ANNEX
to the
Commission Recommendation on guiding principles of water efficiency first

Key water efficient practices to implement the Water Efficiency First guiding principles

(1) Better control of the resource

Maintain accurate and up-to-date water balances based on available guidance[1] and consider such water balances in planning decisions affecting water consumption and water saving measures. To this end, the following action should be considered:

(1) Establish and continuously monitor water abstractions, losses and returns in all water bodies of each river basin, and promote digital water metering for water abstractions and discharges. Water suppliers should make documents and data on the changes in the water balance and water quality publicly available frequently.

(2) In the public water supply sector, it should be ensured that water consumption is metered individually for each building and, in the case of condominiums, for each individual apartment. The use of smart meters should be encouraged where real time data reporting is needed for additional efficiency gains making the investment worthwhile.

(3) Establish ecological flows[2] of surface waterbodies, taking into account also the needs of groundwater bodies, in all river basins to know the maximum volume of sustainable abstractions, which is a precondition for rational and efficient water use. The maximum volume of sustainable abstractions should also take into account the needs of non-consumptive users and the requirements in relevant legislation. Engage in transboundary coordination to establish ecological flows for rivers that cross borders to avoid conflicts that could undermine an efficient approach to water consumption. Ensure the effective implementation of ecological flows by systematically considering them in conditions for water permits.

(4) Adequately assess, based on available guidance[3], saline and other intrusions and the water needs of dependent terrestrial and associated aquatic ecosystems connected to groundwater bodies. Make a responsible application, through a comprehensive risk-assessment, of Managed Aquifer Recharge techniques[4].

(5) Ensure that permits for water abstractions for surface and groundwater consider climate change predictions which account for uncertainty to anticipate future changes in the water balance and regularly align water permits to avoid over-abstractions[5]. Make sure that the system of abstractions permitting is sufficiently

1 See Common Implementation Strategy (CIS) under the Water Framework Directive Guidance No. 34 on Water Balances, available here.
2 See CIS Guidance No. 31 on Ecologic Flows, available here.
3 See CIS Guidance No. 18 on Groundwater Status and Trend Assessment, available here.
4 See CIS Guidance No. 39 on Managed Aquifer Recharge, available here.
5 See CIS Guidance No. 24 on River Basin Management and Climate Change, available here.

agile, taking also into account significant seasonal variations where appropriate. Avoid unduly long permit times to allow for flexible adaptation in light of changes to the water balance. Apply appropriate water pricing to ensure the efficient use of water. Adopt sufficiently dissuasive sanctions for illegal, unregistered or non-permitted water abstractions and discharges.

(6) Ensure that the river basin management plans include 'water balances' and quantify water consumption per socio-economic activity to facilitate the planning of efficiency measures based on estimates for the remaining water saving potential. Integrate drought risk management aspects in River Basin Management Plans and prepare for the risk of a prolonged drought.

(7) Ensure that increased water efficiency leads to resilience through lower water consumption. For that purpose:

- apply the cost recovery principle for water services so that all water-users and water use sectors provide an adequate contribution to the water services costs;
- ensure that water-pricing policies provide adequate incentives for using water resources more efficiently based on the economic analysis required under Annex III to Directive 2000/60/EC[6];
- make better and wider use of the 'polluter-pays' and the 'precautionary' principles, eliminating harmful environmental subsidies and ensuring affordable, just and fair pricing mechanisms for all water users.

Member States may, in so doing, have regard to the social, environmental and economic effects of the cost recovery as well as the geographic and climatic conditions of the region or regions affected.

Ensure full transparency of water pricing policies notably on the level of the tariffs, the use of the funds, the measures taken to preserve the water resource. As a matter of good practice this should be applied also in other sectors beyond drinking water and urban wastewater treatment.

(2) Conveyance efficiency

Enhance water leakage management as an essential part of operational management of water supply systems and prioritise investments to swiftly address leakages focusing on the supply areas most in need and using all Union funding opportunities and tools available.

(3) Storage efficiency

(a) Prioritise natural water retention measures,[7] in soil, forests, groundwater and wetlands, which reduce evaporation compared to water storage above the ground in artificial reservoirs.

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6 CIS Guidance No. 1 on Economics and the Environment, available here.

7 See, for instance, "A guide to support the selection, design and implementation of natural water retention measures in Europe, Capturing the multiple benefits of nature-based solutions", available here; and CIS Technical Report 82 "Natural Water Retention Measures", available here; and Joint Research Centre "Nature-based solutions for agricultural water management", available here.

(b) Regularly maintain artificial reservoirs including by ringfencing funding for the periodic removal of sediments and the prevention of leaks.

(c) Optimise urban water management through "rainwater harvesting", and other forms of natural water retention and accelerate the roll out of measures to prevent storm water overflows[8].

(4) Use efficiency

(a) Promote the adoption of best available technologies, practices and services to ensure an efficient use of water across all sectors, including by promoting circularity.

(b) Promote the reuse of wastewater beyond irrigation including also in industry, energy and the public water supply sector while preventing risks to human health and bearing in mind the environmental impacts of reduced return flows in a river basin.

(5) Good governance

(a) Develop water allocation schemes that are transparent and have an inclusive governance mechanism to ensure predictability for the water users concerned, including the non-consumptive users, while promoting sustainability, fairness, and the respect of human rights. When designing water allocation mechanisms, the water saving potential of sectors and regions should be taken into account.

(b) Develop or maintain specific social policies that benefit water users with low-income revenues and/or vulnerable / marginalised people to ensure access to water and sanitation for all, as required by the Directive 2020/2184 and the Directive (EU) 2024/3019.

(6) Training and awareness raising

(a) Increase skills and train water management authorities, and authorities responsible for water using sectors, to help them apply the principle of water efficiency first to encourage lower water consumption.

(b) Support research and innovation, improve skills and enhance knowledge about all aspects of efficient water management in water using sectors. Raise consumers' awareness of the importance of saving water, while empowering them to act more sustainably in light of local conditions. This also includes providing transparency for consumers and citizens on water consumption and water management in line with Article 17 of Directive 2020/2184 and Article 24 of Directive (EU) 2024/3019.

(c) Promote better consumer information and raise awareness on the water footprint of consumer products and services using tools, such as the EU Ecolabel, the Digital Product Passport under Regulation (EU) 2024/1781 of the European Parliament and of the Council[9].

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8 In line with Article 5 of Directive (EU) 2024/3019.

9 Regulation (EU) 2024/1781 of the European Parliament and of the Council of 13 June 2024 establishing a framework for the setting of ecodesign requirements for sustainable products, amending Directive (EU) 2020/1828 and Regulation (EU) 2023/1542 and repealing Directive 2009/125/EC (OJ L, 2024/1781, 28.6.2024, ELI: http://data.europa.eu/eli/reg/2024/1781/oj).

(7) International dimension

(a) Consider, whenever relevant, the principles and objectives of this Recommendation when designing technical and financial support to partner countries.

(b) Strengthen engagement with financial institutions such as the European Investment Bank, the European Bank for Reconstruction and Development and the World Bank, as well as the private sector to crowd-in long term investments into water efficiency initiatives in line with the objectives of the EU Global Gateway strategy[10].

(c) Share best practices by implementing the principles and objectives of this Recommendation and advocate for water resilience and water efficiency in international cooperation.

[10] Joint Communication to the European Parliament, the Council, the European Economic and Social Committee, the Committee of the Regions and the European Investment Bank "The Global Gateway", JOIN(2021) 30 final.