ENFORCEMENT BRANCH
OF THE COMPLIANCE COMMITTEE

CC-2012-1-5/Slovakia/EB
4 July 2012

WRITTEN SUBMISSION FROM SLOVAKIA

MINISTRY OF ENVIRONMENT OF THE SLOVAK REPUBLIC
Department of Climate Change Policy
Námestie Ľudovíta Štúra 1, 812 35 Bratislava

Dan Bondi Ogolla
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	34857/2012 5383/2012-8.1	Mgr. Milan Zvara +421 905 886 727	03. 07. 2012

Dear Mr. Ogolla,

With reference to our earlier intention and notification as expressed in our letter to the Compliance Committee from June 7, 2012, please, find enclosed the electronic version of the Written submission of the Slovak Republic which is submitted in accordance with Section X, paragraph 1 (b) of the Annex to decision 27/CMP.1 with regard to the Question of Implementation raised by the Compliance Committee.

Sincerely yours,

Helena Princová
Agent of the Slovak Republic and
Head of the Department

WRITTEN SUBMISSION OF SLOVAK REPUBLIC

Under Section X of the Annex to Decision 27/CMP.1
(Procedures and mechanisms relating to compliance under the Kyoto Protocol)

July 3, 2012

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I. INTRODUCTION

1.1 Background

1. From 22 to 27 August 2011 27, the in-country review of the 2011 annual submission of Slovakia, coordinated by the UNFCCC secretariat, took place in Bratislava, Slovak Republic.

2. On the basis the in-country review and further communication between the Slovak Republic and the expert review team (the "**ERT**"), the Report of the individual review of the annual submission of Slovakia submitted in 2011 (reference FCCC/ARR/2011/SVK) (the "**2011 ARR**") containing questions of implementation, was published on May 8, 2012.

3. The 2011 ARR was made available to the Slovak Republic by the Notice to the Party Concerned of Question of Implementation dated May 9, 2012 (reference CC/ERT/ARR/2012/17)

4. Following the allocation of the questions of implementation to the enforcement branch of the Comp1iance Committee by the bureau of the Comp1iance Committee and after preliminary examination conducted in accordance with paragraph 2 of section VII and paragraph 1(a) of section X of the annex to decision 27 CMP.1, the enforcement branch of the Comp1iance Committee decided in its Decision on Pre1iminary Examination of the Enforcement Branch of the Comp1iance Committee dated June 1, 2012 (reference CC-2012-1-2/Slovakia/EB) (the "**Decision on Pre1iminary Examination**") to proceed with the further consideration of the questions of implementation and to seek expert advice.

5. The Decision on Pre1iminary Examination was conveyed to the Slovak Republic by the Notice to the Party Concerned of Decision to Proceed dated June 4, 2012 (reference CC-2012-1/Slovakia/EB).

6. In response to the Decision on Preliminary Examination we are p1eased to submit the following written submission (the "**Written Submission**") on beha1f of the Government of the Slovak Republic.

1.2 Questions of Implementation

7. In the 2011 ARR, the ERT indicated the following questions of imp1ementation.

8. The ERT concluded that the national system of Slovakia *does not fully comply* with the Guide1ines for nationa1 systems for the estimation of anthropogenic greenhouse gas emissions by sources and remova1s by sinks under Artic1e 5, paragraph 1, of the Kyoto Protoco1 (Annex to decision 19/CMP.1) (the "**Guidelines for national systems**").[1] In particular, the ERT concluded that *the national system of Slovakia does not fully perform the following specific functions required for national systems, as set out in the annex to decision 19/CMP.1, and the ERT considers that they are unresolved problems, and, therefore, lists them as questions of implementation:*

[1] The 2011 ARR, paragraph 238.

(a) *Define and allocate specific responsibilities in the inventory development process, including those relating to choice of methods, data collection, particularly AD and EFs from statistical services and other entities, processing and archiving, and QC and QA. This definition shall specify the roles of, and cooperation between, government agencies and other entities involved in the preparation of the inventory, as well as the institutional, legal and procedural arrangements made to prepare the inventory (para. 12(c));*

(b) *Elaborate an inventory QA/QC plan which describes specific QC procedures to be implemented during the inventory development process, facilitate the overall QA procedures to be conducted, to the extent possible, on the entire inventory and establish quality objectives (para. 12(d));*

(c) *Establish processes for the official consideration and approval of the inventory, including any recalculations, prior to its submission and to respond to any issues raised by the inventory review process under Article 8. (para. 12(e));*

(d) *Collect sufficient AD, process information and EFs as are necessary to support the methods selected for estimating GHG emissions by sources and removals by sinks (paragraph 14(c));*

(e) *Implement general inventory QC procedures (tier 1) in accordance with its QA/QC plan following the IPCC good practice guidance (para. 14(g));*

(f) *Provide review teams under Article 8 with access to all archived information used by the Party to prepare the inventory, in accordance with relevant decisions of the COP and/or CMP (para. 16(b)); and*

(g) *Respond to requests for clarifying inventory information resulting from the different stages of the review process of the inventory information, and information on the national system, in a timely manner in accordance with Article 8 (para. 16(c))*.[2]

9. In this respect, the ERT further noted that the national system does not fully ensure the following:

(h) *Strong formal relations and agreements between institutions, with a clear specification of the roles of, and cooperation between, government agencies and other entities in order to ensure a reliable data flow for the preparation of the inventory, which, currently, relies heavily on a number of external experts and their personal networks of contacts for data acquisition for several sectors*;

[2] The 2011 ARR, paragraph 239.

(i) *Clear communication channels with regard to the principles, purposes and procedures of the UNFCCC reporting guidelines and the review processes with external experts, ensuring that these experts fully understand the formal requirements of these guidelines, including reporting and review requirements, and the need to ensure their availability during (or during a major part of) the review week, and that their contributions are delivered on time, as the current expertise within the permanent staff of the national system is insufficient to compensate for this and, for example, to:*

(i) Respond to questions and issues identified during the review process;

(ii) Ensure time-series consistency (of the AD and EFs);

(iii) Clearly understand the QA/QC principles and tools, the use of notation keys and the importance of providing comments to previous stages of the review process in time for the review week;

(j) *That the limited resources available for inventory planning, preparation and management are directed towards the highest priorities, such as the reconciliation of data used in the inventory with national statistical and internationally reported AD (e.g. fuel use), and not towards other activities, such as the detailed tier 2 uncertainty analysis for some sectors and categories of the inventory*.[3]

10. The ERT also concluded that Slovakia's estimates of CO2, CH4 and N2O emissions from road transportation, and HFC, PFC and SF6 emissions from consumption of halocarbons and SF6 are incomplete and/or have been prepared in a way that is not consistent with the methodological and reporting requirements of the Revised 1996 IPCC Guidelines and the IPCC good practice guidance.[4] Furthermore, pursuant to the ERT, Slovakia did not satisfactorily resolve the identified potential problems during the review, including through the submission of revised estimates, and did not agree with the adjustments calculated by the ERT, as indicated in its communication of 17 April 2012. Therefore, the ERT lists a question of implementation regarding the calculation of the estimates of CO2, CH4 and N2O emissions from road transportation, and HFC, PFC and SF6 emissions from consumption of halocarbons and SF6 that were not prepared in accordance with the methodological and reporting requirements.[5]

11. In this Written Submission, the Slovak Republic submits and presents information on steps and measures it has undertaken since the in-country review of the 2011until the date of this Written Submission. The Slovak Republic believes that this information

[3] The 2011 ARR, paragraph 240.

[4] The 2011 ARR, paragraph 243.

[5] The 2011 ARR, paragraph 243.

will enable the enforcement branch of the Compliance Committee to conclude that the questions of implementation listed in the 2011 ARR have been resolved.

12. The Slovak Republic also seeks to explain in this Written Submission the reasons of its disagreement with the adjustments proposed in the 2011 ARR and submits revised estimates. The Slovak Republic believes that on the basis of this information the enforcement branch of the Compliance Committee will accept these estimates and will modify the adjustments calculated and applied by the ERT in the 2011 ARR.

II. RESPONSE TO QUESTION OF IMPLEMENTATION RELATING TO SLOVAKIA'S NATIONAL SYSTEM

13. In response to ERT's conclusion that Slovak national system lacks *strong formal relations and agreements between institutions, with a clear specification of the roles of, and cooperation between, government agencies and other entities in order to ensure a reliable data flow for the preparation of the inventory*,[6] the Slovak Republic submits the following.

14. The Ministry of the Environment of the Slovak Republic (the "**MoE**") (http://www.minzp.sk/en/) is responsible for implementation of national environmental policy including climate change and air protection. It serves also as the National Focal Point under the United Nations Framework Convention on Climate Change ("**UNFCCC**").

15. Particular tasks connected with this role, fulfillment of obligations and commitments under the UNFCCC and the Kyoto Protocol ("**KP**"), are undertaken by the newly established Division of climate change and economic instruments, which began to operate on June 3, 2011. Before this change, all the tasks on climate change policy were conducted by inferior unit in the Ministry of Environment - Department of climate change and economic instruments.

16. According to the Governmental Resolution No. 821 dated December 19, 2011 (enclosed in Annex 1), the inter-ministerial High Level Committee on Coordination of Climate Change Policy (the "**Coordination Committee**") was established. The Coordination Committee was established on January 15, 2012 at the state secretary level and replaced previous coordinating body, *i.e.* the High Level Committee on Climate-Energy Package established in August 2008. The Coordination Committee is chaired by the State Secretary of the Ministry of the Environment. Other members include the state secretaries of the Ministry of Economy, Ministry of Agriculture and Rural Development, Ministry of Transport, Construction and Regional Development, Ministry of Education, Science, Research and Sport, Ministry of Health, Ministry of Finance, Ministry of Foreign Affairs and the Head of the Regulatory Office for the Network Industries. Differently from previous committee, two representatives from environmental non-governmental organizations are also the members of the Coordination Committee. The current list of members of the Coordination Committee is attached as Annex 2.

17. Main objectives of the Coordination Committee are (i) to develop and implement national strategy on mitigation and adaptation and (ii) to ensure cost-effective meeting of reduction commitments both in middle and long-term frame. The Coordination Committee plays an important role also in process of evaluation of fulfillment of our climate change objectives and commitments. Detailed description of its competencies and organization rules is attached as Annex 3.

[6] The 2011 ARR, paragraph 240(a).

18. The Coordination Committee started its work in May 2012. As the first important output of its activities, report titled "Report on the Current State of Fulfillment of the International Climate Change Policy Commitments of the Slovak Republic" (*Správa o priebežnom stave plnenia prijatých medzinárodných záväzkov SR v oblasti politiky zmeny klímy*) has been submitted to the Slovak government and adopted by the Governmental Resolution No. 261 dated June 13, 2012[7]. The report contains a separate chapter "Current State of Fulfillment of Reduction Commitments of the Slovak Republic under the Kyoto Protocol" (*Aktuálny stav plnenia prijatých redukčných záväzkov SR podľa Kjótskeho protokolu*).

19. The Slovak Hydrometeorological Institute ("**SHMÚ**") (www.shmu.sk) is authorised by the MoE to provide environmental services, including annual GHG inventories according to the approved statute (http://www.shmu.sk/File/statut.pdf). The range of services, competencies, time schedule and financial budget are updated and agreed annually. All details of the SHMÚ activities are described in the Annual Plan of Main Tasks. The Annual Plan of Main Tasks, commented by all stakeholders, is published after its approval by the MoE at the website of the SHMÚ (http://www.shmu.sk/File/SHMU_Kontrakt_2012.pdf). Deadline for the approval of this plan including contract detailed by the MoE is 31st December of each year.

20. The MoE imposed an obligation on SHMÚ to fulfill the reporting obligations of the Slovak Republic towards the UNFCCC. In practice, this is performed through a particular task within the Annual Plan of Main Tasks of the SHMU, whose contents and extent are annually updated depending on the latest requirements of UNFCCC, the KP and the European Commission ("**EC**").

21. The obligation of the Slovak Republic to create and maintain the national inventory system ("**NIS**") which enables continual monitoring of greenhouse gases emissions is given by Article 5, paragraph 1 of the Kyoto Protocol. The National Inventory System (http://ghg-inventory.shmu.sk/) has been established and officially announced in the official journal of the MoE.[8] All changes and improvements related to the NIS were undertaken in formal way and are regularly reported in the national inventory reports.

22. In order to secure the working of the NIS from the administrative and expert point of view, the Single National Entity ("**SNE**") was created within SHMÚ in 2007 in accordance with Article 12 (a) of the Guidelines for national systems.

23. Specific functions of NIS in relation to the QA/QC requirements as stipulated in the Guidelines for national systems have been implemented in the Slovak Republic on the basis of two focused projects in 2008 and 2009. In spite of the effort and improvements implemented in QA/QC to date, system still has some areas to improve.

24. The certification body for the certification of management quality systems confirmed that SHMÚ had a management quality system implemented, documented and

[7] http://www.rokovanie.sk/File.aspx/ViewDocumentHtml/Uznesenie-12583?prefixFile=u_

[8] Vestník (Official Journal of the Ministry of Environment), XV, 3, 2007, page 19: National inventory system of the Slovak republic for the GHG emissions and sinks under the Article 5, of the Kyoto Protocol.

maintained under ISO 9001. The NIS may build its functions upon the basis of this system.

25. The Slovak Republic dealt with the system in cooperation with TUV Sud, a renowned company (Slovakia earmarked sufficient funds in 2009-2010). Although a Quality Manager was hired for the purposes of NIS only in 2011, the improvement of the QA/QC processes has not been fully achieved yet, which was also stated by the ERT.

26. During the process of changes in the organizational structure of the SHMU (to increase efficiency and to save financial resources) the Department of Emissions was merged with the Department of Air Quality on 1st December 2010. The new unit is named the Department of Emissions and Air Quality Monitoring and serves also as the Single National Entity (SNE) while providing all activities connected with coordination of the National Inventory System for the KP under Article 5.1. This change had no practical impact on the functioning of the SNE.

27. The SNE was further structurally changed in August 2011 by the Decision of the director general of the SHMU (please see Annex 5). The SNE currently comprises 2.5 experts working on inventory tasks as a full time job. Composition of SNE is: NIS Coordinator, Deputy NIS Coordinator and Quality Manager (for a half time job).

28. Fulfillment of all approved main tasks is regularly (at least twice a year) controlled by the MoE's representatives, and for the NIS functions more frequently as described in details in the QA/QC external plan (please see Table 3 below).

29. Permanent staff of emission experts of the SNE is complemented by several external experts from relevant institutions working on the basis of frame contracts with annual adjustments (scope of work and budget). Contracts with external institutions and sectoral experts are fully in competence of the SHMU after previous approval by the MoE.

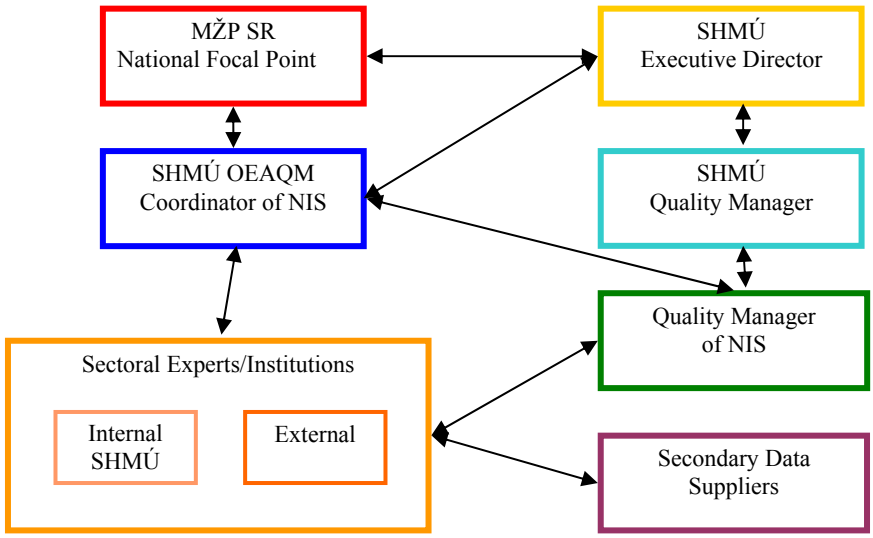
Table 1:
List of sectoral experts in the National Inventory System of the Slovak Republic

External Experts/Institutions		
Institution	**Name**	**Responsibility**
Ecosys Slovakia – company for environmental services in energy	Mr. Jiri BALAJKA	Consultations in energy and emission projections
Profing – company for environmental services in GHG	Mr. Jan JUDAK	Reference approach and fugitive emissions preparation
Spirit – IT services, databases provider	Mr. Jozef SKAKALA	NEIS[9] provider, consultation about the NACE classification of sources
Motran Research – company for transport research	Mr. Jiri DUFEK	GHG inventory in transport sector

[9] National Emission Information System (www.air.sk)

Transport Research Institute		Data provider in transport sector
Prima Banka Slovakia	Mr. Miroslav HROBAK	National Registry focal point
Statistical Office of the Slovakia	Ms. Maria LEXOVA	Statistical data provider
Faculty of Chemical and Food Technology	Mr. Vladimir DANIELIK	GHG inventory in industrial processes and solvent use sectors
Slovak Association of refrigeration and air conditioning engineers	Mr. Peter TOMLEIN	GHG inventory in F-gases
Slovak Agricultural University	Mr. Bernard SISKA	GHG inventory in agriculture
National Forest Research Centre	Mr. Tibor PRIWITZER	GHG inventory in LULUCF and KP LULUCF
veQ – company for waste management research	Mr. Juraj FARKAS	GHG inventory in waste sector
Slovak Environmental Agency	Ms. Alena BODIKOVA	Data provider for waste sector
Faculty of Mathematic, Physic and Informatics	Mr. Martin GERA	Uncertainty analyses
Ministry of Finance – Taxation and Customs Section		Data provider for biofuels
Internal experts - SHMU		
Department	**Name**	**Responsibility**
Dept. of Emissions and Air Quality Monitoring	Ms. Janka SZEMESOVA	NIS coordinator
Dept. of Emissions and Air Quality Monitoring	Mr. Miroslav MIKOVEC	Deputy of NIS coordinator, energy sector coordinator
Dept. of Emissions and Air Quality Monitoring	Ms. Silvia SRENKELOVA	Quality manager for NIS
Dept. of Emissions and Air Quality Monitoring	Mr. Jozef UHLIK	NEIS expert
Dept. of Emissions and Air Quality Monitoring	Ms. Monika JALSOVSKA	NEIS expert
Dept. of Emissions and Air Quality Monitoring	Ms. Lydia OSTRADICKA	Basic pollutant`s emissions - coordinator
Dept. of Water Quality	Ms. Lea MRAFKOVA	GHG inventory in wastewater sector

Figure 1:
Concise structure of the National Inventory System of the Slovak Republic



30. The SNE and sectoral experts/institutions are responsible for choice of methods, data collection, particularly activity data ("**AD**") and emission factors ("**EFs**") from statistical services and other entities, processing and archiving of input and output data connected with inventory development process, including QC/QA procedures.

Inventory QA/QC plan and QC procedures[10]

31. Since 2010 (2008 inventory) Slovakia, within the reporting of emissions, structures the national inventory report ("**NIR**") chapters in accordance with the document presented by the UNFCCC Secretariat (*Annotated outline of the National Inventory Report including reporting elements under the Kyoto Protocol*). Annually, it updates and published in the NIR the following chapters: Uncertainties and Time-series Consistency, Source-specific QA/QC and Verification, Source-specific Recalculations and Source-specific Planned Improvements in NIR for all IPCC sectors and categories (see for example the 2011 NIR - http://ghg-inventory.shmu.sk/documents.php?lang=2).

32. In addition, chapter 10.5 of the Slovak Republic 2011 National Inventory Report (the "**2011 NIR**") contains Table 10.5 *Recalculations including to the response to the review process and planned improvements to the inventory*, which annually describes all of the steps the Slovak Republic has made to respond to the ERT's recommendations contained in the previous ARR.

[10] The 2011 ARR, paragraph 239(b) and 239(e).

Table 2:
Response to the review of the 2010 inventory submission (Table 10.5, 2011 NIR, p. 240)

CRF	Issue Identified by the ERT	Slovakia responses
1. ENERGY	**CRF 1.A.3d Navigation (domestic) -** Slovakia reported CO_2, N_2O and CH_4 emissions from small domestic inland shipping as not occurring.	The emission estimation of emissions of CO_2, N_2O and CH_4 from small domestic inland shipping was completed.
2. INDUSTRIAL PROCESSES	**CRF 2.C.1 Steel Production from EAF technology -** Slovakia has not included CO_2 emissions from consumed electrodes for steel production in electric arc furnaces (EAF) in its 2010 annual submission.	The emission estimation from consumed electrodes in EAF was completed and reported for 2000-2008.
3. INDUSTRIAL PROCESSES	**CRF 2.F.9 Consumption of Halocarbons and SF_6 - Other -** The ERT identified in the CRF tables that actual emissions from consumption of halocarbons and SF_6 are reported as NO and that potential emissions are reported.	The verification of the potential and actual SF_6 emissions was provided and occur only from electrical equipment in Slovakia and therefore is not reason for reporting of SF_6 emissions in the category 2.F.9. The notation key "NO" shall be use in the category 2.F.9. The potential SF_6 emissions from category 2.F.9 – Other were reallocated to the category 2.F.8 – Electrical Equipment.
	CRF 3.A Paint Application **CRF 3B Degreasing and Dry Cleaning**	The recalculation of time series was corrected and the estimation of CO_2 emissions from the categories 3A, 3B and 3C was reported.
4. SOLVENT USE	**CRF 3C Chemical Products, Manufacture and Processing** The ERT identified that the reported CO_2 emissions estimates do not follow the methodology described in NIR and are underestimated.	
5. WASTE	**CRF 6.A.1 Solid Waste Disposal on Managed Landfills** The ERT identified that to estimate CH_4 emissions from solid waste disposal sites, using the IPCC methodology, Slovakia deducted the methane recovered from the emissions generated twice.	The estimation was reviewed in term of avoiding double deduction of methane flared in landfill gas by operator and eventually corrected the data in CRF tables.
6. WASTE	**CRF 6.B.2 N_2O from Domestic Wastewater** The ERT identified that the calculated values for emissions of N_2O from domestic wastewater had not been correctly entered into the CRF table.	The estimation was completed by including information on new stream for wastewater handling. The new methodology includes direct N_2O emissions from WWT plants, which were not included in previous approach.

33. By way of an example, we submit the improvement plan for the LULUCF sector contained in the 2011 NIR on pages 189 and 190. It starts with chapter 7.4.5. – Uncertainties and time consistency; 7.4.6. – Source specific QA/QC and verification; 7.4.7 – Source specific recalculations and ends with chapter: 7.4.8. – Source specific planned improvements. The last category of planned improvements comprises:

- Determination of new annual biomass increments for all tree species.
- Estimation of more accurate soil carbon stocks data for forest soils.
- Improve the estimation of DOM carbon pools.

34. Planned improvements for inventory preparation have been developed for all remaining IPCC sectors and categories and are published in the 2011 NIR.

35. The improvement plan is assessed on a regular basis, reflecting the ERT's recommendations from the previous review. However, it is not always possible to implement all of the planned improvements in one year, since some of them are time and capacity demanding or dependent on the processes of other institutions, which the MoE cannot directly influence. For instance, in the waste sector in 2011, improvements connected with the publishing of data from the national census 2011 were planned. Due to the delayed evaluation and publishing of data by the Statistical Office of the Slovak Republic, the MoE will perform this within the submission for 2012.

36. It is probable that there is a room for further improvement of the inventory QA/QC plan preparation; however, we believe that the general reservation in paragraph 239 (b) of the 2011 ARR does not fully reflect the actual state of these processes in the Slovak Republic. We believe that the Slovak Republic has elaborated the individual QA/QC plan inventory elements very well, but there is still room for improvement of their incorporation into the overall QA/QC inventory plan in relation to the planned improvement objectives.

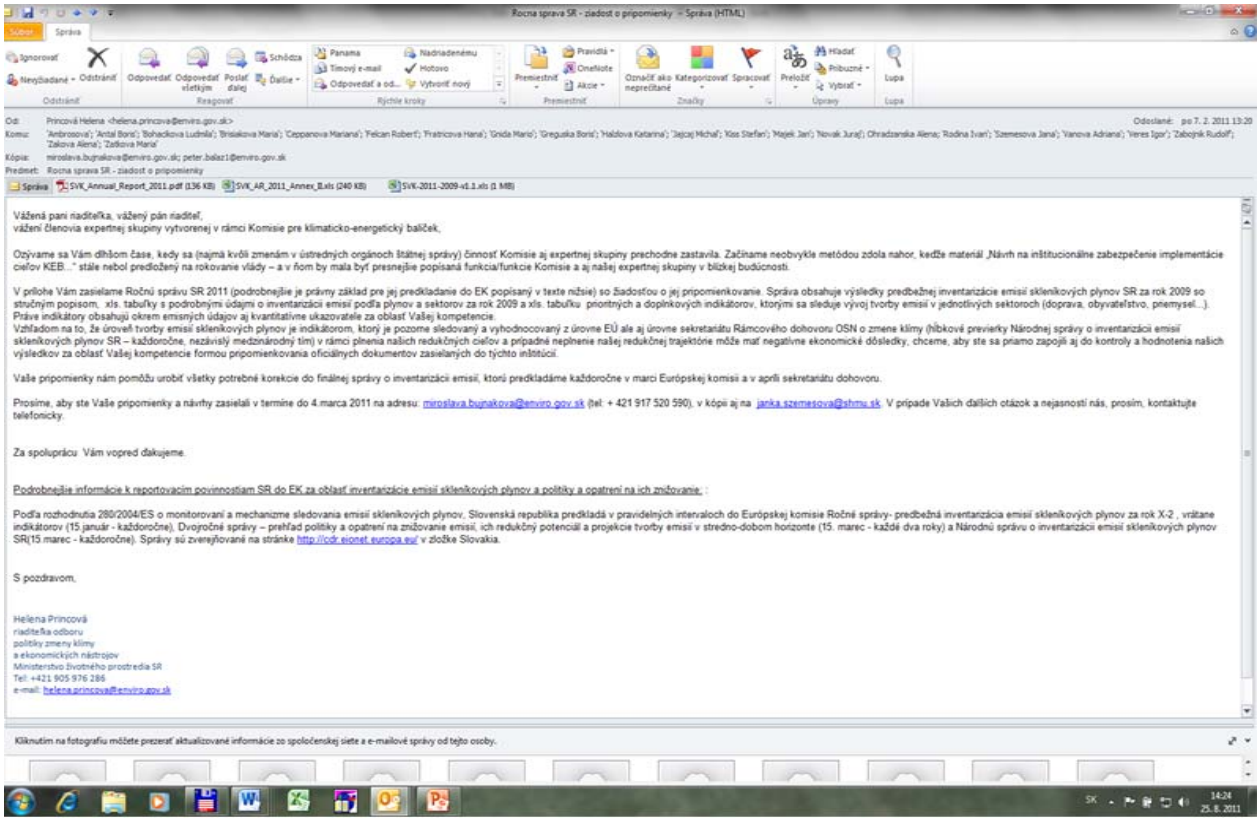
Processes for official consideration and approval of the inventory report[11]

37. Process of "internal" examination of the output data from the inventory development, not the review process conducted by the UNFCCC, is described in more details in the following paragraphs.

38. Peer review of the provisional 2011 NIR, including the CRF tables, has been performed by representatives of selected ministries upon the request of the MoE in February 2011. The copy of electronically sent request for comments to all relevant ministries which take also part in the Coordination Committee can be seen in Figure 2 below. This is the first step of review process to fulfill our reporting obligations. Information on this was sent (submitted) to the ERT in our response to the document Follow-up questions (NIS) which has been sent during the in-country review.

[11] The 2011 ARR, paragraph 239(c).

Figure 2:
Request for comments



39. The second step of the review process is an independent review of the Annual Report of the Slovak Republic submitted yearly on 15 January according to the Article 3(1) of Decision No. 280/2004/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 11 February 2004 concerning a mechanism for monitoring Community greenhouse gas emissions and for implementing the Kyoto Protocol. This review is performed on yearly basis by independent experts from the European Commission and always before the deadline for our submission to the UNFCCC.

40. As we already mentioned in paragraph 18 above, the Report on the Current State of Fulfillment of the International Climate Change Policy Commitments of the Slovak Republic (*Správa o priebežnom stave plnenia prijatých medzinárodných záväzkov SR v oblasti politiky zmeny klímy*) was submitted by the Coordination Committee to the Government for its consideration. The Report adopted by the Governmental Resolution No. 261[12] also includes a separate chapter Current State of Fulfillment of Reduction Commitments of the Slovak Republic under the Kyoto Protocol (*Aktuálny stav plnenia prijatých redukčných záväzkov SR podľa Kjótskeho protokolu*), which informs the Government in detail on the state of fulfillment of our reduction commitments based on the information from the most recent available GHG emission inventories.

[12] http://www.rokovanie.sk/File.aspx/ViewDocumentHtml/Uznesenie-12583?prefixFile=u_

Improvements in the NIS since 2011 in-country review

41. As indicated in the plan of action submitted in the Slovak Republic's responses to the Potential Problems and Further Questions from the ERT formulated in the course of the 2011 review of the greenhouse gas inventories of Party submitted in October 2011 dated August 27, 2011 ("**Saturday Paper**"), the SHMU hired a new employee for GHG emission inventory tasks since January 1, 2012 and an additional employee is planned to be hired by the SHMU this year.

42. In order to coordinate and make the process of greenhouse gas inventories in the individual sectors more effective, the MoE in cooperation with the NIS national coordinator conducted several negotiations with selected institutions in 2012. As a consequence of the negotiations, the preparation has been made more effectively and the institutional representation in the Slovak NIS structure has been reinforced based on new contracts. Specifically, the following fields have been modified as of today:

    1. Slovak Environmental Agency

    The main tasks of the Slovak Environmental Agency approved for 2012 includes the following task: Preparation of Documents and Examination of Outputs during the Fulfillment of the Slovak Republic's Reporting Commitments in the Field of Greenhouse Gas Inventories for the Waste Sector (*Príprava podkladov a kontrola výstupov pri plnení reportingových povinností SR v oblasti inventarizácie emisií skleníkových plynov pre sektor odpadov*)[13], performed by the Waste Management Centre Bratislava ("**COH**"). Professional and financial capacities have been earmarked for the task. In a long run, COH cooperates with MoE (Waste Management Section) and sectoral expert during the collection of input data and creation of database files for this field. We strive to improve the quality and data control during the whole cycle of the NIR preparation based on direct involvement of COH in the examination of outputs from the inventories (QA/QC in the waste sector).

    2. Ministry of Agriculture and Rural Development of the Slovak Republic, National Forest Centre Zvolen

    Following the negotiations with the MoE, the following task No. 10/11 was approved to be included in the plan of main tasks of the National Forest Centre for 2012: Implementation of Commitments under the UN Framework Convention on Climate Change and its Kyoto Protocol (LULUCF and KP LULUCF sectors) (*Realizácia záväzkov vyplývajúcich z Rámcového dohovoru OSN o zmene klímy a jeho Kjótskeho protokolu (sektor LULUCF)*). Particular outputs of this task are defined as follow:

    - to quantify carbon stocks and GHG emissions/removals and their year-to-year changes in the LULUCF sector (land use, land-use change and forestry) for 2011;

    - to prepare the necessary documents for the implementation of the commitments of the Slovak Republic under the Kyoto Protocol for the next accounting period in the LULUCF sector;

[13] http://www.sazp.sk/public/index/go.php?id=392

- to prepare basis reports and expert opinions on the LULUCF sector issue, including in relation to the commitments adopted beyond the framework of the Kyoto Protocol. Personnel and financial capacities have been earmarked for the task.

3. Ministry of Transport, Construction and Regional Development of the Slovak Republic

As in the previous cases, and in order to make the process of preparation of the greenhouse gas inventories more effective, the MoE also negotiated with the commissioned officials of the Ministry of Transport. The aim was to improve the cooperation of the Transport Research Institute (VÚD) and the SHMÚ on mutual provision of data and independent inspection of output databases and creation of GHG emissions in transport. In a long run, VÚD has been preparing strategic documents and analyses for the Ministry of Transport for the decision-making process, including determination of emissions of fundamental contaminants and GHG emissions in the transport sector. The result of the negotiations is an approved task for VÚD for 2012 titled: Monitoring and Evaluation of Adverse Effects of Transport on the Environment in Relation to the International Environmental Commitments of the Slovak Republic (*Monitorovanie a hodnotenie nepriaznivých vplyvov dopravy na životné prostredie vo väzbe na medzinárodne záväzky SR v oblasti životného prostredia*).

4. Statistical Office of the Slovak Republic ("**ŠÚ SR**")

Experts from ŠÚ SR, NIS coordinator, sectoral energy experts and representative of the MoE met several times in order to establish closer cooperation and prepare on agreement on the provision of confidential information between the MoE and the ŠÚ SR. The cooperation of ŠÚ SR, the MoE and SHMÚ should result in a draft agreement between the MoE and ŠÚ SR. Based on this agreement, SHMÚ will have access to the information about the consumption of fuels in the individual enterprises, so the information will not be at disposal in an aggregated form only with the summarized consumption of fuels by enterprises in the particular categories (as it is now). The disaggregation of the consumption of fuels by the individual enterprises will allow comparison of the data from the ŠÚ SR, as the national energy balance, with the NEIS[14] data on the source level in order to ensure consistency in the determination of emission from the energy sector between reference approach ("**RA**") and sectoral approach ("**SA**"). In the event of conflict regarding the consumption of fuel, the ŠÚ SR data are deemed decisive. For the sources included in ETS, the information about the fuel consumption and emissions are gained directly from the Reports on Greenhouse Gas Emissions submitted under Act No. 572/2004 Coll. on Greenhouse Gas Emission Allowance Trading System as amended.

5. Ministry of Finance of the Slovak Republic ("**MoF**"):

Within the process of implementation of Directive 2009/28/EC and with regard to the EU requirement to decrease excessive administrative burden, cooperation with the MoF during the provision of biofuel data has been established. The Customs

[14] National Emission Information System (www.air.sk)

Administration has an extensive information system, and all of the entities introducing fuels, including biofuels, in the Slovak market, are obliged to report data. Based on these data, it is possible to evaluate the use of biofuels in the Slovak Republic, and their contribution to the reduction of greenhouse gas emissions. Thus, the whole process of data acquisition has been made more simple and effective, preserving the confidential nature of the information, because only cumulative data processed on the basis of the database data will be used. The Customs Administration has already inserted the necessary data in the Report on the Fulfillment of Commitment to Introduce Fuels Containing Biofuels in the Market (*Hlásenie o plnení povinnosti uvádzať na trh pohonné látky s obsahom biopalív*) and published them on the website of the Customs Directorate.[15]

The obligation to provide the MoE with data for the purposes of evaluation of fulfillment of national and international commitments will also be embedded in the draft amendment to Act No. 309/2009 Coll. on Support of Renewable Energy Resources and Highly Efficient Combined Production and on amendment to certain acts. At the request of the MoE and Ministry of Economy of the Slovak Republic, the MoF has so far provided the data for the first quarter of 2012.

Reliance on external experts and their personal networks for data acquisition[16]

43. All experts only use official statistical data and sectoral databases as a basis for determination of the GHG emissions. They have access to the data based on the official mandate and authorization from the MoE. In specific cases, the MoE directly addresses the institutions with an official request for data provision. The MoE, SHMÚ or sectoral experts have not yet had any serious problem with the acquisition of the input data. The experts only use the personal network to verify the official data or as a basis for uncertainty analyses. During the whole period of reviews, no ERT has questioned the quality or sources of the input data used by the Slovak Republic for inventories.

44. We respect the requirement for formalization of the data flow, although we cannot foretell to what extent it may contribute to the improvement of the input data. With regard to the requirements of the currently prepared EU legislation, the Slovak Republic is preparing a draft act on climate change and an implementing decree which will impose an obligation on both natural persons and entities to provide the MoE, or an entity commissioned by the MoE, with current and true data for the GHG emission inventories. Any failure to provide the data will be penalized.

Availability of experts[17]

45. We accept ERT's finding related to our problem with ensuring availability of experts as stated in paragraph 240 (b) of the 2011 ARR. During the 2011 in-country review, we

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15 http://www.colnasprava.sk/wps/portal/!ut/p/.cmd/cs/.ce/7_0_A/.s/7_0_3QH/_th/J_0_9D/_s.7_0_A/7_0_OM/_s.7_0_A/7_0_3QH

16 The 2011 ARR, paragraph 239(a) and paragraph 240(a).

17 The 2011 ARR, paragraph 240(b).

had to deal with a particularly unlucky set of circumstances, which covers relatively short time for planning of in-country review and summer holidays. Despite all the circumstances we arranged availability of all experts except for F-gases sector. We have had a problem to ensure availability of crucial expert for HFC, PFC and SF6 emissions from consumption of halocarbons and SF6 due to his serious work obligation abroad (world conference in Prague where he was chairing three panels). We announced this irreversible fact to the ERT in advance. At the same time he made himself available for distance co-operation during the whole review week.

46. We do not fully understand why ERT does specify a reservation that we failed to provide it with access to all archived information used by Party to prepare the inventory under Article 8 of the Kyoto Protocol. During the review week, the Slovak Republic provided an access to the archive documents and databases used for the preparation of inventories. The only exception caused by unforeseeable events (Vis Major) was the failure to provide access to NEIS database right during the inspection at SHMÚ[18]. This is a publicly available and very detailed database of medium and large scale sources of air pollution used in the Slovak Republic since 2000, which is, save for confidential data, publicly available.

Responding to questions and issues identified during the review process[19]

47. We admit that we were not always diligent in responding to the ERT's questions before the start of the review week. As an expression of our good will, we granted the permission for in-country review, but the result was we could not prepare "all the cogs of the machine in the right order." On the other hand, during the review week we answered all questions on time. Similarly we were diligent in answering all additional questions after the review on time.

Ensuring time-series consistency (of the AD and EFs)[20]

48. Within the previous reviews, the time-series consistency has never been questioned as problematic. In general, the Slovak Republic always monitors the time-series consistency criterion and uses the same methodology retrospectively to 1990 during recalculations.

49. QA/QC for time-series consistency: In addition to the standard tools offered by CRFReporter, the Slovak Republic also examines the time-series consistency, AD and EF within the individual sectoral QA/QC tools (described in the NIR), and also centrally within the review process for Decision 280/2004/EC concerning a mechanism for monitoring Community greenhouse gas emissions carried out by the EC. EC has developed and annually improves systemic tools for qualitative assessment of emission inventories of its Member States so as to provide the required quality on the EU level. The NIS experts are regularly trained and instructed about this system, and the NIS coordinator cooperates with EC on the QA/QC process for the agriculture sector.

[18] National Emission Information System (www.air.sk)

[19] The 2011 ARR, paragraph 240(b)(i).

[20] The 2011 ARR, paragraph 240(b)(ii).

Systemic monitoring mechanisms standardized under Decision 280/2004/EC work annually from January 15 to May 15 and their task is to discover any incorrectly filled-in notation keys, categories and emission time-series inconsistencies, AD and EF. The system also includes an outlier analysis (high or low values corresponding to 3% confidence interval and other gaps), cross-cutting examination of the used side parameters and written questions/responses by reviewers and experts within several stages of EU review. Within the review of the EC emission submission, the aggregated data of the Member States are also examined by the subsequent review by UNFCCC, just like any other Annex I country.

50. Since the Slovak national conditions are very specific (in terms of economy size), it is possible that during the outage of certain productions or e.g., in the "gas crisis" at the beginning of 2009 or "forest calamity" in High Tatras in 2004, these events will reflect in apparent time-series inconsistency. However, such events are always described and explained in the NIR.

51. The sector of industrial process is specific, since the productions in the individual categories are sometimes represented by one source only, and in such case, the production decrease or outage reflects in a significant reduction in the time-series emissions.

52. The objection that the emissions in some categories may not change so dramatically from year to year due to changes in production does not have to be necessarily true in the case of small countries. In Slovakia, there is a relatively small number of companies present in the individual IPCC categories. If just one company significantly reduces production (or it is closed), it will result in a significant change in emissions.

53. The same objection is valid for average emission factor. The average emission factor can be significantly affected by changing production in the case of aggregated emissions. In the categories where emissions are aggregated from various companies (or emissions from the manufacturing of products with significantly different emission factors) the IEF can change significantly from year to year. For example, in ferroalloys, where the CO2 emission factors range from 1.3 to 4.8 t / t (or nitric acid, where N2O emission factors for different technologies used in Slovakia are in the range 7.5 to 13 kg / t). Just smaller change in the proportion of individual products can results in significant change in the implied emission factor.

54. For example, in the 2012 submission, the complete information from the LULUCF and KP LULUCF sectors from 1990 was recalculated according to the ERT recommendations in its 2011 ARR conclusions, preserving the time-series consistency for the individual measurements in all of the LULUCF categories.

Understanding of the QA/QC principles and tools, the use of notation keys[21]

55. The Slovak Republic takes the reservations seriously and has implemented many improvements since the completion of the review in August 2011. After completion of the review, the Slovak Republic performed a detailed analysis of the insufficiencies

[21] The 2011 ARR, paragraph 240(b)(iii)

and based on it were proposed immediate measures for improvement. The NIS experts are regularly trained in terms of the UNFCCC review process, and the QA/QC plan preparation has been improved in order to implement the ERT's recommendations from the most recent and previous reviews as soon as possible. The system of external inspection by the MoE has been intensified and a principle for interlinkages between the allocated funds and output quality was proposed and already applied in contracts for 2012.

56. The notation key review is a permanent agenda of the climate change panel on the EC level within the work of the workgroup for WGI reporting. At their regular meetings, harmonization of all used notation keys for all EU countries is discussed.

57. The following steps and improvement tools currently used in NIS are the result of our efforts from the 2011 in-country review:

    QA/QC tools used in contemporary NIS

    - tier 1 analysis of key sources and uncertainties
    - tier 2 analysis of uncertainties for selected sectors – Monte Carlo method for fuel combustion sectors (1A sectoral approach), solid waste disposal on land sectors (6A) and IPPU sector (2 – industrial processes except F-gases and 3- solvent use)
    - tier 2 analysis of specific uncertainties in the individual categories from sectoral experts
    - systemic monitoring mechanisms standardized under Decision 280/2004/EC work annually from January 15 to May 15 and their task is to discover any incorrectly filled-in notation keys and categories, perform outlier analysis (high or low values corresponding to 3% confidence interval and other gaps), cross-cutting examination of the used side parameters, time-series review, etc.
    - each sectoral expert is obliged to fill in the verification protocols for any change or recalculation; the recalculation is reviewed by an expert, coordinator and Quality Manager.
    - **Plan:** each sectoral expert is obliged to have any outputs, which he/she wishes to deliver to the NIS coordinator, reviewed by another independent expert (organization) for the relevant sector. This "substitute" expert should also archive all sectoral data and defend the results, if necessary.

58. The latest implemented external and internal QA/QC plan together with flowsheet and interlinkages of QA/QC activities are given in Tables 3 and 4 and Figure 3.

Table 3: Quality Assurance/Quality Control Plan – External

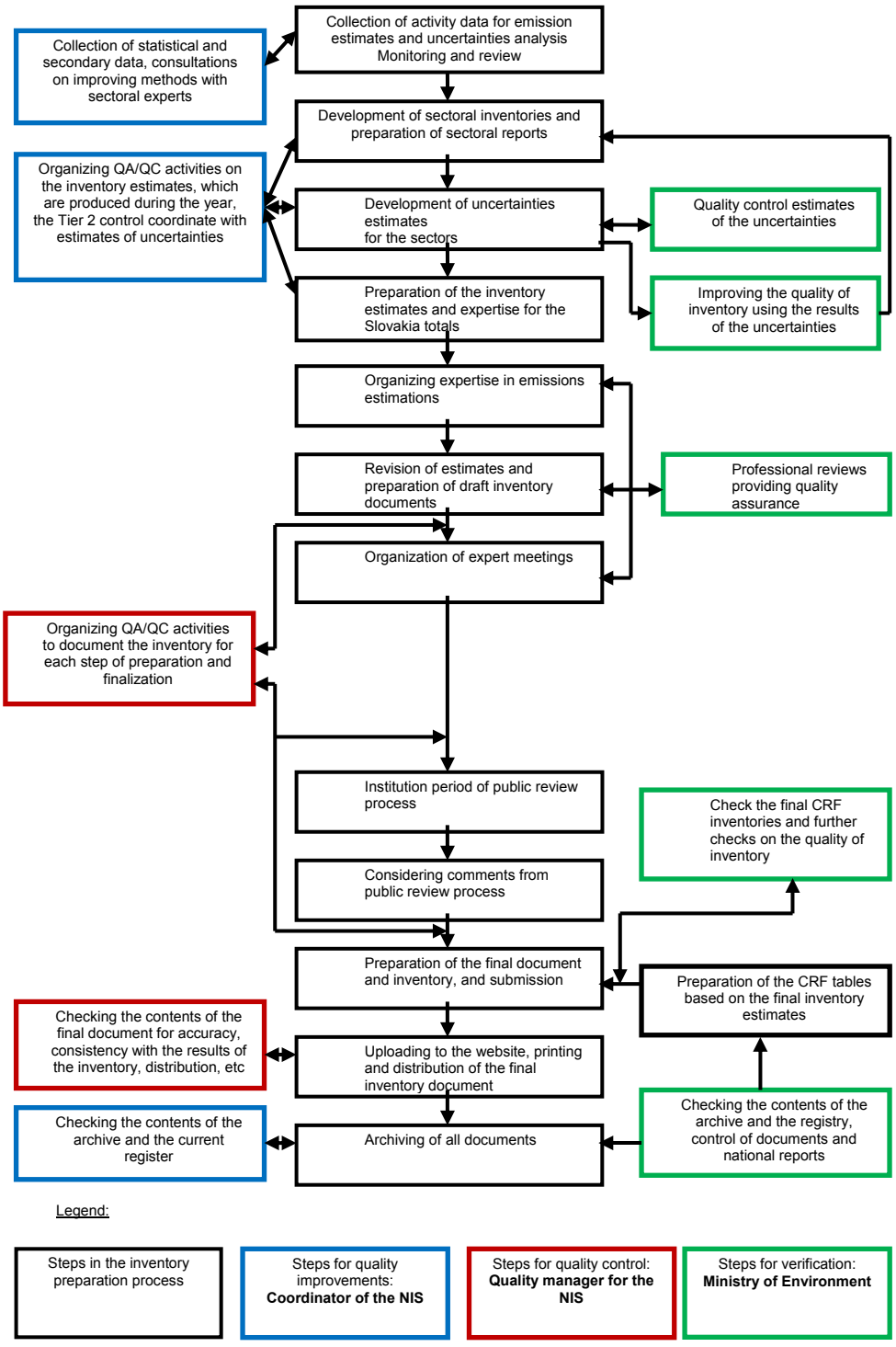
	Activity	Date of output	Form of output	Responsibility	QA/QC	Date of QA/QC	Output of QA/QC
1.	Annual Report 2012 -submission according to the Dec. 280/2004/EC, Art. 3.1.a-k 1. Preliminary GHG emission inventory for year 2010 2. Preliminary National Inventory Report SR 2012 (NIR)	15. January	Publicly available on CDR (Central data Repository) http://cdr.eionet.europa.eu/sk/eu	NIS coordinator	Completeness check of the Annual Report SR 2012 MoE SR - NFP	10.1.2012	Comments to the Annual Report SR 2012
2.	Inter-ministerial comments to the *Report on the actual status of fullfilment of adopted international commitments of the Slovak Republic in scope of climate change policy* – compliance of Gov. Res. B.3 UV SR No. 821/2011 – as of 19 December 2011; The report will include also results of the NIR SR 2012.	5. March	Evaluation table from the inter-ministerial comments to the document	MoE SR – NFP	Corection of the Report – based on comments	10.3.2012	Final *Report on the actual status of fullfilment of adopted international commitments of the Slovak Republic in scope of climate change policy* and revised text of the NIR SR 2012 according to the QA/QC outcomes - Report submitted to the Government al approval until the end of March 2012; - NIR SR 2012 uploaded to the oficial SR web site
3.	Submission of the revised Annual Report SR 2012 according to the Dec. 280/2004/EC art. 3.1.a-k: **1.** GHG emission inventory report for the year 2010 **2.** NIR SR 2012 **3.** Evaluation of the key sources and total uncertainties of the GHG emission inventory for the year 2010	15. March	Uploaded to the CDR dbase	NIS coordinator	MoE-NFP	15.3.2012	Control after uploading Official announcement to the DG Climate Action
4.	NIR SR 2012 – preparing for submission to the UNFCCC secretariat	30. March	First draft	NIS coordinator	Review and corections of the NIR SR 2012 first draft - MoE SR – NFP, SEs, Deputies of SE	5.4.2012	Final version of the NIR SR 2012
5.	Submission of the NIR SR 2012 to the UNFCCC secretariat: 1. GHG emission inventory for the year 2010 2. NIR SR 2012 3. Evaluation of the key sources and total uncertainties for the year 2010 4. KP-LULUCF tables for the year 2010 5. Reports from the National Emission Register for the year 2010	15.April	Publicated to the UNFCCC portal: https://unfccc.int/submisionportal/webportal/submissionstatusComponent	NIS coordinator		15.4.2012	Final version of the emission submission for the year 2010
6.	Release of the NIR SR 2012 and GHG emission inventory 2010 at official NIS web site	30.April	NIS web site upload www.ghg-inventory.shmu.sk	NIS coordinator	NIS deputy coordinator, Quality manager MoE SR - NFP	5.5.2012	
7.	Completion and resubmission of the NIR SR 2012 according to the UNFCCC Annual Status Report	27.May	Response to the Status Report	NIS coordinator		27.5.2012	
8.	Submission of GHG emission data to the Statistical Office of the SR. Distribution of the final NIR SR 2012 to the relevant subjects. Preparation of the Air Quality Report – chapter 5 for the SHMÚ.	31.August	Statistical yearbook - GHG emisssion data Air Quality Annual Report	NIS coordinator	Control of the fullfilment of the NIS tasks MoE SR - NFP	5.9.2012	Minutes from control day
9.	International review of the NIR SR 2012 coordinated by the UNFCCC secretariat.	July - October	UNFCCC Annual Review Report according to the desk, centralized or in-country review	NIS coordinator SEs Deputies of SEs MoE-NFP	ERT	TBD	Annual Review Report of the NIR SR 2012
10.	Measures and objectives for improvements in QA/QC procedure for GHG emission inventory for relevant sectors pursuant to the outcomes of review process	30. October- 15. November	Proposals of measures, proposal of QA/QC plan for 2013	NIS coordinator SEs Deputies of SEs MoE-NFP	Adequacy check of the draft measures in relation to the financial sources and Plan of the main tasks of the MoE SR and SHMÚ for 2013	20.11.2012	Minutes from QA/QC meeting, draft proposals of the Plan of the main tasks of the SHMÚ, SAŽP (Slovak environment al agency) and MoE for the year 2013

Table 4: Quality Assurance/Quality Control Plan – Internal

	Activity	Responsibility	Quality control	Time schedule	Record of actions
1.	Training a new employee for the position: Energy sector expert.	NIS Coordinator	Quality Manager	31.12.2012	Description of work activity Regular assessment of outcomes
2.	Specification of tasks and objectives for the year 2012, conclusion of annual contracts with all IPCC sectoral experts	NIS Coordinator, Deputy of NIS Coordinator, Sectoral experts (SEs)	External audit SHMU Director MoE SR – NFP	31.1.2012	Framework agreement, Appendixes for the year concerned, Official nominations of the IPCC sectoral experts by MoE
3.	Ensuring SE`s substitutability for all IPCC sectors	SEs + Deputies of SE	NIS Coordinator Quality Manager Deputy of NIS Coordinator MoE SR – NFP	31. 3. 2012	Responsibility matrices, Description of work activity, Contracts of work for the year 2012 for Deputies of SE
4.	Uncertainty assessment of the verified inventory data 2010 for each sector	Expert for the uncertainty, SEs	NIS Coordinator Quality Manager Deputy of NIS Coordinator	15. 1. 2012	Uncertainty assessment report
5.	Final decision on 2010 inventory data for each sector on the basis of the Uncertainty assessment report and Assessment review report (ARR) SVK from the year 2011	NIS Coordinator, Deputy of NIS Coordinator, SEs	Quality Manager MoE SR - NFP	28. 2. 2012	Verification Protocol, proposal of changes- if appropriate
6.	Participation in the individual evaluations and cooperation in preparing national responses within the review process of the UNFCCC secretariat.	SEs	NIS Coordinator Quality Manager Deputy of NIS	continuously	Responses to the review outcomes
7.	Throughout checking of work in progress for preparing emission inventory 2011	SEs	NIS Coordinator Deputy of NIS Coordinator Quality Manager MoE SR – NFP	30. 6. 2012	Minutes of the meeting
8.	Update of methodologies and recalculation of data for individual sectors	SEs	NIS Coordinator Deputy of NIS Coordinator Quality Manager	30. 11. 2012	Sectoral report
9.	Approval of final reports for individual IPCC sectors	NIS Coordinator Deputy of NIS Coordinator Quality Manager	MoE SR – NFP	30. 11. 2012	Approval protocol Individual reports for all followed IPCC sectors
10.	Evaluation meeting of SEs, MoE- NFP and NIS Coordinator: Agenda- evaluation of results and outcomes based on conclusions of internal and external NIR review process, proposals of measure to improve the quality of NIS for the next year	SEs, NIS Coordinator Deputy of NIS Coordinator MoE SR - NFP	Quality Manager	November 2012	Minutes of the meeting
11.	Development of special software tool with inventory data accessible to all IPCC experts ;training on use of software for all SEs and Deputies of SE – planned actions, implementation depends on availability of resources	NIS Coordinator	Quality Manager MoE SR – NFP	31. 12. 2012	Training certificate

Figure 3:

Flowsheet and interlinkages of QA/QC activities and uncertainty analysis in the process of inventory preparation



Reconciliation of data used in the inventory with national statistical and internationally reported AD (e.g. fuel use) as a priority[22]

59. NIS adopted a recommendation relating to the more detailed review and data comparison specified in the IEA, EUROSTAT and ŠÚ SR databases. Our RA draws on the official ŠÚ SR data. Based on these data and using the national NCV and EF, the CO2 emissions from combustion and transformation of fossil fuels are calculated. Within in-country review, during the comparison of the official ŠÚ SR data and the EUROSTAT database, only one difference in the consumption of jet kerosene has been identified. EUROSTAT calculates this consumption separately, without the national statistical offices being aware of it.

60. The draft new methodology of SA and RA harmonization prepared by the Slovak Republic also on the basis of 2011 in-country review findings is specified in Annex 4.

[22] The 2011 ARR, paragraph 240(c).

III. DISAGREEMENT WITH ADJUSTMENT CONCERNING CALCULATION OF ESTIMATES OF CO2, CH4 and N2O EMISSIONS FROM ROAD TRANSPORTATION, AND HFC, PFC AND SF6 EMISSIONS FROM CONSUMPTION OF HALOCARBONS AND SF6 AND RESPONSE TO RELATED QUESTION OF IMPLEMENTATION

3.1 Calculation of estimates of CO2, CH4 and N2O emissions from road transportation

61. After thorough examination of assessment and proposed adjustments in the 2011 ARR relating to the CO_2, CH_4 and N_2O emissions from road transportation we understand that the ERT has identified potential problems in two main areas:

    - Transparency of the 2011 NIR in the reporting of CH_4 and N_2O EFs from 1A3b for all fuels, particularly in justifying the decrease in EFs compared to the 2010 submission.

    - Underestimation of EFs of CO_2, CH_4 and N_2O from gasoline, diesel oil, LPG, gaseous fuels and biomass.

62. All emissions from road transport including N2O were calculated with **CO**mputer **P**rogramme to calculate **E**missions from **R**oad **T**ransport ("**COPERT**") methodology, latest version. This programme is internationally recognised – used by many European countries for reporting official emissions data. The programme is technologically advanced and transparent – COPERT´s methodology is published and peer reviewed by experts of the UNECE LRTAP Convention.

63. Slovakia uses only the COPERT default emission factors, including nitrous oxide. No country specific emission factors are used for calculation.

Transparency

64. We admit some weaknesses in the transparency of the 2011 NIR, therefore we respect your arguments, that in our responses to the Saturday Paper we concentrated more on recalculations and comparison of EFs instead of on comprehensive explanation of our methodology and emission factors used.

65. The main reason behind was that by submitting new emission estimates for CO_2, CH_4 and N_2O for all fuels (in order to secure a consistency, we changed COPERT IV version 7.0 to COPERT IV version 8.1) we tried to solve the request for ensuring time series consistency since 1990 identified by the previous ERT in the 2010 ARR and also raised in paragraph 34 of the 2011 ARR. Background information on our approach was also included in our response to the Saturday Paper.

Underestimation of emissions

66. We do not fully share ERT`s views on some issues and reasoning for proposed adjustments related to emissions from road transportation, and particularly some of the links made to potential underestimations. The main question to decide is not whether our N_2O and CH_4 EFs are correct, but whether the ERT can generally conclude underestimation of emissions due to the change to new COPERT versions. As stated in paragraph 159 of the 2011 ARR, in line with paragraph 17 of the Technical

guidance on methodologies for adjustments under Article 5, paragraph 2, of the Kyoto Protocol[23] (the "**Good Practice Guidance for Adjustments**"), the ERT did not apply adjustments to CH_4 emissions from gasoline and diesel oil and to CO_2 emissions from LPG and gaseous fuels because the adjusted estimates for 2008 and 2009 calculated by ERT are lower than the original estimates we submitted. In our view, this proves that the Slovak Republic is not underestimating emissions for these emission sources.

67. The adjustments the ERT proposed in these non-key categories are initiated because of alleged lack of transparency. In fact, our EFs are not very different from many other Annex I Parties (as we presented in our response to the Saturday Paper) and in some cases - like CO_2 from diesel oil - our EF is even higher than the IPCC default. So, we do not fully agree that we have underestimated emissions. The problem of Slovakia should be qualified as the lack of transparency without explicit link to underestimations – at least for some gases/fuels. Perhaps the 2011 NIR is not as transparent as it should be but we cannot understand ERT's rationale for arguing that it cannot assess whether our EFs are underestimated, when e.g. our EF for CO_2 from diesel is already higher than the IPCC default. Lack of transparency can indeed trigger adjustments but we would expect more robust reasoning to argue potential underestimation of our emissions in CRF 1A3b.

68. In addition, the ERT proposed adjustments based on IPCC tier 1 method, while we estimate emissions using tier 3 method, which is certainly more accurate.

69. We have also reservations regarding the method used by the ERT to estimate N_2O and CH_4 biomass emissions, and N_2O LPG emissions (where there are no EFs in the 1996 IPCC Guidelines for National Greenhouse Gas Inventories). Pursuant to paragraph 37 of the Good Practice Guidance for Adjustments, the ERT should provide the reason for the use of cluster and demonstrate its appropriateness. The ERT should also assign the Party to the cluster of countries to which it would most likely belong according to its national circumstances. The Slovak Republic therefore wonders on which grounds the ERT used Table 5 of the 2011 ARR. Just removing Bulgaria (extreme values, not similar national circumstances) from this table would reduce the EFs from 2.4, 12.7 and 3.4 for LPG N_2O, biomass CH_4 and biomass N_2O, respectively, to 2.6, 4.9 and 2.2. The later EFs are quite similar to the ones we submitted.

70. In the last COPERT workshop in Belgrade in May 2012, our experts again consulted emission factors from the latest COPERT 4, especially N_2O, directly with co-author of the COPERT, Mr. Leonidas Ntziachristos. He assured us that all emission factors, including N_2O, are correct. Slovak vehicle fleet is fully comparable with the fleet in Europe, because the international emission standards as well as safety ones must be fulfilled.

71. COPERT emission factors have been reviewed by the TFEIP Transport Expert Panel and they are fully accepted for use in the European countries. The 2006 IPCC Guidelines for National Greenhouse Gas Inventories also uses aggregated figures of these emission factors.

[23] Annex to Decision 20/CMP.1 (Good practice guidance and adjustments under Article 5, paragraph 2, of the Kyoto Protocol)

Table 5:

Road transport Implied Emissions Factors from several European countries in 2009

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	IMPLIED EMISSION FACTORS [2]		
	CO_2	CH_4	N_2O
	(t/TJ)	(kg/TJ)	
1.A.3 Transport			
Road Transportation SLOVAKIA (latest results)			
Gasoline	**71,558**	**14,942**	**4,174**
Diesel Oil	**74,166**	**4,354**	**1,601**
Road Transportation GERMANY			
Gasoline	72,000	5,899	**1,365**
Diesel Oil	74,000	0,745	**1,494**
Road Transportation SWITZERLAND			
Gasoline	73,90	8,32	**1,14**
Diesel Oil	73,60	0,40	**1,95**
Road Transportation FINLAND			
Gasoline	72,90	14,99	**2,75**
Diesel Oil	73,60	2,51	**3,64**
Road Transportation AUSTRIA			
Gasoline	73,02	8,31	**4,07**
Diesel Oil	73,67	0,58	**2,01**
Road Transportation BELGIUM			
Gasoline	68,61	6,82	**1,41**
Diesel Oil	73,33	0,99	**1,88**
Road Transportation BULGARIA			
Gasoline	70,63	11,19	**4,14**
Diesel Oil	74,81	1,70	**1,77**
Road Transportation CZECH REPUBLIC			
Gasoline	72,67	6,25	**18,04**
Diesel Oil	73,87	5,40	**4,88**
Road Transportation HUNGARY			
Gasoline	68,61	10,99	**13,51**
Diesel Oil	73,33	3,47	**4,12**
Road Transportation SLOVENIA			
Gasoline	71,41	14,50	**5,28**
Diesel Oil	73,23	2,15	**2,54**

Source: Common Reporting Formats (CRF) data in 2009 (www.unfccc.int)

72. It is evident from Table 5 that implied N2O emission factors in Slovakia are somewhere in the middle of compared countries, neither underestimated nor overestimated.

73. Please note the following relevant N_2O changes in the COPERT 4 (version 8.1) methodology: N2O hot and cold emission factors parameters for Euro 5 and Euro 6 LPG passenger cars are set equal to Euro 5 and Euro 6 gasoline ones.[24] This is estimated to slightly increase N_2O in some EU member states with the widespread use of LPG vehicles.

3.2 Calculation of estimates of HFC, PFC and SF6 emissions from consumptions of halocarbons and SF_6

74. After further round of finding and confirmation of input data for these categories by our experts and thorough review of proposed adjustments in the 2011 ARR related to HFCs, PFCs and SF_6 emissions from consumptions of halocarbons and SF_6 (CRF 2.F), we would like to submit for your consideration following corrections of values presented in Table 11 of the 2011 ARR.[25]

75. Details and reasoning for proposed corrections are given in table below.

Table 6: Comments and proposals to Table 11 of the 2011 ARR

Category	Average value from Table 11 of Draft 2011 ARR in $GgCO_2$ on inhanbitant.10^{-6}	Reported value in the 2011 NIR	New SVK proposal	Comments
Solvents	0,34 emissions per capita based on CZ inventory	"NO"	"NO"	Suggested value derived from the Czech Republic (CZ) is not relevant to the Slovak Republic (SVK). There is no import of F-Solvents to SVK. SVK uses solvents L113, S316 which are not obliged to be included in the inventory.
Aerosols	2,37	0,654	1,36	Number of containers is correct and was verified again via report of the State Institute for Drug Control (ŠÚKL). Original charge of container was set on the base of expert estimation. After recalculation of basic charge we suggest to accept average value = 1,36 obtained after excluding extreme values from CZ and Poland (PL).
PFC extinguishing media	0,51	"NO"	"NO"	We suggest to keep status NO. Import of PFC extinguishing media is not reported in SVK.
SF_6 extinguishing media	0,16	"NO"	"NO"	We suggest to keep status NO. SVK reports SF_6 as insulation gas. In Table 11 only RO reports SF_6 as extinguishing media and this should not be the base for representative cluster of countries.
Blowing agents	3,64	0,049	0,44	Suggested average value in Table 11 is not relevant for SVK. After review of national circumstances we suggest to use average from values reported by CZ and Hungary = 0,44. Extreme values from Bulgaria, PL and EE should be taken out from average.

[24] COPERT 4 v8.1; point 1.2 (Methodology) of the report on the methodological and software revisions of COPERT 4 version 8.1 compared to version 8.0; http://www.emisia.com/download_file.html?file=COPERT4_v8_1.pdf

[25] The 2011 ARR, p. 63.

		In SVK production of foams changed from blowing agent R141b directly to cyclopentan and in 2002 to HFC 245fa and HFC365mfc. Import to building industry was based on values of big importers (BASF) and estimation of a part imported by small companies. We suppose that consumption in SVK was the lowest, comparably to value from CZ.

76. In the light of updated information on sources and values of EF, we propose to reconsider the proposed adjustments contained in letters (j) to (n) of paragraph 234 of the 2011 ARR for year 2008 and in letters (j) to (n) of paragraph 236 of the 2011 ARR for year 2009 as follows in Table 7 below.

Table 7: Comparison of recalculations for 2008 and 2009: ERT and SVK figures

	2008 ERT $GgCO_2$/year	2008 SVK suggest $GgCO_2$/year	2009 ERT $GgCO_2$/year	2009 SVK suggest $GgCO_2$/year
2.F.5 Solvents	2,229	NO	2,231	NO
2.F.4 Aerosols	15,546	6,591	15,563	7,072
2.F.3 PFC Extinguishing Media	3,344	NO	3,348	NO
2.F.3 SF_6 Extinguishing Media	1,019	NO	1,020	NO
2.F.2 Foam Blowing	23,854	2,019	23,881	2,039

77. In general, we would like to express our disagreement with the proposed adjustment in the IPCC categories 2.F.2-6 as proposed in the 2011 ARR. The cluster methodology and selection of countries for respective clusters used in the 2011 ARR do not fully correspond with the principles of the Good Practice Guidance for Adjustments and do not take into account the Slovak national circumstances.

78. Pursuant to the Good Practice Guidance for Adjustments, *the clusters to be used in the adjustment process should, to the extent possible, be selected according to the following criteria, taking into account expert judgement:*

(a) Only Annex I Parties that have undergone an individual review, and for which the relevant data were deemed accurate during the review process and for which no adjustment to any inventory parameter of the gases or categories concerned was made, should be included. Inventory data from the Party subject to adjustment should be excluded from the cluster

(b) The cluster should cover a minimum number of countries, as specified in the recommended approaches and tools for clustering of inventory data

(c) The grouping of countries into clusters should, to the extent possible, take into account <u>similar national circumstances</u>. National circumstances could relate to, inter alia, climatic conditions, economic development, operation or management practices, types of oil and gas activity, or the age of equipment or installations and their technical features, forest, land-use and soil characteristics, depending on the source or sink category in question.[26]

[26] The Good Practice Guidance for Adjustments, paragraph 39.

79. Moreover, *the drivers to be used in the adjustment process should, to the extent possible, be selected according to the following criteria:*

(a) The driver shall be adequately correlated with the emissions or removals concerned

(b) The significance of the relationship between the driver used and the emissions or removals calculated needs to be demonstrated, taking into account national circumstances.[27]

80. In the courses for the ERT members,[28] GHG Management Institute provides the following instructions:

A cluster is defined as "inventory-related data from a group of countries."

When selecting a cluster you should follow the steps:

- *Assess differences in national circumstances at the source or sink level*
- *Identify other countries that may be expected to have similar circumstances for the source or sink category as the Party under review.*
- *Remove from the cluster data from countries that have not undergone a UNFCCC review and values from any country that have been subject to adjustments. Because the latest inventories will not have been reviewed, clustering should normally be based on the previous year submission. It may also be necessary to extrapolate data to the review year to fully reflect a trend.*
- *Identify and assess drivers that reflect the required differences in national circumstances.*
- *Use statistical approaches or expert judgment to identify potential outliers (i.e., values that unreasonably deviate from the average value of the cluster). If you choose to use a statistical approach to define the cluster and identify outliers, the results should only be used if they are justifiable in terms of underlying similarities. You should not remove values from the cluster only for the reason of being statistical outliers. You should check the review reports and only remove inappropriate values.*
- *Check the cluster size. The cluster should contain a minimum number of countries. The minimum number of countries depends on the number of Parties that report the source or sink in question. A rule of thumb is that a minimum number of countries is five. But in some circumstances you may need to use data from a smaller cluster because the source or sink is reported by few Parties.*

[27] The Good Practice Guidance for Adjustments, paragraph 40.

[28] Courses *Application of Adjustments under Article 5, paragraph 2 of the Kyoto Protocol*

81. The Slovak Republic further proposes to reconsider the ERT's selection of countries for the cluster. As follows from the above, countries with similar national circumstances should be selected for the cluster. The ERT chose the cluster on the basis of the GDP per capita parameter but, in particular, Bulgaria and Romania have three-times and two-times, respectively, lower GDP/cap per capita than Slovakia.

82. The Slovak Republic proposes to reconsider cluster of countries for HFCs, PFCs and SF6 as foam blowing, fire extinguishing media, aerosols/metered dose inhalers and F-gas solvents due to the following reasons: (i) only 1 out of 9 countries uses SF6 as fire extinguishing media, (ii) only 1 out of 9 countries uses HFCs as solvents, (iii) only 2 out of 9 countries use PFCs as extinguishing media, (iv) Bulgaria should be excluded from the cluster as it has much lower GDP per capita than the Slovak Republic and, moreover, it has a high consumption of HFCs as foam blowing agents due to its need to store a lot of agricultural production, which rapidly declined in the Slovak Republic, and (v) Romania should be also excluded from the cluster as it has lower GDP per capita than the Slovak Republic and its application of SF_6 as a fire extinguisher is likely incorrect categorization of the use of SF_6 for extinguishing electric arc, which is standardly reported as isolating gas (electrical equipment). Therefore, values proposed in the relevant three (out of five) columns are insufficient and inappropriate for adjusting and similarly as with respect to the majority of countries in this cluster, emission for the Slovak Republic should be set as "NO".

83. Further explanations of applied methodology and results of recalculations and implications on national GHG emission inventory for given CRF categories are described below.

Source category description – Foam Blowing (CRF 2.F.2)

84. The Slovak Republic partly disagrees with the adjustment proposed by the ERT in this category based on cluster methodology. Extreme values of emissions per capita reported by Bulgaria (13.87 x 10-6 Gg CO2 eq.), Poland (8.31 x 10-6 Gg CO2 eq.) and Estonia (3.96 x 10-6 Gg CO2 eq.) should be not included in average value. Production of foams in the Slovak Republic changed from blowing agent R141b directly to cyclopentane and to HFC 245fa and HFC365mfc in 2002. After reviewing the cluster countries´ national circumstances we believe that the most appropriate for the Slovak Republic would be to use the average of the values reported by the Czech Republic and Hungary, which is 0.435 x 10-6 Gg CO2 eq. Import to building industry was based on values provided by big importer (BASF) and estimation of part imported by small companies. We suppose that consumption in the Slovak Republic was the lowest in comparison with the other countries and was comparable to values for the Czech Republic.

85. Emissions for this category were estimated based on the latest available data and information and are firstly reported in the Slovak Republic 2012 National Inventory Report (the "**2012 NIR**"). Emissions are released from hard (CRF 2.F.2.1) and soft foams (2.F.2.2) categories. After review of national circumstances, the following gases have occurred since 1999: HFC134a, HFC245fa for hard foam and HFC365mfc for soft foam (Tables 8 and 9). The annual loss is 0.5% for all gases in this category.

Table 8: Revised time-series of HFCs emissions in category 2.F.2 Foam Blowing according to gases

	2.F.2.1 Hard Foam				2.F.2.2 Soft Foam
	HFC134a			HFC245fa	HFC365mfc
Year	new products [t]	in operation [t]	Actual emissions from stock [t]	Actual emissions from stock [Gg of CO_2 eq.]	Actual emissions from stock [Gg of CO_2 eq.]
1999	41,200	41,200	0,206	NO	NO
2000	41,200	82,400	0,412	NO	NO
2001	37,500	119,900	0,600	NO	NO
2002	37,500	157,400	0,787	0,034	0,026
2003	31,200	188,600	0,943	0,068	0,052
2004	24,900	213,500	1,068	0,099	0,076
2005	18,700	232,200	1,161	0,130	0,100
2006	13,700	245,900	1,230	0,156	0,120
2007	12,500	258,400	1,292	0,176	0,136
2008	NO	258,400	1,292	0,192	0,148
2009	NO	258,400	1,292	0,203	0,156
2010	NO	258,400	1,292	0,213	0,164

Table 9: Revised time-series of total HFCs emissions in category 2.F.2 Foam Blowing

Year	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
HFCs (Gg CO_2 eq.)	0,268	0,536	0,779	1,083	1,346	1,563	1,739	1,874	1,992	2,019	2,039	2,057

Source category description – Fire Extinguishers (CRF 2.F.3)

86. PFCs emissions: The Slovak Republic proposes to reconsider the adjustment proposed by the ERT in this category based on cluster methodology. ERT used adjustment calculation based on non-representative cluster data from only two countries (Poland, Russian Federation). Import of PFC extinguishing media does not occur in the Slovak Republic. The Slovak Republic transferred ODS directly to HFCs extinguishing media. We propose to keep status "NO".

87. SF_6 emissions: The Slovak Republic proposes to reconsider the adjustment proposed by the ERT in this category based on cluster methodology. ERT used adjustment calculation based on non-representative cluster data from only one country (Romania). Moreover, Romania[29] has a quite different national circumstances, including different GDP per capita (only one half of Slovak Republic's one) that was chosen as the driver by ERT. The Slovak Republic also reports SF_6 as insulation gas and not as arc-extinguishing media. We suggest to keep status "NO".

Source category description – Aerosols/Metered Dose Inhalers (CRF 2.F.4)

88. The Slovak Republic partly accepts and partly disagrees with the adjustment proposed by the ERT in this category based on cluster methodology. ERT used adjustment

[29] The emission (cap) for SF6 contained in Table 11 of the 2011 ARR should be 0,0065 (x10-6) instead of 0,16.

calculation based on cluster data from seven countries which are not justifiable in terms of underlying similarities as required by the Good Practice Guidance for Adjustments. The extreme values of emissions per capita for Poland (4.67 x 10^{-6} Gg CO_2 *eq.*) and Czech Republic (6.23 x 10^{-6} Gg CO_2 *eq.*) should be excluded from the cluster due to the different national circumstances of Poland and Czech Republic, the countries with the production in this category. After recalculation of basic charge we suggest to accept average value = 1.36 x 10^{-6} Gg CO_2 *eq.*

89. Emissions for this category were estimated based on the latest available data and information and are firstly reported in the 2012 NIR submission. Emissions are produced in the category 2.F.4.1 – Metered Dose Inhalers. The product life factor is 100% for all gases in this category. Estimate of emissions for this category was based on the recommendation of the ERT during the 2011 in-country review. Number of containers was taken directly from the report of the State Institute for Drug Control (ŠÚKL). Original charge of container was set on the base of expert estimation with the average value of 1.36 x 10^{-6} Gg CO_2 *eq*.

90. After review of national circumstances the following gases have occurred since 2000: HFC134a, HFC227ea for aerosols in metered dose inhalers (Tables 10 and 11).

Table 10: Revised time-series of HFCs emissions in category 2.F.4.1 Metered Dose Inhalers according to gases

	2.F.4.1 Metered Dose Inhalers		
	HFC134a		HFC227ea
Year	in operation [t]	Actual emissions from stock [t]	Actual emissions from stock [t]
2000	3,730	3,730	NO
2001	4,100	4,100	NO
2002	4,290	4,290	NO
2003	4,470	4,470	NO
2004	4,660	4,660	NO
2005	4,850	4,850	NO
2006	5,030	5,030	NO
2007	5,030	5,030	NO
2008	5,070	5,070	NO
2009	5,440	5,440	NO
2010	4,838	4,838	0,274

Table 11: Time-series of total HFCs emissions in category 2.F.4 Aerosols/Metered Dose Inhalers

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
HFCs (Gg CO_2 eq.)	4,849	5,330	5,577	5,811	6,058	6,305	6,539	6,539	6,591	7,072	7,084

Source category description – Solvents (CRF 2.F.5)

91. Slovak Republic proposes to reconsider the adjustment proposed by the ERT in this category based on cluster methodology. The ERT used adjustment calculation based on cluster data from only one country (Czech Republic). In addition, the value of emissions per capita proposed in Table 11 of the 2011 ARR, derived from Czech

Republic, should not apply to the Slovak Republic due to the different circumstances in industry. In particular, there is no import of F-Solvents to the Slovak Republic in comparison to the Czech Republic (as provided in the Czech inventory). Therefore, no emissions of F gases were included in this category. According to the actual information from industrial companies, solvents L113, S316 are used, but these are not included in the IPCC GPG 2000.

Source category description – Other applications using ODS substitutes (CRF 2.F.6)

92. No emissions of F gases were included in this category.

Source category description – Semiconductor manufacture (CRF 2.F.7)

93. No emissions of F gases were included in this category.

Source category description – Electrical equipment (CRF 2.F.8)

Emissions originated from electrical equipment represent less than 10% of SF_6 emissions from 2.F category. Total actual emissions of SF_6 were 0.77 Gg of CO_2 equivalents in 2008 and total actual emissions of SF_6 were 0.81 Gg of CO_2 equivalents in 2009. The potential emissions of SF_6 were 0.005 Gg of CO_2 equivalents in 2008 and 0.004 Gg of CO_2 equivalents in 2009. Emissions of HFCs and PFCs do not occur in this category.

IV. CONCLUSIONS AND REQUEST

4.1 Conclusions

94. The Slovak Republic acknowledges that at the time of the original 2011 annual inventory submissions, there were a couple of issues that prevented the Slovak national system from functioning perfectly in accordance with the Guidelines for national systems. However, it is clear from this Written Submission that the Slovak Republic managed to implement many improvements since the 2011 in-country review despite a complicated political situation in connection with the early parliamentary elections and establishing of a new government. Therefore, we believe that Slovak national system is fully operating and is capable to prepare inventory reports and manage inventory data on a very high level.

95. As described in Part II above, the NIS is based on formal relations between institutions with a clear specification of the roles which allows a reliable data flow for the preparation of the inventory. All external experts use solely official statistical data and sectoral databases as a basis for estimation of the GHG emissions. It must be stressed that these experts use their personal networks only to verify the official data or as a basis for the analysis of uncertainties.

96. The Coordination Committee (special inter-ministerial committee for the coordination of climate change policy) commenced its work in May 2012 with its functions being in place.

97. The Slovak Republic also maintains that its national system ensures time-series consistency of the AD and EFs. Although events resulting in apparent time-series inconsistency might occur (caused mainly by fluctuation in level production of a relatively low number of producers in particular IPPC category), such events are always described and clearly explained in the NIR.

98. The reconciliation of data used in the inventory with the nationally and internationally reported statistical data has been and still is the high priority for the Slovak Republic. Since the 2011 in-country review, a recommendation concerning detailed review and data comparison specified in the IEA, EUROSTAT and ŠÚ SR databases was adopted. Within in-country review, during the comparison of the official ŠÚ SR data and the EUROSTAT database, only one non-key difference in the consumption of jet kerosene has been identified. The Slovak Republic will put further efforts in controlling input data from different databases.

99. In addition, the Slovak Republic maintains, as discussed in Part III above, that its calculations of the estimates of CO2, CH4 and N2O emissions from road transportation, and HFC, PFC and SF6 emissions from consumptions of halocarbons and SF6 were prepared in line with the applicable methodological and reporting requirements and submits certain corrections with respect to calculations of the estimates of HFC, PFC and SF6 emissions from consumptions of halocarbons and SF6.

4.2 Request

100. Based on the evidence contained in this Written Submission, the Slovak Republic requests the enforcement branch of the Compliance Committee

(i) to determine not to proceed further with any of the questions of implementation raised in the 2011 ARR and the Decision On Preliminary Examination;

or alternatively

(ii) to refer the questions of implementation listed in the 2011 ARR to the facilitative branch of the Compliance Committee for consideration pursuant to section IX, paragraph 12 of the Procedures and mechanisms relating to compliance under the Kyoto Protocol.

ANNEX 1 – Governmental Resolution No. 821 from 19 December 2011 establishing the inter-ministerial High Level Committee on Coordination of Climate Change Policy

MOTION FOR RESOLUTION
OF THE GOVERNMENT OF THE SLOVAK REPUBLIC

No. 821/2011

of December 19, 2011

to the Proposal for Institutional Performance of Achievement of Objectives of Climate and Energy Package in the Conditions of the Slovak Republic, with Regard to the Systemic Changes Under Act No. 37/2010 Coll., amending Act No. 575/2001 Coll. on Organizing of Government Activities and Organization of Central State Administration as amended

Material No:

Proposer: Minister of Environment of the Slovak Republic

Government

approves

A. 1. motion for institutional performance of achievement of objectives of climate and energy package in the conditions of the Slovak Republic, with regard to the systemic changes under Act No. 37/2010 Coll., amending Act No. 575/2001 Coll. on Organizing of Government Activities and Organization of Central State Administration as amended;

obliges

the Minister of Environment

B. 1. to cancel the Climate and Energy Package Committee established based on the performance of the task under paragraph B.1. UV SR No. 416 of June 18, 2008;

by January 15, 2012

B. 2. to establish the Climate Change Policy Coordination Committee on the level of State Secretaries under the auspices of the Ministry of Environment of the Slovak Republic with the participation of the State Secretaries of the Ministry of Economy, Ministry of Agriculture and Rural Development, Ministry of Transport, Construction and Regional Development, Ministry of Education, Science, Research and Sports, Ministry of Health, Ministry of Finance and Ministry of Foreign Affairs of the Slovak Republic and Chairman of the Regulatory Office for Network Industries;

by January 15, 2012

ANNEX 2 – List of members of the inter-ministerial High Level Committee on Coordination of Climate Change Policy

Title of the advisory body:

Komisia pre koordináciu politiky zmeny klímy

(Climate Change Policy Coordination Committee)

List of current members of the advisory body:

Chairman:

- ***Doc. Ing. Ján Ilavský, CSc**., State Secretary, Ministry of Environment of the Slovak Republic*

Secretary:

- ***MA. Radovan Znášik**, Climate Change Policy Department, Climate Change and Economy Tools Section, Ministry of Environment of the Slovak Republic*

Other members:

- ***Ing. Dušan Petrík**, State Secretary, Ministry of Economy the Slovak Republic,*
- ***Ing. Štefan Chudoba, PhD**., State Secretary, Ministry of Education, Science, Research and Sports of the Slovak Republic,*
- ***JUDr. Vazil Hudák**, State Secretary, Ministry of Finance of the Slovak Republic,*
- ***MUDr. Viliam Čislák**, MPH., State Secretary, Ministry of Health of the Slovak Republic,*
- ***Ing. Magdaléna Lacko Bartošová**, CSc., State Secretary, Ministry of Agriculture and Rural Development of the Slovak Republic,*
- ***Ing. Peter Javorčík**, State Secretary, Ministry of Foreign Affairs of the Slovak Republic,*
- ***Ing. František Palko**, State Secretary, Ministry of Transport, Construction and Regional Development of the Slovak Republic,*
- ***Ing. Jozef Holjenčík, PhD**., Chairman of the Regulatory Office for Network Industries,*
- ***Mgr. Pavol Široký**, non-governmental environmental organization – Ekoforum.*

Annex to the Decision of the Ministry of Economy

of the Slovak Republic of January 13, 2012, No. 1/2012-8.1.

ANNEX 3 – Rules of Procedure and Organization of the inter-ministerial High Level Committee on Coordination of Climate Change Policy

Rules of Procedure and Organization of the Climate Change Policy Coordination Committee

Art. 1
Introductory Provisions

The Rules of Procedure and Organization regulates the competences, tasks and composition of the Climate Change Policy Coordination Committee (the "Committee").

Art. 2
General Provisions

1. The Committee is a coordination, advisory, inspection and professional body of the Ministry of Environment of the Slovak Republic (the "Ministry") for the issues relating to the long-term strategy of the low-carbon development and fulfillment of the adopted international climate change policy commitments and adaptations to its adverse effects.

2. The Committee's management is performed by the Ministry, which is also responsible for the Committee's activities.

Art. 3
Competences and Tasks

1. The Committee represents the supreme level of coordination of the process of preparation and implementation of low-carbon development strategy, including the selection of tools and measures to reduce greenhouse gas emissions in the conditions of the Slovak Republic (SR), resulting from the commitments of SR under the international treaties and legal acts of the European Union (EU).

2. The Committee coordinates the elaboration of the official positions of SR to the international negotiations within the UN Framework Convention on Climate Change and Kyoto Protocol and for the negotiations with the EU institutions, and approves fundamental EU decisions on the climate change policy issues based on the motions and proposals of the competent Ministries, national authorities and institutions, without prejudice to the competences of the Coordination Group of the Ministry of Environment of the Slovak Republic.

3. The Committee coordinates the preparation of preliminary evaluation reports pursuant to the resolutions of the government of SR, requirements of the Minister of

Environment of SR (the "Minister") or, as the case may be, regarding the course and results of international negotiations about the current state of readiness of SR to fulfill its climate change commitments, including proposals for further procedure.

4. The Committee continuously monitors the implementation of the adopted measures at the national level, level of relevant sectors and level of performance of local state administration and regional independent administration for climate change.

5. The Committee proposes procedures and monitors the implementation of the approved measures at the national level, level of relevant sectors and level of performance of local state administration and regional independent administration if SR fails to fulfill the adopted climate change commitments.

6. On an annual basis or as necessary, the Committee provides the Minister with the information about current state of fulfillment of the adopted international climate change commitments of SR.

7. The Committee coordinates the preparation of documents and detailed analyses of the relevant national authorities and institutions, based on which the Committee prepares proposals for further procedure in order to ensure fluent decrease of greenhouse gas emissions in the conditions of SR.

8. The Committee discusses other current issues connected with the climate change policy, including the commitments of SR to reduce greenhouse gas emissions.

Art. 4
Composition of the Committee

1. The Committee is composed of one Chairman, other Committee Members and a Secretary.

2. The Committee Chairman is the Ministry's State Secretary.

3. Other Committee Members include:
   a) State Secretary of the Ministry of Economy of the Slovak Republic,
   b) State Secretary of the Ministry of Agriculture and Rural Development of the Slovak Republic,
   c) State Secretary of the Ministry of Transport, Construction and Regional Development of the Slovak Republic,
   d) State Secretary of the Ministry of Education, Science, Research and Sports of the Slovak Republic,
   e) State Secretary of the Ministry of Health of the Slovak Republic,
   f) State Secretary of the Ministry of Finance of the Slovak Republic,
   g) State Secretary of the Ministry of Foreign Affairs of the Slovak Republic,
   h) Chairman of the Regulatory Office for Network Industries.

4. The Committee membership is not remunerated.

Art. 5
Committee Membership

1. Chairman, other Committee Members and Secretary are appointed and removed by the Minister.
2. The other Committee Members are appointed by the Minister based on the nominations by the relevant ministries and Regulatory Office for Network Industries.
3. The Committee membership ceases to exist as a consequence of:
   a) removal from the office by the government of SR,
   b) death or presumption of death.
4. In their absence, the Chairman and a Committee Member may be represented by an agent appointed by the relevant ministry represented in the Committee or Regulatory Office for Network Industries.

5. The Committee negotiations are always attended by a representative of non-governmental organizations and institutions, which largely take part in the resolving of the issue falling within the Committee's competences.

6. If necessary, the Committee may include *ad hoc* members – economy experts and representatives, depending on the discussed issue.

7. The Committee Chairman may invite other persons to take part in the negotiations at his/her own discretion or at the request of a Committee Member.

Art. 6
Committee Chairman

The Committee Chairman
a) manages and is responsible for the activities of the Committee,
b) coordinates the preparation and elaboration of official positions, opinions, draft instructions and draft mandates for negotiations about the reduction of greenhouse gas emissions within EU,
c) is responsible for the preparation of preliminary evaluation reports for the government of SR on the course of negotiations about the climate change policy commitments and the current state of readiness of SR to implement the tools and measures in order to reduce greenhouse gas emissions, including proposals for further procedure,
d) coordinates the preparation of analyses and relevant national authorities and institutions, based on which the Committee prepares proposals for further steps necessary for the fluent implementation of tools and measures in order to reduce greenhouse gas emission in the conditions of SR,
e) if necessary, may establish an expert workgroup reporting to the Committee within the vertical management structure,
f) is accountable for the completeness of information and documents for the decision-making process and ensures their mutual exchange among the involved entities.

Art. 7
Committee Secretary

Committee Secretary
a) organizes the individual Committee sessions from the organization and administrative point of view, including informing of all of the Committee Members about the session agenda, and is responsible for the submission of documentation necessary for a Committee session,
b) maintains an official written list of agents,
c) prepares Minutes of the individual Committee sessions,
d) has no voting right.

Art. 8
Committee Members

Committee Members
a) are obliged to take part in all Committee sessions; they may let themselves be represented by their agents in justified cases only, and they are obliged to carry out the tasks adopted at the Committee sessions,
b) within their competence, they coordinate the preparation of positions, opinions, draft instructions and draft mandates for climate change policy negotiations,
c) cooperate with the Committee Chairman on the preparation of official position, opinions, draft instructions and draft mandates for international climate change policy negotiations,
d) coordinate the preparation of documents and analyses for reports on continuous fulfillment of the adopted international climate change policy commitments of SR for the field in their competence,
e) are responsible for the preparation of documents and analyses for the field of their competence, based on which the Committee prepares proposals for further steps necessary for fluent implementation of tools and measures in order to reduce greenhouse gas emission in the conditions of SR,
f) are responsible for the completeness and impartiality of the documents for their field of competence (and, during their preparation, they cooperate with all relevant institutions and experts),
g) inform the Chairman and other Committee Members about any and all other activities and processes, which are directly or indirectly connected with the process of implementation of tools and measures to reduce greenhouse gas emissions in SR.

Art. 9
Committee Sessions

1. A Committee session is convened and chaired by the Chairman.

2. The Committee holds talks operatively, based on the Chairman's decision or proposal by a Committee Member, so as to optimally fulfill all of its tasks and functions.

3. The draft session agenda and materials for negotiation in the Committee are submitted by the Chairman also on the proposal by Committee Members.

4. The session agenda and relevant documents are sent in an electronic or written form to the Committee Members at least five business days before the negotiation.

5. Between the individual sessions of the Committee, the Chairman may convene a more specific session to negotiate partial and specific issues. The chairman will inform all of the other Committee Members about the result of such sessions during an ordinary session.

6. The Committee sessions are not public.

7. The Minutes of Committee session signed by the Chairman, annexed with the attendance sheet and joint positions on the discussed issues, is sent to the Committee Members in an electronic form.

8. In the event that any issue requires immediate discussion, the Committee session may be substituted with a written position of the Chairman prepared based on the written positions of the other Committee Members.

9. To adopt the Committee's outputs (official positions, reports, information, documents and analyses), an absolute majority of votes of all of the Committee Members is necessary. Any conflict shall be submitted for resolution at the level of ministers of the involved ministries and subsequently, if necessary, for the discussion by government of SR.

Art. 10
Final Provisions

1. **These Rules of Procedure and Organization shall take effect on January 15, 2012.**

2. The Committee shall cease to exist as of the day of the Minister's decision on its dissolution.

József Nagy
Minister of Environment
of the Slovak Republic

ANNEX 4 – New Methodology for SA and RA Harmonization of Fuel Data in the Energy Sector

New methodology proposed in order to harmonize ŠÚ SR energy data with the fuel data in the national source database (NEIS) as a response to the ERT recommendations was used to prepare the balance of emissions in the energy sector for the 2012 submission retrospectively to 1990. The methodology includes the following procedures and tools to monitor and preserve the (QA/QC) quality:

1. disaggregation of consumptions of fuels for the individual installation;
2. definition of fuels at the ŠÚ SR and NEIS levels;
3. classification of fuel consumptions into individual groups at the ŠÚ SR level;
4. method of calculation of consumption of coke oven, blast furnace and convertory gases;
5. exclusion of double counting;
6. new classification of NACE codes for NEIS, as well as their allocation to NFR codes (the converter is dealt within a parallel project).

This approach is based on the "top-down" balance and also with regard to the relatively short time between the moment, when the NEIS data are available, and the submission date (approximately 4 months). Another step to achieve consistency and data comparability is the "bottom-up" balance based on the adoption of the same methodology and form for the provision of data to the individual databases (ŠÚ SR, NEIS, ETS) by companies in an electronic form only. At the installation level it will be ensured that the calculation is made on the basis of the same data for a particular activity, using the unified methodology.

The problem of discrepancy between the reference approach (RA) and sectoral approach (SA) originated due to the use of official statistical data in the "top-down" balance, since the data in the statistical yearbook for energy are aggregated and, with regard to the economic development, many companies underwent a transformation, division and fusion, which reflected in the change of classification according to the NACE classification (Eurostat definition). Thus, it was very difficult to assign the energy statistics data according to detailed categorization of IPCC sources. For this purposes, Slovakia used NEIS database, in which, however, the structure of monitoring of the activity data was primarily aimed at the creation of basic pollutants and differed from the structure of monitoring of greenhouse gas emissions. This led to differences between the balances of the reference approach (top-down according to ŠÚ SR) and the sectoral approach (bottom-up according to NEIS). To remove these discrepancies and fully apply the ERT recommendations, from which the most important is the requirement to harmonize RA and SA and requirement for a clear carbon balance, we implemented the following procedure:

1. The activity data balance in the individual sectors was extended by the fuels balanced within RA. This is especially coking coal, which is balanced in categories 1A1c, 1A2a and 2C1 in the new regulation, and oil balanced in category 1A1b.

2. Secondary gas fuels were classified into the fuel class depending on their origin. These are coke oven, blast furnace and converter gases, classified as solid fuels and occurring in categories 1A1c, 1A2a, 1A2f and 2C1, and refinery gas, classified as liquid fuel and occurring in categories 1A1b a 1A2c.

3. A part of the natural gas used in sectors 1A1b (production of hydrogen by steam reforming for in-depth oil processing – hydrocrack) and natural gas used in chemistry 1A2c was not balanced within NEIS. Therefore, these data were added to the balance in these sectors following the balance with the data from the ŠÚ SR energy statistics.

4. A major problem is the disaggregation of carbon among categories 1A1c, 1A2a, 1A2f and 2C1 in metallurgy. In SR, coke batteries are not separated as a separate company with a different NACE code from the manufacture of raw iron and steel, and the media flow is performed on-line. Moreover, the total balance of secondary fuels is also affected by carbon from inorganic mixtures, such as limestone and carbon in raw ore. Secondary fuels, such as coke oven and blast furnace gases, are used for heating in coke batteries, blast furnaces, and a part is used to burn in the CHP factory, in steelworks industry, and partially, coke oven gas is burned to produce inorganic materials. The last production was before the privatization of the whole metallurgy complex. Within the CO2 balance of the current metallurgy complex for ETS, an input – output analysis is used, and the difference between the IPCC sectors does not have to be identified for verification.

5. It is similar to the oil refinery, which was originally one independent manufacturing complex. Today, the production is divided between the refinery, petrochemistry and heating plant (energy unit) as separate economic production units. Refinery gases and waste fuels from secondary fuels pass to the heating unit and petrochemistry through the boundaries of the refinery.

For the first solution to this problem for 2000 – 2010, a new analysis was prepared based on the input – output carbon analysis, where the individual fuels entered the sector and the manufactured secondary fuels passed to the relevant sectors for use. Therefore, for each fuel, the following analysis was prepared:

C_{fuel} [t C] = $Q_{input} - Q_{output}$ [TJ] x EF[tC/TJ] – C_{store} [t C]

Q_{fuel} [TJ] = ($Q_{input} - Q_{output}$) [TJ]

$C_{category}$[t C] = S C_{fuel} [t]

$Q_{category}$ [TJ] = S Q_{fuel} [TJ]

IEF [tCO2/TJ] = $\underline{C_{category}[t\ C] \times 3.664}$

$Q_{category}$ [TJ]

6. The first example is the 1A1b category, in which the carbon balance is represented by oil and natural gas as input, and motor fuels and fuel oils as output, as well as the products creating carbon store – lubricants, etc. A part of the products, such as fuel oils and refinery gas, just like refinery feedstock, circulate within category 1A1b or pass to category 1A2c.

7. In metallurgy, the coke oven carbon is divided among categories 1A1c, 1A2a 1A2f and 2C1, and a portion passes to tar as carbon store. convertory gas carbon, originating in steelworks, is burned here immediately and does not pass to another category.

8. When the fuels were classified, a comparison of consumption of fuels was prepared in measurement and energy units, as well as the comparison of the total creation of CO2; small differences between RA a SA were discovered.

9. Input-output analysis was transformed to the standard CRF tables, where the fuel consumption for the individual categories was expressed as the input-output difference and reduced by the fuel energy equivalent Qekv corresponding to the carbon store:

Qekv [TJ] = Cstore[t C]/EF[tCO2/TJ]

10. This analysis prevents substantial overestimate or underestimate of the CO2 emissions production within the bottom-up balance (SA), and is, at the same time, controlled based on the top-down balances (RA). With the current state in mind, it is impossible to achieve better consistency of both procedures. Small differences as compared to SA may be explained by different classification of fuels into the IPCC categories. The following table for the individual steps compares the fuel balances and CO2 emissions within RA and SA.

2010	**RA**	**SA**	**RA**	**SA**	**Difference**	
Fuels/units	***TJ***	***TJ***	***Gg CO_2***	***Gg CO_2***	***Gg CO_2***	***% RA***
Liquid	121 893.0	122 622.2	6 279.74	6 333.12	-53.38	-0.850%
Solid	179 022.9	178 974.1	16 621.02	16 616.61	4.41	0.027%
Gaseous (NG)	244 290.8	244 290.0	13 169.66	13 169.66	0.00	0.000%
Total	**545 205.9**	**545 886.3**	**36 070.42**	**36 119.39**	**-48.9736**	**-0.136%**

ANNEX 5 – Decision of the director general of the SHMU

received in Slovak