#### **ENGLISH ONLY**

#### UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE

SUBSIDIARY BODY FOR SCIENTIFIC AND TECHNOLOGICAL ADVICE Sixteenth session
Bonn, 5–14 June 2002
Item 4 (a) of the provisional agenda

#### METHODOLOGICAL ISSUES

# GUIDELINES ON REPORTING AND REVIEW OF GREENHOUSE GAS INVENTORIES FROM PARTIES INCLUDED IN ANNEX I TO THE CONVENTION (IMPLEMENTING DECISIONS 3/CP.5 AND 6/CP.5)

<u>Views from Parties on the proposals for revision of the guidelines on reporting and review of</u> greenhouse gas inventories from Parties included in Annex I to the Convention

- 1. At its fifteenth session, the Subsidiary Body for Scientific and Technological Advice (SBSTA) welcomed the organization of an expert meeting by the secretariat on methodological and operational issues relating to the use of the guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part I: UNFCCC reporting guidelines on annual inventories (hereinafter referred to as the "reporting guidelines"); and the UNFCCC guidelines for the technical review of greenhouse gas (GHG) inventories from Parties included in Annex I to the Convention (hereinafter referred to as the "review guidelines"). The SBSTA requested the secretariat to prepare a report of the expert meeting for consideration at its sixteenth session (FCCC/SBSTA/2001/8, para. 15 (b)).
- 2. The secretariat, in response to the above mandate, prepared a report (FCCC/SBSTA/2002/2) and three addenda (FCCC/SBSTA/2002/2/Add.1, FCCC/SBSTA/2002/2/Add.2 and FCCC/SBSTA/2002/2/Add.3) that contain proposals for revision of the reporting, including tables of the common reporting format, and review guidelines.
- 3. The secretariat has received two submissions\* with views on the proposals contained in the documents mentioned in paragraph 2 above, one from Norway and one from Spain on behalf of the European Community and its member States, and Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia and Slovenia. In accordance with the procedure for miscellaneous documents, these submissions are attached and are reproduced in the language in which they were received and without formal editing.

<sup>\*</sup> These submissions have been electronically imported in order to make them available on electronic systems, including the World Wide Web. The secretariat has made every effort to ensure the correct reproduction of the text as submitted.

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#### PAPER NO 1: NORWAY

#### Views on

# Guidelines on Reporting and Review of Greenhouse Gas Inventories from Parties included in Annex 1 to the Convention (Implementing Decisions 3/CP.5 and 6/CP.5)

#### May 2002

The secretariat of UNFCCC organized an expert meeting from 4 to 6 December 2001 in Bonn, to assess experiences in the use of UNFCCC reporting and review guidelines. The purpose of the expert meeting was to advance the methodological work relating to the revision of the UNFCCC reporting and review guidelines. Based upon the conclusions from the expert meeting the secretariat prepared proposals for revisions of the UNFCCC reporting and review guidelines, see documents FCCC/SBSTA/2002/2/Add.1 and 2. Hereby Norway submits some views on the guideline for reporting of greenhouse gas inventories from Parties included in Annex 1 to the Convention (FCCC/SBSTA/2002/2/Add.2)

We believe the secretariat has done a thorough and important piece of work in preparing the document FCCC/SBSTA/2002/2/Add.2 . Most of our views presented at the Bonn expert meeting in December have been taken into account. However we have some few additional comments on the issue of "feedstock" and "indirect  $CO_2$  Emissions from  $CH_4$  and NMVOC Oxidation" we would like to see included in the final reporting guideline.

#### Feedstock

Under section <u>F. Reporting</u>, <u>General guidance</u> on page 7 we believe there should be a reference to the issue on energy used as "feedstock" to highlight the importance covered later in the document on page 11 (Para 38 (f) (i)). We therefore propose a new paragraph 20bis on page 7:

"Parties should clearly indicate whether feedstocks have been accounted for in the inventory, and if so, where they have been accounted for, in the energy or industrial processes sector"

#### Indirect CO<sub>2</sub> Emissions

According to the 1996 Revised IPCC Guidelines volatile organic compounds (NMVOCs) and  $CH_4$  emissions from solvents, coal mines, and oil and gas production and transportation should be followed by an estimation of  $CO_2$ . When the NMVOC and  $CH_4$  emissions are caused by combustion of fossil fuels the  $CO_2$  emissions will normally be covered by the  $CO_2$  emissions factor which includes all carbon regardless of whether the carbon is emitted as  $CO_2$ , VOC or  $CH_4$ . However, when VOC and  $CH_4$  are emitted from non-combustion processes, such as venting, leakages and so on, the  $CO_2$  emissions often have to be calculated separately. To ensure that parties include such "indirect  $CO_2$  Emissions from  $CH_4$ , and NMVOC Oxidation" we propose following additional paragraph under paragraph 38 (f) on page 11:

(iii) Whether emissions of CO<sub>2</sub> corresponding to VOC and CH<sub>4</sub> emissions from non-combustion processes, such as solvent use, coal mines, venting, leakages and of fossil fuels.

#### PAPER NO 2: SPAIN

(ON BEHALF OF THE EUROPEAN COMMUNITY AND ITS MEMBER STATES, AND BULGARIA, CROATIA, CYPRUS, CZECH REPUBLIC, ESTONIA, HUNGARY, LATVIA, LITHUANIA, MALTA, POLAND, ROMANIA, SLOVAKIA AND SLOVENIA)

#### **BRUSSELS, 13 MAY 2002**

# REVISION OF GUIDELINES ON REPORTING AND REVIEW OF GREENHOUSE GAS INVENTORIES FROM ANNEX I PARTIES TO THE CONVENTION

Spain, on behalf of the European Community and its Member States, and Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia, Slovenia welcome the opportunity to send views on the draft revised guidelines on reporting and review of greenhouse gas inventories, taking into consideration the discussions and the outcomes of the expert meeting held in Bonn, in December 4-6 2001 (see documents FCCC/SBSTA/2002/2, FCCC/SBSTA/2002/2/Add.1, FCCC/SBSTA/2002/2/Add.2 and FCCC/SBSTA/2002/2/Add.3).

The EU and its Member States, and Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia, Slovenia welcome the progress made on this matter and would like to thank the secretariat, the Chairman of the SBSTA, and the experts involved, for the preparation of the draft revised guidelines on reporting and review of greenhouse gas inventories under the Convention. In this regard, the EU and its Member States, and Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia, Slovenia highlight the relevance of the experience gained during the trial period for assessing the existing guidelines.

The EU and its Member States, and Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia, Slovenia believe that the draft revised guidelines improve the current ones. In particular, the EU and its Member States, and Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia, Slovenia welcome the modifications introduced to reflect the IPCC *Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories*, as well as the proposal for a general and common structure for the National Inventory Report (NIR).

The EU and its Member States, and Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia, Slovenia believe that the revised guidelines will assist Parties to further improve transparency, completeness, consistency, accuracy, comparability and verifiability. Furthermore, they will make the review process easier. Nevertheless, the EU and its Member States, and Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia, Slovenia believe that the proposed revised guidelines still require some modifications. For this reason, the EU and its Member States, and Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia, Slovenia provide comments structured into two sections: i) UNFCCC guidelines for the technical review of GHG inventories; and ii) UNFCCC reporting guidelines on annual inventories.

Finally, the EU and its Member States, and Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia, Slovenia note that the time available to elaborate comments on the draft revised guidelines has been rather limited, especially regarding the modifications to the Common Reporting Format. As a consequence, the EU and its Member States, and Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia, Slovenia might further develop its views on this matter. In this regard, the in-depth analysis of

document FCCC/SBSTA/2002/2/Add.3 the EU is performing might result not only in comments on the CRF tables, but also in additional views on other elements of the reporting guidelines.

# UNFCCC GUIDELINES FOR THE TECHNICAL REVIEW OF GREENHOUSE GAS INVENTORIES FROM ANNEX I PARTIES (FCCC/SBSTA/2002/2/ADD.1)

#### **General comments**

The relevance of the use of the key source analyses for review (and for other purposes as well) relies on that a "reasonable" inventory has been provided and that the categorisation of the sources for the analyses is made properly.

#### **Specific comments**

#### Paragraph 11(c)

In our view, the use of "external" is confusing in this sentence. We propose to delete this word.

#### Paragraph 14(a)(iii)

For the same reason given in our previous comment, "data from external authoritative sources" should be replaced by "data from relevant authoritative sources".

#### Paragraph 16(b)

According to paragraph 16(b) six selected experts will assess the preliminary synthesis and assessment report, which is prepared by the Secretariat. The text is silent regarding who makes the selection and what the procedures are. As we feel that current practice is functioning properly, we propose to modify this subparagraph as follows:

"Upon its completion, the preliminary synthesis and assessment report will be considered by six experts, who will assess the findings included in the report and will identify, as appropriate, additional findings for individual inventories. The six experts shall be selected by the secretariat from the UNFCCC roster of experts, have recognised competence in general and/or specific sectors of the greenhouse gas inventories and should have participated in an inventory review. The secretariat shall strive for balance among those experts selected from non-Annex I Parties and among those experts selected from Annex I Parties. The Secretariat will prepare..."

# UNFCCC REPORTING GUIDELINES ON ANNUAL INVENTORIES FROM ANNEX I PARTIES (FCCC/SBSTA/2002/2/ADD.2)

#### General comments

The EU and its Member States, and Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia, Slovenia welcome the proposal for the general structure for the NIR.

We believe that the NIR should bring all the necessary information complementary to the CRF, but that it should be short and clear, avoiding any unnecessary duplication. It should focus on explaining how emissions of key source categories are estimated.

In our view, the whole text should be looked through on its logic in the use of should/shall, which especially accounts for the introduction of IPCC good practice guidance. In this regard, specific comments are provided below.

Finally, we would like to point out that reporting of emissions and removals of greenhouse gases for which 100-year global warming potentials have not yet been adopted by the COP, or that are not part of the IPCC guidelines, is encouraged in the reporting guidelines. However, we feel that the CRF is not designed to fully account for this.

### **Specific comments**

### Paragraph 6, heading

We propose to replace the present heading, "C. Scope", by "C. Context", as the latter is more appropriate with regard to the content of paragraph 6.

#### Paragraph 8

In order to be consistent with provisions in other relevant decisions, IPCC good practice guidance should be introduced here with "shall". We therefore propose to amend the second sentence of this paragraph as follows:

"In preparing national inventories of these gases Parties shall also use the IPCC good practice guidance, agreed..."

#### Paragraph 9

The second sentence of this paragraph is more condensed than in the current version of the guidelines, but the previous wording seems clearer. We propose to replace the second sentence of this paragraph by the following wording, which introduces IPCC good practice guidance and is similar to the one in the current guidelines:

"In accordance with the IPCC guidelines, Parties may also use national methodologies which they consider better able to reflect their national situation, provided that these methodologies are compatible with the IPCC guidelines and IPCC Good Practice Guidance and are well documented and scientifically based."

#### Paragraph 11

The IPCC guidelines do not provide default emission factors in all cases. In addition, the reference to revised default data is considered better at this point. For these reasons, we deem appropriate to substitute the first sentence for the following two:

"For many source/gas combinations, the IPCC Guidelines offer a default methodology that includes default emission factors and, in some cases, default activity data. Furthermore, the default emission factors and default activity data for some sources and gases have been revised by the IPCC good practice guidance."

We also believe that the beginning of the second sentence should be modified to:

"As these default data and factors may not always be..."

#### Paragraph 13

We consider that the wording of this paragraph can be improved by introducing the following amendments:

"Parties should estimate, in quantitative terms, the uncertainties in emissions from each IPCC source category and for the totals by using at least the tier 1 method, as provided in the IPCC good practice guidance. Parties may also use the tier 2 method in the good practice guidance when the uncertainty data necessary to apply this method are available."

## Paragraphs 14 and 15

In our view, paragraphs 14 and 15 address a very important element of the reporting guidelines; however, they do not adequately reflect the issues covered by chapter 7 of IPCC good practice guidance. Regarding the second sentence of paragraph 14, we find too restrictive the reference to accuracy and completeness, as we consider that recalculations must take account also, and as appropriate, of principles different to accuracy and completeness. As for the third sentence of this paragraph, the changes mentioned need not necessarily result in recalculations for the base year. For all these reasons, we propose to replace paragraph 14 by:

"The inventories of an entire time-series should, as far as possible, be estimated using the same methodologies and the underlying activity data and emission factors should be obtained and used in a consistent manner. Recalculations of previously submitted inventories may be required to ensure this consistency. Parties should therefore evaluate the need for recalculations relative to the reasons given by IPCC good practice guidance while recognising that changes or refinements to methods may not be applicable in all years. Where recalculations for one or more years are justified, they should be performed in accordance with IPCC good practice guidance and the general principles set down in these guidelines."

With regard to paragraph 15, it is advisable to make clear that the methods recommended here are quite different to the general methods covered by paragraphs 8 to 11 of the guidelines. We propose the following wording, which also is more in line with section 7.3.2 of IPCC good practice guidance:

"In some cases it may not be possible to use the same methods and consistent data sets for all years. In such cases, emissions or removals may need to be recalculated using alternative methods, not generally covered by paragraphs 8 through 11. In these instances, Parties should use one of techniques provided by the IPCC good practice guidance (overlap, surrogate, interpolation, and extrapolation) or their own customised approach to determine the missing values. Parties should demonstrate that the time series is consistent, wherever such techniques are used."

#### Paragraph 16

We propose to replace paragraph 16 by the following wording, which is more consistent with similar provisions in other guidelines:

"As part of inventory preparation,

- (a) Parties shall implement general inventory QC procedures (Tier 1) in accordance with its QA/QC plan following the IPCC good practice guidance;
- (b) Parties should, in addition, apply source category specific QC procedures (Tier 2) for key source categories and for those individual source categories in which significant methodological changes and/or data revisions have occurred in accordance with IPCC good practice guidance;

(c) Parties should implement QA procedures by providing for a basic review of their inventories in accordance with IPCC good practice guidance."

#### Paragraph 18

Delete the last part of the first sentence "except in cases where it may be technically impossible to separate information on sources and sinks in the areas of land-use change and forestry". The IPCC is elaborating good practice guidance on LULUCF. We believe that, with the assistance of this further methodological guidance, all Annex I Parties should be able to at least separate emissions from removals in the LUCF category, so that the restricting phrase in this paragraph is no longer needed.

The Secretariat may provide additional information to Parties at the next SBSTA session if 2002 inventories submissions from Annex I Parties show that some Parties are not able to separate information on sources and sinks in LUCF category.

## Paragraph 21

For clarification insert "additional" before "greenhouse gases" in the first line.

#### Paragraph 24

We propose to delete "methodological or data" in the first line. In addition, as completeness also refers to geographical coverage, we suggest inserting after the second sentence:

"Similarly, Parties should indicate the parts of their geographical area, if any, not covered by their inventory and explain the reasons for their exclusion."

#### Paragraph 24(b)

We suggest changing "...why emissions could not be estimated;" by "...why emissions have not been estimated;"

#### Paragraph 25

We propose to replace "estimate" by "report" at the beginning of the sentence.

#### Paragraph 26

Current wording could be made clearer by replacing the first and second sentences by:

"Parties should estimate and report the individual and cumulative percentage contributions of emissions from key source categories to their national total, with respect to both emission level and emission trend. The emissions should be expressed in terms of  $CO_2$  equivalents using the methods provided in the IPCC good practice guidance."

#### Paragraph 28

For clarification insert "uncertainties of" after "related to" in the last sentence.

#### Paragraph 30

We propose to delete the second sentence of this paragraph, as it is already covered by paragraph 14. In addition, the wording would be improved by merging the first and third sentences. We suggest replacing the first three sentences of this paragraph by:

"Recalculations should be reported in the NIR, with explanatory information including justification for recalculations, and in the relevant CRF tables."

In addition, the text should be made clearer by inserting "not previously covered" after sinks in the 3<sup>rd</sup> last line.

#### Paragraph 32

For consistency with our proposal for paragraph 16 on the inventory QA/QC plan, the current paragraph 32 should be replaced by:

"Parties shall report on QA/QC procedures already implemented in their inventories under paragraph 16 or to be implemented in the future."

# Paragraph 38 (a)

To ensure consistency with paragraph 42, in which it is stated that the CRF is an integral part of the NIR, and that the CRF tables shall be submitted annually to the COP, we consider necessary to split 38(a) from the rest of bullet points. A new paragraph 37bis would then be introduced:

"The NIR shall include annual inventory information, submitted in accordance with paragraphs 35 above and 42 below."

Accordingly, paragraph 38(a) would be deleted from the list.

#### Paragraph 38 (c)

The last sentence is difficult to implement. It is unclear how departure from IPCC good practice guidance is defined for emission factors (EF) and activity data (AD). Especially for AD, IPCC good practice guidance recommends to use national data that produce most accurate results at the national level. Data collection systems differ in different countries, therefore activity data sources may differ as well. It is unclear what type of departures from IPCC activity data should be reported. IPCC good practice guidance does not provide ranges for many emissions factors, but single numbers (especially in the energy chapter). This sentence implies that Parties will always have to justify the use of emission factors because for some tier methods it is likely that national emission factors will always depart from defaults. The last sentence should be deleted as the necessary information is already provided due to the first sentence of the paragraph.

#### Paragraph 38 (g)

For consistency with the chapeau, "Parties are encouraged to provide" should be deleted.

#### Paragraph 38 (j)

For consistency with the chapeau, "The NIR should include" should be deleted.

#### Paragraph 38 (k)

According to this subparagraph, information on changes from previous years should be included in the NIR (methodology, sources of information, response to review). However, it is unclear to us where this information fits within the proposed structure of the NIR (Annex I) when such changes do not imply recalculations.

#### Paragraph 41

Modify to plural in last sentence ("include specific cross-references to the corresponding sections"), as there will be many cross-references.

### Paragraph 42

We propose to replace the ending of the second sentence by the following, which we consider more appropriate:

"...in accordance with decision 11/CP.4 and other relevant decisions of the COP."

#### Paragraph 43

This paragraph should be moved to the Annex (page 17) of FCCC/SBSTA/2002/2/Add.3 as paragraph 1bis.

#### Paragraph 44

In our view, this paragraph fits better in document FCCC/SBSTA/2002/2/Add.3, under heading "D. Approach" on page 3. In addition, the second sentence could be deleted, as it is not needed now.

#### Paragraph 45

The paragraph should be deleted. It contains no reporting requirement for Parties. It is not necessary to highlight the consistency with IPCC sectoral tables. The "minimum" information in the second sentence could be misleading. Paragraph 41 already explains that more detailed explanations should be provided in the NIR and not the CRF. The paragraph is also duplicating parts of the following paragraph.

#### Paragraph 46(a)

This point would read better as:

"Summary, sectoral and trend tables for all greenhouse gas emissions and removals;"

#### Paragraph 46(b)

To be consistent with "Table 1.A (c) - Comparison of  $CO_2$  emissions from fuel combustion", in which the current heading "National approach" has been changed to "Sectoral approach", we propose to modify the wording in subparagraph (i) as follows:

"...and a table for comparing estimates under this Reference Approach with estimates under the Sectoral Approach, as well as..."

The second sentence of footnote 12 could be modified to:

"These are top-down ratios between a Party's emission estimates and activity data at the level of aggregation given by the tables."

#### Paragraph 50

The paragraph should be moved to the Annex of FCCC/SBSTA/2002/2/Add.3, as its content fits better there.

# Comments to Annex I of the UNFCCC reporting guidelines: proposed structure for the National Inventory Report

<u>Chapter 1: INTRODUCTION - Brief general description of methodologies used (including information on activity data and emission factors):</u>

It is unclear what type of information should be provided in the introductory part, as detailed information will be provided in chapter 3 and summarised information is already required in the CRF tables. We therefore propose to delete this bullet point.

<u>Chapter 1: INTRODUCTION - Information on the QA/QC plan including verification and treatment of confidentiality issues where relevant</u>

The current wording of this bullet point is misleading, as it could be interpreted as addressing linkages between three distinct issues. We propose to replace it by:

"Information on the QA/QC plan, verification and treatment of confidentiality issues where relevant"

#### Chapter 2: TRENDS IN GREENHOUSE GAS EMISSIONS

It should be clarified that there is no need to duplicate all trend tables provided in the CRF and that the focus should be on trend analysis and explanation. We propose to replace current text by:

- "Analysis and explanation of emissions trends by sources"
- "Analysis and explanation of emissions trends by gas"
- "Analysis and explanation of emissions trends for aggregated GHG emissions"
- "Analysis and explanation of emissions trends for indirect GHG and SO<sub>2</sub>"

#### Chapter 4: RECALCULATIONS

Replace in the first bullet "Implication" by "Implications".

#### **Chapter 5: SECTOR ANALYSIS**

It should be inserted "where relevant "after "should be included and expanded in the NIR" in the last paragraph of this chapter 5.

# Appendix: ADDITIONAL SECTORAL REPORTING REQUIREMENTS TO BE INCLUDED IN THE CORRESPONDING SECTION OF THE NIR

The Appendix needs some technical redrafting:

- to avoid duplication of information with CRF (e.g. livestock population data by animal type is already provided in CRF);
- to clarify that part of the information requested may not be part of the methodology chosen by a specific country;
- to use consistent language with CRF tables and IPCC guidelines (e.g. fugitive emissions from solid fuels instead of fugitive fuel emissions coal mining);
- to provide more transparency with respect to different energy production activities.

To this end, we propose the following specific modifications:

### Energy – Fuel combustion activities

More specific information than that required in CRF tables 1.A(a) could be provided on self production of electricity and urban heating (in manufacturing industries, commercial and residential).

# Energy - Fugitive emissions from solid fuels

More specific information than that required in CRF tables 1.B.1 could be provided, e.g. data on number of active underground mines or number of mines with drainage (recovery) systems.

### Energy - Fugitive emission from oil, natural gas and other sources

More specific information than that required in CRF tables 1.B.2 could be provided in the NIR, e.g. pipelines length, number of oil wells, gas throughput, and oil throughput. (The footnote in the proposed text would remain).

# Agriculture - Cross cutting

Parties should provide livestock population data in CRF table 4.A. Any further disaggregation of these data, e.g. for regions, could be provided in the NIR, where relevant. Consistent livestock population data should be used in the relevant CRF tables to estimate  $CH_4$  emissions from enteric fermentation,  $CH_4$  and  $N_2O$  emissions from manure management,  $N_2O$  emissions from soils,  $N_2O$  emissions associated with manure production and use.

#### Agriculture - Enteric fermentation

The first bullet point should be deleted, as it duplicates what has already been stated under "cross cutting". Regarding the second bullet, it should be further specified which parameters are requested.

#### Agriculture - Manure management

The second bullet point, which is already covered by the cross-cutting part, should be deleted. Regarding the third bullet, it should be further specified which parameters are requested.

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