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Response by official statistics to the Sustainable Development Goals

Measuring sustainable development and wellbeing of people: challenges and the role of National Statistical Institutes

Note by the National Statistical Institute of Italy (ISTAT)

Summary

The paper presents an overview of measuring sustainable development and wellbeing in Italy in the context of the Equitable and Sustainable Development initiative (Benessere equo e sostenibile - BES). The paper also presents the results of pilot testing of the CES framework in Italy. The conclusions include recommendations for developing the SDG indicator framework.

The paper is presented for discussion to the first session of the Conference of European Statisticians' seminar "Response by official statistics to the Sustainable Development Goals".

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I. Executive summary

1. The coordination role of the National Statistical Institute is essential for the reporting and monitoring process of the SDGs. For Italy this will be carried out based on the existing National Statistical System, reinforcing the relationships with the national stakeholders and producers, and taking in consideration the BES initiative (Benessere equo e sostenibile – Equitable and Sustainable Wellbeing), involving all major representatives of Italian civil society and promoting consultation with citizens.

2. In Italy, sustainability is measured in the context of the BES initiative, in line with the United Nations 2013 declaration that sustainable development is about wellbeing of people, and with the ongoing “beyond GDP” initiatives. Measurement of well-being and sustainability represents a major challenge for the BES. The adopted measurement methods rely mainly on observations (set of indicators) and on forward-looking models. The Italian set of indicators for sustainability assessment is based on 12 domains of wellbeing and their inter-linkages, and on indicators that highlight vulnerabilities and resilience (indicators on risk factors, capabilities and capital). Some policy utilization of the BES framework will also be presented.

3. Finally, as ISTAT pilot tested the UNECE-CES framework for measuring sustainable development, a comparative analysis between the CES and ISTAT-BES frameworks will be done to propose a subset of relevant indicators for the UNECE region. In addition, ISTAT conducted a first analysis of the SDG indicators proposed for the targets identified by the Open Working Group (OWG). Some early considerations on the monitoring system and on consistency between measuring sustainable development at the national, regional and global level will be presented.

II. Introduction

4. The Sustainable Development Goals (SDGs) process implies the definition of many new goals and targets compared with the Millennium Development Goals (MDGs). The statistical community is required to discuss the measurability of those goals and targets. A long list of provisional indicators has been proposed. The statistical community is also discussing the relevance, feasibility and other quality characteristics of the proposed indicators. In this process the National Statistical Institutes are called to play a role and to stimulate debate for selecting the best indicator framework for monitoring the SDGs. Therefore, it is necessary to strengthen the NSI's role in coordinating the national statistical system, involving not only central and local governments but also the private sector, research and civil society organizations.

5. A clear coordination role of the NSIs needs to be defined for an effective global, regional and national indicator framework and the SDG monitoring process, to stimulate all the national and international statistical actors (inside and outside countries) and implement efficient production processes.

6. This is essential for the development of a high quality and robust indicator framework, capable to capture the post-2015 challenges and to serve as well as possible sustainable development. The global indicator framework should be limited and should include multi-purpose indicators that address several targets at the same time. Although we call for a limited number of indicators we are also aware that the number of indicators in the existing list is very high. The creation of “headline”

indicators (possibly one indicator for each goal) and of “supporting” indicators could be a good way forward.

7. To ensure that the framework of global indicators captures the integrated and transformative nature of the goals and targets, it is important to build them on what it is already developed and take stock of existing experiences. At the same time it is important to carry out research in new areas where international statistical standards are missing (for example governance and peace).

8. In the last 7 months ISTAT participated in the process of selecting indicators for the monitoring of SDGs. ISTAT is also involved in the work of the UN Statistical Commission (UNSC) Friends of the Chair group (FOC). Since the beginning, ISTAT has contributed to the FOC activities with the aim of using the progress and well-being measures based on the Italian BES project.

9. The first identification of indicators was done taking into consideration the goals and targets that the Open Working Group defined in the Zero Draft Note. In September/December 2014, as part of the FOC group, ISTAT participated in the assessment of the availability of statistical data and the feasibility of the SDG indicators for evaluating the measurement framework. The FOC discussed the possible indicators also with reference to the CES framework and completed the compendium of national practices on broader measures of progress.

10. At the end of February, UNSD launched a similar survey on a different set of indicators for the monitoring of the SDGs, deriving from UN agencies (the so-called Technical Support Team (TST) proposal). With respect to the FOC proposal, only 24 indicators were common, 47 were similar, and 233 were completely different. The main difference between the two lists is that the FOC indicators come from sustainable development frameworks developed and tested in other contexts (CES and MDGs, SDSN, Eurostat, OECD), while the indicators presented by TST are mainly produced by international organizations (such as FAO, ILO, UNICEF, World Bank) and are not based on any specific framework of sustainable development. Within two weeks, with great efforts to ensure internal consultation, ISTAT replied to the questionnaire evaluating each proposed indicator in terms of its feasibility, suitability and relevance.

11. On 14th March 2015 the UNSC sent a “Draft report summarizing the first results of the survey” and ISTAT provided some comments. On 19th March all countries received the final version of the Report for discussion during political negotiations.

12. During 2014, ISTAT also participated in the pilot testing of the CES Framework for Measuring Sustainable Development. This exercise has also been useful for developing the national framework of sustainability of well-being.

13. ISTAT is contributing to the UN post-2015 and SDG discussion at the national level as well, participating in roundtables organized by Italian Ministries.

14. At the same time ISTAT is developing a system for supporting evidence based decision making, developing new data, modernising the statistical production process and improving communication of statistical information.

15. In this paper we will present the national experience in measuring well-being and sustainability, the pilot testing of the CES framework and comparing it with the Italian BES project. The conclusions will include recommendations how to develop the SDG indicator framework.

III. National experience

16. Italy is approaching the measurement of sustainability in the context of the BES initiative, in line with the declaration of the United Nations RIO+20 Conference in 2013 (see para 38 of the outcome document *The Future We Want*) that the aim of sustainable development is wellbeing of people, and with the ongoing “beyond GDP” initiatives.

17. Moreover, the Conference of European Statisticians framework has also been utilized for the national discussion on sustainable well-being indicators.

A. The BES initiative: measuring equitable and sustainable well-being

18. In line with the most advanced experiences all over the world and as recommended by the Stiglitz-Sen-Fitoussi Commission, in December 2010 the National Council for Economics and Labour (CNEL) and the Italian National Institute of Statistics (ISTAT) committed themselves to provide Italian society with a measurement tool for progress in Italy. The inter-institutional initiative is called “Equitable and Sustainable Well-being” (Benessere Equo e Sostenibile - BES) and aims at giving the country a shared perspective on the economic, social, and environmental conditions and their distribution within and between generations. In particular, the initiative’s objectives are to:

(a) develop a shared definition of progress in the Italian society, by defining the most relevant economic, social and environmental domains;

(b) select a set of high-quality statistical indicators that are representative of the different domains;

(c) communicate the results of this process, informing citizens of indicator values in the most thorough possible way. The set of indicators defined is intended for a broad public audience as well as for policy users.

19. BES framework represents an initiative of great scientific importance, which places Italy in the forefront of the international panorama for the development of well-being indicators “beyond GDP”. In order to guarantee it a strong legitimacy, the initiative involves all major representatives of Italian civil society through the institution of a Steering Committee and a Scientific Commission, and the promotion of citizens’ consultation instruments.

20. The Steering Committee has the mandate to select the relevant domains for well-being and ensures the participation of trade associations, trade unions and relevant third sector organizations such as women’s, environmental and consumer organizations and broad civil society platforms. The Committee selected 12 domains: Health, Education and training, Work and life balance, Economic well-being, Social relationships, Policy and institutions, Security, Subjective well-being, Landscape and cultural heritage, Environment, Research and innovation, and Quality of services to be included in the initial framework as main themes for analysing well-being in Italy.

21. This was the starting point for the Scientific Commission which is hosted by ISTAT and composed of more than 80 experts from academia, research centres and ISTAT. Up to now the Commission selected 134 indicators which are generally available at regional level and that can be disaggregated by gender and age. The Commission considers separately the well-being indicators, mainly focusing on

outcomes, their distribution among social groups, and the aspects of economic, social, and environmental sustainability.

22. All relevant information are communicated on the project website www.misuredelbenessere.it, such as the two annual Reports produced until now, the synthesis, the description of all domains and indicators, and the full set of time series data by regions, sex and age.

23. The BES initiative implied a big methodological investment for the theoretical definition of the BES framework and development of new indicators using the existing data sources. Moreover, further work is in progress in order to 1) elaborate composite indicators; 2) assess well-being inequalities; 3) define and measure well-being sustainability; 4) apply the BES framework at local level.

24. The National Council for Economics and Labour (CNEL), the National Association of Italian Municipalities (ANCI) and ISTAT are exploring the implementation of the BES framework at local level through the URBES project. This projects aims at defining a set of well-being indicators for the 15 biggest Italian cities. Three URBES reports have been published (June 2013, June 2014, April 2015) but this represents only an initial step. The project has close connections with the research and work on “smart cities”, promoted by the Italian Government, where smartness is seen as a collection of tools for fostering citizens’ quality of life.

B. Sustainability of well-being

25. Well-being is a multidimensional concept which changes according to time, place and culture. Therefore, the identification of domains and indicators to measure well-being is always an exercise that reflects norms, values and priorities of those who participate in the selection process.

26. For sustainability in Italy, some key characteristics have been taken into consideration, such as uncertainty, complexity, dynamics, global perspective and inter-linkages. Measuring sustainability is therefore a complex process combining different knowledge and disciplines. It is a way of modeling and representing complexity and inter-linkages among different systems, people and dimensions of life, taking in consideration time and space. It may imply a trade-off among different domains of well-being (for example, policies on energy, environmental protection, social welfare and economic development may pursue different aims). In addition, the ecological conditions are enabling conditions for sustainability. The ecological conditions are the basis of the vitality of natural systems and therefore the structures, processes, functions of ecosystems are in continuously evolving dynamics that interfaces with social systems.

27. In practice the Italian model monitors well-being over time and space (represented by all the outcomes of the BES), and assesses whether it can improve or remain at the same level without compromising the needs of present and future generations. In order to do this, an interpretative model on how and what determines well-being is required.

28. The CES framework was considered as a starting point, then the approach was extended.

29. The two key assumptions in the BES framework are that there is progress of well-being when it is equitable and sustainable over time, and that well-being is sustainable when it can be maintained or improved for present and future generations over time and space.

30. The measurement methods have focused mainly on observations (set of indicators) and forward-looking models.

31. The first method included development of a dashboard of indicators that highlights vulnerabilities and resiliencies over the 12 domains of wellbeing selected for Italy, and that captures the interactions among domains. The vulnerabilities focus on the risk factors that undermine the ability to maintain or achieve equilibrium or the optimal level of well-being, and to maintain and possibly improve levels of wellbeing outcomes achieved. Resilience is defined as the ability to withstand adverse shocks and ability to facilitate equilibrium and thus maintain or increase levels of well-being achieved. The observation of indicators of vulnerability and resilience allows us to design a path suitable for the measurement of sustainability in all dimensions of well-being and to assess the sustainability of well-being.

32. The second method focused on forecasting models which explain interactions between aggregates taking into consideration the three dimensions of sustainability: economic, social and environmental. Its aim is to facilitate ex-ante and ex-post evaluation policies. A General Economic Equilibrium Theory model (called MeMoIT) is used with additional modules on energy and emissions, and another module on distributional aspects of household income. Recently ISTAT has been developing an alternative approach where a well-being production function is estimated as the target of policy.

33. There is an objective difficulty in measuring the sustainability of well-being, in correlating the various areas and understanding the meaning of relationships, as well as analysing trends. It is important to look at the drivers of well-being outcomes (statistical models for analysing interrelations). But the real challenge is to identify indicators on inter-linkages among BES domains.

C. The Italian experience on piloting the CES framework

34. During 2014 ISTAT carried out the pilot testing of the CES framework. An intermediary report was produced early in June and a final report in December¹. The exercise was conducted with a real collection of data on the 95 indicators proposed by the CES. Italy could provide data for 81 indicators.

1. Observations on experimental data collection for the CES framework

(a) General observations

35. According to the analysis carried out for the small set suggested by the *CES Recommendations on Measuring Sustainable Development*, the Italian conclusion was that the CES small set puts too much emphasis on economic indicators, such as GDP and related measures. The social and environmental indicators were not sufficiently represented. On the other hand, the large set is better balanced including a good selection of social and environmental indicators. Still we believe that, at least as concerns the small set, the construction of a good set of indicators on sustainability of well-being should be based more on social and environmental aspects.

¹ http://www.misuredelbenessere.it/fileadmin/upload/docPdf/Piloting_CES_-_sustainability_text_to_Data_collection_LARGE_SET_ITALY.pdf

36. Looking at the analysis of the data collected for the CES “large set” it shows that 81 out of 95 proposed CES indicators are produced by Italian sources. ISTAT data sources provide 60 indicators and the 21 remaining indicators can be obtained from the official statistical system (Ministries and National Research Institutes). Of the 14 missing indicators, 11 are place holders (indicators that are needed but not yet available). With additional efforts this gap could be further reduced.

(b) *CES and BES comparison*

37. Concerning the comparison of the CES and the BES frameworks, among the 57 CES indicators produced by ISTAT, 26 indicators share the core definition with the Italian BES framework (for specific observations on slight differences, please see the full report referred earlier). The common indicators mostly relate to social themes such as of Health and Nutrition, Educational attainment, Trust and Institutions, Physical safety and Subjective well-being (which are identical to some of the BES domains). By contrast, concerning the environmental themes, only 5 BES indicators are in common out of 34 proposed in the CES framework. The remaining indicators collected in Italy are mostly produced by the Ministry of Environment and the Environmental Research Center (ISPRA). It should be noted that BES has two domains for environmental issues: one directly connected to the Environment and another connected to Landscape and Cultural Heritage.

38. It is worth highlighting in detail some strengths and weaknesses of the BES in relation to the CES to take advantage from both frameworks:

(a) The BES domain “Subjective well-being” is richer with three indicators in the domain (overall life satisfaction; satisfaction over the leisure time and expectations for the future) and with other indicators in other domains. The CES framework could be improved by including more indicators on subjective well-being. In Italy many subjective indicators related to perceptions and opinions of individuals are considered because often they are good predictors of the future reality and then they will be visible in objective indicators;

(b) Concerning the “economic well-being” dimension, the BES indicators are more focused on measuring inequality and poverty, while highlighting issues such as maternity, working women, time balance between work and family, etc. On the contrary the CES framework focuses mostly on traditional economic measures like gender pay gap;

(c) Two indicators from the CES framework, health expenditure and education expenditure, are not included in the BES but could be added;

(d) The CES theme “housing” is still underdeveloped with three place holder indicators. In Italy all three indicators are available and there is one additional indicator on material deprivation that belongs to the “economic well-being domain” in the BES framework;

(e) Knowledge capital is included in both frameworks (knowledge spillovers and R&D expenditure). In addition, the BES provides a long list of other indicators which could be included in the CES (propensity to patent; impact of knowledge workers on employment; specialization in knowledge-intensive sectors; intensity of internet use).

39. It is worth mentioning that the BES framework is not completed and in particular, the development of the part related to the sustainability indicators is ongoing. According to the BES sustainability framework described in the previous section, new indicators and new data will become available in future. A provisional

version of those new indicators is presented in the final report of December 2014. The forthcoming indicators are mainly indicators of resilience (resilience capacity of rural areas, internet use for public purposes, waste differentiation, access to health services) and of vulnerability (exposure to hydrogeological instability, exposure to earthquakes, risk of mortality/morbidity due to pollution of land/water/air, environmental satisfaction, work related injuries, material deprivation of children, early child engagement). Other horizontal indicators will be considered in the BES framework, such as demographic dynamics, migration flows, import/export flows, development aid, climate change indicators, macroeconomic imbalance, and external energy dependence.

40. Concerning the distribution or inequality indicators, it is worth highlighting that the BES framework already includes several such indicators (Gini coefficient, asymmetry index of family work, rate of physical violence on women, rate of sexual violence on women, rate of domestic violence on women, fear to be a victim of sexual crime, representation of women in Parliament, political representation of women at the regional level, women in decision-making bodies, women in the boards of companies listed in the stock exchange). Almost all the BES indicators are disaggregated by gender, age and territory. This aspect is planned to be strengthened even more to develop the equity dimension of the BES by looking at some disadvantaged social groups, or identifying critical limits of inequality for the sustainability of well-being.

(c) *Place holder indicators*

41. From the 22 place holder indicators in the CES framework, ISTAT and other institutional sources can provide 11 indicators. The remaining place holder indicators can be potentially available after some development work.

42. An assessment of each place holder is provided below: 1) “distribution health” is basically already available but still needs some further work; 2) “migration of human capital” - migration flows have been considered as these can be easily converted into human capital taking into account the level of education; 3) “distribution education” is provided as upper secondary education broken down by gender and territory; 4) “housing stock” is interpreted as the net capital stock of the housing sector; 5) “investment in housing” - gross fixed investment in housing; 6) “housing affordability” is already a BES indicator; 7) “expenditure on safety” is used by the Ministry of Economy and Finance; 8) “land assets” - average land value from the National Agricultural Economics Institute; 9) “emission to soil” is already an ISPRA indicator and measures CO₂ equivalent of the GHG emissions in the agricultural sector; 10, 11, 12) “land footprint”, “water footprint” and “carbon footprint” are potentially available but do not come from an official statistical sources and ISTAT is not in favour of using them; 13) “water quality index” is a BES indicator interpreted as a percentage of bathing marine coastal water of total coasts; 14) “emission to water” is potentially available in-house but still under construction; 15) “historical CO₂ emissions” is potentially available but not at ISTAT; 16) “energy resources” - used energy material from domestic extraction, an indicator provided in-house; 17) “mineral resources” - used mineral material from domestic extraction; 18) “bridging social capital” is potentially available at ISTAT; 19) “contribution to international institutions” is potentially available but not in ISTAT; 20) “R&D capital stock” is part of the indicator R&D gross capital stock; 21) “export of knowledge capital” is potentially available by ISTAT/Bank of Italy; 22) “social capital” is not yet available but is currently developed in-house.

43. A detailed comparison between the CES and the Italian BES indicators is provided at http://www.misuredelbenessere.it/fileadmin/upload/docPdf/Piloting_CES_sustainability_text_to_Data_collection_LARGE_SET_ITALY.pdf.

44. The main conclusion from the pilot testing of the CES framework, is that Italy is in favour of improving the CES framework based on the large set of indicators, at least for developing the framework of regional SDG indicators, and contributing to formulation of the global indicator framework. Therefore we suggest to experiment collecting data on the large set of indicators, focusing more on social and environmental aspects for sustainability. The UN discussion on SDG indicators suggests considering the large set of indicators and comparing it to the other sets of provisional indicators proposed until now, even if it is still not sufficient to cover all the targets/goals identified. Indicators for new areas, such as governance and peace will have to be developed. The national experiences in measuring well-being and progress should be taken into account.

45. Up to now the work of the Italian Scientific Commission to construct a complete well-being sustainability framework has been focused on producing a dashboard of indicators. The dashboard will include indicators on outcome, distribution, vulnerability and resilience for each BES domain. The sustainability indicators are defined looking at the interrelations among BES domains.

46. To get a complete picture of sustainability, ISTAT is also working on measuring the so-called “transboundary activities” to consider interactions between countries. This means analyzing the environmental, social and economic relationships between countries that impact on the well-being. This includes, for example, aid transfers, imports, migration/human capital transfers (move of national skills abroad reduces the national human capital), financial exposure (can lead to contagion from the financial crisis), energy dependence (can be a vulnerability for a country), supranational scale pollutants, macroeconomic imbalances (EU-MIP-Macroeconomic Imbalances Procedure).

47. Italy is also working at the subnational level trying to identify which aspects are relevant for sustainability of local well-being. Regional level indicators are developed within the BES initiative. In addition, many Italian provinces and metropolitan cities (within URBES initiative) are developing their sets of indicators.

V. Conclusions and recommendations

48. Some considerations and recommendations are proposed hereafter for the Post 2015 Agenda monitoring, taking into account the pilot testing of the CES framework and the Italian experience in measuring well-being within the BES project.

49. A clear and strong coordinating role of the National Statistical Institutes is needed for effective, efficient and sustainable indicator framework and SDG monitoring process at global, regional and national levels. This enhances the role of statistical producers inside and outside countries to face the challenges coming from the new data needs.

50. At the same time, modernization of statistical production process is required at country level, taking in consideration technological innovation, multidimensional demand and strengthening a multi-source production system. Countries and NSIs need to move towards an integrated system stepping away from a fragmented silo approach. This has to be primarily done by redesigning the production processes at

the country level, but it must be supported by a global strategy of integrated statistics. It is desirable to explore potential new data sources, including Big data, in partnership with research centres.

51. The UNSC Friend of Chair Group made an explicit recommendation to have a specific target on building an effective official statistical system. Such a target would emphasize the importance of statistics within democratic governance and ensure financial support for a renewed and enhanced world data revolution. The Financing for Development (FFD) process, including enhancing statistical capacity, is a priority that will be discussed at the July 2015 Conference in Addis Ababa.

52. For high quality and robust indicator framework to capture the Post 2015 challenges and to serve the sustainable development goals and targets, it is essential to have a global indicator framework limited in number but including multi-purpose indicators that can address several targets at the same time. At the same time, the number of indicators of the existing list circulated by UNSC is very high. The creation of “headline” indicators (possibly one for each goal) and “supporting” indicators could be a good way forward. Headline indicators should cover the most essential aspects. Their purpose would be to provide simple and clear information about progress towards internationally agreed policy objective. The supporting indicators, on the other hand, should provide further information on more specific aspects. They would be valuable to achieve a deeper comprehension of each phenomenon. Moreover, we stress the importance of disaggregated data to leave no one and no group behind and adequately address inequality and exclusion.

53. There is also a need to better respond to the Rio+20 mandate, in particular with regard to paragraph 38 on broader measures of progress to complement gross domestic product. It is important to ensure that the broader measures of progress are integrated across the global framework of indicators and that experiences developed at national level should be taken into account (as stated in the last FOC report on national practices around the world).

54. Subjective indicators should be used too. The subjective indicators (such as Generalized trust, Trust in institutions, Life satisfaction, Evaluation of wellbeing and Positive mode affects) have a proven capacity to grasp unobserved aspects of human wellbeing. They should be included in the framework as a sign of democracy of a country where people’s opinions are taken in consideration. Concerning composite indices, there are some concerns about their capacity to measure targets.

55. The work of IEAG-SDGs should start from considering the existing experiences and developing the indicator framework by taking into account the work done on specific sustainable development frameworks already agreed at international level by CES-UNECE, OECD, UN MDGs and Interagency Expert Group on Gender Statistics.

56. The monitoring process should also be consulted with the political actors. A close co-operation and consultation between experts and politicians and civil society is needed.

57. As stated above the significant role of the National Statistical Institutes is essential for the reporting and monitoring process of the SDGs. In Italy this will be carried out taking into account the already existing national statistical system, reinforcing the relationships with the national stakeholders and producers, including the civil society, and taking into consideration the Equitable and Sustainable Well-being project (BES).

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