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Integrating environmental accounts within
national accounts in Italy

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What do I mean by INTEGRATION in this presentation

- Reference is primarily to Environmental **Accounts**' PRODUCTION PROCESSES...
- but also – as a desired consequence of integration – to consistency of EAs with other NAs
- Indeed, in this CONSISTENCY lies all value added of EAs (with respect to Environmental **Statistics** as well as to other NAs)
- This is reached by using the same CLASSIFICATIONS and METHODS in use in NA...
- ... and further pursued by
 - USING when possible the same BASIC DATA of
 - sharing the PRODUCTION INFRASTRUCTURE with national accountants.

I do NOT mean valuation, and even less incorporation of environmental «capital» or «services» value, into NA monetary aggregates (a completely different story...).

Until recently: Coherence through adaptation

In Italy, Satellite Accounts on the Environment have been produced in the National Accounting Directorate since 2001...

...but until recently the production processes of Environmental Accounts remained almost completely «downstream» to the core National Accounts.



Coherence was not granted through process integration, but through ex-post adaptation of EA.

Feedback from EA could be taken onboard into core NA only to a limited extent

An opportunity that could not be missed

IN 2013-2014, THE ITALIAN CORE NA HAD TO BE THOROUGHLY REVISED NOT ONLY FOR THE USUAL REASONS OF PERIODICAL REVISION

NEW DATA SOURCES, ELABORATION IMPROVEMENTS, NEW BENCHMARK YEAR

BUT ALSO BECAUSE THE SNA/ESA HAD CHANGED

SUCH A MAJOR REVISION WAS A UNIQUE OPPORTUNITY FOR GOING TOWARDS MORE INTEGRATED PRODUCTION PROCESSES



Let us focus on the improvements achieved on this occasion

Physical supply and use tables (PSUT) are being constructed, piece by piece, aiming at a complete description of materials life cycles. In particular:

- **Biomasses' cycle is being analysed at great detail level - Data on biomass products are used more consistently with core NA;**
- **As for industrial products, the P-production matrix has been set up, using data and formulas that are by construction coherent with those in use in core NA, which also changed through feedback;**
- **As for the energy resources and products, MFA draws from the specific work described in the next slide.**

Integration: Physical and Monetary Energy Use

PUT of energy products used to be produced for the monetary estimates (P*Q)

For use in EA these had to be split by purpose.

The data sources used for the split were in some cases additional, and not consistent with those used for the totals.

Now the two steps are not distinct anymore, all sources are used consistently and reconciliated in a single Energy PUT.

Further improvements in this field include:

- **complete independence between S- and D-side estimates for physical flows;**
- **better SUT balancing procedures:**
 - **consistent in physical and monetary units;**
 - **higher product detail;**
 - **feedback from monetary to physical units.**

Significant impact in terms of GDP revision.

Positive impact also on *Air Emission* and *Environmental Taxes Accounts*.

Integration: Environmental Taxes

Major improvement: method for estimating taxes on energy products revenue. The tax paid by each user (industries, households, non-residents) on individual energy products is calculated by multiplying the quantity used by the tax rate; different uses of the energy products – transport, heating, industrial energy use, transformation – are identified. Tax exemptions are also taken into account.

Now included in the energy rows of the core tax matrices (revenue by product and user).

Other joint improvements: use of *motor vehicles' register* data to break down Motor vehicle duty and Provincial tax on motor vehicles insurance revenues.

These revisions, carried out within the framework of the 2014 NA benchmark, brought about a significant improvement of the accuracy of environmental taxes' breakdown by activity.

Integration: Environmental Protection Expenditure

Improvements concerned mainly the «waste» sector:

-In the working-level SUT there is now:

- a breakdown between economic activities related to waste «management» and to materials «recovery» (in the column);
- a deeper breakdown by products between waste as a «good» (e.g. metal waste, rubber or plastic or paper waste...) and waste collection services

-Based on in-depth analysis of specific data sources

waste management enterprises' budgets, sector studies and specialised Institutions' reports (ISPRA, recovery consortia, etc.),

a structure was determined for the distribution of:

- total production value by products for the two branches of economic activities;
- use of these economic activities' main products.

This work allowed mainly to improve the allocation of production value among principal and secondary products also through the identification of «new» secondary products.

A similar work concerned the water sector.

Conclusions

- **Process integration is possible**
- **It delivers higher quality EAs and NAs**
- **some investment is required in terms e.g. of higher detail or accuracy in the making of core S-U tables...**
- **...but at the system level, the investments are soon paid back by lower current efforts and better results.**
- **A win-win solution requires, besides a general commitment to product quality and coherence:**
 - **a cooperative working environment or**
 - **a free market between rational agents or**
 - **an enlightened *visible* hand.**

It is not important what worked in which case, but that, after change has happened, all can see its advantages

Thank you for your attention