Topic report on: Assessment of Water Scarcity and Drought aspects in a selection of European Union River Basin Management Plans

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Contents

1. Executive summary

The screening exercise based on the River Basin Management Plan (RBMP) assessment and complementary information has been carried out for all countries which have submitted their RBMPs (therefore excluding PT, EL, and parts of ES and BE), and covers thus the major part of Europe (123 RBDs). The following conclusions can be drawn:

- Water scarcity and droughts (WS&D) are recognized as relevant issues by RBMPs across the EU. Water scarcity is reported for the whole Mediterranean area, and for some areas in Central, Eastern and Northern Europe. 41% of the RBMPs do not specifically mention water scarcity as impacting the ecological status. Drought is reported for a wide range of River Basin Districts accross Europe. 39% of the RBMPs do not mention drought.
- The analysis of water quantity aspects lacks adequate foundation in many RBMPs: quantity data are insufficient and water scarcity is often not clearly distinguished from droughts and viceversa. Water demand scenarios are presented for only 35% and water availability scenarios for less than 25% of the RBMPs. 85% of the plans do not asses the uncertainty of data and 90% do not specify the sources of funds to implement the relevant measures.
- Measures to ensure the achievement of the WFD objectives by enhancing the resilience of the ecosystems are included in 54% of the RBMPs. Only in a few basins that include water scarcity as an important element for the river basin management , restrictions to new water-consuming developments are envisaged as a high priority in the RBMPs.
- The influence of other sectoral policies on the reduction of water scarcity and the mitigation of drought effects is included for 15% of the RBMPs.
- Dealing with water quantity in a way that reduces conflict risks and contributes to the WFDs objectives is included in 3% of the screened international RBMPs; these include co-ordinated measures for the entire international RBD to deal with WS&D.

A number of recommendations or proposals can be drawn for improvement in the next planning cycles, and are included in Chapter 13.

2. Introduction

The aim of this report is to improve the knowledge on Water Scarcity & Drought (WS & D) at the River Basin District (RBD) level, in particular on how different aspects have been considered in the River Basin Management Plans (RBMPs). It is part of the documents to support the 2012 evaluation of the policy on water scarcity and droughts.

As WS&D were not included as specific (reporting) elements for the RBMPs, this study focuses on the relevance for water scarcity and drought in achieving the good ecological status and not necessarily for all water management aspects of the different RBDs.

3. Methodology

The information covers all RBMPs adopted in the EU by June 2012, thus most of the area, except PT, EL and parts of ES and BE (a total of 123 RBMPs[1] encompassing approximately a 58% of all EU River Basin Districts).

Fig. 1. RBMPs analysed

The document looks at different aspects that are relevant for addressing adequately WS&D issues in the RBMPs, as long as those can be screened in the Plans. The main information source for this report is a screening exercise of the RBMPs developed by the European Commission between 2010 and 2012. The draft versions of this document have been discussed afterwards at several meetings, including those of the EG on WS&D. Consequently, additional information from Member States - such as RBMPs and other official information – and stakeholders has been taken into account, but is highlighted as such in the annexes.

[1] AT1000, AT2000, AT5000, , BEMaas_VL, BESchelde_VL, BE_Nordzee_FED, BG1000, BG2000, BG3000, BG4000, CY001, CZ_RB_1000, CZ_RB_5000, CZ_RB_6000, DE1000, DE2000, DE3000, DE4000, DE5000, DE6000, DE7000, DE9500, DE9610, DE9650, DK1, DK2, DK3, DK4, EE1, EE2, EE3, ES100, FIVHA1, FIVHA2, FIVHA3, FIVHA4, FIVHA5, FIVHA6, FIVHA7, FIWDA, FRA, FRB1, FRB2, FRC, FRD, FRE, FRF, FRG, FRH, FRI, FRJ, FRK, FRL, HU1000, IEEA, GBNIIENB (IE), GBNIIENW (IE), IESE, IEGBNISH, IESW, IEWE, ITA, ITB, ITC, ITD, ITE, ITF, ITG, ITH, LT1100, LT2300, LT3400, LT4500, LU2000, LVDUBA, LVGUBA, LVLUBA, LVVUBA, MTMalta, NLEM, NLMS, NLRN, NLSC, PL2000, PL6000, PL7000, PL8000, RO1000, SE1, SE2, SE3, SE4, SE5, SI_RBD_1, SI_RBD_2, SK30000, SK40000, UK01, UK02, UK03, UK04, UK05, UK06, UK07, UK08, UK09, UK10, UK11, UK12, GBNIIENB (UK), GBNIIENW (UK), GBNINE, NO1101, NO1102, NO1103, NO1104, NO1105, NO5101, NO5102, NO5103, NO5104, NO5105, NO5106. Please find the relation between codes and RBD names in Annex 15.1.

4. Relevance of Water scarcity and Droughts

The first aspect that has been assessed is whether the RBMPs, have identified either droughts and/or water scarcity as relevant issues for the RBD, and if those concepts have been adequately differentiated according to their causes. The assessment results show that for 24 RBDs[2] this issue is not clearly stated in the RBMPs (i.e. both WS and D are not clearly distinguished or the information to this matter is not clear enough). Both drought and water scarcity are said to take place together in many of the RBDs where it is considered as a relevant phenomena (26 RBDs), although there are some exceptions to this fact.

4.1. Occurrence of Drought

Droughts are reported for a wide range of RBDs across Europe, although the results from the screening exercise show that approximately 39% (48 RBDs) of the RBMPs assessed, do not mention drought as relevant for achieving the good ecological status. 10 RBMPs mention drought spells as RBD-wide phenomena, and for other 27 RBDs, local or sub-basins drought spells are said to take place. In 24 RBDs, droughts and water scarcity affect part of or the entire basin, though the two conditions are not clearly distinguished, or this issue is not clearly addressed.

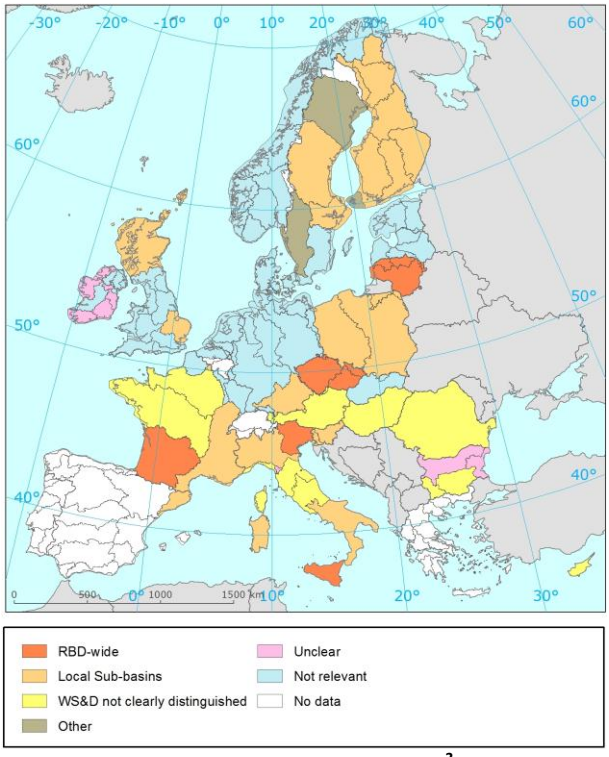

Fig. 2. Occurrence of Drought[3]

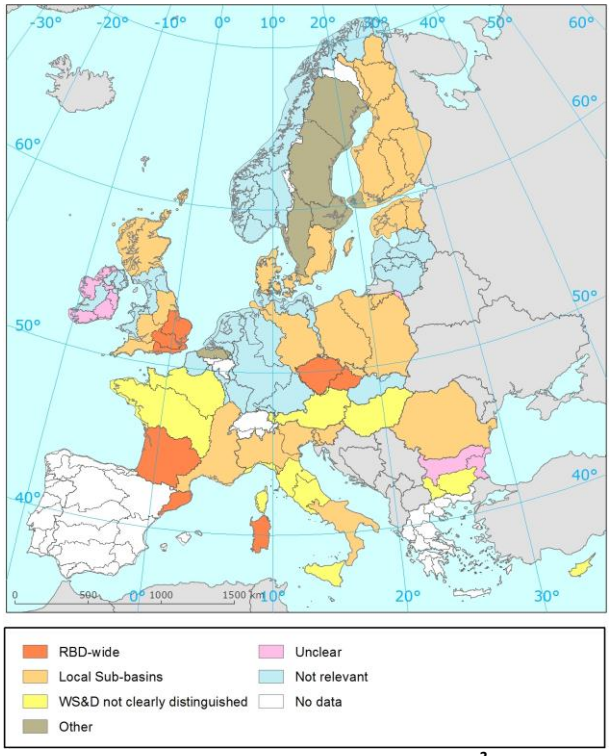

Fig. 3. Occurrence of Water Scarcity[3]

[2] AT1000, AT2000, AT5000, BG1000, BG2000, BG3000, BG4000, CY001, FRE, FRG, FRH, GBNIIENW (IE), HU1000, IEEA, IESE, IESW, IEWE, ITC, ITD, ITE, ITG, PL7000, PL8000 and RO1000

[3] 'Other' also includes the cases where there is no clear information about these issues in the RBMPs (see Annexes 15.3.1and 15.3.2

4.2. Occurrence of Water scarcity

Water scarcity is reported for some RBDs across Europe, although for 39% of the screened RBDs (48 RBDs), the plans do not mention water scarcity as relevant for achieving the good ecological status. In particular, for 9 RBDs river basin-wide water scarcity was reported and for other 35 RBDs, local or sub-basin water scarcity was reported.

According to the assessment, 44 RBMPs report that they are facing water scarcity. The list of RBDs facing water scarcity includes almost the whole EU Mediterranean area (not only based on the assessment), but also some areas in Central, Eastern and Northern Europe with significant water scarcity at a local level, mainly due to large water usage in comparison to availability. The above map shows the European RBDs and the occurrence of both droughts and water scarcity as reflected by the RBMPs. The results show that Drought is still not only characteristic for Southern Europe, and occurs also in other parts of the EU.

5. Causes of Droughts and Water scarcity

5.1. Causes of Droughts

The most common identified causes of drought correspond to irregular rainfall patterns – usually perceived as meteorological droughts - (43 RBDs[4]) and the decrease in natural available resources – usually perceived as hydrological droughts - (32 RBDs[5]). 25 of these RBDs consider both as drivers for droughts.

In addition to this, 18 RBMPs have reported other causes (not related with the meteorological nature of the phenomenon) such as past and current water over-allocation, new water demands from agriculture and tourism or water use technologies that do not foster efficient water use. These causes of water scarcity can enhance droughts. Some RBMPs do apparently not include information on the causes for droughts, although the RBDs are said to be affected by this phenomenon. These results of the RBMPs screening exercise are not consistent with sound planning practices.

5.2. Causes of Water scarcity

According to the RBMPs, water scarcity situations in RBDs are also (mainly) caused by irregular rainfall patterns (for 40 RBDs[6]) and a decrease in natural available water resources (for 34 RBDs[7]), though only 1/3 of the plans provide data that support this analysis.

[4] Of these 43 RBDs (see Annex 15.3.3), only 24 (AT1000, AT2000, AT5000, BEMaas_VL, BESchelde_VL, BG1000, BG3000, BG4000, CY001, DE1000, DE2000, DE3000, DE7000, ES100, FIVHA4, HU1000, ITF, ITG, LT1100, LT2300, LT3400, LT4500, SI_RBD_1, SI_RBD_2) provided both data on current consumption and water availability. Regarding future trends on both water demand and availability, 16 of them do not provide information in the RBMPs.

[5] Of these 34 RBDs (see Annex 15.3.3), only 16 (AT1000, AT2000, AT5000, BG1000, BG3000, BG4000, CY001, ES100, FIVHA4, HU1000, ITF, ITG, LT1100, LT2300, LT3400, LT4500) provided both data on current consumption and water availability. Regarding future trends on both water demand and availability, 14 of them do not provide information in the RBMPs.

[6] Of these 40 RBDs, only 15 of them (AT1000, AT2000, AT5000, BEMaas_VL, BESchelde_VL, BG1000, BG3000, BG4000, CY001, DE2000, DE3000, DE7000, ES100, FIVHA4, HU1000) provided both data on current

21 RBMPs[8] recognise past and current over allocation of resources as a cause of water scarcity problems and 30 RBMPs identify new water demands (for urban uses, agriculture, industrial and tourism sector) as causes for upcoming water scarcity problems (i.e. RBDS from AT, DK, EE, ES, FI, FR, HU, IT, SE, SL and UK). Even though 3 RBMPs[9] identified RBD-wide water scarcity, and 14 WS for local sub-basins[10] no clear causes have been identified for those basins (or no information was found in the RBMPs to this regard). This lacking of analysis can hamper the development of adequate strategies and measures to tackle water scarcity.

6. Effects of Water scarcity and Droughts

From the screening exercise on the RBMPs, different effects were stated and can be expected to be caused by past, current and future droughts spells or water scarcity scenarios, depending on their frequency and magnitude:

- **Degradation of surface water quality** was reported as a significant effect for both drought (25 RBDs) and water scarcity (35 RBDs) situations. Other "environmental effects", such as the **degradation of groundwater quality** and **wetlands degradation** are also identified as main effects of WS&D according to the assessment. The **disruption of environmental in-stream flow regime**, was reported as an effect for 16 RBDs in the case of drought spells and for (a significant) 34 RBDs for the case of water scarcity situations.
- **Urban water supply shortages** were reported as an effect (and also expected impact for future scenarios) both for drought spells (21 RBDs) and water scarcity situations (34 RBDs).
- **Groundwater over-abstraction** was reported as an effect for 13 RBDs for the case of drought situations and for up to 42 RBDs for the case of water scarcity scenarios.
- **Economic losses**, in the agricultural sector, in the tourism sector or in the industrial sector were not reported as significant effects for the majority of the RBMPs assessed. The main effects seem to appear for the case of agriculture, where only 5 RBDs (due to drought impacts) and 6 RBDs (due to water scarcity situations) report effects.

7. Data on water demand and water availability trend scenarios

Regarding the assessment on both water demands and water availability (for both current and trend scenarios) the RBMPs present a different level of detail and analysis (of these issues).

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consumption and water availability. Regarding future trends on both water demand and availability, 17 of them do not provide information in the RBMPs.

[7] Of these 34 RBDs, only 11 of them (AT1000, AT2000, AT5000, BG1000, BG3000, BG4000, CY001, FIVHA4, HU1000, ITF, ITG) provided both data on current consumption and water availability. Regarding future trends on both water demand and availability, 20 of them do not provide information in the RBMPs.

[8] CY001, CZ_RB_1000, CZ_RB_5000, DK1, DK2, ES100, FRD, FRG, FRH, FRI, FRJ, HU1000, PL2000, PL6000, PL7000, SE2, SE3, SE4, UK01

[9] FRF, CZ_RB_1000 and CZ_RB_5000

[10] CZ_RB_1000, CZ_RB_5000, CZ_RB_6000, FIVHA1, FIVHA2, FIVHA3, FIVHA4, FIVHA5, FIVHA6, FIVHA7, ITB, ITD, RO1000, SE4

7.1. Water demand trend scenarios

The RBMPs present data on water demand trend scenarios for almost 35% of the screened RBDs, and for the majority of them, the data are also analysed by water use type. The completeness of the timeline of these projections (e.g. 2015, 2021 and 2027) and information regarding the geographical scope, magnitude and trend data for each itemised water use, have not been assessed so far.

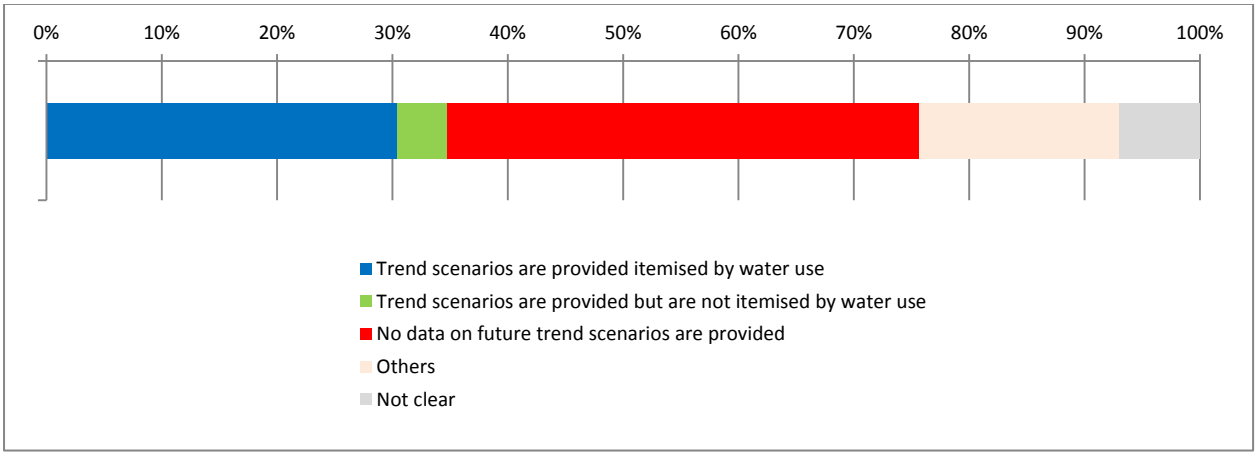
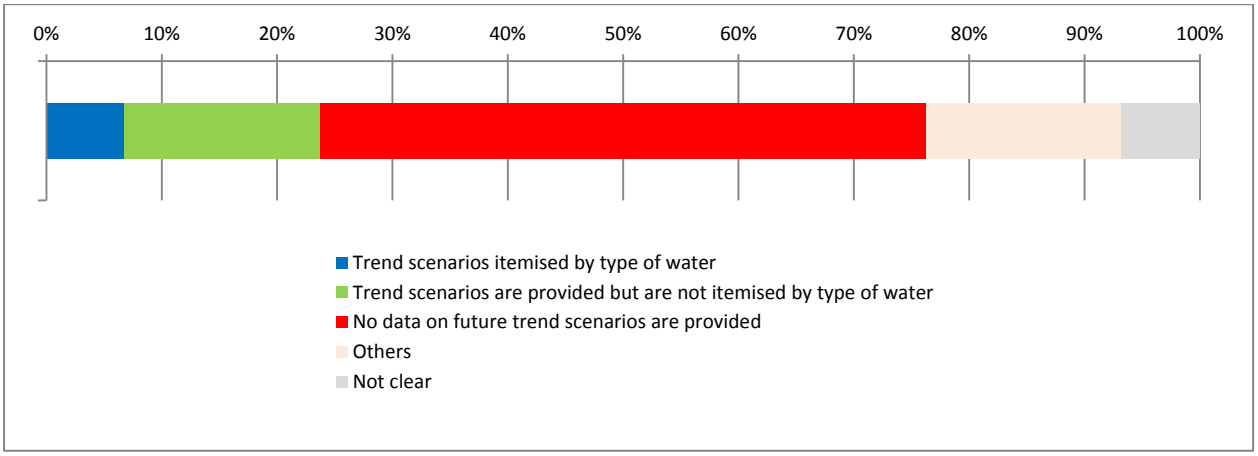


Fig. 4. Water use trend scenarios in the RBMPs

However, it is still a concerning issue that most of the assessed RBMPs do not include data on future trend scenarios, showing an inconsistency with the principles of sound management of (future) water resources. This is particularly concerning for those RBDs that have reported on WS as RBD-wide issues[11]

7.2. Water availability trend scenarios

Regarding the analysis of the water availability trends, the assessment shows that in less than 25% of the RBMPs, these scenarios are provided; in addition, around 7% of the RBMPs provide itemised data (by water type). The completeness of the timeline of these projections (e.g. 2015, 2021, 2027) and information regarding the geographical scope, magnitude and trend data for each itemised water type have not been assessed so far.



[11]FRF, FRI and ITG

Fig. 5. Water availability trend scenarios in the RBMPs

In most of the assessed RBMPs, no data on future water availability trend scenarios are provided. This is particularly important for those RBDs that have reported on WS as RBD-wide issues.

8. Measures to deal with Water scarcity and Droughts

The most common measures contained in the major part of the RBMPs are those to improve knowledge and governance (present in 85% of the RBMPs), and efficiency (they are present in 75% of the RBMPs), and to increase water supply (see grouping of measures in Annex 15.3.9). About 45% of the RBMPs include economic/pricing-oriented measures and 20% restrictions to land-use.

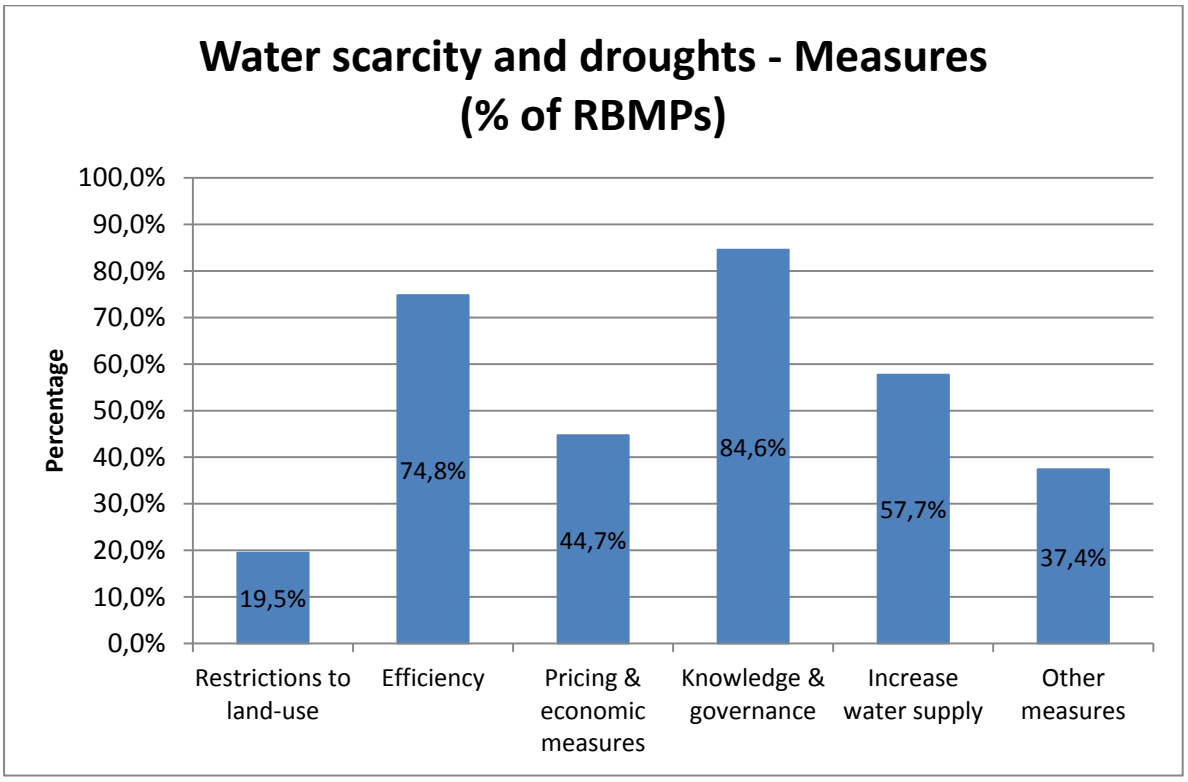


Fig. 6. Major groups of measures in the RBMPs regarding WS&D

However, the varying degrees of intensity in the drought and water shortage problems faced by basins introduce significant differences in patterns of action contained in the RBMPs. As shown in the graph below, the watersheds with general or local problems of drought and/or water scarcity[12] include measures to improve efficiency, knowledge and governance, or increase of water supply in higher proportion than those in which such problems are not relevant. Moreover, it appears that no significant differences within these groups of basins in the presence of measures of pricing systems or other economic instruments, land use restrictions or other measures.

It is remarkable that all basins with general problems of water scarcity & drought proposes solutions to improve efficiency and in particular measures to reduce the losses in urban distribution networks (100% of RBMPs assessed). The reduction and improved management of groundwater extraction is also a proposal widespread in the basins with general or local problems (present in 85% of these

[12] Basins affected by drought and/or water scarcity though these two conditions are not clearly distinguished are also included in this group

RBMPs); this percentage does not vary across watersheds with quantitative groundwater resources problems (55% of the basins with problems of drought or water shortages suffer groundwater over-abstraction). In other areas with no significant problems this measure is included in almost 50% of RBMPs being the most commonly used in the set of assessed plans. Furthermore, improving water efficiency in agricultural use is included in 50% of watershed plans that are affected by general or local drought and water shortages and in 20% of the remaining watersheds.

Finally, according to the assessment, the restrictions to new water-demanding developments (urban, irrigation) are reported to be planned for 20% of the assessed RBMPs and their presence is more common in basins with local problems (27%). These measures are reported in 13% of the watersheds most affected by drought and water shortages (two plans: ES100 and ITA), which is a proportion less than in the basins that have no significant presence of these problems.

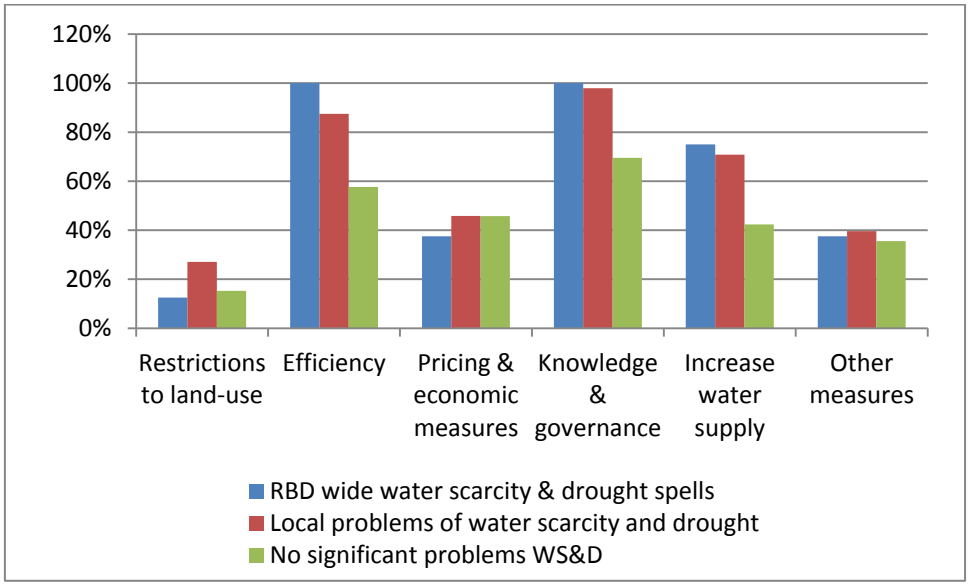


Fig. 7. Groups of measures included in the RBMPs (according to WS&D problems)

The analysis of the completeness of the battery of measures considered in the planning scheme of different European RBDs has been based on the verification of the presence of a selected set of 22 specific measures to deal with water scarcity and drought. In addition to the "standard" set of measures, some RBMPs include other actions, which were also taken into account in the screening exercise (see Annex 15.2). The figure below summarizes the results obtained from the assessment.

Fig. 8. Measures on WS&D included in the RBMPs

The "top-5" list of measures considered within the RBMPs assessed is:

1. Reduction/management of groundwater abstraction
2. Measures to increase the resilience of ecosystems (e.g. e-flows)
3. Reduction of losses in urban distribution networks
4. Training, education and capacity building in water saving,

5. Studies, research and pilot projects to solve water scarcity problems and improve the response to droughts,

Even though great efforts are said to be planned for the reduction/ management of groundwater abstraction (considering that it is being included in almost 70% of RBMPs, and reflected as a priority in more than 50% of these plans), the positive impact of this measure still remains unclear, especially taking into consideration that other "enabling" measures that are pre-conditions or should support its implementation (e.g. measures to enhance water metering) are much less included in the RBMPs priorities. Nevertheless, it is a positive step toward increasing awareness of groundwater problems.

Moreover, governance measures as the enhancement of the resilience of the ecosystems (e.g. eflows), very relevant to ensure the achievement of the environmental WFD objectives in areas that face WS&D, are planned in 55% of the RBMPs[13].

In the field of increasing efficiency in the use of water, reduction of losses in urban distribution networks is included in 50% of RBMPs assessed and is considered as a priority in half of them.

Other significant efforts are also envisaged, regarding studies, research, pilot projects, training, education and capacity building (they are present in approximately 45 % of the RBMPs); water pricing policies to foster a more efficient use of water (included in almost 40% of the RMBPs) and a number of measures to increase treated water reuse (also integrated in approximately 40% of the plans). However, despite these investments and efforts planned (in the mid and long-term) it is important to highlight that the impact on the achievements of the objectives stated by the WFD of these measures should be analysed in depth, given the unspecific nature of these measures.

Other measures for improving the efficiency with a lesser presence in the assessed RBMPs are the improvement of the efficiency of water agricultural uses (also present in 35% of the RBMPs) or measures to enhance water metering (present in 33% of the RBMPs).

The development of Drought Management Plans (DMPs) was reflected in 32% of the assessed RBMPs.

The measures least considered within the RBMPs are the development or upgrade of desalination plants and the establishment of water rights markets or schemes to facilitate water reallocation. It is also remarkable and worrying the weak presence of measures restricting new urban (present in 9% of the RBMPs) and agricultural (present in 12% of the RBMPs) demands.

In consequence, some of these measures should be analysed deeper and/or good practice examples should be better disseminated to water managers in future.

Finally, measures included in the "other measures" category such as ecological reconstruction (restoring longitudinal and lateral connectivity), use of best available techniques in industry, trade of water rights (mostly promoted by water authorities) and agriculture to save water, improve knowledge on future water demands and needs or to put in coherence the authorizations of abstractions with the needs of the aquatic environment, are (within others) included in a great proportion of the RBMPs assessed.

[13] please note that this figure is based on the in-depth analysis using complementary data (see Annex)

9. Inter-linkages between Water scarcity and sector policies

Water scarcity problems might be caused both for an inadequate design of the water related policies or for other related policies of water-using sectors. To address this issue, the RBMPs might take into consideration the inter-linkages between the different policy areas, as well as propose measures to harmonise those policies with the reduction of water scarcity and the mitigation of drought in the RBD.

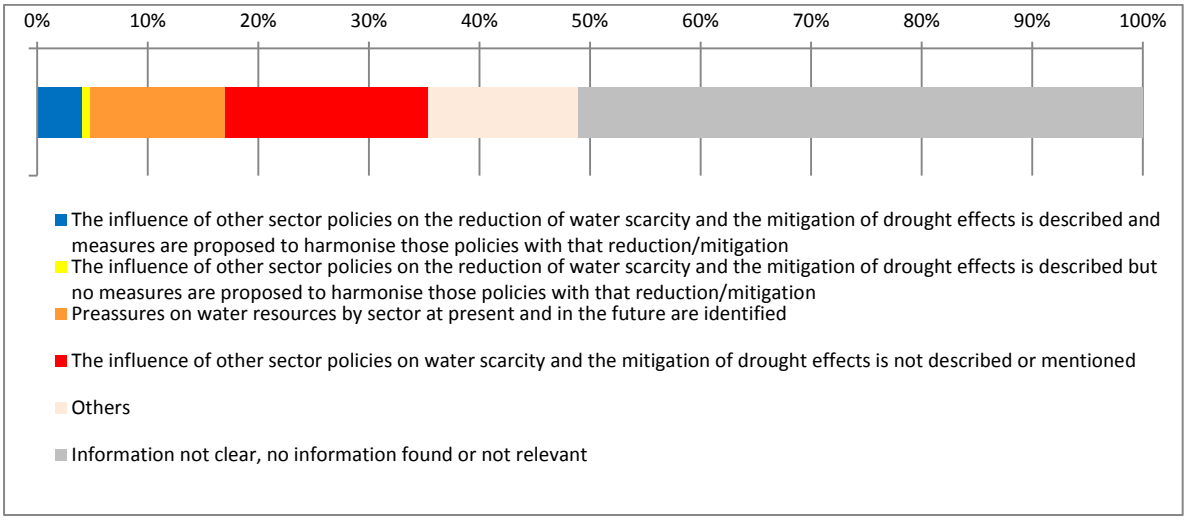


Fig. 9. Inclusion of sector policies in the RBMPs

According to the screening exercise (see results in Annex 15.3.10), for 6 RBDs[14], the influence of other sector policies on the reduction of water scarcity and the mitigation of drought effects is described, and measures are proposed to harmonise those policies with that reduction/mitigation. For 15% of the assessed RBMPs, the pressures on water resources by sector at present and in the future are identified.

For 22 % of the RBMPs assessed, the influence of other sector policies on water scarcity and the mitigation of drought effects is not described or mentioned in any section, and for more than 60% of the plans, the information is not relevant/ unclear, or simply no information has been found. Of these RBMPs, somewhat less than half (34 in case of water scarcity[15]; and 31 for drought[16]) should not be concerned about the issue due to the circumstances in their basins; but for the remaining 50% water scarcity and/or drought are a recognised problem.

[14] HU1000, ITA, ITD, ITF, SI_RBD_1 and SI_RBD_2

[15] BG2000, DE3000, DE4000, DE7000, DE9500, DE9610, DK3, EE3, FRB1, FRB2, FRC, GBNIIENB (IE), GBNIIENW (IE), GBNINE, IEGBNISH, IESE, IESW, IEWE, LU2000, LVDUBA, LVGUBA, LVLUBA, LVVUBA, NLEM, NLMS, NLRN, NLSC, PL8000, SE1, SK30000, SK40000, UK02, GBNIIENB (UK), GBNIIENW (UK)

[16] DE3000, DE4000, DE7000, DE9500, DE9610, DK3, EE3, FRB1, FRC, GBNIIENB (IE), GBNIIENW (IE), GBNINE, IEGBNISH, IESE, IESW, IEWE, LU2000, LVDUBA, LVGUBA, LVLUBA, LVVUBA, NLEM, NLMS, NLRN, NLSC, SE1, SK30000, SK40000, UK02, GBNIIENB (UK), GBNIIENW (UK)

10. Quality of data and assumptions

For an adequate design and definition of the general water planning scheme, that should be translated into the corresponding RBMPs (and their associated Programmes of Measures, PoMs), it is necessary to use transparent data and clear assumptions. The assessment exercise addresses this issue through one of its questions. The results can be summarized as the following figure shows:

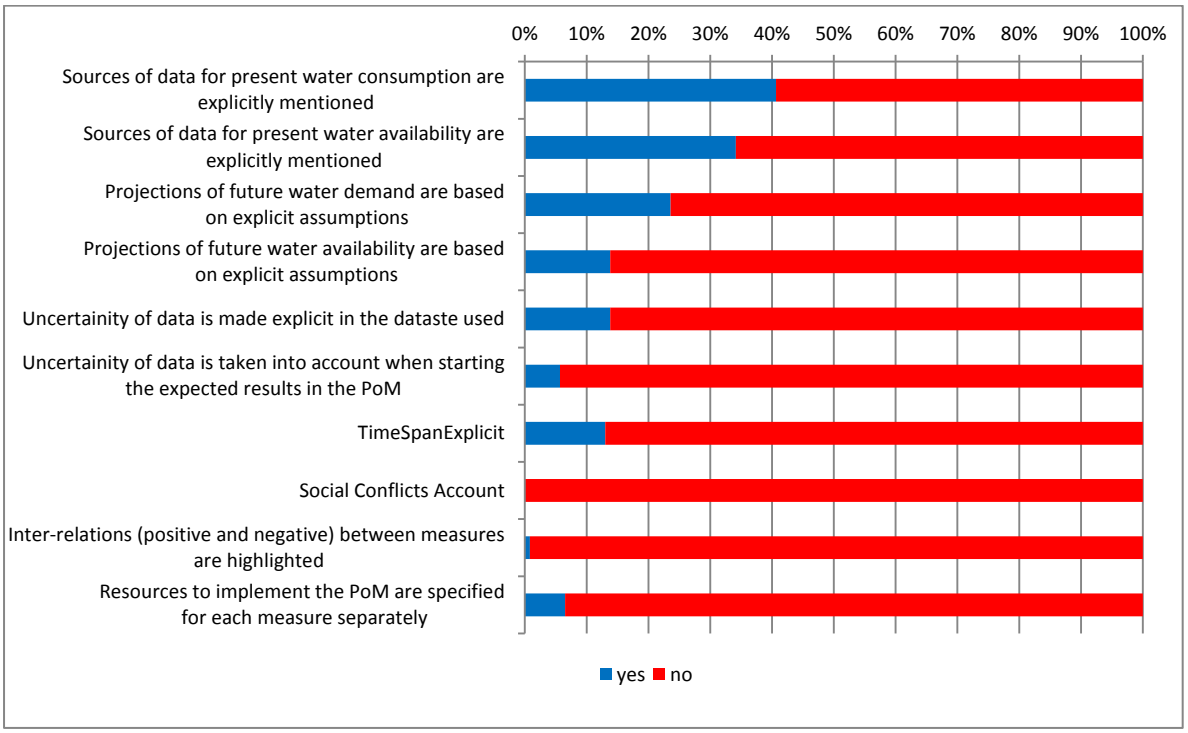


Fig. 10. Main features of the datasets included in the RBMPs

In almost 40% of the assessed RBMPs, the sources of data for present water consumption are explicitly mentioned and the same goes for water availability by 35% of cases; however, in only 25% of the plans projections of future water demand are based on explicit assumptions (15% for water availability).

For almost 15% of the assessed plans, uncertainty of data is made explicit in the dataset used, and when relevant, the time span of the dataset is made explicit. For less of 10% of the screened RBMPs, the sources of funds to implement the Programme of Measures are specified for each measure separately, and for even less of the RBMPs (around 6% of them) the uncertainty of data is taken into consideration when stating the expected results in the Programme of Measures.

Moreover, for none of the assessed RBMPs, the existing social conflicts were considered as a risk for successful implementation, and just for one of them [BG4000] the interrelation (either positive or negative) between measures was highlighted. This shows the lack of transparency and adequacy of the analysis regarding key quantitative aspects of the water planning scheme, within most of the assessed RBMPs.

11. Transboundary cooperation on Water scarcity and Droughts

Regarding 73 International RBMPs[17], their approach to deal with WS&D in a transboundary way reflects:

- In around 60% of the plans, the information on transboundary coordination in the field of water scarcity and droughts is not clear, no information is found or it can be considered as "not relevant";
- 3% of the plans (FRB1, FRC y RO1000) include co-ordinated measures for the entire international RBD, and just one of the assessed plans (RO1000) specific co-ordinated measures for the different transboundary water bodies were identified;
- 11% of the plans identify joint challenges as the way to address WS&D issues in shared water bodies and in another 20%, the transboundary cooperation was stated as a general coordination issue.

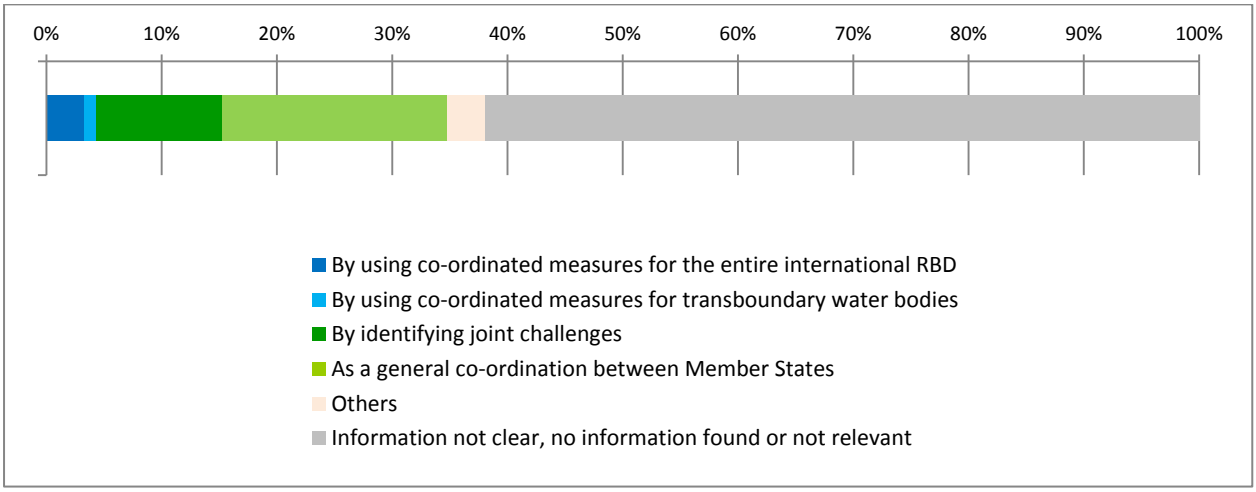


Fig. 11. Coordination of measures for WS&D according to the RBMPs

12. Conclusions

The screening assessment of the major part of the European RBDs regarding the aspects of WS&D in their RBMPs[18] leads to the following conclusions:

- Water scarcity and droughts are recognised in many RBMPs as relevant issues across the EU, but the two phenomena are not well differentiated.

[17] AT1000, AT2000, AT5000, BE_Nordzee_FED, BEMaas_VL, BESchelde_VL, BG1000, BG3000, BG4000, CZ_RB_1000, CZ_RB_5000, CZ_RB_6000, DE1000, DE2000, DE3000, DE5000, DE6000, DE7000, DK4, EE2, EE3, FIVHA6, FIVHA7, FRA, FRB1, FRB2, FRC, FRE, FRH, HU1000, GBNIIENB (IE), GBNIIENW (IE), IEGBNISH, ITA, ITB, ITC, LT1100, LT2300, LT3400, LT4500, LU2000, LVDUBA, LVGUBA, LVLUBA, LVVUBA, NLEM, NLMS, NLRN, NLSC, NO1102, NO1103, NO1105, NO5101, NO5102, NO5103, NO5104, NO5105, NO5106PL2000, PL6000, PL7000, PL8000, RO1000, SE1, SE2, SE5, SI_RBD_1, SI_RBD_2, SK30000, SK40000, GBNIIENB (UK), GBNIIENW (UK),

[18] The Slovak Republic in the preparation and reporting of River Basin Management Plans (RBMP) has not assessed for the evaluated years drought and water scarcity as an important water management issue, because in those years, the drought did not occur in Slovakia. Water scarcity in the reviewed period was managed by functional measures (reservoirs, water transfers...).

- Water quantity issues are not yet substantially addressed in the RBMPs, the quantitative datasets are incomplete in many plans, and they are insufficient for pro-active planning. Water demand and availability trend scenarios were not identified in most of the plans.
- The majority of measures applied by Member States target pressures, state and impacts, and only very few measures target key drivers. The sources of funds to implement the relevant measures are not specified in the majority of the RBMPs.
- Restrictions to new water-consuming developments are envisaged as a high priority in the RBMPs of only a few basins that face water scarcity.
- The influence of other sectoral policies on the reduction of water scarcity and the mitigation of drought effects is not yet addressed.
- In the case transboundary river basins there is still a major gap in dealing with water quantity; very few of the international river basins include coordinated measures between the neighboring countries.

13. Recommendations or proposals for improvement in the next planning cycles

From this exercise, the following recommendations or proposals can be drawn for improvement in the next planning cycles:

- Droughts and water scarcity should be clearly differentiated in the next RBMPs cycle, including DPSIR relations. This is particularly relevant for understanding the (different) causes of water scarcity and for drought and the different measures and their effectiveness. A common understanding of water scarcity and droughts has been reached in the framework of the CIS process[19].
- When and, where needed, a specific Drought Management Plan or sub-plan should be developed taking into consideration the CIS report on Drought Management Plan that serves as guideline for developing such plans.
- Trend assessments should be completed in the second RBMP cycle and, if needed, trend reversal assessment should also be considered.
- The establishment and enforcement of adequate ecological flows for all water bodies in Europe is essential for dealing efficiently with WS&D issues.
- In drought-prone areas, drought uncertainties and variations (e.g. of the water availability) should be considered in the RBMPs' baseline and not be interpreted as unexpected natural climate extremes.
- Datasets should be improved, including better forecasting of water availability, use and consumption. Data should also be more transparent, revealing uncertainties, time spans, and sources.
- The PoMs provided in the RBMPs need improvement on the issue of developing coherent and effective sets of measures to tackle WS&D. In particular, major efforts should be taken to address drivers and pressures with a coherent and compact package of measures, thus establishing also clearer buy-in from other sectors (agriculture, tourism, energy, etc.). Implementation risks related to funding, social or transboundary conflicts should be better

[19] Working definitions of Water Scarcity and Drought , CIS EG on WS&D, April 2012

stated, monitoring and control should be put in place. Better measures with specified timing are also required to ensure the environmental objectives of the different water bodies under water scarcity and drought conditions.

- Quantitative and qualitative aspects should be jointly considered when developing the plans and programmes.
- In the case of transboundary water bodies international co-ordination should be improved.

14. References

European Commission (2007) Communication from the Commission to the European Parliament and the Council - Addressing the challenge of water scarcity and droughts in the European Union {SEC(2007) 993} {SEC(2007) 996}/* COM/2007/0414 final */

European Commission (2010): Report from the Commission to the European Parliament and the Council (2011): Third Follow up Report to the Communication on water scarcity and droughts in the European Union COM (2007) 414 final. SEC(2011) 338 final

15. Annexes

15.1. Correspondence of RBD codes and RBD names

MSCode	RBDCode	RBDName
AT	AT1000	Danube
AT	AT2000	Rhine
AT	AT5000	Elbe
BE	BE_Nordzee_FED	Belgian Coastal Waters
BE	BEMaas_VL	Meuse
BE	BESchelde_VL	Scheldt in Flanders
BG	BG1000	Danube Region Basin District
BG	BG2000	Black Sea Basin District
BG	BG3000	East Aegean Region Basin District
BG	BG4000	West Aegean Region Basin District
CY	CY001	Cyprus
CZ	CZ_RB_1000	Danube
CZ	CZ_RB_5000	Elbe
CZ	CZ_RB_6000	Oder
DE	DE1000	Danube
DE	DE2000	Rhine
DE	DE3000	Ems
DE	DE4000	Weser
DE	DE5000	Elbe
DE	DE6000	Odra
DE	DE7000	Meuse
DE	DE9500	Eider
DE	DE9610	Schlei/Trave
DE	DE9650	Warnow/Peene
DK	DK1	Jutland and Funen
DK	DK2	Zealand
DK	DK3	Bornholm
DK	DK4	Vidaa-Krusaa
EE	EE1	West Estonia
EE	EE2	East Estonia
EE	EE3	Gauja
ES	ES100	Internal Basins of Catalonia

MSCode	RBDCode	RBDName
FI	FIVHA1	Vuoksi
FI	FIVHA2	Kymijoki-Gulf of Finland
FI	FIVHA3	Kokemõenjoki-Archipelago Sea-Bothnian Sea
FI	FIVHA4	Oulujoki-Iijoki
FI	FIVHA5	Kemijoki
FI	FIVHA6	Tornionjoki (Finnish part)
FI	FIVHA7	Teno-, Nõõtõm÷- and Paatsjoki (Finnish part)
FI	FIWDA	Aland islands
FR	FRA	Scheldt, Somme and coastal waters of the Channel and the North Sea
FR	FRB1	Meuse
FR	FRB2	Sambre
FR	FRC	Rhine
FR	FRD	Rhone and Coastal Mediterranean
FR	FRE	Corsica
FR	FRF	Adour, Garonne, Dordogne, Charente and coastal waters of Aquitania
FR	FRG	Loire, Brittany and Vendee coastal waters
FR	FRH	Seine and Normandy coastal waters
FR	FRI	Guadeloupe
FR	FRJ	Martinique
FR	FRK	Guyana (French)
FR	FRL	Reunion Island
HU	HU1000	Danube
IE	IEEA	Eastern
IE	GBNIIENB	Neagh Bann
IE	GBNIIENW	North Western
IE	IESE	South Eastern
IE	IEGBNISH	Shannon
IE	IESW	South Western
IE	IEWE	Western
IT	ITA	Eastern Alps
IT	ITB	Po Basin
IT	ITC	Northern Appenines
IT	ITD	Serchio
IT	ITE	Middle Appenines
IT	ITF	Southern Appenines
IT	ITG	Sardinia
IT	ITH	Sicily
LT	LT1100	Nemunas
LT	LT2300	Venta
LT	LT3400	Lielupe
LT	LT4500	Daugava
LU	LU2000	Rhine
LV	LVDUBA	Daugava
LV	LVGUBA	Gauja
LV	LVLUBA	Lielupe
LV	LVVUBA	Venta
MT	MTMalta	Malta
NL	NLEM	Ems
NL	NLMS	Meuse
NL	NLRN	Rhine
NL	NLSC	Scheldt
NO	NO1101	Moere and Romsdal
NO	NO1102	Troendelag
NO	NO1103	Nordland
NO	NO1104	Troms
NO	NO1105	Finnmark
NO	NO5101	Glomma
NO	NO5102	West Bay
NO	NO5103	Agder

MSCode	RBDCode	RBDName
NO	NO5104	Rogaland
NO	NO5105	Hordaland
NO	NO5106	Sogn and Fjordane
PL	PL2000	Vistula
PL	PL6000	Odra
PL	PL7000	Pregolya
PL	PL8000	Nemunas
RO	RO1000	Danube
SE	SE1	Bothnian Bay
SE	SE2	Bothnian Sea
SE	SE3	North Baltic
SE	SE4	South Baltic
SE	SE5	Skagerrak and Kattegat
SI	SI_RBD_1	Danube
SI	SI_RBD_2	North Adriatic
SK	SK30000	Vistula
SK	SK40000	Danube
UK	GBNIIENB	Neagh Bann
UK	GBNIIENW	North Western
UK	GBNINE	North Eastern
UK	UK01	Scotland
UK	UK02	Solway Tweed
UK	UK03	Northumbria
UK	UK04	Humber
UK	UK05	Anglian
UK	UK06	Thames
UK	UK07	South East
UK	UK08	South West
UK	UK09	Severn
UK	UK10	Western Wales
UK	UK11	Dee
UK	UK12	North West

15.2. Relationship between the 7 action lines of the 2007 Communication on Water Scarcity & Drought and the possible measures included in the RBMPs

The following 22 measures have been looked at in the RBMP assessment. The table explains their relationship with the 7 headings of the Communication on WS&D, and if they address mainly drivers, pressures and/or impacts according to the DPSIR scheme.

	Water pricing	Allocating funding	Drought risk mgmt	Water supply infrastructure	Efficiency	Water-saving culture	Knowledge and data	Drivers	Pressures	Impacts
Modification of the water pricing system to foster a more efficient use of water	x							x		
Subsidies for shifting to less water-demanding land uses		x						x		
Development of Drought Risk Management Plans			x							x
Development or upgrade of desalination plants			x						x	
Development or upgrade of reservoirs or other water regulation works				x					x	
Development or upgrade of water transfer schemes				x					x	

Promotion of rainwater harvesting				x						x
Measures to increase treated water re-use				x					x	x
Measures to foster aquifer recharge				x					x	x
Measures to enhance water metering					x				x	
Improvement of the efficiency of water agricultural uses					x				x	
Adoption of binding performance criteria for new buildings and for public and private networks					x				x	
Development of fiscal or economic incentives for the promotion of water-efficient devices and practices					x			x	x	
Reduction of losses in urban distribution networks					x				x	x
Training, education and capacity-building in water saving						x		x		
Studies, research and pilot projects to solve water scarcity problems and improve the response to droughts							x	x		x
Restrictions to new urban developments									x	
Restrictions to new irrigation schemes									x	
Reduction / management of groundwater abstraction (e.g. by controls, registers)									x	
Establishment of water rights markets or schemes to facilitate water reallocation								x	x	x
Measures to enhance the resilience of the ecosystems to water scarcity and droughts										x
Measures to enhance water governance										x
Σ=22	1	1	2	5	5	1	1	6	14	9

15.3. Information on the assessed RBMPS

The following tables include information from the RBMP screening on water scarcity and drought aspects, developed by the European Commission during 2010, 2011 and 2012. Please note that the sums of the different plans are different due to double-counting in several items.

15.3.1. Which of the following water scarcity phenomena characterize the RBD?

	Σ=	RBMPs
RBD wide	**9**	CZ_RB_1000, CZ_RB_5000, ES100, FRF, FRI, ITG, UK05, UK06, UK07
Local Subasins	**35**	CZ_RB_1000, CZ_RB_5000, CZ_RB_6000, DE5000, DK1, DK2, DK4, EE1, EE2, FIVHA1, FIVHA2, FIVHA3, FIVHA4, FIVHA5, FIVHA6, FIVHA7, FIWDA, FRD, FRJ, FRL, ITA, ITB, ITD, ITF, PL2000, PL6000, PL7000, RO1000, SE4, SI_RBD_1, SI_RBD_2, UK01, UK04, UK08, UK09
Two conditions not clearly distinguished	**14**	AT1000, AT2000, AT5000, BG3000, BG4000, CY001, FRE, FRG, FRH, HU1000, ITC, ITE, ITG, RO1000
Other	**8**	BEMaas_VL, BESchelde_VL[20], FIWDA, FRK, SE1, SE2, SE3, SE5
Not clear	**10**	BG1000, BG2000, IEEA, GBNIIENW (IE), IESE, IESW, IEWE, ITD, PL7000, PL8000
No information found	**13**	PL8000, NO1101, NO1102, NO1103, NO1104, NO1105, NO5101, NO5102, NO5103, NO5104, NO5105, NO5106, BE_Nordzee_FED
Not relevant	**48**	BG2000, DE1000, DE2000, DE3000, DE4000, DE6000, DE7000, DE9500, DE9610, DE9650, DK3, EE3, FRA, FRB1, FRB2, FRC, GBNIIENB (IE), GBNIIENW (IE), IESE, IEGBNISH, IESW, IEWE, LT1100, LT2300, LT3400, LT4500, LU2000, LVDUBA, LVGUBA, LVLUBA, LVVUBA, MTMalta, NLEM, NLMS, NLRN, NLSC, PL8000, SE1, SK30000, SK40000, UK02, UK03, UK10, UK11, UK12, GBNIIENB (UK), GBNIIENW (UK), GBNINE

[20] According to the feedback from BE to the European Commission, for some groundwater bodies of BEMaas_VL, BESchelde_VL water scarcity problems are clearly distinguished

15.3.2. Which of the following drought phenomena characterize the RBD?

	Σ=	RBMPs
RBD wide	**10**	CZ_RB_1000, CZ_RB_5000, CZ_RB_6000, FRF, ITA, ITH, LT1100, LT2300, LT3400, LT4500
Local Subasins	**27**	CZ_RB_1000, CZ_RB_5000, DE1000, ES100, FIVHA1, FIVHA2, FIVHA3, FIVHA4, FIVHA5, FIVHA6, FIVHA7, FRB2, FRD, FRL, ITB, ITF, ITG, PL2000, PL6000, PL7000, PL8000, SE2, SE3, SI_RBD_1, SI_RBD_2, UK01, UK05
Two conditions not clearly distinguished	**14**	AT1000, AT2000, AT5000, BG3000, BG4000, CY001, FRE, FRG, FRH, HU1000, ITC, ITE, ITG, RO1000
Other	**6**	FIWDA, FRK, SE1, SE2, SE3, SE5
Not clear	**10**	BG1000, BG2000, IEEA, GBNIIENW (IE), IESE, IESW, IEWE, ITD, PL7000, PL8000
No information found	**13**	PL8000, NO1101, NO1102, NO1103, NO1104, NO1105, NO5101, NO5102, NO5103, NO5104, NO5105, NO5106, BE_Nordzee_FED
Not relevant	**48**	BEMaas_VL, BESchelde_VL, DE2000, DE3000, DE4000, DE5000, DE6000, DE7000, DE9500, DE9610, DE9650, DK3, EE3, FRA, FRB1, FRC, GBNIIENB (IE), GBNIIENW (IE), IESE, IEGBNISH, IESW, IEWE, LU2000, LVDUBA, LVGUBA, LVLUBA, LVVUBA, MTMalta, NLEM, NLMS,, NLRN, NLSC, SE1, SK30000, SK40000, UK02, UK03, UK04, UK06, UK07, UK08, UK09, UK10, UK11, UK12, GBNIIENB (UK), GBNIIENW (UK), GBNINE

15.3.3. What are the factors that are identified as the main causes (drivers) of current and upcoming Drought situations?

	Σ=	RBMPs
Decrease in natural available resources	**32**	AT1000, AT2000, AT5000, BG1000, BG3000, BG4000, CY001, ES100, FIVHA1, FIVHA2, FIVHA3, FIVHA4, FIVHA5, FIVHA6, FIWDA, FRA, FRB2, FRG, HU1000, ITF, ITG, ITH, LT1100, LT2300, LT3400, LT4500, MTMalta, NLEM, NLMS, NLRN, NLSC, UK01
Irregular rainfall patterns	**43**	AT1000, AT2000, AT5000, BEMaas_VL, BESchelde_VL[21], BG1000, BG3000, BG4000, CY001, DE1000, DE2000, DE3000, DE4000, DE5000, DE6000, DE7000, ES100, FIVHA1, FIVHA2, FIVHA3, FIVHA4, FIVHA5, FIVHA6, FIVHA7, FIWDA, FRB2, FRE, FRG, FRH, FRK, HU1000, ITA, ITD, ITE, ITF, ITG, LT1100, LT2300, LT3400, LT4500, MTMalta, SI_RBD_1, SI_RBD_2
Insufficient development of water supply infrastructure	**0**	
Past and current overallocation of available water resources	**4**	CY001, FRB2, FRG, FRH
Need to satisfy new urban water demands	**0**	
Need to satisfy new agricultural water demands	**3**	AT1000, AT2000, AT5000
Need to satisfy new industrial water demands	**0**	
Need to satisfy new tourism water demands	**3**	AT1000, AT2000, AT5000
Non authorised or non controlled use of water	**1**	CY001

[21] According to the feedback from BE to the European Commission, the problem affecting these basins is not a decrease in natural resources, but (in future) a shift in rainfall patterns and a problem of overexploitation of some groundwater bodies

	Σ=	RBMPs
Water use technologies that do not foster efficient use	**2**	SI_RBD_1, SI_RBD_2
Lack of water metering	**0**	
Water pricing policies that do not provide incentives foe efficient use	**0**	
Lack or inadequacy of drought risk management plans	**1**	ES100
Insufficient flexibility in the water rights system	**0**	
Other	**4**	PL2000, PL6000, PL7000, PL8000
Not clear	**11**	BG1000, BG2000, FIVHA1, FIVHA2, FIVHA3, FIVHA4, FIVHA5, FIVHA6, FIVHA7, FRD, FRF
No information found	**37**	CZ_RB_1000, CZ_RB_5000, CZ_RB_6000, DK3, EE1, EE2, EE3, FRL, GBNIIENB (IE), GBNIIENW (IE), IEEA, IEGBNISH, IESE, IESW, IEWE, ITB, ITC, ITD, NO1101, NO1102, NO1103, NO1104, NO1105, NO5101, NO5102, NO5103, NO5104, NO5105, NO5106, RO1000, UK03, UK04, UK05, UK06, UK07, UK08, UK09
Not relevant	**29**	BE_Nordzee_FED, DE9500, DE9610, DE9650, FRB1, FRC, GBNIIENB (IE), GBNIIENW (IE), GBNINE, IEEA, IEGBNISH, IESE, IESW, IEWE, LU2000, LVDUBA, LVGUBA, LVLUBA, LVVUBA, SE1, SE5, SK30000, SK40000, UK02, UK10, UK11, UK12, GBNIIENB (UK), GBNIIENW (UK)

15.3.4. What are the factors that are identified as the main causes (drivers) of current and upcoming water scarcity (WS) situations?

	Σ=	RBMPs
Decrease in natural available resources	**34**	AT1000, AT2000, AT5000, BG1000, BG3000, BG4000, CY001, EE1, FIVHA1, FIVHA2, FIVHA3, FIVHA4, FIVHA5, FIVHA6, FIWDA, FRA, FRD, FRG, HU1000, ITF, ITG, NLEM, NLMS, NLRN, NLSC, SE4, UK01, UK03, UK04, UK05, UK06, UK07, UK08, UK09
Irregular rainfall patterns	**40**	AT1000, AT2000, AT5000, BG1000, BG3000, BG4000, CY001, DE2000, DE3000, DE7000, ES100, FIVHA4, HU1000, DE5000, DE6000, FIWDA, SE1, FIVHA1, FIVHA2, FIVHA3, FIVHA5, FIVHA6, BEMaas_VL, BESchelde_VL, DE4000, FRE, FRG, FRH, FRI, FRJ, FRK, FRL, ITD, UK03, UK04, UK05, UK06, UK07, UK08, UK09
Insufficient development of water supply infrastructure	**8**	BG1000, BG4000, FRI, FRJ, FRL, ITF, SI_RBD_1, SI_RBD_2
Past and current overallocation of available water resources	**21**	BEMaas_VL, BESchelde_VL[22], CY001, CZ_RB_1000, CZ_RB_5000, DK1, DK2, ES100, FRD, FRG, FRH, FRI, FRJ, HU1000, PL2000, PL6000, PL7000, SE2, SE3, SE4, UK01
Need to satisfy new urban water demands	**22**	DK1, DK2, EE1, ES100, FIVHA1, FIVHA2, FIVHA3, FIVHA4, FIVHA5, FIVHA6, FIVHA7, FIWDA, FRD, FRL, SE1, UK03, UK04, UK05, UK06, UK07, UK08, UK09
Need to satisfy new agricultural water demands	**25**	AT1000, AT2000, AT5000, DK1, DK2, DK4, ES100, FIVHA1, FIVHA2, FIVHA3, FIVHA4, FIVHA5, FIVHA6, FRD, FRL, HU1000, ITF, SI_RBD_1, SI_RBD_2, UK03, UK04, UK05, UK06, UK07, UK08
Need to satisfy new industrial water demands	**15**	ES100, FIVHA1, FIVHA2, FIVHA3, FIVHA4, FIVHA5, FIVHA6, FRL, ITF, UK02, UK03, UK04, UK05, UK06, UK07

[22] According to the feedback from BE to the European Commission, the main driver of current and upcoming water scarcity in these basins will be (in future) a shift in rainfall patterns and a problem of overexploitation of some groundwater bodies because an overallocation of their resources

Need to satisfy new tourism water demands	**18**	AT1000, AT2000, AT5000, FIVHA1, FIVHA2, FIVHA3, FIVHA4, FIVHA5, FIVHA6, FIVHA7, FRD, FRL, ITF, UK03, UK04, UK05, UK07, UK08
Non authorised or non controlled use of water	**12**	CY001, DK1, DK2, DK4, EE1, ES100, FIVHA1, FIVHA2, FIVHA3, FIVHA4, FRL, ITF
Water use technologies that do not foster efficient use	**7**	BG1000, BG3000, BG4000, ES100, FRD, ITF, SE2
Lack of water metering	**2**	ITF, SE2
Water pricing policies that do not provide incentives foe efficient use	**2**	EE1, FRL
Lack or inadequacy of drought risk management plans	**4**	FRI, SE2, SE3, SE4
Insufficient flexibility in the water rights system	**0**	
Other	**14**	EE2, ES100, FIWDA, FRJ, FRL, GBNIIENW (UK), GBNINE, ITD, ITE, ITF, SE1, SI_RBD_1, SI_RBD_2, UK08
Not clear	**13**	BG1000, BG2000, FIVHA1, FIVHA2, FIVHA3, FIVHA4, FIVHA5, FIVHA6, FIVHA7, FRF, SE2, SE3, SE4
No information found	**28**	CZ_RB_1000, CZ_RB_5000, CZ_RB_6000, DK3, EE3, GBNIIENB (IE), GBNIIENW (IE), IEEA, IEGBNISH, IESE, IESW, IEWE, ITB, ITC, ITD, ITE, NO1101, NO1102, NO1103, NO1104, NO1105, NO5101, NO5102, NO5103, NO5104, NO5105, NO5106, RO1000
Not relevant	**35**	BE_Nordzee_FED, DE9500, DE9610, DE9650, FRB1, FRB2, FRC, GBNIIENB (IE), GBNIIENB (UK), GBNIIENW (IE), GBNIIENW (UK), GBNINE,

15.3.5. What are the effects of past and expected droughts?

	Σ=	**RBMPs**
Urban supply shortages	**21**	BEMaas_VL, BESchelde_VL[23], BG3000, CY001, DE2000, DE4000, ES100, FIVHA6, FRB1, FRC, FRE, FRF, FRG, FRK, HU1000, ITA, NLEM, NLMS, NLRN, NLSC, UK01
Economic losses in the agricultural sector	**5**	CY001, FRF, HU1000, SI_RBD_1, SI_RBD_2
Economic losses in the industrial sector	**2**	FIVHA6, FRF
Economic losses in the tourism sector	**2**	FIVHA6, FRF
Hindrance to the economic development of the RBD	**1**	FRF
Dependence of the RBD on new/external water resources	**2**	ES100, FRF
Degradation of surface water quality	**25**	AT1000, AT2000, AT5000, BEMaas_VL, BESchelde_VL, BG3000, CY001, DE1000, DE2000, DE3000, DE4000, DE5000, DE7000, FIVHA1, FIVHA2, FIVHA3, FIVHA4, FIVHA5, FIVHA6, FIVHA7, FRF, FRH, FRK, MTMalta, UK01
Degradation of groundwater quality	**14**	CY001, DE9650, FIVHA1, FIVHA2, FIVHA3, FIVHA4, FIVHA5, FIVHA6, FIVHA7, FIWDA, FRF, MTMalta, SI_RBD_1, SI_RBD_2
Groundwater over-abstraction	**13**	AT1000, AT2000, AT5000, CY001, FIVHA1, FIVHA2, FIVHA3, FIVHA4, FIWDA, FRF, FRG, FRH, MTMalta
Wetlands degradation or disappearance	**12**	BG3000, ES100, FIVHA1, FIVHA2, FIVHA3, FIVHA4, FIVHA5, FIVHA6, FIVHA7, FRF, FRG, ITF
Disruption of environmental in-stream flow	**16**	AT1000, AT2000, AT5000, CY001, FIVHA1, FIVHA2, FIVHA3, FIVHA4, FIVHA5, FIVHA6, FIVHA7, FRF, FRG, HU1000, PL6000, UK01

[23] According to the feedback from BE to the European Commission, the main effects of drought are the difficulties in the urban supply and the deterioration of surface water quality

regimes		
Exemptions of environmental objectives	**4**	ES100, FRC, FRF, FRH
Others	**13**	DE2000, DE3000, DE4000, DE7000, FRD, FRE, FRH, ITF, LT2300, LT3400, LT4500,, PL6000, PL8000
Not clear	**9**	BG1000, BG4000, ITE, ITG, PL6000, PL7000, SE2, SE3, SE4
No information found	**40**	BG2000, DE6000, DK3, EE1, EE2, EE3, FRA, FRB2, FRL, GBNIIENW (IE), IEEA, IEGBNISH, IESE, IESW, IEWE, ITB, ITC, ITD, ITH, LT1100, NO1101, NO1102, NO1103, NO1104, NO1105, NO5101, NO5102, NO5103, NO5104, NO5105, NO5106, PL2000, RO1000, UK03, UK04, UK05, UK06, UK07, UK08, UK09
Not relevant	**26**	BE_Nordzee_FED, DE9500, DE9610, GBNIIENB (IE), GBNIIENW (IE), GBNINE, IEEA, IEGBNISH, IESE, IESW, IEWE, LU2000, LVDUBA, LVGUBA, LVLUBA, LVVUBA, MTMalta, SE5, SK30000, SK40000, UK02, UK10, UK11, UK12, GBNIIENB (UK), GBNIIENW (UK)

15.3.6. What are the effects of past and expected water scarcity?

	Σ=	**RBMPs**
Urban supply shortages	**34**	BEMaas_VL, BESchelde_VL,[24] BG3000, CY001, DE4000, ES100, FIVHA1, FIVHA2, FIVHA3, FIVHA4, FIVHA5, FIVHA6, FIVHA7, FIWDA, FRB1, FRC, FRE, FRF, FRG, FRI, FRJ, NLEM, NLMS, NLRN, NLSC, SE4, SI_RBD_1, SI_RBD_2, UK03, UK04, UK05, UK06, UK07, UK09
Economic losses in the agricultural sector	**6**	CY001, ES100, FRF, FRI, FRJ, ITG
Economic losses in the industrial sector	**2**	FIVHA6, FRF
Economic losses in the tourism sector	**2**	FIVHA6, FRF
Hindrance to the economic development of the RBD	**1**	FRF
Dependence of the RBD on new/external water resources	**8**	DK1, DK2, DK4, ES100, FRF, FRI, FRJ, FRL
Degradation of surface water quality	**35**	AT1000, AT2000, AT5000, BEMaas_VL, BESchelde_VL, BG3000, CY001, DE2000, DE3000, DE4000, DE5000, DE7000, DK1, DK2, DK4, FIVHA1, FIVHA2, FIVHA3, FIVHA4, FIVHA5, FIVHA6, FIVHA7, FRF, FRH, FRI, FRJ, SE4, UK01, UK03, UK04, UK05, UK06, UK07, UK08, UK09
Degradation of groundwater quality	**30**	BEMaas_VL, BESchelde_VL, CY001, DK1, DK2, DK4, EE1, EE2, FIVHA1, FIVHA2, FIVHA3, FIVHA4, FIVHA5, FIVHA6, FIVHA7, FIWDA, FRF, HU1000, ITF, SE1, SE2, SE3, SE4, UK03, UK04, UK05, UK06, UK07, UK08, UK09
Groundwater over-abstraction	**42**	AT1000, AT2000, AT5000, BEMaas_VL, BESchelde_VL, CY001, CZ_RB_6000, DK1, DK2, DK4, EE1, EE2, FIVHA1, FIVHA2, FIVHA3, FIVHA4, FIWDA, FRF, FRG, FRH, FRL, GBNIIENW (UK), GBNINE, HU1000, IEWE, ITC, ITD, ITE, ITF, PL2000, PL6000, PL7000, SE1, SE2, SE3, SE4, SI_RBD_2, UK01, UK03, UK05, UK06, UK07
Wetlands degradation or disappearance	**18**	BG3000, FIVHA1, FIVHA2, FIVHA3, FIVHA4, FIVHA5, FIVHA6, FIVHA7, FRF, FRG, ITF, UK03, UK04, UK05, UK06, UK07, UK08, UK09
Disruption of environmental in-stream flow	**34**	AT1000, AT2000, AT5000, BG3000, CY001, EE1, EE2, ES100, FIVHA1, FIVHA2, FIVHA3, FIVHA4, FIVHA5, FIVHA6, FIVHA7, FRF, FRG, FRI, FRJ, GBNIIENB (IE),

[24] According to the feedback from BE to the European Commission, the effects of WS are essentially the difficulties in the urban supply, the groundwater over-abstraction and the deterioration of surface and groundwater water quality

regimes		GBNIIENW (IE), GBNINE, IESW, IEWE, ITF, UK01, UK03, UK04, UK05, UK06, UK07, UK08, UK09, GBNIIENW (UK)
Exemptions of environmental objectives	**10**	CZ_RB_1000, CZ_RB_5000, CZ_RB_6000, DK1, DK2, DK4, ES100, FRC, FRF, FRH
Others	**16**	DE2000, DE3000, DE4000, DE7000, FRD, FRE, FRH, ITC, ITE, ITF, PL2000, PL6000, UK04, UK05, UK07, UK08
Not clear	**2**	BG1000, BG4000
No information found	**29**	BG2000, DE6000, DK3, EE3, FRA, FRB2, IEEA, IEGBNISH, IESE, ITB, ITC, ITD, ITH, LT1100, LT2300, LT3400, LT4500, NO1101, NO1102, NO1103, NO1104, NO1105, NO5101, NO5102, NO5103, NO5104, NO5105, NO5106, RO1000
Not relevant	**23**	BE_Nordzee_FED, DE9500, DE9610, GBNIIENB, GBNIIENW, GBNINE, IEEA, IEGBNISH, IESE, LU2000, LVDUBA, LVGUBA, LVLUBA, LVVUBA, MTMalta, PL8000, SE5, SK30000, SK40000, UK02, UK10, UK11, UK12

15.3.7. What data on future water demand and water availability trend scenarios are provided for the RBD?

	Σ=	RBMPs
Water demand trend scenarios are provided itemised by water use	**35**	BG2000, BG4000, CY001, CZ_RB_1000, CZ_RB_5000, CZ_RB_6000, DE1000, DE2000, DE3000, DE4000, DE5000, DE6000, DE7000, DE9500, DE9610, DE9650, EE1, EE2, ES100, FIVHA1, FIVHA2, FIVHA3, FIVHA4, FIVHA5, FIVHA6, FIVHA7, FRG, HU1000, LVDUBA, LVGUBA, LVLUBA, LVVUBA, RO1000, SI_RBD_1, SI_RBD_2
Water demand trend scenarios are provided but are not itemised by water use	**5**	DE2000, DK1, DK2, FRL, LT1100[25]
Water availability trend scenarios are provided itemised by type of water	**8**	BG2000, CY001, CZ_RB_1000, CZ_RB_5000, CZ_RB_6000, EE1, EE3, HU1000
Water availability trend scenarios are provided but are not itemised by type of water	**20**	AT1000, AT2000, AT5000, BG1000, BG2000, BG3000,[26] BG4000, DE2000, DE3000, DE4000, DE6000, DE7000, DE9650, FIVHA1, FIVHA2, FIVHA3, FIVHA4, FIVHA5, FIVHA6, FIVHA7
No data on future water demand trend scenarios are provided	**47**	BE_Nordzee_FED, BEMaas_VL, BESchelde_VL, BG1000, BG3000, DK3, DK4, FIWDA, FRB1, FRC, FRE, FRH, FRI, FRK, GBNIIENB (IE), GBNIIENW (IE), GBNINE, IEEA, IEGBNISH, IESE, IESW, IEWE, ITA, ITC, ITD, ITE, ITF, ITG, ITH, LU2000, MTMalta, NLEM, NLMS, NLRN, NLSC, PL2000, PL6000, PL7000, PL8000, SE2, SE3, SE4, SE5, SK30000, SK40000, GBNIIENB (UK), GBNIIENW (UK),
No data on future water availability trend scenarios are provided	**62**	BE_Nordzee_FED, BEMaas_VL, BESchelde_VL, BG1000, BG3000, DE2000, DE5000, DE9500, DE9610, DK3, DK4, FIWDA, FRB1, FRC, FRE, FRH, FRI, FRK, FRL, GBNIIENB (IE), GBNIIENW (IE), GBNINE, IEEA, IEGBNISH, IESE, IESW, IEWE, ITA, ITB, ITC, ITD, ITE, ITF, ITG, ITH, LU2000, MTMalta, NLEM, NLMS, NLRN, NLSC, NO1101, NO1102, NO1103, NO1104, NO1105, NO5101, NO5102, NO5103, NO5104, NO5105, NO5106, PL2000, PL6000, PL7000, PL8000, SE2, SE3, SE4, SE5, GBNIIENB (UK), GBNIIENW (UK)
Others	**20**	FRD, LT1100, LT2300, LT3400, LT4500, RO1000, SI_RBD_1, SI_RBD_2, UK01[27], UK02, UK03, UK04, UK05, UK06, UK07, UK08, UK09, UK10, UK11, UK12
Not clear	**8**	AT1000, AT2000, AT5000, FRA, FRB2, FRF, FRJ, SE1

[25] According to the feedback from LT to the European Commission, trend changes have been analysed in 2010 until 2020, outside the RBMP (http://vanduo.gamta.lt/files/Klimato%20kaitos%20poveikis.pdf)

[26] According to the feedback from BG to the European Commission, in 2011 an Analysis for water use and availability was carried out, considering climate scenarios

[27] According to the feedback from UK to the European Commission, data are included in the previous Water Resources Management Plans

15.3.8. Does the RBMP include information on measures to minimize pressures and impacts of droughts and water scarcity?

	Σ=	RBMPs
Yes	**92**	AT1000, AT2000, AT5000, BEMaas_VL, BESchelde_VL, BG1000, BG2000, BG3000, BG4000, CY001, CZ_RB_1000, CZ_RB_5000, CZ_RB_6000, DK1, DK2, DK4, ES100, FIVHA1, FIVHA2, FIVHA3, FIVHA4, FIVHA5, FIVHA6, FIVHA7, FIWDA, FRA, FRB1, FRB2, FRC, FRD, FRE, FRF, FRG, FRH, FRI, FRJ, FRK, FRL, GBNIIENB (IE(, GBNIIENW (IE), GBNINE, HU1000, IEEA, IEGBNISH, IESE, IESW, IEWE, ITA, ITB, ITC, ITD, ITE, ITF, ITG, LT1100, LT2300, LT3400, LT4500, LVDUBA, LVGUBA, LVLUBA, LVVUBA, MTMalta, NLEM, NLMS, NLRN, NLSC, PL2000, PL6000, PL7000, PL8000, RO1000, SE2, SE3, SE4, SE5, SI_RBD_1, SI_RBD_2, UK01, UK02, UK03, UK04, UK05, UK06, UK07, UK08, UK09, UK10, UK11, UK12, GBNIIENB (UK), GBNIIENW (UK)
No, unclear or not relevant	**31**	BE_Nordzee_FED, DE1000, DE2000, DE3000, DE4000, DE5000, DE6000, DE7000, DE9500, DE9610, DE9650, DK3, EE1, EE2, EE3, ITH, LU2000, NO1101, NO1102, NO1103, NO1104, NO1105, NO5101, NO5102, NO5103, NO5104, NO5105, NO5106, SE1, SK30000, SK40000,

15.3.9. Which measures of the Programme of Measures address droughts and water scarcity?

Measure	Σ=	Category	RBMPs
1. Restrictions to new urban developments	83	Not included	AT1000, AT2000, AT5000, BEMaas_VL, BESchelde_VL, BG1000, BG3000, BG4000, CY001, CZ_RB_1000, CZ_RB_5000, CZ_RB_6000, DK1, DK2, DK3, DK4, ES100, FIVHA5, FIVHA6, FIVHA7, FIWDA, FRA, FRB1, FRB2, FRC, FRD, FRE, FRF, FRH, FRI, FRJ, FRL, GBNIIENB (IE), GBNIIENW (IE), GBNINE, HU1000, IEEA, ITA, ITB, ITD, ITE, ITF, ITG, ITH, LT1100, LT2300, LT3400, LT4500, LVDUBA, LVGUBA, LVLUBA, LVVUBA, MTMalta, NLEM, NLMS, NLRN, NLSC, PL2000, PL6000, PL7000, PL8000, RO1000, SE1, SE2, SE3, SE4, SE5, SI_RBD_1, SI_RBD_2, UK01, UK02, UK03, UK04, UK05, UK06, UK07, UK08, UK09, UK10, UK11, UK12, GBNIIENB (UK), GBNIIENW (UK),
	7	Included but unable to assess significance	IEGBNISH, IESE, IESE, IEWE, ITC FRG, FRK
	0	Low importance	
	4	Moderate importance	FIVHA1, FIVHA2, FIVHA3, FIVHA4
	0	High importance	
	29	No info	BE_Nordzee_FED, BG2000, DE1000, DE2000, DE3000, DE4000, DE5000, DE6000, DE7000, DE9500, DE9610, DE9650, EE1, EE2, EE3, LU2000, NO1101, NO1102, NO1103, NO1104, NO1105, NO5101, NO5102, NO5103, NO5104, NO5105, NO5106, SK30000, SK40000,
2. Restrictions to new irrigation schemes	78	Not included	AT1000, AT2000, AT5000, BEMaas_VL, BESchelde_VL, BG1000, BG4000, CY001, CZ_RB_1000, CZ_RB_5000, CZ_RB_6000, DK3, FIVHA1, FIVHA2, FIVHA3, FIVHA4, FIVHA5, FIVHA6, FIVHA7, FIWDA, FRA, FRB1, FRB2, FRC, FRD, FRE, FRF, FRH, FRI, FRJ, GBNIIENB (IE), GBNIIENW (IE), GBNINE, HU1000, IEEA, IEGBNISH, IESE, IESW, IEWE, ITB,ITC, ITD, ITE, ITF, ITG, ITH, LT1100, LT2300, LT3400, LT4500, MTMalta, NLEM, NLMS, NLRN, NLSC, PL2000, PL6000, PL7000, PL8000, RO1000, SE1, SE2, SE3, SE4, SE5, UK01, UK02, UK03, UK04, UK05, UK06, UK07, UK08, UK09, UK10, UK11, UK12, GBNIIENB (UK), GBNIIENW (UK)
	8	Included but unable to assess significance	FRG, FRK, FRL, ITA, LVDUBA, LVGUBA, LVLUBA, LVVUBA
	2	Low importance	SI_RBD_1, SI_RBD_2
	0	Moderate importance	

Measure	Σ=	Category	RBMPs
	5	High importance	BG3000, DK1, DK2, DK4,ES100
	29	No info	BE_Nordzee_FED, BG2000, DE1000, DE2000, DE3000, DE4000, DE5000, DE6000, DE7000, DE9500, DE9610, DE9650, EE1, EE2, EE3, LU2000, NO1101, NO1102, NO1103, NO1104, NO1105, NO5101, NO5102, NO5103, NO5104, NO5105, NO5106, SK30000, SK40000
3. Subsidies for shifting to less water-demanding land uses	85	Not included	AT1000, AT2000, AT5000, BEMaas_VL, BESchelde_VL, CZ_RB_1000, CZ_RB_5000, CZ_RB_6000, DK1, DK2, DK3, DK4, FIVHA1, FIVHA2, FIVHA3, FIVHA4, FIVHA5, FIVHA6, FIVHA7, FIWDA, FRA, FRB1, FRB2, FRC, FRD, FRE, FRF, FRH, FRI, FRJ, FRK, FRL, GBNIIENB (IE), GBNIIENB (UK), GBNIIENW (IE), GBNIIENW (UK), GBNINE, IEEA, IEGBNISH, IESE, IESW, IEWE, ITA, ITB, ITC, ITD, ITE, ITF, ITG, ITH, LT1100, LT2300, LT3400, LT4500, LVDUBA, LVGUBA, LVLUBA, LVVUBA, MTMalta, NLEM, NLMS, NLRN, NLSC, PL2000, PL6000, PL7000, PL8000, RO1000, SE1, SE2, SE3, SE4, SE5, UK01, UK02, UK03, UK04, UK05, UK06, UK07, UK08, UK09, UK10, UK11, UK12
	5	Included but unable to assess significance	BG4000, FRG, HU1000, SI_RBD_1, SI_RBD_2
	1	Low importance	CY001
	0	Moderate importance	
	3	High importance	BG1000, BG3000, ES100
	29	No Info	BE_Nordzee_FED, BG2000, DE1000, DE2000, DE3000, DE4000, DE5000, DE6000, DE7000, DE9500, DE9610, DE9650, EE1, EE2, EE3, LU2000, NO1101, NO1102, NO1103, NO1104, NO1105, NO5101, NO5102, NO5103, NO5104, NO5105, NO5106, SK30000, SK40000
4. Improvement of the efficiency of water agricultural uses	51	Not included	AT1000, AT2000, AT5000, CZ_RB_1000, CZ_RB_5000, CZ_RB_6000, DK3, FIVHA1, FIVHA2, FIVHA3, FIVHA4, FIVHA5, FIVHA6, FIVHA7, FIWDA, FRB1, FRC, FRE, FRF, FRH, FRK, GBNIIENB (IE), GBNIIENB (UK), GBNIIENW (IE), GBNIIENW (UK), GBNINE, IEEA, IEGBNISH, IESE, IESW, IEWE, ITD, ITF, LT1100, LT2300, LT3400, LT4500, MTMalta, NLEM, NLMS, NLRN, NLSC, PL6000, PL7000, PL8000, SE1, SE2, SE3, SE4, SE5, UK03
	19	Included but unable to assess significance	BEMaas_VL, BESchelde_VL, BG4000, DK1, DK2, DK4, FRA, FRB2, FRD, FRG, FRL, ITA, ITB, ITC, ITE, ITG, ITH, PL2000, RO1000
	3	Low importance	SI_RBD_1, SI_RBD_2, UK12
	12	Moderate importance	CY001, ES100, UK01, UK02, UK04, UK05, UK06, UK07, UK08, UK09, UK10, UK11
	9	High importance	HU1000, BG1000, BG3000, FRI, FRJ, LVDUBA, LVGUBA, LVLUBA, LVVUBA
	29	No info	BE_Nordzee_FED, BG2000, DE1000, DE2000, DE3000, DE4000, DE5000, DE6000, DE7000, DE9500, DE9610, DE9650, EE1, EE2, EE3, LU2000, NO1101, NO1102, NO1103, NO1104, NO1105, NO5101, NO5102, NO5103, NO5104, NO5105, NO5106, SK30000, SK40000
5. Reduction of losses in urban distribution networks	35	Not included	AT1000, AT2000, AT5000, CY001, DK1, DK2, DK3, DK4, FIVHA5, FIVHA6, FIVHA7, FIWDA, FRE, FRH, FRK, FRL, GBNIIENW (IE), ITB, ITD, ITE, ITF, NLEM, NLMS, NLRN, NLSC, PL7000, PL8000, RO1000, SE1, SE2, SE3, SE4, SE5, UK10, UK11
	26	Included but unable to assess significance	BEMaas_VL, BESchelde_VL, BG2000, CZ_RB_1000, CZ_RB_5000, CZ_RB_6000, FRA, FRB1, FRB2, FRC, FRD, FRF, FRG, GBNIIENB (IE), IEEA, IEGBNISH, IESE, IESW, IEWE, ITA, ITC, ITG, ITH, MTMalta, PL2000, PL6000
	1	Low importance	LT3400
	13	Moderate importance	ES100, FIVHA1, FIVHA2, FIVHA3, FIVHA4, GBNIIENB (UK), GBNIIENW (UK), GBNINE, LT1100, LT2300, LT4500, UK01, UK02

Measure	Σ=	Category	RBMPs
	20	High importance	BG1000, BG3000, BG4000, FRI, FRJ, HU1000, LVDUBA, LVGUBA, LVLUBA, LVVUBA, SI_RBD_1, SI_RBD_2, UK03, UK04, UK05, UK06, UK07, UK08, UK09, UK12,
	28	No info	BE_Nordzee_FED, DE1000, DE2000, DE3000, DE4000, DE5000, DE6000, DE7000, DE9500, DE9610, DE9650, EE1, EE2, EE3, LU2000, NO1101, NO1102, NO1103, NO1104, NO1105, NO5101, NO5102, NO5103, NO5104, NO5105, NO5106, SK30000, SK40000,
6. Reduction/ management of groundwater abstraction (e.g. by controls, registers)	12	Not included	DK3, GBNIIENB (UK), GBNIIENW (UK), GBNINE, IEEA, ITB, ITC, ITG, PL7000, PL8000, UK01, UK02
	33	Included but unable to assess significance	BG2000, FIVHA5, FIVHA6, FIVHA7, FRA, FRB1, FRB2, FRC, FRD, FRE, FRF, FRG, FRH, FRK, GBNIIENB (IE), GBNIIENW (IE), IEGBNISH, IESE, IESW, IEWE, ITA, ITD, ITE, ITF, ITH, MTMalta, PL2000, PL6000, SE1, SE2, SE3, SE4, SE5
	3	Low importance	LT3400, SI_RBD_1, SI_RBD_2
	21	Moderate importance	AT1000, AT2000, AT5000, CZ_RB_1000, CZ_RB_5000, CZ_RB_6000, ES100, FIVHA1, FIVHA2, FIVHA3, FIVHA4, FIWDA, LT1100, LT2300, LT4500, LVDUBA, LVGUBA,, LVLUBA, LVVUBA, UK10, UK11
	2	High importance	BEMaas_VL, BESchelde_VL[28], BG1000, BG3000, BG4000, CY00, DK1, DK2, DK4, HU1000, FRI, FRJ, FRL, NLEM, NLMS, NLRN, NLSC, RO1000, UK03, UK04, UK05, UK06, UK07, UK08, UK09, UK12,
	28	No info	BE_Nordzee_FED, DE1000, DE2000, DE3000, DE4000, DE5000, DE6000, DE7000, DE9500, DE9610, DE9650, EE1, EE2, EE3, LU2000, NO1101, NO1102, NO1103, NO1104, NO1105, NO5101, NO5102, NO5103, NO5104, NO5105, NO5106, SK30000, SK40000
7. Adoption of binding performance criteria for new buildings and for public and private networks	62	Not included	AT1000, AT2000, AT5000, BG3000, BG4000, CZ_RB_1000, CZ_RB_5000, CZ_RB_6000, DK1, DK2, DK3, DK4, FIWDA, FRA, FRB1, FRB2, FRC, FRD, FRE, FRF, FRG, FRH, FRI, FRJ, FRK, FRL, GBNIIENB (IE), GBNIIENW (IE), GBNINE, IEEA, IEGBNISH, IESE, IESW, IEWE, ITA, ITB, ITC, ITE, ITF, ITG, LT1100, LT2300, LT3400, LT4500, MTMalta, PL2000, PL6000, PL7000, PL8000, RO1000, SE1, SE2, SE3, SE4, SE5, SI_RBD_1, SI_RBD_2, UK01, UK02, UK10, GBNIIENB (UK), GBNIIENW (UK)
	12	Included but unable to assess significance	BEMaas_VL, BESchelde_VL, FIVHA5, FIVHA6, FIVHA7, HU1000, ITD, ITH, LVDUBA, LVGUBA, LVLUBA, LVVUBA
	1	Low importance	ES100
	14	Moderate importance	CY001, FIVHA1, FIVHA2, FIVHA3, FIVHA4, UK03, UK04, UK05, UK06, UK07, UK08, UK09, UK11, UK12
	5	High importance	BG1000, NLEM, NLMS, NLRN, NLSC
	29	No info	BE_Nordzee_FED, BG2000, DE1000, DE2000, DE3000, DE4000, DE5000, DE6000, DE7000, DE9500, DE9610, DE9650, EE1, EE2, EE3, LU2000, NO1101, NO1102, NO1103, NO1104, NO1105, NO5101, NO5102, NO5103, NO5104, NO5105, NO5106, SK30000, SK40000
8. Measures to enhance water metering	54	Not included	AT1000, AT2000, AT5000, CZ_RB_1000, CZ_RB_5000, CZ_RB_6000, DK1, DK2, DK3, DK4, ES100, FIVHA1, FIVHA2, FIVHA3, FIVHA4, FIVHA5, FIVHA6, FIVHA7, FIWDA, FRA, FRB1, FRB2, FRC, FRD, FRE, FRF, FRG, FRH, FRI, FRJ, FRL, GBNIIENB (UK), GBNIIENW (IE), GBNIIENW (UK), GBNINE, HU1000, ITB, ITE, ITF, ITG, ITH, LT1100, LT2300, LT3400, LT4500, PL2000, PL7000, PL8000, RO1000, SE4, SE5, SI_RBD_1, SI_RBD_2, UK01

[28] According to the feedback from BE to the European Commission, several measures addressing droughts and water scarcity in Flanders river basins have been included: the high importance of measures of Reduction/ management of groundwater abstraction is underlined; likewise other measures included in the category of 'Included but unable to assess significance', as measures to enhance water metering, resilience of the ecosystems to water scarcity and droughts or governance (transboundary agreements) and measures of promoting rainwater harvesting

Measure	Σ=	Category	RBMPs
	20	Included but unable to assess significance	BEMaas_VL, BESchelde_VL, BG1000, BG3000, BG4000, FRK, GBNIIENB (IE), IEEA, IESE, IESW, IEGBNISH, IEWE, ITA, ITC, ITD, MTMalta, PL6000, SE1, SE2, SE3
	2	Low importance	UK10, UK11
	17	Moderate importance	LVDUBA, LVGUBA, LVLUBA, LVVUBA, NLEM, NLMS, NLRN, NLSC, UK02, UK03, UK04, UK05, UK06, UK07, UK08, UK09, UK12
	1	High importance	CY001
	29	No info	BE_Nordzee_FED, BG2000, DE1000, DE2000, DE3000, DE4000, DE5000, DE6000, DE7000, DE9500, DE9610, DE9650, EE1, EE2, EE3, LU2000, NO1101, NO1102, NO1103, NO1104, NO1105, NO5101, NO5102, NO5103, NO5104, NO5105, NO5106, SK30000, SK40000
9. Modification of the water pricing system to foster a more efficient use of water	50	Not included	AT1000, AT2000, AT5000, CZ_RB_1000, CZ_RB_5000, CZ_RB_6000, DK1, DK2, DK3, DK4, ES100, FIVHA1, FIVHA2, FIVHA3, FIVHA4, FIVHA5, FIVHA6, FIVHA7, FIWDA, FRB1, FRC, FRD, FRF, FRG, FRI, FRJ, GBNIIENB (UK), GBNIIENW (UK), GBNINE, IEEA, ITB, ITC, ITE, ITF, ITG, LT1100, LT2300, LT3400, LT4500, MTMalta, PL6000, RO1000, SE1, SE2, SE3, UK01, UK02, UK10, UK11, UK12
	25	Included but unable to assess significance	BEMaas_VL, BESchelde_VL, BG1000, BG2000, BG3000, BG4000, FRA, FRB2, FRE, FRH, FRK, GBNIIENB (IE), GBNIIENW (IE), IESE, IEWE, IEGBNISH, IEWE, ITA, ITD, ITH, PL2000, PL7000, PL8000, SE4, SE5,
	9	Low importance	SI_RBD_1, SI_RBD_2, UK03, UK04, UK05, UK06, UK07, UK08, UK09
	0	Moderate importance	
	11	High importance	CY001, HU1000, FRL, LVDUBA, LVGUBA, LVLUBA, LVVUBA, NLEM, NLMS, NLRN, NLSC
	28	No info	BE_Nordzee_FED, DE1000, DE2000, DE3000, DE4000, DE5000, DE6000, DE7000, DE9500, DE9610, DE9650, EE1, EE2, EE3, LU2000, NO1101, NO1102, NO1103, NO1104, NO1105, NO5101, NO5102, NO5103, NO5104, NO5105, NO5106, SK30000, SK40000
10. Development of fiscal or economic incentives for the promotion of water efficient devices or practices	64	Not included	AT1000, AT2000, AT5000, CZ_RB_1000, CZ_RB_5000, CZ_RB_6000, DK1, DK2, DK3, DK4, ES100, FIVHA1, FIVHA2, FIVHA3, FIVHA4, FIVHA5, FIVHA6, FIVHA7, FIWDA, FRA, FRB2, FRD, FRE, FRF, FRG, FRH, FRI, FRJ, FRK, FRL, GBNIIENB (IE), GBNIIENB (IE), GBNIIENW (UK), GBNIIENW (UK), GBNINE, IEEA, IEGBNISH, IESE, IESW, IEWE, ITA, ITB, ITG, LT1100, LT2300, LT3400, LT4500, MTMalta, NLEM, NLMS, NLRN, NLSC, PL2000, PL6000, PL7000, PL8000, RO1000, SE1, SE2, SE3, SE4, UK01, UK05, UK10
	13	Included but unable to assess significance	BEMaas_VL, BESchelde_VL, FRB1, FRC, HU1000, ITC, ITD, ITE, ITF, ITH, SE5 , SI_RBD_1, SI_RBD_2
	10	Low importance	BG4000, CY001, UK03, UK04, UK06, UK07, UK08, UK09, UK11, UK12
	7	Moderate importance	BG1000, BG3000, LVDUBA, LVGUBA, LVLUBA, LVVUBA, UK02
	0	High importance	
	29	No info	BE_Nordzee_FED, BG2000, DE1000, DE2000, DE3000, DE4000, DE5000, DE6000, DE7000, DE9500, DE9610, DE9650, EE1, EE2, EE3, LU2000, NO1101, NO1102, NO1103, NO1104, NO1105, NO5101, NO5102, NO5103, NO5104, NO5105, NO5106, SK30000, SK40000

Measure	Σ=	Category	RBMPs
11. Establishment of water rights markets or schemes to facilitate water reallocation	91	Not included	AT1000, AT2000, AT5000, BEMaas_VL, BESchelde_VL, BG1000, BG3000, BG4000, CY001, CZ_RB_1000, CZ_RB_5000, CZ_RB_6000, DK1, DK2, DK3, DK4, ES100, FIVHA1, FIVHA2, FIVHA3, FIVHA4, FIVHA5, FIVHA6, FIVHA7, FIWDA, FRB1, FRC, FRD, FRE, FRF, FRG, FRI, FRJ, FRK, FRL, GBNIIENB (IE), GBNIIENW (IE), GBNINE, HU1000, IEEA, IEGBNISH, IESE, IESW, IEWE, ITA, ITB, ITC, ITD, ITE, ITF, ITG, ITH, LT1100, LT2300, LT3400, LT4500, LVDUBA, LVGUBA, LVLUBA, LVVUBA, MTMalta, NLEM, NLMS, NLRN, NLSC, PL2000, PL6000, PL7000, PL8000, RO1000, SE1, SE2, SE3, SE4, SE5, SI_RBD_1, SI_RBD_2, UK01, UK02, UK03, UK04, UK05, UK06, UK07, UK08, UK09, UK10, UK11, UK12, GBNIIENB (UK), GBNIIENW (UK)
	3	Included but unable to assess significance	FRA, FRB2, FRH
	0	Low importance	
	0	Moderate importance	
	0	High importance	
	29	No Info	BE_Nordzee_FED, BG2000, DE1000, DE2000, DE3000, DE4000, DE5000, DE6000, DE7000, DE9500, DE9610, DE9650, EE1, EE2, EE3, LU2000, NO1101, NO1102, NO1103, NO1104, NO1105, NO5101, NO5102, NO5103, NO5104, NO5105, NO5106, SK30000, SK40000
12. Development of Drought Risk Management Plans[29]	78	Not included	AT1000, AT2000, AT5000, BENoordzee_FED, BG1000, BG2000, BG4000, DE1000, DE2000, DE3000, DE4000, DE5000, DE6000, DE7000, DE9500, DE9610, DE9650, DK1, DK2, DK3, DK4, IEEA, ITF, ITG, ITH, EE1, EE2, EE3, FIVHA1, FIVHA2, FIVHA3, FIVHA4, FIVHA5, FIVHA6, FIVHA7, FIWDA, GBNIIENB, GBNIIENW, GBNIIENB (UK), GBNIIENW (UK), GBNINE, IEGBNISH, IESE, IESW, IEWE, LT1100, LT2300, LT3400, LT4500, LU2000, LVDUBA, LVGUBA, LVLUBA, LVVUBA, NO1101, NO1102, NO1103, NO1104, NO1105, NO5101, NO5102, NO5103, NO5104, NO5105, NO5106, PL2000, PL6000, PL7000, PL8000, RO1000, SE1, SE2, SE3, SE5, SI_RBD_2, SI_RBD_1, SK30000, SK40000
	0	Included but unable to assess significance	
	0	Low importance	
	22	Moderate importance	BEMaas_VL, BESchelde_VL, CZ_1000, CZ_5000, CZ_6000, FRA, FRB1, FRB2, FRC, FRE, FRH, ITA, ITE, NLEM, NLMS, NLSC, UK01, UK02, UK03, UK10, UK11, UK12
	17	High importance	CY001, ES100, FRD, FRF, FRG, FRL, ITB[30], ITC, ITD, MTMALTA, NLRN, UK04, UK05, UK06, UK07, UK08, UK09
	6	No Info or unclear	BG3000, FRI, FRJ, FRK, HU1000, SE4
13. Measures to enhance the resilience of the ecosystems to water scarcity and droughts[31]	56	Not included	BENoordzee_FED, CZ_1000, CZ_5000, CZ_6000, DE3000, DE9500, DE9610, DE9650, FIVHA2, FIVHA5, FIVHA7, FIWDA, FRA, FRB1, FRB2, FRC, FRE, FRH, FRG, FRI, FRK, FRL, GBNIIENB, GBNIIENW, IEEA, IEGBNISH, IESE, IESW, IEWE, ITH, LVDUBA, LVGUBA, LVLUBA, LVVUBA, MTMALTA,NLEM, NLMS, NLRN, NLSC, NO1101, NO1102, NO1103, NO1104, NO1105, NO5105, NO5106, PL2000, PL6000, PL7000, PL8000, SE1, SE2, SE4, SE5, SK30000, SK40000
	2	Included but unable to assess significance	BEMaas_VL, BESchelde_VL

[29] Measures 12 and 13 have been categorized with basis in the assessment carried out in the framework of the *Comparative Study of Pressures and Measures in the Major River Basin Management Plans*. All European RBs have been assessed though the level of confidence is uneven.

[30] According to the feedback from IT, the"Water Balance Plan for the Po River District" (WBP-PO) is in progress under high priority (its completion is scheduled for the end of 2013 or 2014)

[31] Measures 12 and 13 have been categorized with basis in the assessment carried out in the framework of the *Comparative Study of Pressures and Measures in the Major River Basin Management Plans*. All European RBs have been assessed though the level of confidence is uneven.

Measure	Σ=	Category	RBMPs
	23	Low importance	AT1000, AT2000, AT5000, BG2000, BG3000, EE1, EE2, EE3, FIVHA6, GBNIIENW (UK), LT1100, LT2300, LT3400, LT4500, NO5101, NO5102, NO5103, NO5104, SE3, SI_RBD_2, UK08, UK10, UK11
	24	Moderate importance	DE1000, DE2000, DE6000, DE7000, DK1, DK2, DK3, DK4, FIVHA1, FIVHA3, FIVHA4, GBNIIENB (UK), GBNINE HU1000, ITA, ITE, RO1000, SI_RBD_1, UK01, UK02, UK03, UK04, UK09, UK12,
	17	High importance	BG1000, BG4000, CY001, DE4000, DE5000, ES100, FRD, FRF, FRJ, ITB, ITC, ITD, ITF, ITG, UK05, UK06, UK07
	0	No info	LU2000
14. Measures to enhance water governance	58	Not included	AT1000, AT2000, AT5000, BG3000, BG4000, CY001, CZ_RB_1000, CZ_RB_5000, CZ_RB_6000, DK1, DK2, DK3, DK4, FIWDA, FRA, FRB1, FRB2, FRC, FRE, FRH, FRK, GBNIIENB (IE), GBNIIENW (IE), IEGBNISH, IESE, IESW, IEWE, LT1100, LT2300, LT3400, LT4500, MTMalta, NLEM, NLMS, NLRN, NLSC, PL2000, PL6000, PL7000, PL8000, RO1000, SE1, SE2, SE3, SE4, SE5, UK01, UK02, UK03, UK04, UK05, UK06, UK07, UK08, UK09, UK10, UK11, UK12
	20	Included but unable to assess significance	BEMaas_VL, BESchelde_VL, BG1000, BG2000, FIVHA5, FIVHA6, FIVHA7, FRD, FRF, FRG, FRL, IEEA, ITA, ITB, ITC, ITD, ITE, ITF, ITG, ITH
	2	Low importance	SI_RBD_1, SI_RBD_2
	5	Moderate importance	ES100, FIVHA1, FIVHA2, FIVHA3, FIVHA4
	10	High importance	HU1000, FRI, FRJ, LVDUBA, LVGUBA, LVLUBA, LVVUBA, GBNIIENB (UK), GBNIIENW (UK), GBNINE
	28	No Info	BE_Nordzee_FED, DE1000, DE2000, DE3000, DE4000, DE5000, DE6000, DE7000, DE9500, DE9610, DE9650, EE1, EE2, EE3, LU2000, NO1101, NO1102, NO1103, NO1104, NO1105, NO5101, NO5102, NO5103, NO5104, NO5105, NO5106, SK30000, SK40000
15. Training, education and capacity-building in water saving	38	Not included	AT1000, AT2000, AT5000, CZ_RB_1000, CZ_RB_5000, CZ_RB_6000, DK3, FIWDA, FRA, FRB2, FRE, FRH, FRK, IEEA, IESE, IESW, IEGBNISH, IEWE, ITA, ITB, ITC, ITD, ITE, ITF ITG, ITH, LT1100, LT2300, LT3400, LT4500, MTMalta, PL2000, RO1000, SE1, SE2, SE3, SE4, SE5
	20	Included but unable to assess significance	BEMaas_VL, BESchelde_VL, DK1, DK2, DK4, FIVHA5 , FIVHA6, FIVHA7, FRB1, FRC, FRD, FRF, FRG, FRL, GBNIIENB (IE), GBNIIENW (IE), HU1000, PL6000, PL7000, PL8000
	18	Low importance	BG4000, SI_RBD_1, SI_RBD_2, UK01, UK02, UK03, UK04, UK05, UK06, UK07, UK08, UK09, UK10, UK11, UK12, GBNIIENB (UK), GBNIIENW (UK), GBNINE
	7	Moderate importance	BG1000, BG3000, FIVHA1, FIVHA2, FIVHA3, FIVHA4, ES100
	11	High importance	CY1000, FRI, FRJ, LVDUBA, LVGUBA, LVLUBA, LVVUBA, NLEM, NLMS, NLRN, NLSC
	29	No info	BE_Nordzee_FED, BG2000, DE1000, DE2000, DE3000, DE4000, DE5000, DE6000, DE7000, DE9500, DE9610, DE9650, EE1, EE2, EE3, LU2000, NO1101, NO1102, NO1103, NO1104, NO1105, NO5101, NO5102, NO5103, NO5104, NO5105, NO5106, SK30000, SK40000
16. Studies, research and pilot projects to solve water scarcity problems and improve the response to droughts	41	Not included	AT1000, AT2000, AT5000, DK3, FRA, FRB1, FRB2, FRC, FRD, FRE, FRF, FRI, FRJ, FRK, GBNIIENB (IE), GBNIIENW (IE), IEEA, IESE, IESW, IEGBNISH, IEWE, ITA, ITB, ITF, ITG, ITH, LT1100, LT2300, LT3400, LT4500, LVDUBA, LVGUBA, LVLUBA, LVVUBA, MTMalta, PL2000, PL6000, PL7000, PL8000, UK01, UK11
	25	Included but unable to assess significance	BEMaas_VL, BESchelde_VL, CZ_RB_1000, CZ_RB_5000, CZ_RB_6000, FIVHA1, FIVHA2, FIVHA3, FIVHA4, FIVHA5, FIVHA6, FIVHA7, FIWDA, FRG, FRH, FRL ITC, ITD, ITE, RO1000, SE1, SE2, SE3, SE4, SE5
	14	Low importance	BG4000, UK02, UK03, UK04, UK05, UK06, UK07, UK08, UK09, UK10, UK12, GBNIIENB (UK), GBNIIENW (UK), GBNINE

Measure	Σ=	Category	RBMPs
	13	Moderate importance	BG1000, BG3000, DK1, DK2, DK4, ES100, HU1000, NLEM, NLMS, NLRN, NLSC, SI_RBD_1, SI_RBD_2
	1	High importance	CY001
	29	No Info	BE_Nordzee_FED, BG2000, DE1000, DE2000, DE3000, DE4000, DE5000, DE6000, DE7000, DE9500, DE9610, DE9650, EE1, EE2, EE3, LU2000, NO1101, NO1102, NO1103, NO1104, NO1105, NO5101, NO5102, NO5103, NO5104, NO5105, NO5106, SK30000, SK40000
17. Promotion of rainwater harvesting	67	Not included	AT1000, AT2000, AT5000, BG1000, BG3000, BG4000, CZ_RB_1000, CZ_RB_5000, CZ_RB_6000, CY001, DK1, DK2, DK3, DK4, ES100, FIVHA1, FIVHA2, FIVHA3, FIVHA4, FIVHA5, FIVHA6, FIVHA7, FIWDA, FRA, FRB2, FRE, FRG, FRH, FRI, FRJ, FRL, GBNIIENB (IE), GBNIIENW (IE), HU1000, ITB, ITC, ITD, ITF, ITG, ITH, LT1100, LT2300, LT3400, LT4500, LVDUBA, LVGUBA, LVLUBA, LVVUBA, NLEM, NLMS, NLRN, NLSC, PL2000, PL6000, PL7000, PL8000, RO1000, SE1, SE2, SE3, SE4, SE5, UK01, UK02, GBNIIENB (UK), GBNIIENW (UK), GBNINE
	17	Included but unable to assess significance	BEMaas_VL, BESchelde_VL, FRB1, FRC, FRD, FRF, FRK, IEEA, IESE, IESE, IEGBNISH, IEWE, ITA, ITE, MTMalta, SI_RBD_1, SI_RBD_2
	10	Low importance	UK03, UK04, UK05, UK06, UK07, UK08, UK09, UK10, UK11, UK12
	0	Moderate importance	
	0	High importance	
	29	No Info	BE_Nordzee_FED, BG2000, DE1000, DE2000, DE3000, DE4000, DE5000, DE6000, DE7000, DE9500, DE9610, DE9650, EE1, EE2, EE3, LU2000, NO1101, NO1102, NO1103, NO1104, NO1105, NO5101, NO5102, NO5103, NO5104, NO5105, NO5106, SK30000, SK40000
18. Measures to increase treated water re-use	49	Not included	AT1000, AT2000, AT5000, CZ_RB_1000, CZ_RB_5000, CZ_RB_6000, DK1, DK2, DK3, DK4, FIWDA, FRA, FRB1, FRB2, FRC, FRE, FRF, FRG, FRH, FRI, FRJ, FRK, FRL, GBNIIENB (IE), GBNIIENW (IE), IEEA, LT1100, LT2300, LT3400, LT4500, NLEM, NLMS, NLRN, NLSC, PL2000, PL7000, PL8000, RO1000, SE1, SE2, SE3, SE4, SE5, SI_RBD_1, SI_RBD_2, UK01, GBNIIENB (UK), GBNIIENW (UK), GBNINE
	24	Included but unable to assess significance	BEMaas_VL, BESchelde_VL, FIVHA1, FIVHA2, FIVHA3, FIVHA4, FIVHA5, FIVHA6, FIVHA7, FRD, IESE, IESW, IEGBNISH, IEWE, ITA, ITB, ITC, ITD, ITE, ITF, ITG, ITH, MTMalta, PL6000
	11	Low importance	UK02, UK03, UK04, UK05, UK06, UK07, UK08, UK09, UK10, UK11, UK12
	1	Moderate importance	BG1000
	9	High importance	BG3000, BG4000, CY001, ES100, HU1000, LVDUBA, LVGUBA, LVLUBA, LVVUBA
	29	No Info	BE_Nordzee_FED, BG2000, DE1000, DE2000, DE3000, DE4000, DE5000, DE6000, DE7000, DE9500, DE9610, DE9650, EE1, EE2, EE3, LU2000, NO1101, NO1102, NO1103, NO1104, NO1105, NO5101, NO5102, NO5103, NO5104, NO5105, NO5106, SK30000, SK40000
19. Measures to foster aquifer recharge	64	Not included	AT1000, AT2000, AT5000, BEMaas_VL, BESchelde_VL, BG1000, BG3000, BG4000, DK1, DK2, DK3, DK4, FRE, FRF, FRG, FRI, FRJ, FRK, GBNIIENB (IE), GBNIIENW (IE), IEEA, IESE, IESW, IEGBNISH, IEWE, ITF, ITG, ITH, LT1100, LT2300, LT3400, LT4500, LVDUBA, LVGUBA, LVLUBA, LVVUBA, NLEM, NLMS, NLRN, NLSC, PL2000, PL6000, PL7000, PL8000, RO1000, SE4, SE5, SI_RBD_1, SI_RBD_2, UK01, UK02, UK03, UK04, UK05, UK06, UK07, UK08, UK09, UK10, UK11, UK12, GBNIIENB (UK), GBNIIENW (UK), GBNINE
	24	Included but unable to assess significance	CZ_RB_1000, CZ_RB_5000, CZ_RB_6000, FIVHA1, FIVHA2, FIVHA3, FIVHA4, FIVHA5, FIVHA6, FIVHA7, FIWDA, FRA, FRB1, FRB2, FRC, FRD, FRH, FRL, ITA, ITB, ITC, ITD, ITE, MTMalta
	3	Low importance	SE1, SE2, SE3

Measure	Σ=	Category	RBMPs
	1	Moderate importance	ES100
	2	High importance	CY001, HU1000
	20	No Info	BE_Nordzee_FED, BG2000, DE1000, DE2000, DE3000, DE4000, DE5000, DE6000, DE7000, DE9500, DE9610, DE9650, EE1, EE2, EE3, LU2000, NO1101, NO1102, NO1103, NO1104, NO1105, NO5101, NO5102, NO5103, NO5104, NO5105, NO5106, SK30000, SK40000
20. Development or upgrade of reservoirs or other water regulation works	66	Not included	AT1000, AT2000, AT5000, BEMaas_VL, BESchelde_VL, BG1000, BG3000, DK1, DK2, DK3, DK4, ES100, FRA, FRB1, FRB2, FRC, FRH, FRJ, FRK, FRL, GBNIIENB (IE), GBNIIENW (IE), IEEA, IESE, IESW, IEGBNISH, IEWE, ITD, ITE, ITF, ITG, ITH, LT1100, LT2300, LT3400, LT4500, LVDUBA, LVGUBA, LVLUBA, LVVUBA, MTMalta, NLEM, NLMS, NLRN, NLSC, PL2000, PL6000, PL7000, PL8000, RO1000, SE1, SE2, SE3, UK03, UK04, UK05, UK06, UK07, UK08, UK09, UK10, UK11, UK12, GBNIIENB (UK), GBNIIENW (UK), GBNINE
	19	Included but unable to assess significance	BG2000, CZ_RB_1000, CZ_RB_5000, CZ_RB_6000, FIVHA5, FIVHA6, FIVHA7, FIWDA, FRD, FRE, FRF, FRG, ITA, ITB, ITC, SE4, SE5, SI_RBD_1, SI_RBD_2
	0	Low importance	
	2	Moderate importance	UK01, UK02
	8	High importance	BG4000, CY001, FIVHA1, FIVHA2, FIVHA3, FIVHA4, FRI, HU1000
	28	No Info	BE_Nordzee_FED, DE1000, DE2000, DE3000, DE4000, DE5000, DE6000, DE7000, DE9500, DE9610, DE9650, EE1, EE2, EE3, LU2000, NO1101, NO1102, NO1103, NO1104, NO1105, NO5101, NO5102, NO5103, NO5104, NO5105, NO5106, SK30000, SK40000
21. Development or upgrade of water transfer schemes	74	Not included	AT1000, AT2000, AT5000, BEMaas_VL, BESchelde_VL, CZ_RB_1000, CZ_RB_5000, CZ_RB_6000, DK1, DK2, DK3, DK4, ES100, FIWDA, FRA, FRB1, FRB2, FRC, FRG, FRH, FRK, GBNIIENB (IE), GBNIIENW (IE), IEEA, IESE, IESW, IEGBNISH, IEWE, ITA, ITB, ITC, ITD, ITG, ITH, LT1100, LT2300, LT3400, LT4500, LVDUBA, LVGUBA, LVLUBA, LVVUBA, MTMalta, NLEM, NLMS, NLRN, NLSC, PL2000, PL6000, PL7000, PL8000, RO1000, SE1, SE2, SE3, SE4, SE5, SI_RBD_1, SI_RBD_2, UK01, UK02, UK03, UK04, UK05, UK06, UK07, UK08, UK09, UK10, UK11, UK12, GBNIIENB (UK), GBNIIENW (UK), GBNINE
	10	Included but unable to assess significance	BG2000, FIVHA5, FIVHA6, FIVHA7, FRD, FRE, FRF, FRL, HU1000, ITF
	0	Low importance	
	1	Moderate importance	BG3000
	10	High importance	BG1000, BG4000, CY001, FIVHA1, FIVHA2, FIVHA3, FIVHA4, FRI, FRJ, ITE
	28	No Info	BE_Nordzee_FED, DE1000, DE2000, DE3000, DE4000, DE5000, DE6000, DE7000, DE9500, DE9610, DE9650, EE1, EE2, EE3, LU2000, NO1101, NO1102, NO1103, NO1104, NO1105, NO5101, NO5102, NO5103, NO5104, NO5105, NO5106, SK30000, SK40000
22. Development or upgrade of desalination plants	91	Not included	AT1000, AT2000, AT5000, BEMaas_VL, BESchelde_VL, BG1000, BG3000, BG4000, CZ_RB_1000, CZ_RB_5000, CZ_RB_6000, DK1, DK2, DK3, DK4, FIVHA1, FIVHA2, FIVHA3, FIVHA4, FIVHA5, FIVHA6, FIVHA7, FRA, FRB1, FRB2, FRC, FRD, FRE, FRF, FRG, FRH, FRI, FRJ, FRK, FRL, HU1000, GBNIIENB (IE), GBNIIENW (IE), IEEA, IESE, IESW, IEGBNISH, IEWE, ITA, ITB, ITC, ITD, ITE, ITF, ITG, ITH, LT1100, LT2300, LT3400, LT4500, LVDUBA, LVGUBA, LVLUBA, LVVUBA, MTMalta, NLEM, NLMS, NLRN, NLSC, PL2000, PL6000, PL7000, PL8000 RO1000, SE1, SE2, SE3, SE4, SE5, SI_RBD_1, SI_RBD_2UK01, UK02, UK03, UK04, UK05, UK06, UK07, UK08, UK09, UK10, UK11, UK12, GBNIIENB (UK), GBNIIENW (UK), GBNINE
	1	Included but unable to assess significance	FIWDA
	0	Low importance	

Measure	Σ=	Category	RBMPs
	0	Moderate importance	
	2	High importance	CY001, ES100
	29	No Info	BE_Nordzee_FED, BG2000, DE1000, DE2000, DE3000, DE4000, DE5000, DE6000, DE7000, DE9500, DE9610, DE9650, EE1, EE2, EE3, LU2000, NO1101, NO1102, NO1103, NO1104, NO1105, NO5101, NO5102, NO5103, NO5104, NO5105, NO5106, SK30000, SK40000
23. Other measures[32]	22	Not included	DK3,FRB2, FRK, GBNIIENB (IE), HU1000, IEEA, IESE, IESW, IEWE, ITA, ITD, ITE, LT1100, LT2300, LT3400, LT4500, MTMalta, SE1, SE2, SE3, SE4, SI_RBD_1, SI_RBD_2
	26	Included but unable to assess significance	BEMaas_VL, BESchelde_VL, DK1, DK2, DK4, FRA, FRB1, FRC, FRE, FRF, FRG, FRL, GBNIIENW (IE), IEGBNISH, IESW, ITB, ITC, ITF, ITG, ITH, PL2000, PL6000, PL7000, PL8000[33], RO1000, SE5
	15	Low importance	UK01, UK02, UK03, UK04, UK05, UK06, UK07, UK08, UK09, UK10, UK11, UK12, GBNIIENB (UK), GBNIIENW (UK), GBNINE
	0	Moderate importance	
	5	High importance	FRJ, NLEM, NLMS, NLRN, NLSC
	55	No Info	AT1000, AT2000, AT5000, BE_Nordzee_FED, BG1000, BG2000, BG3000, BG4000, CY001, CZ_RB_1000, CZ_RB_5000, CZ_RB_6000, DE1000, DE2000, DE3000, DE4000, DE5000, DE6000, DE7000, DE9500, DE9610, DE9650, EE1, EE2, EE3, ES100, FIVHA1, FIVHA2, FIVHA3, FIVHA4, FIVHA5, FIVHA6, FIVHA7, FIWDA, FRD, FRH, FRI, LU2000, LVDUBA, LVGUBA, LVLUBA, LVVUBA, NO1101, NO1102, NO1103, NO1104, NO1105, NO5101, NO5102, NO5103, NO5104, NO5105, NO5106, SK30000, SK40000

The following grouping of measures has been applied in order to check the relevance of types of measures in the RBMPs.

RBMPs assessed	123
Information not clear	4
No information found	16
Not relevant	11
Yes	92
	Mesures included
Restrictions to land-use	
Restrictions to new urban developments	11
Restrictions to new irrigation schemes	15
Efficiency	
Improvement of the efficiency of water agricultural uses	43

[32] Other measures that have been included in different RBMPs are the following ones: measures to promote efficient and sustainable water use, controls on surface water abstractions, ecological reconstruction (restoring longitudinal and lateral connectivity), use of best available techniques in industry trade and agriculture to save water, improve knowledge on future water demands and needs, specific measures to face droughts, put in coherence the authorizations of abstractions with the needs of the aquatic environment, seeking new aquifers substitute sources (no details), crisis management approaches, development of GW abstractions, development of interconnection between water companies development of raw and treated water storage, restore or create water storage for irrigation, improve understanding of existing water sources and identify new ones, application of water saving measures in industry as a prerequisite to get a licence drawing up of a priority list for the division of water in times of drought, increase supply capacity by integration of use of different sources, match irrigation to crop needs, change timing of abstractions (agriculture), encourage farmers to build winter storage reservoirs, extension of abstraction controls to include previously exempt areas, include strong water efficiency policies in Spatial Strategies and Local Development plans/frameworks, promotion of small scale storage reservoirs for agricultural uses.

[33] According to the feedback from PL to the European Commission, these other measures include rationalization of water use in industry sector verification of water abstraction permits, controls on surface water abstraction and promoting efficient and sustainable water use (see chapter 10 of PL RBMPs)

Reduction of losses in urban distribution networks	60
Adoption of binding performance criteria for new buildings and for public and private networks	32
Reduction/ management of groundwater abstraction (e.g. by controls, registers)	83
Measures to enhance water metering	40
Pricing & economic measures	
Modification of the water pricing system to foster a more efficient use of water	45
Development of fiscal or economic incentives for the promotion of water efficient devices or practices	30
Establishment of water rights markets or schemes to facilitate water reallocation	3
Subsidies for shifting to less water-demanding land uses	9
Knowledge & governance	
Development of Drought Risk Managment Plans	39
Measures to enhance the resilience of the ecosystems to water scarcity and droughts	66
Measures to enhance water governance	37
Training, education and capacity-building in water saving	56
Studies, research and pilot projects to solve water scarcity problems and improve the response to droughts	53
Increase water supply	
Promotion of rainwater harvesting	27
Measures to increase treated water re-use	45
Measures to foster aquifer recharge	30
Development or upgrade of reservoirs or other water regulation works	29
Development or upgrade of water transfer schemes	21
Development or upgrade of desalination plants	3
Other measures	
Other measures	46
Restrictions to land-use	24
Efficiency	92
Pricing & economic measures	55
Knowledge & governance	104
Increase water supply	71
Other measures	46

15.3.10. Are inter-linkages between water scarcity and other sector policies acknowledged and taken into account in the RBMP?

	Σ=	RBMPs
Sectors put pressure on water resources at present and in the future are identified	18	BEMaas_VL, BESchelde_VL[34], CZ_RB_1000, CZ_RB_5000, CZ_RB_6000, DE2000, DE3000, DE5000, DE6000, DE7000, DE9650, ES100, FRD, FRG, FRL, HU1000, MTMalta, RO1000
The influence of other sector policies on the reduction of water scarcity and the mitigation of drought effects is described and measures are proposed to harmonise those policies with that reduction/mitigation	6	HU1000, ITA, ITD, ITF, SL_RBD_1, SI_RBD_2
The influence of other sector policies on the reduction of water scarcity and the mitigation of drought effects is described but no measure is proposed to harmonise those policies with that reduction/mitigation	1	CY001
The influence of other sector policies on water scarcity and the mitigation of drought effects is not described or mentioned	27	AT1000, AT2000, AT5000, DE1000, DK1, DK2, DK4, ES100, FIWDA, FRA, FRG, FRI, FRJ, GBNIIENB (IE), GBNIIENW (IE), IEEA, IEGBNISH, IESE, IESW, IEWE, ITE, SE2, SE3, SE4, SE5, SI_RBD_1, SI_RBD_2

[34] According to the feedback from BE to the European Commission, sectors in BEMaas_VL, BESchelde_VL are identified in Annexes

Other	20	ITB, ITC, ITG, LT1100, LT2300, LT3400, LT4500, SE5, UK01[35], UK02, UK03, UK04, UK05, UK06, UK07, UK08, UK09, UK10, UK11, UK12
Unclear	14	BG2000, BG3000, BG4000, DK1, DK2, DK4, FIVHA1, FIVHA2, FIVHA3, FIVHA4, FIVHA5, FIVHA6, FIVHA7, FRF
No Info	36	BE_Nordzee_FED, BG1000, CZ_RB_1000, CZ_RB_5000, CZ_RB_6000, EE1, EE2, EE3, FRB1, FRC, FRE, FRH, FRK, GBNIIENB (UK), GBNIIENW (UK), GBNINE, ITH, NLEM, NLMS, NLRN, NLSC, NO1101, NO1102, NO1103, NO1104, NO1105, NO5101, NO5102, NO5103, NO5104, NO5105, NO5106, PL2000, PL6000, PL7000, PL8000
Not relevant	25	DE3000, DE4000, DE7000, DE9500, DE9610, DK3, FRB2, GBNIIENB (IE), GBNIIENW (IE), IEEA, IEGBNISH, IESE, IESW, IEWE, ITD, LU2000, LVDUBA, LVGUBA, LVLUBA, LVVUBA, SE1, SK30000, SK40000, UK01, UK02

15.3.11. How transparent and reliable are the data and the assumptions, with respect to water scarcity and droughts, upon which the RBMP is based?

	Σ=	RBMPs
The sources of data for present water consumption are explicitly mentioned	50	AT1000, AT2000, AT5000, BEMaas_VL, BESchelde_VL[36], BG1000, BG3000, BG4000, CY001, CZ_RB_1000, CZ_RB_5000, CZ_RB_6000, DE1000, DE2000, DE3000, DE5000, DE6000, DE7000, DE9500, DE9610, DK1, DK2, EE1, EE2, EE3, ES100, FIVHA4, FIWDA, HU1000, ITB, ITF, ITG, LT1100, LT2300, LT3400, LT4500, LU2000, MTMalta, PL2000, PL6000, RO1000, SE1, SE2, SE3, SE4, SE5, SI_RBD_1, SI_RBD_2, SK30000, SK40000
The sources of data for present water availability are explicitly mentioned	42	AT1000, AT2000, AT5000, BEMaas_VL, BESchelde_VL, BG1000, BG2000, BG3000, BG4000, CY001, CZ_RB_1000, CZ_RB_5000, CZ_RB_6000, DE1000, DE2000, DE3000, DE7000, EE3, ES100, FIVHA1, FIVHA2, FIVHA3, FIVHA4, FIVHA5, FIVHA6, FIVHA7, HU1000, ITB, ITF, ITG, LT1100, LT2300, LT3400, LT4500, LU2000, PL2000, PL6000, RO1000, SI_RBD_1, SI_RBD_2, SK30000, SK40000
Projections of future water demand are based on explicit assumptions	29	AT1000, AT2000, AT5000, BG2000, BG4000, CY001, CZ_RB_1000, CZ_RB_5000, CZ_RB_6000, DE1000, DE2000, DE3000, DE5000, DE6000, DE7000, DE9500, DE9610, DE9650, DK1, DK2, EE1, EE2, EE3, ES100, LT1100, LT2300, LT3400, LT4500, RO1000
Projections of future water availability are based on explicit assumptions	17	AT1000, AT2000, AT5000, CY001, CZ_RB_1000, CZ_RB_5000, CZ_RB_6000, DE1000, DE2000, DE3000, DE7000, DE9650, LT1100, LT2300, LT3400, LT4500, RO1000
Uncertainity of data is made explicit in the dataset used	17	DE2000, DE3000, DE4000, DE5000, DE6000, DE7000, DE9500, DE9610, DE9650, EE1, EE2, EE3, ES100, LVDUBA, LVGUBA, LVLUBA, LVVUBA
Uncertainity of data is taken into account when starting the expected results in the Programme of Measures	7	DK1, DK2, LVDUBA, LVGUBA, LVLUBA, LVVUBA, MTMalta
TimeSpanExplicit	16	CY001, CZ_RB_1000, DE1000, DE6000, ES100, LT1100, LT2300, LT3400, LT4500, LVDUBA, LVGUBA, LVLUBA, LVVUBA, RO1000, SI_RBD_1, SI_RBD_2
Social Conflicts Account	0	
Inter-relations (positive and negative) between measures are highlighted	1	BG4000
The resources of funds to implement the Programme of Measures are specified for each measure separately	8	BG2000, BG3000, LVDUBA, LVGUBA, LVLUBA, LVVUBA, SI_RBD_1, SI_RBD_2
Unclear	14	BG1000, BG3000, BG4000, DK4, FRA, FRB2, FRG, FRJ, PL2000, PL6000, SE1, SE2, SE3, SE4

[35] According to the feedback from UK to the European Commission, data are included in the previous Water Resources Management Plans

[36] According to the feedback from BE, all data are mentioned in annexes

No information found	50	FRB1, FRC, FRD, FRE, FRF, FRH, FRI, FRK, FRL, GBNIIENB (IE), GBNIIENW (IE), IEEA, IEGBNISH, IESE, IESW, IEWE, ITA, ITC, ITD, ITE, ITH, NLEM, NLMS, NLRN, NLSC, NO1101, NO1102, NO1103, NO1104, NO1105, NO5101, NO5102, NO5103, NO5104, NO5105, NO5106, PL7000, PL8000, UK01, UK02, UK03, UK04, UK05, UK06, UK07, UK08, UK09, UK10, UK11, UK12
Not relevant	16	BE_Nordzee_FED, DK3, GBNIIENB (IE), GBNIIENB (UK), GBNIIENW (IE), GBNIIENW (UK), GBNINE, IEEA, IEGBNISH, IESE, IESW, IEWE, LU2000, SE1, UK01, UK02

15.3.12. In the case of an International River Basin District, in what way have the water scarcity and/or droughts related issues been coordinated?

	Σ=	RBMPs
As a general coordination between Member States	18	BE_Nordzee_FED, CZ_RB_1000, DK4, EE1, FRA, FRB2, HU1000, ITA, NLEM, NLMS, NLRN, NLSC, RO1000, SE1, SE2, SI_RBD_1, SI_RBD_2[37], SK40000
By identifying joint challenges	10	AT1000, AT2000, AT5000, CZ_RB_1000, DE1000, DE2000, DE5000, DE7000, SI_RBD_1, SK40000
By using coordinated measures for transboundary water bodies	1	RO1000
By using coordinated measures for the entire international RBD	3	FRB1, FRC, RO1000
Others	3	BG3000, DE7000, EE2
Not an International RBD	50	BG2000, CY001, DE4000, DE9500, DE9610, DE9650, DK1, DK2, DK3, EE1, ES100, FIVHA1, FIVHA2, FIVHA3, FIVHA4, FIVHA5, FIWDA, FRD, FRF, FRG, FRI, FRJ, FRK, FRL, GBNINE, IEEA, IESE, IESW, IEWE, ITD, ITE, ITF, ITG, ITH, MTMalta, NO1101, SE3, SE4, UK01, UK02, UK03, UK04, UK05, UK06, UK07, UK08, UK09, UK10, UK11, UK12
Information not clear	3	BEMaas_VL, BESchelde_VL, LT2300
No information found	34	BG1000, BG4000, CZ_RB_1000, CZ_RB_5000, CZ_RB_6000, DE6000, EE3, FIVHA5, FIVHA6, FIVHA7, FRH, GBNIIENB (IE), GBNIIENB (UK), GBNIIENW (UK), IEGBNISH, ITB, ITC, LT1100, LT3400, LT4500, LVGUBA, LVVUBA, NO1102, NO1103, NO1104, NO1105, NO5101, NO5104, NO5106, PL2000, PL6000, PL7000, PL8000, SK30000
Not relevant	20	DE3000, FRE, GBNIIENB (IE), GBNIIENB (UK), GBNIIENW (UK), IEEA, IEGBNISH, IESE, IESW, IEWE, LU2000, LVDUBA, LVLUBA, NO5102, NO5103, NO5105, SE1, SE3, SE4, SE5

[37] According to the feedback from SL to the European Commission, transboundary coordination and the addressing of water management issues in the North Adriatic, including the issue of water shortages and droughts, take place at the multilateral level through the Mixed Slovenian-Italian-Croatian-Montenegrin Commission for the Protection of the Waters of the Adriatic Sea and Coastal Areas against Pollution