

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:

Italy (IT)

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 Plans<sup>1</sup>, 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 Italy.

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.

<sup>&</sup>lt;sup>1</sup> <u>http://ec.europa.eu/environment/water/water-framework/impl\_reports.htm</u>

### 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)?
  - o 8a) What are the main achievements?
  - o 8b) Improvements in status of water bodies?
  - o 8c) What are the main obstacles?
  - o 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 **<u>in-depth assessment</u>** 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)?
  - o 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 <u>priority hazardous substances</u>?
- 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 Italy

Italy has eight RBDs. Key methodological approaches for the implementation of the WFD are set at national level. This includes, for example, classification and characterisation of WBs and monitoring. In the 2010 RBMPs (Italy's RBMPs were completed in early 2010), there were nonetheless major differences across the RBDs in terms of the extent of analysis and the use of recent national technical approaches: this is due to the fact that some methodologies, such as those for monitoring, came late in the process. Moreover, the RBMPs at RBD level draw on previous plans – especially the Water Protection Plans (Piani di Tutela delle Acque) prepared at regional level. It appears that many of the measures listed in the RBMPs are taken from these previous plans. Indeed, the RBMPs show that the regions - rather than the RBDs - are the main level at which water policy is implemented. Moreover, there are significant differences in approach and timing across the regions, including across regions within the same RBD.

The 2010 RBMPs refer to a broad range of pressures, including: diffuse pollution, in particular from agriculture; point source pollution, including from urban waste water treatment (UWWT) plants and industrial facilities; and water abstraction for agriculture and other sectors. For a high proportion of surface water bodies, however, the ecological and chemical status of water bodies was unknown at the time the RBMPs were completed in 2010: ecological status was unknown for almost 60% of surface water bodies (SWBs), and chemical status was unknown for almost 80% of SWBs. For groundwater bodies (GWBs), on the other hand, chemical status was unknown for about 25% of GWBs and quantitative status was unknown for about 32% (this for only six of the RBDs - no GWB information at all was provided for two of the eight). While Italy reported that 8.3% of SWBs reached good status or better in 2009, and 10.1% would do so in 2015, the lack of information on water body status means that these results are incomplete and not very informative.

# 4. Role of basic measures and supplementary measures

Article 11.3 of the WFD states that basic measures <u>are the minimum requirements</u> to be complied with and <u>shall</u> consist of <sup>2</sup>:

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 I: 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.

<sup>&</sup>lt;sup>2</sup> 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 (WB). 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.

Most of the RBMPs discuss sources and impacts in qualitative terms, though some provide data for the RBD as a whole. In general, however, information apportioning impacts between sources and sectors is scarce in the RBMPs. Within individual RBDs, information can vary across regions and sub-basins. The information provided on WISE for the first cycle identifies – for some RBDs – the number of WBs not meeting good status due to specific sectors and their pressures.

### Approaches of assigning measures to sectors/sources to reduce pressures

The RBMPs do not provide a clear explanation as to how measures were assigned. Sectors that are identified as being sources of significant pressures - i.e. agriculture, industry and households - are clearly

targeted. It should be noted that for most RBMPs, the measures refer to broad geographical areas (the whole RBD or entire regions) rather than specific catchments or WBs. Nonetheless, it appears that many of the measures listed in the PoMs are derived from previous plans, such as the regional Piani di Tutela delle Acque (Water Protection Plans). This is indicated clearly in some RBMPs but not in others.

The RBMP for ITF (Southern Apennines), for example, lists measures from these Water Protection Plans and other prior plans as well as measures specifically for the RBMP (both basic and supplementary measures). The measures in ITF are all described in very general terms, such as: "actions for morphological, hydraulic and environmental restoration" (this a prior measure), without information as to the content or location. In contrast, two RBMPs, ITB (Po) and ITC (Northern Appenines), contain annexes detailing measures by sub-basin catchment. For ITC, a check of two sub-basin catchments indicated that measures come largely from the existing Water Protection Plans; for this RBD, these more specific subbasin measures are linked to 'umbrella' RBMP measures (and thus here, the RBMP's measures are closely linked to those of previous plans). Nonetheless, the specific water bodies addressed are not indicated, though the documents list water bodies and the expected date of achieving good status, implying that some analysis or estimate of the results of measures was carried out.

In general, the RBMPs do not provide clear links from pressures and sources to measures. For basic measures, there is a focus on actions for transposing and implementing legislation at regional level.

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

As noted above, the RBMPs do not provide clear information as to how measures were assigned. It appears that the sectors known to be contributing most to pressures and impacts are targeted (see above); however, any links to pressures and impacts are qualitative and for the most part refer to broad geographical scales (RBDs, regions or sub-basins). As indicated above, the extent of information varies across RBMPs.

### **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.

No information was found regarding cost-effectiveness analysis of measures. Indeed, relatively little information was found on the costs of measures. None of the RBMPs refer to the reasons for this, though a few indicate that economic analysis will be undertaken and provide some discussion of the methods to be used (the case, for example, for ITA, Eastern Alps).

### 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).

In total, exemptions have been reported for 1838 water bodies in Italy, about 21% of the total. (As noted in section 3, status assessments were not available for many water bodies, so the exemptions reported may not represent all those needed.) Most exemptions are under Article 4.4 (extension of the deadline for meeting good status), and less than 10% under Article 4.5 (lower objective).

Under Article 4.4, disproportionate costs are cited for about half of the exemptions; under Article 4.5, this reason is cited for most of the cases.

However, hardly any information was found on methods used to determine disproportionate costs 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.

No information was found in the RBMPs on the consideration of uncertainty – it appears that this was not considered when identifying measures.

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

Across Italy, a range of actions has been taken for the further implementation of basic measures. For the UWWT Directive and the Drinking Water Directive, further investments were being made. For the Bathing Water and Plant Protection Products, where new EU legislation has been put in place in recent years, this legislation has been transposed and is being implemented in Italy. For the Birds and Habitats Directive, new sites have been designated and the preparation of management plans was being financed.

In general, the information does not indicate the extent to which progress in implementation of these basic measures will support the attainment of WFD objectives. The information provided on progress includes actions taken both before and after the RBMPs were completed in 2010: while dates are provided, the information does not provide a clear indication that the RBMPs have influenced the course of implementation of the basic measures (which appear to be carried out mainly at regional level). While further progress is expected across Italy to 2015, there is no information to link this to attainment of the WFD and RBMP objectives.

No information was found for ITH, Sicily.

### **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

Since 2010, other basic measures (Article 11.3 (b) to (l) of the WFD) have been implemented in many parts of Italy - however, the information provided does not cover all RBMPs. Moreover, the information provided refers almost entirely to measures carried out at regional level: while some responses specify the regions, it is not always clear in others which regions are concerned or whether information covers all or a substantive part of the RBD. As a result, it is not clear if the information collected in the figure above provides a complete picture of progress across Italy. (And here, as for other types of measures, it is not clear to what extent these measures taken at regional level are linked to the RBMPs and implementation of the WFD).

The results indicate, that while work is underway, implementation has been completed for few if any of the basic measures. For cost recovery, progress depends on work underway at national level for the development of cost recovery methods, an area where Italy has not met the WFD's 2010 deadline.

### **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.

Italy provided relatively little information on delays to implementation of these types of measures. Where information was provided, obstacles to funding were identified as the main reason for delays.

### **Financing of measures**

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

According to the information provided, EU Structural Funds (ERDF) provides about 13% of the funding identified for the implementation of the Article 11.3.b to I basic measures, and the Rural Development Fund (EARDF) provides a further 8%. Several other EU funds are cited, including the Fisheries Fund and LIFE+: these other sources, however, provide much smaller shares of financing. Non-EU funds are the source of finance for 48% of these basic measures (however, it is not clear if funding information is provided for all measures).

### 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 (IT) where basic measures are enough (Yes) or not enough (No) to tackle significant pressures on <u>surface</u> water bodies (22 sub-units reported in IT).



Source: WISE PoM reports

Supplementary measures are needed to tackle nearly all the main significant pressures on surface water bodies in the RBDs.

# Figure 8.2 Number of river basin districts within the Member State (IT) where basic measures are enough (Yes) or not enough (No) to tackle significant pressures on ground water bodies. Eight RBDs reported in IT.



Source: WISE PoM reports

While information is not complete on the need for supplementary measures to tackle significant pressures on GWBs, supplementary measures are needed to address diffuse sources and abstraction in at least six of the eight RBDs, and point sources and saltwater intrusion in at least five.

### **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



Note: a measure may tackle more than one pressure. Source: WISE PoMs Reports

#### Groundwater



Not Started

On-going Completed

#### Figure 8.4 State of implementation of supplementary measures in relation to significant



0%

20%

3 Abstraction

**4** Artificial Recharge

5 Saltwater Intrusion

**6** Other Pressures

As reporting was not complete for all RBDs, the information provided does not allow an overall assessment of the state of implementation of supplementary measures. Overall progress information (see Figures 8.3 and 8.4) is limited to details of supplementary measures for four RBDs (ITA, ITB, ITC, ITG). Of these, 19% had not been started in 2012, 54% were ongoing, 17% completed, and for 10% no information had been provided on state of implementation.

40%

% of measures

60%

80%

100%

### **Delays in implementation**

As with Article 11.3 b to I 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.

Substantial delays were reported for almost one-quarter of the measures. The main reason indicated seen for nearly all these cases – is lack of funding (23%). Other reasons provided for delays are: legislative, regulatory or administrative barriers (0.2%); plans to start later in the cycle or in the next cycle (0.2%); and lack of staff (0.7%).

#### Financing of supplementary measures

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

Non-EU funds are indicated as the main source of finance for 84% of supplementary measures. Among EU sources, structural funds are the most important ones (11%), followed by rural development funds (4%) and other EU sources (2%).

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

Reporting for Italy on this issue has been fragmentary. In information submitted to WISE for 2009, only ITA and ITG clearly reported supplementary measures against pressures. The PoM WISE reporting on supplementary measures does not cover ITH (Sicily) and it is not clear if the information is complete for other RBDs. Some measures have quite broad titles, making it difficult to identify the specific types of action and the links to individual pressures: for example, ITA measure 31 is entitled 'Misure adottate per i corpi idrici a rischio' (measures adopted for water bodies at risk): it is linked to about 30 pressures. Some discrepancies were found. PoM WISE 4.1 indicates that measures in ITG address river management; however, river management is not listed as a significant pressure in these RBDs in the WISE report on surface water body pressures (SWB\_Pressure).

### 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 I) 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 Italy in the implementation of KTMs primarily associated with the five key topics subject to the in-depth assessment. 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**

No information has been provided on the reductions required from agricultural pressures to achieve WFD objectives. In general, diffuse nitrate pollution is indicated as a pressure in all eight RBDs, as is abstraction for agriculture. Diffuse phosphate pollution from agriculture is a pressure reported in all but one RBD (ITA), and four of the RBDs indicate that diffuse pesticides pollution is a pressure. Only one RBMP (ITB) indicates hydromorphological pressures related to agriculture, though this is likely to be present elsewhere in Italy. The information uploaded to WISE indicates the number of SWBs not meeting good status due to diffuse pollution from agriculture, but not more detailed information (e.g. referring specifically to the number affected by nitrates, etc.). Little information is provided on risks of soil erosion.

### Assessment of measures for the achievement of WFD objectives

The RBMPs indicate, mostly in a qualitative manner, that agriculture is a major source of pressures and list supplementary measures targeted to the agriculture sector. None, however, indicate to what extent the measures will contribute to achieving WFD objectives. For example, the RBMPs contain relatively few references to the Nitrates Action Programmes: these are cited once in the document on basic measures for the ITB RBMP and also once in the ITF RBMP; for ITC, the legislative references to the regional programmes are provided; for ITA, a reference to the Nitrates Action Programme was found for only one of the regions (Lombardy) in the RBD. For at least some RBDs, it appears that measures are planned but these are not specified in the RBMPs.

In the RBMPs/PoMs, it is difficult to identify measures that are specifically indicated for Article 11.3.g.

The RBMPs/PoMs contain little information related to Article 11.3.h measures. For ITB, for example, there is simply a reference to all the measures implemented under the Nitrates Directive and those for plant protection products. Some indications of these measures were found: e.g. in ITA, measures to address pesticides in drinking water areas in Bolzano Province, however, in other RBMPs/PoMs, such as for ITF, no information was found. Here too, the descriptions of basic measures in the Italian PoMs do not indicate how much the measures will contribute to achieving WFD objectives.

### Key types of measure

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

### Figure 10.1 Percentages of measures/indicators associated with KTM2 that were reported as being not started, 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)":

- 2.1 Area of agricultural land covered by measures (km<sup>2</sup>) beyond the requirements of the Nitrates Directive in this case agricultural land covered by General Binding Rules
- 2.2 Estimated Total Costs (€) of the measures
- 2.3 Number of projects/measures
- Source: WISE PoM Reports

Italy has reported indicators for KTM2 measures in ITA, ITB, ITC, ITE and ITG. The RBDs, however, have used different indicators for progress on these measures. For ITE it appears that indicators cover different regions. For ITA and ITE, for example, measures have been completed on 960 km<sup>2</sup>, are underway on 41 km<sup>2</sup> and have not been started on 4430 km<sup>2</sup>. For ITB, ITC and ITE: measures completed are valued at 308 million Euros; those underway at 307 million Euros; those not started at 44 million Euros. ITG reports that two projects are ongoing and four have not yet been started.

#### **KTM12: Advisory services for agriculture**

### Figure 10.2 Percentages of indicator/baseline associated with KTM12 that were reported as being not started, 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)." 12.1 Number of farms 12.2 Number of advisory services Source: WISE PoM Reports

ITA and ITG reported KTM12 measures. For ITA, services have been completed at over 8500 farms. For ITG, one advisory service measure is ongoing and one has not yet started.

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

### **Quantification of the scale of chemical pressures**

Information uploaded to WISE indicates the numbers of water bodies failing to meet good chemical status due to specific priority substances. This information is provided for 13 priority substances. As noted in section 3, however, chemical status was reported as unknown for 80% of SWBs and 25% of GWBs. Most of the information on water bodies failing to meet good chemical status due to specific priority substances comes from two RBDs (ITB and ITC) with some further results from ITA, ITD and ITE. The number of pollutants monitored varied at regional level and, at the time of the first RBMPs, in most cases did not appear to cover all priority substances (this has been addressed in recent national ministerial decrees on monitoring and status assessment). No information is available on the loads of priority substances to be reduced to achieve objectives or on other parameters listed above.

### Assessment of measures for the achievement of WFD objectives

#### **Basic and supplementary measures**

Most of the RBMPs/PoMs refer to implementation of the Integrated Pollution Prevention and Control (IPPC) Directive - usually by describing relevant national and regional legislation (no reference to the Directive was found in the RBMP for ITF). There were no indications as to how much these measures will contribute to the achievement of WFD objectives.

With reference to Article 11.3.k measures, most RBMPs / PoMs cite the Priority Substances Directive (2008/105/EC) and refer to legislative measures to transpose this at national and regional levels, including regarding monitoring requirements. The RBMPs / PoMs have few references to 11.3.g on point sources, though the topic of permitting and controls is mentioned in several, without much detail. No indications of assessments or judgements as to how much the measures will contribute to the achievement of WFD objectives were found.

Some measures to address chemicals are described, but only in general terms. For example, the PoM for ITC includes measures to identify contaminated sites and carry out monitoring and restoration. There is no assessment of how much the measures will contribute to achieving WFD objectives.

#### Measures required by the EQS Directive

#### Inventory of the sources of chemical pollution

In the first cycle of RBMPs and PoMs, inventories of the sources of chemical pollution were not found.

#### Use of mixing zones

In the first cycle of RBMPs and PoMs, information on the use of mixing zones was not found.

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

No measures were found.

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

While the RBMPs/PoMs include measures to address chemical pollution, none indicate that these focus specifically on priority substances.

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

No measures aimed at specific priority substances were found.

### Key types of measure

#### KTM3. Reduce pesticides pollution in agriculture

### Figure 11.1 Percentages of indicator/measures associated with KTM3 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)":

- 3.1 Area of agricultural land covered by measures (km<sup>2</sup>) to reduce pollution in agriculture
- 3.2 Number of projects/measures

Source: WISE PoM Reports

Italy reported indicators for KMT3 measures for ITA, ITE and ITG. No single indicator is used in all all three RBDs. For ITA, measures were completed in just under 20% of the agricultural area in 2012 and not started for about 80% of agricultural land. In ITE, measures had not been started. In ITG, one measure had been completed and two not started.

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





Key to indicators

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

15.1 Number of permits issued or updated

15.2 Number of projects/measures

Italy reported indicators for KTM15 measures for four RBDs: ITA, ITE, ITF and ITG. For ITE, however, the indicators provided may cover different areas of the RBD. For all the indicators reported, measures are either being planned, construction is ongoing or are completed.

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





#### Key to indicators

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

16.1 Number of projects/measures

16.2 Estimated Total Costs (€)

Indicators for KTM16 measures are provided for four RBDs: ITA, ITE, ITF and ITG. The two indicators provided for ITF may cover different areas of the RBD; consequently, it is not clear that information is complete across the four RBDs listed. In total for these: 44 projects were completed in 2012; construction was ongoing for 30; planning ongoing for 17; and 1 not started.

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

### Quantification of the scale of pressures from hydromorphological alterations

Italy provided data indicating the number of water bodies not meeting good status due to hydromorphological pressures (however, this does not cover all WBs).

### Assessment of measures for the achievement of WFD objectives

The RBMPs / PoMs refer to steps to put in place existing directives, including the Environmental Impact Assessment (EIA) and Habitats Directives; however, links between these and reductions in hydromorphological pressures were not always found. Examples where information was provided include: in ITB, there is a description of various actions underway in regions, such as the restoration of gravel extraction areas in the Po River bed (Emilia-Romagna); in ITG (Sardinia), regional work for minimum flows and for buffer strips is mentioned.

Many RBMPs and PoMs have supplementary measures to address hydromorphological pressures. These are for the most part described in very general terms - for example, for ITF there is measure on the 'morphological characterisation of rivers'.

No assessments were found of the extent to which the various measures would contribute to achieving WFD objectives.

### 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

5.2 Estimated Total Costs (€) of the measures

Source: WISE PoM Reports

Indicators for KTM5 measures are provided for ITB, ITC and ITD. In ITB, about 70% of construction was ongoing and the remainder had been completed for 2012. In ITC, two separate indicator show that work had been completed for 2012. For ITD, 1 of 8 projects had construction ongoing, 4 had planning ongoing and 3 had not been started.

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





#### 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

6.3 Number of projects/measures

6.4 Estimated Total Costs (€) of the measures

Source: WISE PoM Reports

Indicators were provided for KTM6 measures for ITA, ITB, ITC and ITG. In ITB, ITC and ITG measures reported had been completed for 2012. In ITA, over 60% of measures (in terms of total costs) had construction ongoing. In ITD, one project had been completed and five were ongoing.

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

#### **Quantification of the scale of the pressures**

The information provided via WISE indicates the number of water bodies not meeting good status due to UWWT plants in all RBDs. However, no information was found in the RBMPs on the reduction in load from UWWT plants to achieve objectives.

#### Assessment of measures for the achievement of WFD objectives

In general, the PoMs describe various regional legislative documents for the transposition and implementation of the UWWT Directive but do not provide information on the results of implementation in terms of WFD objectives. A number of RBMPs (e.g. ITB) also mention regional provision for storm overflows as well as other related issues.

The PoMs include measures (described in very general terms) for UWWT - however, there is no assessment as to how such measures will contribute to achieving WFD objectives.

#### Key types of measure

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

### Figure 13.1 Percentages of indicator/measures associated with KTM1 that were reported as being not started, planning on-going, construction on-going and completed in 2012



Key to indicators measures

- 1.1 Number of population equivalent covered by measures beyond the requirements of the UWWTD
- 1.2 Number of projects/measures
- 1.3 Estimated Total Costs (€) of the measures
- Source: WISE PoM Reports

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

Italy has reported indicators for KTM1 measures in six RBDs: ITA, ITB, ITC, ITE, ITF and ITG. The data may not be complete: for ITE and ITF, for example, some data are provided by region and not all regions are listed. For ITA, ITB and ITC, the indicators suggest that more than 40% of measures were completed for 2012. In contrast, in ITF and ITG as well as two regions of ITE, measures reported were all in planning.

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

### **Quantification of the scale of the pressure**

The RBMPs and data uploaded to WISE include information related to abstractions. The number of water bodies (GWBs and SWBs) failing to meet good status due to abstractions is indicated in WISE: this is a pressure in all RBDs. As noted in section 3, however, quantitative status is not known for 32% of GWBs, so this information is not complete.

Illegal abstractions are not mentioned frequently in the RBMPs, though they are noted for ITG; here, however, there is no estimate of their volume. No estimates were found of the volume by which abstractions need to be reduced to achieve WFD objectives.

### Assessment of measures for the achievement of WFD objectives

Clear information on the extent to which basic measures under Article 11.3.a address abstractions was not found in the RBMPs / PoMs. The RBMPs refer in particular to legal measures, such as provisions under Royal Decree no. 1775 of 1933 (as amended) on the use of public waters. In general, this decree requires permits (*concessioni*) for water abstractions. The permits have a maximum time limit of 30 years; for irrigation and aquaculture, 40 years; and for large abstractions, including those for irrigation, drinking water and industrial uses, up to 15 years. Moreover, Legislative Decree (D.Lgs) 152/2006 states that all water abstractions underway are subject to forecasts of levels that guarantee the minimum ecological flow. However, the RBMPs did not indicate how or how often permits are reviewed and updated.

The RBMPs / PoMs also include supplementary measures related to abstractions.

Nowhere is there an assessment of the extent to which measures will contribute to the achievement of WFD objectives.

### Key types of measure

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



Figure 14.1 Percentages of indicator/measures associated with KTM7 that were reported as being not started, planning on-going, construction on-going and completed in 2012

Key to indicators measures

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

7.1 Number of projects/measures (including permits)

7.2 Length of rivers (km) affected by measures

Source: WISE PoM Reports

Indicators for KTM7 measures are provided for five of the eight RBDs: ITA, ITB, ITD, ITE and ITG. No single indicator, however, covers all RBDs. Across four of these RBDs – ITB, ITD, ITE and ITG – a total of 6 projects/measures were completed in 2012; 22 were ongoing; and 4 not started. For ITA, work was ongoing on 500 km of rivers.

#### KTM8: Water efficiency measures for irrigation (technical measures)





Key to indicators measures

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

8.2 Number of projects/measures;

8.3 Estimated Total Costs (€)

Indicators were provided for KTM8 measures in six RBDs: ITA, ITB, ITC, ITE, ITF and ITG. Here as for other KTMs, it is not clear if the information provided covers all areas of each RBD. The overwhelming majority of projects reported, however, were ongoing or had been completed in 2012.

### 15. Reporting of other Key Types of Measure

This section summarises the progress with the implementation of the defined KTMs not included within the assessment of the specific pressures/issues. Member States were also given the possibility to report different or additional KTMs 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)

### Figure 15.1 Percentages of indicator/measures associated with KTM4 that were reported as being not started, planning on-going, construction on-going and completed in 2012



Key to indicators measures

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

4.2 Number of sites subject to measures

Source: WISE PoM Reports

Indicators were provided for KTM4 measures in four RBDs: ITA, ITB, ITE and ITG. Here as for other KTMs, it is not clear if the information provided covers all areas of each RBD. However, based on the reporting, the majority of measures were ongoing or completed in each RBD.

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



Figure 15.2 Progress associated with KTM9 reported in 2012

Key to indicators measures

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

9.1 Population affected

9.2 Area (km<sup>2</sup>) covered

Source: WISE PoM Reports

Indicators for KTM9 measures were reported for ITA and ITG. In both, it would appear that the measures have been completed. It is not clear, however, how these measures for two RBDs interact with work known to be underway at national level for the reform of water pricing.

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



Figure 15.3 Progress associated with KTM10 reported in 2012

Key to indicators measures

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

10.1 Number of sites affected

Source: WISE PoM Reports

Information was provided for ITG only, where measures had been completed in 2012 at 5 of 10 sites.

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



Figure 15.4 Progress associated with KTM11 reported in 2012

Key to indicators measures

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

11.1 Area (km<sup>2</sup>) affected

Source: WISE PoM Reports

Indicators for KTM11 measures were reported for two RBDs. ITA reports all measures were completed for 2012 and ITG reports that none were.





Figure 15.5 Progress associated with KTM13 reported in 2012

Key to indicators measures

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

13.1 Number of drinking water protection zones Source: WISE PoM Reports

Indicators for KTM13 measures were provided for ITA, ITD, ITE, ITF and ITG. In ITD, some parts of ITE and in ITG measures have been completed. Some of the reported data for some RBDs is incomplete and, therefore, excluded from the above figure.

#### KTM14: Research, improvement of knowledge base reducing uncertainty

Figure 15.6 Percentages of indicator/measures associated with KTM14 that were reported as being not started, planning on-going, construction on-going and completed in 2012



Key to indicators measures

The annotations next to each bar in the Figure shows "RBDCode; Indicator number; (value of the indicator when 100% completed)" 14.1 Estimated Total Costs (€)

14.1 Estimated Total Costs  $(\in)$ 14.2 Number of the research studies etc.

Source: WISE PoM Reports

Indicators for KTM14 measures were reported for seven of the eight RBDs (only ITH is missing). Measures were ongoing or completed in nearly all cases.

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

It appears that measures have been developed in Italy and in most cases are underway in 2012 across all of the key types. The information reported, however, was not complete. Firstly, no information was provided for ITH. Secondly, it appears that in many cases, indicators refer to measures for only part of the RBDs reporting. While the information provided suggests that further progress will be achieved by 2015, there is not sufficient information to make an overall assessment for Italy for any of the key types of measures.

#### **New Key Types of Measures**

One New Key Type of Measure was reported for Italy: Water efficiency measures for drinking water (Water quantity). Measures were in place in ITB and ITC.

### Figure 15.7 Percentages of indicator/measures associated with KTM15 that were reported as being not started, planning on-going, construction on-going and completed in 2012



Key to indicators measures

The annotations next to each bar in the Figure shows "RBDCode; Indicator number"

1.1 Water efficiency measures for drinking water (Water quantity)

1.2 17 Source: WISE PoM Reports

The indicators for this New KTM appear to have been mis-reported. It is not clear why the same indicator is reported twice in different ways for ITC.

### 16. Overall progress with the Programme of Measures

### Main achievements

Based on Italy's reporting, work on measures appears to be underway in at least seven of Italy's eight RBDs (no information was provided for ITH, Sicily). By 2012, a majority of supplementary measures had been started in six RBDs and many had been completed in five RBDs. The work underway included the development of new legislation and/or regulations, especially at regional level and for basic measures. Financing has been secured for many measures, though a lack of funding has been reported for some of the supplementary measures that faced substantial delays.

For basic measures, information is often provided for each region within the RBDs, indicating that the regions - not the RBDs - have the main role in implementing measures. This also raises the question whether reporting is complete for all regions within the RBDs. Overall, there is not sufficient information to make comparisons across the RBDs.

### **Main obstacles**

About one-third of supplementary measures faced a 'substantial delay' in 2012. As noted, lack of financing had been an issue for certain measures.

It should also be noted that reporting on PoM for Italy was not complete: no information at all was provided for ITH and information was not complete for all the other seven RBDs. Moreover, the reporting did not allow a clear link to be made between pressures and measures. Indeed, the lack of information on water body status raises a question of how measures were identified.

### **Overall Progress**

Many basic and supplementary measures have been started and a number of supplementary measures had been completed in Italy in 2012. Financing is an issue for some measures.

The reporting for basic measures in particular shows that these are carried out by the regions and it is not clear if the RBMPs have played a strong role in supporting their implementation.

As a result, while the information provided shows that measures and actions were underway, it is not possible to make an assessment of the overall progress for Italy.

### **17. Progress in financing measures**

Little information is found on the overall budgets for the PoMs. A lack of financing is noted for some measures. Overall, it has not been possible to make an assessment of possible obstacles and achievements in terms of financing the PoMs.