



Economic and Social Council

Distr.: General
14 June 2019

English only

Economic Commission for Europe

Conference of European Statisticians

67th plenary session

Paris, 26-28 June 2019

Item 4 (c) of the provisional agenda

Leading, composite and sentiment indicators

Results of the consultation on the draft *Guidelines on producing leading, composite and sentiment indicators*

Note by the Task Force on leading, composite and sentiment indicators

Summary

This document summarizes the comments by countries and organisations on the draft *Guidelines on producing leading, composite and sentiment indicators*, resulting from the final consultation between December 2018 and March 2019 with all members of the Conference of European Statisticians (CES).

A total of 68 countries and organizations replied to the request for comments. All replies supported the endorsement of the Guidelines. The replies included a number of suggestions to improve the text of the Guidelines. The revised version of the Guidelines taking into account the comments received is available as document ECE/CES/2019/4/Rev.1 on <http://www.unece.org/index.php?id=48575>.

In view of the support received, the Conference of European Statisticians is invited to endorse the *Guidelines on producing leading, composite and sentiment indicators*.



I. Background

1. This document summarizes the comments on the draft *Guidelines on producing leading, composite and sentiment indicators*, resulting from the final consultation conducted from December 2018 to March 2019.
2. The Guidelines were developed by the Task Force on leading, composite and sentiment indicators established by the CES Bureau in February 2016. The objective of the Task Force was to develop guidelines for national statistical offices (NSOs) in producing leading, composite and sentiment (LCS) indicators. The guidelines should clarify possible roles of NSOs in producing LCS indicators and provide practical guidance for NSOs that produce or consider producing LCS indicators. The guidelines should complement existing methodological handbooks and manuals, in particular *Handbook on constructing composite indicators* (OECD, 2009) and *Handbook on cyclical composite indicators* (Eurostat and UNSD, 2017). The guidelines, therefore, should not provide detailed methodological guidance but refer to existing material when relevant.
3. The Task Force consisted of Denmark, Hungary, Israel, Italy, Mexico, the Netherlands, Sweden, Turkey, Eurostat, the Organisation for Economic Co-operation and Development (OECD) and United Nations Statistics Division (UNSD). Jeroen Boelhouwer, The Netherlands Institute for Social Research, and Gian Luigi Mazzi, GOPA Consulting Group, participated in the Task Force as independent experts. The Task Force was chaired by Denmark from November 2017. Before that it was chaired by Sweden.
4. In early 2018, the Guidelines were sent for interim consultation to all CES members. The purpose of the interim consultation was to give CES members an opportunity to review the draft Guidelines and provide comments and suggestions for further improvements. Based on the received comments the Task Force submitted a revised version of the Guidelines to the CES Bureau in October 2018. The Bureau was in support of the revised version and asked the UNECE Secretariat to conduct a final consultation with CES members. This was carried out from December 2018 to March 2019. UNSD extended the consultation globally to countries that are not members of the CES.
5. In spring 2019, the Task Force updated the Guidelines to reflect the comments from the final consultation. All substantive comments were incorporated to the extent possible. Editorial comments and suggestions for clarifications were also considered. The updated version of the Guidelines was carefully edited by Joe Grice, UK to ensure clarity and coherence throughout the chapters.
6. Section II summarises the outcome of the consultation. Section III provides a brief overview of the general comments received and section IV includes detailed comments received to the chapters and annexes of the Guidelines together with the responses by the Task Force. Section IV outlines possible further work in the area of LCS indicators and section V includes the proposal to the CES to endorse the Guidelines.

II. Summary of feedback

7. A total of 70 replies were received from national statistical offices of 62 countries, 4 international organizations and 2 research institutes. NSOs of the following countries replied: Armenia, Australia, Bangladesh, Belarus, Bolivia (two replies by the National Statistical Institute), Botswana, Bulgaria, Canada, Chile, Colombia, Croatia, Czech Republic, Denmark, Egypt, Estonia, Eswatini, Finland, France, Georgia, Germany, Greece, Guinea, Hungary, Iran, Israel, Italy, Japan, Latvia, Lithuania, Madagascar, Mexico, Mongolia, Myanmar, New Zealand, Norway, Oman, Pakistan, Palestine, Panama, Peru, Poland, Qatar, Romania, Russian Federation, Saudi Arabia, Serbia, Singapore, Slovakia, Slovenia, South Africa, Republic of Korea, Republic of Moldova, South Sudan, Spain, Sweden, Switzerland, Thailand, Turkey, Ukraine, United Kingdom, United States (two replies, by the Bureau of Economic Analysis and the Bureau of Labour Statistics) and Viet Nam. The following international organisations replied: OECD, the Statistical, Economic and Social Research and Training Centre for Islamic Countries (SESRIC), UNSD and World Meteorological Organization (WMO). The following research institutions

replied: KOF Swiss Economic Institute, and University of Geneva.

8. All responding countries and organisations supported the endorsement of the Guidelines at the 2019 CES plenary session. Many countries emphasized that further work on LCS indicators and exchange of experiences and good practices would be useful.

III. General comments

9. Most replies indicated that the Guidelines provide clear and useful guidance on production of LCS indicators and appreciated sharing of best practices. A number of general comments are listed below:

10. Armenia: The Guidelines shed light on the possible role for NSOs in producing LCS indicators and gives guidance on practical approaches and quality assurance based on the principles of official statistics.

11. Finland: The Guidelines are a useful tool for countries, which are producing or intending to start to compile this kind of indicators.

12. France: The Guidelines are well structured and embrace the different types of LCS indicators in a clear and systematic way. It is helpful that the Guidelines deal not only with technical issues, but also, and more prominently, with strategical matters (positioning of the NSO, communication, etc.). Useful references, either international or national.

13. Germany: The Guidelines offer a balanced presentation of LCS indicators and their advantages and disadvantages.

14. Hungary: The Guidelines provide clear and comprehensive guidance and will be useful for producing LCS indicators and in improving their quality and international comparability.

15. New Zealand appreciated that the Guidelines draw on existing best practice in producing official statistics. The Guidelines will be useful for anyone setting out to produce new indicators.

16. Poland: The Guidelines provide useful information on the production of LCS indicators and can serve as a recommendation for management regarding the decision whether to produce composite indicators.

17. Sweden: The Guidelines give good basic structures and a context that is useful when NSO (or other organisation) is planning the production of an indicator. Since this is a complex area, it is useful to have a common conceptual framework and guidance on what to consider in the process of setting up an indicator without the purpose of giving detailed guidance on survey design and methods.

18. United Kingdom: the country examples used throughout the document are particularly insightful, allowing the more theoretical aspects of the Guidelines to be demonstrated in real world examples.

19. United States (Bureau of Economic Analysis): The Guidelines provide a useful discussion of the construction of composite indicators. The grouping of the different types of indicators is useful.

20. Ukraine emphasized the usefulness of addressing both positive and negative aspects in relation to LCS indicators and found the examples with practical country experiences particularly helpful.

21. Viet Nam: The Guidelines are an important reference for NSOs to compile better statistics for policy-makers, including early signals of turning points in business cycles.

IV. Comments on individual chapters of the Guidelines

22. This section outlines the substantive comments on the chapters of the Guidelines received from countries and organisations, together with a response from the Task Force that prepared the Guidelines. The Secretariat also received detailed editorial corrections, comments and suggestions for clarifications. These have been incorporated in the final draft version of the Guidelines and are not mentioned in this section.

A. Chapter 1: Introduction

23. Iran recommended a clearer distinction between definition of LCS indicators, their importance and practical examples.

24. Peru suggested to include a brief text about comparing LCS indicators with reference series.

25. Switzerland underlined the importance of mentioning the *CES Recommendations on Measuring Sustainable Development*, since well-being is one of the dimensions of sustainable development.

Response by the Task Force

26. Chapter 3 provides definitions of LCS indicators, together with brief explanations about their use and examples; elaborated practical examples are provided in the annexes. Comparisons with reference series are dealt with in detail in chapters 4-6 and in annex A. The *CES Recommendations on Measuring Sustainable Development* (UNECE 2014) have been included as reference in chapter 3 and in chapter 6.

B. Chapter 2: Typology of leading, sentiment and composite indicators

27. SESRIC mentioned that compiling a composite indicator in two steps (from individual indicators to dimensions and from dimensions to the overall composite indicator) may lose information compared to calculating the composite indicator in one step.

28. Switzerland questioned the use of the term “socio-economic sentiment indicator” instead of “social sentiment indicator” since not all social indicators have an economic component.

29. Viet Nam noted that the pros and cons of each type of LCS indicator should be moved from chapter 3 to chapter 2.

Response by the Task Force

30. The Guidelines explain that when a composite indicator covers more than one dimension it is usually compiled in two steps since estimates for the dimensions are required. For additional methodological explanations readers are referred to OECD (2009) and Eurostat and UNSD (2017). The term “socio-economic” is preferred as the broader and more commonly used term. Chapter 2 provides a descriptive typology, it does not assess possible advantages or disadvantages that NSO may consider. For this reason, the pros and cons of the indicators are included in chapter 3.

C. Chapter 3: The role of national statistical offices in producing leading, sentiment and composite indicators

31. Croatia stressed the need for training in producing LCS indicators which are new to many countries.

32. Eswatini and Viet Nam indicated a need for clearer recommendations about the role of NSOs in producing LCS indicators.

33. Saudi Arabia recommended adding more information about strategic challenges in producing LCS indicators.

34. Serbia would appreciate having more examples on how NSOs organise work on LCS indicators between different departments of the NSO.

Response by the Task Force

35. The need for capacity building is mentioned in the proposed topics for possible further work in section 1.5 of the Guidelines. It is up to NSO to decide whether to engage in the production of LCS indicators. Chapter 3 has been restructured to include a stepwise decision-making process that NSOs may use in their decision. The main strategic challenges are outlined in chapter 3 but will vary with country specific conditions. The need to consider the practical organisation is stressed in section 3.5 on compiling and communicating LCS indicators. The examples provided in the annexes also provide input on how work may be organized.

D. Chapter 4: Sentiment indicators

36. Chile stated that it would be useful to have more examples of “how to analyse feelings” using data from social media and big data.

37. Colombia stressed that in some cases the response burden associated with carrying out sentiment surveys may be too high. Columbia also pointed out that despite common methods or procedures there may still be issues of lack of international comparability because of cultural differences etc.

38. France indicated that the distinction between single sentiment indicators and composite ones is clearer than in the previous draft but that it still can seem somewhat artificial. France and Slovenia noted that the formula of the EU consumer confidence indicator had been changed as of January 2019.

Response by the Task Force

39. The Task Force did not have the possibility to discuss the use of social media or big data in relation to compilation of LCS indicators. Use of big data and web data are included in the topics for possible further work in section 1.5 of the Guidelines. The Task Force agrees that the distinction between single and composite indicators can be made in different ways but maintain the selected distinction to facilitate a clear presentation of the particular issues related to the two types of indicators. The description of the calculation of the European Commission’s consumer confidence indicator in section 4.2.3 has been updated to reflect the changes in methodology as of January 2019. In the earlier version of the Guidelines, each of the chapters 4, 5 and 6 included a list of pros and cons for the type of indicator discussed in the chapter. These have been removed and incorporated in the list of pros & cons in chapter 3 to reflect that the pros and cons should be considered in the decision-making on whether to engage in the production of LCS indicators.

E. Chapter 5: Composite economic indicators

40. Chile questioned the use of factor 69 when using Hodrick-Prescot filter to smooth timeseries.

41. Israel noted that the partial least square (PLS) model for estimating weights was not mentioned.

42. Poland indicated a need for more methodological and technical guidance in some areas of estimating composite indicators.

43. Switzerland proposed using the term “treatment of data” instead of “manipulation of data” because the latter may have a negative connotation.

Response by the Task Force

44. It has been clarified that the factor 69 filter is used for the example in Figure 5.4 and a reference has been included. Interested users are referred to consult with literature on filters for more methodological details. The use of PLS has been referred to under multivariate analysis and under weighting and aggregation. PLS is also mentioned in chapter 6. The Guidelines do not intend to provide detailed methodological or technical guidance. Instead, where relevant references are made to existing methodological handbooks and manuals such as provided by OECD, Eurostat and UNSD. The term “manipulation of data” has been replaced by “treatment of data”.

F. Chapter 6: Composite socio-economic indicators

45. Colombia found that the lack of a conceptual framework to help selecting and weighting indicators and dimensions is an obstacle for developing internationally comparable composite indicators. To this end it will be necessary to have additional guidelines addressing both conceptual and measurement issues.

46. Iran noted that data for constructing composite socio-economic indicators may not always be available.

47. South Sudan stressed that the production of composite socio-economic indicators is a major challenge because of lack of resources and technical know-how.

48. The World Meteorological Organization pointed out that environmental concepts should be more emphasised.

Response by the Task Force

49. The chapter provides examples of the most commonly used dimensions when measuring well-being. Different methods for selection and weighting of indicators and dimensions are presented in sections 6.3.2 and 6.3.6 with their main advantages and disadvantages. The examples of the chapter also provide information about selection and weighting methods. The need for a statistical framework for a composite indicator of well-being, which could give further guidance on the selection and weighting of indicators and dimensions, is mentioned in section 1.5 on topics for further work. The availability of data is addressed in section 6.3.2, and section 6.3.3 mentions the need for imputation in case of missing data. Based on its mandate the Task Force focused on economic and socio-economic indicators and did not have the possibility to discuss the use of LCS indicators in environmental statistics.

G. Chapter 7: Communicating LCS indicators

50. Colombia and Republic of Korea mentioned that users and stakeholders should be actively involved when developing composite indicators and that continuous communication throughout the development and production of the indicators should be maintained.

51. Serbia underlined the importance of ensuring transparency to mitigate misinterpretation of the disseminated statistics.

52. Republic of Korea mentioned that indicators allow different social groups and the public in general to participate in the discussions in society on a better-informed basis which can facilitate better decision making.

Response by the Task Force

53. Both chapter 3 and chapter 7 underline the need to involve stakeholders and users already in the development phase of LCS indicators, and stress the need for continuous communication through the development and production of the indicators. Section 7.3 Quality criteria for communicating LCS indicators, underlines the need to document methods and data sources to the public together with suitable explanations to facilitate

correct interpretation and use of the indicators. Documentation is also addressed in section 3.5 Compiling and communicating LCS indicators.

H. Annexes

54. Bolivia found that metadata of some proposed indicators should be incorporated in the Annexes.

55. Chile suggested that more concrete examples of comparing indicators with reference series would be useful in annex A.

Response by the Task Force

56. Additional details and documentation on the examples are available from the websites of the countries/organisations that provided the examples. Annex A provides references to relevant literature with more examples and explanations of comparisons with reference series.

V. Further work

57. Section 1.5 of the Guidelines outlines a list of possible topics for further work and research on LCS indicators. Almost all respondents found the list of topics for further work complete. Many countries highlighted the importance of individual research items and recommendations to their national circumstances. The issues most frequently highlighted were: an increased effort to mainstream LCS indicators into official statistics (based on more examples and case studies); developing a statistical framework for measuring well-being; methodological and technical assistance; the role of statistical legislation for engaging in the production of LCS indicators; the use of new data sources, especially administrative data and big data.

58. Other suggestions for further work are: a repository of country experiences in producing LCS indicators; analysis and validation of LCS indicators; more guidance on communicating LCS indicators; exploring the pertinence and possibilities of generating composite indicators within the context of SDGs; and the analysis of survey biases in different political, social and cultural contexts. Many countries underlined the need for further exchange of experiences and good practices. Countries with limited or no experiences in LCS indicators also mentioned the need for training and capacity building.

VI. Proposal

59. In view of the broad support by countries and organizations, it is proposed that the Conference of European Statisticians endorses the *Guidelines on producing leading, composite and sentiment indicators*.
