



# **Full International and Global Accounts for Research in Input-Output Analysis(FIGARO)**

**UNECE Group of Experts on National Accounts**

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**Eurostat, National Accounts and DG Joint Research Centre**

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# **FIGARO**

**Full International and Global Accounts for  
Research in Input-Output Analysis**

**Project Eurostat – DG JRC IPTS**

**EU Multi-Country  
Supply, Use and Input-Output Tables**

# Motivation

*This project aims to support Eurostat (ESTAT) in establishing:*

- 1) an **annual** production of **EU Multi-country Input-Output Tables***
- 2) **five-yearly** production of **EU Multi-country Supply, Use and Input-Output Tables** (EU-MC-SUIOTs).*

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*The EU-MC-SUIOTs constitute a **further development** of the current regularly published EU and Euro area consolidated SUIOTs.*

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*This project does **not** represent any additional **burden** on the Member States provided that it will rely as much as possible on the **re-use of available data**.*

# Motivation (cont.)

The development of the **EU-MC-SUIOT** shall be **based on**:

- A regular combination of **primary statistics** on businesses and trade and **macro-economic data** sources (TEC, STEC...);
- Careful checking of **user needs** of various European Commission's **DGs** for policy analyses, i.e.: DG ESTAT, DG ECFIN, DG TRADE, DG ENV, DG RTD, DG EMPL, DG GROW...
- An institutional perspective by setting up consistent EU-MC-SUIOTs, recognised by international agencies such as **OECD**, **WTO** and **UN**, and used as such in a **Global Multi-country Supply, Use and Input-Output** framework.
- **National compilers** of the EU Member States should also be involved in order to ensure that they can take ownership of the national data used.

# Scope and objectives/tasks

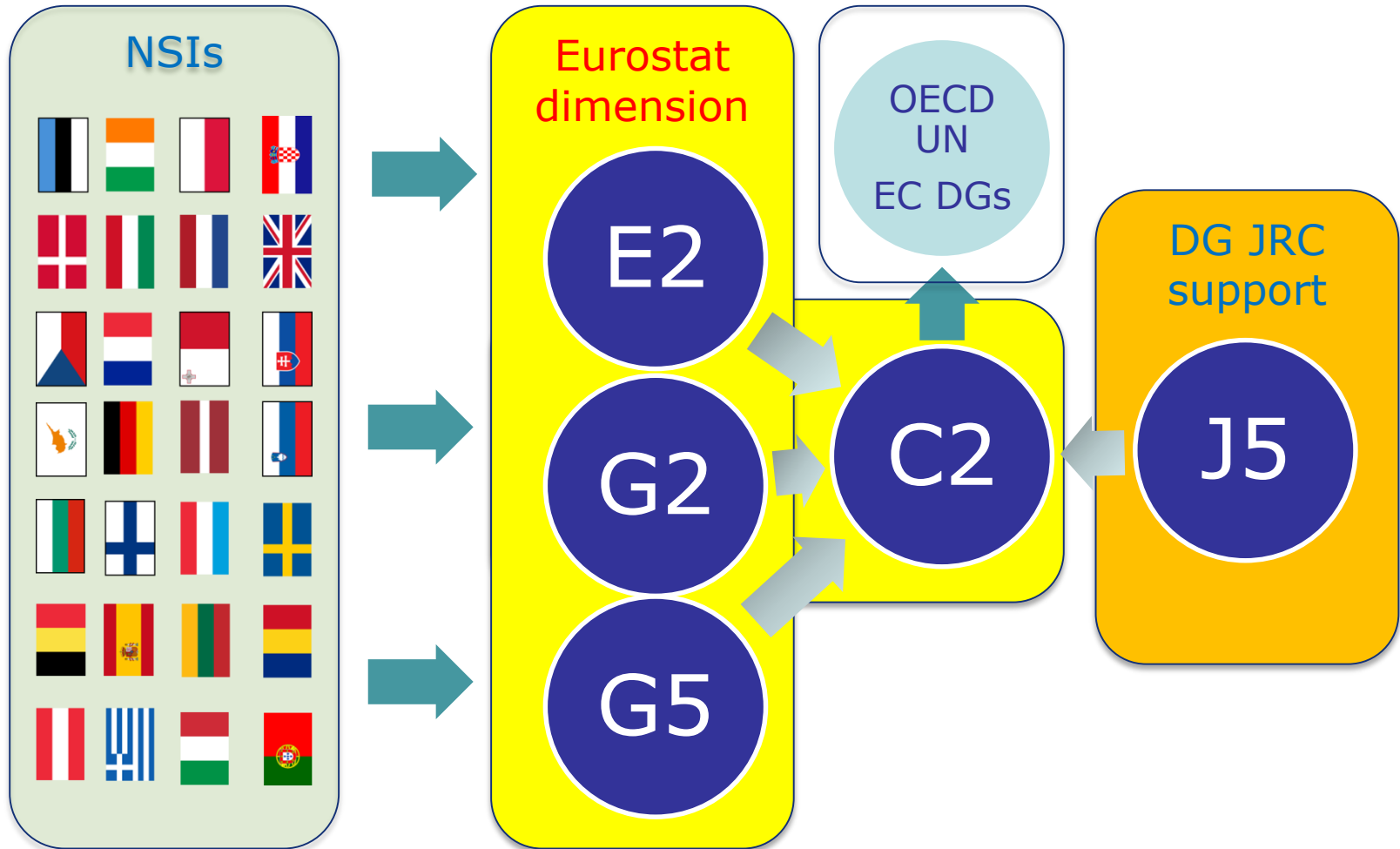
1. To make a **stock taking exercise** of current international projects related to the construction of multi country SUIOTs;
2. To define a **suitable methodological framework for the regular production of EU-MC-SUIOTs**, including the analysis and treatment of specific issues producing inconsistencies or asymmetries in trade statistics and overall balance procedure;
3. To construct **EU-MC-SUIOTs at basic prices** for the reference year **2010** based on SNA2008/**ESA2010** methodology and the **NACE Rev.2/CPA 2008/ISIC Rev. 4** classifications;
4. To integrate the EU-MC-SUIOTs into **Global (World) Supply, Use and Input-Output Tables**, in collaboration with the OECD and UN;

# Scope and objectives/tasks

5. To include a **reduced version** of the EU-MC-SUIOTs at the A10 sector classification with **capital and labour** productivity indicators;
6. To integrate the EU-MC-SUIOTs with **environmental accounts** (energy and GHG emissions);
7. To explore possible **extensions of the EU-MC-SUIOTs** with business and international trade statistics taking into account the recommendations of the **OECD Expert Group of Extended Supply and Use Tables**;
8. To propose a **strategy for a regular production** of Eurostat's annual EU-MC-IOTs and five-yearly EU-MC-SUIOTs, linked to environmental accounts and possibly with an extended SUIOT format using business and international trade statistics

# EU-MC-SUIOT (FIGARO)

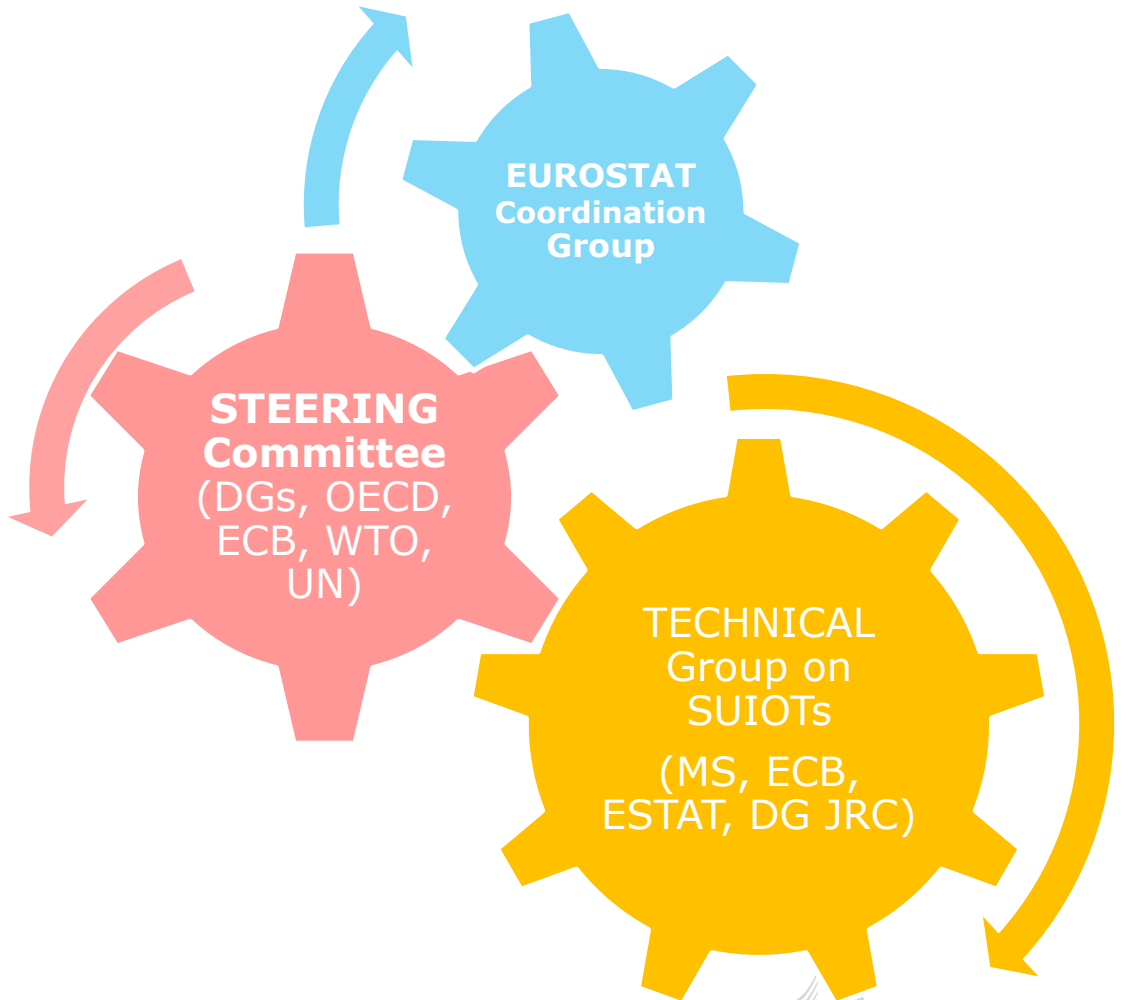
## Implementation of the project



EU-MC-SUIOT FIGARO

# Organised Working Groups

Other possible meetings to report to other Working Groups (e.g. **EnvWG, ITWG...**); to the Directors of Macro-Economic Statistics (**DMES**); to the Business Statistics Directors Group (**BSDG**); to the **OECD Expert Group** on Extended Supply and Use Tables; to various related UN international meetings (**UNECE, FOC Group...**); to academic fora (**IIOA** conference, **IARIW** conference, **GTAP** conference...).





# Description of Work

- WP1.-** *Inception report and format of the EU-MC-SUIOT*
- WP2.-** *Review of methods*
- WP3.-** *Treatment of asymmetries in trade statistics*
- WP4.-** *Construction of international SUTs*
- WP5.-** *Construction of international IOTs*
- WP6.-** *Integration with global MC-SUIOTs (OECD, UN)*
- WP7.-** *Link to labour and capital inputs*
- WP8.-** *Environmental accounts*
- WP9.-** *Extended format of MC-SUTs*
- WP10.-** *Analysis of results, dissemination & future prospects*
- WP11.-** *IT developments*

# WP1. Inception and format

This Work Package has the aim to set up the basics and the format of the EU-MC-SUIOTs in terms of:

- a) The year of reference
- b) The use of national SUIOTs and valuation (prices, imports, exports...)
- c) The use of National Accounts as benchmark
- d) The use of the domestic principle versus the territorial principle
- e) The method to be used for estimating missing national SUIOTs
- f) The use of international trade statistics in combination with national SUIOTs and National Accounts data
- g) The use of the ESA2010, NACE Rev.2, CPA08 and the choice of the number of industries and products
- h) The type of input-output table (product by product or industry by industry)
- i) The future periodicity of publication of SUTs (e.g. 5-yearly) and IOTs (e.g. yearly)
- j) The identification of countries included in the Rest of the World region
- k) The use of reliability estimates
- l) Possible extensions to the standard SUIOT format

# WP2. Review

## ***Stock taking exercise of current international projects related to the construction of MC-SUIOTs (data sources and tables):***

- a. EXIOBASE (TNO, Netherlands)
- b. WIOD (RUG, Netherlands)
- c. OECD/WTO (OECD, France)
- d. GTAP (Purdue University, US)
- e. EORA (University of Sydney, Australia)
- f. IDE-JETRO (Japan External Trade Org, Japan)
- g. GRAM (Vienna University, Austria)

**Aim: *detailed proposal of the methodology to construct the EU-MC-SUIOTs***

# WP3. Asymmetries in trade statistics

## **Outcomes:**

1. *Country of origin of imports*
2. *Trade asymmetries (total exports/imports by products)*
3. *Split import matrices by users (BEC...)*

*The results will be discussed among the different project partners for quality assurance, especially in the treatment of asymmetries and confidentiality.*

*Cooperation with Eurostat trade statistics units.*

# WP4. EU-MC-SUTs

## ***Steps:***

- a. Harmonisation and standardisation of SUTs
- b. Estimation of missing SUTs (bp)
- c. Benchmark to National Accounts
- d. Estimation and balancing International SUTs (bp), outcome of WP3

*The results will be discussed among the different project partners for quality assurance, especially in the treatment of asymmetries and confidentiality.*

# WP5. EU-MC-IOTs

- 1. Supply and Use Tables (SUTs) can be transformed into Input-Output Tables (IOTs) using various **technology assumptions** (for product by product IOTs) and various **sales structure assumptions** (for industry by industry IOTs).*
- 2. This Work Package will estimate the EU-MC-IOTs from the estimated EU-MC-SUTs (WP4) following one of these assumptions.*
- 3. The results will be discussed among the different project partners for **quality assurance**.*

## WP6. Global EU-MC-SUIOTs

- *This Work Package aims to facilitate the integration of the EU-MC-SUIOTs into **global databases** developed by other international statistical agencies such as the **OECD** and the **UN**.*
- *The results will be discussed among the different project partners for **quality assurance**, especially in the treatment of asymmetries and balancing method.*

## WP7. Labour and capital

- *This Work Package aims to link a number of **labour and capital input indicators** (A10 industry breakdown) to the EU-MC-SUIOTs, e.g. QALIs, Net fixed capital stock...*



# WP8. Environmental accounts

- *This Work Package aims to link **energy and greenhouse gas emissions** (CO<sub>2</sub>, N<sub>2</sub>O, CH<sub>4</sub>) to the EU-MC-SUIOTs.*
- *The ESTAT Unit E2 will deliver **data** of environmental accounts (iAEA, MFA, GHG and energy accounts); will validate and check **consistency** between (energy) physical and monetary tables (in cooperation with unit C2); will **treat the GHG emissions and energy data** needed **to link** the environmental accounts to the EU-MC-SUIOTs; among other tasks.*

## WP9. Extended formats of MC-SUTs

- *This Work Package aims to explore the type of **extended format** that future **EU-MC-SUIOTs** may have by using additional primary statistics of businesses and international trade statistics.*
- *Preferably, this work will take into account the results of the discussions of the **OECD Expert Group on Extended Supply and Use Tables**.*
- *This Work Package **does not aim to produce** an extended EU-MC-SUIOT but rather to pave the way to do it.*

# WP10. Analysis, dissemination and future

- *This Work Package aims to carry out the calculation of:*
  - a) **GHG footprints,**
  - b) **Employment embodied in EU exports**  
*as a way to complement the dissemination activities of the new EU-MC-SUIOTs*
  - c) **Estimation of international services trade by supply modes**
- *Besides, some conclusions will have to be provided by this Work Package on the **lessons learnt and future prospects/recommendations for a regular production** of EU-MC-SUIOTs by Eurostat.*

# WP11. IT Developments

- *This Work Package will take care of the **IT needs** to **efficiently** deal with:*
  - a) **Data storage** needed as input for the construction of the EU-MC-SUIOTs*
  - b) All type of **calculations** involved in the different steps of the construction of the EU-MC-SUIOTs (including **code writing**)*
  - c) **Dissemination** of the EU-MC-SUIOTs and the **analysis of results** to the general public.*

# Schedule

		2015			2016												2017												
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
		M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20	M21	M22	M23	M24	M25	M26	M27	
Inc	WP1						<b>D1</b>																						
Rev	WP2				<b>D2</b>																								
Asym	WP3									<i>D3.1</i>					<b>D3.2</b>														
SUT	WP4										<i>D4.1</i>					<b>D4.2</b>													
IOT	WP5																	<b>D5</b>											
OECD	WP6										<i>D6.1</i>											<b>D6.2</b>							
LK	WP7																												
Env	WP8																<i>D8.1</i>												
Ext	WP9												<i>D9.1</i>																
Dis	WP10																												
IT	WP11												<i>D11.1</i>																

Bold = Final reports

Italics = Interim/progress reports



***ESTAT-DG JRC Project on the  
construction of  
EU Multi-Country SUIOTs  
(FIGARO Project)***

***Thank you very much!!***

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European Commission, Eurostat and DG JRC (IPTs, Seville)**