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UNITED NATIONS STATISTICAL COMMISSION and ECONOMIC COMMISSION FOR EUROPE CONFERENCE OF EUROPEAN STATISTICIANS

EUROPEAN COMMISSION STATISTICAL OFFICE OF THE EUROPEAN COMMUNITIES (EUROSTAT)

ORGANISATION FOR ECONOMIC COOPERATION AND DEVELOPMENT (OECD) STATISTICS DIRECTORATE

Work Session on Statistical Metadata (METIS 2008)
(Luxembourg, 9-11 April 2008)

FINAL REPORT

INTRODUCTION

1. The UNECE/Eurostat/OECD work session on statistical metadata was held in Luxembourg City, Luxembourg, from 9 to11 April 2008. It was attended by participants from: Albania, Australia (via video link), Austria, Bulgaria, Canada, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Hungary, Ireland, Latvia, Lithuania, Mexico, Moldova, Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Russian Federation, Slovakia, Slovenia, South Africa, Spain, Sweden, Switzerland, Turkey, and the United States of America. Representatives of the Eastern Caribbean Central Bank, Statistical Office of European Communities (Eurostat), Food and Agricultural Organization, International Monetary Fund, Organization for Economic Cooperation and Development, United Nations Economic Commission for Europe, and the United Nations Industrial Development Organization also attended. A participant from the Open Data Foundation Inc. and an expert invited by Eurostat were also present.

2. The agenda consisted of the following sessions:

Topic 1: Terms of Reference of the METIS Steering Group and outcomes of past meetings
Topic 2: Common Metadata Framework
Part A: Advocating for metadata in a corporate context
Part B: Metadata concepts, standards, models and registries
Part C: Metadata and the statistical cycle and Part D: Implementation
Topic 3: Future work on the Common Metadata Framework

3. The work session was co-chaired by Mr. Daniel Gillman (United States) and Mr. August Götzfried (Eurostat). The sessions were organized by Mr. Klas Blomqvist (Sweden), Ms. Jana Meliskova (Private Consultant), Mr. Daniel Gillman (United States), Ms. Alice Born (Canada), Mr. Marco Pellegrino (Eurostat), Mr. Max Booleman (Netherlands), Ms. Joza Klep (Slovenia), and Mr. Matjaz Jug (New Zealand).

4. Mr. Hervé Carré, Director General of Eurostat welcomed delegates and highlighted the growing importance of metadata as data become more visible, and users need to know how to interpret them. He stressed the importance of the Statistical Data and Metadata Exchange (SDMX) initiative, and the need for the Common Metadata Framework (CMF) as a tool to guide statistical offices in their development and management of metadata systems. He expressed his hope that METIS remains a think-tank for current and future metadata issues, and wished delegates a fruitful meeting.

ADOPTION OF THE REPORT

5. The participants adopted the draft report before the workshop adjourned and this final version incorporates edits received during the two week comment period that followed the meeting.

SUMMARY OF THE MAIN CONCLUSIONS REACHED DURING THE WORK SESSION ON STATISTICAL METADATA (METIS) 2008

TOPIC 1.: TERMS OF REFERENCE OF THE METIS STEERING GROUP AND OUTCOMES OF PAST MEETINGS
Session Organizer: Mr. Marco Pellegrino (Eurostat) and Mr. Juraj Riecan (UNECE)
Documentation: Joint working paper by Eurostat and UNECE and a working paper by the UNECE

6. Eurostat and UNECE opened the meeting by explaining the history and context of METIS meetings and highlighting recent activities and current work. This identified the following outstanding actions and priorities:

- METIS 2008 participants may wish to consider including advocacy-related activities in the METIS work programme, while continuing the exchange of experiences. Advocacy should address the role of metadata in the management of statistical activities, as well as the value metadata bring to subject-matter statisticians and users of statistics.
- A note on metadata advocacy is being prepared for the 2008 plenary session of the Conference of European Statisticians. In preparing it, the UNECE Secretariat has taken into account comments received from members of the METIS Steering Group.
- The Steering Group should make Part B of the CMF a comprehensive reference on the field of application of metadata standards – which standard for what purpose;
- The UNECE Secretariat will launch and maintain a METIS-wiki hosting CMF documents and, in particular, more case studies about metadata across the statistical business process;
- The Steering Group shall populate Part D of the CMF with more examples of good practices in metadata systems implementation;
- METIS 2008 participants shall try to agree on a common definition of terms such as “survey”, “data collection”, “statistical activities” and other related terms, either as part of the discussion under topic 2 (ii) or through written consultation after the work session;
- METIS 2008 participants shall consider and recommend a classification/typology of statistical metadata as an outcome of discussion of WP.7 under topic 2 (ii);
- METIS 2008 participants shall comment and make recommendations with respect to the Generic Statistical Business Process Model under topic 2 (iii) (WP.17) taking into account a variety of initiatives at national and international level for the standardisation of the statistical production process.

7. Issues raised by participants included translation of terminology into other languages, the usefulness of a generic statistical business process model, and the importance of standard terminology for statistical communication.

8. The results of the pre-METIS 2008 questionnaire were presented and discussed. The findings are detailed in Working Paper 3. This exercise provides a valuable snapshot of the current situation regarding metadata management in statistical organizations. This includes an impression of central versus independent metadata systems, recent progress in implementing metadata standards and the level of challenges faced by statistical metadata experts. This raises the question as to how to use the content in the Common Metadata Framework to help agencies address common challenges. The discussion included proposals to link the questionnaire to case studies and to ask for more detail on the use of standards, as well as the reasons for the falling use of some standards. It was agreed to repeat this questionnaire to inform the discussions in future METIS sessions.

TOPIC 2.: COMMON METADATA FRAMEWORK (CMF)

PART A: ADVOCATING FOR METADATA IN A CORPORATE CONTEXT
Session Organizers: Mr. Klas Blomqvist (Sweden) and Ms. Jana Meliskova (expert invited by Eurostat)
Documentation: Working papers by Cyprus, Norway and Czech Republic

9. Part A of the Common Metadata Framework (CMF) focuses on advocacy and the role of metadata in a corporate context.

10. It is clear that good metadata management provides benefits across the entire statistical organization, but

the challenge is to communicate this message. The need for and nature of advocacy may differ according to the situation and the stage of development of metadata systems. For example, the focus on metadata advocacy will be different when:

- developing a vision and strategies for metadata management;
- addressing management issues across the statistical organization;
- developing and building a metadata system – a team approach is important, in particular, there should be different experts involved and it should not be considered exclusively as an IT-issue; or
- implementing and maintaining systems – it will be important to demonstrate the benefits to methodologists and subject matter statisticians by giving examples of re-use of metadata throughout the statistical business process.

11. The discussion on this topic raised the following issues:

- It is important to get the whole staff of statistical offices to understand the use of metadata. The Common Metadata Framework (CMF) provides material on how to advocate for better metadata management.
- Factors influencing an increase in requests for data and metadata include demand by international organizations, increased usage of official statistics by journalists and students and increased accessibility of information on the Internet. Web sites are becoming the main vehicle for data dissemination and the statistical knowledge of users is varied.
- Clear metadata is an important component of providing high-quality statistics.
- Statistical Metadata Systems (SMS) are used throughout the statistical business process and affect the entire organization. Introducing a new system requires a strategic plan supported by top management and the commitment of staff. The benefits of an integrated statistical information system mainly concern the quality of data and metadata and the improvement in services to end-users that this will bring.
- The potential use of administrative sources should not be directly dependent on the development of an integrated statistical information system.
- There is a lack of international coordination in some subject domains. It would be useful if international organizations encourage subject-matter statisticians to develop international systems, similar to the System of National Accounts, in other subject-matter domains.
- A new sub-topic under Part A of the CMF is to consider the possibility of using statistical metadata systems to support other processes within the statistical office, such as cost control and efficiency evaluations.

12. Norway provided a short introduction to their newly developed metadata portal (www.ssb.no/english/metadata), which uses web services to collate metadata from various systems and publish it through a single interface. Its purpose is to make the metadata from these systems more accessible and easier to use, and to provide a tool for central metadata management and monitoring.

13. The participants identified the following possibilities for international cooperation:

- Working with quality experts to agree on standards for improving data and metadata quality;
- Sharing experiences through further documentation of case studies and METIS working papers;
- Clarifying the role of top management through the publication of the previously prepared Part A of the Common Metadata Framework (CMF);
- Involving subject-matter subject statisticians and methodologists in METIS work and discussions;
- Developing methods for clearly demonstrating the benefits of good metadata management to key user groups.

PART B: METADATA CONCEPTS, STANDARDS, MODELS AND REGISTRIES

Session Organizers: Mr. Daniel Gillman (United States), Ms. Alice Born (Canada) and Mr. Marco Pellegrino (Eurostat)

Documentation: Working paper by Netherlands, Sweden, United States, Eurostat (2 papers); Conference room papers by Eurostat and UNECE.

14. There are several different international standards relevant to statistical metadata. Practitioners in national statistical offices need to clearly understand potential applications and the relationships between these standards. The discussion at the work session provided the opportunity to explore and showcase implementations of metadata concepts, standards, models and registries.

15. There are a number of classifications for types of metadata (metadata groups) currently in existence. The participants at the Workshop on Statistical Metadata that was held 4-6 July 2007 in Vienna proposed that this issue be discussed at the METIS 2008 work session with the aim of agreeing on a common metadata typology/classification. It was suggested that metadata may be classified according to the following four criteria, and possible classifications were outlined:

- Who needs the metadata, and for which purposes (e.g. exploratory and explanatory);
- What the metadata inform about: metadata objects (attachment objects) and metadata variables;
- How the metadata are structured and formalised (or not);
- Where the metadata come from (source processes) and where they go (use processes).

The discussion on this issue pointed out that:

- The purpose of the exercise is to provide a simple common terminology for different kinds of statistical metadata. This terminology would facilitate collaboration and sharing of tools and solutions, as the collaboration and sharing depend on mutual understanding of parties involved.
- While the four dimensions listed above are useful, the original expectations were to have a one-dimensional classification.
- The classification by purpose seems to be of interest to the metadata experts.
- Further work is needed before a common metadata classification can be agreed.

16. The relationship between different standards was the core question that led to the work on the Common Metadata Framework (CMF). At the METIS 2006 work session it was proposed that ISO/IEC 11179 standard would be mapped with other standards. The following points were made in the discussion:

- Further progress was made since 2006, and the approach was generally successful, except for a few issues that are not covered by ISO/IEC 11179.
- The Statistical Data and Metadata Exchange (SDMX) and the Extensible Business Reporting Language (XBRL) sponsors agreed to define mapping between the two standards.
- There are objects in ISO/IEC 11179 that do not have counterparts in SDMX, but in general, SDMX is capable of capturing all information that should not be lost.
- Several participants were interested in mapping between PC-Axis and SDMX. It was pointed out that PC-Axis is not a standard, but rather a data dissemination system.
    - Practical results of the bidirectional (export-import) integration of SDMX into PC-Axis can be expected before the end of 2008.
    - The export function would facilitate the provision of SDMX applicable web services when PC-Axis files would be generated through the same procedures as SDMX-ML files.
    - The import function is of interest for statistical offices that plan to publish data for international comparison, and therefore need to load national data along with comparable data received from international organizations and other sources in their PC-Axis public databases.
    - There are some content related issues on the PC-Axis side that the SDMX integration has to address, in particular if expecting a full automation. On the substantive side, the PC-Axis model does not comprise all components of the SDMX information model. Moreover, the administration metadata in SDMX are missing in PC-Axis.
- The potential of SDMX for handling microdata was considered. It was pointed out that the context would be aggregated tables combining unit level data from several reporting units. However, a possible use of SDMX for tables comprising microdata for a single reporting unit was not ruled out.

17. Eurostat presented a series of ongoing SDMX implementations, namely the SDMX registry, a Reference Metadata Editor and the new ESMS standard (Euro-SDMX Metadata Structure) for reference metadata. The discussion showed the interest of national statistical offices in these implementations, with a view to defining their own strategies:

- Participants asked how far national statistical offices should follow the SDMX registry architecture. Eurostat is proposing the following approaches towards metadata exchange:
    - A *push* mode, allowing national statistical offices to submit metadata to Eurostat through the eDAMIS single entry point.
    - A *pull* mode, where metadata are made available through a web service, or making use of RSS feeds containing the info for accessing the database.
    - A Metadata editor, on which Eurostat is working, which entails another kind of "push" transmission, enabling external providers to edit metadata on a web form, sending the approved

version to Eurostat through eDAMIS.

- Eurostat plans to migrate all its reference metadata from the SDDS to the new ESMS structure in the second half of 2008. The new structure is also going to be recommended as the reference standard for the European Statistical System.

18. A set of Content-Oriented Guidelines for the SDMX initiative has been published at www.sdmx.org for public comments. The presentation of Content-Oriented Guidelines included cross-domain concepts and the Metadata Common Vocabulary (MCV), together with more general terminological issues. The following points were made during the discussion:

- The participants were invited to submit comments on the SDMX Content Oriented Guidelines via the SDMX web site (www.sdmx.org).
- It is still difficult to exchange metadata in an automated way: this difficulty has a terminological dimension, in particular related to synonyms and homonyms.
- The relationship between the MCV and cross-domain concepts needs clarification. The consistency of definitions may need to be addressed.
- More generally, data themselves are terminological, and managing descriptions of the underlying concepts may have benefit. The semantics and computational models of data are linked and each is understood better through terminological management of concepts.
- The UNECE expressed its interest to participate in the future work on metadata terminology. In this context, it was stressed that some terms may have different meanings from the national and international organization perspectives, while others may only be relevant from one of those perspectives.

19. When discussing general requirements for soundness of metadata models, the following principles were outlined:

- Completeness: The model should comprise all relevant objects.
- Avoiding irrelevant content: Problems occur when a model comprises objects that are outside their application scope.
- Avoiding confusion: Versioning should be properly recorded.
- Classification structures are Boolean algebras.

20. The general discussion identified potential areas for the future international cooperation in the area of metadata concepts, standards, models and registries:

- Interoperability: This may be addressed by the Common Metadata Framework (CMF). Examples are the interoperability between SDMX and ISO/IEC 11179, PC-Axis and SDMX, as well as other possible mappings.
- Terminology: in this context the necessity of identifying synonyms was emphasised.
- Classification of metadata.
- Statistical classifications.
- Metadata systems architecture: harmonizing and/or standardizing the architecture of metadata systems might be a possible way for facilitating the exchange of metadata among statistical offices.

PART C: METADATA AND THE STATISTICAL CYCLE AND PART D: IMPLEMENTATION

Session Organizers: Mr. Max Booleman (Netherlands), Ms. Joza Klep (Slovenia) and Mr. Matjaz Jug (New Zealand)

Documentation: Working paper by Canada, Sweden, Switzerland and UNECE; Demonstrations by Canada, Ireland, Sweden, OECD and Arofan Gregory (metadata standards expert); Case studies by Australia, Croatia, Czech Republic, Norway, Portugal, South Africa and UNIDO.

21. The focus of METIS is widening beyond metadata to consider strategic organization issues and how metadata systems can provide benefits to address them. The issue of data and metadata quality, raised in earlier sessions, was again highlighted. IT development must be done with business needs clearly in mind. Concepts, such as the Generic Statistical Business Process Model, provide a basis for understanding the business needs to be supported by statistical information systems.

22. The status and future development of the Generic Statistical Business Process Model were discussed. The model is a fundamental component of Part C of the Common Metadata Framework (CMF), which focuses

on the role of metadata throughout statistical production. The discussion raised general issues related to the required level of detail, expected benefits of the model, and content of phases and subprocesses:

- Information management is becoming increasingly important in statistical agencies. The last phase of the statistical business process is archiving and disposal of data and associated metadata:
  - Participants at the METIS workshop held in Vienna in July 2007, agreed the archive phase should be added to the Generic Statistical Business Process Model and tabled for discussion and adoption at this meeting (refer to WP 17).
  - Statistics Canada provided a proposal for the phase to include both archiving and disposal and suggested the sub-processes involved (refer to WP 16).
- There were several questions proposed for discussion. The participants agreed to continue this via electronic consultation during 2008:
  - Such a model should evolve and adapt to the needs of statistical organizations;
  - Consider combination with other models, such as service oriented architecture;
  - Suggest that it is incorporated into the MCV and/or in SDMX as a cross-domain concept (it was noted these are two different things);
  - There is a need to track where metadata is adding value in the generic statistical business process.
- There was support for retaining all three levels of the model. The third level may appear too detailed, but countries with experience in applying the model have found that the third level is vital to understanding.
- There were no objections to the adoption of the Generic Statistical Business Process Model and therefore general support for continuing this work was assumed.

23. Exchange of experiences on implementation was the original purpose of METIS work sessions. Modernization projects to integrate statistical production systems facilitate reuse of existing data and metadata, increased use of administrative sources, and harmonization of processes. Therefore, Part D on implementation is a very important component of the CMF, and participants devoted their attention to examples of implementation.

- Examples from Switzerland show that metadata centralization using a cross-domain metadata model is possible and necessary for harmonization, but it is no guarantee of that. However, an organizational structure that provides direct links between the centralized metadata unit and decentralized subject-matter areas can provide the framework to facilitate harmonization.
- Sweden described their current reorganization project, which aims to shift from a decentralized, 'stove-pipe' structure to more efficient process-oriented one, to reduce costs, reduce respondent burden and increase quality in relation to investment. Their central metadata system, MetaPlus, provides an overall picture of the data collected and can be used to support different types of technical solutions for producing statistics. As a fundamental component for strategic management, MetaPlus provides a good example of the benefits a metadata management system can provide to the overall management of statistical organizations.
- Demonstrations and presentations of metadata systems and tools were given by Arofan Gregory, Canada, Ireland, OECD and Sweden.

Presentation and discussion of Case Studies

24. The first case studies were presented in the METIS workshop held in 2007. They are intended as a means of getting input to Part D of the CMF. They are being collated in the METIS-wiki (www.unece.org/stats/metis/wiki), which provides the means for consolidating and comparing information on national practices. Some of the more recent case studies were presented and discussed in this work session.

25. Statistics Norway presented their current and planned metadata infrastructure, highlighting the following points:

- Separate sub-systems have been brought together within a single portal – the creation of this portal was facilitated by the existence of a service library for master metadata systems.
- Future priorities include improved systems to support data capture and for research access to microdata.
- System requirements will be determined according to a statistical business process model, which is similar to the METIS model, except that evaluation and archiving are seen as cross-cutting. The model is considered relevant for the use of administrative sources.

- Corporate strategy documents emphasize the importance of metadata, and top-management support has been essential. Training is an important part of metadata advocacy within the organization.
- Collaboration is strong with other Nordic statistical agencies and the Neuchatel Group. Further collaboration is welcome.
- Step-wise development, continuous follow-up, early capture, and the ability to re-use metadata have been identified as key factors for success.

26. Statistics Croatia presented their metadata model, and a metadata management tool. The presentation included the following points:

- Statistical processes have been mapped to the generic statistical business process model
- The metadata model (CROMETA) is based on the Reference Model, and includes organizational metadata, variables, measurements, studies, questionnaires, classifications, publications, processing and validation rules, access and authorization rules, archiving metadata.
- The metadata management tool was developed in-house. The user interface is bi-lingual, and generic for different types of metadata.
- Workflow processes are incorporated in the metadata management process, including review, authorization and archiving functions.

27. The UNIDO case study presentation showed progress so far, and highlighted some of the issues relevant to international organizations. Points raised included:

- The development of an integrated data and metadata framework has followed a step-wise approach since 1999, and is linked to the quality assurance framework.
- The metadata model is based on a formal framework, taking account of relevant statistical standards, and using SDMX for transfers.
- The underlying statistical business process model is similar to the draft METIS model, but is focussed on the specific needs of an organization with no direct data collection.
- A tool for maintaining reference metadata has been implemented, as well as tools for producing questionnaires, and capturing metadata from returned questionnaires.
- Metadata are integrated with data for external users via a web application.

28. The case study from Portugal explains the development of their Integrated Statistical Metadata System, developed in-house since 2003.

- A metadata unit coordinates their statistical metadata system. The management of statistical concepts is centralized, including a process for methodology approval. A standard format for documentation is used.
- Integrated Statistical Metadata System comprises five linked subsystems: concepts; classifications (based on Neuchatel model); variables; data collection instruments; and methodological document. These systems make the metadata available on the intranet, the Statistics Portugal web site, or both.
- They intend to implement the proposed Generic Statistical Business Process Model being developed through METIS.
- Training plans were fundamental as a way to involve subject-matter experts in the development of their system.
- Results from usability tests indicated there are areas for improvement and enhancements aim to minimize the distance between metadata producers and users.

29. A presentation of the case study by colleagues in Australia outlined their long tradition in metadata management from initial stages, when metadata was managed without a strategy, to introducing a strategic approach in 1991, and more recently, the development of a future vision for 2020. Their first core metadata repositories provided limited gains, as metadata was seen as an overhead by subject-matter statisticians. Reorganization in 2001 saw the adoption of a formal strategy (Strategy for end-to-end management of ABS metadata (2003)), although some ‘stove pipes’ remain and it is acknowledged the transition to a strategic approach takes time. Current activities are around developing a metadata vision for the future. Key points include:

- There is a strong need to justify the investment in metadata in order to answer tough questions asked by ABS Executive Managers. The debate at this level is not about whether they should have a metadata strategy, but what the strategy should be.
- External stakeholders are having an increased demand for metadata, such as that needed for

interoperability between other agencies, and software collaboration.

- There will be a "paradigm shift" needed at ABS to deal with the practical complexities of using metadata from end-to-end as well as making metadata capabilities less ABS specific (more flexible, interoperable and generic) in response to user demands.

30. South Africa provided an update of the case study they documented for the METIS workshop in 2007.

- South Africa's metadata management system was developed using external consultants.
- Linking questions and questionnaires allows users to see the benefits of metadata capture.
- Managing the change to a new system and processes recognizes that it is a gradual process to achieve commitment.

31. The following challenges were identified in the general discussion on Parts C and D:

- Approach: sustainable step by step development according clear Roadmap/Strategy based on the best practice and international cooperation
- Standards and annotations: case studies have leveraged the use of standards like ISO/IEC 11179, SDMX, DDI, Neuchâtel etc. Their use has become necessity and mappings between standards can provide significant opportunities
    - ISO/IEC 11179 is undergoing a revision. However, the part that is used by statistical offices for data and metadata description is not expected to change.
    - SDMX can provide lessons when creating a statistical information system.
    - Neuchâtel model is available on the CMF website.
- Statistical business process: there is a strong push towards the increased use of metadata in statistical production systems. Metadata systems have become integral part of any new statistical production system. More and more countries are developing end-to-end statistical production systems. Direction towards more centralised data production requires process-based metadata systems architecture.
- Systems & design: architectural shift towards Service Oriented Architecture, externalisation and interoperability are becoming key issues.
- Cultural/Utilisation issues: it is still a challenge to motivate subject-matter units to provide metadata or increase quality. It should be made part of "Business As Usual".
    - Publishing of metadata on the internet may trigger improvement of their quality.
- Metadata quality: participants stressed the importance of metadata quality. Metadata are also data, so existing quality frameworks are equally applicable and should be used.
- Standardisation and reuse of metadata can reduce administrative burden and improve metadata quality.
- Governance: processes and governance for metadata management are as important as having the *metadata* systems in place.
- According to the change management experts, statistical organisations can be quite difficult to work with, because statisticians regard themselves to be specialists in all areas. As NSO's when we commit to work with consultants we should help them find solutions to the problems and not be adding to the problems by being unnecessarily difficult.

TOPIC 3.: FUTURE WORK ON THE COMMON METADATA FRAMEWORK

32. The METIS Steering Group recognizes the growing importance of metadata for all processes in statistical offices. Furthermore, senior level support is demonstrated by the recent decision of the Bureau of the Conference of European Statisticians to strengthen the mandate of this working group. In this respect, the Steering Group recommended continuing the exchange of experience, the collection of good practices and the input for standardisation through meetings on statistical metadata. During 2009-2010, they propose to organize:

- a workshop on Part B of the Common Metadata Framework (CMF) aiming at progressing the work on standards (what standard, for what purpose, input to and from SDMX), terminology and reaching a consensus on classification of metadata; to be held back to back with
- a workshop on Part C of the CMF aiming at finalising the Generic Business Process Model.
- depending on the demand, a workshop on Part D of the CMF focused on case studies, with the aim of analysing existing content for similarities and differences between statistical organizations, and increasing contributions from others.
- a Work Session on Statistical Metadata (METIS) in the first half of 2010.

33. The Steering Group will undertake other activities in connection with the CMF:

- Part A, Metadata in the Corporate Context:
  - The UNECE Secretariat will prepare a print version of Part A of the CMF. This will be circulated to the Steering Group for a final clearance before publishing.
  - A paper based on Part A of the CMF will be presented at the Plenary Session of the Conference of European Statisticians. The paper advocates for the importance of metadata to the senior managements of statistical offices. Other co-organisers (such as the OECD and Eurostat) will conduct similar activities in the framework of their respective governance structures.
- Part B, Metadata Concepts, standards and registries:
  - Part B of the CMF will be updated using papers and outcomes of the METIS 2008 work session.
  - Part B should align with SDMX, in particular with regard to the expected progress of the SMDX Content-Oriented Guidelines;
- Part C, Metadata and the statistical business process:
  - The Steering Group will lead the preparation of the updated version of the Generic Statistical Business Process Model and solicit comments from statistical offices participating in METIS. The model should be better explained and issues related to quality and terminology will be addressed.
  - The Steering Group will develop phase nine of the model: evaluation.
  - The Steering Group recalled that a workshop on Part C was already organized in 2007, and that this workshop helped the progress on Part C, in particular the Generic Statistical Business Process Model. The proposed workshop in 2009 will focus on finalising this model, with understanding that it will need review and updating in the future.
- Part D, Implementation;
  - The Steering Group will solicit more examples of implementation in national metadata systems.
  - Case studies are considered to be highly useful and there was support for using METIS-wiki as the platform for sharing and updating the information.
  - The case study template could be enhanced by the addition of contact information for specialists in areas related to metadata management. Also, a new section to provide details on components or tools that can be made available to others for free or for a charge.
  - The Steering Group will solicit more case studies and will consider the possibility of organizing a thematic workshop focused on case studies. Statistical offices are invited to provide new case studies. Similarly, offices that have already completed case studies are invited to update the content regularly (approximately once per year).
  - Completion of a case study was estimated to take from two working days to complete. They may be partially and/or gradually completed.
  - Analysis across all case study content to identify different approaches, success stories, lessons learned and areas for improvement, would be a welcome discussion point at future meetings.

34. The Steering Group discussed the further development of the METIS-wiki launched in connection with the METIS 2008 work session. The following suggestions were made:

- the UNECE Secretariat will ensure synergies between METIS-wiki and the Common Metadata Framework (CMF) web site by making METIS-wiki a part of the CMF.
- In consultation with authoring agencies, the UNECE will add previously prepared case studies (from the workshop in 2007) into METIS-wiki.

35. The Steering Group will regularly report, through the UNECE Secretariat, to the Bureau of the Conference of European Statisticians (CES) on the progress of work. The OECD and Eurostat will do the same in the framework of their respective governance structures. Consider the ongoing development and changing nature of metadata and its applications to official statistics, the Steering Group strongly recommends the extension of its mandate beyond 2009.

OPEN DISCUSSION (Tour de table)

36. The open discussion at the end of the Work Session was in the form of a tour de table. The following points were raised:

- There was support for continuing METIS work through a combination of virtual tools (METIS-wiki and mailing list), thematic workshops and full work sessions.
- The value of face-to-face meetings is highly appreciated by participants and there were requests for longer breaks during the meeting to allow time for bi-lateral discussions.
- It was suggested that combining two work sessions in one week is too much for those participants who attend both.
- There should be more clarity on the boundaries between what is covered by the METIS group versus MSIS (Management of Statistical Information Systems).
- Translation of documents into Russian and interpretation services during meetings and workshops will help the CIS countries.
- It would be good if future METIS meetings could be hosted by a statistical organization and the meeting could be combined with a site visit and possibility to study a particular implementation of a statistical metadata system in more detail.
- Analysis and comparison between statistical offices would be a useful topic for the next work session.
- Considering the development of metadata portals by several organizations, a site that links to these portals would be appreciated. The PC-Axis web site and European Data Archive (http://www.nsd.uib.no/cessda/archives.html) were quoted as examples of how such a site could be structured.
- It is important to have international standards to inform implementation work at the national level.
- Short progress reports from countries that have previously provided case studies would be a useful addition to the agenda. This information may be collected by adding a question to the pre-METIS meeting survey asking respondents to provide a short update on progress since the last meeting.
- There was support for the suggestion to do more work on quality of data and metadata in the METIS group.
- A topic on barriers to adopting standards and developing systems would be appreciated. This may be combined with a focus on success and benefits of metadata systems in order to provide more material to help with advocacy within organizations.
- Part A should also include possibilities for using the statistical metadata system for other processes in statistical office, such as budgeting and efficiency monitoring.
- Future work should also consider possibilities for sharing tools and components between organizations. For example, South Africa, which uses an open source approach, offered to share their source code. A section to gather information on this will be added to the case study template.
- There is a need for good definitions and classifications that can be understood by non-experts

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