

**Recommendations on plans or  
programmes to be drafted under the  
Air Quality Framework Directive  
96/62/EC**

**Draft version  
subject to changes in the course of the adoption of the  
Decision**

**Working Group on Implementation  
established by the  
European Commission  
DG Environment  
Unit C1 “Air, Noise and Transport”**

**July 2003**

## **Summary**

*This document addresses the plans and programmes that have to be drafted under the Air Quality Framework Directive (96/62/EC, Article 8) when certain air quality thresholds have been exceeded. It has been drafted by the Working Group on Implementation, which was established under the Clean Air For Europe (CAFE) Steering Group of the European Commission.*

*The document gives recommendations on the one hand regarding the plans and programmes to be developed within Member States and on the other hand regarding a summary of these plans and programmes to be sent to the Commission. Only the text of the directive or other Community legislation is authentic in law. Accordingly, the text of the directive or other Community legislation is applicable where there are differences between the provisions there and the contents of the recommendations given here.*

*The recommendations on the plans and programmes are of more global character, as these documents should be adapted to the local context and optimally support the local decision making process.*

*Detailed structures are recommended for the summary report to the Commission. The Working Group recommends using a standard reporting sheet, essentially a table, to be filled in by the authorities responsible for drafting the plans or programmes. Each column of the table represents an "exceedance situation", which is an area where exceedance of the limit value plus the margin of tolerance has been found; each row contains an element of the description of the exceedance situation and the foreseen measures for improving the air quality. The recommendations include guidance on how to fill in the summary report.*

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# 1. Introduction

These recommendations have been drafted by the Working Group on Implementation, established under the Steering Group of the Clean Air For Europe (CAFE) programme. They address the obligation under the Council Directive on ambient air quality assessment and management 96/62/EC (the Air Quality Framework Directive, abbreviated here as FWD) to develop plans and programmes and send these to the Commission:

*Article 8.3: In the zones and agglomerations referred to in paragraph 1<sup>1</sup>, Member States shall take measures to ensure that a plan or programme is prepared or implemented for attaining the limit value within the specific time limit.*

*The said plan or programme, which must be made available to the public, shall incorporate at least the information listed in Annex IV.*

*Article 8.4: In the zones and agglomerations referred to in paragraph 1, where the level of more than one pollutant is higher than the limit values, Member States shall provide an integrated plan covering all the pollutants concerned.*

*Article 11.1(iii): Member States shall [...] send to the Commission the plans or programmes referred to in Article 8 (3) no later than two years after the end of the year during which the levels were observed [...].*

If exceedances of the limit value plus the margin of tolerance are found in a certain year, Member States have to report the exceedances to the Commission before 1 October of the following year (96/62/EC, Article 11.1a(i,ii)). Commission Decision 2001/839/EC lays down a questionnaire for this report under the first Daughter Directive 1999/30/EC. This is the first stage of informing the Commission on the air quality situation.

For all these exceedances – except in certain specified situations – plans and programmes have to be drawn up to attain the limit value by the date specified in the relevant Daughter Directive and these have to be sent to the Commission no later than two years after the end of the year during which the exceedances were observed. The requirement to develop or implement PPs applies only to the period before the date on which the limit value has to be attained [*being checked with Legal Service: every year, including 2004 / 2009?*]. The recommendations here address the plans and programmes related to the first two Daughter Directives 1999/30/EC and 2000/69/EC.

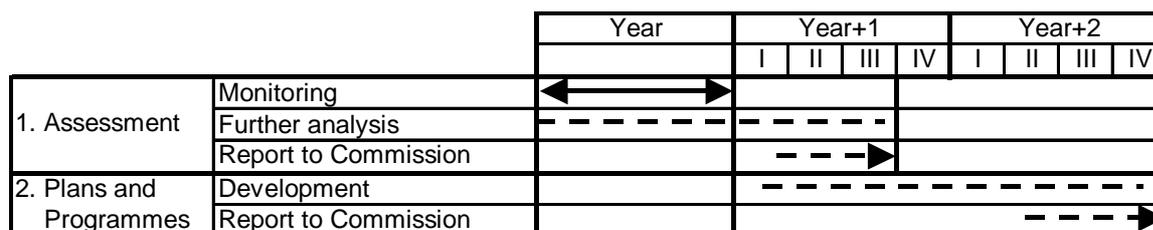


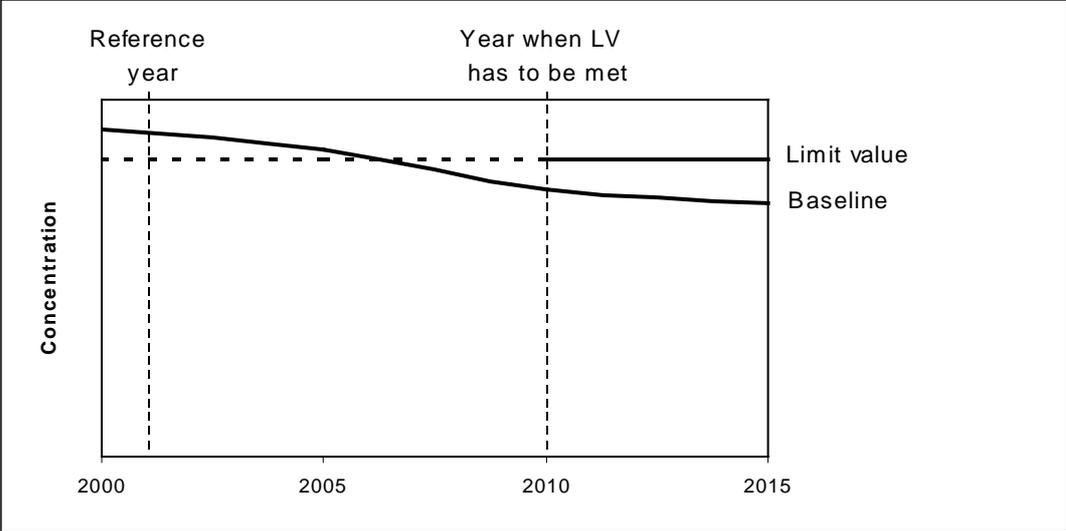
Figure 1 summarises the timetable.

**Figure 1** Timetable for reporting on exceedances in a particular year. The assessment must be done every year, the plans and programmes must be updated when needed (see Chapter 3).

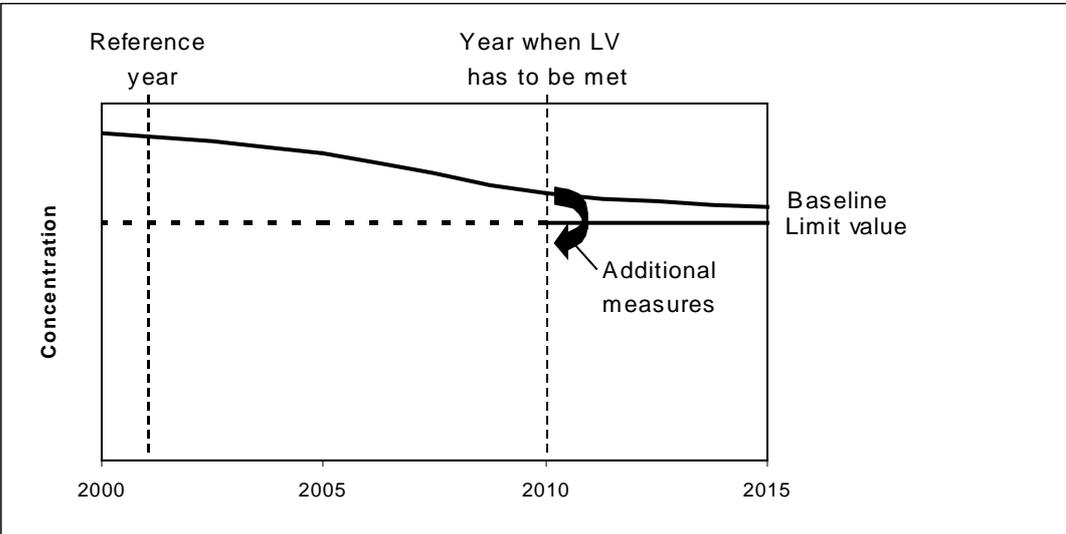
Exceedance of the limit value plus the margin of tolerance triggers the obligation to develop plans and programmes because such an exceedance is an indication that, without additional measures, the levels will not be below the limit value in the first year in which the limit value has to be met. Before deciding on additional measures, the responsible authorities need to analyse the situation in more detail, in particular the development of the ‘baseline’ concentration, *i.e.* the ‘Business as usual’ trend expected when no additional measures are taken. If the baseline concentration is predicted not to

<sup>1</sup> Paragraph 1 refers to zones and agglomerations where the levels are higher than the limit value plus the margin of tolerance or, if no margin of tolerance has been set, higher than the limit value.

exceed the limit value when it has to be met, additional measures are not needed (see Figure 2). If, however, the baseline concentration does not decrease fast enough, additional measures are needed (see Figure 3). These additional measures are described in the plans and programmes required by Article 8.3 of the Framework Directive. The current document is about these plans and programmes. It should be noted that the short term action plans mentioned in Article 7.3 of the Framework Directive are not dealt with here.



**Figure 2** Illustration of a situation in which the baseline concentration will be below the limit value (LV) when it has to be met (2010 in the example). Additional measures are not needed.



**Figure 3** Illustration of a situation in which the baseline concentration does not decrease enough to attain the limit value (LV) when it has to be met (2010 in the example). Additional measures are needed to attain the limit value.

The plans and programmes can be drafted at the local, regional or national level. To be effective in the decision making process, they need to be detailed, adapted to local conditions and addressing the local decision makers in their own language.

The Commission needs to have information on the plans and programmes in order to confirm that the necessary steps are being taken to ensure compliance with the limit values established under the Daughter Directives. In addition, reports at the EU level should assist other Member States and Accession Candidate Countries in learning from experience elsewhere. Exchanging information on the exceedances and on the nature and effectiveness of measures will be very important for effective implementation of the air quality directives. It will also provide insight needed for further development of air quality legislation by CAFE and possible other concerted action between Member States and the Commission.

For the Commission and Member States (other than the one concerned) to make use of the plans and programmes, the information would need to be well structured and comparable, while, on the other hand, the form of the plans and programmes should be flexible in order to allow full adaptation to the local situation. In order to serve these two disparate purposes best, the Working Group recommends making a distinction between the local, regional or national plans and programmes on the one hand and the information to be sent to the Commission on the other hand:

1. *Plans and programmes for local, regional or national use*

Regarding the plans and programmes for local, regional or national use, Annex IV of the FWD gives a list of items that should at least be included. Where deemed useful, this recommendation gives guidance on these items. In addition, the Working Group also gives several general recommendations, but the Working Group felt that authorities responsible for developing a plan or programme (PP) must have freedom in choosing the form that suits the internal decision process best.

2. *Summary information on PPs to be sent to the Commission*

Regarding the information to be sent to the Commission, the Working Group felt that it would serve the use at the Community level best if it would be a highly structured summary. Not only would this make aggregation and reviewing much easier, it would also make the summaries more accessible across language borders. This recommendation gives proposals for the summary to be reported to the Commission. In the view of the Working Group the burden of filling in the proposed reporting sheet should be small compared to the effort needed for developing and implementing the PPs.

The Working Group recommends formally adopting a standard reporting sheet. This would render it unnecessary to forward all local PPs to the Commission. Instead, the reporting sheet would give references to the PP and the PP would have to be kept available to the Commission on request. *[Next sentence to be adapted later to the situation at the time of finalisation:]* We understand that the Commission intends to adopt this recommendation (if it is endorsed by the CAFE Steering Group) and would then make this standard reporting sheet mandatory by adopting it under the procedure specified in Article 12 of the FWD.

## **2. Structure of this recommendation**

Following the outline described in Chapter 1, a clear distinction will be made between recommendations on the local, regional or national PPs and proposals for the summary report to the Commission.

In Chapter 3 some general recommendations on PPs are given. Then, in Chapter 4, general comments on the structure of the summary report for the Commission are given. After that, Chapter 5 follows the structure and content of the proposed summary report to the Commission. The content of that report takes into account Annex IV of the FWD, which gives a minimum list of items to be included in the PPs. These items have been rearranged in seven groups, each of which is structured as follows:

- general recommendations, addressing PPs as well as the summary report for the Commission;
- a detailed proposal for the summary report to the Commission, namely a draft text to be used in a Decision on reporting on PPs followed by guidance on how to fill in the summary report.

### 3. General recommendations on local, regional and national plans and programmes

#### *The Margin of Tolerance*

The margin of tolerance (MOT) as introduced in the FWD reflects the expected overall downward trend in air pollution levels in the years before the limit value has to be met. It prevents air quality reporting procedures being triggered by exceedances of the limit value that may be expected to disappear without additional measures before the year in which the limit value has to be met. In the first two Daughter Directives all limit values (except the daily limit value for SO<sub>2</sub>) that do not have to be immediately met, have a MOT.

The downward trend reflected in the MOT may not be realistic everywhere. Even where the limit value plus margin of tolerance (LV+MOT) has not been exceeded, there may still be reasons to believe that the trend in the area concerned differs from the decrease represented by the MOT and that there may be problems in meeting the limit value. In these cases, the Working Group considers with regard to FWD Article 7.1 that appropriate measures should be taken to ensure that limit values will be met by the due date, even though the FWD does not establish a legal requirement to draft a PP.

The LV+MOT is intended only as a threshold for triggering the requirement to draft PPs. The Working Group therefore considers that in the analysis of current and future exceedances, the concentrations should be compared with the level of the limit value, not to the level of the LV+MOT. The LV+MOT is not intended as a temporary limit value and it would be confusing to use a changing threshold in the analysis of the concentration changes over time.

#### *Other aspects*

The requirement to develop or implement PPs applies only to the period before the date on which the limit value has to be attained [*being checked with Legal Service: every year, including 2004 / 2009?*]. As the limit values for ecosystems and vegetation had already to be met in 2001, the PPs only need to address exceedances related to the limit values for health protection.

FWD Article 11.1(iii), which specifies that Member States should send the PPs no later than two years after the end of the year during which the levels were observed, obviously implies that the PPs should be finalised within these two years. It does, however, not imply that the measures described in the PPs have already to be implemented in that period; but implementation should be fast enough to accomplish the air pollution reduction that is needed in the year when the LV has to be met.

All exceedances of the LV+MOT have to be reported in the annual questionnaire (2001/839/EC for the first Daughter Directive) and for all exceedances of the LV+MOT PPs have to be drafted, with the exception of those zones or agglomerations set out in 1999/30/EC, Articles 3.4, 5.4 and 5.5. Apart from these exceptions, there should be a full correspondence between the two sets of exceedances. For measured exceedances, this means that the two reports should cover the same set of stations. For modelled exceedances, the correspondence is less traceable, since in the annual questionnaire 2001/839/EC such exceedances are only reported for a zone as a whole.

The FWD gives Member States the responsibility to ensure that PPs are developed or implemented. It is up to each Member State to decide to which internal administrative levels this task is given. Usually several administrative levels will have to cooperate in developing and implementing measures.

A PP can be written as a part of a larger programme, but it should be identifiable within such a programme and it should explicitly refer to the FWD or the transposition of it in the national or regional legislation.

A single PP may include reports on several or many separate exceedance situations, *e.g.* it could include all exceedance situations within the territory of the responsible authority. However, each

exceedance situation needs to be described individually within such a PP. The PP should also reflect FWD Article 8.4, which requires that in zones and agglomerations, where the level of more than one pollutant is higher than the limit values, Member States should provide an integrated plan covering all the pollutants concerned.

As the primary purpose of the PP is to develop and implement effective measures, the PPs should be detailed and clear enough to be understandable for the target readers. These are in the first place the stakeholders and decision makers; also the requirement to make the PP available to the public (FWD Article 8.3) should be taken into account in the drafting.

The Commission is required to check the implementation of the PPs (FWD Article 8.5). To this end, Member States have to inform the Commission every three years of the progress (FWD Article 11.1a(iv)). In the view of the Working Group, this check should not only be based on examination of the air quality trends, but it should also be checked whether the planned changes in the causes of high pollution levels are indeed taking place. Therefore, the Working Group recommends describing a timetable for the implementation with quantifiable goals for the changes in polluting activities that are affected by the measures.

The report to the Commission should be a public document and readily available to interested readers. The Working Group recommends attaching the report to the Commission as an Annex to the PP.

## 4. Structure of the summary report for the Commission

In order to create a well-structured summary report for the Commission that is accessible across language borders<sup>2</sup>, the Working Group recommends defining the report as a table.

An authority drafting the report to the Commission may have to address one, several or many situations for which exceedance of one or more limit values plus the margins of tolerance has been found. The Working Group proposes defining the report to the Commission as a set of tables in which *exceedance situations* are described. Each exceedance situation is defined by a particular exceedance area and the LV+MOT that has been exceeded in that area. An exceedance area is defined as a single location or set of locations for which exceedance of a LV+MOT has been found. This can be the location of a monitoring station and its immediate surroundings, but it can also be an area for which model calculations have shown exceedance. The descriptive elements of the report about an exceedance situation are arranged in a column; each cell of this column contains such an element. If several LVs+MOTs have been exceeded in the same exceedance area (*e.g.* exceedance of the annual mean LV+MOT for NO<sub>2</sub> and the daily LV+MOT for PM<sub>10</sub> at the same monitoring station), an exceedance situation has to be defined for each LV+MOT exceeded.

The rationale for recommending exceedance situations as the basic building blocks for the report is that a PP will often need to differentiate between exceedance areas and between limit values that have been exceeded<sup>3,4</sup>. If two limit values of the same pollutant are exceeded, the Working Group prefers for reasons of uniformity and simplicity distinguishing these in the report to the Commission also as separate exceedance situations, although it is usually better to address these together in the PP in an integrated way. It is noted that, in contrast to the descriptions in the annual questionnaire 2001/839/EC, the zone in which the exceedance occurs is not regarded as a prominent characteristic of the exceedance.

As on the one hand, a single PP may address a single exceedance situation, while, on the other hand, a single PP may cover many exceedance situations, possibly encompassing a large territory comprising several zones or agglomerations, it is important to have possibilities for combined or even integrated reporting on exceedance situations. The proposed structure allows avoiding duplication by providing maximum flexibility in combining similar (elements of) reports:

1. *Catalogue of measures*

A separate table for describing the measures is used, which forms a common catalogue of measures for all exceedance situations described in the report. This avoids the risk of having to repeat measures in a report on a large number of exceedance situations. For the individual exceedance situations, only a reference to the pertinent measure(s) needs to be given and some additional information on the measure(s) that is different per exceedance situation.

2. *Cross referencing*

Identical elements belonging to different exceedance situations do not have to be repeated, but can simply be cross-referenced. If *e.g.* elements to be reported for exceedances of two limit values of a certain pollutant are the same, these elements need to be described for one limit value only, and for the other limit value references to already described exceedance situations suffice (“see ...”). When measures for different exceedance locations in a zone or even a Member State are the same, they need to be described only once. This does not reduce the number of columns, but the number of different entries is reduced.

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<sup>2</sup> It would be useful in this respect if the report to the Commission would be available in English.

<sup>3</sup> PPs will only address exceedances of limit values for health protection (see Chapter 3).

<sup>4</sup> FWD Article 8.4 requires Member States to provide an integrated plan covering all pollutants for which the levels are in the same zone higher than the limit value. In the summary report to the Commission specific information about the integration is not asked.

3. *Merging separate locations into one exceedance area*

It is possible to treat several separate locations as one exceedance area (*e.g.* similar streets in a city for which the same measure will be taken). This is illustrated in Figure 4. Such merging is only possible if these locations are sufficiently similar to be described in a single exceedance situation. This approach reduces the number of columns. However, authorities that have to report only a limited number of exceedances may find it easier to disregard this possibility.

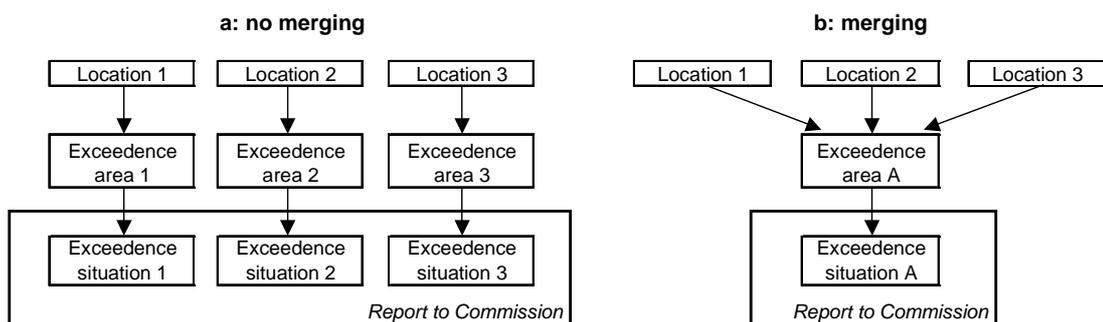
In order to make sure that essential information is not lost, there are limitations to the extent to which exceedance locations can be merged into a single exceedance area. Whenever merging of exceedance locations might lead to confusion, one should decide not to merge.

Merging means, that only one column is available for describing all merged exceedance locations. Consequently, for each descriptive element only one cell is available. To avoid confusion, the elements to be merged should be so comparable for the most important aspects, that a single description can be given that covers all merged exceedance locations. This applies to the following aspects:

- a. the limit value for which exceedance of the LV+MOT was found. So exceedances of LVs+MOTs for different pollutants or with different averaging times should be dealt with separately;
- b. the type of station or, in case of modelling, the type of area for which exceedance was found;
- c. the cause of exceedance;
- d. the projected emission trends;
- e. the measures.

If exceedance locations are so comparable in all the above respects that they can be described with a single description, merging is allowed. This is further specified in the descriptions of the forms in Chapter 5, where each descriptive element that has to be the same for all locations to be merged has been marked by code “S”.

Elements not marked by “S” are allowed to differ, *e.g.* the number of exceedances of a certain daily LV+MOT can be different at the exceedance locations to be merged. When such exceedance locations are merged, it needs to be specified how such different elements are described in a single entry, *e.g.* by giving the range in case of the numbers of exceedances. Section 5.1 describes this in more detail.



**Figure 4** Individual exceedance locations (*e.g.* at individual stations) are normally regarded as separate exceedance areas and reported as individual exceedances situations (a); if sufficiently similar, exceedance locations may be merged into one composite exceedance area and reported as a single exceedance situation (b).

## 5. Content of the plans and programmes and the reports to the Commission

### 5.1 Introduction

#### 5.1.1 General

The recommendations in this chapter have been arranged according to the proposed structure of the report to the Commission. For this report, the items required by FWD Annex IV have been rearranged to be more consistent with the anticipated structure of PPs. Annex 1 to this Working Group report lists the items that FWD Annex IV requires to report at least in the plans and programmes and specifies where the various items are addressed in this recommendation. It should be noted that the rearrangement in the report to the Commission is not intended as a preferred outline for PPs; the structure of PPs should be optimal for local use.

All sections 5.x of this chapter are structured in the same way. They start with a sub-section 5.x.1 giving general recommendations that apply to PPs as well as to the report to the Commission. Sub-sections 5.x.2 describe the recommended report to the Commission. They are further subdivided into two sub-sections, of which the first 5.x.2.1 contains a detailed specification of the report, which is intended as a draft proposal for a Commission Decision on reporting to the Commission. This is followed by a sub-section 5.x.2.2, in which guidance on how to fill in the forms is given. The text block below outlines this structure. *[Temporary remark: it is intended to replace in the final version of this WG report the current proposal in 5.x.2.1 by the final text of the Decision. The entire WG report can then serve as a guideline to the Decision.]*

#### 5. Content of the plans and programmes and the reports to the Commission

(...)

5.x (...)

5.x.1 General recommendations on PPs and the report to the Commission

5.x.2 Report to the Commission

5.x.2.1 Detailed draft proposal for Commission's Decision

5.x.2.2 Guidance on how to write the report to the Commission

(...)

➤ Please note:

Below, all sections proposed as text for the Commission's Decision (Sections 5.x.2.1), will be written in sans serif font, similar to this paragraph.

#### 5.1.2 Report to the Commission

##### 5.1.2.1 Recommended introductory specification of the report to the Commission

The report to the Commission shall be given in the seven forms specified below. Form 1 describes general information on the plan or programme concerned. In Forms 2 to 6, each column describes an exceedance situation addressed by the plan or programme. An exceedance situation is defined by an exceedance area and the limit value (LV) plus the margin of tolerance (LV+MOT) that has been exceeded in that area. An exceedance area is a location or a collection of locations where the levels have been found to exceed a LV+MOT in the reference year. The reference year is the year in which the exceedance occurred that, following 96/62/EC Article 8, gave rise to the obligation to prepare or implement the PP. Each row in Forms 2 to 6 contains a descriptive element for the exceedance situation.

An exceedance area can be a composite of several locations where exceedance of the LV+MOT has been found in the reference year, provided that certain descriptive elements of these locations are comparable or identical. These descriptive elements are indicated in Forms 2 to 6 by a merging code that is specified in Box 1. For the descriptive elements that

are allowed to be different for the locations, other codes are given in Box 1, which specify how the different elements shall be aggregated.

Summary descriptions of individual measures are given in Form 7.

**Box 1** Specification of how locations where the levels have been found to exceed a LV+MOT can be merged into a single exceedance situation: merging codes, which are given for each entry in the forms below.

Merging code	Meaning of merging code
N.A.	Not applicable
S	This entry should be a <i>single</i> description (not a <i>list</i> , <i>range</i> or <i>total</i> ), that applies to all locations that have been merged.
L	If merged, the entry shall be a <i>list</i> <sup>1</sup> of all entries of the locations.
LS	If merged, the entry shall be a <i>list</i> <sup>1</sup> of all entries of the locations or a <i>single</i> description
R	If merged, the entry shall be the <i>range</i> of the entries of the different locations: minimum value – maximum value
T	If merged, the entry shall be the summed <i>total</i> of all entries of the locations.

<sup>1</sup> All lists shall have the same sequence of locations. Entries for separate locations shall be separated by a double slash “//”.

*[Temporary remark: Similar to the format of the annual questionnaire 2001/839/EC, a distinction can be made between items that are mandatory and items that are voluntary to report. Recommendations on this are not given here; this is left to the Art 12 Committee.]*

#### 5.1.2.2 Guidance to the introductory specification of the report to the Commission

For readability, the information has been divided into seven forms. The Working Group recommends to the Commission to develop an electronic reporting facility, similar to the spreadsheet used for the annual report under Commission Decision 2001/839/EC.

Annex 2 gives an example of how the report to the Commission should be filled in.

## 5.2 General information on the plan or programme – Form 1

### 5.2.1 General

Plans and Programmes should be developed to ensure that concentrations will not exceed the limit values when they have to be met. Which local, regional and/or national authorities are responsible for drafting and implementing plans and programmes depends on the administrative system within a Member State. Responsibilities for developing, implementing and reporting the plans and programmes may rest with different authorities. In order to ensure the success of any measure, these responsibilities have to be well defined. It is also important that the responsibilities for monitoring and evaluating the successful implementation of the PP over the years are clearly indicated.

FWD Annex IV specifies that a list of the publications, documents, work, etc used to supplement information should be included in the PP.

### 5.2.2 Report to the Commission

#### 5.2.2.1 Recommended specification of the report to the Commission

### Form 1 General information on the plan or programme

a.	Reference year	N.A.
b.	Member State	N.A.
c.	Reference to the plan or programme	N.A.
d.	List of the code numbers of the exceedance situations described in Forms 2 to 6	N.A.
e.	Name of the authority responsible for drafting the plan or programme addressing the exceedance situation	N.A.
f.	Postal address of the responsible authority	N.A.
g.	Name of the contact person	N.A.
h.	Postal address of the contact person	N.A.
i.	Phone number of the contact person	N.A.
j.	Fax number of the contact person	N.A.
k.	E-mail address of the contact person	N.A.
l.	Comments for clarification if needed	N.A.

#### Notes to Form 1:

1. *Sub b:* The Member State shall be indicated using the following codes: Austria: A; Belgium: B; Denmark: DK; Finland: SF; France: F; Germany: D; Greece: GR; Ireland: IRL; Italy: I; Luxembourg: L; Netherlands: NL; Portugal: P; Spain: E; Sweden: S; Great Britain: GB.
2. *Sub c:* The reference to the plan or programme shall be a complete and detailed reference to the document(s) in which the plan or programme is fully described. In addition, a web address may be given.
3. *Sub g:* The contact person is the person that the Commission shall approach if they require further information on any aspect of this reporting sheet if needed.

#### 5.2.2.2 Guidance to Form 1

- In contrast to the other forms, Form 1 has only one column per plan or programme.
- *Sub e:* When the responsibilities are divided between several authorities, the name and postal address of the authority that has the lead responsibility for drafting the PP should be mentioned in Form 1.
- *Sub g:* The contact person may be a person of a local, regional or national authority, not necessarily the authority responsible for drafting the PP.

### 5.3 Description of the exceedance – Form 2

#### 5.3.1 General

This section addresses information on the exceedance situation and exposure to levels above the limit value. Following FWD Annex IV, a map of the area where exceedance was found could be given in the PP: the area around the monitoring station, including an indication of the area above the limit value, or the area where exceedance was found using model calculation, using *e.g.* iso-concentration contours. In case of large-scale exceedance, the size of the map would be chosen so that the exceedance area is fully covered. In case of hotspot<sup>5</sup> exceedances, a map of the city or region could be helpful to indicate where the exceedance area is; concentration contours are not needed in such a map, as the map would serve to indicate relevant sources and possibly other relevant monitoring stations.

Furthermore, the PP should describe the techniques used for assessing the exceedances: measuring methods and/or modelling techniques used.

When relevant and available, the PP could include information on the presence of population subgroups that are particularly sensitive to air pollution: sensitive groups of population that are more

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<sup>5</sup> Exceedance in a small area, *e.g.* in a busy street or due to a particular industrial source.

than usually present in the exceedance area, such as children at school, patients in a hospital, residents of a home for the elderly, athletes in a sport park.

### 5.3.2 Report to the Commission

#### 5.3.2.1 Recommended specification of the report to the Commission

##### Form 2 Description of the exceedance of the limit value

a.	Code number of the exceedance situation	N.A.
b.	Pollutant	S
c.	Zone code	L
d.	Name of the city(-ies) or municipality(-ies)	L
e.	To be filled in only if the pollutant is SO <sub>2</sub> , NO <sub>2</sub> or PM <sub>10</sub> : limit value for which the LV+MOT was exceeded [h/d/a]	S
f.	Concentration level in the reference year:	
	Concentration in µg/m <sup>3</sup> if applicable, or	R
	Maximum 8-hour mean CO concentration in mg/m <sup>3</sup> if applicable, or	R
	Total number of exceedances expressed in relation to the LV+MOT if applicable	R
g.	To be filled in only if the LV is expressed as number of exceedances of a numerical concentration: total number of exceedances in the reference year expressed in relation to the LV	R
h.	Concentration level in the reference year expressed in relation to the other health related LV of the pollutant concerned, if such a LV exists:	
	Concentration in µg/m <sup>3</sup> if applicable, or	R
	Total number of exceedances expressed in relation to the LV if applicable	R
i.	Concentrations observed in previous years if available and not communicated earlier to the Commission	
	Year and concentration in µg/m <sup>3</sup> if applicable, or	L
	Year and maximum 8-hour mean CO concentration in mg/m <sup>3</sup> if applicable, or	L
	Year and total number of exceedances expressed in relation to the LV+MOT if applicable	L
j.	If the exceedance was found by measurement:	
	Code of the station where the exceedance was observed	L
	Geographical coordinates of the station	L
	Classification of the station	S
k.	If the exceedance was found by model calculation:	
	Indication of the location of the exceedance area	LS
	Classification of the area	S
l.	Estimate of the surface area (km <sup>2</sup> ) where the level was above the LV in the reference year	T
m.	Estimate of the length of road (km) where the level was above the LV in the reference year	T
n.	Estimate of the total population exposed to a level above the LV in the reference year	T
o.	Comments for clarification if needed	N.A.

Notes to Form 2:

1. *Sub a*: Each exceedance situation shall be given a code number that is unique within the Member State.
2. *Sub b*: The pollutant shall be indicated by "SO<sub>2</sub>", "NO<sub>2</sub>", "PM<sub>10</sub>", "Pb" for lead, "C<sub>6</sub>H<sub>6</sub>" for benzene and "CO".
3. *Sub c*: The zone code shall be identical to the one submitted in the annual questionnaire 2001/839/EC of the reference year.
4. *Sub d*: If the exceedance area extends over more than one city or municipality, all cities and municipalities where exceedance was found shall be mentioned, separated by a semicolon.
5. *Sub e*: The limit value for which the LV+MOT was exceeded shall be identified by "h" (based on hourly means), "d" (daily means) or "a" (annual means).
6. *Sub f and h*: If the exceedance has been found by modelling, the highest level in the exceedance area shall be given in this and the following forms.
7. *Sub i*: The information should be given in the form "year: concentration". Entries for several years should be separated by a semicolon. Non-availability of data shall be indicated by "n.a.", earlier communication by "com."
8. *Sub j*: "Code of the station where the exceedance was observed" shall be the code that has been used in the annual questionnaire of the reference year (Commission Decision 2001/839/EC).
9. *Sub j*: For "geographical coordinates of the station" and "classification of the station", the specifications that are already in use for the exchange of data under the Exchange of Information Decision 97/101/EC shall be used.
10. *Sub k*: The codes for "classification of station" shall also be used for "classification of the area". If the exceedance area found by modelling includes more than one class, the class codes shall be given, separated by a semicolon.
11. *Sub l and m*: The "surface area (km<sup>2</sup>) above the LV" indicates the size of the exceedance area concerned. It may be left blank for traffic stations or traffic areas. The "length of road (km) where the level was above the LV" shall only be given for exceedances at traffic stations or, in case of modelling, traffic areas. It indicates the total length of road sections where at one or both sides exceedance occurred.
12. *Sub o*: "Population exposure above the LV" indicates an estimate of the average number of people present during the exceedance of the limit value.

### 5.3.2.2 Guidance to Form 2

- *Sub a*: The authority drafting the report to the Commission is free in choosing the system of coding exceedance situations and the way of arranging exceedance situations from left to right in the form *e.g.* by zone, pollutant or type of exceedance location.
- In Form 2, levels relative to the LV and relative to the LV+MOT are distinguished. Following the remarks in Chapter 3, the exceedance of the LV+MOT that triggered the obligation to develop or implement a plan or programme should be reported (*sub e and f*). The further analysis of the exceedance in this and the following forms, notably when counting the number of exceedances, should be done in relation to the (lower) LV. Also the exposure information in the three last rows should be given in relation to the LV, not the LV+MOT.
- *Sub e*: This information is only needed for pollutants with more than one LV+MOT.
- *Sub f*: The air quality directives specify LVs that are expressed in various different air quality parameters, and consequently exceedances are also expressed in various parameters. To avoid confusion, the forms distinguish levels that have to be expressed as annual concentrations (expressed in µg/m<sup>3</sup>), the maximum 8-hourly CO concentration (expressed in mg/m<sup>3</sup>) and the total numbers of exceedances of the numerical level of a LV. The total number of exceedances given should include the allowed number of exceedances.
- *Sub h*: If there are two health limit values for the pollutant concerned, the level should also be given as expressed in terms of the other LV, also when the other LV has not been exceeded.
- *Sub j and k*: "Classification of station" should be determined following the *Guidance on the Annexes to Decision 97/101/EC on Exchange of Information as revised by Decision 2001/752/EC*<sup>6</sup> and coded as follows:

<sup>6</sup> <http://www.europa.eu.int/comm/environment/air/guidancetoannexes97101ec.pdf>

	Traffic	Industrial	Background
Urban	UT	UI	UB
Suburban	ST	SI	SB
Rural	RT	RI	RB

This classification should also be used for the classification of the area where exceedance was found by model calculation.

- *Sub k:* When the exceedance has been observed by measurement at a fixed station, the location of the exceedance is easily characterised by the location of the station. However, when the exceedance has been calculated by a model, the location of the exceedance area can be difficult to characterise, because the area can be large or composed of several separate sub areas. It is suggested to give either the geographical coordinates of the location of the largest exceedance or a free text indicating where the exceedance area is situated, *e.g.* “at the northwest border of City X”.
- *Sub l, m and n:* At the exceedance location the LV+MOT has been exceeded, but the estimates of surface area, length of road and total population exposed should refer to levels above the LV. As far as possible this estimate should refer to the area associated with the exceedance of the LV+MOT, but a clear borderline cannot always be drawn.
- *Sub m:* In contrast to the global information to be given in the annual questionnaire 2001/839/EC, the “length of road where the level was above the LV” refers to any road, including motorways.
- *Sub n:* Population exposure is approximated here as 'potential' exposure, which only takes outdoor concentrations into account. The population exposure above a limit value can be calculated as the total number of persons living in an area where the levels are above the limit value. In practice, the calculated number of persons will depend on the spatial resolution of the population data and concentration maps. Ideally, a resolution of the order of 10 m would be needed, but in practice, lower resolution might be sufficient. As the main purpose of this parameter is to give an indication of exposure, not necessarily a precise number, estimates may also be given, in particular when exceedances in the zone occur only at a few hot spots.

In the case of detailed calculations in which individual dwellings are distinguished, it is recommended to count the residents of a dwelling as exposed above the limit value if the concentration at least one side is above the limit value.

In special cases, it is suggested to take the presence of non-residents into account, *e.g.* in holiday resorts where during the holiday season the number of persons present is considerably higher than the number of permanent inhabitants, or in office districts in large cities, where this is the case during working hours.

## 5.4 Causes of the exceedance – Form 3

### 5.4.1 General

For prognostic analysis and for the development and justification of measures a good insight in the causes of the exceedances is needed. Hence, a full and quantitative analysis of the contributions of relevant sources to the concentration levels is very useful. The *Guidance on assessment under the EU air quality directives* gives in its Section 4.4 a short description of methods for doing this.

A difficulty in quantifying source contributions to exceedances that are expressed as numbers of exceedances of a certain concentration, is that they are not additive: each source may, on its own, give rise to zero exceedances, but together the sources may cause many exceedances. A non-additivity problem exists also for NO<sub>2</sub> concentrations (including the annual mean), as they are not proportional to emissions of NO<sub>x</sub>.

Another complication is that overall source sector such as traffic are not always very useful, because they include both local and long-range transport contributions, which may require very different approaches in terms of reduction measures.

In the PPs, these difficulties can be dealt with in a flexible way, focusing on the most relevant aspects, but in the reports to the Commission a uniform approach is desired. Because of this, the Working Group recommends giving only a simple characterisation in the report to the Commission.

FWD Annex IV requires including also the following information in the PP:

- “
- a list of the main emission sources responsible for pollution (map)
  - the total quantity of emissions from these sources (tonnes/year)
  - information on pollution imported from other regions
  - details of those factors responsible for the excess (transport, including cross-border transport, formation)”.

It is recommended to discuss these elements together with the analysis of the exceedance, in an integrated fashion. The source categories distinguished in Form 3 could be mentioned more specifically, giving the emission of these sources. More details would be given about the sources that could potentially be influenced by measures. If long-range transport is an important cause for the exceedance, it is recommended to discuss the main contributors to the large-scale pollution levels.

Climate or topography as such is not regarded as a cause of exceedance, as this cannot cause high pollution levels without the existence of pollution sources. However, local exceptional climatological or topographical conditions, deviating from the prevailing conditions elsewhere in the region, may be relevant to the analysis, especially when relocation of sources is an option, and it would furthermore clarify why the pollution levels deviate from the levels elsewhere in the region concerned.

#### 5.4.2 Report to the Commission

##### 5.4.2.1 Recommended specification of the report to the Commission

#### Form 3 Analysis of the causes of exceedance of the limit value in the reference year

a. Code number of the exceedance situation	N.A.
b. Estimate of the regional background level	
- Annual mean concentration in $\mu\text{g}/\text{m}^3$ if applicable, or	R
- Maximum 8-hour mean CO concentration in $\text{mg}/\text{m}^3$ if applicable, or	R
- Total number of exceedances expressed in relation to the LV if applicable	R
c. Estimate of the total background level	
- Annual mean concentration in $\mu\text{g}/\text{m}^3$ if applicable, or	R
- Maximum 8-hour mean CO concentration in $\text{mg}/\text{m}^3$ if applicable, or	R
- Total number of exceedances expressed in relation to the LV if applicable	R
d. Indication of the contribution of local sources to exceedances of the limit value:	
- Traffic	S
- Industry including heat and power production	S
- Agriculture	S
- Commercial and residential sources	S
- Natural sources	S
- Other	S
e. Reference to the emission inventory used in the course of the analysis	N.A.
f. If exceptional: indication of local climatology	S
g. If exceptional: indication of local topography	S
h. Comments for clarification if needed	N.A.

Notes to Form 3:

1. *Sub b and c*: The background level is the concentration of pollutants on a larger scale than the exceedance area. The regional background level is the level that is estimated to occur in the absence of sources within a distance of the order of 30 km. For locations in a city, this would be the background level in the absence of the city. For exceedance due to long-range transport of air pollution, the regional background can be equal to the exceedance reported in Form 2.  
The total background is the level that is estimated to occur in the absence of local sources (with high chimneys within about 5 km and low sources within roughly 0.3 km – this distance could be smaller, e.g. for residential heating, or larger, e.g. for steel mills). The total background level includes the regional background level. In a city, the total background is the urban background, i.e. the level that would occur in the absence of significant sources in the immediate vicinity. In a rural area, the total background level is about equal to the regional background level.
2. *Sub d*: The contributions of the local sources shall be expressed as a sequential number, using “1” for the largest contributor, “2” for the second largest contributor etc. Sources that do not contribute significantly shall be indicated by “-”.
3. *Sub d*: If the contribution of “other” sources has been indicated as significant, the source type(s) shall be clarified at the entry “Comments for clarification”.
4. *Sub f*: Exceptional local climatology shall be indicated by “+”.
5. *Sub g*: Exceptional local topography shall be indicated by “+”.

#### 5.4.2.2 Guidance to Form 3

The total concentration level has already been given in Form 2 and is therefore not repeated here.

In the report to the Commission, the causes of the exceedance are characterised by the spatial scale of the contributions and by the source categories sectors.

To characterise the spatial scale, Form 3 distinguishes the regional background level and the total background level (in which the regional background is included). The local contribution does not need to be reported, as it is equal to the difference between the total concentration level reported in Form 2 and the total background level. As exact definitions of the spatial scales, applicable for every situation, would be unnecessarily complicated, only an indication is given.

For limit values expressed as number of exceedances of a numerical level and for NO<sub>2</sub> limit values, the contributions are not additive and hence a simple percent wise list of contributions is not asked. The regional background concentration and the total background level are expressed as totals, while the contribution of local sources is indicated as a sequence number based on the magnitude of the local contribution. If two source sectors are (about) equal in magnitude they can be given the same sequence number, e.g. 1 and 1, followed by 3, 4,...

It should be noted that the term “natural sources” refers to all natural sources. The identification of source contributions in Form 3 does not relate to Article 3.4 of 1999/30/EC relating to derogations for exceedances of SO<sub>2</sub> limit values due to natural sources. This report to the Commission cannot be used for informing the Commission on zones or agglomerations designated under Article 3.4.

## 5.5 Baseline level – Form 4

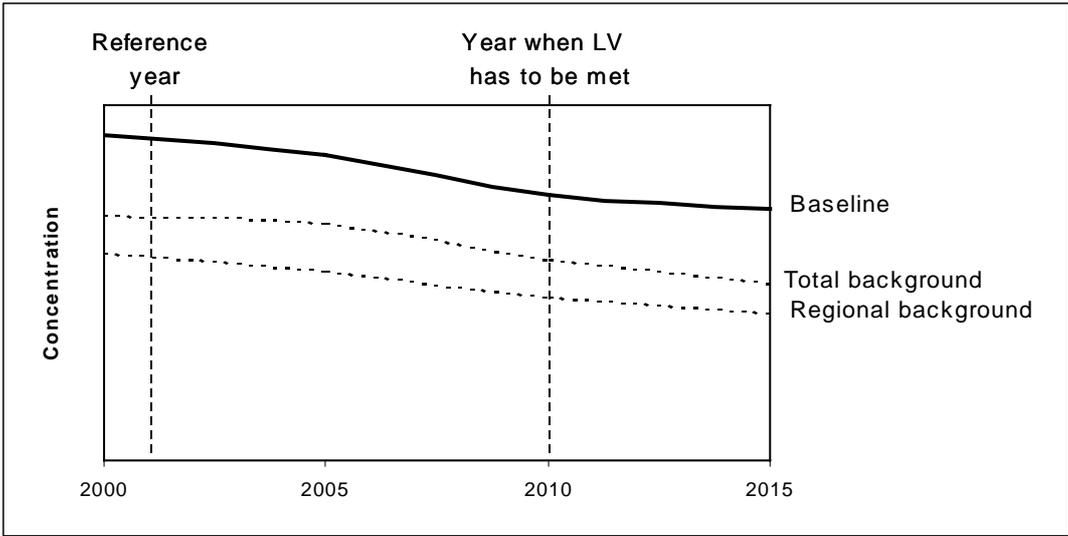
### 5.5.1 General

Exceedance of LV+MOT does not necessarily mean that the limit value will be exceeded in the future years when it has to be met (*i.e.* from 2005 on for SO<sub>2</sub>, PM<sub>10</sub>, lead and CO; from 2010 on for NO<sub>2</sub> and, around specific sources, for lead; possibly later for special zones or agglomerations for benzene). Already existing and planned measures may be sufficient to bring the concentrations below the limit value. Therefore, before considering additional measures, an investigation needs to be done of the

baseline concentration, *i.e.* the concentration predicted for the future assuming that no additional measures are taken.

In the interpretation of the Working Group, the requirement given in FWD Annex IV to give details of measures or projects for improvement which existed prior to the entry into force of the FWD and the observed effect of these measures should be understood in relation to the baseline analysis. The baseline prognosis should represent the ‘business as usual’ scenario, which includes the effect of existing measures and of measures that have already been decided to reduce pollution, *e.g.* directives to reduce emissions per vehicle, and also the development in pollution activities, *e.g.* traffic growth.

Typically, a prognosis of the baseline concentration at the location of the exceedance requires model calculations in which the future development of the regional background level, the total background level and the local source contributions are taken into account (see also the guidance to Form 3 and Figures 2, 3 and 5). For the future trend in the regional background, results of model calculations by EMEP [ <http://www.emep.int> ] could be used, although these results should not be copied blindly. It is not possible to make general recommendations about how best to estimate the developments in the contribution of nearby sources (within about 30 km). If feasible, model calculations could be done to calculate the contribution of these sources. In these calculations a high level of detail would be needed for the contribution of the sources that contribute strongly to the exceedance, *e.g.* a street model should be used for calculating the concentration at the kerb along a busy road. In this example, the changes in traffic intensities and emission factors need to be taken into account.



**Figure 5** The development of the baseline concentration over time depends on how the regional background level, the total background level and the local contribution develops.

In the PP, the assumptions on the baseline scenario need to be documented, preferably in the form of the changes in emissions of the relevant sources. It is not always necessary to describe the baseline scenario in terms of emission scenarios. If existing calculations, *e.g.* those by EMEP, are used, it is sufficient to give a reference to the emission prognoses that have been used there. For the development of the local sources, however, no prognosis may be available, and hence the analysis, including the prognosis of emissions, has to be described in the PP.

The Working Group recognised that it is very difficult to make meaningful prognoses for PM<sub>10</sub>. As the attainment year 2005 is fairly close to the reference year, a practical solution for situations where no

significant changes in the pollution activities are expected could be to assume that the levels in the reference year are representative for those in 2005.

It is advisable to take in the baseline investigation also the years following the first year when the limit value has to be met into account, as it has to be ensured that the limit value is not exceeded in any year after the limit value has to be met.

FWD Annex IV requires also giving a description of the trend of the concentrations prior to the reference year. This information can be useful for judging the credibility of the calculated future trends. If possible, the trends should be expressed in terms of the parameter of the limit value. However, if it is not feasible to reconstruct the number of exceedances of the numerical concentration of a limit value, a surrogate parameter could be considered, preferably the number of exceedances of another level not too far away from the limit value or a corresponding percentile.

If the predicted concentrations are found to be below the limit value after the attainment date (Figure 2 in Chapter 1), additional measures may be deemed unnecessary. It is up to the responsible authority how to take uncertainties into account, including fluctuations between years in the concentration statistics due to fluctuations in meteorology or emission. If after this analysis the responsible authorities are confident that the limit value will be attained without additional measures, the items described in Sections 5.6 to 5.8 do not need to be addressed in the PP, and Forms 5 to 7 need not be filled in.

If it is found that the limit value is expected to be exceeded when it has to be met, additional measures need to be taken (Figure 3 in Chapter 1). These additional measures, the main purpose of the PP, are addressed in Sections 5.6 to 5.8.

### ***5.5.2 Report to the Commission***

#### *5.5.2.1 Recommended specification of the report to the Commission*

#### Form 4 Baseline level

a. Code number of the exceedance situation	N.A.
b. Short description of the emission scenario used for the baseline analysis:	
- Sources contributing to the regional background level	S
- Regional sources contributing to the total background level but not to the regional background level	S
- Local sources as far as relevant	S
c. Expected levels in the first year in which the limit value has to be met:	
- Regional background baseline level:	
o Annual mean concentration in $\mu\text{g}/\text{m}^3$ if applicable, or	R
o Maximum 8-hour mean CO concentration in $\text{mg}/\text{m}^3$ if applicable, or	R
o Total number of exceedances expressed in relation to the LV if applicable	R
- Total background baseline level:	
o Annual mean concentration in $\mu\text{g}/\text{m}^3$ if applicable, or	R
o Maximum 8-hour mean CO concentration in $\text{mg}/\text{m}^3$ if applicable, or	R
o Total number of exceedances expressed in relation to the LV if applicable	R
- Baseline level at location of exceedance:	
o Annual mean concentration in $\mu\text{g}/\text{m}^3$ if applicable, or	R
o Maximum 8-hour mean CO concentration in $\text{mg}/\text{m}^3$ if applicable, or	R
o Total number of exceedances expressed in relation to the LV if applicable	R
d. Are any measures beyond those resulting from existing legislation needed to ensure that the limit value will be met by the compliance date? [y/n]	S
e. Comments for clarification if needed	N.A.

#### Note to Form 4:

- Form 4 shall be filled in for the limit value(s) for which the LV+MOT has been exceeded.
- The baseline level is the concentration to be expected in the year when the limit value comes into force without any measures beyond those already agreed or implied by existing legislation.

#### 5.5.2.2 Guidance to Form 4

- *Sub b:* The description of the emission scenario is given in free text. In this text, the assumptions regarding the emission scenarios are described. Preferably a reference to background material is given.
- *Sub b:* Local sources are only relevant in case of hotspot situations, where the levels are above the background levels over a small area. Following the description of the background level given in the guidance to Form 3, local sources are typically sources with high chimneys within about 5 km and low sources within roughly 0.3 km – this distance could be smaller, e.g. for residential heating, or larger, e.g. for steel mills.

### 5.6 Measures beyond those already required by existing legislation – Form 5

#### 5.6.1 General

If the analysis described in section 5.5 shows that it is not expected that the limit values will be attained, additional measures, i.e. measures beyond those already required by existing legislation, should be taken to ensure attainment. These measures are addressed in this Section and should by themselves be adequate for attaining the limit value in time. Although FWD Annex IV refers to measures, a single measure may be sufficient. Section 5.7 addresses possible measures that have been considered but have not been taken. Section 5.7 also addresses possible further or alternative measures in the long term mentioned in FWD Annex IV.

The form and depth of the description of the additional measures in the PP may depend on the relationship with other existing policy documents on plans and programmes, e.g. a local environmental action plan. The PP should, however, at least:

- Identify the sectors affected by the measures.
- Describe the measures in terms of action taken and the associated targets.
- Describe the effect of the measure on the emissions. The effectiveness could be provided in absolute terms (in tonnes/year) and in relative change (as % of total emissions of this source) for each year from implementation to full effectiveness, at least until the date by which the limit value has to be met.
- Set out the effect of the measures on air quality. It should explain the methodology used to make the estimate and set out the uncertainty associated with the estimate.
- Give a timetable for the action to take effect.
- List the indicators used for monitoring the progress of the measures.

Additionally, the report could ideally also set out the cost of the measures. In drawing up measures, the responsible authority should consider the secondary effect of their plans on the environment, for example on CO<sub>2</sub> production, and the social effects of the measure. But a report is not required on these secondary effects.

For monitoring the effectiveness of a measure, it is usually not sufficient to just follow how concentration level changes, as the change may be due to other causes. Hence, it is important to follow the progress of the measures with suitable indicators that relate more directly to the measure.

Examples of indicators are:

- have the planned parking fees been implemented [y/n] and to what extent [number of parking places affected];
- has the planned permit revision been implemented [y/n];
- how much has the traffic volume on a road gone down [% heavy duty vehicles].

These indicators should primarily serve the responsible authorities, but they can also be used for the 3-year progress report to the Commission (FWD Article 11.1a(iv)).

## 5.6.2 Report to the Commission

### 5.6.2.1 Recommended specification of the report to the Commission

#### Form 5 Details of measures beyond those already required by existing legislation

a. Code number of the exceedance situation	N.A.
b. Code(s) of the measure(s)	S
c. Foreseen timetable of implementation	L
d. Indicator(s) for monitoring the progress	S
e. Funding allocated (years; amount in EURO)	T
f. Estimated total costs (amount in EURO)	T
g. Estimated level in the years when the limit value has to be met, taking the additional measures into account	R
h. Comments for clarification if needed	N.A.

Note to Form 5:

1. Form 5 needs to be filled only if the analysis required by Form 4 shows that it is not expected that the limit values will be attained by measures already required by existing legislation.
2. *Sub b*: Each measure shall be indicated by a code, which refers to a measure described in Form 7.
3. *Sub c*: Keywords on the various implementation steps shall be given followed by a date or period in the form “mm/yy”. The entries shall be separated by a semicolon.
4. *Sub e and f*: The funding allocated refers to public funds alone; the estimated total costs include also the costs borne by the sector(s) affected.

#### *5.6.2.2 Guidance to Form 5*

- Each measure to be reported in Forms 5 and 6 has to be summarised in Form 7, which serves as a catalogue of measures. Form 7 contains generic descriptions of measures, which are supplemented in Form 5 by aspects that depend on the exceedance situation. Thus, in the file to be sent to the Commission, all relevant measures are arranged in Form 7, with a column for each measure.
- *Sub d*: The indicator(s) for monitoring the progress are described in free text.

### **5.7 Possible measures that have not been taken and long-term measures – Form 6**

#### **5.7.1 General**

##### *Possible measures that have not been taken*

FWD Annex IV states that details of possible measures should be described in the PP. It is the interpretation of the Working Group that this concerns measures that might significantly affect the magnitude of the exceedance and are technically feasible. This also includes measures that could possibly be taken by other authorities, including *e.g.* the European Commission. It would be useful to make a distinction between measures at the local, regional, national and EU level: the purpose of identifying measures at a higher administrative level would be to flag to that level that there is a need to take such action.

Obviously, the possible measures include those that have actually been selected for implementation; these have been addressed already in Section 5.6 and Form 5. Form 6 of the report to the Commission is optional; it provides the possibility to the responsible authorities of describing possible measures that have not been taken.

##### *Long-term measures*

In addition to the additional measures (Section 5.6) and possible measures that have not been taken, FWD Annex IV mentions measures or projects planned or being planned for the long term. In the opinion of the Working Group, these are possible alternative measures, which could not yet be introduced, but might either be more effective to attain the limit value than the currently planned measures, or usefully supplement currently planned measures. These could include measures that are not yet technically or economically feasible.

The PP may also discuss the situation after the attainment date, when measures should be ‘taken in the short term where there is a risk of the limit values and/or alert values being exceeded’ (FWD Article 7.3).

#### **5.7.2 Report to the Commission**

##### *5.7.2.1 Recommended specification of the report to the Commission*

### Form 6 Possible measures that have not been taken and long-term measures (optional)

a. Code number of the exceedance situation	N.A.
b. Code(s) of the possible measure(s) that have not been taken	LS
c. For measures that have not been taken:	
Administrative level at which the measure could be taken	LS
Reason for not taking the measure	LS
d. Code(s) of the long-term measure(s)	LS
e. Comments for clarification if needed	N.A.

#### Notes to Form 6:

1. *Sub b and d:* Each measure shall be indicated by a code, which refers to a measure described in Form 7. If more than one measure is indicated, the codes shall be separated by a semicolon.
2. *Sub c:* The following codes shall be used to characterise the administrative level at which the measure could be taken: A: local; B: regional; C: national; D: European Union; E: international beyond European Union. If more than one level is appropriate, the codes shall be separated by a semicolon.

#### 5.7.2.2 Guidance to Form 6

- Similar to Form 5, Form 6 refers to Form 7 in which all measures are described.
- *Sub c:* The reason for not taking the measure should be given in free text.

### 5.8 Summary of measures – Form 7

#### 5.8.1 General

This section only deals with the report to the Commission. It describes how to summarise the additional measures (Section 5.6) as well as the possible measures that have not been taken and the long-term measures (Section 5.7)

#### 5.8.2 Report to the Commission

##### 5.8.2.1 Recommended specification of the report to the Commission

#### Form 7 Summary of measures

a. Code of the measure	N.A.
b. Title	N.A.
c. Description	N.A.
d. Administrative level at which the measure could be taken	
e. Type of measure	N.A.
f. Is the measure regulatory? [y/n]	N.A.
g. Time scale of reduction	N.A.
h. Source sector(s) affected	N.A.
i. Spatial scale of the sources affected	N.A.
j. Comments for clarification if needed	N.A.

#### Notes to Form 7:

1. Form 7 shall be used to describe the measures mentioned in Forms 5 or 6. For each measure, a column of Form 7 shall be filled in.
2. *Sub a:* Each measure shall be given a unique code.
3. *Sub c:* The description of the measure is a free text of typically 100 to 200 words.
4. *Sub d:* The following codes shall be used to characterise the administrative level at which the measure could be taken: A: local; B: regional; C: national.

5. *Sub e*: The following codes shall be used to characterise the type of measure:  
A: economic/fiscal; B: technical; C: education/information; D: other.
6. *Sub g*: The following codes shall be used to characterise the time scale of the concentration reduction achieved by the measure:  
A.: short term; B: medium term (about a year); C: long term.
7. *Sub h*: The following codes shall be used to characterise the source sector affected by the measure:  
A: transport; B: industry including heat and power production; C: agriculture; D: commercial and residential sources; E: other.
8. *Sub e and h*: If the code for "other" is used, this shall be clarified at the entry "Comments for clarification".
9. *Sub i*: The following codes shall be used to characterise the spatial scale of the sources affected by the measure:  
A: local source(s) only; B: sources in the urban area concerned; C: sources in the region concerned; D: sources in the country; E: sources in more than one country.
10. *Sub d-i*: If more than one code applies, the codes shall be separated by a semicolon.

#### 5.8.2.2 Guidance to Form 7

- *Sub c*: For the measures that have not been taken and the long-term measures, a shorter description may be appropriate.
- *Sub g*: "Short term" indicates that the reduction takes place immediately or shortly after the measure is implemented (*e.g.* in case of a parking ban). "Medium term" and "Long term" indicates a gradual build-up over several years (*e.g.* in case of changes in newly sold cars).
- Measures under FWD Article 7.3 (short term action plans) should not be included in Form 7.

## Annex 1

### List of minimum items of plans and programmes as required by Annex IV of Directive 96/62/EC

Annex IV of FWD gives a list of items that shall at least be incorporated in the plans and programmes (FWD, art. 8(3)). The Working Group felt that it was needed to rearrange these items in such an order that the expected structure of PPs would better be matched. The table below specifies where the various items of FWD's Annex IV are addressed in the recommendation. It should be noted that all items have to be included in the PP, but not necessarily in the report to the Commission.

Item of Annex IV	Where is it in this recommendation?	Where is it in the report to Commission?
<i>1. Localization of excess pollution</i>		
- region	Section 5.3 as zone <sup>1)</sup>	Form 2 (as zone <sup>1)</sup> )
- city (map)	Section 5.3	Form 2
- measuring station (map, geographical coordinates).	Section 5.3	Form 2 (partly)
<i>2. General information</i>		
- type of zone (city, industrial or rural area)	Section 5.3 <sup>1)</sup>	Form 2 (as station or area type <sup>1)</sup> )
- estimate of the polluted area (km <sup>2</sup> ) and of the population exposed to the pollution	Section 5.3	Form 2
- useful climatic data	Section 5.3	Form 2
- relevant data on topography	Section 5.4	Form 3
- sufficient information on the type of targets requiring protection in the zone.	Section 5.3	Form 2
<i>3. Responsible authorities</i>		
- Names and addresses of persons responsible for the development and implementation of improvement plans.	Section 5.2	Form 1 (responsible authority)
<i>4. Nature and assessment of pollution</i>		
- concentrations observed over previous years (before the implementation of the improvement measures)	Section 5.4	Form 2
- concentrations measured since the beginning of the project	Section 5.4	Form 2
- techniques used for the assessment.	Section 5.3	Form 2
<i>5. Origin of pollution</i>		
- list of the main emission sources responsible for pollution (map)	Section 5.4	Form 3 (as source categories)
- total quantity of emissions from these sources (tonnes/year)	Section 5.4	Form 3 (emission inventory)
- information on pollution imported from other regions	Section 5.4	Form 3 (background levels)
<i>6. Analysis of the situation</i>		
- details of those factors responsible for the excess (transport, including cross-border transport, formation)	Section 5.4	Form 3 (regional background level)
- details of possible measures for improvement of air quality	Section 5.5	Form 7

<i>7. Details of those measures or projects for improvement which existed prior to the entry into force of this Directive i.e.</i>		
- local, regional, national, international measures	Section 5.4	Form 4 (under emission scenario)
- observed effects of these measures	Section 5.5	Form 4
<i>8. Details of those measures or projects adopted with a view to reducing pollution following the entry into force of this Directive</i>		
- listing and description of all the measures set out in the project	Sections 5.6 and 5.8	Forms 5 and 7
- timetable for implementation	Section 5.6	Form 5
- estimate of the improvement of air quality planned and of the expected time required to attain these objectives	Section 5.6	Form 5 (only referring to years after the LV has to be met)
<i>9. Details of the measures or projects planned or being researched for the long term</i>	Sections 5.6 and 5.7	Forms 6 and 7
<i>10. List of the publications, documents, work, etc., used to supplement information requested in this Annex</i>	Chapter 3	Form 1 and 4

<sup>1)</sup> At the time of drafting of the FWD, there were two different concepts of zones in use: the zone as defined in the Exchange of Information Decision 101/97/EC (EoI), which referred to the local environment around a measuring station, and the zone as defined in the FWD, which can be a much larger area and is in practice primarily defined by administrative borders. In the opinion of the Working Group, the intention of Annex IV of the FWD was probably to report on areas around the measuring station, that is the zone as defined by EoI. However, the term “zone” has recently been removed in the revised EoI, and is no longer in general use in that context. In the current recommendation, the term zone is only used as defined in the main text of the FWD.

## Annex 2

### Example of filled-in forms for the report to the Commission

#### Form 1 General information on the plan or programme

a.	Reference year	2001
b.	Member State	Exemplia
c.	Reference to the plan or programme	Attaining the limit values for air quality in the Rohan region. Norah, Exemplia. November 2002
d.	List of the code numbers of the exceedance situations described in Forms 2 to 6	Example1;Example2;Example3
e.	Name of the authority responsible for drafting the plan or programme addressing the exceedance situation	Rohan region, Exemplia
f.	Postal address of the responsible authority	Smitstreet 1 9876 EF Norah, Exemplia
g.	Name of the contact person	A. Cegik
h.	Postal address of the contact person	Clean Street 123 1357 AB Airtown Exemplia
i.	Phone number of the contact person	+99 9876543210
j.	Fax number of the contact person	+99 9876540123
k.	E-mail address of the contact person	<a href="mailto:Cegik@minenv.ex">Cegik@minenv.ex</a>
l.	Comments for clarification if needed	

**Form 2 Description of the exceedance of the limit value**

a. Code number of the exceedance situation	Example1	Example2	Example3
b. Pollutant	NO <sub>2</sub>	PM <sub>10</sub>	NO <sub>2</sub>
c. Zone code	EX0010	EX0012 // EX0012 // EX0010	EX0011 // EX0011 // EX0011 // EX0011 // EX0011 // EX0011 //
d. Name of the city(-ies) or municipality(-ies)	Middletown	Norah // Edoras // Ispahan	Nediel
e. To be filled in only if the pollutant is SO <sub>2</sub> , NO <sub>2</sub> or PM <sub>10</sub> : limit value for which the LV+MOT was exceeded [h/d/a]	h	d	a
f. Concentration level in the reference year:			
- Concentration in µg/m <sup>3</sup> if applicable, or			59-65
- Maximum 8-hour mean CO concentration in mg/m <sup>3</sup> if applicable, or			
- Total number of exceedances expressed in relation to the LV+MOT if applicable	24	36-48	
g. To be filled in only if the LV is expressed as number of exceedances of a numerical concentration: total number of exceedances in the reference year expressed in relation to the LV	239	50-83	
h. Concentration level in the reference year expressed in relation to the other health related LV of the pollutant concerned, if such a LV exists:			
- Concentration in µg/m <sup>3</sup> if applicable, or	38	34-46	
- Total number of exceedances expressed in relation to the LV if applicable			77-258
i. Concentrations observed in previous years if available and not communicated earlier to the Commission:			
- Year and concentration in µg/m <sup>3</sup> if applicable, or			1999: 60-71; 2000: 61-67
- Year and maximum 8-hour mean CO concentration in mg/m <sup>3</sup> if applicable, or			
- Year and total number of exceedances expressed in relation to the LV+MOT if applicable	n.a.	com.	
j. If the exceedance was found by measurement:			
- Code of the station where the exceedance was observed	EX0344	EX0684 // EX0688 //	

		EX0693	
- Geographical coordinates of the station	+521033.2+043052.5	+521033.2+043052.5 //+521647.2+043085.3 // +523527.4+045378.9	
Classification of the station	ST	UB	
k. If the exceedance was found by model calculation:			
- Indication of the location of the exceedance area			In 7 streets in the city Nediel
- Classification of the area			UT
l. Estimate of the surface area (km <sup>2</sup> ) where the level was above the LV in the reference year		13	
m. Estimate of the length of road (km) where the level was above the LV in the reference year	0.8		7
n. Estimate of the total population exposed to a level above the LV in the reference year	200	240000	
o. Comments for clarification if needed			

**Form 3 Analysis of the causes of exceedance of the limit value in the reference year**

	Example1	Example2	Example3
a. Code number of the exceedance situation			
b. Estimate of the regional background level			
- Annual mean concentration in $\mu\text{g}/\text{m}^3$ if applicable, or			26-35
- Maximum 8-hour mean CO concentration in $\text{mg}/\text{m}^3$ if applicable, or			
- Total number of exceedances expressed in relation to the LV if applicable	2	15-22	
c. Estimate of the total background level			
- Annual mean concentration in $\mu\text{g}/\text{m}^3$ if applicable, - or			33-49
- Maximum 8-hour mean CO concentration in $\text{mg}/\text{m}^3$ if applicable, or			
- Total number of exceedances expressed in relation to the LV if applicable	9	38-44	
d. Indication of the contribution of local sources to exceedances of the limit value:			
- Traffic	1	1	1
- Industry including heat and power production	-	-	-
- Agriculture	-	-	-
- Commercial and residential sources	-	-	-
- Natural sources	-	-	-
- Other	-	-	-
e. Reference to the emission inventory used in the course of the analysis	Emissions from road traffic in the city of Middletown - Update 2000	Annual emission inventory for Exampia - 2001	Annual emission inventory for Exampia - 2001
f. If exceptional: indication of local climatology			
g. If exceptional: indication of local topography			
h. Comments for clarification if needed			

**Form 4 Baseline level**

a. Code number of the exceedance situation	Example1	Example2	Example3
b. Short description of the emission scenario used for the baseline analysis:			
- Sources contributing to the regional background level	Based on EMEP scenario calculations ...	Assumed unchanged until 2005 ...	See Example1
- Regional sources contributing to the background level but not to the regional background level		Assumed unchanged until 2005 ...	See Example1
- Local sources as far as relevant	Prognosis of local traffic intensity and ...	Assumed unchanged until 2005 ...	See Example1
c. Expected levels in the first year in which the limit value has to be met:			
- Regional background baseline level:			
o Annual mean concentration in $\mu\text{g}/\text{m}^3$ if applicable, or			19-25
o Maximum 8-hour mean CO concentration in $\text{mg}/\text{m}^3$ if applicable, or			
o Total number of exceedances expressed in relation to the LV if applicable	0	38-44	
- Total background baseline level:			
o Annual mean concentration in $\mu\text{g}/\text{m}^3$ if applicable, or			24-33
o Maximum 8-hour mean CO concentration in $\text{mg}/\text{m}^3$ if applicable, or			
o Total number of exceedances expressed in relation to the LV if applicable	0	38-44	
- Baseline level at location of exceedance:			
o Annual mean concentration in $\mu\text{g}/\text{m}^3$ if applicable, or			42-47
o Maximum 8-hour mean CO concentration in $\text{mg}/\text{m}^3$ if applicable, or			
o Total number of exceedances expressed in relation to the LV if applicable	25	38-44	
d. Are additional measures needed to ensure that the limit value will be met by the compliance date? [y/n]	y	Y	Y
e. Comments for clarification if needed			

**Form 5 Details of measures beyond those already required by existing legislation**

a.	Code number of the exceedance situation	Example1	Example2	Example3
b.	Code(s) of the measure(s)	A	B;C	G
c.	Foreseen timetable of implementation	announcement 04/04; test phase 05-11/04; full implementation 08/05	test phase 01-06/03; full fuel switch 10/04...	adoption of plan...
d.	Indicator(s) for monitoring the progress	The number of heavy duty vehicles per day passing through the street	Percentage of public transport vehicles in the cities concerned operating on natural gas	Counts of average daily traffic volume for each street
e.	Funding allocated (years; amount in EURO)	2003: 850000	350000 per year	200000 per year
f.	Estimated total costs (amount in EURO)	2003: 850000; later 10000 per year	3000000	400000 per year
g.	Estimated level in the years when the limit value has to be met, taking the additional measures into account	15	31-34	33-38
h.	Comments for clarification if needed	The measure is part of a larger programme for reducing the heavy-duty traffic in the city		

**Form 6 Possible measures that have not been taken and long-term measures (optional)**

a.	Code number of the exceedance situation	Example1	Example2	Example3
b.	Code(s) of the possible measure(s) that have not been taken	C;D;E	D;G	C;D;E
c.	For measures that have not been taken:			
	- Administrative level at which the measure could be taken			
	- Reason for not taking the measure			
d.	Code(s) of the long-term measure(s)	F	H;I	F
e.	Comments for clarification if needed			

**Form 7 Summary of measures**

a. Code of the measure	A	B
b. Title	Reduced access of heavy duty vehicles	Change of public transport to natural gas fuel
c. Description	The measure aims at reducing the access of heavy duty vehicles in the street where the limit value plus the margin of tolerance was exceeded. This is done by ...	The Rohan region is executing a programme of changing fuel of buses. This programme is ...
d. Type of measure	D	D
e. Is the measure regulatory? [y/n]	y	n
f. Time scale of reduction	B	C
g. Source sector(s) affected	A	A
h. Spatial scale of the sources affected	A	B
i. Comments for clarification if needed		

## **Annex 3**

### **Members of the Working Group on Implementation**

#### **Chairman**

Hans Herremans, The Netherlands  
(replacing Jürgen Schneider, Austria)

#### **Members**

Roel van Aalst, EEA  
Manuel Bravo, Europa  
Joelle Colosio, France  
Francisco C. Ferreira, Portugal  
Michael Harryman, UK  
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