



Assessment of Member States' progress in the implementation of Programmes of Measures during the first planning cycle of the Water Framework Directive

Member State Report:

Netherlands (NL)

Disclaimer: this report was prepared by consultants contracted by the European Commission, and it does not necessarily reflect the views of the Commission.

1. Introduction

The Water Framework Directive (WFD) requires that Member States (MS) establish Programmes of Measures to achieve the objectives established under Article 4. Measures are required to reduce the pressures to levels that are compatible with the achievement of the objectives such as the achievement of good water status by 2015.

Programmes of Measures for the first planning cycle were due to be published in December 2009 and should have been made operational in Member States by December 2012. Progress with implementation of the measures was to be reported electronically to the Commission in December 2012 through the Water Information System for Europe (WISE).

A preliminary assessment of the 2012 electronic WISE reports was undertaken in 2013 through the use of templates comprising a number of pre-defined questions, the answering of which by consultant Member State assessors provided the assessment of Member States' progress. The results were presented to the Commission by the consultants in a Preliminary Assessment report in January 2014.

The preliminary assessment was taken further by undertaking an in-depth assessment of some key processes in developing programmes of measures and in relation to five key aspects/pressures (agriculture, chemicals, hydromorphology, urban waste water treatment and water abstraction) of the Water Framework Directive. This was again facilitated by the use of pre-defined questions within templates answered by Member State assessors.

The results were reported to the Commission in December 2014 as a European Overview report that provided an overview of the progress made by Member States in the development and implementation of programmes of measures for the first planning cycle. It was also based on the conclusions from the Commission's 2012 assessment of the first River Basin Management Plans¹, Member States' electronic (WISE) reports to the Commission in December 2012 on the progress with implementation of their programmes of measures (summarised in the Preliminary Assessment report) and the information arising from the Commission's bilateral meetings with Member States on their first River Basin Management Plans during 2013 and 2014. The report was used in support of the Commission's Communication to the European Parliament and Council on progress with Water Framework Directive implementation and its associated Commission Staff Working Document, both to be published in March 2015.

This report is a summary of the findings of the preliminary and in-depth assessment of the progress with the implementation of the programmes of measures in Netherlands.

References to River Basin Management Plans (RBMPs) and programmes of measures (PoMs) throughout this document relate to the first planning cycle unless explicitly stated otherwise.

¹ http://ec.europa.eu/environment/water/water-framework/impl_reports.htm

2. Questions used in the assessments

For the **preliminary assessment** the following assessment questions were asked:

- Question 1. What is the reported progress between 2009 and 2012 with the implementation of the Basic Measures set out in Article 11.3.a?
- Question 2. What is the reported progress between 2009 and 2012 with the implementation of the Other Basic Measures set out in Article 11.3b-I?
- Question 3. What is the progress with the implementation of Supplementary Measures between 2009 and 2012?
- Question 4. Are there Supplementary Measures in place to tackle each of the significant pressures for which Basic Measures are reported by Member States to be not enough to achieve WFD objectives? Which pressures are not tackled?
- Question 5. Which measures reported to be implemented in the first RBMP/PoM in 2009 have not been reported in 2012?
- Question 6. What is the status of implementation of the Key Types of Measures identified in the Member State, and what progress is expected over the duration of the first RBMP?
- Question 8. What is the reported overall progress on implementing the Programme of Measures? Are there differences between the RBDs in the Member State? What are the main obstacles to successful implementation (if any)?
 - 8a) What are the main achievements?
 - 8b) Improvements in status of water bodies?
 - 8c) What are the main obstacles?
 - 8d) Overall Progress?
- Question 9. How are the measures being financed? What are the main achievements, progress and obstacles in securing the budget for the PoMs?
 - 9a) Securing finance for the PoMs?
 - 9b) Funding source?
 - 9c) Overall progress?

For the **in-depth assessment** the following assessment questions were asked:

- Question 1. What are the impacts on water bodies reported for 2009?
- Question 2. Have the sources of the impacts been identified?

- Question 3. If the sources of at least some of the impacts were identified, please indicate the relevant sources and pressures in the Excel spreadsheet provided in the document area to answer this question
- Question 4. Have the identified impacts been apportioned between the sources and sectors/drivers responsible for the pressures?
- Question 4a. Are there different approaches to source apportionment between the RBDs within the MS?
- Question 5. If no source apportionment was undertaken, how were measures assigned to the sectors to reduce pressures?
- Question 6. How were the measures assigned across the polluters and activities/sectors responsible for the impacts?
- Question 7a. Has the scale of the pressures arising from agriculture been quantified in terms of the reductions required to achieve WFD objectives?
- Question 7b. How much of the gap to the achievement of WFD objectives was expected to be achieved by the Nitrates Action Programmes?
- Question 7c. How much of the gap to the achievement of WFD objectives was expected to be achieved by the implementation of Article 11.3.h basic measures?
- Question 7d. How much of the gap to the achievement of WFD objectives was expected to be achieved by the implementation of Article 11.3.g basic measures?
- Question 7e. How much of the gap to the achievement of WFD objectives was expected to be achieved by the implementation of Article 11.4 supplementary measures?
- Question 8a. Has the scale of the pressures arising from emissions, discharges and losses of chemicals been quantified in terms of the reductions required to achieve WFD objectives?
- Question 8b. How much of the gap to the achievement of WFD objectives was expected to be achieved by the Basic Measures required by Article 11.3.a (measures required by the IPPC Directive (96/61/EC and 2008/1/EC) which was superseded by the Industrial Emissions Directive (2010/75/EU) on 7 January 2014)?
- Question 8c. How much of the gap to the achievement of WFD objectives was expected to be achieved by the implementation of Article 11.3.g and Article 11.3.k basic measures?
- Question 8d. What measures are in place to address the related objectives under the Environmental Quality Standards Directive (2008/105/EC)?
 - Is there an inventory of the sources of chemical pollution?
 - Are mixing zones being used?
 - If mixing zones are used, does the plan indicate measures taken to reduce the extent of the mixing zone in the future?
 - Are there specific measures with the aim of progressively reducing pollution from priority substances?

- Are there specific measures with the aim of ceasing or phasing out emissions, discharges and losses of priority hazardous substances?
- Question 8e. How much of the gap to the achievement of WFD objectives was expected to be achieved by the implementation of Article 11.4 supplementary measures?
- Question 9a. Has the scale of hydromorphological pressures been quantified in terms of the reductions required to achieve WFD objectives?
- Question 9b. How much of the gap to the achievement of WFD objectives was expected to be achieved by the Basic Measures required by Article 11.3.a?
- Question 9c. How much of the gap to the achievement of WFD objectives was expected to be achieved by the implementation of Article 11.3.i basic measures?
- Question 9d. How much of the gap to the achievement of WFD objectives was expected to be achieved by the implementation of Article 11.4 supplementary measures?
- Question 10a. Has the scale of the pressures arising from urban waste water treatment been quantified in terms of the reductions required to achieve WFD objectives?
- Question 10b. How much of the gap to the achievement of WFD objectives was expected to be achieved by the national programmes for the implementation of the Urban Waste Water Treatment Directive?
- Question 10c. How much of the gap to the achievement of WFD objectives was expected to be achieved by the implementation of Article 11.3.g basic measures?
- Question 10d. How much of the gap to the achievement of WFD objectives was expected to be achieved by the implementation of Article 11.4 supplementary measures?
- Question 11a. Has the scale of the pressures arising from water abstraction been quantified in terms of the reductions required to achieve WFD objectives?
- Question 11b. How much of the gap to the achievement of WFD objectives was expected to be achieved by the Basic Measures required by Article 11.3.a?
- Question 11c. How much of the gap to the achievement of WFD objectives was expected to be achieved by the implementation of Article 11.3.c and 11.3.e basic measures?
- Question 11d. How much of the gap to the achievement of WFD objectives was expected to be achieved by the implementation of Article 11.4 supplementary measures?
- Question 12a. Was a cost effectiveness analysis undertaken during the development of the programme of measures?
- Question 12b. Did the cost effectiveness analysis influence the selection of measures?
- Question 12c. What were the main factors that limited the use of a cost effectiveness analysis?
- Question 13. What are the effects/consequences of uncertainty in the Article 5 pressures and impacts analysis, monitoring and classification of status on targeting of measures to reduce pressures to achieve WFD objectives?
- Question 14. What are the main changes and improvements envisaged for the second planning cycle?

3. Contextual information on Netherlands

The Netherlands has four river basin districts. These are all parts of international river basin districts. The sharing countries are EU member states, as well as Switzerland, and Liechtenstein. At the state level the 'Ministry of Infrastructure and the Environment' is the responsible authority for implementing the WFD. Other responsible authorities for WFD implementation include: Provinces (regional level), Water boards ('Waterschappen' sub-basin level) and Municipalities (local level). Only the state and the Water boards are indicated to have direct water management authority. Provinces and municipalities have other authorities that are linked to water management and hence contribute in WFD implementation. The competences of different authorities are explained in the introduction of the RBMPs. These competences, together with the coordination between the different authorities, are laid down in the 'National Water Act'.

Almost all (99 %) of the water bodies are subject to significant pressures. The following pressures are reported in order of magnitude (water bodies subject to the pressure : Diffuse sources, Other pressures, River management, Other morphological alterations, Water flow regulations, Point sources and Transitional and coastal water management).

4. Role of basic measures and supplementary measures

Article 11.3 of the WFD states that basic measures **are the minimum requirements** to be complied with and **shall** consist of ²:

Paragraph a: those **measures required to implement Community legislation** for the protection of water, including measures required under the legislation specified in Article 10 and in part A of Annex VI (*e.g. measures to achieve compliance with the Nitrates Directive and Urban Waste Water Treatment Directive*)

Paragraphs b to l: measures that largely require binding rules in terms of, for example, the control of abstractions (paragraph e) (*e.g. requires abstraction permits to be revised in line with WFD requirements*), diffuse sources (paragraph h) (*e.g. where phosphate, pesticides, sediment, organic pollution and ammonia from agriculture are identified as a pressure affecting the achievement of overall good status, controls must be established*), and activities that affect hydromorphological conditions (paragraph i) (*e.g. controls should be defined to ensure that actions in or near rivers do not negatively impact on morphological condition*) that go beyond the national implementation of Article 11.3.a measures for the achievement of WFD objectives.

In certain situations basic measures alone will not be sufficient to achieve good status and so Article 11.4 supplementary measures may be needed. MS must first have basic measures that are compliant with Article 11.3 and second define supplementary measures and have a credible plan for securing and tracking progress on the established supplementary measures. Supplementary measures can be, for example, technical measures, advisory services or cooperative agreements between groups of stakeholders (see WFD Annex VI.B).

Basic and supplementary measures must add up to what is needed to address the pressures to allow the achievement of the WFD objectives.

² Meeting of the Strategic Co-ordination Group, 4 November 2013, Agenda point 4.a. Clarification on WFD programmes of measures (Article 11).

5. Targeting of measures to reduce pressures and impacts to achieve WFD objectives

Measures should be targeted in terms of their type and extent to ensure that pressures are addressed and that this will deliver improvements towards achieving good status or potential in the individual water bodies. The measures should be designed based on the assessment of the actual status of the water body, supplemented with the information from the analysis of pressures and impacts affecting the water body.

In terms of the objective of achieving good status by 2015, the aim would be to identify the gap in water body status/potential expected by 2015 and the status required by the Water Framework Directive. How large the gap that must be filled to achieve WFD objectives in any particular River Basin District and Member State will depend, for example, on how Member States have implemented the requirements under other Directives (e.g. the relative stringency of measures in national Nitrates Action Plans) and policies, as well as differences in the type, extent and magnitude of pressures on water bodies. The gap should be filled with measures that would be implemented under the Water Framework Directive for those water bodies expected to be failing objectives in 2015 without exemptions.

The gap to the achievement of objectives will be caused by significant pressures on water bodies: the sources and sectors responsible will have to be identified to determine where actions on the ground are needed to reduce pressures to levels in/on water bodies compatible with the achievement of objectives. This may be achieved through the use of source apportionment to give a clear picture of the most important sources for a given pressure or impact. In this context a source might be considered as a combination of a pressure type (e.g. diffuse or point source pollution combined with the responsible sector or driver (e.g. diffuse – agriculture, diffuse – forestry)).

The required reduction of the pressures to fill the gap to the achievement of objectives should then be quantified: this can be expressed in different ways depending on the nature of the pressure. For example: for nutrient pollution it could be in terms of the required reduction in the loads of nitrogen and phosphorus in the receiving water bodies; for pressures arising from the hydromorphological alteration of water bodies it could be expressed as number of barriers that have conditions not compatible with the achievement of Water Framework Directive objectives; and, for water abstractions the volume of water abstracted or diverted that has to be reduced to achieve objectives.

Apportionment of impacts and pressures to sources

As described above source apportionment information is required so that measures can be targeted effectively at sources to reduce the pressures to levels compatible with the achievement of WFD objectives.

Summary:

The main pressures were identified and indicated as significant if a good ecological and chemical status will not be achieved in 2015. A quantitative apportionment was done based on the contribution of the different sources (however not all) to their main pressures.

Based on the RBMPs the sources are identified per pressure type (table 5.1 in the RBMPs). A significance assessment level is indicated: not present, present but not significant, less important, important and very important. This is based on the % of waterbodies whereby the contribution of the pressure is significant in comparison with total number of waterbodies. The same methodology is used across the four River Basin Districts (RBDs) of the Netherlands.

The methodology for determining significant point and diffuse source pollution is based on data on emissions, and the significance level is determined based on the fact that a certain substance would be attributing more than 10 % standard exceedance for a certain water body. The relative importance of a certain point source or diffuse source overall is based on the number of surface waterbodies assessed as being significantly impacted. For example, in the Rhine RBMPs, the exceedance of the metolachlor standard is mainly (i.e. 100%) due to agricultural soils. Whereas for Cadmium, +-10% of the exceedances are caused by sewage treatment plants. The identification of the other pressure types are determined by the local water managers.

Approaches of assigning measures to sectors/sources to reduce pressures

The RBMPs provide a link between the pressures (and sources) and their measures, whereby the measures were prioritised based on cost estimates, feasibility and applicability in business operations. The starting point to assign measures was problem specific for each RBD.

The RBMPs of the 4 RBDs identify the link between the pressures and the measures and describe the approach to define the necessary measures (see table 6.1 in the RBMPs). There is a general description of significant pressures that have led to the definition of specific measures. The pressures are identified based on the assessment. Pressures that lead to an exceedance of the standard are then assessed. In the next phase, the status assessment is described in more detail based on further research. Therefore not all pressures are relevant. This may mean that fewer measures are taken compared to those based on the monitoring network. For the supplementary measures, in the RBMPs there is a specific analysis at water body level. According to the RBMPs (chapter 6 on cost effectiveness), the measures were designed for each RBD, the basis of which were the problems specific to each RBD. In a first step, all measures were identified and were then prioritized based on the 1) cost estimates and 2) the feasibility and applicability in business operations and support among sectors for implementation.

Assigning measures across the polluters and activities/sectors responsible for the impacts

Summary:

The RBMPs provide a link between the pressures (and sources) and measures, whereby the measures were prioritised based on cost estimates and feasibility and applicability in business operations.

In the RBMPs of the 4 RBDs, there is a link between the pressures and the measures and it describes the approach to define the necessary measures (see table 6.1 in the RBMPs). There is a general description of significant pressures that have led to the definition of specific measures. For the supplementary measures, a table in the RBMPs shows the specific analysis at waterbody level (MS summary document). According to the RBMPs (chapter 6 on cost effectivity), the measures were designed for each RBD, whereby the starting point was the problem for each RBD. In the first step, all measures were identified and were then prioritized based on the 1) cost estimates and 2) the feasibility and applicability in business operations and support among sectors for implementation. In the RBMPs the following is stated: In the first step, the pressures are identified based on the assessment. Pressures that lead to an exceedance of the standard are then assessed. In the next phase, the status assessment is described in more detail based on further research. Therefore not all pressures are relevant. This may mean that fewer measures are taken place compared to those based on the monitoring network.

Cost effectiveness

Cost-effectiveness analysis (CEA) is an appraisal technique that provides a ranking of alternative measures on the basis of their costs and effectiveness, where the most cost-effective has the highest ranking.

Uncertainty on costs, effectiveness and time-lagged effects of measures needs to be dealt with throughout the economic analysis process associated with the WFD, and more generally throughout the process of identifying measures and developing the RBMP. Sources of uncertainty are highly diverse according to situations and river basins, but will exist with regards to the assessment of pressures, impacts, baseline, costs or measures effectiveness. It is important that key areas of uncertainty and key assumptions made for the analysis are clearly spelt out and reported alongside the results of the analysis.

Summary:

A cost-effectiveness analysis has been undertaken for measures made by the most important sectors, however no information was available on factors that could limit this analysis.

A cost-effectiveness analysis has been undertaken in the PoM (see section 6.7 in the different RBMPs). The total costs of the supplementary measures are identified in the RBMPs, and also a breakdown of the costs per pressure is provided. An estimation of the cost for environmental measures made by the most important sectors that are somewhat related to water quality are given for the Netherlands. In the RBMP (section 6.7) it is stated that the most cost-effective measures take priority. For each waterbody the additional measures were listed. Only the measures that do not have a significant impact on a sector or a function were scored on costs and effectiveness and were then ranked. Based on this information the programmes of measures were established. For hydromorphological measures, the cost effective analysis concluded that the measures will contribute significantly to achieving ecological targets. An estimation of the effects were made by the water managers. This is only given for the main ecological groups and for parameters relevant for eutrophication. No specific effects per measure were given. No information was available on the main factors that could limit the use of a cost effectiveness analysis.

Assessment of Disproportionate costs

An extended time to the achievement of objectives or less stringent objectives can be justified on the grounds of disproportionately expensive measures (Articles 4.4 and 4.5).

A large number of exemptions have been applied that are related to disproportionate costs (400). However the reasoning for the application of exemptions has not been clearly justified in the RBMPs.

Effects of uncertainties

Measures should be targeted in terms of their type and extent to ensure that pressures are tackled and reduced, and that this will deliver improvements towards achieving good status or potential in the individual water bodies. The measures should be designed based on the assessment of the actual status of the water body, supplemented with the information from the analysis of pressures and impacts affecting the water body.

Therefore, uncertainty in the robustness and suitability of methods used in the Article 5 analysis of pressures and impacts, and/or in the confidence of the results of monitoring and the subsequent assessment of ecological and chemical status can fundamentally affect how measures are targeted at water bodies at risk of failing objectives or those that are assessed as being at less than good status from all significant pressures in a RBD.

The main pressures were identified and indicated as significant if a good ecological and chemical status isn't achieved in 2015. The first step, pressures are identified based on an assessment. Pressures that lead to an exceedance of the standard are then assessed. In the next phase, the status assessment is more in detail described based on further research. Therefore not all pressures are relevant. This may mean that fewer measures are taken place compared to those based on the monitoring network. The identification of the other pressure types are determined by the local water managers.

There is a general description of significant pressures that have led to define the correspondent specific measures. For the supplementary measures, a table in the RBMPs shows the specific analysis at waterbody level. According to the RBMPs (chapter 6 on cost effectivity), the measures were designed for each RBD, whereby the starting point was the problems specifically for each RBD.

Uncertainties related to prescribing additional measures at European level and the development of new cost-effective technologies in the future are the main argument to not quantify the necessary reduction of certain substances (for example, nitrogen, TBT, phosphate).

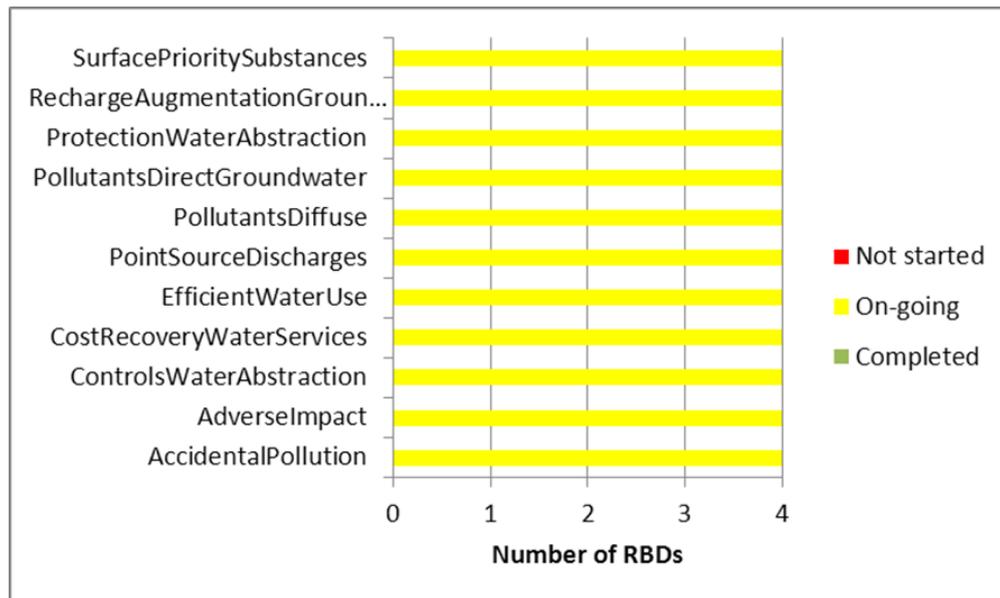
6. Progress with the implementation of the Basic Measures set out in Article 11.3.a

All eleven Directives are reported to be implemented nationwide across all four RBDs in the Netherlands. Most measures were implemented in 2009 already, and further progress has been made by 2012. The Netherlands provided a general description on the status and progress of the relevant national Regulations implementing each Directive. The Netherlands mentioned explicitly in 2012 that the requirements have been met for the Bathing Water Directive, Drinking Water Directive, Environmental Impact Assessment Directive, Integrated Pollution Prevention Control Directive, Major Accidents (Seveso) Directive, Nitrates Directive and Urban Wastewater Treatment Directive. Implementation and finalization of other Directives was reported to be ongoing in 2012. The classification of Special Protection Areas (SPAs) (Natura 2000) and development of SPA management plans (Bird and Habitats Directives). A National Action Programme has to be sent to the EC for the Plant Protection Products Directive. In most cases there is no explicit link made with or explanations of the actions relevant to the WFD implementation. No RBD-specific information is reported. There has been significant progress in the implementation of the Basic Measures between 2009 and 2012. Most Directives were already implemented in the national legislation in 2009 and requirements were reported in 2012 to be fully met. It is not clear whether the classification of 104 SPAs (Bird and Habitat Directive Areas) and development of management plans for all SPAs will be achieved by 2015.

7. Progress with the implementation of Basic Measures set out in Article 11.3b-I

Reported progress

Figure 7.1 Reported progress with implementation of basic measures (Article 11.3 (b) to (l) in 2012) (PoM aggregation report)



Source: WISE PoMs Aggregation Report 2-2 - Implementation of Other Basic Measures in 2012

All the basic measures required under Article 11.3.b-1 were already in place in 2009 in all RBDs in the Netherlands. The report from the Netherlands from 2012 does not provide information on possible additional measures taken since 2012. The provided information is given on a national basis, no RBD-specific information is available.

Delays in implementation

Member States were asked to report if there were substantial delays in the implementation of basic measures required under Article 11.3. b to l.

There were no reported delays of Article 11.3 (b to l) basic measures in the Netherlands RBDs.

Financing of measures

Member States were asked to report on the source of EU funds for the financing of Article 11.3.b to l basic measures.

For all measures, non-EU funds were used to finance these measures in the Netherlands.

8. Supplementary measures (Article 11.4)

The need for supplementary measures

Supplementary Measures are those measures designed and implemented in addition to the Basic Measures where they are necessary to achieve the environmental objectives of the WFD as established in Article 4 and Annex V. Supplementary Measures can include additional legislative powers, fiscal measures, research or educational campaigns that go beyond the Basic Measures and are deemed necessary for the achievement of objectives.

In 2010, Member States reported details of the Supplementary Measures planned (in 2009) to tackle significant pressures on surface and ground waters where Basic Measures were not enough to meet WFD environmental objectives. Details of the measures were reported in a List of Supplementary Measures specific to each RBD. Each Supplementary Measure was to be reported with a national code. In some Member States, national codes and measures may be common to more than one RBD, whereas in others the same measure may have a different code in each RBD. Therefore, the number of different measures used at a national level does not necessarily equate to the sum of the different measures used in the component RBDs. Also, the same Supplementary Measure may be applicable to more than one pressure type.

Member States were asked to report which Supplementary Measures were used to tackle specific pressures (at an aggregated and/or disaggregated level) when Basic Measures were not enough: these are indicative of those that have been applied or planned in 2009. There are also examples of where not all Supplementary Measures in the List of Supplementary Measures are reported to be used or planned in 2009.

In 2012, Member States reported some additional aspects on Supplementary Measures including their state of implementation ('not started', 'on-going' or 'completed'), whether their implementation was substantially delayed and, if so, the reasons for the delay.

Figure 8.1 Number of sub-units within the Member State (NL) where basic measures are enough (Yes) or not enough (No) to tackle significant pressures on surface water bodies (724 surface water bodies, 4 RBDs in NL).

Source: WISE PoM reports

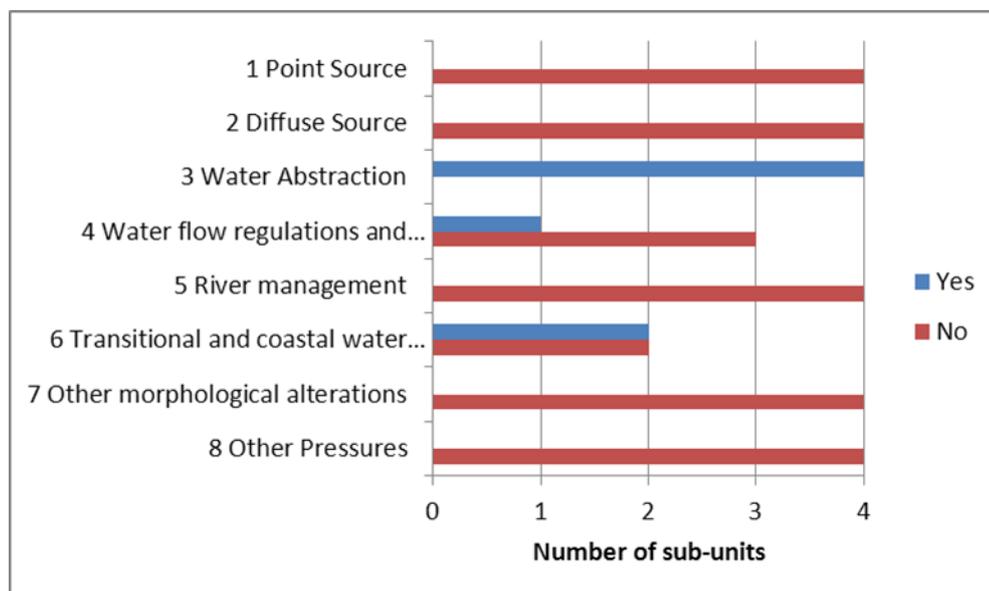
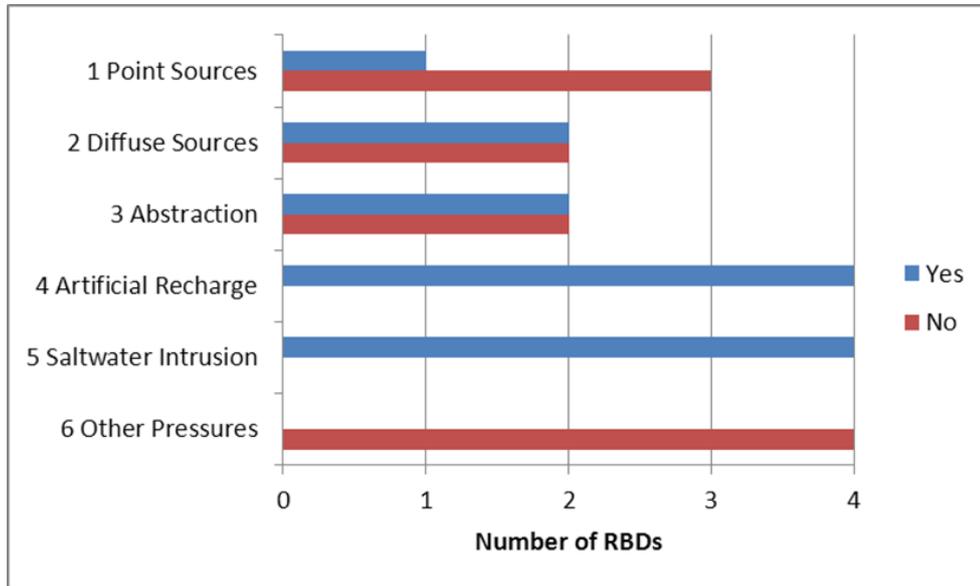


Figure 8.2 Number of river basin districts within the Member State (NL) where basic measures are enough (Yes) or not enough (No) to tackle significant pressures on ground water bodies. (23 GWB, 4 RBDs)

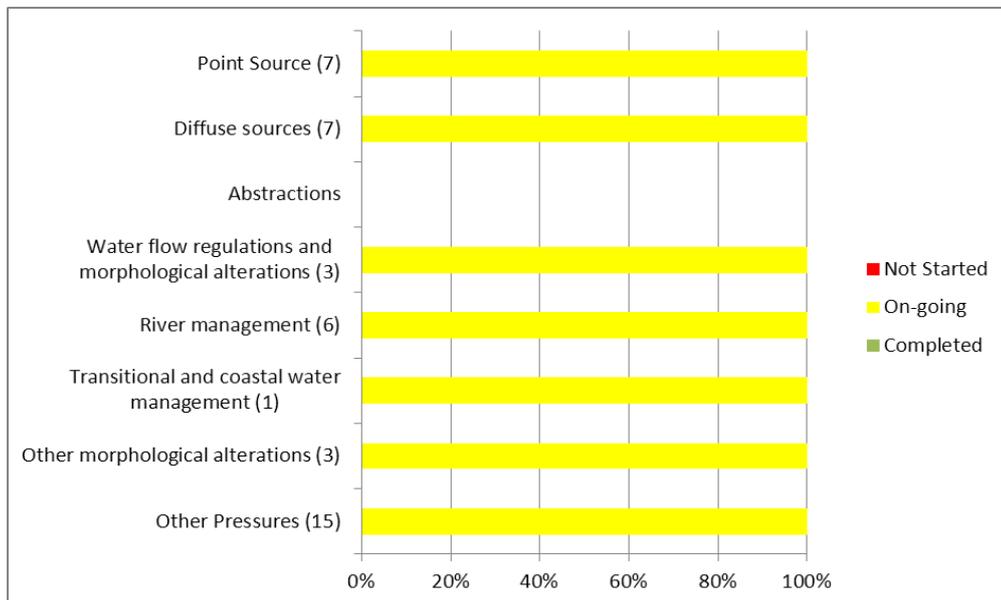
Source: WISE PoM reports



Progress with the implementation of Supplementary Measures between 2009 and 2012

Surface Waters

Figure 8.3 State of implementation of supplementary measures in relation to significant pressures of surface waters in 2012



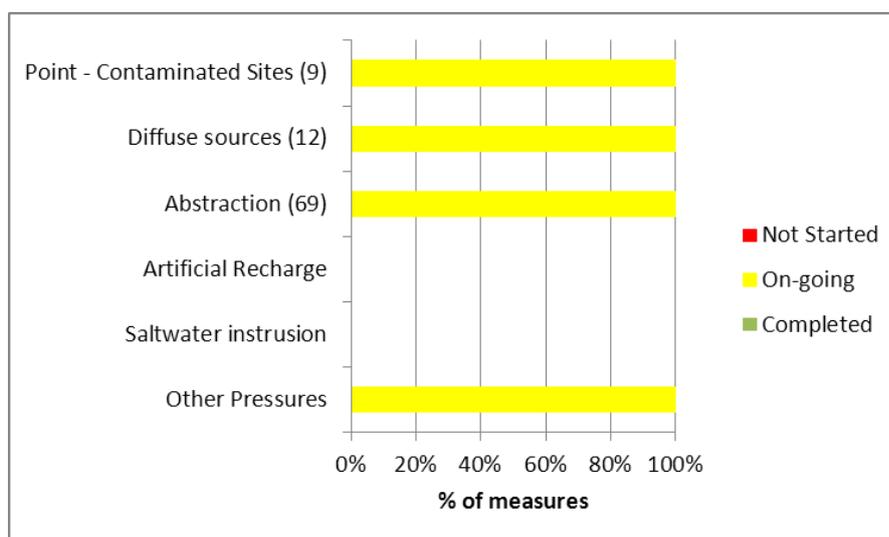
Number in brackets is the number of supplementary measures tackling the pressure.

Note: a measure may tackle more than one pressure.

Source: WISE PoMs Reports

Groundwater

Figure 8.4 State of implementation of supplementary measures in relation to significant pressures on ground waters in 2012



Number in brackets is the number of supplementary measures tackling the pressure.
Note: a measure may tackle more than one pressure

The majority of the supplementary measures are reported to be on-going without any reported delays. Several measures are postponed to after 2015 due to austerity measures of the government. In case of projects relating to river restoration the delays are caused by delays in land acquisition and other measures. It is expected that the several targets for 2015 relating to Other pressures, River management, transitional and coastal water management, other morphological alterations will not be met in 2015.

Delays in implementation

As with Article 11.3 b to l basic measures, Member States were asked to report whether there was a substantial delay in implementing supplementary measures included in the first RBMPs in 2009, and to explain any such delays.

In the Netherlands, 18% of the 112 supplementary measures were reported to be delayed because of funding/finance obstacles. Other reasons are legislation barriers (5%) and lack of land/acquisition (4%).

Financing of supplementary measures

Member States were also asked to report on the source of EU funds for the financing of supplementary measures.

As for Article 11.3.b to l, non-EU funders were mostly used to finance supplementary measures in the Netherlands (89%). Other EU funds (4%), cohesion (3%), Life+ (2%), rural development (1%) and structural funds were used to finance these measures.

Supplementary Measures in place to tackle each of the significant pressures for which Basic Measures are not enough to achieve WFD objectives

From the reported information there are supplementary measures for each of the significant pressures for which basic measures are not enough to meet the WFD objectives.

All supplementary measures relating to 2009 were also reported in 2012. No new supplementary measures were reported in 2012.

9. Reporting of Key Types of Measures

In 2012, Member States were asked to report on 16 defined Key Types of Measures (KTM). These were expected to incorporate Article 11.3 (b to l) basic measures and supplementary measures. Their implementation and completion were expected to deliver the bulk of the actions required to achieve WFD objectives, i.e. to reduce significant pressures to the extent required to achieve good status or to prevent deterioration of status in high and good status water bodies. The defined KTMs were:

- 1 Construction or upgrades of wastewater treatment plants beyond the requirements of the Directive on Urban Waste Water Treatment;
- 2 Reduce nutrient pollution in agriculture beyond the requirements of the Nitrates Directive;
- 3 Reduce pesticides pollution in agriculture;
- 4 Remediation of contaminated sites (historical pollution including sediments, groundwater, soil);
- 5 Improving longitudinal continuity (e.g. establishing fish passes, demolishing old dams);
- 6 Improving hydromorphological conditions of water bodies other than longitudinal continuity;
- 7 Improvements in flow regime and/or establishment of minimum ecological flow;
- 8 Water efficiency measures for irrigation (technical measures);
- 9 Progress in water pricing policy measures for the implementation of the recovery of cost of water services from households;
- 10 Progress in water pricing policy measures for the implementation of the recovery of cost of water services from industry;
- 11 Progress in water pricing policy measures for the implementation of the recovery of cost of water services from agriculture;
- 12 Advisory services for agriculture;
- 13 Drinking water protection measures (e.g. establishment of safeguard zones, buffer zones etc.);
- 14 Research, improvement of knowledge base reducing uncertainty;
- 15 Measures for the phasing-out of emissions, discharges and losses of priority hazardous substances or for the reduction of emissions, discharges and losses of priority substances
- 16 Upgrades or improvements of industrial wastewater treatment plants (including farms) beyond the requirements of the Integrated Pollution Prevention and Control (IPPC) Directive;

Member States also were given the possibility to report different or additional KTMs according to their specific situations and requirements.

Quantitative indicators for the scale and progress with the implementation of measures were proposed for each of the defined Key Types of Measure. Member States could also report their own indicators if the proposed ones were not appropriate for their specific national situations.

Sections 10 to 14 show and describe the progress made by Netherlands in the implementation of KTMs primarily associated with the five key topics subject to the in-depth assessment: not all KTMs were reported and/or applicable to the situation in Netherlands. Some of the KTMs are not necessarily associated with the 5 selected Topics: these are described in section 15. As indicated above, Member States were also able to report different KTMs from the defined KTMs; these are also described in section 15.

10. Progress with implementation of measures to reduce pressures (nutrients, organic matter) from agriculture

Quantification of the scale of agricultural pressures

The scale of the agricultural pressures has been quantified in terms of reductions of some pressures to achieve the objectives, however not for all.

In each RBD, nitrates, phosphates, pesticides and other diffuse sources are types of pollutants arising from agriculture and have contributed to diffuse pressures. From the pressure types; hydromorphology and soil erosion it is unclear if those contribute to agricultural pollutants. In addition, the number of water bodies (WBs) failing Environmental Quality Standards (EQS) for pesticides, metals, etc. are also given (see table 4.4 in the RBMPs). The presentation of the results is similar across RBDs, although the number and type of substances that exceed EQS is not the same across the 4 RBDs. In general, the loads are given (see RBMPs), however the loads to be reduced to meet the objectives are not given. Thus it cannot be said how much nutrient load reduction is needed from agriculture to reach the nutrient standards (because of multiple nutrient sources, diffuse emissions from historic loading of the soil). An overview is given of the measures (technical, economic, non-technical measures) addressing agricultural pressures as described in the programmes of measures of the RBMPs.

Assessment of measures for the achievement of WFD objectives

The Netherlands developed basic measures under Article 11.3.a, g and h and supplementary measures under Article 11.4 related to pressures arising from agricultural pressures. As stated above, it was not clear from the RBMPs how much the pressures need to be reduced to reach the WFD objectives.

In the first RBMPs (section 6.2.9 in the RBMPs), the 4th Nitrate Action Plan (NAP) was proposed (2010-2013) as a basic measure. In this NAP, the actions were: tighten nitrogen and phosphate application and coefficients (depending on soil type and parcel), lower period for manure maturation and build a larger storage capacity for manure. However, the European Commission was concerned that action on pollution from agriculture was not sufficient under the Nitrates Directive (ND), therefore NL stated that there will be a 5th NAP under the ND which would be finalized by December 2013. In advance of this NAP an estimation of the additional gaps to be filled, types of measures and level of funding needed for this would be sent to the Commission.

In all the 4 RBDs the basic measures were not enough to meet the WFD objectives in rivers and lakes. For transitional waters this was only for one RBD. Agriculture has been defined as an important driver leading to significant pressure in all the Dutch RBDs. Pollutants from diffuse agricultural sources form a significant pressure on water quality. Some information is provided on the scope of application of the measures. The basic measures are applied at national level. In the Annex P of the RBMPs, the measures related to Article 11.3h are given. Those related to agriculture are: lowering emissions from nutrients from agriculture; lowering emissions from pesticides and plant protection products; planning a manure and spray-free zone. Information on the Rural Developmental Programme is not found in the RBMPs. In addition, no information could be found on how much of the gap will be filled and by when.

The point source from agriculture does not seem to be relevant. However in the RBMPs, measures related to agriculture are also part of Article 11.3.g, namely decisions on discharge of open cultivation and livestock and decisions on horticulture. However, no information could be found back on how much of the gap will be filled and by when.

In the RBMPs, article 11.4 is mentioned and measures related to agriculture are regional measures for diffuse sources. However what is mentioned in the RBMPs is not in line with what is found back in the Annex P of the RBMPS. For example, in the Rhine RBMP, following measure related to agriculture are planned, namely lowering emissions from agriculture in 616 places. However in the Annex P of the RBMP of the Rhine, this can be found back under Article 11.3.h. The same is noted in the other RBMPs. However, no information could found back on how much of the gap will be filled and by when.

Key types of measure

KTM2. Reduce nutrient pollution in agriculture beyond the requirements of the nitrates directive

This KTM was not reported by Netherlands.

KTM12: Advisory services for agriculture

This KTM was not reported by Netherlands.

11. Progress with implementation of measures to reduce pressures from chemicals

Quantification of the scale of chemical pressures

The scale of the pressures arising from emission, discharges and losses of chemical has been quantified in terms of reductions to be required to achieve the WFD objectives, however not for all sources.

The RBMPs do not present an exhaustive inventory of sources of chemical pollution. Information is available on the amount of some pollutants entering surface water annually via different sources: wastewater treatment installations, industry and diffuse sources. However it is unclear whether this information is complete. In addition, an overview is given on the substances for which an EQS is not met (see table 4.2 of the different RBMPs). In table 4.4 an overview is given for each pollutant, in which the percentage of water bodies that exceed the standard and thus fails to meet the good status is given. The percentage of water bodies failing to achieve a good status is given in classes. In the RBMPs, the number of water bodies that are significantly impacted are given per pressure type (e.g. Integrated Pollution Prevention and Control (IPPC) industries, non-IPPC industries, STPs, etc.). The methodology of determining the significant point and diffuse source pollution is based on emissions data. The relative importance of a certain point or diffuse source is based on the number of WBs assessed as being significantly impacted. The policy on emissions reduction under the ND, the polluter pays principle (PPP), etc. will help to achieve the objectives. However, most emissions are diffuse with sources from the past. The lack of coherence between the WFD and Registration, Evaluation, Authorisation & restriction of Chemicals (REACH) and also other EU policies (e.g. traffic) will not contribute to achieving reductions in chemical pollution.

Assessment of measures for the achievement of WFD objectives

Basic and supplementary measures

The Netherlands developed basic measures under Articles 11.3.a, g and k and supplementary measures under Article 11.4 related to pressures arising from chemical pressures.

Most of the measures described in the PoMs are basic measures under article 11.3.a that are applied at national level and most of them are indeed implementing other relevant legislation (IPPC). At national level, general measures related to chemical pollution are: Seveso Directive, Environmental Impact Assessment Directive, the Urban waste-water directive and the IPPC Directive. Other natural measures are: regulation on point discharges. It is not specified for which sectors these measures apply but it can be assumed that they apply to industrial emissions, waste deposits and households. The IPPC Directive is implemented, however no specific links with the relevant aspects or measures of the WFD are given. However, no information could be found on how much of the gap will be filled and by when.

However, it is not clear if the basic measures that were considered not enough to meet WFD objectives can be related to chemical pollution (only point sources are mentioned and is not specified if this is applied to agriculture, chemical pollution of other point sources). In the RBMPs of the 4 RBDs the following is noted under Article 11.3g:

- ban on discharges into the groundwater, on or in the soil, in household wastewater, cooling water and industrial waste outside sewers

- general rules and permit system for the discharge of waste, contaminated or hazardous substances in surface water due to: application BATs (BREFs) and implementation of emission-imission test
- sewage from private households should not be discharged if within 40 meters of a public sewer or if connected to another treatment plant is possible. If this is not the case, discharge may take place, provided that the discharge is reported and the waste water prior to discharge at the surface unit offers water passed through a water treatment facility
- remediation of serious and urgent soil and groundwater contamination. In the Annex P of the RBMPs, there is an overview given of the specific measures (with units) for point sources that could be related to chemical pollution (Article 11.3g).

Measures related to Article 11.3k are related to priority substances, in the RBMPs the following could be found :

- admission assessment for plant protection products and biocide products based on criteria to protect humans and the environment on the Uniform principles. Regarding risks to aquatic organisms, there is a national specific assessment which it is aligned with to achieve the water quality objectives of the WFD.
- where necessary, to mandate use regulations in order to meet the admission requirements laid down for the protection of people and the environment in permits granted on the basis of the Water Act
- application of BREFs or otherwise formulated abatement measures: the best available technics, application of the emission-imission test in assessment of emissions to surface water
- at least obtain the current level of protection (art18 of the WFD)

In the RBMP itself, measures are given related to Article 11.4. The measures that could be related to chemicals are: regional additional measures for point and diffuse sources. More specifically, for point sources, the following measures are given: improvement of the purification of sewage treatment plants, purchase untreated discharges, tackling sewage overflows. For diffuse sources the following measures are reported: removal of polluted sediment, lowering emission of pesticides and plant protection products, lowering emission traffic/navigation. However, the measure itself can be different between RBDs, the same category is given but not all RBD categories are of relevance. In the Annex P of the RBMPs, the measures that are under Article 11.4 are not related to those chemical measures.

In general, measures are identified, however no assessment and judgement is available as to how much of the measures will contribute to achieving the objectives.

Measures required by the EQS Directive

The EQSD includes a number of obligations related to priority substances such as monitoring of sediment and biota and the establishment of an inventory of emissions, discharges and losses. Next to this, the EQSD also contains a provision to designate mixing zones.

Inventory of the sources of chemical pollution

The RBMPs do not present an exhaustive inventory of the sources of chemical pollution, but rather include information on chemical pollution in different tables. There is information on the amount of some pollutants entering the surface waters annually via the effluent from wastewater treatment installations, industry and diffuse sources. However it is not clear whether this information is complete and it is quite difficult to get an overview.

Use of mixing zones

No information on mixing zones could be found.

Measures taken to reduce the extent of the mixing zone in the future

As no information on the potential use of mixing zones could be found, it seems that no measures are related to this.

Specific measures with the aim of progressively reducing pollution from priority substances

Measures to eliminate pollution of surface water by priority substances (and reduce from other substances) were in place in 2009. In the RBMPs there are measures given related to priority substances (see measures related to Article 11.3.k). In the Annex M an overview is given of the priority substances. However, no detailed information was found on measures for the priority substances. In Annex M of the RBMPs, a table is available where an X is added if the substances is a priority hazardous and if the Directive 91/414 or Directive 76/769/E is applicable. No information on the measures related to those substances are given.

Specific measures with the aim of ceasing or phasing out emissions, discharges and losses of priority hazardous substances

As indicated above, no specific measures related to ceasing of phasing out of priority substances are given.

Key types of measure

KTM3. Reduce pesticides pollution in agriculture

This KTM was not reported by Netherlands.

KTM15: Measures for the phasing-out of emissions, discharges and losses of priority hazardous substances or for the reduction of emissions, discharges and losses of priority substances

This KTM was not reported by Netherlands.

KTM16: Upgrades or improvements of industrial wastewater treatment plants (including farms) beyond the requirements of the Integrated Pollution Prevention and Control (IPPC) Directive

This KTM was not reported by Netherlands.

12. Progress with implementation of measures to reduce pressures from hydromorphological alterations

Quantification of the scale of pressures from hydromorphological alterations

The scale of hydromorphological pressures has been quantified in terms of reductions required to achieve the WFD objectives, however not for all pressures.

In the RBMPs, an overview is given on the relative contribution of pressure due to hydromorphological and waterflow regulation impacts on surface waters. In the RBMPs of the 4 RBDs, in table 5.1. the pressure linked with the significance level are given and the total number of waterbodies that are significantly impacted. The pressure types for waterflow regulation and morphological alterations are: water reservoirs, harbors, barriers, etc. The same methodology is used in the 4 RBMPs, however, the number of WBs that are significantly impacted per pressure type can be different. Projects related to improve hydromorphological conditions over a length of 2462 km are planned or being developed. Projects with a total length of 1060 km are in the planning phase, whereas projects of 953 kilometers are in construction phase and 449 km has been completed. A cost effectiveness analysis has been undertaken. An ex ante evaluation of the measures has been undertaken with the information that was available in the spring of 2008. Here it is mentioned that the proposed measures on hydromorphology will contribute largely in achieving the ecological targets. Also it was stated that present policy already contributes to the realization of the goals. •

Assessment of measures for the achievement of WFD objectives

The Netherlands report measures under articles 11.3.a, 11.3.i and 11.4. However no assessment is available on how much of the measures will contribute to the achievements of the WFD objective.

The Environmental Impact Assessment Directive and the Habitat Directive have been implemented across all RBDs. No specific information was provided on the actions and procedures relevant to the WFD aspects for the two directives.

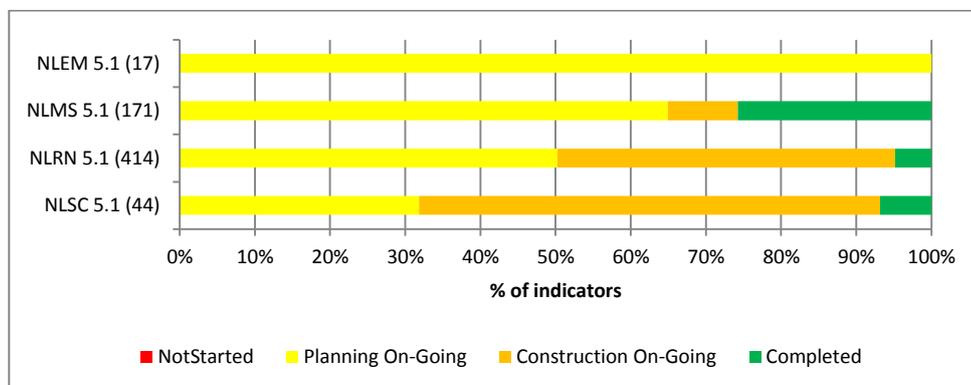
In the RBMPs, two measures are given according to article 11.3.i: regulation and restoration of water movement and hydromorphology. In the Annex P of the RBMPs, specific measures are given related to Article 11.3i. The types of measures are the same across all RBDs, however the unit can differ.

In the RBMPs, a number of measures related to Article 11.4 are given that can be related to hydromorphology. In the annexes of the RBMPs, more specifically, the type of pressures are given, however it is not always clear if those are related to hydromorphology. Three supplementary measures relating to waterflow regulation and morphological alterations of surface waters are reported in 2012. All of them were reported to be ongoing. Three supplementary measures related to other morphological alterations were also reported in 2012 and all of them were reported to be ongoing.

Key types of measure

KTM5: Improving longitudinal continuity (e.g. establishing fish passes, demolishing old dams)

Figure 12.1 Percentages of indicator/measures associated with KTM5 that were reported as being not started, planning on-going, construction on-going and completed in 2012



Key to indicators

The annotations next to each bar in the Figure shows "RBDCode; Indicator number; (value of the indicator when 100% completed)":

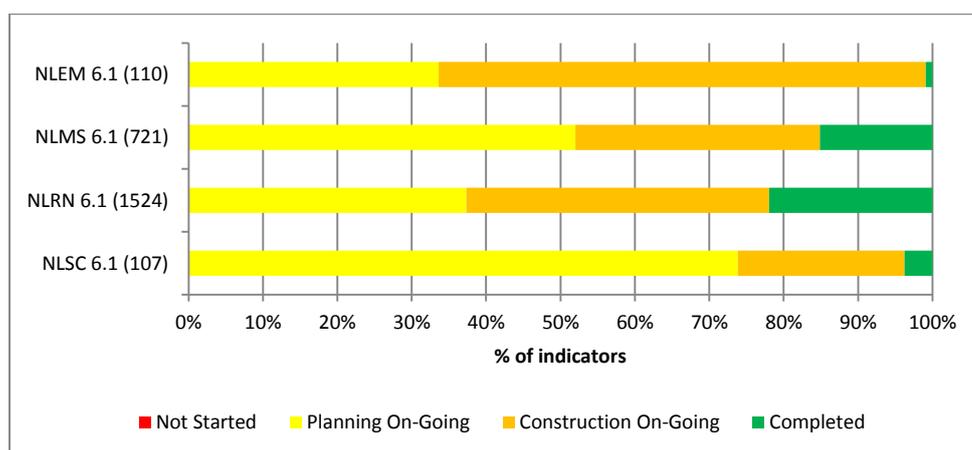
5.1 Number of projects/measures to improve longitudinal continuity

Source: WISE PoM Reports

The Netherlands reported that there is a total of 646 projects dealing with improving longitudinal continuity. These projects take place in all 4 RBDs: the Meuse, Rhine, Scheldt and Ems. 350 of these projects are in the planning phase. 229 are in the construction phase while 67 of them have been completed.

KTM6: Improving hydromorphological conditions of water bodies other than longitudinal continuity

Figure 12.2 Percentages of indicator/measures associated with KTM6 that were reported as being not started, planning on-going, construction on-going and completed in 2012



Key to indicators

The annotations next to each bar in the Figure shows "RBDCode; Indicator number; (value of the indicator when 100% completed)":

6.1 Length of rivers (km) affected by measures

Source: WISE PoM Reports

The Netherlands reported that projects with measures to improve hydromorphological conditions over a length of 2462 kilometer are being planned or developed. Projects with a total length of 1060 kilometer are in the planning phase. Projects with a total length of 953 kilometer are in the construction phase while a total of 449 kilometer have been completed.

13. Progress with implementation of measures to reduce pressures from urban waste water treatment

Quantification of the scale of the pressures

The scale of the pressures arising from urban waste water treatment has been quantified in terms of the reductions required to achieve the WFD objectives for some priority substances and specific pollutants. In the RBMP the following information is given: (1) the number of WBs failing the EQS for pesticides, metals etc (2) the relative contribution of STPs, sewage overflows, sludge processing plants, (3) the number of STP's and the loadings of several pollutants in the effluents of those STPS. However, in the RBMPs it is not mentioned how much loading of the different substances has to be reduced to achieve the objectives. The approach and presentation is the same across the 4 RBDs, however the loads/number of exceedances etc. differ between the different RBDs.

Assessment of measures for the achievement of WFD objectives

In the Netherlands, basic measures are planned for the implementation of the Urban Waste Water Treatment Directive. However, no assessment has been done as to how much those measures will contribute to the achievement of the WFD objectives.

The Netherlands reported in 2009 that the Urban Waste Water Treatment (UWWT) Directive has been implemented in the national legislation across all RBDs. In 2012, the Netherlands reported that the minimum required reductions for P and N have been met. However, no specific RBD is given.

In the RBMPs of the 4 RBDs, the following measures are noted under Article 11.3g: (1) A ban on discharges into the groundwater, on or in the soil and in household wastewater, cooling water and industrial waste outside sewers, (2) general rules and permit systems for the discharge of waste, contaminated or hazardous substances in surface water due to: application BATs (BREFs) and implementation of emission-imission test, (3) sewage from private households should not be discharged if within 40 meters of a public sewer or other treatment plant a connection is possible. If this is not the case, discharge may take place, provided that the discharge is reported and the waste water prior to discharge at the surface unit offers water passed through a water treatment facility. In addition, in the Annex P of the RBMPs, there is an overview given of the measures related to point sources that could be related to chemical pollution (Article 11.3g).

The supplementary measures related to UWWT that are indicated under Article 11.4 in the RBMPs are; sanitation of sewage overflows and untreated discharges, measures to have higher quality of effluents. However, those are mostly tackled under Article 11.3.g.

Key types of measure

KTM1. Construction or upgrades of wastewater treatment plants beyond the requirements of the directive on urban waste water treatment

This KTM was not reported by Netherlands.

14. Progress with implementation of measures to reduce pressures from water abstractions

Quantification of the scale of the pressure

The scale of pressures arising from water abstraction has been quantified in terms of the reductions required to achieve the WFD objectives. This has not been done for all pressures.

In Table 5.1 (for surface water) and Table 5.11 (for groundwater) of the RBMPs, the number of waterbodies are given that are significantly impacted are given per pressure type (also for water abstraction). For groundwater, in the RBMPs the volumes are given per pressure type (e.g. by human consumption, agriculture, industry, recreation, nature, other sources, thermal storage). In the RBMPs, the measures are given per pressure type, however there is no indication on how much of the volume has to be reduced to achieve the objectives.

Assessment of measures for the achievement of WFD objectives

The Netherlands provide information on measures related to basic measures (under Article 11.3.a), measures related to Article 11.3.e and Article 11.4. The Environmental Impact Assessment Directive and the Habitat directive have been implemented across all RBDs. However, no specific information was provided on the actions and procedures relevant to the WFD aspects for the two directives.

In the Annex P of the RBMPs, the measures are given per RBD related to Article 11.3e. In the RBMPs, Article 11.3c is mentioned, however no specific measures are given in the Annexes of the RBMPs.

In the Annex P of the RBMPs, measures are given related to Article 11.4, however it is not clear if those are related to Water Abstraction.

In general, measures related to reduce pressures from water abstractions are given, however it is not clear how much of those measures will contribute to the achievement of the WFD objectives.

Key types of measure

KTM7: Improvements in flow regime and/or establishment of minimum ecological flow

This KTM was not reported by Netherlands.

KTM8: Water efficiency measures for irrigation (technical measures)

This KTM was not reported by Netherlands.

15. Reporting of other Key Types of Measure

This section summarises the progress with the implementation of the defined KTM's not included within the assessment of the specific pressures/issues. Member States were also given the possibility to report different or additional KTM's according to their specific situations and requirements: these are also summarised in this section.

KTM4: Remediation of contaminated sites (historical pollution including sediments, groundwater, soil)

This KTM was not reported by Netherlands.

KTM9: Progress in water pricing policy measures for the implementation of the recovery of cost of water services from households

This KTM was not reported by Netherlands.

KTM10: Progress in water pricing policy measures for the implementation of the recovery of cost of water services from industry

This KTM was not reported by Netherlands.

KTM11: Progress in water pricing policy measures for the implementation of the recovery of cost of water services from agriculture

This KTM was not reported by Netherlands.

KTM13: Drinking water protection measures (e.g. establishment of safeguard zones, buffer zones, etc.)

This KTM was not reported by Netherlands.

KTM14: Research, improvement of knowledge base reducing uncertainty

This KTM was not reported by Netherlands.

Summary assessment on the state of implementation of Key Types of Measure

14 of the 16 KTM's were not reported by the Netherlands. There is no indication on the expected progress over the next 3 years of the first planning period.

New Key Types of Measures

No information on the Netherlands was available under POM_7_1 New Key types of Measures.

16. Overall progress with the Programme of Measures

Main achievements

There is good process in implementation and making measures operational. The same information was reported for all RBDs. The Netherlands reported that good progress has been achieved and implementation is progressing well.

No further information was provided on improvements in status of water bodies.

Main obstacles

The PoM should contain all the relevant measures to be applied in the RBD. Many of these measures are only described in the sub-basin plans, which results in a quite general PoM in the RBMPs and in a lack of specificity concerning the measures to be implemented. The RBMPs will benefit from more detail on how the implementation of the PoM will lead to the achievement of objectives under Article 4. This will require more information on scope of measures, financing, timescales, etc. In addition, budgetary cuts decided after the adoption of the plan have cast serious doubts on the implementation of the planned measures. Adequate financing for the PoM should be provided to make it possible to achieve the objectives of the adopted RBMPs.

Overall Progress

The same information was reported for each of the four Dutch RBDs and The Netherlands reported that 'for most measures implementation has started and progresses well'.

17. Progress in financing measures

The financing of measures is an integral part of the water management plan from 2009. These water management plans form the basis for the implementation and financing of measures from the river basin management plans. The Netherlands reported that the financial crisis has led to austerity measures which can lead to adjustments in the phasing of the PoM of the WFD. The EC have been informed on those measures where phasing has been postponed to after 2015. No further information is provided in WISE PoM on funding sources or budget.