Achievements under the 2020 Work Programme of the UNECE High-Level Group for the Modernisation of Official Statistics

28 December 2020

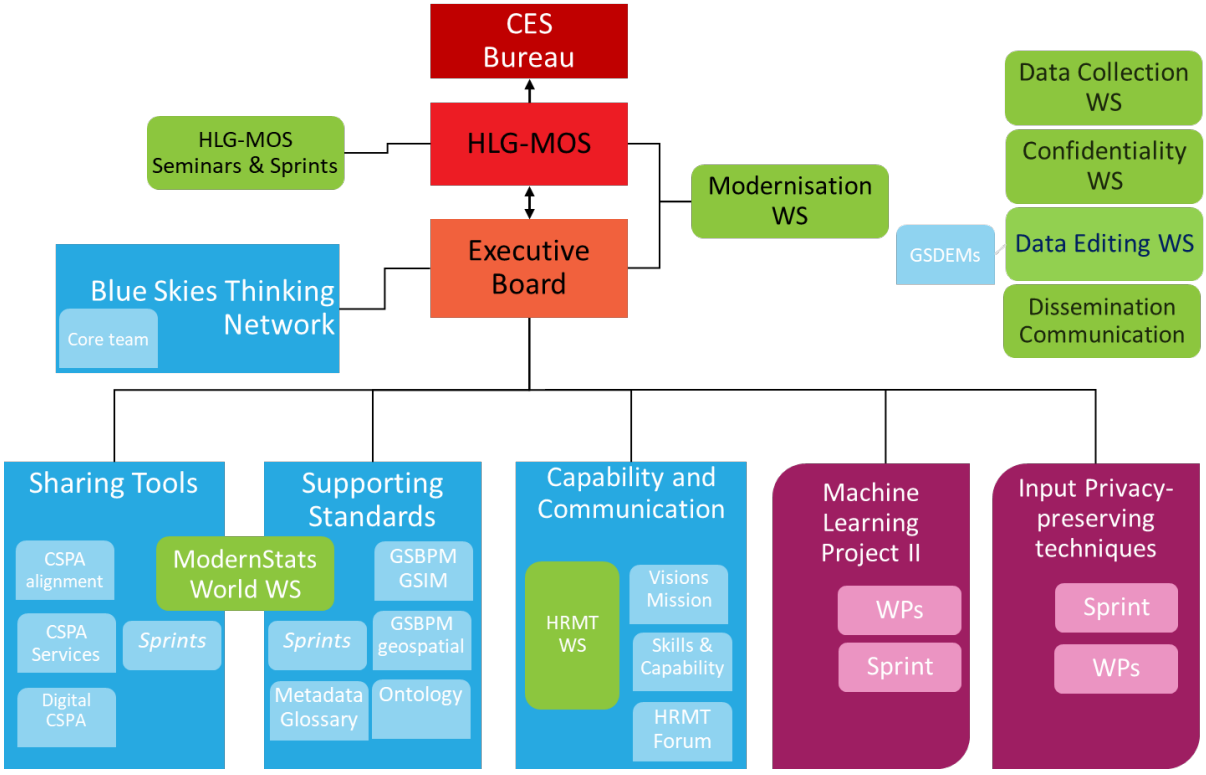
Introduction

1. This report summarizes the achievements made under the Work Programme of the High-Level Group for the Modernisation of Official Statistics (HLG-MOS) in 2020.

2. The HLG-MOS was setup by the Conference of European Statisticians to advance the modernisation of official statistics. It is led by Chief Statisticians of fourteen organisations that set the vision, mission and priority topics. The HLG-MOS Executive Board (EB) was setup to actively monitoring the situation and to adjust where necessary. Further information is available from the public HLG-MOS site.

3. In 2020, the HLG-MOS work programme consisted of two projects, four Expert Groups (with each additional Task Teams) and several Expert Group meetings and workshops organized by Steering Committees. A schematic overview of the groups, network, projects and workshops active under the HLG-MOS in 2020 can be seen in the figure below.

HLG-MOS Structure



4. Right around the time of the meeting in New York of the Chief Statisticians that lead the HLG-MOS, the COVID-19 pandemic started to impact our work in a dramatic way. Additionally, the unit supporting the work of the HLG-MOS continued to have issues in

terms of human resources[1]. Despite all of this, a large part of the works programme could be executed as planned. In several cases, adjustments were made to better support the response of NSOs to the pandemic.

5. In total, Expert Groups, Task Teams, Steering Committees and Projects had 300 members[2] from over fifty different organisations. Meetings and workshops were attended by over 1,200 colleagues.

6. An overview of the Trust Fund that was setup by the HLG-MOS members, can be found Annex 1. A summary and schematic overview of the impact of the crises on the work programme is provided in Annex 2. Finally, the list of participants by country and office in all HLG-MOS activities is included as Annex 3.

Executive Board

7. The Executive Board (EB) has been overseeing the work continuously and met every month, including with project managers and the chairs of the groups. In consultation with the UNECE Secretariat, several steps to mitigate the impact of the Covid-19 pandemic and of the staff shortages at UNECE were taken. Despite various measures being taken, some activities were delayed, realigned, cancelled or put on hold. Where possible, priorities were moved towards activities relevant for the Covid-19 response of NSOs.

8. The monthly virtual meetings alternate between modernisation update and strategic focused meetings. At any time, chairs and project managers can request assistance or interventions from the EB. The concept of EB members being 'champions' of specific activities and following the work in more detail, was introduced. It will need further strengthening but it helps to ensures that the focus of the workshops and the output of the projects and groups is aligned with the mission, vision and priority topics of the HLG-MOS. Together with the UNECE secretariat, the group is also responsible for organising the HLG-MOS Modernisation Workshop. Links: Modernisation Updates.

Projects

9. For 2020, two projects were selected: the second year of the Machine Learning project and the Input Privacy-Preservation project.

Machine Learning Project

10. The Machine Leaning (ML) project was led by Mr. Claude Julien (UNECE consultant). He was supported by the UNECE secretariat and several project members led the work packages and sub-groups. There were 40 participants and another 80 collaborators and followers in the project. Project members had online meetings once a month and sub-group met on a regular basis as well. Between 31 March and 16 April, an online sprint in 12 sessions was organized. On 13-15 October, the Machine Learning Sessions were organized to share and discuss the work of all the streams with participants, collaborators, and other interested colleagues. At several international conferences the work was presented, giving further exposure of this work done as part of the HLG-MOS to a wider audience. The work

[1] The liquidity crisis at the United Nations continued and the hiring freeze remained in place, effectively blocking the recruitment against the two empty posts that were by chance located in the unit supporting the HLG-MOS work programme. As there was neither a possibility to share resources within the Division or UNECE, this meant that effectively only 3 out of 5 post were available to support (the challenging) work programme.

[2] Several colleagues participate in multiple activities. There were over 250 unique participants

achieved during the two years of the project were presented to a wider audience (with over 200 attendees) on 16-17 November in the Machine Learning Webinar as part of the HLG-MOS Modernisation Workshop.

11. The project was structured around three work packages:

   a. Pilot studies on:
      i. Coding and Classification
      ii. Edit and Imputation
      iii. Imagery
   b. Quality Framework for Statistical Algorithms (QF4SA)
   c. Challenges in Integration of Machine Learning

12. The value addition of ML was demonstrated through pilot studies. The capability to use ML within the participating organisations was advanced and the shared outputs should further increase capabilities in more organisations. ML should be considered as a potential solution for business needs: it is definitely not a BUZZ but rather a MUST where it adds value. Organisations should have access to a centre of expertise to assess and support the development of ML and have clear ownership and accountabilities in the implementation and maintenance of ML.

13. The Quality Framework for Statistical Algorithms (QF4SA) was produced to provide a guide to official statistics on the choice of algorithms to be used in the production process. Algorithms can both cover traditional and modern statistical methods. Accuracy, timeliness, efficiency, explainability and reproducibility are important dimensions of this framework that is meant to supplement existing quality frameworks. With respect to integrating ML into statistical production, more work is needed. Challenges and practices were identified and discussed.

14. All project reports and relevant documents can be found at the public ML wiki.

15. The interdisciplinary nature of ML and the need for specific skills acquisition was recognized. This led to the broad agreement that knowledge sharing, through internal communities of practice and international organizations is valuable. It was therefore proposed to continue the work and create an ML community for official statistics as a follow-up of the project. The Data Science Campus at the UK Office for National Statistics Office stepped forward to support this initiative which led to the creation of the ONS-UNECE HLG-MOS Group on Machine Learning 2021.

Input Privacy-Preservation project

16. The Input Privacy-Preservation project was strongly impacted by the crises. The (in-person) Sprint to scope and start off the project that was planned for March was cancelled due to the pandemic. Progress was further hampered because until July, largely due to the pandemic and related priorities, no in-kind project manager was made available by NSOs. Additionally, due to the staff shortages, UNECE did not have the capacity to take on these roles temporarily. From 1 July onward, Statistics Netherlands made available Dennis Ramondt as a part-time project manager. A substantive specialist to co-lead the project was not found in 2020.

17. It was decided by the Executive Board that the project would slowly expand and progressively take in more participants. By August, the group had 20 members from five organisations (Istat, Statistics Canada, Statistics Netherlands, ONS and Eurostat). The work

in the second half of 2020 focused on scoping the proposal (WP0) and on documenting by an agreed format statistical use-cases relevant for application of privacy-preserving techniques by the participants (WP1). These will serve as a basis for creating reference scenarios for evaluating the various techniques.

Groups

18. In 2020, there were several Expert Groups under the HLG-MOS structure. The Supporting Standards Group, the Sharing Tools Group, the Capability and Communication Group and the Blue Skies Thinking Network.

Blue Skies Thinking Network

19. The Blue Skie Thinking Network (BSTN) is the ideas factory of the HLG-MOS. This Expert Group was setup to generate and evaluate new ideas and to assess their potency to modernise statistics. It is led by the innovation manager Barteld Braaksma from Statistics Netherlands and supported by UNECE. The core expert group consisted of around fifteen members that met at least once a month. Additionally, pitched talks sessions were organised. These are a kind of mini sprints where members and outsiders can present briefly an idea or a project in the area of modernisation and which are subsequently discussed by the group. This concept, turned out to be an effective way to identify new topics. Additionally, Task Teams were setup with additional subject area experts to follow-up on specific topics.

20. As a follow-up on last year's Modernisation Workshop, the BSTN decided to setup four expert Task Teams:

a. **Chatbots**: under the leadership of OECD, Statistics Netherlands and Statistics Canada joined to prepare a business case for Statsbot by working out a Proof of Concept for a scalable StatsBot. Results were presented at the StatsBot Webinar and in a project report document. Additionally, a project proposal was prepared and presented and submitted to the HLG-MOS.

b. **Data-driven decision-making support at local level**: this stream was mainly inactive as it did not get other offices involved beyond Statistics Serbia. The BSTN and Executive Board continues to try to get more countries to join the sub-group as the idea turned out to be a very effective tool in response to the Covid-19 pandemic.

c. **Data Science Labs**: was relabelled to Sustainable Communities for HLG-MOS initiatives. The BSTN prepared a concept note in which it is proposed to use the Machine Learning project and the BSTN Synthetic Data Sets subgroup as pilots for creating dedicated communities of experts on new methodologies and technologies for modernizing official statistics. To facilitate this, a support team needs to be setup with information management and communication experts. ONS kindly offered to support the Machine Learning while a community for Synthetic Data was started (next item).

d. **Synthetic Data Sets**: this work expanded rapidly, and the expert group that was setup, grew to 30 members from 13 organisations. Two subgroups were setup: i) on methods and tools, and ii) on utility measures and communication. Statistics Canada made a project lead available and UNECE provides additional support. This has increased the effectiveness and success of this group to a large extend. The group prepared and submitted a project proposal for consideration of the HLG-MOS for the 2021 work programme.

21. Through the pitch talks and further discussions, several topics were identified for 2021 (see HLG-MOS Work Programme 2021). The HLG-MOS Executive Board oversees the work and can request assessment of topics that might be relevant for the modernisation of statistics. The group keeps being ready to evaluate activity and project proposals submitted from the statistical community. Link: General info (public)

Supporting Standards Group:

19. The Supporting Standards Group is responsible for supporting, integrating and further development of the modernisation models and standards developed by the HLG-MOS. The group was chaired by Marina Signore from Istat and supported by the UNECE secretariat. Beside the monthly plenary expert group meetings, five task teams met on a frequent basis. Over fifty experts participated in the various activities of this group. The main activities and outcomes in 2020 were:

a. **Linking GSBPM and GSIM**: Two templates that capture all necessary information were used to map 20 sub-processes. New mapping diagrams showing information flows were produced. In 2020, the group will finalize the mapping and information flows and continue the collaboration with the GSIM task team on the minor update of GSIM.

b. **Geospatial information for GSBPM**: Five use cases were identified. In 2020, the focus was on: Use of geospatial information to produce geospatially-enabled statistics and Use of geospatial information to support statistical production. Additionally, the relation of geospatial information with the subprocesses of five of the eight phases of GSBPM was identified. The group plans to finish the work in 2021.

c. **Metadata Glossary**: The work was completed in May 2020. The glossary is available from the main HLG-MOS site (https://statswiki.unece.org/x/4ADrDw) and contains a list of definitions and explanatory texts for main terms used in ModernStats Models: GAMSO, GSBPM, GSIM and CSPA. For GSIM, which already has its own glossary, the Metadata Glossary team reviewed terms and made proposals for changes.

d. **GSIM update**: the communication paper was completed. The group will continue working to update and clarify ambiguous points and correct errors. Findings from the activities listed above and from experiences implementing GSIM provided input for this process.

e. **Core Ontology for Official Statistics**: The work on the ontology was frozen due to the Covid-19 pandemic.

f. **ModernStats World Workshop**: The workshop was organised jointly with the Sharing Tools group. As a result of the Covid-19 pandemic, it had to be turned into an online workshop. This led to a wider audience being able to attend (140 participants from 40 organisations). The main focus was on sharing experiences with using the modernisation models. The work of the Supporting Standards group and CSPA was shared while countries presented their experiences in using the models. Presentations, documents and the meeting report is available from the meeting site.

Sharing Tools Group

22. The group supports further developing the Common Statistical Production Architecture (CSPA) and its implementation. The Sharing Tools Group was mainly inactive in 2020. The group traditionally works through in-person sprints to advance the work which

were impossible due to the Covid-19 pandemic. The work planned could neither progress under the ESSnet project Implementing Shared Statistical Services (I3S) as it was also impacted by the crisis. In 2021, CSPA will be part of the Supporting Standards group. The output created by the Sharing Tools group is available from the CSPA webspace. The activities in 2020 can be summarized as:

a. **CSPA 2.0**: The CSPA 2.0 was finalized and made available from the public wiki of the Common Statistical Production Architecture site.

b. **ModernStats World Workshop**: Together with the Supporting Standards, the group prepared the 2020 ModernStats World Workshop (see above).

Capability and Communication Group:

23. The Capability and Communication Group was created by adding Communication to the Expert Group on Developing Organisational Resilience. The group is responsible for aspects of Human Resource Management and Training as well as Communication in Statistical Organisations.

24. The work of the expert group on Capabilities and Communication group nearly came to a full stop. HR and communication departments were strongly involved in the Covid-19 response in most offices. On a monthly basis, the group kept meeting to evaluate if any task team could commence their activities. In July, the task team on Ethical Leadership has (re)started but only with few members. The task team doing the follow up on the Strategic Communication Framework initially switched to collecting examples of the response of NSOs to the pandemic and changed to focus towards updating and expanding the crisis communication management section of the framework. Due to staff shortages at UNECE and the pandemic, the HRMT workshop was initially cancelled. The Executive Board encouraged the group to refocus activities on response to the pandemic. Therefore, it was decided to organise an online Covid-19 response event:

a. **Ethical leadership**: the work was further scoped. A short poll to countries about their ethics management policies was prepared and the team will be working on a survey in 2021.

b. **Strategic Communication Framework**: a digital platform was created and extended with examples from Covid-19 responses in communication. The various outputs of the 2018 and 2019 Strategic Communication Framework projects are being integrated and will submitted for United Nations publication in early 2021.

c. **Workshop on Human Resource Management and Training for Statistical Offices**: the planned regular HRMT Workshop was changed into an online workshop on Covid-19 response in the area of Communication and HRMT. It brought together statistical organisations to discuss how they are managing unprecedented crisis situation during the pandemic and to share useful experiences and practices. Presentations and papers area available from the meeting site.

Meetings and Workshops

25. Originally, at least ten in-person meetings, workshops and sprint events were planned for 2020[3]. However, the Covid-19 pandemic as well as staff shortages as a result of the

[3] Statistics Poland, Statistics Portugal, Statistics Serbia and Destatis had already start preparations to host one of these events.

United Nations liquidity crisis made drastic changes needed. The main immediate decision was to postpone all (face-to-face) workshops that were planned for the first half of 2020. However, as the pandemic continued and the recruitment to the empty posts were blocked further, changes were needed. The Executive Board and the UNECE secretariat decided to move some workshops to online events (Data Editing, ModernStats World Workshop and HLG-MOS Modernisation workshop) and to cancel all other workshops (Workshop on Dissemination and Communication of Statistics, Workshop on Human Resources Management and Training, Workshop on Statistical Data Collection). However, given the emerging needs caused by the Covid-19 pandemic, it was decided to replace the cancelled workshops with online Covid-19 response events as they were in areas where the impact of the pandemic was strongest.

26. In the end, twelve larger events were organised in 2020. Over 1,200 colleagues participated in these events. In chronological order these were:

- **HLG-MOS meeting** (1 March, New York): As customarily, the Sunday before the start of the Statistical Commission in New York, the Chief Statisticians that are member of the HLG-MOS meet. This year, due to the liquidity crisis at the United Nations, the meeting had to be shortened to a half day event. The results of 2019 and work programme for 2020 were discussed and approved. It was felt that the mission and vision statement did not need an update and that the priority topics were still valid. The Executive Board got further tasks to lead and guide the work under the HLG-MOS in 2020.

- **Machine Learning Sprint** (31 March - 16 April, online): Statistics Poland planned to host the sprint workshop but due to the pandemic it was changed to an online event. The main objective was to advance the production of the pilot study theme reports based on the pilot study reports (WP 1 of the ML project). Quality and integration of ML in official statistics was also discussed and several recent pilot studies were presented. In total 12 online sessions were held. Most presentations and other material shared at the sprint are available from the ML for Official Statistics site.

- **Expert Group meeting on Statistical Data Editing:** The original workshop was postponed and turned into an online event. The impact is limited to less discussions groups and alternative solutions to determine future work in this area. On the other hand, now over 200 participants were able to participate rather than the usual 60-70 participants. It had the following topics: Methods: for machine learning and time series data, and new/emerging methods; Data: 2021 Census, administrative data, geospatial data, big data and other alternative data; Software: open-source software and software demonstrations; Quality: assessing data quality and indicators; Imputation Methods: machine learning and new/emerging methods; Processes: editing in a process-oriented setup, standardisation and meta-data driven processes. Papers, presentations and the outcome are available from the meeting site: 2020 SDE Workshop.

- **Expert Group meeting on Covid-19 Response in Dissemination and Communication of Statistics** (7-9 September, online): The workshop focused on sharing experiences with responding to the Covid-19 pandemic in the area of communication. Topics discussed include: Emergency communication and innovation in communication; Communicating new products developed during the crisis; Internal communication during the pandemic. There were 21 presentations (of which seven on the joint day with the HRMT Workshop) where experiences with responding to the pandemic were shared. HLG-MOS

member and president of Statistics Poland Dominik Rozkrut, provided a keynote presentation. Over 110 colleagues joined the workshop. It included small group discussions to share experiences and discuss lessons learned. Results are available from the meeting site.

- **Covid-19 Response in Human Resource, Management and Training (HRMT)** (9-11 September, online): With 20 presentations (seven on joint day), it brought together statistical organisations to discuss how they are managing unprecedented crisis situation during the pandemic and to share useful experiences and practices. Over ninety colleagues participated in the workshop. It included small group discussions to share experiences and to discuss lessons learned. Presentations, papers and other meeting documents are available from the meeting site. A special session for EECAA[4] countries with Russian interpretation was jointly organised and funded by EFTA.

- **Expert Group meeting on Statistical Data Collection in times of Covid-10** (5-9 October: This online Covid-19 response event was attended by 129 participants. It included 25 presentations and small group discussions to share the impact of the pandemic on data collection activities and to discuss the legacy of the pandemic on data collection practices. The focus was on sharing the impact of the pandemic in the area of data collection and to challenges it posed to existing data collection activities but also on the opportunities it provided to introduce new modes, new data sources and new roles for NSOs. Presentations, papers and outcomes area available from the meeting site.

- **Machine Learning Sessions** (13-15 October, online): in this three day event about twenty-five talks were organized on four broad themes: project output, study updates, new applications in official statistics, as well as on preparations for continuation of the ML as a community in 2021. The sessions were open to all project participants, collaborators and others interested in the work. About seventy different experts attended the sessions. Most of the material presented is integrated and available on the ML for Official Statistics site.

- **The ModernStats World Workshop** (27-30 October, online), organized jointly by the Supporting Standards and the Sharing Tools groups was held online with an adjusted programme. Interactive elements were reduced and there are slightly less results to present. However, there was more time to present the models (specifically GSBPM) to a broader audience. Link: 2020 Workshop.

- **Differential Privacy Workshop** (30 October): this short workshop was organized by the Synthetic Data Sets group of the BSTN. Participants in the Synthetic Data Sets group shared and discussed their experiences in differential privacy and the interlinkages with synthetic data. Conclusions will be included in the work of the group.

- **Machine Learning Webinar** (16-17 November, online): to share the many project outputs, this webinar was organised for a wider audience. Over two-hundred persons attended the event where the outputs of the project were communicated. This included study reports, shared code and data, analysis of value added, recommended ML practices, quality framework elements and examples of organisational practices to address integration

[4] Eastern Europe, the Caucasus and Central Asia

challenges. Presentations, papers and other material is available from the webinar pages on the public ML for Official Statistics site.

- **HLG-MOS Modernisation Workshop** (18-19 November) was held online with an adjusted programme as there was less output to present. As several topics will be carried over to 2021, less new topics can be taken on board in 2021. Significantly more time was allocated to present the results and to discuss the project and activity proposals. Four rounds of (online) discussion groups in simultaneous virtual outbreak rooms were held where participants discussed the merits and potential scoping of the proposals and activities. At side events, webinars were organized to share the work of the Machine Learning project and of the Statsbots activity of the BSTN group. Presentations, papers and activity and project proposals are available from the meeting site.

- **Statsbot Webinar** (20 November, online): the webinar focused on sharing the results of the BSTN subgroup on StatsBot. Representatives from OECD, that lead the activity, and the contracted parties presented two proofs of concepts and their lessons learned. A second main idea shared during the Webinar was on joint user research to drive value and innovation. Over fifty participants joined the discussions. Documents and presentations are available from the webinar pages.

27. Some Project Sprint workshops that were planned had to be cancelled (on Input Privacy Preservation and one on Machine Learning) while the Machine Learning Sprint planned in Warsaw was turned into an online event. Several other Machine Learning events were added as well (ML Sessions and ML Webinar). The BSTN group also organized several Pitch Talk events and a Workshop on Differential Privacy as well as a webinar on the Statsbot activity. On several occasions, outputs and activities of groups and projects were presented at relevant HLG-MOS workshops or at external meetings. For example, results of the Machine Learning project were not only presented at the UNECE Workshop on Statistical Data Editing, but also at various other international events on Machine Learning.

Other activities

28. The work of the HLG-MOS is facilitated by a large number of wiki sites and web pages. In total, the UNECE secretariat is managing and maintaining over fifty different public and restricted wiki sites available for collaborative purposes or for sharing output from HLG-MOS activities. Furthermore, several presentations on the work of the HLG-MOS were given at national and international events. Additionally, news articles and various reports to intergovernmental bodies were prepared (e.g. for the Conference of European Statisticians or the United Nations Secretariat). Moreover, the UNECE HLG-MOS secretariat responded to various request for publications, sharing information, presentation of work or requests for assistance by colleagues from within and outside the UNECE region.

29. The work was also coordinated within the Statistical Division, UNECE and with other International Organisations working on the modernisation of official statistics (e.g. Eurostat, European Central Bank, OECD, UNDESA, World Bank). Coordination was assured and linkages were made with international activities in similar areas, for example with: the Global Working Group for Big Data, the ESSnet Big Data from exploration to exploitation, the ESSnet Implementing Shared Statistical Services (I3S) project, the EU MAKSWELL project and UN-GGIM.

30. On many occasions chairs, project managers and other group members, represented and coordinated the work done under the HLG-MOS with other national and international activities. Several colleagues and offices have also been active at providing technical assistance to other countries on implementing the modernisation models or other guidelines, frameworks and recommendations produced under the HLG-MOS.

31. Further information is available from through the main HLG-MOS online portal. The UNECE Secretariat can be contacted as well for further information.

Annex 1: HLG-MOS Trust Fund

Overview 2020

As the Covid-19 pandemic started just before the first travel was planned, all budgeted travel costs remained unspent. Additionally, the Input Privacy Preservation Project started only in the second half of 2020 and Statistics Netherlands provided a (part-time) in-kind project manager[5]. At the start of 2020, contributions to the Trust Fund were received from Mexico (US$10,000) and New Zealand (US$32,425) while the Republic of Korea had contributed at the end of last year (US$30,000). The UNECE secretariat therefore did not send out further requests for payments in the first half of the year (as originally had been planned and announced at the New York meeting).

Proposed budget and actual expenditure for 2020[6]

	$USD	
Expenditure during the year	Planned	Actual
Consultant fees	106,711	84,428
Travel – UNECE staff	14,238	NIL
Travel – Experts/Consultants	26,442	NIL
Total Expenditure	**147,392**	84,428
Mandatory Operating Reserve	*22,174*	
Difference budgeted and actual	***62,964***	

In-kind contributions

The Executive Board was chaired by CSO Ireland and Statistics Canada. Chairs of Modernisation Groups were provided by Istat, Statistics Netherlands and Statistics Poland. Additionally, Istat, OECD, Statistics Canada and the US Bureau of Labor Statistics lead Task Teams. Statistics Netherlands provided a part-time project manager. The Federal Statistical Office of Germany, Statistics Poland, Statistics Portugal, and Statistics Serbia had already planned to host expert or sprint workshops. However, due to the Covid-19 pandemic all these events were cancelled. A detailed overview of the involvement of staff can be found in Annex 3.

[5] In case of an in-kind project manager, about 20% of the usual fee is paid to cover additional costs for the project manager.
[6] To better reflect the real costs per item, administrative charges, insurance and other mandatory fees are now attributed to the respective cost line rather than under one separate cost item.

Outlook for 2021

At the end of 2020, we had a balance left of about US$70,000 while contributions were received from South Korea (US$35,000, Mexico (US$10,000), Canada (US$35,000) and early 2021 we will receive that of Ireland (€13,000 or approximately US$14,000). We therefore have an estimated US$164,000 available in the Trust Fund. Travel will most likely still be restricted for at least the first half of 2021. Additionally, in-kind project managers were found on a part-time basis, reducing the costs to about 20% of the usual fee (to cover additional costs for the project manager). We are still looking for part-time technical leads but even if prorated usual fees would be paid, it is expected that additional funds will remain unspent.

The expected surplus at the end of 2021 will therefore be at least US$24,000. The UNECE secretariat will therefor send requests for additional contributions only in the second half of 2021 for setting up the budget for 2022.

Proposed budget for 2021[7]

Expenditure during the year	$USD
Consultant fees	90,000
Travel – UNECE staff	20,000
Travel – Experts/Consultants	30,000
Miscellaneous	2,000
Total Expenditure	**142,00**
Additional Mandatory Operating Reserve	*(2,000)*
Available budget:	164,000
Surplus (at least)	***24,000***

The Executive Board will again be led by CSO Ireland and Statistics Canada. Chairs for the groups will be provided by CSO Ireland, Statistics Hungary, Statistics Netherlands and Statistics Poland. While Statistics Canada and Statistics Netherlands will provide in-kind project managers (on a part-time basis). UNECE has made meeting room reservations for all planned events in Geneva. Due to the uncertainty with the Covid-19 pandemic, no arrangements have been made for hosting expert group and sprint workshops at this stage.

[7] To better reflect the real costs per item, administrative charges, insurance and other mandatory fees are now attributed to the respective cost line rather than under one cost item.

Annex 2: Summary of status of HLG-MOS activities

Key impact of the COVID-19 pandemic and staffing issues on the work programme of the HLG-MOS:

Limited impact:

- The Machine Learning project
- Blue Skies Thinking network
- Supporting Standards group
- Data Editing and ModernStats World workshop

Major reduction of activities:

- Input Privacy-Preservation project
- Sharing Tools Group

Major reduction and refocus on Covid 19 response:

- Capabilities and Communication Group
- Dissemination and Communication, HRMT, Data Collection workshops

See the table bwlow for a more detailed summary overview of the impact

Status HLG-MOS Activities 2020		
Activity	**Status**	**Note**
Modernisation Groups		
Excutive Board		Montly meetings as scheduled
Blue Skies Thinking Network		Montly meetings as scheduled
Identification of new topics		Identification of new topics finished
Synthetic Data Sets		Expanded into 30+ expert group. Will continue as project
Chatbots		Proof of Concepts finished
Data Science Labs/Expert Communities		Note produced. ML pilot will start with support from ONS. Synthetic Data now project.
Data-driven decision-making support at local level		Statistics Serbia waiting for countries to collaborate
Supporting Standards		
Linking GSBPM and GSIM (conti.)		Significant progress was made but continues in 2021 (with additional output)
Core Ontology for Official Statistics (conti.)		not started/continued
Metadata Glossary (conti.)		Finished June 2020
Geospatial: Home		Most work was done the remaining work will is planned to finish by April 2021
GSIM		Start delayed to July 2020. Work will continue in 2021
Organisation ModernStats World workshop		Finished with adjusted programme

Sharing Tools		Inactive but subgroup setup under Supporting Standards Group
CSPA 2.0		Finalized by 2 January
Digitising of CSPA document & Promotion		Inactive
Adding Services to the CSPA Catalogue		Inactive
Communicating the Restated CSPA Concept		Inactive
Organisation ModernStats World workshop		Finished with adjusted programme
Capabilities and Communication Group		
Culture Change and Internal Communications Strategy		Inactive due to Covid pandemic
Competencies Training and Development		Inactive due to Covid pandemic
Future of work in the context of Modernisation of the workplace		Inactive due to Covid pandemic
Social Media Strategy and other follow up on the Strategic Communication Framework		Started in July, focus first on crisis communication management
Ethical leadership		Started in July will continue in 2021
HRMT workshop organization		Workshop cancelled but replaced with virtual Covid-19 response workshop

Projects

Machine Learning Project		All output delivered
Sprints (2x)		Moved to virtual (and one replaced by ML sessions)
Input-Privacy Preservation Project		Start postponed to July; will slowly expand the scope and participation
Sprints (2x)		Cancelled

Workshops

Data Editing Workshop		Postponed and changed to virtual event of original workshop
Data Collection Workshop		Cancelled, replaced by Covid-19 response workshop
Dissemination and Communication WS		Cancelled, replaced by Covid-19 response workshop
Confidentiality Workshop	*2021*	*24 month cycle next planned for 2021*
HRMT WS		Cancelled, replaced by Covid-19 response workshop
ModernStats World Workshop		Modified original workshop
Modernisation Workshop (November)		Planned to be virtual; more presentation of results, less on future work

Finished		Postponed/Strong impact
On Track/limited impact		Cancelled

Annex 3: List of Participants in 2020 by Country and Organisation

Australia

ABS

- Blue Skies Thinking Network - Daniel Elazar
- Blue Skies Thinking Network - Ric Clarke
- Capabilities and Communication - Andrew Mann
- Exectuve Board - Anders Holmberg
- Machine Learning Project - Daniel Merkas
- Machine Learning Project - Jenny Pocknee
- Machine Learning Project - Norman Mueller
- Machine Learning Project - Ric Clarke
- Machine Learning Project - Siu-Ming Tam
- Supporting Standards - Al Hamilton
- Supporting Standards - Annette Tyler
- Supporting Standards - Martin Brady
- Synthetic Data Project - Geoffrey Brent
- Synthetic Data Project - Ric Clarke

Austria

Statistics Austria

- Workshop on Statistical Data Editing - Alexander Kowarik

Belgium

Statistiek Vlaanderen

- Machine Learning Project - Marc Callens

Vito

- Machine Learning Project - Bart Buelens

Canada

Statistics Canada

- Blue Skies Thinking Network - Eric Sauvé
- Blue Skies Thinking Network - Kate Burnett-Isaacs
- Capabilities and Communication - Gabrielle Beaudoin
- Capabilities and Communication - Janice Keenan
- Capabilities and Communication - Stacey Money
- Exectuve Board - Stépane Dufour (co-chair)
- Input Privacy-Preservation Project - Abel Dasylva
- Input Privacy-Preservation Project - Philippe Gagné
- Input Privacy-Preservation Project - Robert McLellan
- Input Privacy-Preservation Project - Saeid Molladavoudi
- Machine Learning Project - Isaac Ross
- Machine Learning Project - Justin Evans
- Machine Learning Project - Wesley Yung
- Supporting Standards - Cory Chobanik
- Supporting Standards - Farrah Sanjari
- Supporting Standards - Flavio Rizzolo
- Supporting Standards - Francine Kalonji
- Supporting Standards - Tim Werschler
- Synthetic Data Project - Claudiu Motoc
- Synthetic Data Project - Héloïse Gauvin

- Synthetic Data Project - Kate Burnett-Isaacs (chair)
- Synthetic Data Project - Kathryn Stevenson
- Synthetic Data Project - Kenza Sallier
- Synthetic Data Project - Steven Thomas
- Workshop Dissemination and Communication - Gabrielle Beaudoin (chair)
- Workshop Dissemination and Communication - Janice Keenan
- Workshop on Statistical Confidentiality - Steven Thomas
- Workshop Statistical Data Collection - Lise Rivais

Finland

Statistics Finland

- Blue Skies Thinking Network - Faiz Alsuhail
- Blue Skies Thinking Network - Jussi Ritola
- Exectuve Board - Mikko Lindholm
- Supporting Standards - Antti Santaharju
- Supporting Standards - Essi Kaukonen
- Supporting Standards - Mikko Saloila
- Workshop on Statistical Confidentiality - Janika Tarkoma

France

INSEE

- Sharing Tools - Franck Cotton
- Supporting Standards - Christophe Dzikowski
- Supporting Standards - Florian Vucko
- Supporting Standards - Franck Cotton

Germany

Destatis

- Machine Learning Project - Florian Dumpert
- Workshop Dissemination and Communication - Kerstin Haensel
- Workshop on Statistical Confidentiality - Sarah Giessing

Institute for Employment Research

- Synthetic Data Project - Jörg Drechsler

Hungary

Statistics Hungary

- Supporting Standards - Csaba Ábry
- Supporting Standards - Éva Hajósné Ender
- Supporting Standards - Zoltán Vereczkei
- Workshop on Statistical Data Editing - Agnes Andics

Ireland

CSO

- Capabilities and Communication - Aeidin Sheppard
- Capabilities and Communication - Eilish O'Sullivan
- Capabilities and Communication - Louise Dineen
- Capabilities and Communication - Maria Harley (co-chair)
- Capabilities and Communication - Marie Creedon
- Exectuve Board - Jennifer Banim (co-chair)
- Workshop Dissemination and Communication - Aeidin Sheppard
- Workshop Dissemination and Communication - Elaine O'Mahoney

Italy

Istat

Blue Skies Thinking Network - Carlo Vaccari
Blue Skies Thinking Network - Marco Di Zio
Blue Skies Thinking Network - Monica Scannapieco
Capabilities and Communication - Angela Leonetti
Capabilities and Communication - Antonio Ottaiano
Capabilities and Communication - Daniela Bonardo
Capabilities and Communication - Fabrizio Rotundi
Capabilities and Communication - Giulia Peci
Capabilities and Communication - Michela Troia
Capabilities and Communication - Pietro Scalisi
Exectuve Board - Monica Scannapieco
Input Privacy-Preservation Project - Carlo Vaccari
Input Privacy-Preservation Project - Diego Zardetto
Input Privacy-Preservation Project - Fabrizio De Fausti
Input Privacy-Preservation Project - Massimo De Cubellis
Input Privacy-Preservation Project - Mauro Bruno
Input Privacy-Preservation Project - Monica Scannapieco
Machine Learning Project - Diego Zardetto
Machine Learning Project - Fabiana Rocci
Machine Learning Project - Gabriele Ascari
Machine Learning Project - Roberta Varriale
Machine Learning Project - Romina Filippini
Machine Learning Project - Tiziana Tuoto
Sharing Tools - Carlo Vaccari
Sharing Tools - Marco Silipo
Sharing Tools - Mauro Bruno
Sharing Tools - Roberta Varriale
Sharing Tools - Tiziana Tuoto
Supporting Standards - Adele Bianco
Supporting Standards - Andrea Bruni
Supporting Standards - Carlo Vaccari
Supporting Standards - Giorgia Simeoni
Supporting Standards - Lauro Tosco
Supporting Standards - Marina Signore (chair)
Supporting Standards - Mauro Bruno
Supporting Standards - Mauro Scanu
Supporting Standards - Michele Riccio
Supporting Standards - Paolo Francescangeli
Synthetic Data Project - Flavio Foschi
Synthetic Data Project - Guido Drovandi
Synthetic Data Project - Loredana Di Consiglio
Workshop on Statistical Data Editing - Simona Rosati

Mexico

INEGI

Blue Skies Thinking Network - Juan Muñoz
Capabilities and Communication - Alberto Valencia
Exectuve Board - Sergio Carrera
Input Privacy-Preservation Project - Luis Clemente

Machine Learning Project - Abel Coronado
Machine Learning Project - Jael Pérez Sánchez
Machine Learning Project - Jimena Juárez
Machine Learning Project - Jose Ruiz Sánchez
Sharing Tools - Juan Muñoz
Sharing Tools - Ricardo Olvera
Sharing Tools - Silvia Fraustro
Supporting Standards - Ildeliza Ramos
Supporting Standards - José de Jesús Togno
Supporting Standards - Juan Muñoz
Supporting Standards - Manuel Cuellar
Supporting Standards - Ricardo Olvera
Supporting Standards - Ximena Fernandez Conde
Synthetic Data Project - Juan Muñoz

Montenegro

MONSTAT

Capabilities and Communication - Jelena Markovic
Supporting Standards - Boris Muratovic

Netherlands

Statistics Netherlands

Blue Skies Thinking Network - Barteld Braaksma (chair)
Capabilities and Communication - Arne Essers
Capabilities and Communication - Jeroen Rutten
Capabilities and Communication - Martha Kevers
Exectuve Board - Astrid Boeijen
Input Privacy-Preservation Project - Jeori Vanetten
Input Privacy-Preservation Project - Matjaz Jug
Input Privacy-Preservation Project - Paul Grooten
Input Privacy-Preservation Project - Ralph Schreijen
Input Privacy-Preservation Project - Sulaika Suijzings-Mahangi
Input Privacy-Preservation Project - Ted Stormen
Machine Learning Project - Jan van den Brakel
Machine Learning Project - Jeroen Pannekoek
Machine Learning Project - Joep Burger
Sharing Tools - Matjaz Jug
Sharing Tools - Ronald Ossendrijver
Synthetic Data Project - Adriaan Knobbe
Synthetic Data Project - Paul Grooten
Synthetic Data Project - Peter-Paul de Wolf
Synthetic Data Project - Quinton Denman
Workshop on Statistical Confidentiality - Eric Schulte-Nordholt
Workshop on Statistical Confidentiality - Peter-Paul de Wolf (chair)
Workshop on Statistical Data Editing - Sander Schoultus
Workshop Statistical Data Collection - Irene Salemink

New Zealand

StatsNZ

Blue Skies Thinking Network - Gary Dunnet
Capabilities and Communication - Terry McCaul

Exectuve Board - Vince Galvin
Sharing Tools - Rosemary McGrath (chair)
Synthetic Data Project - Alistair Ramsden
Synthetic Data Project - Lindy Siegert
Synthetic Data Project - Peter de Wit

Norway

Statistics Norway

Machine Learning Project - Magnar Lillegård
Machine Learning Project - Tatsiana Pekarskaya
Machine Learning Project - Thivyesh Ahilathasan
Sharing Tools - Trygve Falch
Synthetic Data Project - Johan Heldal
Synthetic Data Project - Øyvind Langsrud
Workshop on Statistical Data Editing - Li-Chun Zhang

Poland

Statistics Poland

Capabilities and Communication - Anna Borowska (co-chair)
Capabilities and Communication - Karolina Banaszek
Machine Learning Project - Dominika Nowak
Machine Learning Project - Jacek Maslankowski
Machine Learning Project - Krystyna Piatkowska
Machine Learning Project - Marta Kruczek-Szepel
Machine Learning Project - Michał Orleański
Machine Learning Project - Sebastian Wojcik
Sharing Tools - Anna Dlugosz
Supporting Standards - Amelia Wardzińska-Sharif
Supporting Standards - Anna Sławińska
Supporting Standards - Anna Dlugosz
Supporting Standards - Janusz Dygaszewicz
Workshop Dissemination and Communication - Ewa Bandurska
Workshop Dissemination and Communication - Łukasz Nowak

Portugal

Central Bank Portugal

Workshop Dissemination and Communication - Lígia Nunes
Workshop Dissemination and Communication - Luís Campos

Statistics Portugal

Capabilities and Communication - Margarida Rosa
Workshop Dissemination and Communication - Margarida Rosa
Workshop Statistical Data Collection - Paulo Saraiva dos Santos

Republic of Korea

Statistics Korea

Sharing Tools - Yoonra Choi
Supporting Standards - Yulla Choi

Serbia

Statistics Serbia (SORS)

Blue Skies Thinking Network - Branko Josipovic
Blue Skies Thinking Network - Mira Nikic
Machine Learning Project - Branko Josipovic

Machine Learning Project - Siniša Cimbaljevic
Supporting Standards - Miodrag Cerovina
Supporting Standards - Natasa Cvetkovic

Slovenia

Statistics Slovenia

Capabilities and Communication - Tine Pestaj
Sharing Tools - Tomaz Speh

Spain

Statistics Spain

Workshop on Statistical Data Editing - Pedro Revilla Novella

Sweden

Statistics Sweden

Sharing Tools - Hakim Sjöström
Sharing Tools - Henrik Lonnstrom
Sharing Tools - Jakob Engdahl
Supporting Standards - Catrin Karling
Supporting Standards - Henrik Andersson
Supporting Standards - Jakob Engdahl
Supporting Standards - Patrik Wahlgren
Workshop Statistical Data Collection - Dan Eriksson

Switzerland

FSO

Machine Learning Project - Claudio Facchinetti
Workshop on Statistical Data Editing - Daniel Kilchmann (chair)

Turkey

Turkstat

Workshop Statistical Data Collection - Hakkı Aydoğdu

USA

BLS

Machine Learning Project - Alex Measure
Supporting Standards - Dan Gillman

US Bureau of Labor Statistics

Workshop Dissemination and Communication - Michael Levi

US Census Bureau

Machine Learning Project - Andrea Roberson
Synthetic Data Project - Rolando Rodriguez

US Departement of Agriculture

Workshop Dissemination and Communication - Ellen Dougherty

UK

National Records of Scotland

Synthetic Data Project - Bethanie Fenney
Synthetic Data Project - Christopher Mccrum

ONS

Blue Skies Thinking Network - Eric Deeben
Input Privacy-Preservation Project - Eric Deeben
Input Privacy-Preservation Project - Ioannis Kaloskampis
Input Privacy-Preservation Project - Li Chen
Input Privacy-Preservation Project - Solange Correa-Onel

Machine Learning Project - Claus Sthamer
Machine Learning Project - Eric Deeben
Machine Learning Project - Oliver Mahoney
Sharing Tools - Eric Deeben
Sharing Tools - Neville de Mendonca
Synthetic Data Project - Eric Deeben
Synthetic Data Project - Ioannis Kaloskampis
Workshop on Statistical Data Editing - Fern Leather
Workshop Statistical Data Collection - Ian O'Sullivan

Scottish Government

Synthetic Data Project - Albert King

The Scottish Government

Synthetic Data Project - David Grzybowski
Synthetic Data Project - Nicola Kerr

Iceland

Statistics Iceland

Machine Learning Project - Anton Örm Karlsson

United Nations and related

ILO

Supporting Standards - Edgardo Greising

Intergovernmental

DDI

Supporting Standards - Jay Greenfield

EFTA

Capabilities and Communication - Elena Friso
Capabilities and Communication - Inga Hanna Gudmundsdottir

Eurostat

Capabilities and Communication - Lukasz Augustyniak
Exectuve Board - Márta Nagy-Rothengass
Input Privacy-Preservation Project - Fabio Ricciato
Input Privacy-Preservation Project - Konstantinos Giannakouris
Sharing Tools - Pierre Peyronnel
Supporting Standards - Danny Delcambre
Supporting Standards - Luca Gramaglia
Supporting Standards - Márta Nagy-Rothengass
Supporting Standards - Nikolaos Roubanis
Synthetic Data Project - Wim Kloek
Workshop Dissemination and Communication - Lukasz Augustyniak
Workshop on Statistical Confidentiality - Aleksandra Bujnowska
Workshop Statistical Data Collection - Britta Gauckler

GESIS (DDI)

Supporting Standards - Joachim Wackerow

IMF

Machine Learning Project - Alberto Sanchez Rodelgo
Machine Learning Project - Ayoub Mharzi
Machine Learning Project - Marco Marini

OECD

Blue Skies Thinking Network - Eric Anvar

Capabilities and Communication - Terri Mitton
Supporting Standards - David Barraclough
Workshop Dissemination and Communication - Terri Mitton

Academia

Acadia University
Machine Learning Project - Hugh Chipman

Universitat Rovira i Virgili
Workshop on Statistical Confidentiality - Josep Domingo

University of Cardiff
Synthetic Data Project - Robin Mitra

University of Edinburgh
Synthetic Data Project - Beata Nowok
Synthetic Data Project - Gillian Raab

University of Oklahoma
Workshop on Statistical Confidentiality - Krish Muralidhar

uOttawa
Synthetic Data Project - Devyani Biswal (PhD Student)
Synthetic Data Project - Rafal Kulik (Prof in Statistics)

PrivateSector

Knexus Research
Synthetic Data Project - Christine Task

Privacy Analytics
Synthetic Data Project - Luk Arbuckle

United Nations Secretariat

UNECE
Blue Skies Thinking Network - Taeke Gjaltema (secretariat)
Capabilities and Communication - Taeke Gjaltema (secretariat)
Capabilities and Communication - Tetyana Kolomiyets (secretariat)
Exectuve Board - Taeke Gjaltema (secretariat)
Input Privacy-Preservation Project - Dennis Ramondt (project manager)
Input Privacy-Preservation Project - Taeke Gjaltema (secretariat)
Input Privacy-Preservation Project - Yan Qin (secretariat)
Machine Learning Project - Claude Julien (project manager)
Machine Learning Project - Inkyung Choi (secretariat)
Machine Learning Project - Taeke Gjaltema (secretariat)
Machine Learning Project - Yan Qin (secretariat)
Sharing Tools - Taeke Gjaltema (secretariat)
Supporting Standards - Inkyung Choi (secretariat)
Supporting Standards - Steve Vale
Supporting Standards - Taeke Gjaltema
Workshop Dissemination and Communication - Taeke Gjaltema (secretariat)
Workshop Dissemination and Communication - Tetyana Kolomiyets (secretariat)
Workshop on Statistical Confidentiality - Taeke Gjaltema (secretariat)
Workshop on Statistical Confidentiality - Tetyana Kolomiyets (secretariat)
Workshop on Statistical Data Editing - Inkyung Choi (secretariat)
Workshop on Statistical Data Editing - Taeke Gjaltema (secretariat)
Workshop Statistical Data Collection - Gerald Muriel (secretariat)
Workshop Statistical Data Collection - Taeke Gjaltema (secretariat)