester: the role of Eurostat and of DG ECFIN; Alert mechanism and Scoreboard Indicators; MIP Indicators and indicative thresholds; MIP quality frameworks; Dissemination of MIP indicators.
EXPECTED OUTCOME	Participants will have a good overview of the MIP within the European Semester and a good understanding of the different roles of Eurostat, DG ECFIN and ESS partners.
TRAINING METHODS	<ul style="list-style-type: none"> Presentations and lectures; Group discussions, exchange of views; Case study.
REQUIRED READING	Being familiar with the content of the Eurostat MIP dedicated webpage.
SUGGESTED READING	Any university book on Macroeconomics.
REQUIRED	Participants are requested to write a short summary of their activities in their organisation. They are requested to express the reasons and

PREPARATION	motivation for applying for this training course and to describe their practices, problems and experiences in the field of MIP.
TRAINER(S)/ LECTURER(S)	Eurostat staff working in the MIP field and DG ECFIN.

PRACTICAL INFORMATION				
WHEN	DURATION	WHERE	ORGANISER	APPLICATION VIA NATIONAL CONTACT POINT
01 - 02.12.2016	2 days	Eurostat, Luxembourg	EUROSTAT	Deadline: 06.10.2016

WASTE STATISTICS	
COURSE LEADER	Jörg HANAUER
TARGET GROUP	Staff members involved in the production of official waste statistics, advanced level.
ENTRY QUALIFICATIONS	<ul style="list-style-type: none"> ▪ Sound command of English. Participants should be able to make short interventions and to participate actively in discussions; ▪ Familiarity with the Waste Statistics Regulation; ▪ Experience in producing Waste Statistics.
OBJECTIVE(S)	<p>The course will enhance the theoretical and practical knowledge of waste statistics validation approaches.</p> <p>The main focus will be on validation routines, looking at strengths and weaknesses in the chosen approaches and possibilities for shared responsibilities between countries and Eurostat. The course will explore possible ways of avoiding duplication of validation routines and in waste statistics and means of obtaining more effective statistics.</p>
CONTENTS	<ul style="list-style-type: none"> ▪ Methods for the validation of waste statistics, overview on validation checks currently done; ▪ Analysis of time series for one country, comparisons between countries, use of economic indicators in the validation; ▪ Cross-checks with waste data reported based on other EU legislation; ▪ Methods of data compilation (e.g. factors, modelling) and the effects on the comparability of results; ▪ Reporting on secondary waste; ▪ Calculation of waste management indicators.
EXPECTED OUTCOME	<p>Participants will have a profound understanding of validation of waste statistics currently carried out. The course will provide the participants with tools and methods for the validation of waste statistics, with the aim of improving the quality and comparability of the statistics and of sharing responsibilities for validation between Eurostat and Member states.</p> <p>Participants will have a chance to exchange experiences and thus learn about the practices of other countries.</p>
TRAINING METHODS	<ul style="list-style-type: none"> ▪ Lectures and presentations;

	<ul style="list-style-type: none"> Plenum discussions and group sessions; Practical examples and exercises.
REQUIRED READING	<p>Regulation (EC) No 2150/2002 of the European Parliament and of the Council of 25 November 2002 on waste statistics.</p> <p>Validation approach for waste statistics, available on CircaBC: 3.2 WStatR validation approach_rev1</p> <p>https://circabc.europa.eu/sd/a/0e028210-46c6-4137-b123-f4cdba591f31/3.2%20Validation%20of%20Waste%20Statistics%20-%20the%20way%20forward_rev.pdf</p>
SUGGESTED READING	<ul style="list-style-type: none"> Manual for the Implementation of Regulation (EC) No 2150/2002 on waste statistics EU Indicator on the recycling of waste (excl. major mineral wastes): <p>https://circabc.europa.eu/sd/a/d5604130-8c83-4ce0-ae47-b1013014d8a2/7%20WASTE%20WG%207%20Recycling%20indicator_rev1%20docx.pdf</p> <p>The website of the Data Centre on Waste:</p> <p>http://ec.europa.eu/eurostat/waste</p> <p>The databases available on the website of Eurostat:</p> <p>http://ec.europa.eu/eurostat</p>
REQUIRED PREPARATION	Participants should have a partial overview of waste quantities, the statistical methods and validation approaches applied in official waste statistics within their own country.
TRAINER(S)/ LECTURER(S)	<p>Course leader: Jörg HANAUER (SOGETI);</p> <p>Milla NEUBAUER (Statistics Austria), Brigitte KARIGL (Statistics Austria), Jürgen GONSER (Argus).</p>

PRACTICAL INFORMATION				
WHEN	DURATION	WHERE	ORGANISER	APPLICATION VIA NATIONAL CONTACT POINT
06 - 07.12.2016	2 days	Vienna, Austria	SOGETI	Deadline: 11.10.2016

NATIONAL ESTP CONTACT POINTS

Please send your application form to the address indicated for your country

COUNTRY	ADMINISTRATION	E-MAIL ADDRESS
Austria	Statistics Austria	estp.contact@statistik.gv.at
Belgium	Statistics Belgium	emilie.chatorier@economie.fgov.be
Bulgaria	National Statistical Institute	BG-ESTP-CONTACT@nsi.bg yanastassova@nsi.bg
Croatia	Central Bureau of Statistics of the Republic of Croatia	ESTP@dzs.hr
Cyprus	Statistical Service of Cyprus	pprotopapas@cystat.mof.gov.cy
Czech Republic	Czech Statistical Office - CSU	CZSO-ESTP-CONTACT-POINT@czso.cz
Denmark	Statistics Denmark	denmark-estp-contact@dst.dk
Estonia	Statistics Estonia	ESTONIA-ESTP-CONTACT@STAT.EE
Finland	Statistics Finland	koulutushakemukset@stat.fi
France	National Institute of Statistics - INSEE	luc.rouviere@insee.fr
Germany	German Federal Statistical Office	estp-ncp-germany@destatis.de
Greece	Hellenic Statistical Authority - ELSTAT	elstat_estp_contact@statistics.gr
Hungary	Hungarian Central Statistical Office - KSH	ESTP@ksh.hu
Iceland	Statistics Iceland	estp@hagstofa.is
Ireland	Central Statistics Office - CSO	training@csa.ie
Italy	National Institute of Statistics - ISTAT	it-contact-point-estp@istat.it
Latvia	Central Statistical Bureau of Latvia - CSB	estp@csb.gov.lv
Liechtenstein	Office of Statistics	christian.brunhart@llv.li
Lithuania	Statistics Lithuania	LITHUANIA-ESTP-CONTACT@stat.gov.lt
Luxembourg	National Statistical Institute - STATEC	Estp@statec.etat.lu

COUNTRY	ADMINISTRATION	E-MAIL ADDRESS
Malta	National Statistics Office - NSO	james.briscoe@gov.mt sammy.mangion@gov.mt
Netherlands	Statistics Netherlands - CBS	estp-courses@cbs.nl
Norway	Statistics Norway - SSB	norway.estp.contact@ssb.no
Poland	Central Statistical Office - GUS	GUS-ESTP-CONTACT-POINT@stat.gov.pl
Portugal	National Statistical Institute - INE	estp.portugal@ine.pt
Romania	National Statistical Institute - INSSE	ro-estp-contact-point@insse.ro
Slovak Republic	Statistical Office of the Slovak Republic	sk.estp.contact@statistics.sk
Slovenia	Statistical Office of the Republic of Slovenia - SORS	Gp.surs@gov.si
Spain	National Statistical Institute - INE	estp.spain@ine.es
Sweden	Statistics Sweden - SCB	swe.estp.contact@scb.se
Switzerland	Swiss Federal Statistical Office	international@bfs.admin.ch
United Kingdom	Office for National Statistics - ONS	statistical.training.enquiries@ons.gov.uk

EFTA	EFTA Statistical Office (ESO)	efta-lux@ec.europa.eu
EUROSTAT	Eurostat Unit A3: ESTP Team	ESTAT-ESTP-CONTACTS@ec.europa.eu

CANDIDATE COUNTRIES	ADMINISTRATION	E-MAIL ADDRESS
Albania	GOPA	ipa2014.gopa@gmail.com
Montenegro		
the Former Yugoslav Republic of Macedonia	State Statistical Office	tatjana.velkova@stat.gov.mk

Serbia	Statistical Office of the Republic of Serbia	Serbia-ESTP@stat.gov.rs
Turkey	Turkish Statistical Institute - TURKSTAT	tecip@tuik.gov.tr

POTENTIAL CANDIDATES	ADMINISTRATION	E-MAIL ADDRESS
Bosnia and Herzegovina	GOPA	ipa2014.gopa@gmail.com <i>Please note:</i> All applications should be sent to this address, <u>irrespective</u> of the source of funding
Kosovo*		

International organisations and other countries not mentioned above	ESTAT-ESTP-CONTACTS@ec.europa.eu Applications sent to other addresses will not be taken into consideration
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(*) This designation is without prejudice to positions in status, and is in line with UNSCR 1244 and the ICJ Opinion on the Kosovo Declaration of Independence.