

Proposed scope of SEA for Büyük Menderes River Basin Management Plan

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| Water quality | <ul style="list-style-type: none"> • Water pollution from point and diffuse sources, which limits its use for irrigation and as a drinking water • Groundwater pollution by nitrates from agriculture • Water pollution from olive oil production • Discharge of untreated waste waters from the textile industry (Denizli and Karacasu) and municipalities • Insufficient capacities of the landfills (use of dumpsites and waste disposal to surface waters is widely applied) • Potential threats for coastal waters from municipal solid waste and tourism activities with Didim WWTP pipeline discharge as future additional source of potential pollution | <ul style="list-style-type: none"> • Promoting and supporting good agriculture practice (including fertilizers and pesticides management) • Identification of pollution hot-spots • Identification of locations with the most urgent need for constructing wastewater treatment facilities • Ensuring sufficient capacity of landfills • Promoting and supporting enhancement of waste management system in the area (including waste separation, reuse and recycling) | <ul style="list-style-type: none"> • National River Basin Management Strategy (by MoFWA, 2014-2023) <ol style="list-style-type: none"> 1. Protect and amend the quality of water bodies, execute necessary measures and prepare and implement the Water Quality Management Strategy and Action Plan 2. Preparation of river basin master plans all over the country till year 2020 3. Preparation of Special Provisions for the 20 deteriorated surface water bodies till the end of 2015, and 35 till the end of 2035. • Wastewater Treatment Action Plan (Mo Environment, 2008-2012) <ol style="list-style-type: none"> 1. Target 4: Increase the number of people who has wastewater treatment plant up to 100%, in the settlements having population more than 10,000 till year 2017 2. Increase the number of people who has wastewater treatment plant up to 90%, for the settlements having population more than 2,000 people till year 2017 3. Increase the number of people who has wastewater treatment plant up to 100%, for the settlements having population more than 100,000 people till year 2012 4. Increase the number of people who has wastewater treatment plant up to 90%, for |

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| | | | <p>the settlements having population between 50,00- 100,000 people till year 2012</p> <p>5. Increase the number of people who has wastewater treatment plant up to 30%, for the settlements having population between 2,000- 10,000 people till year 2012</p> |
| Water availability | <ul style="list-style-type: none"> • Expected water demand growth (including possible migration from other provinces) – together with likely consequences of the climate change it may lead to insufficient water resources in future • Extensive land-use can change water balance in the area | <ul style="list-style-type: none"> • Proper consideration of water consumption trends, taking into account likely effects of the climate change • Promoting and supporting efficient water use in the key sectors – agriculture, industry, tourism, households | <ul style="list-style-type: none"> • National River Basin Management Strategy (by MoFWA, 2014-2023) stipulates following relevant objectives: <ol style="list-style-type: none"> 1. <i>Protection, improvement and sustainable use of water resources</i> 2. <i>Increasing the efficiency of water use and water saving</i> 3. <i>Provision of adequate water for drinking, service and industrial use in urban, rural areas</i> 4. <i>Improvement of irrigation techniques and efficiency in accordance with soil and water conditions</i> 5. <i>Provision of adequate utilization of HEPPs also considering environmental, social and economic impacts</i> • Management and Security of Water Resources (by Ministry of Development, 2014 - 2018) |
| Flood management | <ul style="list-style-type: none"> • Possible changes in frequency and scale of floods | <ul style="list-style-type: none"> • Identification of areas the most prone to floods taking into account likely effects of the climate change and formulation of the appropriate measures (both technical as well as spatial) | <ul style="list-style-type: none"> • Upper Basin Flooding Management Action Plan (MoFWA, 2013-2017) <ol style="list-style-type: none"> 1. Prevention of floods which cause likely losses of soil, lives and property in the river basins 2. Decrease the sediment transfer to the dams |

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| | | | and ponds, combating with the floods, minimising the loss of soil |
| Climate change | <ul style="list-style-type: none"> • Likely decrease of surface water resources especially in the middle and north parts of the river basin • Possible higher frequency and seriousness of floods and droughts | <ul style="list-style-type: none"> • Identification of adequate adaptation measures e.g. <ul style="list-style-type: none"> - Securing water resources of the economic sectors and population - Designing flood protection and management measures – both technical as well as spatial | <ul style="list-style-type: none"> • Ensure integration of adaptation to climate change into existing strategies, plans and legislation (National Climate Change Action Plan 2011 – 2013) – this objective is elaborated to a number of activities e.g. • Revising institutional and sectoral strategy plans (industry, agriculture, energy, tourism, urban, drinking water) of organizations involved in water management with the scope of combating climate change • Orientation of water user organizations by relevant institutions within the framework of irrigation businesses taking into account the impacts of climate change |
| Soil degradation | <ul style="list-style-type: none"> • Soil pollution by boron in Akçay and Nazilli plains through using waters from Sarayköy Geothermal Plant and hot springs of Tekke for irrigation • Soil pollution by municipal and industrial waste waters especially in lower parts of the river basin | <ul style="list-style-type: none"> • Securing an alternative water resources for irrigation • Ensuring sufficient capacity of waste water treatment facilities | <ul style="list-style-type: none"> • Upper Basin Flooding Management Action Plan (MoFWA, 2013-2017) <ol style="list-style-type: none"> 1. Combating with the floods and minimisation of soil loss through the flows to the dams and ponds, |
| Ecosystems | <ul style="list-style-type: none"> • Degradation of coastal ecosystems by tourism development | <ul style="list-style-type: none"> • Ensuring sufficient waste water management capacities before further tourism development in coastal areas • Promoting and supporting efficient | Identification of adverse affects of ecological, physical or social processes and developing measures against grazing, drought, desertification, salinization, floods, fires, tourism activities, agricultural transformation or abandonment reasons, |

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| | | water use in tourism facilities | |
| Biodiversity | <ul style="list-style-type: none"> • Potential impacts on Dilek River delta, Dilek Peninsula National Park and Bafa Lake as the biodiversity hot-spots in river basin from water pollution • Sediment load in river delta (especially polluted sediments) resulting in decrease of wetlands areas | <ul style="list-style-type: none"> • Reducing water pollution • Reducing the sediment transport in the River | <ul style="list-style-type: none"> • National Biodiversity Action Plan (2007) <ol style="list-style-type: none"> 1. Identification and monitoring the important factors related with biodiversity 2. Managing the effective use of factors composing the biodiversity also considering the demands of future generations 3. Protection of biodiversity of water, maintenance of ecological functions of the ecosystems 4. Protection of marine and coastal biodiversity 5. Sustainable utilization of ecosystems and developing effective methods for the protection • Upper Basin Flooding Management Action Plan (MoFWA, 2013-2017) <ol style="list-style-type: none"> 1. Reduction of sediment flow to the ponds and dams, |
| Livelihood | <ul style="list-style-type: none"> • Higher number of population at risk from floods and insufficient drinking water resources • Worse economic performance in the key sectors (agriculture, industry) in case of insufficient water resources and/or | <ul style="list-style-type: none"> • See points regarding water quality, water availability and water management above | <p>Health Strategic Plan 2013 – 2013 (Ministry of Health of Turkey, 2012)</p> <ul style="list-style-type: none"> • To reduce the impact on health of public health emergencies and disasters |

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| | water pollution (e.g. low water quality may affect the quality of figs) | | |
| Human health | <ul style="list-style-type: none"> • Contamination of water in wells by boron and nitrates (Aydın) • Potential future risks to the human health related to continuing water pollution (urbanization, industrial pollution, insufficient capacities of waste water treatment facilities, improper solid waste management) | <ul style="list-style-type: none"> • Securing an alternative source of drinking water | <p>Health Strategic Plan 2013 – 2013 (Ministry of Health of Turkey, 2012)</p> <ul style="list-style-type: none"> • To reduce the negative impact of water, air and land pollution on environmental and human health • To ensure the treatment of polluting sources for the purpose of minimising the negative impact of polluted water, air and land on environmental and human health • Reducing communicable diseases by improving water quality |