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United Nations Development Programme

Project Document for nationally implemented projects financed by the GEF/LDCF/SCCF Trust Funds

Project title: Addressing Invasive Alien Species Threats at Key Marine Biodiversity Areas		
Country: Turkey	Implementing Partner: Turkish Ministry of Agriculture and Forestry – General Directorate of Nature Conservation and National Parks	Management Arrangements: National Implementation Modality (NIM)
UNDAF/Country Programme Outcome: UN Development Cooperation Strategy 2016-2020: Outcome 1.3: By 2020, improved implementation of more effective policies and practices for all men and women on sustainable environment, climate change, biodiversity by national local authorities and stakeholders, including resilience of the system/communities to disasters		
UNDP Strategic Plan Output: <u>Output 1.3:</u> Solutions developed at national and sub-national ¹ levels for sustainable management of natural resources, ecosystem services, chemicals and waste. <u>Output 2.5:</u> Legal and regulatory frameworks, policies and institutions enabled to ensure the conservation, sustainable use, and access and benefit sharing of natural resources, biodiversity and ecosystems, in line with international conventions and national legislation.		
UNDP Social and Environmental Screening Category: Low Risk		UNDP Gender Marker: GEN2
Atlas Project ID/Award ID number: 00097993		Atlas Output ID/Project ID number: 00101497
UNDP-GEF PIMS ID number: 5733		GEF ID number: 9233
Planned start date: March, 2018		Planned end date: March, 2023
LPAC date: January 16, 2018		
Brief project description: Turkey's coastline stretches 8,592 km (excluding islands), bordering four different major seas: the Mediterranean, Aegean, Marmara and Black Seas. These extensive marine ecosystems support Turkey's overall high level of marine biodiversity. In total, nearly 5,000 plant and animal species have been identified in Turkey's		

¹ The term "sub-national" is not applicable in the Turkish administrative system

marine waters. Invasive Alien Species (IAS) have been identified by the Ministry of Forestry and Water Affairs (MFWA) as one of the principal threats to Turkey's marine biodiversity. Approximately 450 IAS have been reported on the coasts of Turkey. There are two major pathways for IAS into Turkey's marine waters: The Suez Canal, and "ship-mediated transport" (e.g. ballast water). In the 2011 national review of IAS in marine waters it was found that 66% of the total IAS in Turkey's coastal waters arrived via the Suez Canal, while 30% arrived via ship transport.

The project strategy follows three-stage hierarchical approach for addressing IAS outlined by the Convention on Biological Diversity (CBD): prevention, control, and mitigation. The long-term project goal is to minimize negative impacts of IAS in support of conservation Turkey's globally significant native marine biodiversity. The project objective is "To ensure resilience of marine and coastal ecosystems through strengthened capacities and investment in prevention, detection, control and management of Invasive Alien Species." The project is organized into three components:

- **Component 1.** Effective national policy framework on IAS
- **Component 2.** Capacity building, knowledge and information sharing systems to address the IAS threats
- **Component 3.** Investment in sustainable management, prevention, eradication, and control of IAS and restoration of IAS-degraded habitat at key marine and coastal areas

The project works at both the national level and at the site level at four proposed pilot sites.

FINANCING PLAN

GEF Trust Fund or LDCF or SCCF or other vertical fund	USD \$3,344,654
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Cash co-financing to be administered by UNDP	USD \$0
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(1) Total Budget administered by UNDP	USD \$3,344,654
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PARALLEL CO-FINANCING (all other co-financing that is not cash co-financing administered by UNDP)

UNDP	USD \$200,000
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Government	USD \$13,000,000
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(2) Total co-financing	USD \$13,200,000
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(3) Grand-Total Project Financing (1)+(2)	USD \$16,544,654
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II. DEVELOPMENT CHALLENGE

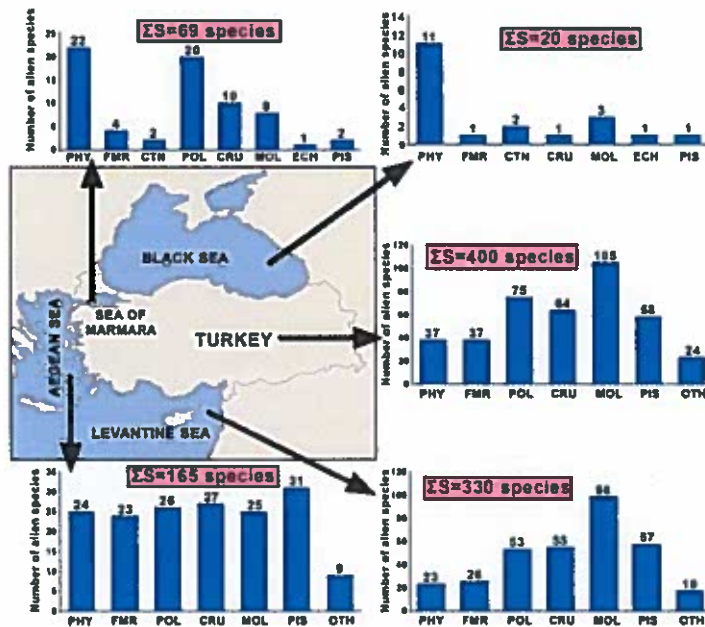
1. Turkey has a coastline of approximately 8,333 km (ranking 19th among all countries), bordering four different major seas – the Mediterranean, Aegean, Marmara and Black Seas. Different hydrographical and ecological features of these seas support Turkey's overall high level of marine biodiversity. Typical habitats found within the marine waters along the coast of Turkey include dense meadows of the endemic seagrass known as Neptune Sea Grass (*Posidonia oceanica*) that grow in shallow-water sandy bottom of the Aegean and Mediterranean coasts. Seagrass meadows (*P. oceanica* as well as *Cymodocea nodosa* and *Zostera* spp.) are important ecosystems in Turkish marine waters, as they stabilize the sediment and act as a sink for nutrients and carbon, weaken the hydrodynamic force of wave action and thus help protect the beaches, and serve as spawning area and a nursery for many species, among them fishes and large invertebrates of economic importance.

2. In total, nearly 5,000 plant and animal species have been identified in Turkey's marine waters. Some 472 species of marine fish have been identified, of which 50% are believed to be at risk of decline due to a combination of threats. While the Aegean and Mediterranean coasts of Turkey have higher biological diversity, the Black Sea has historically supported substantially more productive fisheries. The Black Sea has a lower salinity level (surface water: 18‰), and the number of species living in it is only 20% of the number that live in saline water (> 34‰) of the Aegean and Mediterranean Seas. The difference in diversity is due partly to the fact that the continental shelf of the Black Sea is very narrow and deep water (>150 m) is azoic due to the presence of hydrogen sulphide, which limits the abundance and species variability of benthos. The Aegean Sea and its islands contain abundant microhabitats – including those dominated by seagrasses and algae (*Posidonia oceanica* and *Cystoseira* spp., coralligenous) – which play an important role in the sustainability of the ecosystem.

3. Invasive Alien Species (IAS) have been identified by Ministry of Forestry and Water Affairs, General Directorate of Nature Conservation and National Parks, as one of the principal threats to Turkey's biodiversity and coastal development, and are considered to be one of the principal causes for marine and coastal biodiversity loss in the country. This vulnerability is mainly due to the fact that Turkey is surrounded by three different marine environments, with high endemism but at the same time having high risk of entry of IAS. Currently, approximately 450 IAS have been reported along the coast of Turkey and 21 species in the Turkish Black Sea. Figure 1¹ below shows data from 2011, since which the number of IAS has increased.

¹ Cinar, M.E., et al. 2011. "An updated review of alien species on the coasts of Turkey," Mediterranean Marine Science 12/2, 2011, 257-315.

Figure 1 Number of Invasive Species Along Turkey's Coasts



as *Caulerpa cylindracea*, *Amphistegina lobifera*, *Amphisorus hemprichii*, *Rhopilema nomadica*, *Mnemiopsis leidyi*, *Hydroides spp.*, *Ficopomatus enigmaticus*, *Charybdis longicollis*, *Rapana venosa*, *Asterias rubens*, *Siganus spp.* and *Lagocephalus sceleratus* show a highly invasive character, and have great impacts both on the prevailing ecosystems and humans.

5. Additional detailed development context and baseline information about the four proposed pilot sites to be targeted by the project is included in Annex K, Pilot Site Profiles (as an accompanying document to the Prodoc).

6. It was determined that gender-specific issues were not significant enough in relation to the nature of the development challenge in order to include extensive gender-specific data on the development context.

7. The eradication of already-established IAS in marine waters is considered impossible. Further, the Suez canal is open, and has been expanded. Keeping these two limiting factors in mind, there are three main existing barriers to effective management and control of IAS in Turkey's marine waters: 1.) Incomplete regulatory framework; 2) Insufficient monitoring and data management; 3.) Inadequate systemic, institutional, and individual capacities to manage IAS, including lack of experience in managing IAS in marine waters.

8. Incomplete regulatory framework: Annex J² of this project document includes a summary table of the legislative and policy context, and a full summary baseline analysis of key legislative and policy gaps and conflicts in Turkey's regulatory and legislative framework related to management of IAS. Although a policy and regulatory framework for the conservation of biodiversity exists, the regulation and authorization processes for the introduction and control of IAS are unclear and largely unenforced. In particular, they present inadequate safeguards and measures to control entry, manage invasions once established, penalize against illegal introduction, or comply with global standards and best practices. There is no clearly responsible national institution, and no coordination mechanism between relevant ministries. For example, the Ministry of Transportation, Maritime Affairs and Communication has responsibilities related to management of shipping and ballast water, while the Ministry of Forest and Water Affairs has responsibilities related to the preservation of biodiversity. Due to the underdeveloped regulatory basis, even when Turkey participates in regional initiatives (e.g. GloBallast), it has only been able to partially implement guidelines. Turkey has produced a National Ballast Water Management Strategy (in 2008), but it has not been implemented (partly because the Undersecretary of Maritime Affairs was re-organized in 2011 into

4. There are two major pathways for IAS into Turkey's marine waters: 1.) The Suez Canal (opened in 1869), and "ship-mediated transport" (commonly through transport of ballast water, but also possible via external adhesion (hull fouling) or other ship-related means). In the 2011 national review of IAS in marine waters (Cinar et al, 2011), it was found that 66% of the total IAS in Turkey's coastal waters arrived via the Suez Canal, while 30% arrived via ship transport. As stated in the review, the majority of species (306 species, 76% of total number of species) have become established in the area, while 59 species are classified as casual (15%), 23 species as questionable (6%) and 13 species as cryptogenic (3%). One new alien species was introduced to the coasts of Turkey every 4 weeks between 1991 and 2010. The majority of aliens were found on soft substratum (198 species) in shallow waters (0-10 m) (319 species). Some species such

² Accompanying the Prodoc as a separate document.

the Ministry of Transportation, Maritime Affairs and Communication). Turkey is a party to the International Convention for the Control and Management of Ships' Ballast Water and Sediments (adoption 2004), which will enter into force September 8, 2017. Turkey will require further support to implement the guidelines of the convention. There has been a section developed on IAS under the National Biodiversity Strategy and Action Plan, but there has been no integration of IAS detection and management mechanisms into sectoral and cross-sectoral policies. Marine IAS are not integrated into decision support and monitoring systems, and therefore no financial resources are allocated for marine IAS management, and there are no incentives against the introduction of IAS by economic sectors.

9. **Insufficient monitoring and data management:** Turkey started to sporadically monitor the entry of IAS only few years ago, on an ad hoc basis. As of 2016, there are numerous uncoordinated lists of IAS, no inventory of areas most affected, and importantly, no real time monitoring and detection system in place for IAS in Turkey. Monitoring has been set up only for *Caulerpa* spp., an invasive alga species, but even this monitoring takes place only at a few sites in Izmir Province. There is no long-term monitoring program for IAS entry into Turkey. There is a need to update the available data on IAS due to the continuous introduction of new IAS into the national marine and coastal habitats. Knowledge is available on IAS ecology and biology, broader impacts, and the trajectory of their spread. Such information as is available remains inaccessible to many of the stakeholders whose actions impact on IAS, or is not disseminated in a practical and policy relevant form that can be used to support planning and management action. A comprehensive information system on IAS, coupled with climate-proofed financial and socio-economic data on the most significant IAS, is important for better management of seascapes. While the Turkey Biological Diversity Information System Project, TUBIOS, was initiated in 2003 to improve the system in such a way as to fully cover biological diversity with all aspects, the key barriers to implement the above mention system, is the difficulty related to standardization and systematization of data collection and management; in the area of IAS the system has not been effectively rolled out yet. Lack of accessibility to a coordinated data pool, provides a major barrier for scientific analysis, decision making and the establishment of an effective early warning and monitoring systems for marine IAS management.

10. **Inadequate management capacities:** Common understanding across the economic sectors with respect to their value and threats stemming from IAS is key to ensure resilience of marine and coastal ecosystems. While many different sectors and institutions are mandated to deal with specific aspects of IAS (including for example environment, agriculture, trade, customs), there is little policy, budgetary or management priority accorded to IAS by any of these organizations coordination between them is limited. Collaboration between stakeholders in the prevention, control, and management of IAS needs to be improved and effective mechanisms to be developed and in place. Moreover, differing interests between the environmental, scientific community, and other sectors will be a challenge for the coordination of IAS efforts. There is a need to build capacity on risk assessment, scientific knowledge, awareness among the key stakeholders, especially among the policy makers and local communities. At present, there is limited capacity to measure the threats and impacts of IAS, identify pathways, commodities and organisms that present an IAS risk, develop and evaluate the effectiveness of management systems, and effectively capture and adapt practices to ensure effective prevention, control and eradication measures. The Ministry of Transport, Maritime Affairs and Communications requires additional capacity building for its personnel to sample and handle ballast water. There is a lack of understanding among the public, key sectors, importers and shipping agents of the harmful impacts of IAS, how IAS enter Turkey and spread among the marine and coastal ecosystems, and of what measures are needed to prevent this is an important barrier to more effective marine IAS early detection, prevention and control. There has been no assessment of the economic consequences with respect to food security, livelihoods, health, which explains lack of cost effective measures to prevent IAS entering the country and control them. The gaps in capacity also extend to capacity to effectively manage marine ecosystems (especially MPAs) in general, as degraded marine ecosystems (suffering from habitat destruction, pollution, and other forms of unsustainable use) are more susceptible to IAS invasions.

11. Turkey also has no practical experience in on-the-ground systems to prevent entry, control and manage IAS. This is especially evident at some of the most precious marine areas, which on the one hand host important biodiversity and present potential for economic development (through tourism, aquaculture and fisheries), yet on the other hand continue to suffer from degradation.

III. STRATEGY

12. The theory of change for this project directly follows the strategy for addressing IAS outlined in technical guidance from the Convention on Biological Diversity. This includes the three-stage hierarchical approach, combined with the 15 guiding principles for the prevention, control, and mitigation of impacts from IAS that threaten ecosystems, habitats or species. The three stage hierarchical approach relates to the prevention, control, and mitigation (see Figure 2) of IAS and their negative impacts on native ecosystems and species. The specific implementation of each of these approaches depends on the particular characteristics of each IAS and the corresponding characteristics of native species and the type of habitat targeted.

13. The project strategy also further follows the Turkey Country Programme Document (2016-2020) (CPD) theory of change. For the climate change and environment outcome, the CPD outlines a theory-of-change that focuses on strengthening capacities to prevent and respond to environmental degradation, particularly in relation to biodiversity conservation (as well as forest management, and chemical waste prevention and management). Further, the CPD

aims to integrate biodiversity and ecosystem services into development planning, which will also be supported by multiple aspects of the project. The overarching relevant CPD outcome is “improved implementation of more effective policies and practices on sustainable environment, climate change, biodiversity by national, local authorities and stakeholders including resilience of the system/communities to disasters”, which is to be achieved via the output “enabling legal frameworks and models for conservation and sustainable use of biodiversity and ecosystems in place.” The project directly conforms to this theory of change outlined in the CPD. For example, a key expected result is an increase in the national IAS management frameworks score, as by the GEF BD IAS Tracking Tool.

14. In Turkey currently there are two main identified pathways of marine IAS: the Suez Canal (66% of marine IAS introductions in Turkey), and ship ballast water (30% of marine IAS introductions in Turkey). Other pathways, such as release for aquaculture purposes (1% of marine IAS introductions), or the release of aquarium species, are not yet a significant issue in Turkey with respect to the marine environment (although this project does aim to take steps that these pathways do not become problematic).

15. With respect to prevention, there is little that the Government of Turkey can do to stop the invasion of indo-pacific species into Mediterranean waters via the Suez Canal, a phenomenon that has been ongoing since the Canal’s official opening in 1869, and which has been termed the Lessepsian Migration (so named after the French diplomat in charge of the canal’s construction); the canal, crossing Egypt’s territory, sits outside Turkey’s national waters. Therefore in terms of prevention, the focus for Turkey’s marine ecosystem is squarely on introductions occurring via ship ballast water. Transportation data indicates that an annual average of 23 million tons of ballast water was discharged to Turkey’s coastal areas between 2002-2006, with Turkey’s most at-risk ports in the Marmara Sea, the Eastern Mediterranean Coast, and the Aegean Sea. Fortunately the “International Convention for the Control and Management of Ships’ Ballast Water and Sediments” has been ratified by a sufficient number of countries that it will enter into force on September 8th, 2017 (shortly before the expected start of this project). Turkey is a party to the convention, having ratified it on October 14, 2014. The first part of the theory of change for this project will therefore be to support Turkey’s implementation of the Ballast Water Convention. This will include

Figure 2 Three Part Strategy in-line with CBD Approach

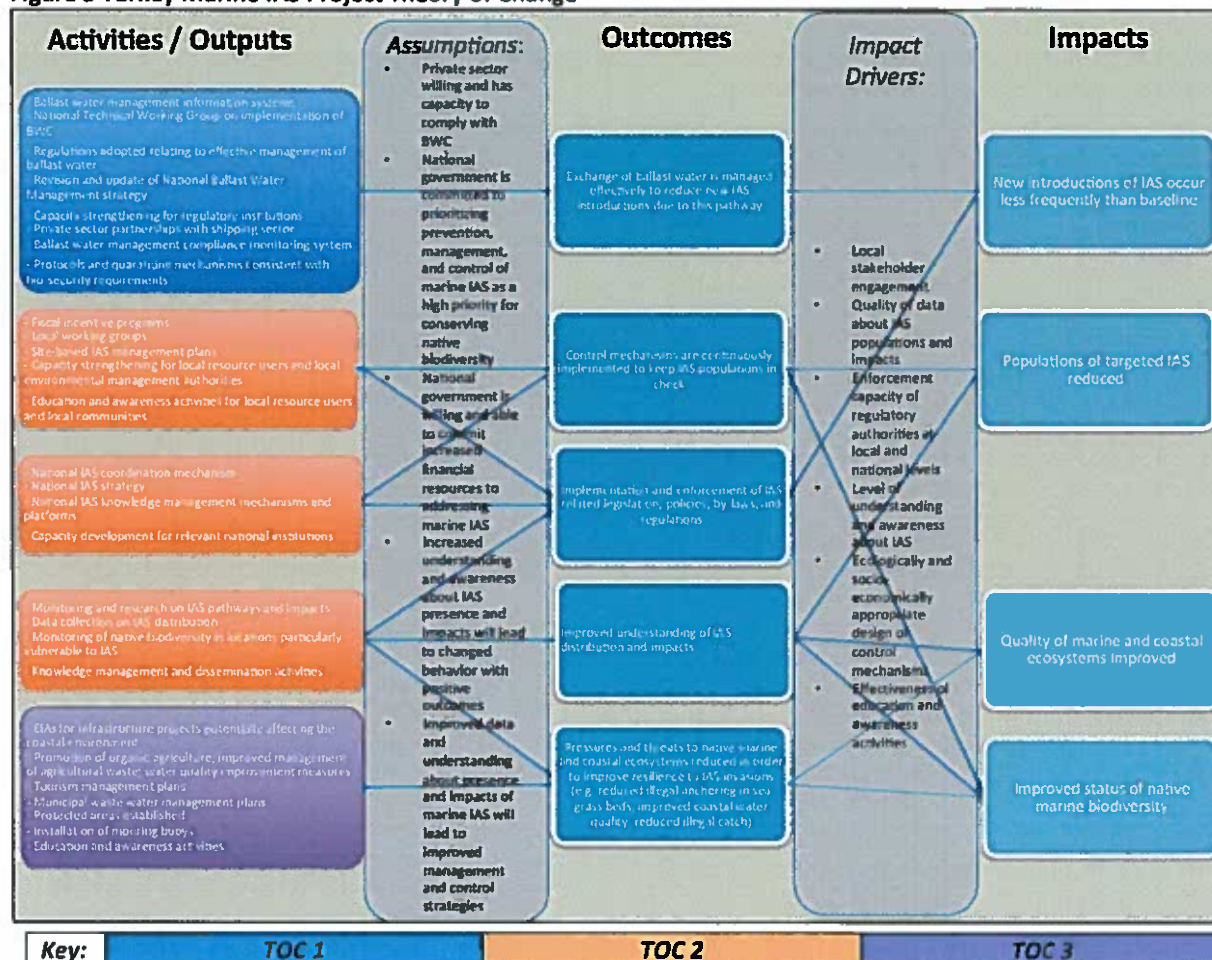


updating and revision of Turkey's National Ballast Water Management Strategy, which was developed in 2010, but which remains largely unimplemented. There are multiple steps envisioned for implementation of the Ballast Water Convention and the National Ballast Water Management Strategy. These include development and introduction of regulations to establish port state controls, certification, type approvals, baseline biological surveys in ports, coordination with universities and research centers, support for scientific studies, and updating of data on ballast water management. This also includes establishing a national coordination mechanism on IAS (relevant for other parts of the project strategy as well), and the adoption of relevant legislation. In carrying out all portions of this part of the project strategy the project aims to coordinate and work closely with the private sector. The three-part Theory-of-Change is shown in Figure 3 below.

16. This first part of the theory of change is expected to directly reduce the rate of new IAS introductions into Turkey's marine water in the future. This will be achieved by increasing the capacity of the Government of Turkey to implement the Ballast Water Convention and the National Ballast Water Management Strategy. Monitoring and controlling ballast water will significantly reduce the risk of new IAS introductions. With fewer new marine IAS introductions there will be fewer negative impacts on native biodiversity, as well as fewer negative economic and social impacts along Turkey's coasts. The most significant assumption

17. The second part of the theory-of-change relates to the control of IAS already present in Turkey's marine ecosystems. The project addresses this strategy through multiple outputs, while incorporating a majority of the CBD's guiding principles. The project will pilot control measures at four sites in key marine ecosystems distributed among Turkey's four major bordering seas, the Black Sea, Marmara Sea, Aegean, and Mediterranean (Levantine sub-region). The control part of the strategy works at both the national and local levels. At the national level, the project will improve national institutional coordination for control of marine IAS throughout all of Turkey by establishing an inter-institutional coordination mechanism involving all key national stakeholder institutions. Primarily this will include MoFWA, MoTMAC, and MFAL, as well as potentially the Ministry of Environment and Urbanization, Ministry of Foreign Affairs and Ministry of Finance. The project will also develop a national strategy on addressing marine IAS, which will be integrated with the National Biodiversity Strategy and Action Plan. The national strategy on marine IAS will include gender mainstreaming considerations, as relevant. In addition the project will improve knowledge management related to marine IAS, in order for key stakeholders to have an improved understanding of the status of marine IAS, and improve capacities to enforce regulations and other control measures related to marine IAS. At the site level, the project will develop marine IAS management plans involving all key local stakeholders (including women's groups representatives). The project also plans to provide capacity strengthening support for IAS management and control at both the national and local levels, through training, improved management procedures and mechanisms (e.g. site-based IAS working groups), and necessary equipment. Both the prevention and control strategies will be implemented through the project's education and awareness activities, which will increase the understanding of the marine IAS problem, and recognition of means to address marine IAS amongst local authorities, targeted user groups, and the general public. Finally, the project will also undertake some direct control measures to minimize negative impacts of marine IAS, and strengthen native biota and ecosystems. The direct control measures will be implemented through the fiscal incentive mechanisms to be piloted by the project; these mechanisms will be structured to leverage local resource user efforts in order to physically remove targeted marine IAS that have significant negative impacts on native biodiversity and ecosystems. It is anticipated that these efforts will primarily target the veined whelk (*Rapana venosa*), North Atlantic seastar (*Asterias rubens*), and lionfish (*Pterois spp.*).

Figure 3 Turkey Marine IAS Project Theory of Change



18. The third part of the theory-of-change focuses on the mitigation of negative marine IAS impacts in Turkey's marine and coastal ecosystems. Mitigation activities will be carried out in each of the four pilot sites. Mitigation activities include both "push" and "pull" strategies, which is to say activities to support the flourishing of native biodiversity in the face of IAS invasions, and the reduction of negative effects of IAS. The specific measures to be taken will be defined in the site IAS management plans to be developed during the first part of the project, but are likely to include activities such as: a.) Reduction of other negative influences that weaken the capacity of native biodiversity to resist the presence of IAS; b.) Direct mitigation of negative impacts of IAS (e.g. removal of washed up water hyacinth biomass in Samandag site); c.) Feasibility assessment of re-introduction or augmentation of populations of native species. The mitigation aspect of the strategy will lead to positive biodiversity impacts by directly supporting native biodiversity. For example, in multiple sites the project will combat threats such as wastewater pollution and illegal anchoring, which weakens and directly destroys native species, which further widens the door for IAS invasions and colonization. When sensitive native seagrass beds are damaged or destroyed these areas are more susceptible to invasion by the alien algae *Caulerpa spp.* The possible re-introduction or augmentation of native populations of mollusks would also lead to direct improvements in the condition of native species populations, further fortifying these populations against the negative effects of IAS.

19. Table 1 below highlights the key internal and external assumptions imperative for the Theory-of-Change. The project strategy and theory of change has been identified as the best strategy at this point in time because of three key factors: 1.) The expected entry into force of the Ballast Water Convention (to which Turkey is a party); 2.) Turkey's extensive coastal area and marine ecosystems make it highly vulnerable to the negative impacts of marine IAS, and therefore it is urgent that Turkey institute a policy and institutional framework and enabling environment

to facilitate addressing this threat to marine biodiversity; and 3.) There is a relative lack of experience addressing marine IAS on the ground in Turkey, and therefore it is imperative that that pilot and demonstration activities be tested in a limited number of diverse sites in order to gain experience and understanding about the management and control of marine IAS in the Turkish context.

Table 1 Key Assumptions Relating to the Project's Theory of Change

	Internal Assumptions: (Program Design and Implementation)	External Assumptions: Partners, Stakeholders, and Context
Overall Project	<ul style="list-style-type: none"> - National coordination body will be an effective means of integrating and aggregating national approach to prevention, management, and control for marine IAS, and will contribute to the implementation of laws and policies relating to marine IAS - Development of a national strategy on marine IAS will be an important element to effectively addressing the problem over the long-term, and will lead to implementation of prioritized national actions to address marine IAS - Education and awareness are an important part of an effective strategy to address marine IAS, and will lead to behavior changes amongst resource users that will be supportive of the prevention, management and control of marine IAS 	<ul style="list-style-type: none"> - Institutional context in Turkey will remain sufficiently stable to successfully carry out activities related to changes in national policy, law, and by-laws; development of national strategy; and the functioning of national coordination mechanism - National government is prepared to increase national funding for addressing marine IAS during the project period - Key institutional partners (i.e. MTMAC, MFAL) will have the capacity to carry out their institutional mandate in a manner that is adequately supportive of the project objective
TOC 1: Prevention of new IAS	<ul style="list-style-type: none"> - The project's inputs and contribution will be sufficient to catalyze significant progress in implementing the Ballast Water Convention in Turkey - Education and awareness activities will reduce the future risk of marine IAS introductions from the tourism, aquarium, and aquaculture sectors 	<ul style="list-style-type: none"> - Private sector actors in the shipping sector will make their own significant direct investments in modifying ships and infrastructure to comply with the Ballast Water Convention - The implementation and enforcement of the Ballast Water Convention will be an effective means of reducing the introduction of new IAS via ballast water - The significance of new IAS introductions from other sectors will remain minimal in the context of Turkey
TOC 2: Control of IAS	<ul style="list-style-type: none"> - Establishment of a site-based stakeholder working group will be an effective means of drawing relevant local stakeholders into action relating to the management and control of marine IAS in their jurisdictions, by increasing awareness, communication, and coordination on marine and coastal ecosystem management - Negative impacts from marine IAS can be minimized by keeping IAS populations in-check even once they have colonized an area; therefore by applying control pressures to IAS populations the project will contribute to the strengthening of native ecosystems and biota - Fiscal incentives can be an effective mechanism for controlling IAS if appropriately designed and implemented in ways that are responsive to the particular circumstances of local stakeholders, the population dynamics of the targeted IAS species, and contextual factors - Improved data and knowledge management about IAS will contribute to improved management and control of marine IAS by institutions that are mandated to do so 	<ul style="list-style-type: none"> - Local stakeholders who are informed about the presence and negative impacts of marine IAS will see benefits to acting to control marine IAS in their region - In circumstances where marine IAS species already have an established commercial value, it will be possible to find common approaches with local resource users to the control and management of these IAS, in such a way that native biota can still thrive and fulfill their necessary ecosystem functions - Once fiscal incentive mechanisms have been piloted and good practices and lessons identified, the national government will be interested in putting the regulatory framework and resources in place to continue the fiscal incentive programs that have been identified as cost-effective means of effectively controlling marine IAS

	Internal Assumptions: (Program Design and Implementation)	External Assumptions: Partners, Stakeholders, and Context
TOC 3: Mitigation of IAS	<ul style="list-style-type: none"> - Healthy ecosystems that are not subjected to a variety of different stresses are more resilient and resistant to the spread of marine IAS; therefore by reducing external ecosystem stresses (e.g. water pollution; ecosystem damage from anchoring, etc.) the project will contribute to reducing the negative impacts of marine IAS on native biota - The project will be able to successfully convene local stakeholder working groups to develop site-based management plans and implement mitigation measures 	<ul style="list-style-type: none"> - Mitigation measures will have multiple local benefits, and therefore will be supported by local stakeholders who will make financial and in-kind contributions to their success - There is sufficient data and buy-in from local stakeholders to successfully develop site-based management plans for marine IAS

20. The project has been designed building on the experiences and lessons from other similar initiatives related to marine IAS and IAS in general, including from the GEF's portfolio. Annex M includes a summary assessment of key lessons learned from other GEF projects, and in particular, from the GloBallast project (see Box 1). The most relevant of these are summarized in Table 2 below.

Box 1 Building on the GloBallast Project

The GloBallast Partnerships Programme was established under the GloBallast Project. The project is being executed by the International Maritime Organization (IMO), in partnership with UNDP as the implementing partner. The project is funded partially by GEF (\$5.69 million USD). The project was approved in 2007 and completion is expected in 2017. There are 15 leading partner countries, including Turkey, plus 70 partnering countries.

The GloBallast project aims to assist developing countries in reducing the risk of ballast water mediated bio invasions, and prepare the countries for implementation of the IMO Ballast Water Management Convention and compliance with its requirements at all levels. The project is targeting global, regional and national level results. At the national level, relevant policy, legal and institutional reforms are expected to be developed. Turkey has prepared its national strategy on ballast water management in line with the project and international agenda. Moreover, the draft legislative context has been prepared but is not currently put into operation due to the uncertainties with the international convention.

The ballast water management related activities of the current Turkey Marine IAS project will be built upon the knowledge, lessons learned and infrastructure developed by the GloBallast project. Turkey's national ballast water management strategy and action plan will be revised and updated, and necessary legislation will be put into operation. Furthermore, guidelines and tools developed by the GloBallast project related to ballast water management standards, and capacity development approaches, will be used during the current Marine IAS project implementation. The project team will ensure swift transition of this knowledge and infrastructure between the projects within the PIU and MTMAC.

Table 2 Key Lessons and Good Practices Incorporated in the Proposed Project from GEF-funded Projects

Project	Good Practices / Key Lessons	Incorporation in Turkey Marine IAS Project
GloBallast (completion expected in 2017)	<ul style="list-style-type: none"> • Establishment of an international coordination and information dissemination through IMO HQ in London. Toolkits, guidelines and cooperation with shipping industry and NGOs. • Establishment of a regional coordination and harmonization, information sharing, training, and capacity building in the application of 	<ul style="list-style-type: none"> • Turkey will continue informing IMO working group about results from IAS project including policy and legislation developments. Turkey will benefit from the documentations and lessons learnt from the international coordination mechanism and industry/

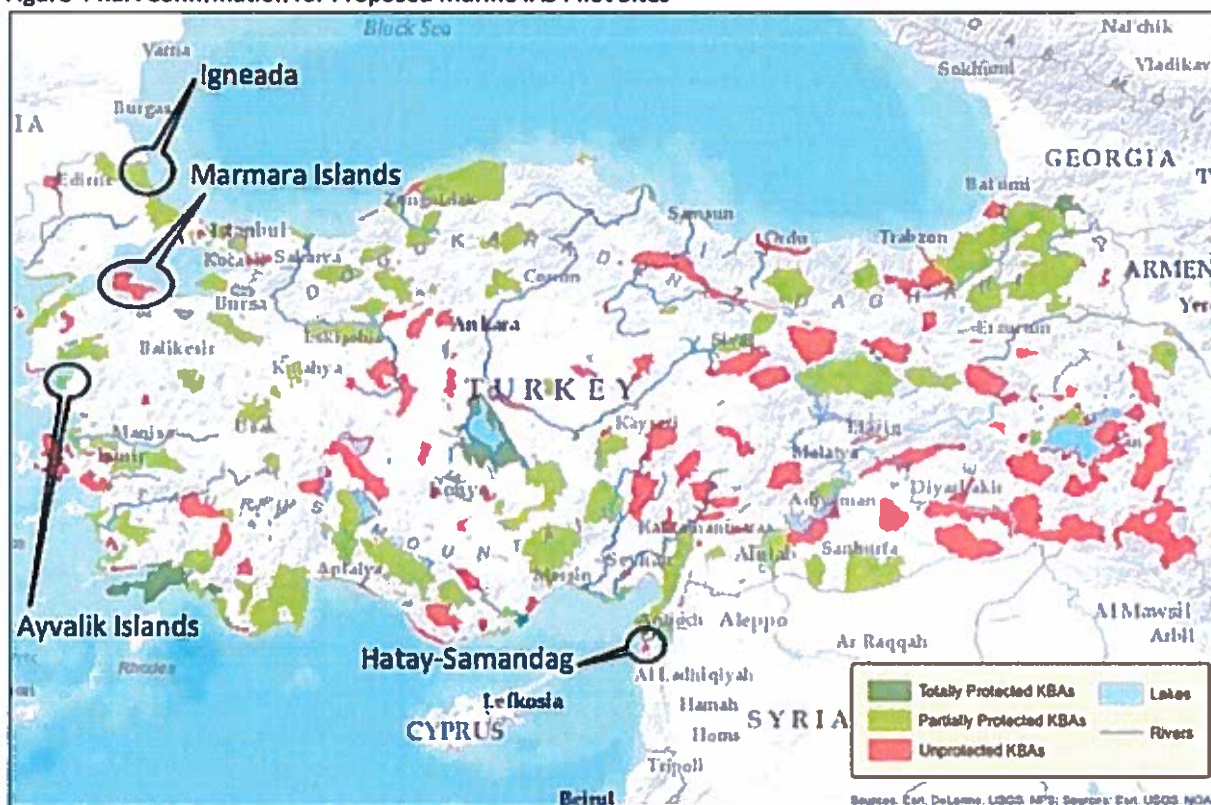
Project	Good Practices / Key Lessons	Incorporation in Turkey Marine IAS Project
	<p>ballast water management tools and guidelines.</p> <ul style="list-style-type: none"> Establishment of a fast track system for Lead Partner Countries; Development of national ballast water management strategy; adopting national legislation, policy and institutional reforms. Undertaking capacity building activities and regional strategy development action. Designing and testing technology solutions, and to enhance global knowledge management and marine electronic communications to address the issue. 	<p>NGO networks when necessary during the project implementation.</p> <ul style="list-style-type: none"> Similarly, Turkey will inform regional coordination unit and partners for effective management of ballast water in relation with IAS threats and measures. Turkey has prepared and adopted its national strategy on ballast water management. The IAS project will revise the strategy and action plan based on the knowledge developed during the project and the other international, regional best practices. Moreover, there is a specific output and activities for ballast water management legislation, and the project team will benefit from the lessons learnt and best practices of the GloBallast project. The IAS project has a strong capacity building in its core approach. The personnel from relevant ministries, customs, coast guards and shipping industry are the key target groups for certain outputs. The project will benefit from the capacity building approaches and documentation during the project implementation. Similarly, the lessons learnt from the IAS project will be made available to other countries through the existing GloBallast coordination mechanism/network. The IAS Project will establish a knowledge management system, including a database module, to support successful implementation of Ballast Water Management Convention. The project will benefit from the tools developed under the GloBallast project and further communicate the Turkey experience.
Control of Invasive Species in the Galapagos Archipelago (completed 2011)	<ul style="list-style-type: none"> Managing invasive species requires strong political support, since many of the measures taken and decisions made will not be popular among some stakeholders and communities Consistent institutional support, collaboration and funding, and a commitment by project staff to achieve eradication objectives (an "eradication ethic") were central to the success of eradication projects during and following the project. A focus on different invasive taxa (invertebrates, vertebrates, plants) has raised awareness of the need to consider trophic 	<p>At least three ministries of Turkey will be involved with the project design and implementation, therefore strong government ownership is already gathered for the IAS Project. Moreover, MFWA has committed its support to the project including the post-project period, which will ensure the sustainability of the result.</p> <p>Strengthening the natural species and marine habitats is adopted as a key project approach for combating IAS in marine areas in the project.</p>

Project	Good Practices / Key Lessons	Incorporation in Turkey Marine IAS Project
	<p>relationships and community-level dimensions to conservation management.</p> <ul style="list-style-type: none"> A focus on biological communities, ecosystems and whole islands may present opportunities to improve the effectiveness and efficiency of invasive species management, and to sustain conservation outcomes 	
Mitigating the Threats of Invasive Alien Species in the Insular Caribbean (completed 2014)	<ul style="list-style-type: none"> In the field of IAS management, projects require significant amounts of good quality information, normally available through up-to-date on-line databases. The more information is put into those databases, stronger their contributions will be to IAS projects globally. IAS project design should be such that information generated can be easily contributed to on-line databases such as those from IUCN invasive species group and others. The role played by communities should never be underestimated, including in IAS control and eradication projects. Community leaders can make a project succeed or be stuck and not implemented. Engaging the community, as in the case of Cabritos, may lead to better understanding of what is being pursued and/or given community 'clearance' for the further eradication actions to proceed. Predator control projects are very expensive and may need to be continued permanently if the conservation target species is to be saved from extinction. For the conservation of the Jamaican Iguana, the eradication of alien predators from main island Jamaica is not feasible, therefore leaving control as the only alternative. New options may be needed. 	<p>One of the key project activities will be the production of scientific information regarding the ecological aspects of IAs as well as its socio-economic impacts in the affected communities/ sectors. Besides, establishing a strong and effective knowledge management system (through a database) is planned as apart of the project. The project team will ensure effective use of scientific data feeding into informed decision-making.</p> <p>Local communities, including fishers and their NGOs, constitutes an important part of the project strategy. Local communities with an ensured gender-balanced representation is a key element of project design. The project team will liaise with key public and fishing sector leaders to achieve its targets.</p>
Development of Best Practices and Dissemination of Lessons Learned for Dealing with the Global Problem of Alien Species that Threaten Biological Diversity (completed 2003)	<ul style="list-style-type: none"> There is a need for personal support early in the project from professional champions and key individuals within funding agencies, along with recognition of the vulnerable nature of major projects involving volunteer time; There is a need for funding continuity, including pilot projects to develop protocols and technologies that will transfer to regions with very limited resources; It is important to educate participants and promote learning by doing among both academics and practitioners to ensure that outputs are delivered on time participants and are efficiently networked; There is a need for constant advocacy based on good case studies verifiable by facts and figures, backed by well-targeted regional workshops; There is value in a wide array of outputs covering a wide range of audiences from specialist academics through professional practitioners to the general public. 	<ul style="list-style-type: none"> The Turkey Marine IAS project will involve a range of stakeholders, including "champion" technical experts who will be contracted by the PIU. In addition, there is strong government buy-in by the key institution, the MFWA, including individuals considered "champions" for the project within the institution. The demonstration activities at the four pilot sites will be replicated and scaled-up within the national government, in order to be transferred and implemented to other key regions and sites facing threats from marine IAS. The project design includes a significant knowledge management component that will involve academics and practitioners at the site level. This will be accomplished through the local working groups, and multiple

Project	Good Practices / Key Lessons	Incorporation in Turkey Marine IAS Project
		education and awareness building activities.

21. **Key Biodiversity Areas Analysis:** All of Turkey's coastal area is recognized as a globally significant marine biodiversity zone, but there are multiple individual Key Biodiversity Areas within this region as well. Turkey is one of the few countries for which a multi-taxon national Key Biodiversity Areas assessment has been conducted. The results of this assessment have been published in a scientific peer reviewed journal, in July 2016: "Identifying key biodiversity areas in Turkey: a multi-taxon approach."³ This assessment primarily focused on terrestrial KBAs, but does still have relevance for Turkey's coastal ecosystems as well. All four planned project pilot areas are considered part of Key Biodiversity Areas, as indicated in Figure 4 below. The scientific analysis was conducted to identify KBAs that are "unprotected", "partially protected", or "fully protected". Two of the proposed pilot sites are identified as "partially protected" while two are identified as "unprotected". All sites except Igneada are part of the "Mediterranean Basin" hotspot (one of 36 globally), and part of the Global 200 marine temperate shelves and seas ecoregion "Mediterranean" (one of 238 globally).

Figure 4 KBA Confirmation for Proposed Marine IAS Pilot Sites⁴



22. **Innovativeness:** There are many aspects of the project that are highly innovative, particularly within Turkey. The overall project is innovative within Turkey as there has not previously been any broad national effort to address marine IAS. Therefore the entire strategy and specific approaches to be implemented by the project will be new in Turkey; this includes elements such as the mechanisms to control and manage ballast water, site-based marine IAS management plans, the establishment of site-based marine IAS working groups. Further, the project's proposed

³ See the article "Identifying key biodiversity areas in Turkey: a multi-taxon approach," in the journal International Journal of Biodiversity Science, Ecosystem Services & Management, 12:3, 181-190. 2016.

⁴ Source: Ibid.

used of fiscal incentive mechanisms to help manage and control marine IAS is highly innovative. No such mechanisms have been implemented in Turkey, and there are not a large number of examples globally of such mechanisms in contexts that would be relevant for Turkey; this is partly due to the fact that each IAS has particular characteristics in terms of population dynamics, habitats, and types of impacts.

23. Other particularly innovative approaches include the application of new technologies. For example, the project will demonstrate the use of eDNA analysis to identify the presence of specific IAS. eDNA is a new, cost-effective technology by which a sample of a medium (such as water, or dirt) is collected, and then analyzed for traces of DNA from specific species.⁵ In addition, the project will assess the feasibility of the use of robots for control of lionfish in the context of the Turkish marine ecosystem, under a new technology being developed by the company Robots in the Service of the Environment (RISE).⁶

24. It was determined that gender-specific issues were not significant with respect to the impacts of IAS on native biodiversity (i.e. the development challenge does not affect men and women differently), and therefore the project strategy does not include a specific gender mainstreaming approach. However, gender perspectives and gender mainstreaming elements have been incorporated throughout all aspects of the project design, as relevant, as can be seen in the following section.

IV. RESULTS AND PARTNERSHIPS

i. Expected Results:

25. *Project Goal, Objective, Outcomes and Outputs/Activities:* The long-term project goal is to minimize negative impacts of IAS in order to support the conservation of the globally significant native biodiversity of Turkey's coastal and marine ecosystems. The project objective is "To ensure resilience of marine and coastal ecosystems through strengthened capacities and investment in prevention, detection, control and management of Invasive Alien Species." The project also seeks to promote gender equality and women's empowerment, to the extent relevant and feasible within the scope of the project. In order to achieve the project objective, and address the barriers, the project's intervention has been organized into three components (this is in line with the components presented at the PIF stage):

- *Component 1.* Effective national policy framework on Invasive Alien Species
- *Component 2.* Capacity building, knowledge and information sharing systems to address the IAS threats
- *Component 3.* Investment in sustainable management, prevention, eradication, and control of IAS and restoration of IAS-degraded habitat at key marine and coastal areas

26. The project works at both the national level and at the site level, at four proposed pilot sites. The key characteristics of the pilot sites are summarized in Table 3 below.

Table 3 Summary Data for Marine IAS Project Pilot Areas

Site Name	Area	National Status	IUCN PA Category
Igneada Floodplain Forests National Park Coastal Seascape	34,200 ha of marine habitat, including 22 km of coastal habitat	Coastal area adjacent to National Park	PA has category II status; proposed marine ecosystem area does not have PA status
Marmara Islands Marine Ecosystems	46,600 ha of marine habitat, including 186.5 km of coastal habitat	No designated PA status; scientific analysis identified site as an unprotected KBA	
Ayvalik Islands National Park	19,624 ha including 13,969 ha of marine habitat, including approximately 112 km of coastal habitat	National PA	IUCN category V

⁵ See discussion and example of use of eDNA technique: <http://e360.yale.edu/features/edna-rivers-fish-bull-trout-forest-service>.

⁶ See <https://robotsise.com>.

Hatay Samandag Sea Turtle Nesting Beach	32 ha of marine habitat, including 16 km of coastal habitat	Limited local protections related to sea turtle nesting beach status; no designated PA status; scientific analysis identified site as an unprotected KBA	
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27. The planned project outputs and activities under each of the three components are described in detail below.

Component 1. Effective national policy framework on marine Invasive Alien Species

28. The outputs and activities of this component will focus around six areas of support: Output 1.1: Regulations on introduction, early detection, prevention and management of IAS in marine and coastal wetland ecosystems developed and submitted for adoption; Output 1.2: Main pathway and vectors for IAS identified; Output 1.3: Protocols and quarantine mechanisms consistent with bio-security requirements and international standards for IAS in marine and coastal wetland ecosystems in place; Output 1.4: Fiscal incentives introduced for effective removal of IAS (e.g. Lion fish, Balloon fish) in marine and coastal wetland ecosystems (to encourage selective fishing and removal of IAS by fishers) jointly with MFAL; Output 1.5: Regulations and standards on control, minimization and removal of IAS from ballast water developed jointly with MTMAC and put for enforcement; Output 1.6: Sustainability and Replication mechanism: National Strategy and Action Plan on IAS in marine and coastal wetland ecosystems developed and approved to inform future actions on identifying priority habitats and species to be protected, evaluating financial and socio-economic effects of action/inaction for marine and freshwater IAS based on a thorough cost/benefit analysis. The proposed suite of activities, and broad implementation arrangements, for each of the six outputs are described in more detail below.

Output 1.1: Regulations on introduction, early detection, prevention and management of IAS in marine and coastal wetland ecosystems developed and submitted for adoption.

29. This output will focus on developing and adoption of key legislations and regulations in relation to IAS and supporting the implementation of those through strengthening the capacities and awareness. The activities under this output are:

1. By-laws and other regulatory mechanisms/tools on marine IAS developed and adopted in relation to implementation of Decree Law on Organization and Duties of Ministry of Forest and Water Affairs Law and other related regulations of other Ministries, including gender perspectives as relevant
2. Implementation of IAS by-laws and other regulatory tools/mechanisms through training and awareness raising of regulators and resource-users

30. In order to achieve this output, the project team will be drafting necessary legislation based on the Decree Law on Organization and Duties of MFWA Law. Another key expected development is the draft law on conservation of nature and biodiversity, a key law of MFWA waiting for adoption in the parliament currently. In case this law is adopted, the Project Implementation Unit will work to deliver an amendment targeting this new legislation. Furthermore, The PIU will work closely with MFAL to develop necessary legislations regarding fishery circulars and regulations including possible incentive mechanism foreseen under the project. Lastly, priority will be given for strengthening the implementation of those legislations. This will be done by targeted capacity building and awareness raising activities for MFWA and MFAL personnel based on the adopted new legislations. Key activities may be series of workshop and promotion materials that can be distributed among key staff. The details of methodology and the products developed will be finalized by the project team.

Output 1.2: Main pathway and vectors for IAS identified

31. This output will aim to analyze the main pathways and vectors for IASs in Turkey. This will be done through research and sequent analysis for IAS distributions and means of introduction. The activities foreseen under this output are:

1. Research and analysis on current marine IAS distribution and pathways in Turkey's coastal zones (including Mediterranean and Black Sea coasts)

2. Updated analysis on main and potential pathways and vectors for alien species introductions

32. The project team will work with the key researchers/ institutes to deliver a detailed desk study based on published and unpublished data including expert views and feedback from fishers along the Turkish coast. This study will be followed by roundtable discussions of experts to assess and analyze the desktop reviews to come up with key results and conclusions regarding IAS pathways and vectors in Turkey. These efforts will be coordinated with the fieldworks that will be carried out under the component 3.

Output 1.3: Protocols and quarantine mechanisms consistent with bio-security requirements and international standards for IAS in marine and coastal wetland ecosystems in place

33. The project will develop and integrate protocols and quarantine mechanisms for IAS under this output. This will be done through (a) integrating the drafted protocols and mechanisms to existing and newly formed legislations; (b) preparing sector specific guidelines; and (c) dissemination of those guidelines widely among the sector in order to support the implementation. The proposed activities for this output are:

1. Assess, customize and integrate protocols and quarantine mechanism consistent with bio-security requirements and international standards into the marine IAS by-law of MoFWA (see 1.1.1) and other related by-laws/regulatory tools and mechanisms, including gender perspectives as relevant
2. Development of sector-specific guidelines on protocols and quarantine mechanisms for marine IAS in all sectors that impact/being impacted by IAS other than shipping, including gender perspectives as relevant
3. Support for implementation of laws and regulations that have been developed and adopted via dissemination of guidelines to targeted sectors

34. The draft protocols and quarantine mechanisms for Turkey will be based on internationally agreed standards and best cases/ practices including related EU Marine Strategy Framework Directive Articles. The key sectors of concern will be mariculture, aquarium trade, marine diving, and marine commercial and recreational boating. The guidelines will be produced for each key sector and they will be disseminated widely. Sector specific trainings will be undertaken especially for the key regulators in different sectors. The details of methodology and means of awareness raising approaches will be identified by the project team and consultants during the project implementation.

Output 1.4: Fiscal incentives introduced for effective removal of IAS (e.g. Lion fish, Balloon fish) in marine and coastal wetland ecosystems (to encourage selective fishing and removal of IAS by fishers) jointly with MFAL

35. This output will define and implement the best approaches for introducing the incentive programs for IAS in Turkey. The approach will include (a) designing the best incentive mechanism suitable for Turkey's own case, experience and culture; (b) undertaking outreach programs targeting local communities and fishers as well as staff of key local public organizations; (c) implementing the site and species specific incentives to encourage fishers to eradicate the target species; and (d) documenting the experiences obtained during the incentive implementations. The proposed activities under this output are:

1. Confirmation of design of incentive mechanism with specific implementation instructions confirmed with all partners, including gender equality perspectives as relevant
2. Outreach program on fiscal incentives for the local communities (and nature/conservation related NGOs) for each study site, including a gender balanced approach
3. Outreach program on fiscal incentives for the staff of the province directorates of MoFAL and MoFWA
4. Harvest incentive program in partnership with local communities for *Pterois spp.* in Hatay-Samandag
5. Harvest incentive program in partnership with local communities for *Eichhornia crassipes* in Hatay-Samandag
6. Harvest incentive program in partnership with local communities for *Tetraodontidae (spp.)* in Hatay-Samandag
7. Harvest incentive program in partnership with local communities for *Asterias rubens* in Marmara Islands
8. Documentation and publications on positive or negative experience with harvest programs, including gender equality perspectives as relevant

36. The PIU in collaboration with project partners will seek for best methods for the design of incentive mechanism. The MFAL has a vast experience in incentive mechanisms in general in Turkey. Moreover, academicians and national/ local NGOs have been working with fishers to adopt small-scale support mechanisms too. The project will gather all of those experiences in order to maximize the effect of proposed incentive mechanism. The mechanism should be based on experiences as well as cultural aspects of Turkish society and fishers' customs. The incentives can vary from site to site and for different species of concern, however, possible approaches might be bounty programs for individual fishers and contracted operations for specific species. The impact of incentive mechanism will be monitored and documented highlighting the best practices and negative experiences gathered.

Output 1.5: Regulations and standards on control, minimization and removal of IAS from ballast water developed jointly with MTMAC and put for enforcement

37. This output focuses on IAS issues related to ballast water and related regulations. This output will be supported by and implemented in coordination with MTMAC. The main approach of the output will be (a) founding the National Technical Working Group for Ballast Water Convention; (b) revision and updating of national strategy and action plan for ballast water; (c) drafting and adopting national legislations in relation to ballast water; (d) mechanisms for implementation and monitoring of international convention; and (e) increasing the capacity for the implementation of ballast water regulations. The activities that will be executed under this output are:

1. Establish National Technical Working Group on implementation of the Ballast Water Convention
2. Revision and updating of the National Ballast Water Strategy, in line with international best practices and Turkey's obligations and commitments under the Ballast Water Convention
3. National legislation for compliance and implementation of Ballast Water Convention prepared and adopted
4. National regulations and by-laws on implementation of National Ballast Water Strategy and Ballast Water Convention developed and adopted
5. Establishment of compliance and enforcement mechanism for implementation of Ballast Water Convention
6. System for monitoring compliance and implementation of the Ballast Water Convention
7. Practical workshops on capacity building of MTMAC personnel working in sampling and analysis of ballast water and sediment, to support implementation of National Ballast Water Strategy and Ballast Water Convention, including application of eDNA sampling and analysis to demonstrate ballast water contamination

38. The PIU will work very closely with MTMAC, as the focal point of Ballast Water Convention, for successful delivery of this output. A national Technical Working Group will be established by MTMAC including the key personnel from relevant public organizations and key experts. The working group will to the extent possible ensure gender balance and/or a gender expert. The working group will act as the body for revision and updating of national ballast water strategy and action plan, ensuring effective inclusion of IAS related measures and standards. Moreover, best compliance and enforcement mechanisms as well as monitoring systems will be defined and developed by MTMAC and the working group. A series of workshops will be held to disseminate the knowledge and measures taken to prevent IAS dispersal via ballast water in Turkey. The main target group for those capacity building activities will be the personnel responsible from sampling, handling, and analysis of ballast water. In addition to biological investigation of ballast water and sediments, also included in the training program will be safe disposal of samples, and possibly the sampling of ballast water for external eDNA analysis.

Output 1.6: Sustainability and Replication mechanism: National Strategy and Action Plan on IAS in marine and coastal wetland ecosystems developed and approved to inform future actions on identifying priority habitats and species to be protected, evaluating financial and socio-economic effects of action/inaction for marine and freshwater IAS based on a thorough cost/benefit analysis.

39. The main focus of this output will be to development of the National Strategy and Action Plan for IAS. The project team will (a) define the ecological and socio-economic impacts of selected IAS, including a organization of a scientific conference; (b) define vulnerable habitats for IAS; (c) draft national strategy and action plan; and (d) support local authorities for the implementation. The proposed activities are:

1. Identification of methods to measure and analyze the impact of marine IAS

2. Investigation of ecological and socio-economic impact of selected marine IAS
3. Identification of habitats vulnerable to marine IAS invasion
4. Scientific conference on ecological and socio-economic impacts of marine IAS.
5. National Strategy and Action Plan on marine IAS (including gender perspectives as relevant)
6. Support to local authorities of MoFWA, MoFAL, Coast Guard, MoEU, MoH, MoCT etc. for implementation of National Strategy and Action Plan on Marine IAS

40. The project team will work with experts and academicians to define the impacts of IAS in Turkey. The methodology will be identified upon roundtable discussions of the experts, who will also define the habitats vulnerable to IAS and research priorities. These discussions will be followed by fieldwork of key experts/ institutes. Moreover, a scientific conference on the impact of IAS will be organized in Turkey to further support the analyses made under this output. Finally, based on those findings, the National Strategy and Action Plan for IAS will be developed with multi-stakeholder approach to devise an applicable and replicable set of actions to prevent alien invasion and minimize the adverse effects. In order to ensure successful implementation of the strategy, capacity building activities through a series of workshops and face-to-face meetings will be held targeting the local authorities of related public institutions.

Component 2. Capacity building, knowledge and information sharing systems to address the IAS threats

41. This component will deliver four outputs to ensure increased capacities and knowledge-information sharing mechanisms are in place. Those outputs will be: Output 2.1. Inter-sectoral multi-stakeholder Advisory Technical Board under Ministry of Forestry and Water Affairs capacitated to deal with IAS prevention, early detection, rapid response, management and eradication; Output 2.2. Information system with official list of prohibited IAS, modules on risk analysis, early warning response and monitoring for IAS in marine and coastal ecosystems is in use by government regulators; Output 2.3: Engagement with shipping industry, and transport and customs sectors, on implementation of regulations and standards on control, minimization and removal of IAS from ballast water; and on procedures for regulating the entry of species for ornamental and aquaculture purposes to mitigate the introduction of marine and freshwater IAS; and Output 2.4: Increased knowledge and awareness on IAS threats, impacts, management options and best practices for relevant industries, enterprises (aquaculture, transport, custom, tourism, etc.) media, security forces (gendarme), schools etc. through a comprehensive national communication, outreach program and delivery of community training. The details of each output and activities are given below.

Output 2.1: Inter-sectoral multi-stakeholder Advisory Technical Board under Ministry of Forestry and Water Affairs capacitated to deal with IAS prevention, early detection, rapid response, management and eradication

42. Output 2.1. will establish and operationalize the national Advisory Technical Board as a coordination body for IAS in Turkey. The main pillars of the output will be (a) publishing the ministerial decree for the establishment of the Board; (b) establishment of the board; and (c) ensuring the successful implementation of national strategy and action plan for IAS by the Board. The proposed activities are:

1. Ministerial Decree on national coordination mechanism (Advisory Technical Board) drafted and submitted for adoption
2. National marine IAS inter-sectoral multi-stakeholder coordination body: Advisory Technical Board established
3. Advisory Technical Board to provide guidance for IAS Strategy and Action Plan process and ensure implementation of the Strategy and Action Plan

43. The national Advisory Technical Board will be established by the MFWA in collaboration with other key ministries in Turkey. The Board will incorporate gender balance or a gender-mainstreaming representative. The necessary legislative conditions for the foundation of this Board will be identified, drafted and adopted by the Ministry. The members of the Board will be selected following the ToR provisions prepared for the board. The Board will meet regularly to coordinate efforts for marine IAS. The associated costs of the Board during the project course will be funded by the project and a sustainability mechanism will be ensured prior to the finalization of the project.

The Board will ensure effective implementation of the National Strategy and Action Plan for IAS by supplying continuous guidance to the implementers.

Output 2.2: Information system with official list of prohibited IAS, modules on risk analysis, early warning response and monitoring for IAS in marine and coastal ecosystems is in use by government regulators. The system enables a comprehensive inventory and monitoring of IAS threats at the most sensitive marine and coastal habitats and species (posidonia meadows, coralligenous, sea turtles, anchovy, mussel, oyster), as well as measures to detect and prevent entry of risky IAS at key points of entry.

44. This output will focus on delivering the infrastructure on knowledge system for IAS. This will be done through (a) Construction of a database for IAS and ballast water with relevant data collected; (b) increased capacities of experts related to databases; (c) outreach activities to promote public access to database; and (d) defining sustainability and maintenance protocols.

1. Data collection for open access marine IAS database
2. Construction of the database and the web interface for open access marine IAS database
3. Development of database module, or separate database, to support implementation, monitoring, and enforcement of Ballast Water Convention
4. Designation and training of experts to operate open access marine IAS database
5. Presentation of the open access marine IAS database to the public and training of the target user groups
6. System for sustainable operation, update and maintenance of the open access marine IAS database

45. This output will create the mechanisms for knowledge management for IAS and increase the capacities to manage the databases foreseen. The database will be open access to ensure data collection from the relevant communities and experts. The database architecture will be discussed and defined by IAS and IT experts collaboratively. The database will build-on and link to existing databases to the extent possible, such as the Global Invasive Species Database and EASIN. The database design will include gender perspectives and gender disaggregated data as relevant. It will be easy-to-use system accessible from a web page in Turkish and English languages. Besides, the database needed for ballast water related issues can be a modular part of the IAS database or the experts may suggest creating a separate database. Ballast database will be used to monitor the Turkey's mandatory actions under the Ballast Water Convention. In both scenarios, both systems will communicate with each other for effective implementation. The creation of database module for Ballast Water Convention will be supported by and implemented in coordination with MTMAC. The initial data necessary for the databases will be collected by project's effort. Therefore experts/ institutes will be hired to lead a desktop study to collect and input data into the system. In order to ensure effective operation of the databases, officials/ institutions will be appointed for management of the databases. Following the assignment of personnel/ organizations, the capacity building activities will follow to train the selected people. As the IAS database will be open to public access, the experts should be managing people's participation to the webpage, leading the forums and facilitate other necessary actions. Outreach activities will be carried out to attract members to the database. Specific interest will be given to the fishers and local NGOs that are in close relation with IAS. Lastly, project will ensure sustainability of the database after the project period and define and implement maintenance protocols accordingly.

Output 2.3: Engagement with shipping industry, and transport and customs sectors, on implementation of regulations and standards on control, minimization and removal of IAS from ballast water; and on procedures for regulating the entry of species for ornamental and aquaculture purposes to mitigate the introduction of marine and freshwater IAS.

46. The project will coordinate with shipping sector to prevent IAS in ballast water through (a) an international symposium on ballast water management; (b) capacity building in shipping sector as well as customs and transport authorities. The symposium will be designed and organized in collaboration with MTMAC. The foreseen activities under Output 2.3 are:

1. International symposium on ballast water management

2. Sectoral capacity building for implementation of regulations and standards on the control, minimization and removal of IAS

3. Capacity building for customs and transport authorities on control of marine IAS in non-shipping sector

47. The project team will work closely with shipping sector to determine the current situation in IAS management in ballast water including current capacities, barriers and investments needed. These efforts will be supported by organization of international symposium on ballast water management to share knowledge among all key stakeholders and experts. The main topics of the symposium may include introduction of IAS by ballast waters, legislations and their implementation, ballast water management systems, current situation in ballast water management in the world/Turkey. Another key focal group of this output will be the staff of Turkish Customs and transport authorities. Training specific to those stakeholders will be designed and implemented to strengthen the control mechanisms against IAS introductions and dispersal. Events and training activities will promote gender balance among participants and integrate discussions on gender equality issues, as feasible and relevant.

Output 2.4: Increased knowledge and awareness on IAS threats, impacts, management options and best practices for relevant industries, enterprises (aquaculture, transport, custom, tourism, etc.) media, security forces (gendarme), schools etc. through a comprehensive national communication, outreach program and delivery of community training

48. This output aims to inform large amount of target groups including the wider community regarding IAS through (a) identification of key target groups and related training/awareness raising programs/ modules; (b) implementing training and awareness raising programs specific to target groups including designing, publication and dissemination of visual promotion materials; (c) monitoring of the impact of awareness raising program implementations. The proposed activities are:

1. Identification of key target groups related to the introduction and control of marine IAS
2. Development of training modules and programs on control of marine IAS
3. Design and printing of training and awareness raising materials
4. Raising awareness on marine IAS in schools - development of high school-level teacher activity packets (lesson plans) related to marine IAS
5. Raising awareness on marine IAS in marine transport sector
6. Raising awareness on marine IAS in hobby aquarium sector and aquarists
7. Raising awareness on marine IAS in aquaculture sector
8. Raising awareness on IAS in media
9. Raising awareness on marine IAS among fishers
10. Raising awareness on marine IAS among divers
11. Raising awareness on marine IAS in governmental institutions (customs, coast guard, MoFAL, MoEU, MoFWA, MoTMAC etc.)
12. Monitoring the awareness in target groups
13. Study visits for capacity building of staff of related Institutions

49. The project team will identify the target groups to be approached by the project's awareness raising/ capacity building stakeholder groups and a communication plan will be defined to list communication activities specialized to each group's needs and specialties. Then, target group specific promotion materials will be designed and published and training programs will be put into operation. The project will have specific awareness raising/ capacity building activities for high school teachers and students, marine transport sector, hobby aquarium sector representatives and aquarists, aquaculture sector, national and local media, fishers and their cooperatives, divers and diver organizations-diver tourism agencies as well as local government institutions. Education and awareness raising materials and activities will be designed incorporating gender perspectives. This output will organize a study visit for the staff of relevant institutions for capacity building in IAS. Lastly, the project will develop and implement a monitoring system to measure the impact of these awareness raising and capacity building programs through application of questionnaires and other relevant methods.

Component 3. Investment in sustainable management, prevention, eradication, and control of IAS and restoration of IAS- degraded habitat at key marine and coastal areas

50. This component consists of three outputs: Output 3.1: Management plans designed and launched for 4 areas, with identification of site-specific measures for prevention, ensure eradication, control and management of IAS; Output 3.2: Measures to detect, control spread of IAS at the target sites in collaboration with local communities, and targeted restoration of ecosystems degraded as a result of IAS; and Output 3.3: Support for the recovery of native species disturbed by IAS at selected sites. The details of the approaches and the detailed activities are given below.

Output 3.1: Management plans designed and launched for 4 areas, with identification of site-specific measures for prevention, ensure eradication, control and management of IAS

51. This output focuses on delivering management plans specific to IAS in four different pilot sites. The main pillars of the actions will be (a) data collection for management planning process; (b) formation and mobilizing of national Technical Working Group and local committees; (c) preparing and adopting the management plans; (d) implementation of the plans; and (e) establishing a monitoring system for effective measurement of the implementation process. The activities under this are:

1. Data collection for completion of project site marine IAS management plans
2. Formation of national Technical Working Group for development of project site marine IAS management plans
3. Formation of the Local Committee for development of project site marine IAS management plans, including gender balance or gender mainstreaming representation
4. Preparation of project site marine IAS draft management plans with support/involvement by the Local Committee, including incorporation of gender perspectives in the management plan as relevant
5. Revision of the draft plan by the national Technical Working Group, and adoption by national Technical Working Group and Local Committee
6. Government (Ministry) adoption and implementation of the local IAS management plans for İğneada, Marmara Islands - Kapıdağ, Ayvalık Islands Nature Park, and Gulf of Iskenderun including formation of Local Marine IAS Taskforces
7. Monitoring implementation of IAS management plans

52. The project will investigate the current management plans regarding the existing protected areas in İğneada, Ayvalık Islands and Gulf of Iskenderun. The marine ecosystems are partially covered in Ayvalık Islands management plan and Gulf of Iskenderun however not in İğneada. Marmara Islands don't have any protection status, and hence, a management plan. The project team and the experts will check the existing management plans in terms of IAS inclusion as well as general implementation progress of the plans. These findings will be key inputs for the management planning for IAS. The project will ensure inclusion of site and species-specific IAS priorities listed in the national strategy and action plan in the management plans. Later, a national Technical Working Group and local committees will be established in order to prepare and support management planning. The national committee will be established in close collaboration of Technical Advisory Board and it will be overseen by the Board. The ToRs and structures of these committees will be defined during the project period. The committees will guide and support the management planning, and later, support the implementation process. Upon drafting and initial revisions of the management plans, government adoption will be searched, and prior to adoption the plans will be put into operation. If necessary, local regulations and legislations will be revisited/ revised in relation to the management plan implementations. Local taskforces of each site will be the main coordination/ implementation units of the plans. Finally, the project will define and put into operation a monitoring system.

Output 3.2: Measures to detect, control spread of IAS at the target sites in collaboration with local communities, and targeted restoration of ecosystems degraded as a result of IAS.

53. Output 3.2 is designed to control spread of IAS in the 4 target sites and restoration of marine ecosystems degraded as a result of IAS. The activities of this output are:

1. Igneada: Implementation of marine IAS management and control measures defined in site management plan (3.1.7), in cooperation with local communities
2. Marmara Islands: Implementation of marine IAS management and control measures defined in site management plan (3.1.8), in cooperation with local communities
3. Ayvalik Islands: Implementation of marine IAS management and control measures defined in site management plan (3.1.9), in cooperation with local communities
4. Hatay-Samandag / Gulf of Iskenderun: Implementation of marine IAS management and control measures defined in site management plan (3.1.10), in cooperation with local communities

54. These activities will support effective implementation of key management plan activities with the project budget. These activities will generate the knowledge and experiences needed in the long term. Although the detailed activities will be defined under the management plans, key activities foreseen under this output can include: removal of *Rapana venosa* in Igneada region; removal of *Rapana venosa* and *Asterias rubens* in Marmara Islands; waste water management and establishment of mooring buoys in Ayvalik Islands; and removal of water hyacinth debris, control of *Ropilema nomadica* and lionfish control in Hatay Samandağ region. Activities will be completed incorporating gender equality perspectives as relevant.

55. The activities under this output represent the testing and piloting of a variety of IAS management and control strategies to be applied in the development of IAS management frameworks throughout Turkey. There is virtually no experience developing and implementing IAS management frameworks in Turkey. Once the IAS management frameworks have been developed at the four pilot sites within the project (within the broader umbrella of the National Strategy and Action Plan on IAS in marine and coastal ecosystems to be developed under Output 1.6), the testing of the control mechanisms will be closely monitored and analyzed for effectiveness and cost-efficiency. The results will be well-documented and published in knowledge products. It is expected that many of the “management and control” activities implemented under Output 3.2 will actually fall more into the category of strengthening resilience and health of species and ecosystems threatened by IAS (i.e. not simple IAS removal activities). For example, in the Igneada site, one likely activity will be to mitigate the hypereutrophic inputs to the marine ecosystem from coastal sources. Therefore, overall, the activities under Output 3.2 are critical for the further development and up-scaling of IAS management frameworks in Turkey.

Output 3.3: Support for the recovery of native species disturbed by IAS at selected sites

56. This activity will carry out actions to support recovery of native species affected by IAS through site and species specific actions that are given below in the activities:

1. Detailed specification of damaged *Mytilus galloprovincialis* and *Mytilaster lineatus* beds in Igneada and Marmara Islands; data collection and feasibility assessment of re-population
2. Eradication of *Rapana venosa* and *Asterias rubens* in the selected sites
3. Long-term control of *Rapana venosa* and *Asterias rubens*
4. Feasibility assessment of other sites in Turkey

57. The project will finance an underwater survey in Igneada region and Marmara Islands to reveal the damaged *Mytilid* beds. Moreover, an eradication program will be planned and implemented for *Rapana venosa* and *Asterias rubens* in selected sites including defining a long-term control program that will be defined in the relevant management plans. Finally, project will facilitate undertaking a comprehensive study in Turkish coastal zone beyond the project pilot areas for the assessment of IAS.

58. The activities under Output 3.2, above, Output 3.3 apply a variety of strategies for strengthening and supporting native biodiversity, including the globally threatened species found in the four pilot sites. There are two overarching strategies: First is the control and removal of the most significant IAS that have the greatest negative impacts on native biota, and second is increasing the resilience of native biota to IAS invasions by improving marine ecosystem health. Based on the nature of marine ecosystem IAS invasions, the complete eradication of IAS in the pilot sites is an unlikely possibility, and is not likely a cost-effective strategy considering the potential for re-

introductions. However, if the most threatening IAS populations are controlled to an extent in certain zones, then native species can recover and maintain healthy populations. In the Igneada and Marmara Islands pilot sites the most critical IAS are the *Rapana venosa* and *Asterias rubens*, which most significantly affect native mollusks – particularly *Mytilus galloprovincialis* and *Mytilaster lineatus*. These native species are critical cornerstone species for healthy coastal marine ecosystems, including all associated species. Mussels play a key role in marine environments and are considered to be "ecosystem engineers" because they modify marine habitats, making them more suitable for themselves and other organisms. Mussel beds play several important roles within marine ecosystems. Mussels are filter feeders, and they draw in large amounts of seawater to trap phytoplankton, their food source. As the mussels filter the water, they also remove sediments and other substances that make the water murky. Mussel beds also provide a habitat for other sea creatures. They act as nurseries for juvenile fish to shelter and grow and are home to invertebrates and other types of marine life. Snapper, crabs and other species also eat mussels.

ii. Partnerships:

59. The Ministry of Forestry and Water Affairs (MoFWA) is the main beneficiary of the project. The General Directorate of Nature Conservation and National Parks Unit of Marine Protected Areas is the organization responsible from management of IAS in Turkey. The Unit will coordinate project activities with other key partners of the project. The Unit is currently developing a project proposal focusing on IAS in terrestrial and inland regions for European Commission Instrument for Pre-Accession (IPA) grant funding. The project aims to identify threats related to IAS, and eradication of the targeted IAS species. The project will focus on six key alien species, and it is expected to start in 2018 if accepted by the EU. Moreover, currently the General Directorate of Nature Conservation and National Parks is leading another GEF-funded project in collaboration with the UN Food and Agriculture Organization (FAO) in Turkey, "Conservation and Sustainable Management of Turkey's Steppe Ecosystems" (GEF ID# 5657). This project aims to conserve steppe ecosystems and achieve sustainable use of steppe natural resources. Although the topics of both projects are different, the two GEF supported projects under the same General Directorate will be encouraged to communicate with each other and share experiences towards achievement of their results.

60. The Ministry of Food Agriculture and Livestock (MFAL) is one of the key partners to this project. MFAL and its provincial directorates will play a key role in implementation as fishing circular and aquaculture related subjects are within the authority of this Ministry. The Project Implementation Unit will closely work with and inform the General Directorate of Fisheries and Aquaculture throughout the project course. The annual fishery circular of the ministry and general permissions / restrictions regulated by the Ministry are key factors that will determine several project issues. MFAL will also be represented on the Project Technical Advisory Group.

61. The Ministry of Transportation, Maritime Affairs and Communication (MTMAC) is another key partner in terms of maritime regulations and management and control of ballast water in the shipping sector. The Ministry is the focal point for the Ballast Water Convention in Turkey. The Project Management Implementation Unit will coordinate project activities regarding ballast water regulations as well as capacity building in customs and shipping sectors. MTMAC will also be represented on the Project Technical Advisory Group.

62. UNDP Turkey, as the project executing partner, will coordinate all project activities with the key partners. UNDP with its long lasting experience in GEF project management will benefit from its experience with previous GEF projects. Specifically, the IAS project will be leveraged by the experience created during the implementation of the previous GEF project "Strengthening the System of Marine and Coastal Protected Areas of Turkey" (GEF ID# 3550). In particular, the experiences, infrastructures and systems created for biodiversity monitoring data and site-specific knowledge of the project will be used.

iii. Stakeholder Engagement:

63. The involvement of key stakeholders is a critical aspect of the project, for stakeholders at both the national and local levels. Table 4 below summarizes the key project stakeholders. The full Stakeholder Engagement Plan is included as Annex H.2 of this Prodoc. The project is applying multiple strategies and mechanisms to ensure stakeholder engagement. First and foremost is the Project Board (as discussed further in Section VIII on Management Arrangements), involving MoFWA as the primary beneficiary, and UNDP as the supplier. UNDP and MoFWA have a

long history of collaboration and successful project completion, including multiple previous GEF-funded projects. In addition, the project will establish a Technical Advisory Group (also further described in Section VIII on Management Arrangements), which will include the other primary stakeholders and beneficiaries. This body will meet regularly to provide input and feedback on planned project activities. In addition to the key national governmental institutions, membership in the Technical Advisory Group will also include representatives from each of the project field sites, and civil society representation. If this body does not automatically have sufficient gender balance, a gender expert will be included in the body to ensure gender-mainstreaming aspects are addressed and integrated throughout all aspects of the project.

64. There are multiple stakeholder types at the local level in the planned project field sites. These include representatives of the artisanal fishing industry, the tourism sector, port authorities, and local coastal communities in general. The project will establish marine IAS working groups in each of the demonstration sites, which will include local government representatives, fishers' groups, the tourism sector, and other site-specific key stakeholders (e.g. representatives of the protected area in Ayvalik Islands). In addition, the project has multiple education and awareness activities planned that will engage local communities and stakeholders in addressing management and control of marine IAS. Formal and informal partnerships will be developed and established with gender balance, and gender mainstreaming approaches in mind.

65. Note that there are no indigenous, minority, or categorically underprivileged stakeholder groups in the project focus areas. The project will highlight at various points the mechanisms and channels of communication that stakeholders may employ if they have any grievances related to the social and environmental impacts of the project. For example, this point will be indicated during the project inception workshop, and through the project education and awareness activities.

Table 4 Turkey Marine IAS Project Key Stakeholders

Project Stakeholder	Relationship With The Project
Government Organizations	
Ministry of Forestry and Water Affairs (MFWA)	<p>MFWA is the responsible body for conservation of biodiversity and nature in Turkey as well as management and conservation of water and forest resources. The Ministry has six general directorates: State Hydraulic Works, Nature Conservation and National Parks (GDNCNP), Forestry, Water Management, Combating Desertification and Erosion, State Meteorological Service.</p> <p>GDNCNP is responsible for the declaration and management of protected areas, ecological construction, preparing management plans for those sites, conservation of species of special concern and critical habitats, preparing development strategy, planning and drafting relevant laws and regulations, and supervising the implementation of the organization to carry out investigation, monitoring of wildlife and ecosystems.</p> <p>MFWA will support for the design, implementation, financing and mainstreaming of the IAS regulations, and policies as envisaged under Component 1, but it will also oversee the implementation of the whole project. It will also ensure coordination among all project stakeholders, ensure impact and progress monitoring and information dissemination and national replication/scaling up of project lessons.</p> <p>MFWA and GDNCNP will be natural members of the project board.</p>
Ministry of Food, Agriculture and Livestock (MFAL)	<p>MFAL is the Ministry in Turkey that is responsible from management of agricultural resources and pastures, fishing waters and conservation of agricultural biodiversity as well as achieving agricultural sustainable development. The Ministry is the body for adopting laws and regulations regarding plant and animal epidemic prevention and quarantine, signing intergovernmental agreements, agreements to develop standards, organization, supervision of domestic animals and plants epidemic prevention and quarantine work, publishing the epidemic and responsible for the organization of extinguishing.</p>

Project Stakeholder	Relationship With The Project
	<p>The General Directorate of Fisheries and Aquaculture (GDFA) is the key department of the Ministry that is responsible from sustainable management and conservation of marine and inland water fisheries and aquaculture in Turkey.</p> <p>For the IAS project, MFAL will be responsible for upscaling of project results nationwide within their jurisdiction. Collaboration with MFAL is crucial for Marine IAS management activities. It will be involved in component 1 and 2 directly and will provide support for the other components at the technical level. Moreover, MFAL will be a member of the Project Board.</p>
Ministry of Transport, Maritime Affairs and Communications (MTMAC)	<p>MTMAC is responsible for organizing, coordinating and guiding of shipping activities in Turkey. MTMAC has the responsibility in managing the shipping routes and management of ballast water and hence the Ministry will be the key partner to identify the alternative solutions and strategy options for ballast water and IAS. The Ministry is the focal point for the Ballast Water Convention in Turkey and is responsible from coordination of Turkish organizations for the Convention related subjects.</p> <p>The Ministry will provide technical support for components 1 and 2 and will be the beneficiary of the dedicated capacity building activities on handling ballast water. MTMAC will be a member of the Project Board. General Directorate of Maritime and Inland Waters Regulation will be the focal point of the Ministry for the IAS Project.</p>
Ministry of Environment and Urbanism (MEU)	MEU is the Ministry that is responsible from protection and management of environment, organization of public work and urban planning. Ministry is the focal point of UNFCCC in Turkey. In relation to the project, the Ministry is responsible for protection of marine environment in terms of pollution. The General Directorate of Environmental Management of the Ministry will support the design and implementation of the quarantine measures and IAS protocols. It will be one of the key Government partners for the implementation of Components 1 and 2.
Ministry of Health (MoH)	MoH is responsible for coordinating human health support services. Specifically, MoH has the responsibility in first aid and cure patients injured or poisoned by Marine Invasive Alien Species. Education and awareness raising activities for staff of the MoH along Turkish coastline will be held on rapid treatment of IAS poisoned/injured people. They will be also involved to ensure that the volunteer ranger program (Component 3) is effectively and securely implemented.
Ministry of Culture and Tourism (MCT)	MCT is responsible for organizing, coordinating and guiding of tourism activities. MCT has the responsibility in managing the tourism activities such as diving, swimming, recreational etc. Information dissemination for tourists and also to minimize/manage the negative impacts of mass tourism to vulnerable ecosystems. The Ministry will be providing technical inputs and implementation support for the knowledge building and advocacy campaign as it is indicated in component 2.
Ministry of Interior Turkish Coast Guard Command (TURCG)	TURCG conducts its tasks in accordance with Coast Guard Command Organization, Duties and Authorities Code/ Regulation cover a wide sphere of activity ranging from saving human life at sea, search and rescue, maritime security, maritime safety, protecting living marine resources and preventing marine environmental pollution. Command conducts its missions assigned with related over 38 acts and regulations issued by 14 Ministries on 24/7 basis. TURCG is in charge/ authorized and responsible within Turkish maritime jurisdiction area that are under sovereignty and control in accordance with national and international laws and in international waters.
Ministry of Development (MD)	Ministry of Development plans and guides Turkey's development sustainable process and focuses on the coordination of policies and strategy development, will support the project to monitor the progress and disseminating the relevant information. The Ministry will be also providing the guidance to ensure that the developed strategies and action plans are in line with the national priorities. MD will be also part of the Project Board.
Regional-Government Agencies	
Regional Directorates of Forestry and Water Affairs (RDoM - MFWA)	RDoM is responsible for the conservation and sustainable use of natural resources and protected areas such as natural parks, nature parks, nature conservation areas and wildlife resources at local scale. The RDoM will be a member of the project implementation unit and support monitoring of objective achievement and information sharing. RDoM will lead in foundation and operation of local committees and task forces regarding the management planning and related

Project Stakeholder	Relationship With The Project
	implementations. RDoM will ensure effective participation of local communities and NGOs as well as private sector to the local activities of the project.
Province Directorates of Ministry of Food, Agriculture and Livestock (Kırklareli, Balıkesir and Hatay)	Province directorates of MFAL are the local units of the Ministry that are responsible from undertaking the local duties and keeping the direct relations with farmers, rangers and fishers. These units will be natural members of local committees and task forces that will be established during the project course.
Turkish Customs	The Turkish Customs are related to IAS introduction, such as hobby aquarium and aquaculture sectors. Customs are generally the first control point for introduction of alien species and hence their participation to the project is key. The project will pay attention to capacity building elements for customs staff for combating IAS.
Gendarmes	The Gendarmes is the responsible body to enforce national and international laws and to ensure the safety of life and property within its jurisdiction. It also has nature conservation teams to protect biodiversity, and thus it is an important beneficiary of the capacity building activities and trainings under the project.
NGOs and Local Communities	
Underwater Research Society – Monk Seal Research Group (SAD-AFAG)	SAD-AFAG is one of the oldest NGOs (founded in 1987) working for the conservation of marine and coastal ecosystems with a specific focus to Monk Seal. SAD-AFAG works to protect fish stocks besides monk seal habitat conservation activities. Organization also works closely with local public authorities to development necessary regulations and effective implementation of existing legislations. (www.sadafag.org)
Mediterranean Conservation Society	The Society aims to protect Mediterranean ecosystem and support communities for sustainable living areas. Main working areas of the organization are large-scale fisheries, aquaculture, amateur fishing, sustainable fishing, marine protected areas and invasive alien species. Society's experience on IAS will be an asset for the project. (akdenizkoruma.org.tr)
Turkish Marine Research Foundation	Founded in 1997, TUDAV aims to undertake research in marine sciences and protect marine life in Turkey. TUDAV's experience in marine research and capacity building activities in the coastal regions can be an asset for the project. (tudav.org)
WWF-Türkiye	WWF in Turkey aims to prevent the degradation of Turkey's natural environment and to build a future in which humans live in harmony with nature. The organization has a long history of working in marine and coastal areas and key marine species including sea turtles and dusky grouper (<i>Epinephelus marginatus</i>). (wwf.org.tr)
Local communities at the pilot sites	Following initial communications during the project development phase, marine resource-users from communities within the selected pilot project areas will be further engaged to carry out field-based IAS management and control activities. Local communications will also be targeted as part of the education and awareness activities to increase understanding about IAS issues. Local resource users will be represented in the local committees that will be established for the preparation and effective implementation of management plans. Local communities will be represented by individuals designated by village headmen (muhtar) and they will be engaged actively in the project activities. The village representatives appointed by headmen will be the main counterparts in linking the project objectives and activities to the needs of the people in the project area. They will be involved mainly in component 3, but also be consulted for fiscal incentive and the policies developed under Component 1.
Private Sector	
Fisheries, aquaculture companies and hobby aquarium sector	Under Component 3, the project will work with fishers, fish producers and aquarists in the region.
Tourism Agencies	The outreach activities of the project will seek cooperation with tourism agencies in the region involved in diving, yachting, and sightseeing.
Marine transport sector	Under Component 2, the project will work with marine transport sector employees.

iv. Mainstreaming Gender:

66. The project development phase included a gender analysis (see Annex L), and direct coordination and cooperation with the UNDP Turkey Country Office gender mainstreaming specialist. The project was designed in accordance with the UNDP Gender Equality Strategy 2014-2017. The UNDP Turkey Country Office has developed a Gender Equality Strategy for 2016-2020; this strategy has been reviewed during the project development process, and the project has been designed with this strategy in mind. The project was developed following the steps of the UNDP Turkey Country Office Gender Screening Guidelines for Project Development and Implementation (also see Annex L). The project is addressing and incorporating gender mainstreaming in all relevant aspects. Key aspects of the gender mainstreaming approach include:

- The full suite of project staff and technical consultants will have gender balance to the extent possible and feasible, in accordance with consideration of the technical qualifications of all candidates for any position, and in accordance with UNDP procurement and human resources policies;
- The Project Board will request a review of the draft annual project workplan by the UNDP Turkey Country Office gender mainstreaming expert prior to the Project Board meeting;
- The Project Technical Advisory Group will either have gender-balanced membership, or will include a special gender mainstreaming representative, to ensure that all aspects of project activities incorporate gender mainstreaming approaches;
- The marine IAS working groups established in each of the project demonstration sites will also either have gender-balanced representation or have a specific gender mainstreaming representative, and the site-based management plans will include a gender mainstreaming perspective, as relevant;
- The project activities related to fiscal incentives for management and control of marine IAS (Output 1.4) will be designed to ensure gender mainstreaming aspects, as appropriate (for example, financial incentive mechanisms may be designed to particularly consider the role of women in the artisanal fishing sector);
- Project activities such as workshops and trainings will ensure gender balance to the extent feasible;
- Government regulations, policies, or legislation developed under the project will include a gender mainstreaming perspective, as relevant;
- Project knowledge products and case studies will include a gender perspective, as relevant;
- The project Strategic Results Framework includes gender-disaggregated indicators, as relevant, and includes a specific indicator on the level of implementation of gender mainstreaming during the project;
- The project activities targeting management and control of marine IAS (Component 3) will ensure consideration of gender mainstreaming aspects, as they will be reviewed and assessed at the national and site levels through the Project Board, National Technical Advisory Group, and local working groups, which will all have gender mainstreaming inputs.

v. South-South and Triangular Cooperation (SSTrC):

67. There are two main project strategies that will target South-South cooperation. First, the project team will actively research, review, and incorporate best practices for management and control of marine IAS from other developing countries, particularly in relation to contexts relevant for Turkey. This will likely include integration of best practices from other developing countries. For example, the project will analyze and consider the applicability in Turkey of various practices for managing lionfish in the Caribbean. Second, the project plans to carry out some site-based study-tours related to marine IAS management, and the project will prioritize visits to developing countries that are successfully implementing models of management and control of marine IAS. In addition, the project plans to organize a number of knowledge-sharing activities, such as scientific conferences and events. The project will ensure that experts from developing countries with good marine IAS management and control practices are invited to participate in these events.

68. In addition, Turkey is a relatively more developed country than many Global South countries.⁷ As a result of this marine IAS project Turkey may gain valuable knowledge and experience that could be relevant for other

⁷ In the 2016 assessment Turkey ranked 71st globally, falling in the “high human development” category.

Global South countries. In this regard, Turkey will, via this project, seek to share and disseminate knowledge and experience on the management and control of marine IAS species. This will be achieved by ensuring experts from other relevant Global South countries are invited to international events organized by the project. Any key reports or research papers will also be translated into English for wider international dissemination.

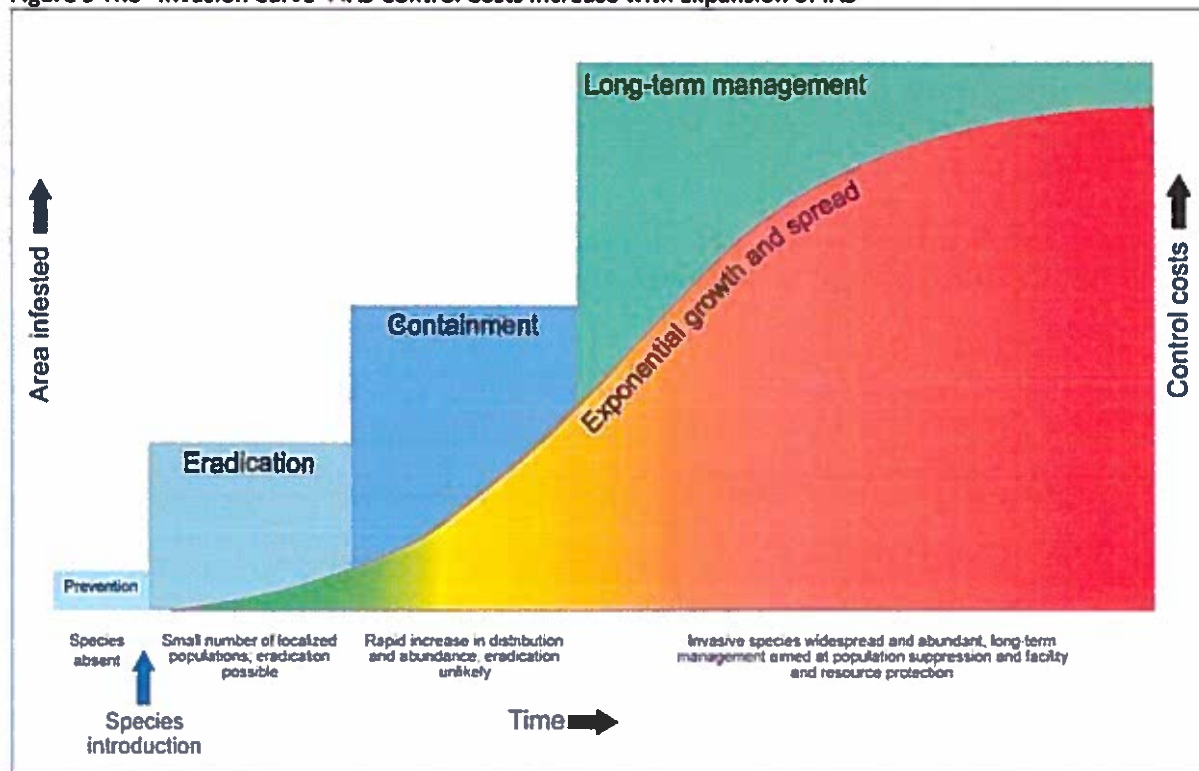
V. FEASIBILITY

i. Cost Efficiency and Effectiveness:

69. The project has been carefully and thoughtfully designed to ensure cost-effectiveness through a variety of strategies and approaches. First of all, in terms of the management arrangements, UNDP and MoFWA have established a history of successful collaboration and partnership, including working jointly on past GEF-funded projects that were successfully implemented. The most notable example is the previous marine PAs project (GEF ID# 3550), which received a rating of “satisfactory” for efficiency in its terminal evaluation. This marine IAS project will also be implemented under standard UNDP and Government of Turkey financial management procedures and requirements, which will ensure cost-effectiveness of aspects such as procurement. Project management will include structured and consistent project workplanning and financial planning, with annual budgeted workplans approved by the Project Board. In addition, project management expenditures are planned at 5% of the project activities budget (in accordance with GEF requirements). Co-financing is also expected in an amount nearly four times the GEF financing.

70. The project’s strategy has been reviewed during the project development phase and has been identified as being the most cost-effective (least cost) method to achieving the planned project objective. The strategy relies on multiple approaches to ensure efficiency. The project strategy recognizes that prevention and reducing risks of new introductions is a much more cost-effective approach with respect to IAS than trying to manage, control, and eradicate IAS after an introduction has occurred – particularly in the marine environment. In fact, complete eradication is extremely difficult (and costly), if not impossible, once the introduction of an IAS has occurred in the marine environment, as shown in Figure 5.

Figure 5 The “Invasion Curve”: IAS Control Costs Increase with Expansion of IAS



Sources: National Invasive Species Council; U.S. Department of Agriculture, National Park Service, U.S. Fish and Wildlife Service; Rodgers, L., South Florida Water Management District; Department of Primary Industries, State of Victoria, Australia; and GAO | GAO-16-49

71. Experience in other regions has shown that full ongoing control of IAS can be extremely expensive. For example, in southern California, measures to eradicate colonies of the invasive “killer algae” *Caulerpa taxifolia* using chemical controls (chlorine injection under plastic) cost approximately \$5 million USD from 2000-2004 – in just one limited location. Therefore a significant focus of the project is the implementation of the Ballast Water Convention, to limit and reduce the rate of new IAS introductions to Turkey’s marine ecosystems (Outputs 1.1, 1.5, 1.6 and 2.3 support this). The project also plans a significant effort on education and awareness raising about IAS amongst stakeholders in coastal communities (Output 2.4) to limit the potential for new introductions (intentional or unintentional) from sectors such as tourism (e.g. diving) and the aquarium industry.

72. Management and control of marine IAS is not a well-developed field in Turkey, and therefore the project includes a focus on testing and piloting a variety of techniques and management approaches (Component 3 and Output 1.4). This will be done at a minimum number of field sites that can provide useful experience and information to be applicable throughout Turkey. Four field sites have been selected: one in each of Turkey’s four major bounding seas, and two focusing on island ecosystems and two focusing on coastal ecosystems. This diverse but limited number of pilot sites will allow the project to make a limited investment in testing a range of IAS management and control techniques and approaches, which can then be scaled up more widely in Turkey.

73. The project includes specific knowledge management activities (Output 2.2) that will allow the project experience to be well-documented, disseminated, and replicated and scaled up. The project plans call for the establishment of an open access database on marine IAS management, which will be used to support implementation at the national level of regulations and policies relating to marine IAS management and control. Aggregating and widely disseminating the lessons and good practices identified through the project experience will be a cost-effective approach to scaling-up marine IAS management in Turkey.

74. Finally, the project strategy calls for a well-developed partnership approach to efficiently leverage and distribute the costs of effective marine IAS management in Turkey. Development partners (e.g. the GEF) and the Government of Turkey cannot afford, in the long-term, to fully finance all costs associated with the management of marine IAS. Therefore the project will work closely with the private sector in a variety of ways to effectively address

different aspects of marine IAS management. For example, the shipping sector will be investing significant amounts in developing and implementing the engineering measures necessary to adapt existing ships to meet ballast water control standards. The project will also work with the artisanal fishing sector, and the tourism sector, to support monitoring, management, and control measures for marine IAS in field sites. For example, the project will educate and train fishers in the demonstration sites to effectively monitor and report the status of marine IAS in their region, and to report any newly present species captured in fishing gear. The diving tourism sector will also be engaged to monitor and report on the status of marine IAS, as the tourism sector makes many more underwater observations than would be feasible for scientists.

ii. Risk Management:

75. The identified project risks are described, along with mitigation measures, in Annex H.1. As per standard UNDP requirements, the Project Technical Coordinator will monitor risks quarterly and report on the status of risks to the UNDP Country Office. The UNDP Country Office will record progress in the UNDP ATLAS risk log. Risks will be reported as critical when the impact and probability are high (i.e. when impact is rated as 5, and when impact is rated as 4 and probability is rated at 3 or higher). Management responses to critical risks will also be reported to the GEF in the annual PIR.

iii. Social and Environmental Safeguards:

76. The project has received an overall “low risk” rating in the UNDP Social and Environmental Screening Protocol (SESP) (Annex F). The project is only relevant to three of the risk standards, and the risk for each is assessed as “low”; explanations related to each of the identified standards are provided in Table 5 below. Any environmental or social grievances raised may be reported to any of the following three channels, in person, by phone, by email, or by regular mail: 1.) Directly to the MoFWA (either to central administration, or to local branch office in any region); 2.) Directly to UNDP through the project team, or directly to UNDP Turkey Country Office senior administration; 3.) To local government representatives, who will then raise the issue with UNDP and MoFWA. The procedures for lodging grievances will be emphasized to all stakeholders during the project inception workshop. Any grievances will be handled in accordance with UNDP and Government of Turkey procedures. Any environmental or social grievances will be reported to the GEF in the annual PIR.

Table 5 UNDP SESP Risk Standards Identified as Relevant for Turkey Marine IAS Project

Standard	Explanation
<i>Standard 1.2 Are any Project activities proposed within or adjacent to critical habitats and/or environmentally sensitive areas, including legally protected areas (e.g. nature reserve, national park), areas proposed for protection, or recognized as such by authoritative sources and/or indigenous peoples or local communities?</i>	<p>One of the four proposed project demonstration sites in Ayvalik Islands includes the territory of the Ayvalik Islands Nature Park. This is an IUCN class V protected area, covering 19,624 hectares, including 13,969 hectares of marine habitat and approximately 112 hectares of coastal habitat. The goal of the project activities will be to improve the condition of biodiversity at the site through the control of notable IAS, and through improvement to the general ecosystem conditions in the protected area in order to strengthen native biota's resistance to alien species invasions. No negative impacts to critical habitats or environmentally sensitive areas are foreseen as a result of project activities (in fact, the contrary is expected).</p> <p>Another proposed project demonstration site, in Igneada, is immediately adjacent to the terrestrial Igneada Floodplain Forest Natural Park (IUCN class V protected area). However, considering that the proposed project activities are targeted for the marine ecosystem, no impact is foreseen on the critical habitats and environmentally sensitive areas of the Igneada protected area. The project may work to address some land-based threats (e.g. water pollution / runoff) to the marine ecosystem in order to strengthen the natural resilience of the native biota to alien species invasions, but if the project is successful in these efforts it is only expected that there would be positive impacts on the neighboring protected area.</p> <p>A third proposed project demonstration site includes the beach and coastal area of Hatay-Samandag. This area does not have formal protected status, but there are some protective regulations in place that are intended to conserve the beach as a nesting site for endangered sea turtles. Again, in this instance, all project activities targeted at addressing IAS are only expected</p>

	to improve the condition of critical habitats and environmentally sensitive areas of Hatay-Samandag.
<i>Standard 1.7 Does the Project involve the production and/or harvesting of fish populations or other aquatic species?</i>	In each of the four demonstration sites (as well as at the national level, more broadly) the project aims to demonstrate IAS control measures in the marine environment. All activities in this respect are intended to benefit the condition of populations of native marine species. The project activities will naturally involve the likely reduction of populations of IAS species in the targeted areas. For example, in Hatay-Samandag, the project will work to control invasive lionfish (<i>Pterois</i> spp.) and balloon fish. In Igneada and Marmara islands the project will work to control invasive veined whelk (<i>Rapana venosa</i>). In Marmara the project will work to control invasive north Atlantic sea stars (<i>Asterias rubens</i>). The control measures for IAS will not involve the “production” or “harvesting” of these species for economic use, with a few possible minor exceptions. The veined whelk is considered an economically valuable species (although it is an IAS species), and therefore the veined whelk individuals removed from the ecosystem may be sold for commercial purposes by the local fishers who harvest them based on the incentives proposed by the project. In addition, the lionfish can be consumed by people, although a market for it does not currently exist in Turkey; therefore the project may work to incentive the harvesting and commercial sale of this species.
<i>Standard 2.2 Would the potential outcomes of the Project be sensitive or vulnerable to potential impacts of climate change?</i>	Although climate change is a certainty, its possible effect on the biodiversity (native, and alien) of Turkey’s marine ecosystems is not clear. In any case, climate change would not be expected to affect the project’s <u>outcomes</u> , it would only have possible effects at the <u>impact</u> level. In this regard however, the project results would be expected to <u>improve</u> the potential climate resiliency of Turkey’s native marine biodiversity, and potentially reduce the resiliency of some IAS, due to control measures.

iv. Sustainability and Scaling Up:

77. The critical aspect of sustainability for any project is the sustainability of the project’s results, not of the project itself. Sustainability is dependent on many factors, and is a dynamic state that can never be guaranteed in perpetuity, as the likelihood of sustainability at any given time can increase or decrease depending on individual events or changing conditions over time. Experience has shown in UNDP-GEF projects that sustainability is critically dependent on stakeholder ownership of the process and project results. Throughout implementation the project will continue to work closely with all stakeholders to ensure the strong engagement and ownership by stakeholders is carried on past the life of the project. The GEF has identified four key elements to sustainability, which are discussed in further detail below.

78. Financial Sustainability: There are two main activities of the project for which financial sustainability is a consideration. First is the project’s approach of establishing local marine IAS working groups in each of the project pilot sites. Some investment will be required during the project to initiate these groups, and operationalize stakeholder communication and coordination procedures. However, once the project is completed, little to no additional investment will be required to continue the operations of these groups. Their main function will be local regular meetings and communication amongst all stakeholders relevant for the management and control of marine IAS in their region. If these groups prove effective and worthwhile it is anticipated that the local stakeholders involved will voluntarily continue their existence, as little or no additional financing would be required to do so. To help ensure their sustainability, the project will identify a working group member that is a local partner organization (for example, an NGO, a private sector partner, or a local government institution) that will assume the responsibility at the end of the project to serve as the working group focal point in charge of continuing to organize working meetings and maintain lines of communication between all working group members. The financial sustainability of the local working groups will also support the financial sustainability of the implementation of the site-based management plans (Output 3.1) under Output 3.2 and Output 3.3. The financial sustainability of the activities will be dependent on additional government financing for IAS, which is one of the key project targets.

79. The second item is the fiscal incentive programs to be piloted under the project. These programs are not designed to be self-sustaining – their effectiveness and utility must be assessed and proven before they should be sustained; no such programs currently exist in Turkey. The effectiveness of the fiscal incentive programs will be carefully assessed; if the programs are deemed a valuable and cost-effective approach to managing and controlling marine IAS then it is anticipated that the central government will allocate budget resources once the project is

complete to continue these programs. Increasing the government budget allocation to address marine IAS is one of the key results indicators of the project. The feasibility of financial sustainability in this regard is closely linked with the project's success in achieving the target of increasing government investment in IAS management and control to \$500,000 USD/year, as codified by indicator #4 in the project Results Framework. The fiscal incentive mechanisms are budgeted during project implementation at \$10,000 - \$14,000 per each for each pilot program. The investment required is small enough that it should be easy for the increased government expenditure on IAS to further finance the programs.

80. To avoid creating expectations that people will only remove IAS if they are paid, the project will also focus on behavior change related to local populations, which will be targeted as part of Output 2.4 related to education and awareness raising. The project will work with local stakeholders to increase the awareness and understanding of IAS presence and threats, to catalyze behaviors that support IAS management and control in addition to the fiscal incentive mechanisms, which are only one part of an overall strategy. For example, the project will carry out education and awareness activities with tourists and dive boat operators such that spear fishermen will be encouraged to capture targeted IAS species. In addition, fishermen will be encouraged to report any sightings or by-catch of IAS species, in order to help inform management and control strategies. In addition, one component of the fiscal incentive mechanisms does target the development of value chains, and other market mechanisms, in situations where this is relevant and feasible. For example, in the project site targeting lionfish, the project may develop a local cooking contest among tourist restaurants for lionfish recipes. The project may also develop fishing tournaments or contests where financial awards will be made to participants who catch the most number or kilograms of the targeted species.

81. **Institutional Sustainability:** The main institutional sustainability mechanism will be via the MFWA as the key national executing partner. Based on the project experiences MFWA will disseminate and implement the good practices identified for wider application throughout all territories under MFWA's mandate. Furthermore, the project will establish the national coordination mechanism on marine IAS, involving all relevant stakeholders. This body will be a key node for dissemination of lessons learned and good practices. In addition, the project includes a focus on knowledge management to disseminate lessons learned to stakeholders beyond MFWA and other stakeholders represented on the national coordination mechanism.

82. **Socio-economic Sustainability:** Socio-economic sustainability for the marine IAS project relies on the effective engagement of local marine resource users. In addition, this aspect of sustainability is dependent on the effectiveness of the project's education and awareness raising activities. If the project is successful at increasing the awareness and understanding of local government officials then there will be sufficient local stakeholder ownership to sustain marine IAS management and control efforts at the local level.

83. **Environmental Sustainability:** Environmental sustainability in the context of this marine IAS project means that the positive impacts achieved by the project in terms of improving the condition of the native biota and ecosystems will be sustained once the project finishes. The project activities are designed to ensure this is achieved, including the implementation of IAS risk management systems. This includes control and monitoring of ballast water discharges (to minimize new IAS introductions), and centralized information systems to track the presence and abundance of marine IAS in Turkey's coastal ecosystems.

84. **Replication and up-scaling** of good practices developed by the project will be achieved through the direct replication of selected project elements and practices and methods, as well as the scaling up of experiences. The following activities have preliminarily been identified as suitable for replication and/or scaling up:

- Establishment of local marine IAS control working groups at targeted high priority sites;
- Development of local site-based marine IAS management plans identifying strategies and priority actions to minimize the negative impacts of marine IAS at targeted high priority sites;
- Implementation of management and control measures for marine IAS (e.g. establishment of mooring buoys in sensitive seagrass habitats; application of new technologies such as robots for targeted control of marine IAS) that are proven to be successful and cost-effective at targeted high priority sites;
- Establishment of fiscal incentive mechanisms for targeted marine IAS;
- Use of eDNA testing to identify the presence and distribution of high priority marine IAS;

85. Between the project's final PIR and the initiation of the project's terminal evaluation, the project team will work with all project stakeholders to develop a brief exit strategy document that clearly and specifically indicates

how key project results will be sustained in terms of roles and responsibilities following project completion. This will include, for example, clearly identifying the institutional “owner” of project outputs such as the marine IAS database.

VI. PROJECT RESULTS FRAMEWORK

This project will contribute to achieving the following Country Program Outcome as defined in CPAP or CPD:	UN Development Cooperation Strategy 2016-2020: Outcome 1.3: By 2020, improved implementation of more effective policies and practices for all men and women on sustainable environment, climate change, biodiversity by national local authorities and stakeholders, including resilience of the system/communities to disasters	
	UN Country Programme Document 2016-2020 Results and Resources Framework Indicators: Outcome level indicator: 1.3.4 Number of hectares of landscapes covered by integrated natural resource management practices (baseline: 0, target: 4,700,000) Output level indicator: 1.3.1. Enabling legal frameworks and models for conservation and sustainable use of biodiversity and ecosystems in place Output level Indicator 1.3.1.3: Number of hectares with restored ecosystem services in biodiversity sensitive areas (baseline: 0; target: 3,760,000)	
	Country Program Outcome Indicators: % of people who have equitable access to ecosystem services by province; % of water use efficiency for agricultural and energy production; % of population benefiting from non-carbon energy sources	
	National Program Outcomes and Indicators CBD Aichi Target and Indicators Tenth NDP 2.3 Livable Places, Sustainable Environment Aichi Target 9: By 2020, invasive alien species and pathways are identified and prioritized, priority species are controlled or eradicated, and measures are in place to manage pathways to prevent their introduction and establishment. Indicator: Trends in the numbers of invasive alien species introduction events Indicator: Red List Index (impacts of invasive alien species) [for birds - not implementable for marine species] Indicator: Proportion of countries adopting relevant national legislation and adequately resourcing the prevention or control of invasive alien species (response indicator). Indicator: Trends in invasive alien species vertebrate eradications BD-2, Program 4: Prevention, Control and Management of Invasive Alien Species Outcome 4.1: Improved management frameworks to prevent, control, and manage invasive alien species (IAS). Indicator 4.1: IAS management framework operational score. Outcome 4.2: Species extinction avoided as a result of IAS management (if applicable) Indicator 4.2: Sustainable populations of critically threatened species.	
	GEF-6 Biodiversity Strategic Objectives, Programs, Outcomes, Indicators:	
Project Goal:	Long-term Goal: Maintain the ecosystem service functions provided by Turkey's native marine biodiversity and avoid species extinctions in the face of increasing threats from IAS, and to minimize future new IAS threats	

Component	Indicator	Baseline (2016)	End of Project Target	Sources of Verification	Assumptions
Objective: To ensure resilience of marine and coastal ecosystems through strengthened capacities investment in prevention, detection, control and management of Invasive Alien Species	1. Hectares of seascape with <u>directly</u> improved management of IAS and enhanced ecosystem resilience	0 ha	>94,800 ha İğneada: 34,200 ha of marine habitat (including 22 km of coastal habitat) Marmara Islands and Kapıdağ Peninsula: 46,600 ha of marine habitat (including 186.5 km of coastal habitat) Ayvalık Adaları Nature Park: 13,969 ha of marine habitat (including approximately 112 km of coastal habitat)	- GEF IAS Tracking Tool, cell C24	Assumptions: - Project work at the site level has sufficient impact to improve the ecological situation - Site-based management measures developed are fully implemented

Component	Indicator	Baseline (2016)	End of Project Target	Sources of Verification	Assumptions
			Samandağ Turtle Nesting Beach: 32 ha of marine habitat (including 16 km of coastal habitat)		with support of local stakeholders Within the time available the project will succeed in having policy recommendations, legislative proposals, and regulatory drafts fully adopted by the relevant national authorities
	2. Hectares of seascape with <u>indirectly</u> improved management of IAS and enhanced ecosystem resilience	0 ha	~700,000 ha (Total approximate coastline of 8,000 km x 1 ha equals ~800,000 ha, less the area of direct influence of 94,800 ha = ~700,000 ha; there is no official figure for the exact length of Turkey's coastline)	<ul style="list-style-type: none"> GEF IAS Tracking Tool, cell C25 	
	3. Rate of new IAS introduction events in marine ecosystems along the coasts of Turkey	1 new alien species every 4 weeks along the coasts of Turkey between 1991 and 2010 (as per source methodology: Cinar, et al, 2011).	< baseline	<ul style="list-style-type: none"> Scientific monitoring Scientific research and analysis by end of project, with comparable methodology to baseline source 	Assumptions: <ul style="list-style-type: none"> The project timeframe is sufficient to influence outcomes within the project timeframe such that a change in the rate of new introductions can be monitored
	4. National funding toward marine and coastal biosecurity and ecosystem resilience support measures in Turkey	Currently no designated national funding related to marine IAS management and control.	National funding at \$500,000/year* is allocated specifically for marine IAS management and control. <i>*% increase from baseline of \$0 is not possible</i>	Relevant budget lines of funding from MoFWA, MFAL, MEU, and MTMAC	Assumptions: <ul style="list-style-type: none"> The national economic situation does not catastrophically change for the worse Addressing marine IAS remains a priority among national institutional partners

Component	Indicator	Baseline (2016)	End of Project Target	Sources of Verification	Assumptions
					Project outputs make the case that investing in prevention, control and mitigation of IAS is a cost-effective government strategy
Outcome 1: Effective national policy framework on Invasive Alien Species	5. Existence and functioning of national coordination mechanism [links to GEF BD indicator 4.1]	0: National Coordination Mechanism does not exist	3: The national coordination mechanism (Technical Advisory Board, interministerial, meeting biannually) oversees development, review and implementation of IAS National Strategy	GEF IAS Tracking tool, cell C48	Assumptions: - It is in the interest of all relevant national stakeholders to participate in and contribute to national coordination mechanism
	6. Existence and level of implementation of national IAS strategy for marine ecosystems [links to GEF BD indicator 4.1]	0: IAS strategy has not been developed	2: IAS strategy exists but is only partially implemented due to lack of funding or other problems	GEF IAS Tracking tool, cell C50	Assumptions: - The project has sufficient time and resources to support development of a national marine IAS strategy, have it adopted, and begin implementation
	7. Status of national policy and regulatory framework related to IAS in marine ecosystems [links to Aichi Target 9 indicator on countries adopting relevant national legislation] [links to GEF BD indicator 4.1]	0: IAS policy does not exist	4: The regulations are under implementation and enforced for some of the main priority pathways for IAS (shipping sector)	GEF IAS Tracking tool, cell C52	- The requirements of the Ballast Water Convention are not so overwhelming that appropriate regulations cannot be developed, adopted, and under

Component	Indicator	Baseline (2016)	End of Project Target	Sources of Verification	Assumptions
					implementation before the end of the project.
	8. Existence of fiscal incentive mechanisms for control or eradication of IAS in marine ecosystems	No incentive mechanisms exist	4 fiscal incentive mechanisms are developed (including gender perspectives, as relevant) and tested, with results from piloting documented and disseminated at national level, including at least one mechanism effective for reducing the targeted species	Project documents and records	Assumptions: <ul style="list-style-type: none"> - Fiscal incentive mechanisms proposed by the project are well-developed and responsive to local conditions and circumstances - Fiscal incentive mechanisms are adequately designed to have an impact on the targeted marine IAS populations
Outcome 2: Increased capacity and improved knowledge and information sharing systems to address IAS threats	9. Existence of detection, delimiting and monitoring surveys	1: Detection surveys (observational) are conducted on a regular basis Note: Surveys are conducted frequently in various areas for various reasons (mainly academic), but not in an organized, consistent and structured manner.	5. Detection surveys rank IAS in terms of their potential damage and detection systems target the IAS that are potentially the most damaging to globally significant biodiversity	GEF IAS Tracking tool, cell C56	Assumptions: <ul style="list-style-type: none"> - Government and stakeholders have technical capacity to undertake a systematized approach to detection surveys - Detection surveys can be organized in a strategic and cost-effective manner to monitor potential presence of the most threatening and harmful marine IAS
	10. Identification and management of priority	1: Priority pathways for invasions have been identified using risk	2: Priority pathways for invasions are being actively managed and monitored to prevent invasions	GEF IAS Tracking tool, cell C54	Assumptions: <ul style="list-style-type: none"> - Current lower priority pathways

Component	Indicator	Baseline (2016)	End of Project Target	Sources of Verification	Assumptions
	pathways (shipping sector)	assessment procedures as appropriate	(In comment section please specify methods for prevention of entry: quarantine laws and regulation, database establishment, public education, inspection, treatment technologies (fumigation, etc.) in the comment box.)		do not increase in importance - Ballast Water Convention is implemented in Turkey
	11. Availability of current data on IAS to decision-makers and ecosystem managers in multiple institutions	No national mechanism for aggregating and disseminating the most current information and data on IAS in marine waters	National IAS knowledge management system in place (including gender perspective as relevant) with multi-stakeholder access, and training on use conducted for all relevant government officials in various institutions	Monitoring via annual project reporting (PIR) by project team; Site-based verification at mid-term review and terminal evaluation by independent external experts	Assumptions: - Barriers related to multi-institutional reporting and data aggregation are not insurmountable
	12. National capacity to implement and enforce Ballast Water Conventions as defined by (as per BWC requirements): a. % of ships docking at Turkish ports have Ballast Water Management Plans and Ballast Water Record Books b. % of ships docking at Turkish ports have approved ballast water management systems (BWC regulation D-3), and meet BWC Regulation D-2: Ballast Water Performance Standard	Ballast Water Convention signed but not implemented and not in force. No monitoring, management, or control of ship ballast water at Turkish ports, and no facilities for control and safe discharge of ballast water.	Ballast Water Convention under implementation: a. >50% b. >50% c. >50% d. >75% e. 100% f. None g. Feasibility assessment conducted	Project documents and records; verification at mid-term review and terminal evaluation by independent external experts based on qualitative data collection from private sector (shipping sector) and national authorities	Assumptions: - Implementation of the Ballast Water Convention within Turkey is feasible

Component	Indicator	Baseline (2016)	End of Project Target	Sources of Verification	Assumptions
	<p>c. % of ships carrying foreign ballast water in Turkish waters are surveyed and certified</p> <p>d. Ports receiving XX% of ballast water by volume have reception facilities for the reception of sediments</p> <p>e. % of ballast water entering Turkish waters that is tracked and monitored for management</p> <p>f. Amount of ballast water exchanges occur within 50 nautical miles of Turkish land</p> <p>g. Status of designation of ballast water exchange zones within Turkey's territorial waters</p>				
	<p>13. Scientific publications produced based on project work to address key data and knowledge gaps for improved development of policy and implementation of management and control measures</p>	0	<p>4 scientific publications:</p> <p>a. Update on key pathways and distribution of marine IAS in Turkey</p> <p>b. Analysis of ecological impacts of marine IAS in Turkey's marine and coastal ecosystems</p> <p>c. Analysis of socio-economic impacts of marine IAS in</p>	Status of publication of scientific papers	<p>Assumptions:</p> <ul style="list-style-type: none"> - Sufficient time provided in project implementation for activities to produce results that can be scientifically documented, and

Component	Indicator	Baseline (2016)	End of Project Target	Sources of Verification	Assumptions
			Turkey's marine and coastal ecosystems d. Results of piloting fiscal incentive programs for marine IAS removal		then scientific papers published
	14. Level of knowledge and understanding relating to marine IAS: a. Among local populations (with additional targeted sub-set of tourism operators) in project pilot sites b. Among school-age children in project pilot sites c. Among national and local (in project pilot sites) government officials in relevant institutions	Fishermen are aware of presence of IAS, but cannot consistently identify IAS species, especially commercial species that have been present for more than 20 years. School children in coastal communities have no knowledge of IAS. Local and national government officials are only aware of the 2-3 most significant and damaging IAS (notably balloon fish and lion fish).	> baseline, with a higher percentage of survey respondents indicating that i.) they know what IAS are generally, ii.) which marine IAS are present in their region, iii.) what the negative impacts that marine IAS can have are, iv.) and what are the key mechanisms by which IAS can be introduced and spread (Monitoring of awareness to be disaggregated by gender)	Annual tracking survey (Monitoring of awareness to be disaggregated by gender)	Assumptions: - Project education and awareness raising activities can reach a sufficient number of people to modify resource-user behavior as appropriate
Outcome 3: Sustainable management, prevention, eradication, and control of IAS and restoration of IAS-degraded habitat at key marine and coastal areas	15. Trend in status of native biodiversity indicator species in targeted marine environments	a. Extent of <i>Mytilus galloprovincialis</i> presence significantly below historical standard (Ignea and Marmara Islands) b. Extent of seagrass beds (Ayvalik Islands) c. Trend in small fish stocks (lion fish prey species) (Hatay-Samandag) Exact Figures will be clarified by end of Year 1	> baseline a. hectares b. hectares c. number of individuals in survey, and/or biomass measurements in survey area	Project-supported monitoring surveys tracking effectiveness of fiscal incentive programs and other management and control measures	Assumptions: - Project efforts to support the resilience of native biodiversity will be effective within the timeframe of the project
	16. Application of best management practices in project target areas	1: Management goal and target area has been defined and acceptable threshold of population level of the species established	5: Funding for sustained and ongoing management and monitoring of the target area is secured.	GEF IAS Tracking tool, cell C58	Assumptions: - The site-based local marine IAS management plans sufficiently

Component	Indicator	Baseline (2016)	End of Project Target	Sources of Verification	Assumptions reflect best practices
	17. Level of resource management planning related to IAS in pilot sites	No IAS-specific management plans in project pilot sites	IAS-specific management plans developed, adopted, and under implementation by relevant local authority in each project pilot site (including gender perspectives as relevant)	Monitoring via annual project reporting (PIR) by project team; Site-based verification at mid-term review and terminal evaluation by independent external experts	Assumptions: <ul style="list-style-type: none"> - It is in the interest of all relevant local stakeholders to develop and implement IAS-specific management plans
Cross-cutting: Gender mainstreaming during implementation	18. Consistency of project gender mainstreaming approach with project plans	N/A – Project not under implementation; project design includes multiple elements designed to mainstream gender	<p>Gender mainstreaming carried out during project implementation, as indicated by:</p> <ul style="list-style-type: none"> - Project Technical Working Group and local stakeholder working groups have gender balance or include a gender mainstreaming representative; - Policies, laws, and regulations developed with project support include gender perspectives, as relevant - Fiscal incentive programs, and other management and control measures implemented at the site level are designed incorporating gender perspectives as relevant - Project events and activities (e.g. trainings) ensure gender balance among invited participants, as feasible - Project education and awareness activities are developed and carried out 	<p>Monitoring via annual project reporting (PIR) by project team; Verification at mid-term review and terminal evaluation by independent external experts</p>	Assumptions: <ul style="list-style-type: none"> - All relevant stakeholders support or are in accordance with gender mainstreaming efforts undertaken by the project

Component	Indicator	Baseline (2016)	End of Project Target incorporating gender perspectives, as relevant	Sources of Verification	Assumptions

VII. MONITORING AND EVALUATION (M&E) PLAN

86. The project results as outlined in the project results framework will be monitored annually and evaluated periodically during project implementation to ensure the project effectively achieves these results. The detailed project Monitoring Plan is included as Annex B, and the Evaluation Plan is included as Annex C.

87. Project-level monitoring and evaluation will be undertaken in compliance with UNDP requirements as outlined in the UNDP POPP and UNDP Evaluation Policy. While these UNDP requirements are not outlined in this project document, the UNDP Country Office will work with the relevant project stakeholders to ensure UNDP M&E requirements are met in a timely fashion and to high quality standards. Additional mandatory GEF-specific M&E requirements (as outlined below) will be undertaken in accordance with the GEF M&E policy and other relevant GEF policies.

88. In addition to these mandatory UNDP and GEF M&E requirements, other M&E activities deemed necessary to support project-level adaptive management will be agreed during the Project Inception Workshop and will be detailed in the Inception Report. This will include the exact role of project target groups and other stakeholders in project M&E activities including the GEF Operational Focal Point and national/regional institutes assigned to undertake project monitoring. The GEF Operational Focal Point will strive to ensure consistency in the approach taken to the GEF-specific M&E requirements (notably the GEF Tracking Tools) across all GEF-financed projects in the country. This could be achieved for example by using one national institute to complete the GEF Tracking Tools for all GEF-financed projects in the country, including projects supported by other GEF Agencies.

M&E Oversight and Monitoring Responsibilities:

89. **Project Technical Coordinator:** The Project Technical Coordinator is responsible for day-to-day project management and regular monitoring of project results and risks, including social and environmental risks. The Project Technical Coordinator will ensure that all project staff maintain a high level of transparency, responsibility and accountability in M&E and reporting of project results. The Project Technical Coordinator will inform the Project Board, the UNDP Country Office and the UNDP-GEF RTA of any delays or difficulties as they arise during implementation so that appropriate support and corrective measures can be adopted.

90. The Project Technical Coordinator will develop annual work plans based on the multi-year work plan included in Annex A, including annual output targets to support the efficient implementation of the project. The Project Technical Coordinator will ensure that the standard UNDP and GEF M&E requirements are fulfilled to the highest quality. This includes, but is not limited to, ensuring the results framework indicators are monitored annually in time for evidence-based reporting in the GEF PIR, and that the monitoring of risks and the various plans/strategies developed to support project implementation (e.g. gender mainstreaming strategy, KM strategy etc..) occur on a regular basis.

91. **Project Board:** The Project Board will take corrective action as needed to ensure the project achieves the desired results. The Project Board will hold project reviews to assess the performance of the project and appraise the Annual Work Plan for the following year. In the project's final year, the Project Board will hold an end-of-project review to capture lessons learned and discuss opportunities for scaling up and to highlight project results and lessons learned with relevant audiences. This final review meeting will also discuss the findings outlined in the project terminal evaluation report and the management response.

92. **Project Implementing Partner:** The Implementing Partner is responsible for providing any and all required information and data necessary for timely, comprehensive and evidence-based project reporting, including results and financial data, as necessary and appropriate. The Implementing Partner will strive to ensure project-level M&E is undertaken by national institutes, and is aligned with national systems so that the data used by and generated by the project supports national systems.

93. **UNDP Country Office:** The UNDP Country Office will support the Project Technical Coordinator as needed, including through annual supervision missions. The annual supervision missions will take place according to the schedule outlined in the annual work plan. Supervision mission reports will be circulated to the project team and Project Board within one month of the mission. The UNDP Country Office will initiate and organize key GEF M&E activities including the annual GEF PIR, the independent mid-term review and the independent terminal evaluation.

The UNDP Country Office will also ensure that the standard UNDP and GEF M&E requirements are fulfilled to the highest quality.

94. The UNDP Country Office is responsible for complying with all UNDP project-level M&E requirements as outlined in the UNDP POPP. This includes ensuring the UNDP Quality Assurance Assessment during implementation is undertaken annually; that annual targets at the output level are developed, and monitored and reported using UNDP corporate systems; the regular updating of the ATLAS risk log; and, the updating of the UNDP gender marker on an annual basis based on gender mainstreaming progress reported in the GEF PIR and the UNDP ROAR. Any quality concerns flagged during these M&E activities (e.g. annual GEF PIR quality assessment ratings) must be addressed by the UNDP Country Office and the Project Technical Coordinator.

95. The UNDP Country Office will retain all M&E records for this project for up to seven years after project financial closure in order to support ex-post evaluations undertaken by the UNDP Independent Evaluation Office (IEO) and/or the GEF Independent Evaluation Office (IEO).

96. UNDP-GEF Unit: Additional M&E and implementation quality assurance and troubleshooting support will be provided by the UNDP-GEF Regional Technical Advisor and the UNDP-GEF Directorate as needed.

97. Audit: The project will be audited according to UNDP Financial Regulations and Rules and applicable audit policies on NIM implemented projects.⁸

Additional GEF monitoring and reporting requirements

98. Inception Workshop and Report: A project inception workshop will be held within two months after the project document has been signed by all relevant parties to, amongst others:

- a) Re-orient project stakeholders to the project strategy and discuss any changes in the overall context that influence project implementation;
- b) Discuss the roles and responsibilities of the project team, including reporting and communication lines and conflict resolution mechanisms;
- c) Review the results framework and finalize the indicators, means of verification and monitoring plan;
- d) Discuss reporting, monitoring and evaluation roles and responsibilities and finalize the M&E budget; identify national/regional institutes to be involved in project-level M&E; discuss the role of the GEF OFP in M&E;
- e) Update and review responsibilities for monitoring the various project plans and strategies, including the risk log; Environmental and Social Management Plan and other safeguard requirements; the gender mainstreaming strategy; the knowledge management strategy, and other relevant strategies;
- f) Review financial reporting procedures and mandatory requirements, and agree on the arrangements for the annual audit; and
- g) Plan and schedule Project Board meetings and finalize the first year annual work plan.

99. The Project Technical Coordinator will prepare the inception report no later than one month after the inception workshop. The inception report will be cleared by the UNDP Country Office and the UNDP-GEF Regional Technical Adviser, and will be approved by the Project Board.

100. GEF Project Implementation Report (PIR): The Project Technical Coordinator, the UNDP Country Office, and the UNDP-GEF Regional Technical Advisor will provide objective input to the annual GEF PIR covering the reporting period July (previous year) to June (current year) for each year of project implementation. The Project Technical Coordinator will ensure that the indicators included in the project results framework are monitored annually in advance of the PIR submission deadline so that progress can be reported in the PIR. Any environmental and social risks and related management plans will be monitored regularly, and progress will be reported in the PIR.

⁸ See guidance here: <https://info.undp.org/global/popp/frm/pages/financial-management-and-execution-modalities.aspx>

101. The PIR submitted to the GEF will be shared with the Project Board. The UNDP Country Office will coordinate the input of the GEF Operational Focal Point and other stakeholders to the PIR as appropriate. The quality rating of the previous year's PIR will be used to inform the preparation of the subsequent PIR.

102. Lessons learned and knowledge generation: Results from the project will be disseminated within and beyond the project intervention area through existing information sharing networks and forums. The project will identify and participate, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may be of benefit to the project. The project will identify, analyze and share lessons learned that might be beneficial to the design and implementation of similar projects and disseminate these lessons widely. There will be continuous information exchange between this project and other projects of similar focus in the same country, region and globally.

103. GEF Focal Area Tracking Tools: The following GEF Tracking Tool(s) will be used to monitor global environmental benefit results: GEF Biodiversity Invasive Species Tracking Tool. The baseline/CEO Endorsement GEF Focal Area Tracking Tool(s) – submitted in Annex D to this project document – will be updated by the Project Technical Coordinator/Team and shared with the mid-term review consultants and terminal evaluation consultants (not the evaluation consultants hired to undertake the MTR or the TE) before the required review/evaluation missions take place. The updated GEF Tracking Tool(s) will be submitted to the GEF along with the completed Mid-term Review report and Terminal Evaluation report.

104. Independent Mid-term Review (MTR): An independent MTR process will begin after the second PIR has been submitted to the GEF, and the MTR report will be submitted to the GEF in the same year as the 3rd PIR. The MTR findings and responses outlined in the management response will be incorporated as recommendations for enhanced implementation during the final half of the project's duration. The terms of reference, the review process and the MTR report will follow the standard templates and guidance prepared by the UNDP IEO for GEF-financed projects available on the UNDP Evaluation Resource Center (ERC). As noted in this guidance, the evaluation will be 'independent, impartial and rigorous'. The consultants that will be hired to undertake the assignment will be independent from organizations that were involved in designing, executing or advising on the project to be evaluated. The GEF Operational Focal Point and other stakeholders will be involved and consulted during the MTR process. Additional quality assurance support is available from the UNDP-GEF Directorate. The final MTR report will be available in English and will be cleared by the UNDP Country Office and the UNDP-GEF Regional Technical Adviser, and approved by the Project Board.

105. Terminal Evaluation (TE): An independent TE will take place upon completion of all major project outputs and activities. The terminal evaluation process will begin three months before operational closure of the project allowing the evaluation mission to proceed while the project team is still in place, yet ensuring the project is close enough to completion for the evaluation team to reach conclusions on key aspects such as project sustainability. The Project Technical Coordinator will remain on contract until the TE report and management response have been finalized. The terms of reference, the evaluation process and the final TE report will follow the standard templates and guidance prepared by the UNDP IEO for GEF-financed projects available on the UNDP Evaluation Resource Center. As noted in this guidance, the evaluation will be 'independent, impartial and rigorous'. The consultants that will be hired to undertake the assignment will be independent from organizations that were involved in designing, executing or advising on the project to be evaluated. The GEF Operational Focal Point and other stakeholders will be involved and consulted during the terminal evaluation process. Additional quality assurance support is available from the UNDP-GEF Directorate. The final TE report will be cleared by the UNDP Country Office and the UNDP-GEF Regional Technical Adviser, and will be approved by the Project Board. The TE report will be publically available in English on the UNDP ERC.

106. The UNDP Country Office will include the planned project terminal evaluation in the UNDP Country Office evaluation plan, and will upload the final terminal evaluation report in English and the corresponding management response to the UNDP Evaluation Resource Centre (ERC). Once uploaded to the ERC, the UNDP IEO will undertake a quality assessment and validate the findings and ratings in the TE report, and rate the quality of the TE report. The UNDP IEO assessment report will be sent to the GEF IEO along with the project terminal evaluation report.

107. Final Report: The project's terminal PIR along with the terminal evaluation (TE) report and corresponding management response will serve as the final project report package. The final project report package shall be

discussed with the Project Board during an end-of-project review meeting to discuss lesson learned and opportunities for scaling up.

108. **Gender:** The PIU, with support from UNDP and MFWA, will be responsible for monitoring gender equality aspects during project implementation. This will include ensuring the project meets requirements for compliance with at least UNDP Gender Marker 1.

Table 6 Budgeted M&E Plan

GEF M&E requirements	Primary responsibility	Indicative costs to be charged to the Project Budget ⁹ (US\$)		Time frame
		GEF	Co-financing	
Inception Workshop	UNDP Turkey Country Office	USD \$10,000	\$5,000	Within three months of project document signature
Inception Report	Project Technical Coordinator	None	None	Within four weeks of inception workshop
Standard UNDP monitoring and reporting requirements as outlined in the UNDP POPP	UNDP Country Office	None	None	Quarterly, annually
Monitoring of indicators in project results framework	Project Technical Coordinator	USD \$5,000	None	Annually
GEF Project Implementation Report (PIR)	Project Technical Coordinator and UNDP Turkey Country Office and UNDP-GEF team	None	None	Annually
NIM Audit as per UNDP audit policies	UNDP Turkey Country Office	Per year: USD \$10,000	\$3,000	Annually or other frequency as per UNDP Audit policies
Lessons learned and knowledge generation	Project Technical Coordinator	Covered under Output 2.4.	None	Annually
Monitoring of environmental and social risks, and corresponding management plans as relevant	Project Technical Coordinator UNDP Turkey Country Office	None	None	On-going
Addressing environmental and social grievances	Project Technical Coordinator UNDP Turkey Country Office BPPS as needed	None for time of Project Technical Coordinator, and UNDP CO	None	On-going (as necessary)
Project Board meetings	Project Board UNDP Turkey Country Office Project Technical Coordinator	\$15,000	\$5,000	At minimum annually
Supervision missions	UNDP Turkey Country Office	None ¹⁰	None	Annually
Oversight missions	UNDP-GEF team	None ¹⁰	None	Troubleshooting as needed
Knowledge management as outlined in Outcome 4	Project Technical Coordinator	Covered under Output 2.4 [>1% of GEF grant], budgeted at a total of \$393,000	None	On-going

⁹ Excluding project team staff time and UNDP staff time and travel expenses.

¹⁰ The costs of UNDP Country Office and UNDP-GEF Unit's participation and time are charged to the GEF Agency Fee.

GEF Secretariat learning missions/site visits	UNDP Turkey Country Office and Project Technical Coordinator and UNDP-GEF team	None	None	To be determined.
Mid-term GEF Tracking Tool to be updated by Project Steering Committee	Project Technical Coordinator	USD \$2,000	\$2,000	Before mid-term review mission takes place.
Independent Mid-term Review (MTR) and management response	UNDP Country Office and Project team and UNDP-GEF team	USD \$25,000	None	Between 2 nd and 3 rd PIR.
Terminal GEF Tracking Tool to be updated by Project Steering Committee	Project Technical Coordinator	USD \$2,000	\$2,000	Before terminal evaluation mission takes place
Independent Terminal Evaluation (TE) included in UNDP evaluation plan, and management response	UNDP Country Office and Project team and UNDP-GEF team	USD \$35,000	None	At least three months before operational closure
Translation of MTR and TE reports into national language / English	UNDP Country Office	USD \$5,000	\$5,000	To be determined.
Total Indicative Cost Excluding project team staff time, and UNDP staff and travel expenses		USD \$109,000 (3% of total project budget)		

VIII. GOVERNANCE AND MANAGEMENT ARRANGEMENTS

109. **Roles and responsibilities of the project's governance mechanism:** The project will be implemented following UNDP's national implementation modality, according to the Standard Basic Assistance Agreement between UNDP and the Government of Turkey, and the Country Programme. The UNDP Project Quality Assurance Report is attached as Annex G to this Prodoc.

110. The **Implementing Partner** for this project is Ministry of Forest and Water Affairs – General Directorate of Nature Conservation and National Parks. The Implementing Partner is responsible and accountable for managing this project, including the monitoring and evaluation of project interventions, achieving project outcomes, and for the effective use of UNDP resources. The results of the UNDP capacity assessment of the project implementing partner and HACT micro-assessment are included as Annex I to this Prodoc.

111. The project organization structure is as shown in Figure 6 below.

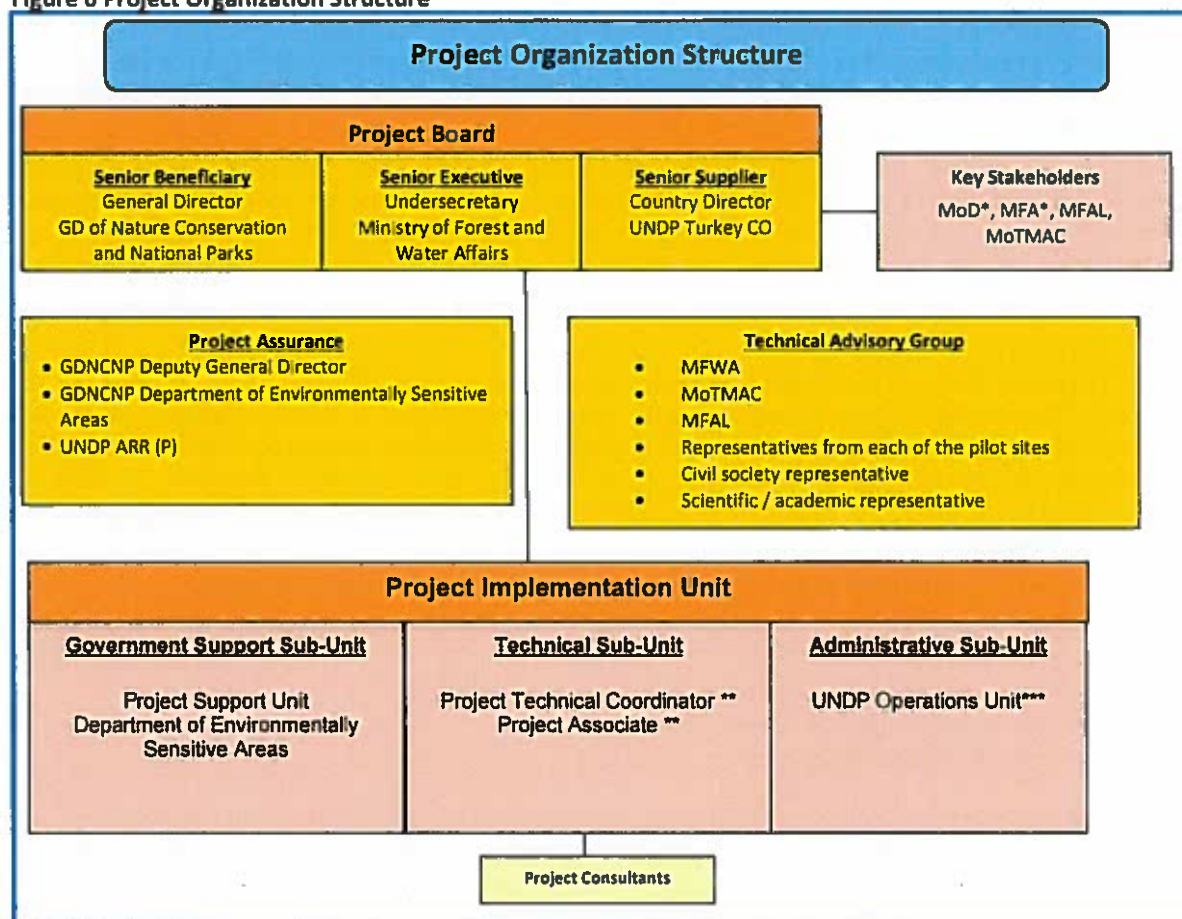
112. The **Project Board** (also called Project Steering Committee) is responsible for making by consensus, management decisions when guidance is required by the Project Technical Coordinator, including recommendation for UNDP/Implementing Partner approval of project plans and revisions. In order to ensure UNDP's ultimate accountability, Project Board decisions should be made in accordance with standards that shall ensure management for development results, best value money, fairness, integrity, transparency and effective international competition. In case a consensus cannot be reached within the Board, final decision shall rest with the UNDP Portfolio Manager. The terms of reference for the Project Board are contained in Annex E. The Project Board is comprised of the following roles:

- **Senior Executive (Chairman of the Board) – Ministry of Forest and Water Affairs:** The Senior Executive is ultimately responsible for the project, supported by the Senior Beneficiary and Senior Supplier. This role requires representing the interests of Ministry of Forest and Water Affairs who will ultimately benefit from the project. The Senior Executive's primary function within the Board will be to ensure that the project is focused throughout its life cycle on achieving its objectives and delivering outputs that will contribute to higher level outcomes. The Senior Executive has to ensure that the project gives value for money, ensuring a cost-conscious approach to the project, balancing the demands of beneficiary and supplier. Senior executive role will be held by the

Undersecretary of the MoFWA. The Undersecretary may delegate this role to another senior official within the MoFWA.

- **Senior Beneficiary – General Directorate of Nature Conservation and National Parks:** The Senior Beneficiary is responsible for validating the needs and for monitoring that the solution will meet those needs within the constraints of the project. The role represents the interests of all those who will benefit from the project, or those for whom the deliverables resulting from activities will achieve specific output targets. The Senior Beneficiary role monitors progress against targets and quality criteria. This role will be held by General Director of the The General Directorate of Nature Conservation and National Parks while General Director may delegate another senior official within the General Directorate.
- **Senior Supplier – UNDP:** The Senior Supplier represents the interests of the parties which provide funding and/or technical expertise to the project (designing, developing, facilitating, procuring, implementing). The Senior Supplier's primary function within the Board will be to provide guidance regarding the technical feasibility of the project. This role will rest with UNDP-Turkey represented by the Country Director.

Figure 6 Project Organization Structure



*MoD (Ministry of Development) and MFA (Ministry of Foreign Affairs) are natural members of the Project Board with a role to link the project results to the national development policy and oversight for international agreements.

** Please refer to Annex E for further information.

*** Please refer to Annex O Letter of Agreement between UNDP and Government of Turkey.

113. The Project Assurance supports the Project Board by carrying out objective and independent project oversight and monitoring functions. This role ensures appropriate project management milestones are managed and completed. Project Assurance has to be independent of the Project Technical Coordinator; therefore, the Project

Board cannot delegate any of its assurance responsibilities to the Project Technical Coordinator. The Project Assurance role will rest with combination of several positions. A deputy General Director from GDNCNP will lead the Project Assurance. Moreover, a representative from Department of Environmentally Sensitive Areas will be appointed. Finally, UNDP Turkey Assistant Resident Representative for Programme (ARR-P) will be a member of Project Assurance team.

114. The project Technical Advisory Group will be established to provide technical oversight and assurance of all project activities. The Technical Advisory Group will consist of technical representatives of key stakeholders. Membership will include representatives from the following: MoFWA, MoTMAC, MFAL, each of the pilot sites, a civil society representative, and a scientific / academic expert. In addition, if the Technical Advisory Group does not innately have gender balance, then the Technical Advisory Group will include a gender expert.

115. The Project Implementation Unit (PIU) will assist the GDNCNP in performing its role as implementing partner. PIU will be comprised of three sub-units according to implementing function of the project.

- First sub-unit, namely Governmental Sub-unit, will be established by Department of Environmentally Sensitive Areas for governmental support function and will have two representatives.
- Second sub-unit, namely Technical Sub-unit, will be established by UNDP, through new recruitments for daily implementation of the project. Project Management function will be carried on by a Project Technical Coordinator and a Project Associate. Technical sub-unit will be composed of : a Project Technical Coordinator and a Project Associate.
- Third sub-unit, namely Administrative Sub-unit, will be established by UNDP for undertaking administrative management function of the project and ensuring compliance with UNDP/GEF administrative regulations. Administrative sub-unit will be composed of: half time of project associate and UNDP Operations Unit.as per LOA between UNDP and the Government of Turkey.

116. The three sub-units will work in harmony and compliment each other for smooth implementation in line with UNDP/GEF rules and regulations.

117. The Project Technical Coordinator (PTC) will run the project on a day-to-day basis on behalf of the Implementing Partner within the constraints laid down by the Board. The Project Technical Coordinator function will end when the final project terminal evaluation report, and other documentation required by the GEF and UNDP, has been completed and submitted to UNDP (including operational closure of the project). The PTC will perform its function with support of UNDP Portfolio Manager and Cluster Lead, based in Ankara. The PTC and Project Associate will nationally recruited.

118. The UNDP Regional Technical Advisor will provide additional quality assurance as needed.

119. The UNDP CO will provide, at the request of GDNCNP, the following support services for the activities of the project (see Annex O Direct Project Costs Letter):

- a) Identification and recruitment of project and programme personnel;
- b) Identification and facilitation of training activities;
- c) Procurement of goods and services;

120. UNDP Direct Project Services as requested by Government: The UNDP, as GEF Agency for this project, will provide project management cycle services for the project as defined by the GEF Council. In addition the Government of Turkey may request UNDP direct services for specific projects, according to its policies and convenience. The UNDP and Government of Turkey acknowledge and agree that those services are not mandatory, and will be provided only upon Government request. If requested the services would follow the UNDP policies on the recovery of direct costs. These services (and their costs) are specified in the Letter of Agreement (Annex O). As is determined by the GEF Council requirements, these service costs will be assigned as Project Management Cost, duly identified in the project budget as Direct Project Costs. Eligible Direct Project Costs should not be charged as a flat percentage. They should be calculated on the basis of estimated actual or transaction based costs and should be charged to the direct project costs account codes: "64397- Direct Project Costs – Staff" and "74596-Direct Project Costs – General Operating Expenses (GOE)".

121. **Agreement on intellectual property rights and use of logo on the project's deliverables and disclosure of information:** In order to accord proper acknowledgement to the GEF for providing grant funding, the GEF logo will appear together with the UNDP logo on all promotional materials, other written materials like publications developed by the project, and project hardware. Any citation on publications regarding projects funded by the GEF will also accord proper acknowledgement to the GEF. Information will be disclosed in accordance with relevant policies notably the UNDP Disclosure Policy¹¹ and the GEF policy on public involvement¹².

IX. FINANCIAL PLANNING AND MANAGEMENT

122. The total cost of the project is USD 16,544,654. This is financed through a GEF grant of USD \$3.34 million, USD 200,000 in kind co-financing to be administered by UNDP, and USD 13,000,000 in parallel co-financing by Government. UNDP, as the GEF Implementing Agency, is responsible for the execution of the GEF resources and the cash co-financing transferred to UNDP bank account only.

123. **Parallel co-financing:** The actual realization of project co-financing will be monitored during the mid-term review and terminal evaluation process and will be reported to the GEF. The planned parallel co-financing will be used as follows:

Co-financing source	Co-financing type	Co-financing amount	Planned Activities/Outputs	Risks	Risk Mitigation Measures
UNDP	In-kind	\$200,000	Output 1.1 Output 1.3 Output 1.4 Output 1.5 Output 1.6 Output 2.1 Output 2.4 Output 3.1	No specific risks related to UNDP co-financing.	UNDP co-financing contributions will be monitored by the PMU and the Project Board during the life of the project.
Government	In-kind	\$13,000,000	Output 1.1. Output 1.3 Output 1.4 Output 1.5 Output 1.6 Output 2.1. Output 2.2. Output 2.3 Output 3.1. Output 3.2. Output 3.3.	Co-financing in the later years of the project is dependent on government budget for time periods which are not yet officially approved, and which may be dependent on the state of the national economy	Ministry of Forestry and Water Affairs will closely monitor the governmental budgeting and approval process.

124. **Budget Revision and Tolerance:** As per UNDP requirements outlined in the UNDP POPP, the project board will agree on a budget tolerance level for each plan under the overall annual work plan allowing the Project Technical Coordinator to expend up to the tolerance level beyond the approved project budget amount for the year without requiring a revision from the Project Board. Should the following deviations occur, the Project Technical Coordinator and UNDP Country Office will seek the approval of the UNDP-GEF team as these are considered major amendments by the GEF:

- a) Budget re-allocations among components in the project with amounts involving 10% of the total project grant or more;

¹¹ See http://www.undp.org/content/undp/en/home/operations/transparency/information_disclosurepolicy/

¹² See https://www.thegef.org/gef/policies_guidelines

- b) Introduction of new budget items/or components that exceed 5% of original GEF allocation.
125. Any over expenditure incurred beyond the available GEF grant amount will be absorbed by non-GEF resources (e.g. UNDP TRAC or cash co-financing).
126. Refund to Donor: Should a refund of unspent funds to the GEF be necessary, this will be managed directly by the UNDP-GEF Unit in New York.
127. Project Closure: Project closure will be conducted as per UNDP requirements outlined in the UNDP POPP. On an exceptional basis only, a no-cost extension beyond the initial duration of the project will be sought from in-country UNDP colleagues and then the UNDP-GEF Executive Coordinator.
128. Operational completion: The project will be operationally completed when the last UNDP-financed inputs have been provided and the related activities have been completed. This includes the final clearance of the Terminal Evaluation Report (that will be available in English) and the corresponding management response, and the end-of-project review Project Board meeting. The Implementing Partner through a Project Board decision will notify the UNDP Country Office when operational closure has been completed. At this time, the relevant parties will have already agreed and confirmed in writing on the arrangements for the disposal of any equipment that is still the property of UNDP.
129. Financial completion: The project will be financially closed when the following conditions have been met:
- c) The project is operationally completed or has been cancelled;
 - d) The Implementing Partner has reported all financial transactions to UNDP;
 - e) UNDP has closed the accounts for the project;
 - f) UNDP and the Implementing Partner have certified a final Combined Delivery Report (which serves as final budget revision).
130. The project will be financially completed within 12 months of operational closure or after the date of cancellation. Between operational and financial closure, the implementing partner will identify and settle all financial obligations and prepare a final expenditure report. The UNDP Country Office will send the final signed closure documents including confirmation of final cumulative expenditure and unspent balance to the UNDP-GEF Unit for confirmation before the project will be financially closed in Atlas by the UNDP Country Office.

X. TOTAL BUDGET AND WORK PLAN

Total Budget and Work Plan		
Atlas Proposal or Award ID:	00097993	Atlas Primary Output Project ID: 00101497
Atlas Proposal or Award Title:	Addressing Invasive Alien Species threats at key marine biodiversity areas	
Atlas Business Unit	TUR10	
Atlas Primary Output Project Title	Addressing Invasive Alien Species threats at key marine biodiversity areas	
UNDP-GEF PIMS No.	5733	
Implementing Partner	General Directorate of Nature Conservation and National Parks, Ministry of Forest and Water Affairs, Government of Turkey	

GEF Component / Atlas Activity	Responsible Party (Atlas Implementing Agent)	Fund ID	Donor Name	Atlas Budgetary Account Code	ATLAS Budget Description	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	Amount Year 5 (USD)	Total (USD)	Ref #
COMPONENT 1: IAS POLICY FRAMEWORKS	MFWA/UNDP	62000	GEF	71200	International Consultants	6.000	6.000	6.000	6.000	6.000	30.000	1
				71300	Local Consultants	27.000	34.500	42.000	27.500	20.000	151.000	2
				71400	Contractual Services - Individual	28.375	28.375	28.375	28.375	28.375	141.875	3
				72100	Contractual services - Companies	0	48.000	48.000	48.000	48.000	192.000	4
				75700	Training Workshops and Conference	45.000	45.000	40.000	75.000	50.000	255.000	5
				72200	Equipment & Furniture	2.625	3.510	5.125	5.125	5.125	21.510	6
				71600	Travel	3.000	3.000	3.000	3.000	3.000	15.000	7
				Total Outcome 1					112.000	168.385	172.500	193.000
COMPONENT 2: IAS CAPACITY AND KNOWLEDGE MANAGEMENT	MFWA/UNDP	62000	GEF	71200	International Consultants	6.000	6.000	6.000	6.000	6.000	30.000	8
				71300	Local Consultants	32.000	32.000	27.000	25.000	15.000	131.000	9
				71400	Contractual Services - Individual	21.750	21.750	21.750	21.750	21.750	108.750	10
				72100	Contractual services - Companies	9.000	29.000	24.000	19.000	9.000	90.000	11
				75700	Training Workshops and Conference	35.000	75.000	75.000	40.000	20.000	245.000	12
				71600	Travel	3.250	3.250	3.250	3.250	3.250	16.250	13
				74200	Audio Visual&Print Prod Costs	10.000	25.000	20.000	10.000	10.000	75.000	14
				Total Outcome 2					117.000	192.000	177.000	125.000

GEF Component / Atlas Activity	Responsible Party (Atlas Implementing Agent)	Fund ID	Donor Name	Atlas Budgetary Account Code	ATLAS Budget Description	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	Amount Year 5 (USD)	Total (USD)	Ref #	
COMPONENT / OUTCOME 3: IAS PREVENTION, MANAGEMENT, AND CONTROL	MFWA/UNDP	62000	GEF	71200	International Consultants	6,000	6,000	36,000	6,000	36,000	90,000	15	
				71300	Local Consultants	47,000	32,000	22,000	10,000	12,000	123,000	16	
				71400	Contractual Services - individual	23,375	23,375	23,375	23,375	23,375	116,875	17	
				72100	Contractual services - Companies	0	0	320,000	340,000	310,000	970,000	18	
				75700	Training Workshops and Conference	18,325	83,325	83,325	53,325	18,325	256,625	19	
				71600	Travel	7,500	7,500	7,500	7,500	7,500	37,500	20	
				72200	Equipment & Furniture	0	25,000	30,000	17,000	17,000	89,000	21	
				Total Outcome 3					102,200	177,200	522,200	457,200	424,200
PROJECT MANAGEMENT UNIT	MFWA	62000	GEF	71400	Contractual Services - Individual	16,500	16,500	16,500	16,500	16,500	82,500	22	
				71600	Travel	4,800	4,800	4,800	4,800	4,800	24,000	23	
				72200	Equipment and Furniture	2,500	1,296	500	500	1,000	5,796	24	
				74100	Professional Services	0	2,500	0	2,500	5,000	10,000	25	
				74500	Miscellaneous Expenses	750	750	750	750	750	3,750	26	
				74596	Direct Project Cost	5,145	5,145	5,145	5,145	5,143	25,723	27	
				75700	Training Workshops and Conference	1,500	1,500	1,500	1,500	1,500	7,500	28	
				Total Project Management Cost					31,195	32,491	29,195	31,695	34,693
				PROJECT TOTAL				362,395	570,076	900,895	806,895	704,393	3,344,654

Table 7 Summary of Funds

	Amount Year 1	Amount Year 2	Amount Year 3	Amount Year 4	Amount Year 5	Total
GEF	362,395	570,076	900,895	806,895	704,393	3,344,654
UNDP	40,000	40,000	40,000	40,000	40,000	200,000
MFWA	2,600,000	2,600,000	2,600,000	2,600,000	2,600,000	13,000,000
TOTAL	3,002,395	3,210,076	3,540,895	3,446,895	3,344,393	16,544,654

Table 8 ATLAS Budget Notes

BUDGET REF #	BUDGET NOTES
1	International consultant for marine and IAS @\$500/day, covering work under Outputs 1.1., 1.2., 1.3. and 1.5: \$500USD/day * 60 days = \$30,000.
2	Cost of national experts required input to Outcome 1. Details as below: Chief Technical Advisor working for all outputs - \$400USD/day * 140 days = \$56,000; National Legislation Expert working for Outputs 1.1., 1.3. and 1.5 - \$250USD/day * 140 days = \$35,000; National Marine and IAS expert working for Outputs 1.2. and 1.6 - \$250USD/day * 60 days = \$15,000; National Fiscal Incentive Expert working for Output 1.4. - \$250USD/day * 180 days = \$45,000.
3	Prorated share of technical input from Project technical coordinator (PTC), 42% time for technical input to Outcome 1 (42 % of PCT cost; 60 months @\$5,000 / month) and input from Project Associate (PA), 11% time for technical input to Outcome 1 (11% of PA cost; 60 months @2,500 / month). Technical functions of PTC and PA are indicated in Annex E – Terms of References.
4	Subcontractors for fiscal incentive program under Output 1.4. (Total Output budget \$192,000).
5	Cost of workshops under Outputs 1.1., 1.2., 1.3., 1.5. and 1.6 (\$4,000ea * 55 workshops = \$220,000); Cost of scientific conference on ecological and socio-economic impacts of marine IAS under Output 1.6 (\$35,000); total \$255,000.
6	IT equipment and office furniture for project team (\$8,385).
7	Prorated share of total project allocation of 3.00% of total budget: support for stakeholder participation in national, regional, and local workshops; site visits of technical experts. Travel of local and international consultants for implementation of Outcome 1. Unit costs \$1,000/international, \$300/local travel (total \$15,000).
8	International consultant for marine and IAS, covering work under outputs 2.2. and 2.3. - \$500USD/day * 60 days = \$30,000.
9	Cost of national experts required input to Outcome 2. Details as below: Chief Technical Advisor working for all outputs: \$400USD/day * 140 days = \$56,000; National Legislation Expert working for Output 2.1. - \$250USD/day * 40 days = \$10,000; National marine and IAS expert working for Output 2.2. - \$250USD/day * 40 days = \$10,000; National Training Expert working for Output 2.4. - \$250USD/day * 220 days = \$55,000.
10	Prorated share of technical input from Project technical coordinator (PTC), 25% time for technical input to Outcome 2 (25 % of PCT cost; 60 months @\$5,000 / month) and input from Project Associate (PA), 22% time for technical input to Outcome 2 (22% of PA cost; 60 months @2,500 / month). Technical functions of PTC and PA are indicated in Annex E – Terms of References.
11	Subcontractors for database construction under Output 2.2. (budgeted at \$70,000) and public awareness monitoring under Output 2.4. (budgeted at \$20,000).
12	International Symposium on Ballast Water Management (\$40,000); Advisory Technical Board Meetings (\$20,000); Study visits \$10,000*2 times-national (\$20,000) and \$40,000*2 times-international (\$80,000); Workshops and awareness raising meetings, various with different unit costs (\$85,000).
13	Prorated share of total project allocation of 3.00% of total budget: support for stakeholder participation in national, regional, and local workshops; site visits of technical experts. Travel of local and international consultants for implementation of Outcome 2. Unit costs \$1,000USD / international, \$250USD / local travel (total \$16,250 USD).
14	Allocation for cost of production and printing of education and awareness materials on IAS under Output 2.4. (total budgeted at \$75,000)
15	International Consultant for marine and IAS, covering work under outputs 3.2. and 3.3.: \$300USD/day * 100 days = \$30,000. International consultants for mid-term review and terminal evaluation @\$600USD/day * 100 = \$60,000.
16	Cost of national experts required input to Outcome 3. Details as below: Chief Technical Advisor working for all outputs - \$400USD/day * 145 days = \$58,000; National marine and IAS expert working for Output 3.3. - \$250 * 260 days = \$65,000.
17	Prorated share of technical input from Project technical coordinator (PTC) 33% time for technical input to Outcome 3 (33 % of PCT cost; 60 months @\$5,000 / month) and input from Project Associate (PA), 11% time for technical input to Outcome 3 (11% of PA cost; 60 months @2,500 / month). Technical functions of PTC and PA are indicated in Annex E – Terms of References.
18	Subcontractors for IAS Prevention Program under the Output 3.2.: Implementation of marine IAS management and control measures defined in management plans for İğneada (total \$180,000 budgeted for implementation of management plan), Marmara Islands (total \$305,000 budgeted for implementation of management plan), Ayvalık Islands (total \$305,000 budgeted for implementation of management plan) and Hatay-Samandag (total \$180,000 budgeted for implementation of management plan).
19	Feasibility assessment fieldwork for natural species / habitat recovery throughout Turkish coastline (\$66,000); Fieldwork for management plans on ecological and socio economic impacts of IAS in pilot sites (\$125,000); Stakeholder and local committee meetings / workshops for management plans in four pilot sites with different unit costs (\$65,625).

BUDGET REF #	BUDGET NOTES
20	Prorated share of total project allocation of 3.00% of total budget: support for stakeholder participation in national, regional, and local workshops; site visits of technical experts. Travel of local and international consultants for implementation of Outcome 3. Unit costs \$1,000USD / international, \$300 / local travel (total \$37,500).
21	Allocation for materials and equipment costs for IAS management and control measures at 4 pilot sites under Output 3.2. (total \$89,000 budgeted)
22	Project management costs of half time Project Associate Sub-total: \$82,500. (55 % of total project staff cost; 60 months @\$2,500 / month for project associate).
23	Cost of project staff monitoring oversight visits to project sites (2 visits per year to 3 regions (2 of 4 sites accessible from the same regional domestic airport). Management-related travel to/from project sites for the project management unit to enable hands-on management (total \$24,000).
24	Cost of IT equipment (3 computers, printer, scanner, underwater camera) (total \$5,796).
25	Cost of a professional company for audits (total \$10,000).
26	Misc. project management expenses allocation, including stationery for office (total \$3,750).
27	Direct Project Costs: Estimated UNDP Direct Project Cost recovery charges as indicated in the Agreement in Annex O of the Project Document. The project is to be managed on the 100% Country Office Cost Recovery basis, upon request of the government, the implementing partner. The estimated cost (total \$25,723) includes: (i) recruitment and payroll management of project staff; (ii) purchase of goods and equipment as requested; and (iii) hiring of consultants. In accordance with GEF Council requirements, the costs of these services will be part of the executing entity's Project Management Cost allocation identified in the project budget. DPC costs would be charged at the end of each year based on the UNDP Universal Pricelist (UPL) or the actual corresponding service cost. The amounts here are estimations based on the services preliminarily indicated, however as part of annual project operational planning the DPC to be requested during the calendar year would be defined and the amount included in the yearly project management budgets and would be charged based on actual services provided at the end of that year (total \$25,723).
28	Project management evaluation meetings.

XI. LEGAL CONTEXT

131. This document together with the CPAP signed by the Government and UNDP which is incorporated herein by reference, constitute together a Project Document as referred to in the Standard Basic Assistance Agreement (SBAA); as such all provisions of the CPAP apply to this document. All references in the SBAA to “Executing Agency” shall be deemed to refer to “Implementing Partner”, as such term is defined and used in the CPAP and this document.

132. Consistent with the Article III of the Standard Basic Assistance Agreement (SBAA), the responsibility for the safety and security of the Implementing Partner and its personnel and property, and of UNDP’s property in the Implementing Partner’s custody, rests with the Implementing Partner. To this end, the Implementing Partner shall:

- a) Put in place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where the project is being carried;
- b) Assume all risks and liabilities related to the implementing partner’s security, and the full implementation of the security plan.

133. UNDP reserves the right to verify whether such a plan is in place, and to suggest modifications to the plan when necessary. Failure to maintain and implement an appropriate security plan as required hereunder shall be deemed a breach of the Implementing Partner’s obligations under this Project Document.

134. The Implementing Partner agrees to undertake all reasonable efforts to ensure that none of the UNDP funds received pursuant to the Project Document are used to provide support to individuals or entities associated with terrorism and that the recipients of any amounts provided by UNDP hereunder do not appear on the list maintained by the Security Council Committee established pursuant to resolution 1267 (1999). The list can be accessed via http://www.un.org/sc/committees/1267/ag_sanctions_list.shtml. This provision must be included in all sub-contracts or sub-agreements entered into under/further to this Project Document”.

135. Any designations on maps or other references employed in this project document do not imply the expression of any opinion whatsoever on the part of UNDP concerning the legal status of any country, territory, city or area or its authorities, or concerning the delimitation of its frontiers or boundaries.

XII. ANNEXES

- A. Multi year Workplan
- B. Monitoring Plan
- C. Evaluation Plan
- D. GEF Tracking Tool at baseline
- E. Terms of Reference for Project Board, Project Technical Coordinator, Chief Technical Advisor and other positions as appropriate
- F. UNDP Social and Environmental and Social Screening Template (SESP)
- G. UNDP Project Quality Assurance Report
- H. UNDP Risk Log
- I. Results of the capacity assessment of the project implementing partner and HACT micro assessment
- J. Legislative and Policy Context; Baseline Legislative and Policy Analysis and Gap Assessment
- K. Pilot Site Profiles
- L. Gender Analysis
- M. Key Lessons and Good Practices from Previous GEF-funded IAS Projects, and Relevance for Proposed Turkey Marine IAS Project
- N. Good Practices and International Standards Related to the Management and Control of Marine Invasive Alien Species
- O. Letter of Agreement between UNDP and Government of Turkey
- P. Co-financing Letters
- Q. Details of GDNCNP Contribution

Annex A: Multi Year Work Plan:

Task	Responsible Party	Year 1				Year 2				Year 3				Year 4				Year 5			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Output 1.1: Regulations on introduction, early detection, prevention and management of IAS in marine and coastal wetland ecosystems developed and submitted for adoption. <input type="checkbox"/>																					
1. By-laws and other regulatory mechanisms/tools on marine IAS developed and adopted in relation to implementation of Decree Law on Organization and Duties of Ministry of Forest and Water Affairs Law and other related regulations of other Ministries	PIU																				
2. Implementation of IAS by-laws and other regulatory tools/mechanisms through training and awareness raising of regulators and resource-users	PIU																				
Output 1.2: Main pathway and vectors for IAS identified.																					
1. Research and analysis on current marine IAS distribution and pathways in Turkey's coastal zones (including Mediterranean and Black Sea coasts)	PIU																				
2. Updated analysis on main and potential pathways and vectors for alien species introductions	PIU																				
Output 1.3: Protocols and quarantine mechanisms consistent with bio-security requirements and international standards for IAS in marine and coastal wetland ecosystems in place																					
1. Assess, customize and integrate protocols and quarantine mechanism consistent with bio-security requirements and international standards into the marine IAS by-law of MoFWA (see 1.1.1) and other related by-laws/regulatory tools and mechanisms	PIU																				
2. Development of sector-specific guidelines on protocols and quarantine mechanisms for marine IAS in all sectors that impact/being impacted by IAS other than shipping	PIU																				

Annex B. Monitoring Plan: The Project Technical Coordinator will collect results data according to the following monitoring plan.

Monitoring	Indicators	Description	Data source/Collection Methods	Frequency	Responsible for data collection	Means of verification	Assumptions and Risks
Objective: To ensure resilience of marine and coastal ecosystems through strengthened capacities and investment in prevention, detection, control and management of Invasive Alien Species	1. Hectares of seascape with <u>directly</u> improved management of IAS and enhanced ecosystem resilience	Amount of hectares rise from 0 ha to 94,800 ha seascape in four project pilot sites.	Direct project interventions will result in ecosystem improvement. Project team and consultant will report the interventions.	Annually Reported in DO tab of the GEF PIR	Project implementation team Project consultants	GEF IAS Tracking Tool, cell C24	Assumptions: <ul style="list-style-type: none"> Project work at the site level has sufficient impact to improve the ecological situation Site-based management measures developed are fully implemented with support of local stakeholders The project objective is aligned with the priorities and interests of local stakeholders Within the time available the project will succeed in having policy recommendations, legislative proposals, and regulatory drafts fully adopted by the relevant national authorities Risks:
	2. Hectares of seascape with <u>indirectly</u> improved management of IAS and enhanced ecosystem resilience	Amount of hectares rise from 0 ha ~700,000 ha (Total approximate coastline of 8,000 km x 1 ha equals ~800,000 ha, less the area of direct influence of 94,800 ha = ~700,000 ha; there is no official figure for the exact length of Turkey's coastline)	This is an indirect project result. Good IAS management practices piloted under the project will be incorporated in legislative and regulatory measures, and will be replicated by key government stakeholders throughout Turkey's marine ecosystems.	End of project	Project implementation team Project consultants	GEF IAS Tracking Tool, cell C25	

Monitoring	Indicators	Description	Data source/Collection Methods	Frequency	Responsible for data collection	Means of verification	Assumptions and Risks
							<ul style="list-style-type: none"> - <i>Dynamic fluctuations in the marine ecosystems create conditions for which the project is not effectively able to address with the time and resources available</i> - <i>Socio-economic or political instability creates conditions whereby addressing marine IAS is not sufficiently a priority for action to be supported by the national government</i>
	3. Rate of new IAS introduction events in marine ecosystems	1 new alien species every 4 weeks between 1991 and 2010 (source: Cinar, et al, 2011).	<ul style="list-style-type: none"> - Scientific monitoring program. - Scientific research and analysis by end of project, with comparable methodology to baseline source. 	End of project	Project implementation team	<ul style="list-style-type: none"> - Scientific monitoring - Scientific research and analysis by end of project, with comparable methodology to baseline source 	<p>Assumptions:</p> <ul style="list-style-type: none"> - The project timeframe is sufficient to influence outcomes within the project timeframe such that a change in the rate of new introductions can be monitored <p>Risks:</p> <ul style="list-style-type: none"> - New or minority pathways for IAS

Monitoring	Indicators	Description	Data source/Collection Methods	Frequency	Responsible for data collection	Means of verification	Assumptions and Risks
	4. National funding toward marine and coastal biosecurity and ecosystem resilience support measures in Turkey	Currently there is no national funding for marine IAS prevention. An allocation is expected before the end of the project.	Annual budget proposals/ approvals of relevant ministries.	End of project	Project implementation team	Relevant budget lines of funding from MoFWA, MFAL, MEU, and MTMAC.	<p>introductions become more significant</p> <p>Assumptions:</p> <ul style="list-style-type: none"> - The national economic situation does not catastrophically change for the worse - Addressing marine IAS remains a priority among national institutional partners - Project outputs make the case that investing in prevention, control and mitigation of IAS is a cost-effective government strategy <p>Risks:</p> <ul style="list-style-type: none"> - Socio-economic or political events distract from the government's attention on addressing and investing in marine IAS
Outcome 1: Effective national policy framework	5. Existence and functioning of national coordination	National coordination mechanism will be established and it will oversee IAS national strategy implementation.	Project reports Project board meeting notes	Annually	Project Technical Coordinator	GEF IAS Tracking tool, cell C48	<p>Assumptions:</p> <ul style="list-style-type: none"> - It is in the interest of all relevant national

Monitoring	Indicators	Description	Data source/Collection Methods	Frequency	Responsible for data collection	Means of verification	Assumptions and Risks
on Invasive Alien Species	mechanism [links to GEF BD indicator 4.1]						<p>stakeholders to participate in and contribute to national coordination mechanism</p> <p>Risks:</p> <ul style="list-style-type: none"> - Issues related to institutional mandates undermine the functionality of the national coordination mechanism
	6. Existence and level of implementation of national IAS strategy for marine ecosystems [links to GEF BD indicator 4.1]	National IAS strategy will be prepared and implementation will start.	Adopted official national strategy document.	Annually	Project Technical Coordinator	GEF IAS Tracking tool, cell C50	<p>Assumptions:</p> <ul style="list-style-type: none"> - The project has sufficient time and resources to support development of a national marine IAS strategy, have it adopted, and begin implementation - The requirements of the Ballast Water Convention are not so overwhelming that appropriate regulations cannot be developed, and adopted, and under
	7. Status of national policy and regulatory framework related to IAS in marine ecosystems [links to Aichi Target 9 indicator on countries adopting relevant national legislation] [links to GEF BD indicator 4.1]	Currently there is no IAS specific regulation. At the end of the project, IAS related regulations will be under implementation	Official adopted legislations Ministry annual reports regarding the implementation of legislations	Annually	Project implementation team Project consultants	GEF IAS Tracking tool, cell C52	

Monitoring	Indicators	Description	Data source/Collection Methods	Frequency	Responsible for data collection	Means of verification	Assumptions and Risks
							<p>implementation before the end of the project.</p> <p>Risks:</p> <ul style="list-style-type: none"> - Ballast Water Convention requirements are too oppressive to be regulated within the time frame of the project - Development of a national marine IAS strategy faces unforeseen challenges
	8. Existence of fiscal incentive mechanisms for control or eradication of IAS in marine ecosystems	Currently there is no incentive mechanism for IAS. The project will introduce and test several.	Project reports Success stories/ best cases for incentive demos	Annually	Project implementation team Project consultants	Project documents and records	<p>Assumptions:</p> <ul style="list-style-type: none"> - Fiscal incentive mechanisms proposed by the project are well-developed and responsive to local conditions and circumstances - Fiscal incentive mechanisms are adequately designed to have an impact on the targeted marine IAS populations <p>Risks:</p> <ul style="list-style-type: none"> - Insufficient financial resources

Monitoring	Indicators	Description	Data source/Collection Methods	Frequency	Responsible for data collection	Means of verification	Assumptions and Risks
							available to make fiscal incentive mechanisms effective in engaging local resource users and having an impact on the targeted marine IAS species
Outcome 2: Increased capacity and improved knowledge and information sharing systems to address IAS threats	9. Existence of detection, delimiting and monitoring surveys	No systematic – regular detection surveys currently. By the project end there will be systematic surveys with specific IAS targets.	Scientific survey programs Results regarding specific IAS	Annually	Project implementation team Consultants	GEF IAS Tracking tool, cell C56	Assumptions: - Government and stakeholders have technical capacity to undertake a systematized approach to detection surveys - Detection surveys can be organized in a strategic and cost-effective manner to monitor potential presence of the most threatening and harmful marine IAS Risks: - Systematized detection surveys are too resource-intensive in Turkey's extensive national waters
	10. Identification and management of	Today, main invasion pathways of IAS are known and documented. They will be actively managed and	Key ministry interventions, regulations.	Annually	Project implementation unit	GEF IAS Tracking tool, cell C54	Assumptions: - Current lower priority pathways

Monitoring	Indicators	Description	Data source/Collection Methods	Frequency	Responsible for data collection	Means of verification	Assumptions and Risks
	priority pathways (shipping sector)	systematically monitored by the end of the project.			Project consultants		<p>do not increase in importance</p> <ul style="list-style-type: none"> Ballast Water Convention is implemented in Turkey <p>Risks:</p> <ul style="list-style-type: none"> Ballast Water Convention is not implemented in Turkey
	11. Availability of current data on IAS to decision-makers and ecosystem managers in multiple institutions	Currently, no knowledge management system in Turkey. Project will put in place a place open to public.	Knowledge management database Number of active users for database	End of project	Project Technical Coordinator	Project reports Database user statistics	<p>Assumptions:</p> <ul style="list-style-type: none"> Barriers related to multi-institutional reporting and data aggregation are not insurmountable <p>Risks:</p> <ul style="list-style-type: none"> Technical challenges cannot be overcome with the available project time and resources
	12. National capacity to implement and enforce Ballast Water Convention	BWC is signed by Turkey but it is not under implementation. Upon adoption, the following indicators are expected to realize: - >50% of ships docking at Turkish ports have Ballast Water Management Plans and Ballast Water Record Books - >50% of ships docking at Turkish ports have approved ballast water	MTMAC statistics, records, reports	Annually	Project implementation unit Project consultants	Project documents and records; verification at mid-term review and terminal evaluation by independent external experts based on qualitative data collection from private sector (shipping sector) and national authorities	<p>Assumptions:</p> <ul style="list-style-type: none"> Implementation of the Ballast Water Convention within Turkey is feasible <p>Risks:</p> <ul style="list-style-type: none"> Even with project support national authorities do not have capacity and

Monitoring	Indicators	Description	Data source/Collection Methods	Frequency	Responsible for data collection	Means of verification	Assumptions and Risks
		<p>management systems (BWC regulation D-3), and meet BWC Regulation D-2: Ballast Water Performance Standard</p> <ul style="list-style-type: none"> - >50% of ships carrying foreign ballast water in Turkish waters are surveyed and certified - Ports receiving >75% of ballast water by volume have reception facilities for the reception of sediments - 100% of ballast water entering Turkish waters is tracked and monitored for management - No ballast water exchanges occur within 50 nautical miles of Turkish land - Feasibility assessment conducted for designation of ballast water exchange zones within Turkey's territorial waters 					<p>resources necessary to support implementation of the Ballast Water Convention</p> <ul style="list-style-type: none"> - Technical barriers related to Turkish ports, equipment availability, or other issues delay Ballast Water Convention implementation
	<p>13. Scientific publications produced based on project work to address key data and knowledge gaps for improved development of policy and implementation of management and control measures</p>	<p>The following scientific publications will be prepared under the project:</p> <ul style="list-style-type: none"> - Update on key pathways and distribution of marine IAS in Turkey - Analysis of ecological impacts of marine IAS in Turkey's marine and coastal ecosystems - Analysis of socio-economic impacts of marine IAS in Turkey's marine and coastal ecosystems 	<p>Project reports</p> <p>Survey/ research reports</p>	<p>Annually</p>	<p>Project Technical Coordinator</p> <p>Consultants</p>	<p>Project reports</p>	<p>Assumptions:</p> <ul style="list-style-type: none"> - Sufficient time provided in project implementation for activities to produce results that can be scientifically documented, and then scientific papers published

Monitoring	Indicators	Description	Data source/Collection Methods	Frequency	Responsible for data collection	Means of verification	Assumptions and Risks
Outcome 3: Sustainable management, prevention, eradication, and restoration of IAS and degraded habitat		- Results of piloting fiscal incentive programs for marine IAS removal					Risks: <ul style="list-style-type: none"> Project does not contribute to scientific results that are worthy of publishing
	14. Level of knowledge and understanding relating to marine IAS: a. Among local populations (with additional targeted sub-set of tourism operators) in project pilot sites b. Among school-age children in project pilot sites c. Among national and local (in project pilot sites) government officials in relevant institutions	The knowledge of specific local communities about IAS will increase among local people, school children and local and national government officials.	Results of annual tracking survey made by the project	Annually	Project implementation team Project consultants	Annual tracking survey reports Project reports	Assumptions: <ul style="list-style-type: none"> Project education and awareness raising activities can reach a sufficient number of people to modify resource-user behavior as appropriate Risks: <ul style="list-style-type: none"> Project does not succeed in leveraging effective communication channels to reach targeted audiences
	15. Trend in status of native biodiversity indicator species in targeted marine environments	Trends of selected key species improves: - <i>Mytilus galloprovincialis</i> in Igneada and Marmara Islands; - Seagrass beds in Ayvalik Islands; - Small fish stocks (lion fish prey species) in Hatay-Samandag region.	Monitoring survey results made by the project for measuring the impact of fiscal incentive programs and other management and control measures	Annually	Project consultants Project implementation team	Survey reports Project reports	Assumptions: <ul style="list-style-type: none"> Project efforts to support the resilience of native biodiversity will be effective within the timeframe of the project Risks:

Monitoring	Indicators	Description	Data source/Collection Methods	Frequency	Responsible for data collection	Means of verification	Assumptions and Risks
at key marine and coastal areas							<ul style="list-style-type: none"> Negative impacts of marine IAS on native biodiversity are not sufficiently understood to carry out approaches that are effective in supporting native biodiversity The project may not be able to demonstrate the effectiveness of management and control measures within the timeframe of the project
	16. Application of best management practices in project target areas	Funding for sustained and ongoing management and monitoring of the target area is secured.	Official budget lines in place for management practices	Annually	Project implementation team	GEF IAS Tracking tool, cell C58	<p>Assumptions:</p> <ul style="list-style-type: none"> The site-based local marine IAS management plans sufficiently reflect best practices <p>Risks:</p> <ul style="list-style-type: none"> Implementation of best practices requires technical capacity or financial resources that are beyond the short-term accessibility of local stakeholders

Monitoring	Indicators	Description	Data source/Collection Methods	Frequency	Responsible for data collection	Means of verification	Assumptions and Risks
	17. Level of resource management planning related to IAS in pilot sites	Currently, there is no IAS related management planning in project pilot sites. Management plans will be prepared, adopted and implemented by the end of project period.	Results and findings of site visits and assessments for PIR reporting, mid-term review and terminal evaluation.	Various	Independent experts Project implementation team	PIR reports Mid-term evaluation report Terminal report	<p>Assumptions:</p> <ul style="list-style-type: none"> It is in the interest of all relevant local stakeholders to develop and implement IAS-specific management plans <p>Risks:</p> <ul style="list-style-type: none"> Local authorities and resource users see marine IAS as a low priority, and are focused on other short-term priorities
Cross-cutting: Gender mainstreaming during implementation	18. Consistency of project gender mainstreaming approach with project plans	<p>Gender mainstreaming carried out during project implementation, as indicated by:</p> <ul style="list-style-type: none"> Project Technical Working Group and local stakeholder working groups have gender balance or include a gender mainstreaming representative; Policies, laws, and regulations developed with project support include gender perspectives, as relevant Fiscal incentive programs, and other management and control measures implemented at the site level are designed incorporating gender perspectives as relevant Project events and activities (e.g. trainings) ensure gender balance 	<p>Monitoring via annual project reporting (PIR) by project team;</p> <p>Verification at mid-term review and terminal evaluation by independent external experts</p>	Annually	Independent experts Project implementation team	PIR reports Mid-term evaluation report Terminal report	<p>Assumptions:</p> <ul style="list-style-type: none"> All relevant stakeholders support or are in accordance with gender mainstreaming efforts undertaken by the project <p>Risks:</p> <ul style="list-style-type: none"> Relevant stakeholders see gender mainstreaming efforts in the context of marine IAS as irrelevant and trivializing to substantive

Monitoring	Indicators	Description	Data source/Collection Methods	Frequency	Responsible for data collection	Means of verification	Assumptions and Risks
		among invited participants, as feasible - Project education and awareness activities are developed and carried out incorporating gender perspectives, as relevant					gender mainstreaming issues in other more relevant contexts, thereby reducing stakeholder buy-in for this cross-cutting issue
Mid-term GEF Tracking Tool (if FSP project only)	N/A	N/A	Standard GEF Tracking Tool available at www.thegef.org Baseline GEF Tracking Tool included in Annex.	After 2 nd PIR submitted to GEF	For example, national university; project consultant but not evaluator	Completed GEF Tracking Tool	Assumptions: - Collection of the GEF Tracking tool data will be supported by national government and private sector stakeholders - Scientific monitoring data on native biodiversity and IAS in project sites will be available
Terminal GEF Tracking Tool	N/A	N/A	Standard GEF Tracking Tool available at www.thegef.org Baseline GEF Tracking Tool included in Annex.	After final PIR submitted to GEF	For example, national university; project consultant but not evaluator	Completed GEF Tracking Tool	Risks: - GEF Tracking Tool is not sufficiently self-explanatory to be completed in a consistent manner
Mid-term Review (if FSP project only)	N/A	N/A	To be outlined in MTR inception report	Submitted to GEF same year as 3 rd PIR	Independent evaluator	Completed MTR	Assumptions: - Project team and stakeholders will comply with UNDP and GEF

Monitoring	Indicators	Description	Data source/Collection Methods	Frequency	Responsible for data collection	Means of verification	Assumptions and Risks
							<p>monitoring requirements, and will support the mid-term review process and provide data as necessary and requested in a timely and transparent manner</p> <p>Timing of the mid-term review can be scheduled such that key stakeholders can be interviewed</p> <p>Risks:</p> <ul style="list-style-type: none"> Qualified international expert to conduct mid-term review cannot be recruited and contracted at time required for mid-term review
Environmental and Social risks and management plans, as relevant.	N/A	N/A	Updated SESP and management plans	Annually	Project Technical Coordinator UNDP CO	Updated SESP	N/A

Annex C. Evaluation Plan

Evaluation Title	Planned start date Month/year	Planned end date Month/year	Included in the Country Office Evaluation Plan	Budget for consultants	Other budget (i.e. travel, site visits etc...)	Budget for translation
Mid-term Review	July 2020	August 2020	Yes	\$25,000	\$5,000	\$2,000
Terminal Evaluation	September 2022	October 2022	Yes	\$35,000	\$5,000	\$3,000
Total evaluation budget				USD \$75,000		

Annex D. GEF-6 IAS Tracking Tool

Please see accompanying Excel document.

Annex E. Terms of Reference for Project Board, Technical Advisory Group, Project Technical Coordinator and Project Associate

Terms of Reference: Project Board

The Project Board will:

- Ensure that there is coherent project organization at both the National and Local Council levels
- Following agreement, set tolerances in the Annual Work Plans and other plans as required with the Project Technical Coordinator, with the involvement of the Project Director (as necessary)
- Monitor and control the progress of the project activities at a strategic level considering the changes influenced by the project on any baseline investments
- Ensure that risks are being tracked and mitigated as effectively as possible
- Organize Project Board meetings, to be Chaired by the Project Director, on a regular basis to be defined by the Board in agreement with the Project Director and Project Technical Coordinator. Normally these meetings will take place semi-annually or annually.
- Review and assess progress towards achieving the outputs is consistent from a project supplier perspective
- Promote and maintain focus to deliver the outputs from the project
- Ensure that the resources from the project supplier are readily available
- Arbitrate on, and ensure resolution of any supplier priority or resource conflicts
- Ensure that the expected project outputs and related activities of the project remains consistent with the perspective of project beneficiaries
- Be informed of meetings relevant to overall national project implementation, including any regional activities conducted in partnership
- Facilitate national policy and institutional changes necessary to engender success in project activities.
- Annually review project progress and make managerial and financial recommendations as appropriate, including recruitment for the Project Management Unit, review and approval of annual reports, budgets and workplans.

The specific responsibilities of the Project Board are outlined below:

- Defining a project
 - Review and approve the Initiation Plan (if such plan was required and submitted to the Local PAC)
- Initiating a project
 - Agree on Project Coordinator's responsibilities, as well as the responsibilities of the other members of the Project Management Unit;
 - Delegate any Project Assurance function as appropriate;
 - Review the Progress Report for the Initiation Stage (if an Initiation Plan was required);
 - Review and appraise detailed Project Plan and Annual Work Plan, including Atlas reports covering activity definition, quality criteria, issue log, updated risk log and the monitoring and communication plan.
- Running a project
 - Provide overall guidance and direction to the project, ensuring it remains within any specified constraints;
 - Address project issues as raised by the Project Coordinator;
 - Provide guidance and agree on possible countermeasures/management actions to address specific risks;
 - Agree on Project Coordinator's tolerances in the Annual Work Plan and quarterly plans when required;
 - Conduct regular meetings to review the Project Quarterly Progress Report and provide direction and recommendations to ensure that the agreed deliverables are produced satisfactorily according to plans.
 - Review Combined Delivery Reports (CDR) prior to certification by the Implementing Partner;
 - Appraise the Project Annual Review Report, make recommendations for the next Annual Work Plan, and inform the Outcome Board about the results of the review.
 - Review and approve end project report, make recommendations for follow-on actions;

- Provide ad-hoc direction and advice for exception situations when Project Technical Coordinator's tolerances are exceeded;
- Assess and decide on project changes through revisions;
- Closing a project
 - Assure that all Project deliverables have been produced satisfactorily;
 - Review and approve the Final Project Review Report, including Lessons-learned;
 - Make recommendations for follow-on actions to be submitted to the Outcome Board;
 - Commission project evaluation (only when required by partnership agreement)
 - Notify operational completion of the project to the Outcome Board
- Specific Responsibilities of Executive (as part of the above responsibilities for the Project Board)
 - Ensure that there is a coherent project organization structure and logical set of plans
 - Set tolerances in the Annual Work Plan and other plans as required for the Project Technical Coordinator
 - Monitor and control the progress of the project at a strategic level
 - Ensure that risks are being tracked and mitigated as effectively as possible
 - Brief Outcome Board and relevant stakeholders about project progress
 - Organize and chair Project Board meetings
 - The Executive is responsible for overall assurance of the project as described below. If the project warrants it, the Executive may delegate some responsibility for the project assurance functions.
- Specific Responsibilities of Senior Supplier (as part of the above responsibilities for the PB)
 - Make sure that progress towards the outputs remains consistent from the supplier perspective
 - Promote and maintain focus on the expected project output(s) from the point of view of supplier management
 - Ensure that the supplier resources required for the project are made available
 - Contribute supplier opinions on Project Board decisions on whether to implement recommendations on proposed changes
 - Arbitrate on, and ensure resolution of, any supplier priority or resource conflicts
- The supplier assurance role responsibilities are to:
 - Advise on the selection of strategy, design and methods to carry out project activities
 - Ensure that any standards defined for the project are met and used to good effect
 - Monitor potential changes and their impact on the quality of deliverables from a supplier perspective
 - Monitor any risks in the implementation aspects of the project.
- Specific Responsibilities of Senior Beneficiary (as part of the above responsibilities for the Project Board)
 - Ensure the expected output(s) and related activities of the project are well defined
 - Make sure that progress towards the outputs required by the beneficiaries remains consistent from the beneficiary perspective
 - Promote and maintain focus on the expected project output(s)
 - Prioritize and contribute beneficiaries' opinions on Project Board decisions on whether to implement recommendations on proposed changes
 - Resolve priority conflicts.
- The assurance responsibilities of the Senior Beneficiary are to check that:
 - Specification of the Beneficiary's needs is accurate, complete and unambiguous
 - Implementation of activities at all stages is monitored to ensure that they will meet the beneficiary's needs and are progressing towards that target
 - Impact of potential changes is evaluated from the beneficiary point of view
 - Risks to the beneficiaries are frequently monitored.

Terms of Reference: Project Technical Advisory Group

The Technical Advisory Group shall:

- Serve as a source of information concerning available country resources for all aspects of project implementation, including data;
- Provide governance assistance, policy guidance and political support in order to facilitate and catalyze implementation of the project, and to ensure relevant project outcomes are appropriately raised for incorporation into other national policy processes, programs, and national actions;
- Technically guide the project through advice and support as necessary to catalyze implementation of the project.
- Annually review program progress and make recommendations as appropriate;

Recruitment processes for project positions will adhere to the “Gender-Sensitive Guidelines for Recruitment and Selection of Candidates: Assessment of Gender-Related Competencies”, which are included as Annex 3 in the UNDP Turkey Country Office Gender Equality Strategy 2016-2020.

Terms of Reference: Project Technical Coordinator

Background

The Project Technical Coordinator (PTC), will be a locally recruited national selected based on an open competitive process. He/she will be responsible for the overall management of the project, including technical coordination and the mobilization of all project inputs, supervision over project staff, consultants and sub-contractors. The PTC will be tasked with the day-to-day management of project activities, as well as with substantive, financial and administrative reporting. The PTC's prime responsibility is to ensure that the project produces the planned outputs and achieves the planned indicators and indicator targets by undertaking necessary activities specified in the project document to the required standard of quality and within the specified constraints of time and cost. This will require linking the indicators to the work plan to ensure Results-Based Management.

The PTC will report to the UNDP Turkey CO for all of the project's substantive and administrative issues. The PTC will be responsible for meeting government obligations under the project and will perform a liaison role with the Government, UNDP and other UN Agencies, NGOs and other project partners.

Duties and Responsibilities

- Supervise and coordinate the project to ensure its results are in accordance with the Project Document and the rules and procedures established in the UNDP Programming Manual
- Assume primary responsibility for daily project management - both organizational and substantive matters – budgeting, planning and general monitoring of the project
- Ensure adequate information flow, discussions and feedback among the various stakeholders of the project
- Ensure adherence to the project's work plan, prepare revisions of the work plan, if required
- Assume overall responsibility for the proper handling of logistics related to project workshops and events
- Prepare, and agree with UNDP on, terms of reference for national and international consultants and subcontractors
- Guide the work of consultants and subcontractors and oversee compliance with the agreed work plan
- Maintain regular contact with UNDP Turkey Country Office and the Government counterpart on project implementation issues of their respective competence
- Monitor the expenditures, commitments and balance of funds under the project budget lines, and draft project budget revisions
- Assume overall responsibility for meeting financial delivery targets set out in the agreed annual work plans, reporting on project funds and related record keeping

- Liaise with project partners to ensure their co-financing contributions are provided within the agreed terms
- Assume overall responsibility for reporting on project progress vis-à-vis indicators in the logframe
- Undertake any other actions related to the project as requested by UNDP or the Government
- Provide technical assistance and co-ordination for outcomes of the project
- Assuring technical co-ordination among consultants to be hired

Qualifications

- Proven management expertise – must be able to fluidly handle the political, technical, and people management challenges that the PTC will face on a daily basis.
- A university and/or a higher degree in related fields;
- At least 8 years of experience in natural resource management or project/programme management;
- At least 5 years of project/programme management experience;
- Working experience with ministries, national institutions and marine sector in Turkey;
- Ability to effectively coordinate a large, multi-stakeholder project;
- Ability to administer budgets, train and work effectively with counterpart staff at all levels and with all groups involved in the project;
- Strong drafting, presentation and reporting skills;
- Strong computer skills, in particular mastery of all applications of the MS Office package and internet search;
- Strong knowledge of marine conservation and/or IAS issues in Turkey, including the political, institutional and socio-economic contexts;
- Strong knowledge and experience on regional and international fishery and/or marine conservation strategies, programmes and implementations
- Excellent writing and communication skills in English.

Terms of Reference: Project Associate

Background

The Project Associate (PA), will be a locally recruited national selected based on an open competitive process. He/she will report to the Project Technical Coordinator (PTC) and assist the PTC in the coordination of the UNDP-GEF project. S/he will oversee support activities in substantive and administrative project implementation including drafting ToRs, assisting information flow, drafting annual work plan, procurement, recruitment and operations logistics. S/he will assess support requirements against project objectives and operating environment. In addition to the administrative tasks, the PA will support the PTC on technical tasks by undertaking necessary activities specified in the project document to the required standard of quality and within the specified constraints of time and cost. Thus, qualification of the PA position for this project includes knowledge and experience in natural resource management focusing marine ecosystem and conservation.

Duties and Responsibilities

- Provide technical assistance and co-ordination for related activities under outputs
- Assisting the PTC for technical co-ordination among consultants to be hired
- Assist the PTC in managing the project staff
- Assist the PTC in formulation of technical ToR for key project expert positions
- Assist the PTC and the project experts to ensure that project experts' results are delivered on time
- Assist the PTC in development of specifications for procurement of specialized equipments
- Assist in screening of options in mapping of project sites

- Prepare GEF quarterly project progress reports, as well as any other substantive and administrative reports requested by the Executing Agency and UNDP
- Act as PTC in case of his/her absence
- Overall, provide all necessary support to the PTC in implementation of the project, both at substantive and administrative sides
- Provide general administrative support to ensure the smooth running of the PMU
- During visits of international experts, manage their visa support, transportation, hotel accommodation etc.
- Monitor the use of non-expendable equipment (record keeping, drawing up regular inventories)
- Arrange duty travel
- Perform any other substantive and administrative duties as requested by the PTC

Qualifications

- University degree in Engineering, Management or Environmental Sciences or related fields;
- At least 2 years of experience in natural resource management
- 6 years of experience in the area of project management at medium and small scale;
- Solid experience of planning and reporting on foreign funded projects;
- Basic knowledge of marine conservation and/or IAS issues in Turkey, including the political, institutional and socio-economic contexts
- Good secretarial skills and good organizational capacity;
- Knowledge in administrative procedures of the Government;
- Good computer skills in common word processing (MS Word), spreadsheet (MS Excel), and accounting software;
- Appropriate English and Turkish language skills, both spoken and written.

Annex F. UNDP Social and Environmental and Social Screening Protocol (SESP)

Project Information

Project Information	
1. Project Title	Addressing Invasive Alien Species Threats at Key Marine Biodiversity Areas
2. Project Number	ATLAS Project ID: 00101497; UNDP PMIS: 5733; GEF PIMS: 9233;
3. Location (Global/Region/Country)	Turkey

Part A. Integrating Overarching Principles to Strengthen Social and Environmental Sustainability

QUESTION 1: How Does the Project Integrate the Overarching Principles in order to Strengthen Social and Environmental Sustainability?

Briefly describe in the space below how the project mainstreams the human-rights based approach

This GEF funded project has been developed in full compliance with a human-rights based approach to development, which is among the main approaches applied to improve the practice of conservation of globally important biodiversity. The project is fully in-line with and supportive of Turkey's UN Development Cooperation Strategy 2016-2020. Through improved management and control of marine IAS the project will strengthen human rights related to access and use of marine ecosystems and species. The project will contribute to the sustainable development of communities neighboring marine ecosystems, which fundamentally enhances human rights. Although the project is not expected to have any negative implications for human rights in any way, project activities, especially at the site level, will be carried out with due process and consultation with neighboring communities. In particular the project will work closely with fishing communities that have a vested interest in the sustainability and ecological condition of marine resources. The location of the proposed project demonstration sites within Turkey means that no refugee populations will be affected in any way.

All government partners at the national and local level will be included in capacity development activities related to the management and control of marine IAS. All capacity development activities will ensure attention to any potential link between the control and management of marine IAS and human rights related issues. Any regulations, policies, management plans, or other such documents produced by the project at the national or local level will retain awareness of any possible effect (none anticipated) on the ability of human rights duty bearers to fulfill their duties or on human rights holders to claim their rights. The project's pilot fiscal incentive schemes for the control and removal of marine IAS have also been designed to ensure the mainstreaming of a human-rights based approach, as relevant. For example, the fiscal incentive schemes are designed to allow equal access for participation by all interested parties, and will also ensure that any marine IAS control and management measures do not adversely affect populations of native biodiversity, particularly economically important species.

All the above mentioned human-rights based activities will be supported by national and local level advocacy and awareness raising campaigns on the management and control of marine IAS, which inherently promotes human rights including the universal basic right for a clean and sustainable environment for this and future generations.

Briefly describe in the space below how the project is likely to improve gender equality and women's empowerment

This project document has been developed in compliance with the corresponding "Guide to Gender Mainstreaming in UNDP Supported GEF Financed Projects". Thus, gender equality aspects will be considered as appropriate while developing capacities on the systemic, institutional and individual level. For this, a project gender mainstreaming action plan will be developed and annually updated within the project implementation period. Particularly, on the national level, women will be involved in the improvement of the enabling framework on biodiversity conservation relating to the management and control of marine IAS, and supported to incorporate gender smart solutions, where relevant. For

example, the project will ensure representative participation by women in all capacity development activities, in accordance with the actual staffing of government partners. In other words, any women employees in relevant positions in partner institutions will participate in capacity development activities.

UNDP and the government partner institutions will also ensure appropriate gender balance and representation in project staffing, including staffing of the project management unit, and the hiring of technical experts. In addition, the UNDP Turkey Country Office maintains a gender specialist, who will monitor the implementation of the project to identify any opportunities or risks related to gender mainstreaming.

Briefly describe in the space below how the project mainstreams environmental sustainability

This GEF funded and UNDP implemented project has the direct effect of mainstreaming environmental sustainability, as the specific objective of the project is to improve the status of Turkey's marine biodiversity. This will be mainstreamed through strengthening the capacity of relevant government partner institutions at the national and local levels to manage and control marine IAS in Turkey's coastal waters. Furthermore, the project activities include education and awareness measures targeting local government institutions, local communities, and other stakeholders. The education and awareness campaign will increase the understanding and awareness of the threat from marine IAS, and contribute to improved implementation of management and control measures. For example, local boat operators and diving clubs will have improved understanding about measures they must take to avoid introducing or spreading marine IAS in Turkey's coastal waters. The project will also work with the private sector shipping industry to increase this awareness and understanding of management and control of marine IAS, in support of implementation of the Ballast Water Convention.

Part B. Identifying and Managing Social and Environmental Risks

QUESTION 2: What are the Potential Social and Environmental Risks? <i>Note: Describe briefly potential social and environmental risks identified in Attachment 1 – Risk Screening Checklist (based on any “Yes” responses). If no risks have been identified in Attachment 1 then note “No Risks Identified” and skip to Question 4 and Select “Low Risk”. Questions 5 and 6 not required for Low Risk Projects.</i>	QUESTION 3: What is the level of significance of the potential social and environmental risks? <i>Note: Respond to Questions 4 and 5 below before proceeding to Question 6</i>	QUESTION 6: What social and environmental assessment and management measures have been conducted and/or are required to address potential risks (for Risks with Moderate and High Significance)?		
Risk Description	Impact and Probability (1-5)	Significance (Low, Moderate, High)	Comments	Description of assessment and management measures as reflected in the Project design. If ESIA or SESA is required note that the assessment should consider all potential impacts and risks.
Risk 1: “Standard 1.2 Are any Project activities proposed within or adjacent to critical habitats and/or environmentally sensitive areas, including legally protected areas (e.g.	I = 1 (negligible) P = 5 (expected)	Low	One of the four proposed project demonstration sites in Ayvalik Islands includes the territory of the Ayvalik Islands Nature Park. This is an IUCN class V protected area, covering 19,624 hectares, includes 13,969	NOT REQUIRED FOR LOW RISK PROJECTS



<p><i>nature reserve, national park), areas proposed for protection, or recognized as such by authoritative sources and/or indigenous peoples or local communities? – YES”</i></p> <p>Three of the four proposed project demonstration sites (Ayvalik Islands, Igneada, and Hatay-Samandag) include or border protected areas, or other critical habitats / environmentally sensitive areas. The fourth site, Marmara Islands, currently does not have any particular protected status or regime, but the area is being considered for potential future protection status.</p>		<p>hectares of marine habitat and approximately 112 hectares of coastal habitat. The goal of the project activities will be to improve the condition of biodiversity at the site through the control of notable IAS, and through improvement to the general ecosystem conditions in the protected area in order to strengthen native biota's resistance to alien species invasions. No negative impacts to critical habitats or environmentally sensitive areas are foreseen as a result of project activities (in fact, the contrary is expected).</p> <p>Another proposed project demonstration site, in Igneada, is immediately adjacent to the terrestrial Igneada Floodplain Forest Natural Park (IUCN class V protected area). However, considering that the proposed project activities are targeted for the marine ecosystem, no impact is foreseen on the critical habitats and environmentally sensitive areas of the Igneada protected area. The project may work to address some land-based threats (e.g. water pollution / runoff) to the marine ecosystem in order to strengthen the natural resilience of the native biota to alien species invasions, but if the project is successful in these efforts it is only expected that there would be positive impacts on the neighboring protected area.</p> <p>A third proposed project demonstration site includes the beach and coastal area of Hatay-Samandag. This area does not have formal protected status, but there are some protective regulations in place that are intended to conserve the beach as a nesting site for endangered sea turtles. Again, in this instance, all project activities targeted at addressing IAS are only expected to improve the condition of critical habitats and environmentally sensitive areas of Hatay-Samandag.</p>
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<p>Risk 2: "Standard 1.7 Does the Project involve the production and/or harvesting of fish populations or other aquatic species? - YES"</p> <p>The project will involve the control of invasive alien marine species, including fish, mollusks, and echinoderms.</p>	<p>I = 1 (negligible) P = 5 (expected)</p>	<p>Low</p>	<p>In each of the four demonstration sites (as well as at the national level, more broadly) the project aims to demonstrate IAS control measures in the marine environment. All activities in this respect are intended to benefit the condition of populations of native marine species. The project activities will naturally involve the likely reduction of populations of IAS species in the targeted areas. For example, in Hatay-Samandag, the project will work to control invasive lionfish (<i>Pterois</i> spp.) and balloon fish. In Igneada and Marmara islands the project will work to control invasive veined whelk (<i>Rapana venosa</i>). In Marmara the project will work to control invasive north Atlantic sea stars (<i>Asterias rubens</i>). The control measures for IAS will not involve the "production" or "harvesting" of these species for economic use, with a few possible minor exceptions. The veined whelk is considered an economically valuable species (although it is an IAS species), and therefore the veined whelk individuals removed from the ecosystem may be sold for commercial purposes by the local fishers who harvest them based on the incentives proposed by the project. In addition, the lionfish can be consumed by people, although a market for it does not currently exist in Turkey; therefore the project may work to incentive the harvesting and commercial sale of this species.</p>	<p>NOT REQUIRED FOR LOW RISK PROJECTS</p>
<p>Risk 3: "Standard 2.2 Would the potential outcomes of the Project be sensitive or vulnerable to potential impacts of climate change? - YES"</p> <p>The long-term status of both native species populations and IAS populations could be affected by climate change in the future. For example, there are suggestions that a warming of certain marine ecosystems in Turkey's coastal waters, such as the northern Aegean sea, could facilitate the expansion of IAS into areas they cannot currently colonize.</p>	<p>I = 2 (minor) P = 2 (not likely)</p>	<p>Low</p>	<p>Although climate change is a certainty, its possible effect on the biodiversity (native, and alien) of Turkey's marine ecosystems is not clear. There is no question that climate change is occurring and affecting Turkey's coastal and marine ecosystems. Currently the rate of change is not so great as to catalyze ecosystem changes that would potentially supersede the project's results. In any case, climate change would not be expected to affect the project's <u>outcomes</u>, it would only have possible effects at the <u>impact level</u>. In this regard however, the project results would be expected to improve the potential climate resiliency of Turkey's native marine biodiversity, and potentially reduce the resiliency of some IAS, due to control measures. Nonetheless, the</p>	<p>NOT REQUIRED FOR LOW RISK PROJECTS</p>

			<p>project will mitigate this risk by tracking some climate change indicators in the project demonstration sites (e.g. water temperature trends), and will continually assess if climate change is leading to any catastrophic changes in relation to the colonization and expansion of marine IAS. If it is identified that catastrophic changes are occurring, the project will re-direct and re-plan project resources and activities, as appropriate, to address these challenges. The Project Board will make any decision along these lines, with technical input from the project Technical Advisory Group.</p>	
QUESTION 4: What is the overall Project risk categorization?				
Select one (see SESP for guidance)			Comments	
	Low Risk	X	All identified potential SESP risks are considered "low" significance. The overall project is considered low risk with respect to SESP issues. The objective of the project specifically includes improvement of environmental and social conditions in the target area, including improved gender mainstreaming.	
	Moderate Risk			
	High Risk			
QUESTION 5: Based on the identified risks and risk categorization, what requirements of the SES are relevant?				
Check all that apply			Comments	
Principle 1: Human Rights			NOT REQUIRED FOR LOW RISK PROJECTS	
Principle 2: Gender Equality and Women's Empowerment			NOT REQUIRED FOR LOW RISK PROJECTS	
1. Biodiversity Conservation and Natural Resource Management			NOT REQUIRED FOR LOW RISK PROJECTS	
2. Climate Change Mitigation and Adaptation			NOT REQUIRED FOR LOW RISK	

	3. Community Health, Safety and Working Conditions	PROJECTS	NOT REQUIRED FOR LOW RISK PROJECTS
	4. Cultural Heritage		NOT REQUIRED FOR LOW RISK PROJECTS
	5. Displacement and Resettlement		NOT REQUIRED FOR LOW RISK PROJECTS
	6. Indigenous Peoples	<input type="checkbox"/>	NOT REQUIRED FOR LOW RISK PROJECTS
	7. Pollution Prevention and Resource Efficiency	<input type="checkbox"/>	NOT REQUIRED FOR LOW RISK PROJECTS

Final Sign Off

Signature	Date	Description
QA Assessor 	Mr. Alia Uras, Assistant Resident Representative Environment Program, UNDP Turkey Country Office	UNDP staff member responsible for the Project, typically a UNDP Programme Officer. Final signature confirms they have "checked" to ensure that the SESP is adequately conducted.
QA Approver 	Mr. Claudio Tomasi, UNDP Country Director (CD) in the Republic of Turkey	UNDP senior manager, typically the UNDP Deputy Country Director (DCD), Country Director (CD), Deputy Resident Representative (DRR), or Resident Representative (RR). The QA Approver cannot also be the QA Assessor. Final signature confirms they have "cleared" the SESP prior to submittal to the PAC.
PAC Chair		UNDP chair of the PAC. In some cases PAC Chair may also be the QA Approver. Final signature confirms that the SESP was considered as part of the project appraisal and considered in recommendations of the PAC.

SESP Attachment 1. Social and Environmental Risk Screening Checklist

Checklist Potential Social and Environmental Risks		Answer (Yes/No)
Principles 1: Human Rights		
1.	Could the Project lead to adverse impacts on enjoyment of the human rights (civil, political, economic, social or cultural) of the affected population and particularly of marginalized groups?	No
2.	Is there a likelihood that the Project would have inequitable or discriminatory adverse impacts on affected populations, particularly people living in poverty or marginalized or excluded individuals or groups? ¹³	No
3.	Could the Project potentially restrict availability, quality of and access to resources or basic services, in particular to marginalized individuals or groups?	No
4.	Is there a likelihood that the Project would exclude any potentially affected stakeholders, in particular marginalized groups, from fully participating in decisions that may affect them?	No
5.	Is there a risk that duty-bearers do not have the capacity to meet their obligations in the Project?	No
6.	Is there a risk that rights-holders do not have the capacity to claim their rights?	No
7.	Have local communities or individuals, given the opportunity, raised human rights concerns regarding the Project during the stakeholder engagement process?	No
8.	Is there a risk that the Project would exacerbate conflicts among and/or the risk of violence to project-affected communities and individuals?	No
Principle 2: Gender Equality and Women's Empowerment		
1.	Is there a likelihood that the proposed Project would have adverse impacts on gender equality and/or the situation of women and girls?	No
2.	Would the Project potentially reproduce discriminations against women based on gender, especially regarding participation in design and implementation or access to opportunities and benefits?	No
3.	Have women's groups/leaders raised gender equality concerns regarding the Project during the stakeholder engagement process and has this been included in the overall Project proposal and in the risk assessment?	No
4.	Would the Project potentially limit women's ability to use, develop and protect natural resources, taking into account different roles and positions of women and men in accessing environmental goods and services? <i>For example, activities that could lead to natural resources degradation or depletion in communities who depend on these resources for their livelihoods and well being</i>	No
Principle 3: Environmental Sustainability: Screening questions regarding environmental risks are encompassed by the specific Standard-related questions below		
Standard 1: Biodiversity Conservation and Sustainable Natural Resource Management		
1.1	Would the Project potentially cause adverse impacts to habitats (e.g. modified, natural, and critical habitats) and/or ecosystems and ecosystem services? <i>For example, through habitat loss, conversion or degradation, fragmentation, hydrological changes</i>	No
1.2	Are any Project activities proposed within or adjacent to critical habitats and/or environmentally sensitive areas, including legally protected areas (e.g. nature reserve, national park), areas proposed for protection, or recognized as such by authoritative sources and/or indigenous peoples or local communities?	Yes

¹³ Prohibited grounds of discrimination include race, ethnicity, gender, age, language, disability, sexual orientation, religion, political or other opinion, national or social or geographical origin, property, birth or other status including as an indigenous person or as a member of a minority. References to "women and men" or similar is understood to include women and men, boys and girls, and other groups discriminated against based on their gender identities, such as transgender people and transsexuals.

1.3	Does the Project involve changes to the use of lands and resources that may have adverse impacts on habitats, ecosystems, and/or livelihoods? (Note: if restrictions and/or limitations of access to lands would apply, refer to Standard 5)	No
1.4	Would Project activities pose risks to endangered species?	No
1.5	Would the Project pose a risk of introducing invasive alien species?	No
1.6	Does the Project involve harvesting of natural forests, plantation development, or reforestation?	No
1.7	Does the Project involve the production and/or harvesting of fish populations or other aquatic species?	Yes
1.8	Does the Project involve significant extraction, diversion or containment of surface or ground water? <i>For example, construction of dams, reservoirs, river basin developments, groundwater extraction</i>	No
1.9	Does the Project involve utilization of genetic resources? (e.g. collection and/or harvesting, commercial development)	No
1.10	Would the Project generate potential adverse transboundary or global environmental concerns?	No
1.11	Would the Project result in secondary or consequential development activities which could lead to adverse social and environmental effects, or would it generate cumulative impacts with other known existing or planned activities in the area? <i>For example, a new road through forested lands will generate direct environmental and social impacts (e.g. felling of trees, earthworks, potential relocation of inhabitants). The new road may also facilitate encroachment on lands by illegal settlers or generate unplanned commercial development along the route, potentially in sensitive areas. These are indirect, secondary, or induced impacts that need to be considered. Also, if similar developments in the same forested area are planned, then cumulative impacts of multiple activities (even if not part of the same Project) need to be considered.</i>	No
Standard 2: Climate Change Mitigation and Adaptation		
2.1	Will the proposed Project result in significant ¹⁴ greenhouse gas emissions or may exacerbate climate change?	No
2.2	Would the potential outcomes of the Project be sensitive or vulnerable to potential impacts of climate change?	Yes
2.3	Is the proposed Project likely to directly or indirectly increase social and environmental vulnerability to climate change now or in the future (also known as maladaptive practices)? <i>For example, changes to land use planning may encourage further development of floodplains, potentially increasing the population's vulnerability to climate change, specifically flooding</i>	No
Standard 3: Community Health, Safety and Working Conditions		
3.1	Would elements of Project construction, operation, or decommissioning pose potential safety risks to local communities?	No
3.2	Would the Project pose potential risks to community health and safety due to the transport, storage, and use and/or disposal of hazardous or dangerous materials (e.g. explosives, fuel and other chemicals during construction and operation)?	No
3.3	Does the Project involve large-scale infrastructure development (e.g. dams, roads, buildings)?	No
3.4	Would failure of structural elements of the Project pose risks to communities? (e.g. collapse of buildings or infrastructure)	No
3.5	Would the proposed Project be susceptible to or lead to increased vulnerability to earthquakes, subsidence, landslides, erosion, flooding or extreme climatic conditions?	No
3.6	Would the Project result in potential increased health risks (e.g. from water-borne or other vector-borne diseases or communicable infections such as HIV/AIDS)?	No

¹⁴ In regards to CO₂, 'significant emissions' corresponds generally to more than 25,000 tons per year (from both direct and indirect sources). [The Guidance Note on Climate Change Mitigation and Adaptation provides additional information on GHG emissions.]

3.7	Does the Project pose potential risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during Project construction, operation, or decommissioning?	No
3.8	Does the Project involve support for employment or livelihoods that may fail to comply with national and international labor standards (i.e. principles and standards of ILO fundamental conventions)?	No
3.9	Does the Project engage security personnel that may pose a potential risk to health and safety of communities and/or individuals (e.g. due to a lack of adequate training or accountability)?	No
Standard 4: Cultural Heritage		
4.1	Will the proposed Project result in interventions that would potentially adversely impact sites, structures, or objects with historical, cultural, artistic, traditional or religious values or intangible forms of culture (e.g. knowledge, innovations, practices)? (Note: Projects intended to protect and conserve Cultural Heritage may also have inadvertent adverse impacts)	No
4.2	Does the Project propose utilizing tangible and/or intangible forms of cultural heritage for commercial or other purposes?	No
Standard 5: Displacement and Resettlement		
5.1	Would the Project potentially involve temporary or permanent and full or partial physical displacement?	No
5.2	Would the Project possibly result in economic displacement (e.g. loss of assets or access to resources due to land acquisition or access restrictions – even in the absence of physical relocation)?	No
5.3	Is there a risk that the Project would lead to forced evictions? ¹⁵	No
5.4	Would the proposed Project possibly affect land tenure arrangements and/or community based property rights/customary rights to land, territories and/or resources?	No
Standard 6: Indigenous Peoples		
6.1	Are indigenous peoples present in the Project area (including Project area of influence)?	No
6.2	Is it likely that the Project or portions of the Project will be located on lands and territories claimed by indigenous peoples?	No
6.3	Would the proposed Project potentially affect the human rights, lands, natural resources, territories, and traditional livelihoods of indigenous peoples (regardless of whether indigenous peoples possess the legal titles to such areas, whether the Project is located within or outside of the lands and territories inhabited by the affected peoples, or whether the indigenous peoples are recognized as indigenous peoples by the country in question)? <i>If the answer to the screening question 6.3 is “yes” the potential risk impacts are considered potentially severe and/or critical and the Project would be categorized as either Moderate or High Risk.</i>	No
6.4	Has there been an absence of culturally appropriate consultations carried out with the objective of achieving FPIC on matters that may affect the rights and interests, lands, resources, territories and traditional livelihoods of the indigenous peoples concerned?	No
6.5	Does the proposed Project involve the utilization and/or commercial development of natural resources on lands and territories claimed by indigenous peoples?	No
6.6	Is there a potential for forced eviction or the whole or partial physical or economic displacement of indigenous peoples, including through access restrictions to lands, territories, and resources?	No
6.7	Would the Project adversely affect the development priorities of indigenous peoples as defined by them?	No
6.8	Would the Project potentially affect the physical and cultural survival of indigenous peoples?	No

¹⁵ Forced evictions include acts and/or omissions involving the coerced or involuntary displacement of individuals, groups, or communities from homes and/or lands and common property resources that were occupied or depended upon, thus eliminating the ability of an individual, group, or community to reside or work in a particular dwelling, residence, or location without the provision of, and access to, appropriate forms of legal or other protections.

6.9	Would the Project potentially affect the Cultural Heritage of indigenous peoples, including through the commercialization or use of their traditional knowledge and practices?	No
Standard 7: Pollution Prevention and Resource Efficiency		
7.1	Would the Project potentially result in the release of pollutants to the environment due to routine or non-routine circumstances with the potential for adverse local, regional, and/or transboundary impacts?	No
7.2	Would the proposed Project potentially result in the generation of waste (both hazardous and non-hazardous)?	No
7.3	Will the proposed Project potentially involve the manufacture, trade, release, and/or use of hazardous chemicals and/or materials? Does the Project propose use of chemicals or materials subject to international bans or phase-outs? <i>For example, DDT, PCBs and other chemicals listed in international conventions such as the Stockholm Conventions on Persistent Organic Pollutants or the Montreal Protocol</i>	No
7.4	Will the proposed Project involve the application of pesticides that may have a negative effect on the environment or human health?	No
7.5	Does the Project include activities that require significant consumption of raw materials, energy, and/or water?	No

Annex G. UNDP Project Quality Assurance Report

The UNDP Project Quality Assurance Report will be attached at the appropriate point in the UNDP project document approval process.

Annex H.1 UNDP Risk Log

Table 9 Turkey Marine IAS Project Risk Assessment and Mitigation

Description	Type	Impact & Probability	Mitigation Measures	Owner	Status
Insufficient national institutional coordination to effectively implement key policies and regulations on marine IAS management and control	Organizational	Impact = 3 Probability = 2	The project plans to specifically establish an inter-ministerial coordination mechanism, which will serve as the primary mitigation measure to this risk. Nonetheless, the project touches on the institutional mandates of multiple governmental institutions in Turkey (MFWA, MFAL, MTMAC, MEU) at the national and local level. Addressing marine IAS is inherently a multi-sectoral issue. As back-up approach, if by the 3 rd year the project faces insurmountable challenges with working on marine IAS issues that are within the purview of MFAL, MTMAC, or MEU, the project will prioritize all efforts toward a.) ensuring implementation of the Ballast Water Convention in collaboration with MTMAC, and b.) working at the site level on marine IAS aspects within the institutional mandate of MFWA.	PMU	N/A
Insufficient local stakeholder buy-in to effectively implement marine IAS management and control measures over the long-term	Political	Impact = 3 Probability = 2	There are few, if any, negative risks to local stakeholders from proposed project activities, but successful long-term management and control of marine IAS does require the involvement and support of local resource-users. However, the threats posed by IAS in most cases is not easily seen, and can be long-term through degraded ecosystems, etc. This significance of this type of threat may not be immediately clear and apparent to local resource users, who may not then be motivated to act in support of IAS control and management measures. The project will work to mitigate this risk through two approaches: 1. The education and awareness raising activities that will be carried out at the site level targeting all different types of stakeholders; 2. The formation of the local IAS task force in each of the demonstration sites will involve representatives of key local stakeholder groups, who will then act as channels of communication and motivation to the wider local stakeholder community.	PMU	N/A
Lack of marine ecosystem and biodiversity data	Operational	Impact = 2 Probability = 3	Only one of the four planned demonstration sites has extensive historical biodiversity monitoring data, which presents some risks in terms of effectively organizing all planned project activities, and tracking the impact of project results over time. The project will mitigate this to the extent possible by undertaking direct ecosystem and biodiversity monitoring of key activities during the project, instead of relying on existing 3 rd party data or sources. For example, the project will specifically track the results of the fiscal incentive activities through direct monitoring to assess effectiveness.	PMU	N/A
Insufficiently robust technical approaches to managing and controlling marine IAS due to lack of experience and know-how	Operational	Impact = 4 Probability = 2	Although Turkey has a number of high quality academic institutions and many highly qualified scientists, the field of management and control of marine IAS is still essentially a new realm of marine ecosystem management in Turkey. Therefore there is little direct experience with real-world implementation of many of the technical aspects of marine IAS management and control activities that will be necessary to achieve the project objective. Therefore there is a risk that some project activities could be delayed or could face unexpected problems due to inadequate technical experience. The project will mitigate this by ensuring that the project draws on the best international practices known that are relevant for the Turkish context. This will	PMU	N/A

Description	Type	Impact & Probability	Mitigation Measures	Owner	Status
			include, for example, conducting conferences and seminars with invited international experts. The project also plans to possibly undertake study tour activities to other countries with more extensive experience in this realm, as long as they are relevant for the Turkish context.		
Inadequate stakeholder engagement related to potential institutional instability and change relating to national political context.	Operational	Impact = 3 Probability = 2	Addressing marine IAS in a comprehensive manner requires involvement of multiple national institutions, as well as coordination at the field level. The project has built in specific mechanisms to support this coordination and interaction. However, Turkey is currently undergoing some national political changes ¹⁶ that may result in changes to institutional structures or mandates in the coming years. In this context of institutional uncertainty and change it may be difficult for the project to effectively engage all necessary stakeholders during project implementation. The project will continuously monitor this risk and take adaptive management measures as necessary if this risk appears to negatively affect the project's operational approach and effectiveness.	PMU	N/A
Project activities are proposed within or adjacent to critical habitats and/or environmentally sensitive areas, including legally protected areas (e.g. nature reserve, national park), areas proposed for protection, or recognized as such by authoritative sources and/or indigenous peoples or local communities. Three of the four proposed project demonstration sites (Ayvalik Islands, Igneada, and Hatay-Samandag) include or border protected areas, or other critical habitats / environmentally sensitive areas. The fourth site, Marmara Islands, currently does not have any particular protected status or regime, but the area is being considered for potential future protection status. (Also see SESP standard 1.2)	Environmental	I = 1 (negligible) P = S (expected)	No negative impacts to critical habitats or environmentally sensitive areas are foreseen as a result of project activities (in fact, the contrary is expected).	PMU	N/A

¹⁶ Turkey held a national constitutional referendum in April 2017.

Description	Type	Impact & Probability	Mitigation Measures	Owner	Status
The project involves the production and/or harvesting of fish populations or other aquatic species. The project will involve the control of invasive alien marine species, including fish, mollusks, and echinoderms. (Also see SESP Standard 1.7)	Environmental	I = 1 (negligible) P = 5 (expected)	In each of the four demonstration sites (as well as at the national level, more broadly) the project aims to demonstrate IAS control measures in the marine environment. All activities in this respect are intended to benefit the condition of populations of native marine species. The project activities will naturally involve the likely reduction of populations of IAS species in the targeted areas. For example, in Hatay-Samandag, the project will work to control invasive lionfish (<i>Pterois</i> spp.) and balloon fish. In Igneada and Marmara islands the project will work to control invasive veined whelk (<i>Rapana venosa</i>). In Marmara the project will work to control invasive north Atlantic sea stars (<i>Asterias rubens</i>). The control measures for IAS will not involve the "production" or "harvesting" of these species for economic use, with a few possible minor exceptions. The veined whelk is considered an economically valuable species (although it is an IAS species), and therefore the veined whelk individuals removed from the ecosystem may be sold for commercial purposes by the local fishers who harvest them based on the incentives proposed by the project. In addition, the lionfish can be consumed by people, although a market for it does not currently exist in Turkey; therefore the project may work to incentive the harvesting and commercial sale of this species.	PMU	N/A
Climate change affects marine ecosystems in a manner that overwhelms the project efforts. (Also see SESP Standard 2.2)	Environmental	Impact = 2 Probability = 2	Climate change can create stress on marine ecosystems, which in turn can stress native biota. It is in such circumstances that certain marine IAS can successfully colonize marine ecosystems, and expand their presence in a way that harms and degrades native ecosystems and biota. There is no question that climate change is occurring and affecting Turkey's coastal and marine ecosystems. However, currently the rate of change is not so great as to catalyze ecosystem changes that would potentially supersede the project's results. Nonetheless, the project will mitigate this risk by tracking some climate change indicators in the project demonstration sites (e.g. water temperature trends), and will continually assess if climate change is leading to any catastrophic changes in relation to the colonization and expansion of marine IAS. If it is identified that catastrophic changes are occurring, the project will re-direct and re-plan project resources and activities, as appropriate, to address these challenges. The Project Board will make any decision along these lines, with technical input from the project Technical Advisory Group.	PMU	N/A

Annex H.2 Simplified Stakeholder Engagement Plan

Stakeholder Group	Why Included (interests)	Participation Methods		Timeline	Cost est.
		Method	Responsibility		
Ministry of Forestry and Water Affairs (MFWA)	<p>MFWA is the responsible body for conservation of biodiversity and nature in Turkey as well as management and conservation of water and forest resources. The Ministry has six general directorates: State Hydraulic Works, Nature Conservation and National Parks (GDNCNP), Forestry, Water Management, Combating Desertification and Erosion, State Meteorological Service.</p> <p>GDNCNP is responsible for the declaration and management of protected areas, ecological construction, preparing management plans for those sites, conservation of species of special concern and critical habitats, preparing development strategy, planning and drafting relevant laws and regulations, and supervising the implementation of the organization to carry out investigation, monitoring of wildlife and ecosystems.</p>	<p>MFWA will support the design, implementation, financing and mainstreaming of the IAS regulations, and policies as envisaged under Component I, but it will also oversee the implementation of the whole project. It will also ensure coordination among all project stakeholders, ensure impact and progress monitoring and information dissemination and national replication/scaling up of project lessons.</p> <p>MFWA and GDNCNP will be natural members of the project board.</p>	PMU	Ongoing	No cost beyond normal project operations.
Ministry of Food, Agriculture and Livestock (MFAL)	MFAL is the Ministry in Turkey that is responsible from management of agricultural resources and pastures, fishing waters and conservation of agricultural biodiversity as well as achieving agricultural sustainable	For the IAS project, MFAL will be responsible for upscaling of project results nationwide within their jurisdiction. Collaboration with MFAL is crucial for Marine IAS management activities. It will be	PMU	Ongoing	No cost beyond normal project operations.

	<p>development. The Ministry is the body for adopting laws and regulations regarding plant and animal epidemic prevention and quarantine, signing intergovernmental agreements, agreements to develop standards, organization, supervision of domestic animals and plants epidemic prevention and quarantine work, publishing the epidemic and responsible for the organization of extinguishing.</p> <p>The General Directorate of Fisheries and Aquaculture (GDFA) is the key department of the Ministry that is responsible from sustainable management and conservation of marine and inland water fisheries and aquaculture in Turkey.</p>	<p>involved in component 1 and 2 directly and will provide support for the other components at the technical level. Moreover, MFAL will be a member of the Project Board.</p>			
Ministry of Transport, Maritime Affairs and Communications (MTMAC)	<p>MTMAC is responsible for organizing, coordinating and guiding of shipping activities in Turkey. MTMAC has the responsibility in managing the shipping routes and management of ballast water and hence the Ministry will be the key partner to identify the alternative solutions and strategy options for ballast water and IAS. The Ministry is the focal point for the Ballast Water Convention in Turkey and is responsible from coordination of Turkish organizations</p>	<p>The Ministry will provide technical support for components 1 and 2 and will be the beneficiary of the dedicated capacity building activities on handling ballast water. MTMAC will be a member of the Project Board. General Directorate of Maritime and Inland Waters Regulation will be the focal point of the Ministry for the IAS Project.</p>	PMU	Ongoing	No cost beyond normal project operations.

	for the Convention related subjects. A				
Ministry of Environment and Urbanism (MEU)	MEU is the Ministry that is responsible from protection and management of environment, organization of public work and urban planning. Ministry is the focal point of UNFCCC in Turkey. In relation to the project, the Ministry is responsible for protection of marine environment in terms of pollution.	The General Directorate of Environmental Management of the Ministry will support the design and implementation of the quarantine measures and IAS protocols. It will be one of the key Government partners for the implementation of Components 1 and 2.	PMU	Ongoing	No cost beyond normal project operations.
Ministry of Health (MoH)	MoH is responsible for coordinating human health support services. Specifically, MoH has the responsibility in first aid and cure patients injured or poisoned by Marine Invasive Alien Species.	Education and awareness raising activities for staff of the MoH along Turkish coastline will be held on rapid treatment of IAS poisoned/injured people. They will be also involved to ensure that the volunteer ranger program (Component 3) is effectively and securely implemented.	PMU	Ongoing	No cost beyond normal project operations.
Ministry of Culture and Tourism (MCT)	MCT is responsible for organizing, coordinating and guiding of tourism activities. MCT has the responsibility in managing the tourism activities such as diving, swimming, recreational etc. Information dissemination for tourists and also to minimize/manage the negative impacts of mass tourism to vulnerable ecosystems.	The Ministry will be providing technical inputs and implementation support for the knowledge building and advocacy campaign as it is indicated in component 2.	PMU	Ongoing	No cost beyond normal project operations.
Ministry of Development (MD)	Ministry of Development plans and guides Turkey's development sustainable process and focuses on the coordination of policies and strategy development, will	The Ministry will be also providing the guidance to ensure that the developed strategies and action plans are in line with the national priorities. MD will be	PMU	Ongoing	No cost beyond normal project operations.

	support the project to monitor the progress and disseminating the relevant information.	also part of the Project Board.			
Regional Directorates of Forestry and Water Affairs (RDoM - MFWA)	RDoM is responsible for the conservation and sustainable use of natural resources and protected areas such as natural parks, nature parks, nature conservation areas and wildlife resources at local scale.	The RDoM will be a member of the project implementation unit and support monitoring of objective achievement and information sharing. RDoM will lead in foundation and operation of local committees and task forces regarding the management planning and related implementations. RDoM will ensure effective participation of local communities and NGOs as well as private sector to the local activities of the project.	PMU	Ongoing	No cost beyond normal project operations.
Province Directorates of Ministry of Food, Agriculture and Livestock (Kirkclareli, Balikesir and Hatay)	Province directorates of MFAL are the local units of the Ministry that are responsible from undertaking the local duties and keeping the direct relations with farmers, rangers and fishers.	These units will be natural members of local committees and task forces that will be established during the project course.	PMU	Ongoing	No cost beyond normal project operations.
Ministry of Interior Turkish Coast Guard Command (TURCG)	TURCG is the responsible organization in combatting illegal fishing and protecting marine environment in maritime jurisdiction areas with its surface and air assets.	The participation of TURCG will enhance the implementation of the project by means of its extensive experience and capacity to control illegal activities such as illegal fishing and combatting ship based marine pollution.	PMU	Ongoing	No cost beyond normal project operations.
Turkish Customs	The Turkish Customs are related to IAS introduction, such as hobby aquarium and aquaculture sectors. Customs are generally the first control point for introduction of alien species and hence their	The project will pay attention to capacity building elements for customs staff for combating IAS.	PMU	Ongoing	No cost beyond normal project operations.

	participation to the project is key.				
Gendarmes	The Gendarmes is the responsible body to enforce national and international laws and to ensure the safety of life and property within its jurisdiction. It also has nature conservation teams to protect biodiversity,	The Gendarmes will be an important beneficiary of the capacity building activities and trainings under the project.	PMU	Ongoing	No cost beyond normal project operations.
Underwater Research Society – Monk Seal Research Group (SAD-AFAG)	SAD-AFAG is one of the oldest NGOs (founded in 1987) working for the conservation of marine and coastal ecosystems with a specific focus to Monk Seal. SAD-AFAG works to protect fish stocks besides monk seal habitat conservation activities. The organization also works closely with local public authorities to develop necessary regulations and for effective implementation of existing legislations. (www.sadafag.org)	The project will collaborate with all relevant civil society organizations in any project pilot areas where the CSOs are active. Aspects of collaboration will include on IAS control activities, activities to support enhanced resilience of native biota, and on cooperation with local authorities and other stakeholders on development of site-based management plans. CSOs will be invited to participate in the project inception workshop, and further direct mechanisms for communication and cooperation will be formalized at that point. All CSOs will also be considered for potential participation in the project's Technical Advisory Group, if their experience has specific relevance to the planned IAS project activities.	PMU	Ongoing	No cost beyond normal project operations.
Mediterranean Conservation Society	The Society aims to protect Mediterranean ecosystem and support communities for sustainable living areas. The main work areas of the organization are large-scale fisheries, aquaculture, amateur fishing, sustainable fishing, marine protected areas and invasive alien species. The Society's experience on IAS will be an asset for the project. (akdenizkoruma.org.tr)		PMU	Ongoing	No cost beyond normal project operations.
Turkish Marine Research Foundation	Founded in 1997, TUDAV aims to undertake research in marine sciences and protect marine life in Turkey. TUDAV's experience in marine research and capacity building activities in		PMU	Ongoing	No cost beyond normal project operations.

	the coastal regions can be an asset for the project. (tudav.org)				
WWF-Türkiye	WWF in Turkey aims to prevent the degradation of Turkey's natural environment and to build a future in which humans live in harmony with nature. The organization has a long history of working in marine and coastal areas and key marine species including sea turtles and dusky grouper (<i>Epinephelus marginatus</i>). (wwf.org.tr)		PMU	Ongoing	No cost beyond normal project operations.
Local communities and resource users at the pilot sites	Local resource users have direct livelihood interests in the health and integrity of native ecosystems, as native marine species provide multiple ecosystem services for local communities. Primary interests include fishing (including harvesting non-fish species) for economic benefit and food security, and the quality of the marine environment for tourism use.	Following initial communications during the project development phase, marine resource-users from communities within the selected pilot project areas will be further engaged to carry out field-based IAS management and control activities. Local communities will also be targeted as part of the education and awareness activities to increase understanding about IAS issues. Local resource users will be represented in the local working groups that will be established for the preparation and effective implementation of management plans. Local communities will be represented by individuals designated by village headmen (muhtar) and they will be engaged actively in the project activities. The village representatives appointed by headmen will be the	PMU	Ongoing	No cost beyond normal project operations.

		main counterparts in linking the project objectives and activities to the needs of the people in the project area. They will be involved mainly in component 3, but also be consulted for fiscal incentive and the policies developed under Component 1.			
Fisheries, aquaculture companies and hobby aquarium sector	As with community-based local resource users, private sector actors have a multitude of direct interests in the health and integrity of the native marine biodiversity and marine ecosystems. Interests include healthy and sustainable commercially important fish populations, and clean and healthy marine ecosystems including good water quality (important for aquaculture and tourism). The hobby aquarium sector does not have a clear interest in the integrity of the native marine biodiversity, but it is an important partner in prevention and risk abatement for marine IAS introductions.	Under Component 3, the project will work with fishers, fish producers and aquarists in the region. These stakeholders will be invited to participate in the local working groups, as relevant, to provide additional input and coordination for the development of the site-based management plans. Private sector stakeholders will also be important partners for IAS-control activities, as well as collaborative monitoring approaches.	PMU	Ongoing	No cost beyond normal project operations.
Tourism Agencies	Tourism agencies have a strong interest in ensuring their regions maintain (or further develop) their reputations as high quality marine and coastal tourism destinations. This means that these stakeholders are interested in maintaining marine and coastal environments that are clean, healthy, and safe for tourists.	The outreach activities of the project will seek cooperation with tourism agencies in the region involved in diving, yachting, and sightseeing.	PMU	Ongoing	No cost beyond normal project operations.

Marine transport sector	The marine transport has a direct interest in how ballast water is regulated and managed.	Under Component 2, the project will work with marine transport sector employees.	PMU	Ongoing	No cost beyond normal project operations.
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Annex I. Results of the capacity assessment of the project implementing partner and HACT micro-assessment

This information will be attached at the appropriate point in the UNDP project document approval process.

Annex J. Turkey Marine IAS Legislative and Policy Context; Baseline Marine IAS Legislative Analysis and Gap Assessment

For the full Summary Baseline Legislative Analysis and Gap Assessment, see the accompanying document (31 pages).

Legislative and Policy Context

Turkey has well-developed environmental legislation, which enable operations of the biodiversity conservation as well as management of coastal and marine ecosystems. The key laws relevant to this project are briefly summarized in the table below.

Law	Date of Adoption	Description
MARPOL	1990	<p>Turkey is also a signatory of the MARPOL 73/78 Convention and its Appendices (International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978), OPRC Convention (International Convention on Oil Pollution Preparedness, Response and Co-operation, 1990), CLC' 92 Convention (International Convention on Civil Liability for Oil Pollution Damage, 1992) and FUND' 92 Convention (International Oil Pollution Compensation Fund, 1992).</p> <p>MARPOL prohibits the discharge of oily waters, garbage and hazardous chemicals in 'special areas' like the Black Sea. Sewage waters and food waste may be discharged under conditions. The rules depend on the size of the vessel. The most stringent rules apply to vessels > 400 gross tonnes.</p> <p>Depending on the size of the vessels other rules apply, like:</p> <ul style="list-style-type: none"> • Vessels may require to secure an International Oil Prevention Certificate (IOPP) • Vessels may have to maintain an Oil Record Book • Vessels may require to secure an International Sewerage Pollution Certificate
The Convention for the Control and Management of ship's Ballast Water and Sediments	2014	<p>Turkey has become a party to the Ballast Convention on condition of a reservation. Turkey's reservation is below;</p> <p>"The Republic of Turkey dissociates itself from the references made in Paragraph 1 of the Preamble of "the International Convention for the Control and Management of ship's Ballast Water and Sediments, 2004", to the international instruments that she is not part to, including the United Nations Convention of the Law of the Sea, 1982. Accession to the said Convention by Turkey cannot be construed as a change in the legal position of Turkey with regard to the said instruments."</p>
Convention on Biological Diversity (1992)	1996	The Convention promotes conservation of biological diversity and sustainable use of its components.
United Nations Framework Convention on Climate Change (1997)	2004	It provides a framework for intergovernmental efforts to tackle the challenge posed by climate change. It recognizes that the climate system is a shared resource whose stability can be affected by industrial and other emissions of carbon dioxide and other greenhouse gases.
The Convention on the Protection of the Black Sea against Pollution (Bucharest Convention)	1994	<p>The Convention on the Protection of the Black Sea against Pollution was signed in Bucharest in April 1992, and ratified by Turkey in 1994. Turkey has adopted key elements from the Convention in various laws and it has committed itself to the prevention of pollution at the Black Sea by harmful substances. The convention comprises three protocols aimed at:</p> <ul style="list-style-type: none"> • The control of land-based sources of pollution (directly or indirectly via inland and coastal waters); • Prohibition of waste dumping; notification procedures; and • Joint action in the case of accidents (such as oil spills).
The Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (Barcelona Convention)	2002	The United Nations Environment Programme (UNEP) decision to place the protection of the Mediterranean Sea among its priority actions resulted in the establishment of the Mediterranean Action Plan (MAP) in 1975 which is an action-orientated effort involving the countries bordering the Mediterranean Sea as well as the European Union. In order to give the actions carried out under the MAP a legal foundation, the Convention on the Protection of the Mediterranean Sea Against Pollution (Barcelona Convention) was

Law	Date of Adoption	Description
		<p>opened for signature on 16 February 1976 in Barcelona. The Protocols of the Convention to which Turkey is Party, are listed below:</p> <ul style="list-style-type: none"> • Protocol for the Prevention and Elimination of Pollution in the Mediterranean Sea by Dumping from Ships and Aircraft or Incineration at Sea • Protocol for the Protection of the Mediterranean Sea Against Pollution from Land-Based Sources and Activities • Protocol Concerning Specially Protected Areas and Biological Diversity in the Mediterranean • Protocol Concerning Cooperation in Preventing Pollution from Ships and, in Cases of Emergency, Combating Pollution of the Mediterranean Sea • Protocol on the Prevention of Pollution of the Mediterranean Sea by Transboundary Movements of Hazardous Wastes and Their Disposal (a declaration was made on Turkey's position regarding the United Nations Law of the Sea) <p>The "Land-based Pollution National Action Plan" was prepared in 2005 in accordance with the Strategic Action Plan that was adopted in the framework of the Barcelona Convention and the Protocol for the Protection of the Mediterranean Sea Against Pollution from Land-Based Sources and Activities.</p>
The Environment Law No. 2872	(1983) as amended by Law No. 5491 (2006)	It is a major environmental milestone and introduces sustainable development principles as a crosscutting policy, in particular for energy, transport and agriculture. Moreover, it embodies protection of the natural resources, polluter liability, the principles of user and polluter pays, sectoral integration, public awareness and public involvement. These also constitute key EU environmental policy objectives.
The Coastal Zone Law no. 3621	1990	Comprises regulations and befitting opportunities and principles of coasts and coast strips marines, natural or artificial lakes and rivers.
Law on Aquatic Products, no. 1380	1971	Protection, production and inspection of aquatic products ("aquatic products", licenses from the Governorship for commercial fishing, bottom trawling, prohibition to use explosives or dangerous substances in fishing etc.)
Law on Pertaining to Principles of Emergency Response and Compensation for Damages in Pollution of Marine Environment by Oil and Other Harmful Substances No. 5312	2005; amended by Law No. 26326 (2006)	<p>This Law includes the authorities, duties and responsibilities of the Ministries, Public Authorities and liable parties of the ships of 500 gross tons or larger, that are carrying petroleum or other harmful substances and are already in or are requesting to enter an area of enforcement for any reason; along with the liable parties of coastal facilities performing operations that might cause pollution with petroleum or other noxious substances.</p> <p>War ships, auxiliary war ships, along with any ships owned or operated by a state and used for noncommercial activities, shall not be subject to this Law.</p>
Law on Sea Transport on Turkey's Coasts and Performance of Industrial and Commercial Activities in Turkey's Harbours and Territorial Waters (Cabotage Law), No: 815	1926	The purpose of the Law is to regulate the sea transport on Turkey's coasts and performance of industrial and commercial activities in Turkey's harbors and territorial waters
Navigation and Hydrography Services Law - no. 1738	1973	Within the territories of Turkey, the Navy Command and the organization under its supervision will carry out the navigation and hydrographic services.
Territorial Sea Law - no. 2674	1982	This law provides for the breadth and delimitation of Turkey's territorial sea, among others.
The Law of Coast Guard Command No: 2692	1982	Turkish Coast Guard Command is authorized and responsible within Republic of Turkey's; all coasts including all sea areas that start from baselines and port facilities in those areas and other facilities serving them, marinas, wharves, boat yards, fishgarths, piers, docks and similar shore facilities and roadsteads, internal waters as Sea of Marmara, Istanbul and Çanakkale Straits, ports and bays, territorial seas, rivers from their mouths to where coast guard ships and boats can reach and operate, Exclusive Economic Zones, sea areas under its sovereignty and jurisdiction, international waters

Law	Date of Adoption	Description
		within the context of duties concerning protection of its sovereignty rights, territorial seas and international waters remaining within Turkish search and rescue region that was declared to IMO in accordance with international conventions.
Decree Law on Organization and Duties of the Ministry of Transport, Maritime Affairs and Communication, Decision no: 655	2011	The objective of this Decree Law is to regulate organization, duties, powers and responsibilities of the Ministry of Transport, Maritime Affairs and Communication.
Decree Law on Organization and Duties of the Ministry of Environment and Urbanization Decision no: 644	2011	The objective of this Decree Law is to regulate organization, duties, powers and responsibilities of the Ministry of Environment and Urbanization
Decree Law on Organization and Duties of the Ministry of Agriculture, Food and Livestock	2011	The objective of this Decree Law is to regulate organization, duties, powers and responsibilities of the Ministry of Agriculture, Food and Livestock
Decree Law on Organization and Duties of the Ministry of Forest and Water Affairs	2011	The objective of this Decree Law is to regulate organization, duties, powers and responsibilities of the Ministry of Forest and Water Affairs
Law on Ports No. 618	1925	The Government is responsible for the administration, cleaning, deepening and widening of ports, for the placing of buoys and their maintenance in good shape, and all the other activities related to ports. All ships entering and abandoning Turkish ports are to comply with the provisions of statutes to be prepared and published by the Government concerning the act of approaching their anchorage area to piers, the loading and unloading of commercial property, the locations and period within which they can load and unload flammable material and the period of time they can remain in ports and the safety and security precautions they have to take, depending on the requirements of every port and technical necessities that may arise.
Decree of the Council of Ministries on Exclusive Economic Zone in the Black Sea No. 86/11264	1986	This decree provides for the establishment of Turkey's Exclusive Economic Zone in the Black Sea.
By-Law on Aquatic Products	1995	The purpose of the By-Law is to regulate the implementation of Aquatic Products Law
By-Law on Control of Pollution by Dangerous Substances in Water and its Environment	2005	Regulates permits for discharge of dangerous substances, as well as substances. Rules and procedures considering pollution decreasing programs caused by discharge of dangerous substances.
By-Law on Water Pollution Control	2004, amended in 2008	Comprises legal and technical principals in order to protect and maintain efficient usage of country's underground and surface water resources and in line prevent pollution. Furthermore, it includes rules and restrictions regarding wastewater discharges, water quality protection plans and all monitoring and inspection principals.
By-Law on Discharges of Wastewater to Sewerage Systems	1984	It is required depending the treatment of sewage and wastewater in the vessels. For this permit the By-law on Water Pollution Control (25867/2004), is to be taken into account.
By-Law on Environmental Auditing	2008	The purpose of this By-Law is to regulate the procedures and principles of environmental control; the qualifications and obligations of the companies authorized to provide environmental audit and personnel for audit and the qualifications of the environmental management unit / environmental officer.
By-Law on General Principles of Waste Management	2008	Establishes general principles concerning management of wastes from their production to disposal.

Law	Date of Adoption	Description
BY Law on the Control of Hazardous Wastes	2005	Lays down the principles and procedures for production, collection, temporary storage, transportation, and exportation.
By Law on Waste Collection from the Ships and Waste Control	2004	The purpose of this By Law is, for the purpose of preventing the release of wastes stemming from the normal activities of ships to the marine environment in sea areas under the jurisdiction of Turkey, to regulate the procedures and guidelines for the operations with regard to reception of wastes from ships, storage thereof, and transferring of wastes to disposal facilities and for the waste reception facilities and waste reception ships required to be established and operated in ports therefor.
By Law on Declaration According to the SOLAS and MARPOL Conventions	2006	Sets forth principles and procedures for reporting, communication and notification activities within the scope of SOLAS and MARPOL Conventions.
By-law on Pertaining to Principles of Emergency Response and Compensation for Damages in Pollution of Marine Environment by Oil and Other Harmful Substances	2006	The purpose of the by-Law is to regulate the implementation of Law No. 5312

Annex K. Turkey Marine IAS Project Pilot Site Profiles

Please see accompanying document (89 pages).

GENDER SCREENING GUIDELINE FOR PROJECT DEVELOPMENT AND IMPLEMENTATION

In order to improve the gender responsiveness of our projects follow the below mentioned steps	Project Development Process
1. Discuss the project idea with gender advisor	Completed.
2. Refer How to develop gender sensitive project proposal document	Completed.
3. Refer to the corporate gender equality Strategy 2014-2017 of UNDP	Completed.
4. Refer to the gender equality Strategy of UNDP Turkey country office	Completed.
5. Refer to the Gender Equality resource space hosted on the RBEC Knowledge Management Gateway to reach the documents related with the subject of the project proposal. Use the link: https://intranet.undp.org/country/rc/intra/gender/SitePages/Home.aspx	Not completed.
6. Prepare the proposal	Completed.
7. Review the proposal by referring Check list for gender review of project proposals (Annex 1)	Completed.
8. Organize a discussion session and ensure participation of gender advisor and a gender focal team member	Completed virtually.
9. Conduct gender analysis and design gender activity exercises with the moderation of gender advisor and / or a gender focal team member (annex 2,3,4,)	Completed.
10. Ensure gender parity for the proposed team, meetings, consultation processes etc..	Partially completed; planned in project document.
11. Refer to a gender expert who works specifically for the subject of the proposed project if needed.	Not completed (not needed).

Gender Mainstreaming Analysis

What is the key objective of the project? Addressing invasive alien species threats at key marine biodiversity areas	What 3 key issues are you trying to address? No national policy or strategy on IAS Insufficient capacity, knowledge and information sharing systems Degraded habitat at key marine and coastal areas due to IAS	Are these issues impacting differentially women and men? Marginally. If there are changes to the quality and integrity of marine/coastal biodiversity and ecosystem these changes have the same impact whether resource users are men or women. Due to differences in societal roles between women and men it is possible that negative impacts could have more significance for women. Considering that, on average, men and women comprise a joint family unit in the context of marine resource users, negative impacts would be on the family unit as a whole. Such negative impacts could be differentiated but comparable between men and women.
What are the key project activities with direct social impact? - Awareness raising activities - Introduction of the species in consumer markets	Who are the main beneficiaries of the project activities? - Government regulatory officials and marine resource managers - Fishing communities	What kind of sex and age disaggregated data do you have? - Fishing cooperative members (statistics) - Demographics of the coastal community

<ul style="list-style-type: none"> - Stakeholder capacity development - Targeted IAS eradication (hands-on or scientific) 	<ul style="list-style-type: none"> - Other resource users - Coastal communities (particularly children) - Academia (marine researchers) 	<p><i>What are the key gender inequality issues related with projects?</i></p> <p>Because women are underrepresented in fishing industry, it could be a strong communications tool to attract attention of wider public to also address the problems of IAS.</p>
<p><i>What is women's role in the area of project interventions and activities?</i></p> <ul style="list-style-type: none"> - Women as consumers - Women as resource users, particularly involvement in fishing cooperatives 	<p><i>What information (study, reports, project analysis) do you have on the gender inequality issues related with the project?</i></p> <p>No</p>	
<p><i>What factors contribute to gender inequality issues?</i></p> <ul style="list-style-type: none"> - Structural factors: demographic, economic, legal, and institutional, etc. - Demographic, economic, institutional - Cultural, religious, attitudinal ones - Other Factors: cultural, religious, and attitudinal ones, etc. 		
<p>Designing Gender Activities</p>		
<p><i>What is the key objective of the project?</i></p> <p>Addressing invasive alien species threats at key marine biodiversity areas.</p>	<p><i>What is/are the gender equality issue (s) the project will address? List maximum 3.</i></p> <ul style="list-style-type: none"> - Under representation of women in the fishing industry - Under representation of women in marine and coastal environment management and regulation authorities - Disproportionate access to information about marine IAS between men and women 	<p><i>What types of activities are planned or will be implemented?</i></p> <ul style="list-style-type: none"> - Legislative work - Research (market/field work) - Capacity building - Information systems - Ecosystem improvement - IAS prevention, monitoring, control, eradication
<p><i>How are the planned activities going to address gender issues?</i></p> <ul style="list-style-type: none"> - Research activities conducted in the pilot areas where fisher women are located. - Specific education and awareness activities targeting women consumers and resource users, such as fisher women 	<p><i>What action needs to be taken to include gender dimensions in planned activities?</i></p> <ul style="list-style-type: none"> - Having fisher women as project partners - Ensure gender representation in resource management decision-making related to IAS - Women specific communication strategy preparation materials 	<p><i>If there a space for gender specific activities? If yes please design identify one/ two strategic activities.</i></p> <p>Special Training on IAS to fisher women cooperative at the pilot project sites.</p>
<p><i>What indicators do we need (qualitative, quantitative)</i></p> <ul style="list-style-type: none"> - MOUs with the fisherwomen cooperatives - Number of gender sensitive communication materials prepared 	<p><i>What are the planned results?</i></p> <ul style="list-style-type: none"> - Secured involvement of fisher women cooperatives in IAS related activities. - Increased visibility of the cooperatives and fisher women. - Increased public awareness on IAS issues also thanks to additional attraction through the involvement of fisher women. 	

Annex M. Key Lessons and Good Practices from Previous GEF-funded IAS Projects, and Relevance for Proposed Turkey Marine IAS Project

Project	Country	GEF amount	Approval Year	Status	Lessons learnt	Relation to IAS Project
Control of Invasive Species in the Galapagos Archipelago	Ecuador	18,300,000	2000	Completed	<p>1. Managing invasive species requires strong political support, since many of the measures taken and decisions made will not be popular among some stakeholders and communities</p> <p>2. Consistent institutional support, collaboration and funding, and a commitment by project staff to achieve eradication objectives (an "eradication ethic") were central to the success of eradication projects during and following the project.</p> <p>3. A focus on different invasive taxa (invertebrates, vertebrates, plants) has raised awareness of the need to consider trophic relationships and community-level dimensions to conservation management.</p> <p>4. A focus on biological communities, ecosystems and whole islands may present opportunities to improve the effectiveness and efficiency of invasive species management, and to sustain conservation outcomes</p>	<p>At least three ministries of Turkey will be involved with the project design and implementation, therefore strong government ownership is already gathered for the IAS Project. Moreover, MFWA has committed its support to the project including the post-project period that will ensure the sustainability of the result.</p> <p>Strengthening the natural species and marine habitats is adopted as a key project approach for combating IAS in marine areas in the project.</p>
Mitigating the Threats of Invasive Alien Species in the Insular Caribbean	Dominican Republic, Jamaica, St. Lucia, Trinidad and Tobago, Bahamas	3,034,027	2008	Completed	<p>1. In the field of IAS management, projects require significant amounts of good quality information, normally available through up-to-date on-line databases. The more information is put into those databases, stronger their contributions will be to IAS projects globally. IAS project design should be such that information generated can be easily contributed to on-line databases such as those from IUCN invasive species group and others.</p> <p>2. The role played by communities should never be underestimated, including in IAS control and eradication projects. Community leaders can make a project succeed or be stuck and not implemented. Engaging the community, as in the case of Cabritos,</p>	<p>One of the key project activities will be the production of scientific information regarding the ecological aspects of IAs as well as its socio-economic impacts in the affected communities/ sectors. Besides, establishing a strong and effective knowledge management system (through a database) is planned as apart of the project. The project team will ensure effective use of scientific</p>

Project	Country	GEF amount	Approval Year	Status	Lessons learnt	Relation to IAS Project
					<p>may lead to better understanding of what is being pursued and/or given community 'clearance' for the further eradication actions to proceed.</p> <p>3. Predator control projects are very expensive and may need to be continued permanently if the conservation target species is to be saved from extinction. For the conservation of the Jamaican Iguana, the eradication of alien predators from main island Jamaica is not feasible, therefore leaving control as the only alternative. New options may be needed.</p>	<p>data feeding into informed decision-making.</p> <p>Local communities, including fishers and their NGOs, constitutes an important part of the project strategy. Local communities with an ensured gender representation is a key element of project design. The project team will liaise with key public and fishing sector leaders to achieve its targets.</p>
Development of Best Practices and Dissemination of Lessons Learned for Dealing with the Global Problem of Alien Species that Threaten Biological Diversity	Cote d'Ivoire, Czech Republic, Kenya, Malawi, Mauritius, New Zealand, Poland, South Africa	750,000	1998	Completed (2003)	<p>a) There is a need for personal support early in the project from professional champions and key individuals within funding agencies, along with recognition of the vulnerable nature of major projects involving volunteer time;</p> <p>b) There is a need for funding continuity, including pilot projects to develop protocols and technologies that will transfer to regions with very limited resources;</p> <p>c) It is important to educate participants and promote learning by doing among both academics and practitioners to ensure that outputs are delivered on time participants and are efficiently networked;</p> <p>d) There is a need to avoid superseding existing science and to show that science is integral to the Convention on Biological Diversity (CBD) and, under its umbrella, can be turned into a tool for the Parties to the Convention;</p> <p>e) There is a need for constant advocacy based on good case studies verifiable by facts and figures, backed by well-targeted regional workshops;</p>	<p>The Turkey Marine IAS project will involve a range of stakeholders, including "champion" technical experts who will be contracted by the PIU. In addition, there is strong government buy-in by the key institution, the MFWA, including individuals considered "champions" for the project within the institution.</p> <p>The demonstration activities at the four pilot sites will be replicated and scaled-up within the national government, in order to be transferred and implemented to other key regions and sites facing threats from marine IAS.</p>

Project	Country	GEF amount	Approval Year	Status	Lessons learnt	Relation to IAS Project
					f) There is value in a wide array of outputs covering a wide range of audiences from specialist academics through professional practitioners to the general public.	The project design includes a significant knowledge management component that will involve academics and practitioners at the site level. This will be accomplished through the local working groups, and multiple education and awareness building activities.
Control of Exotic Aquatic Weeds in Rivers and Coastal Lagoons to Enhance and Restore Biodiversity	Cote d'Ivoire	3,000,000	1993 (initiated in 1997)	Completed (2004)	<p>The ideas that prevailed during the conception of the aquatic weed control project, associating biological control with water quality management, as well as the idea of a participating approach, must serve as reference for similar projects.</p> <p>While elaborating a project, it is important to take into consideration activity planning, notably:</p> <ul style="list-style-type: none"> - Identification of indicators objectively verifiable to correctly assess the level of achievement of planned results - definition of the intervention framework and the responsibilities of the operators (among other things, the authors of the final report state that the administration of Côte d'Ivoire "didn't always say the same thing") - nature of the commitment taken by the government or the beneficiary institution to assure the continuation of the results - adequacy between the means used on a short period and the possibility to assume recurrent post project costs - the planning must be as realistic as possible, but not underestimating the unavoidable delays required for setting up procedures and for effective starting of field activities. 	

Project	Country	GEF amount	Approval Year	Status	Lessons learnt	Relation to IAS Project
					<p>It is important that the commitment of the beneficiary country to correctly finance the follow-up phase be formally demonstrated during grant negotiation; this must be a contractual point for releasing funds.</p> <p>Another requirement should be the existence of an adequate institutional setting or, the commitment of the beneficiary country to apply the principles of water management recognized at international level.</p> <p>A general aspect of this IVC/94 project is the fact that the steering organs are heavy and slow to act. In a context gathering,</p> <ul style="list-style-type: none"> - so many ministries and organizations far away from practical problems, - so many groups of researchers with different areas of expertise and, finally, - so many political constraints, <p>It is remarkable that the project got so many outstanding results.</p> <p>The administrative constraints should be avoided (it is not necessary to create organs that never meet or meet too rarely, or delay the progress of a project) and the realism must be the basis for all decision (for example, exchanging electronic mail could have palliated the impossibility for the PSAC to meet and to benefit from the international expertise).</p> <p>For the second phase, the structure of project organization should be reversed and the target populations should be better represented during the conception of the activities. The present case of aquatic plant control, with easy rearing natural enemies, is a good opportunity to involve water body users from the beginning. The biological control agents can be reared locally and disseminated by the villagers. Besides, the efficiency of the control, especially of water hyacinth, depends on a change in the behaviour of the populations to avoid water</p>	

Project	Country	GEF amount	Approval Year	Status	Lessons learnt	Relation to IAS Project
					<p>eutrophication. This gives a supplementary reason to involve them as early as possible.</p> <p>The project permitted to establish some partnership but it is certainly possible to do more. The question of confiding the management of a field project to the administration, or to an institution with a statute close to the administration, has already been asked.</p> <p>Administration clearly showed, for several components of this project, difficulties to follow the rhythm required by the implementation of a three-year activity program; but it can play an essential role of conception, orientation, supervision, and assessment. Administration is not the most capable to implement concrete actions. Delegating functions of the projects to specialized institutions, NGOs, and local communities should be privileged, with an emphasis on working with direct beneficiaries. The possibility to create joint groups with equal representations (associating administration - CIAPOL, representatives of water users and NGOs - with a technical assistance) needs also to be considered.</p>	
Building Partnerships to Assist Developing Countries to Reduce the Transfer of Harmful Aquatic Organisms in Ships' Ballast Water (GloBallast Partnerships)	Global	5,688,000	2007	Project Approved	<p>Better and more frequent feedback from countries and regions on Ballast Water Management (BWM) implementation would improve abilities to monitor and evaluate progress and to identify needs and opportunities for additional support. The current system of biennial presentations by LPCs to GPTF meetings is insufficient and should be supplemented by annual written reports to the PCU using a standard format that covers inter alia ratification status, the reform process, CME implementation and activities at regional level.</p> <p>There is a pressing need to clarify, consolidate and finalize guidance on compliance monitoring and enforcement (CME) for purposes of the BWM Convention and it is recommended that every effort be made by IMO, its relevant committees and working groups, to expedite such guidance for rapid</p>	<p>The experience gained from the IAS project related to ballast water management will be shared with GloBallast Program coordinating unit and partnering countries on a continuous basis.</p> <p>The IAS Project will identify measures for Ballast Water Management Convention implementations in Turkey including compliance monitoring and enforcement (Output 1.5, Activity 3). A database will</p>

Project	Country	GEF amount	Approval Year	Status	Lessons learnt	Relation to IAS Project
					<p>incorporation into the GBP training programme. The guidance should be comprehensive and should seek to remove current ambiguities such as the proposed use of shore- based reception facilities for non-compliant ballast water which, in reality, do not exist and are unlikely to be available in future. Advice on alternative means of treatment or disposal (e.g. designated offshore areas) for non-compliant ballast water should be included in the guidance. Greater clarity. Regarding methods for sampling ballast tanks) and measurement of organisms referred to in Regulation D2 of the BWM Convention, is urgently required.</p> <p>In order to maintain continuity in BWM at national level, GBP course material and PCU presenters should impress on government agencies and their officials the importance of retaining personnel trained in BWM in the relevant offices and positions.</p>	<p>be established for monitoring purpose. Capacity building program will be designed and carried out for the lawmakers and implementers related to ballast water management in Turkey. Turkey will inform GloBallast Program regarding the findings and best cases in relation to compliance monitoring and enforcement.</p> <p>The IAS Project will ensure the information and knowledge flow between project teams related to ballast water management is maintained. The effective participation of key government personnel who took part in GloBallast Project will be invited to the project activities.</p>
Enhancing the Prevention, Control and Management of Invasive Alien Species in Vulnerable Ecosystems	Cuba	5,018,182	2009	Completed (2016)	<p>LECCIONES APRENDIDAS Relacionadas con la gestión del Proyecto</p> <ul style="list-style-type: none"> Los proyectos encargados de la prevención, manejo y control de las EEI, sirven de agentes catalizadores a la incorporación y participación de sectores que regularmente no se vinculan a la gestión ambiental, como son las aduanas, sanidad vegetal, entre otros. La realización de reuniones periódicas entre las personas involucradas en el Proyecto permiten el intercambio de experiencias y la consolidación de referencias importantes. 	<p>The project plans to actively engage non-traditional stakeholders in environmental management, including the health sector, and customs.</p> <p>The project management and oversight arrangements calls for regular meetings of</p>

Project	Country	GEF amount	Approval Year	Status	Lessons learnt	Relation to IAS Project
					<ul style="list-style-type: none"> • La designación de Coordinadores provinciales y Grupos de Coordinación en cada provincia mejora la eficiencia de la gestión técnico - financiera. • La elaboración de informes trimestrales detallados por los coordinadores provinciales facilita la supervisión y el apoyo a las actividades en desarrollo. • La inclusión de la temática de las EEI en políticas y regulaciones nacionales combinada con la capacitación técnica y la información pública es la más fuerte garantía de sostenibilidad de las acciones iniciadas. <p>Relacionadas con la ejecución del Proyecto</p> <ul style="list-style-type: none"> • La integración de distintos sectores vinculados al medio ambiente y al uso de recursos naturales es esencial en proyectos que traten de la gestión de las EEI. • El desarrollo del trabajo participativo sentó las bases del éxito de la aplicación de prácticas para la prevención, manejo y control de las EEI. • La incorporación de la temática de EEI en los medios de comunicación masiva, es una vía efectiva para involucrar a la población en el sistema de alerta temprana. • La existencia de programas de monitoreo de la biodiversidad permite determinar con precisión los efectos de la variabilidad climática sobre los ecosistemas. • La percepción y el conocimiento de las comunidades es clave para el registro y la interpretación de cambios ambientales por los efectos del cambio climático y su impacto en el comportamiento de especies propias de un lugar a que estas comunidades se vinculan. • La integración de las Universidades Pedagógicas tributa a la sostenibilidad de los conocimientos y 	<p>project stakeholders and the national and site-level.</p> <p>The project implementation arrangements will include the designation of a site-level coordinator.</p> <p>Standard project reporting procedures call for quarterly progress reporting on all project activities at all levels.</p> <p>To ensure the sustainability of results the project has a strong focus on strengthening the enabling environment, including revised and new regulations and legislation.</p> <p>The project activities also call for technical training of relevant stakeholders, as well as education and awareness activities.</p> <p>The project plans to establish a multi-sectoral coordination mechanism.</p> <p>The project aims to take a participatory approach in all aspects of the project.</p> <p>As part of the education and awareness activities the project will engage the mass media to the extent feasible (i.e. based on the level of interest and</p>

Project	Country	GEF amount	Approval Year	Status	Lessons learnt	Relation to IAS Project
					saberes en torno a las EEI en las actuales y futuras generaciones.	engagement of mass media). The project plans to carry out a variety of biodiversity monitoring activities, though it is unclear exactly to what extent this data will provide insight on climate impacts. The project plans to engage local resource users and community representatives in monitoring activities, which will provide an opportunity to capture and integrate community and environmental knowledge. Universities will be involved in various aspects of the project, including research and knowledge management activities.
Mainstreaming Prevention and Control Measures for Invasive Alien Species into Trade, Transport and Travel Across the Production Landscape	Seychelles	2,000,000	2007	Completed (2014)	<ul style="list-style-type: none"> Project LFA indicators and its monitoring are critical to establish progress towards development objectives and therefore constitute the primary tool for adaptive management. Hence, at design and inception, it is necessary to rigorously test all indicators against SMART quality standards, particularly specificity, i.e. to establish if any factor other than the project can cause changes of the indicator variable. Awareness strategies should have clearly defined objectives and target groups, as well as measuring mechanisms, i.e. the indicators and the methods to collect information e.g. surveys, as well as be provided with sufficient budget to cover the costs 	The project strategic results framework has been developed as much as possible with SMART criteria in mind. However, it is virtually impossible in the complex marine environment to assign 100% attribution to the project for any particular change in the marine ecosystem. It is not considered necessary to identify 100% project

Project	Country	GEF amount	Approval Year	Status	Lessons learnt	Relation to IAS Project
					<p>of monitoring. Failing to do that denies stakeholders the possibility of learning what strategies are most cost-effective for what awareness objectives. Strategic, specific investment in awareness, would likely yield better results than general, diluted messages.</p> <ul style="list-style-type: none"> As recruitments constraints are nothing new in SIDS context, contingency plans to avoid halts in project delivery could be developed by e.g. designating deputy project managers, pre-identification of experts, and signature of memoranda of understanding with implementing partners. However, it must be noted that the PCU and the UNDP did in fact implement all the measures mentioned above, including signing agreements with both the Department of Environment and the Seychelles Agricultural Agency and interim covering vacant positions by reassigning tasks of the remaining staff. Accounting of expenditure should be consistent with budgeting. Mechanism to ensure this are, at project design, double check budget accounts and budget notes, and, during implementation coordinate expenditure accounting between UNDP and project implementation unit and keep documentation on "expenditure notes" to enable to track down project costs to activities. 	<p>attribution, as the project is expected to make necessary contributions, but these alone may not be sufficient for change. The project will institute an education and awareness tracking survey among relevant stakeholders to assess changes in attitudes and behavior over time. UNDP and MFWA will institute all relevant standard precautionary measures to support project continuity in the case of project staff turnover.</p> <p>The project will follow standard UNDP financial management procedures, which will also be in-line with all legal obligations under the relevant laws of Turkey. It is planned that the project will have at least one financial audit before the end of the project to ensure financial accounting reconciliation.</p>

Additional Recently Approved GEF-funded IAS Projects Still Under Implementation

Project	Country	GEF amount	Approval Year	Status
Mainstreaming IAS Prevention, Control and Management	Mauritius	3,888,265	2017	Concept approved
Preventing COSTS of Invasive Alien Species (IAS) in Barbados and the OECS Countries	Antigua And Barbuda, Barbados, St. Kitts And Nevis, Dominica, St. Lucia, St. Vincent and Grenadines, Grenada	3,747,945	2016	Concept Approved
Building Capacities to Address Invasive Alien Species to Enhance the Chances of Long-term Survival of Terrestrial Endemic and Threatened Species on Taveuni Island and Surrounding Islets	Fiji	3,502,968	2015	Project Approved
Strengthening of Governance for the Protection of Biodiversity through the Formulation and Implementation of the National Strategy on Invasive Alien Species (NSIAS)	Argentina	3,870,000	2012	Project Approved
Enhancing National Capacities to Manage Invasive Alien Species (IAS) by Implementing the National Strategy on IAS	Mexico	5,354,545	2012	Project Approved
Strengthening National Frameworks for IAS Governance - Piloting in Juan Fernandez Archipelago	Chile	4,000,000	2011	Project Approved
Removing Barriers to Invasive Species Management in Production and Protection Forests in SE Asia	Indonesia, Cambodia, Philippines, Vietnam	3,081,045	2010	Project Approved
PAS: Prevention, Control and Management of Invasive Alien Species in the Pacific Islands	Marshall Islands, Micronesia, Papua New Guinea, Cook Islands, Kiribati, Samoa, Tonga, Vanuatu, Niue, Palau	3,031,818	2009	Project Approved
Strengthening Capacity to Control the Introduction and Spread of Alien Invasive Species	Sri Lanka	1,825,000	2009	Project Approved
Strengthening National and Regional Capacities to Reduce the Impact of Invasive Alien Species on Globally Significant Biodiversity in the Pacific	Tonga, Niue, Marshall Islands, Tuvalu	6,252,489	-	Concept Proposed
BS: Development and Institution of A National Monitoring and Control System (Framework) for Living Modified Organisms (LMOs) and Invasive Alien Species (IAS)	Cameroon	2,400,000	2008	Project Approved

Annex N. Good Practices and International Standards Related to the Management and Control of Marine Invasive Alien Species

Authors: Murat Bilecenoglu and Baki Yokeş

1. Introduction

Among the CBD's Aichi biodiversity conservation targets for 2020 is Target 9: *By 2020, invasive alien species and pathways are identified and prioritized, priority species are controlled or eradicated, and measures are in place to manage pathways to prevent their introduction and establishment.*

Therefore, according to the CBD, by 2020, Parties are expected to achieve the target with following actions:

- Identify and prioritize invasive alien species and pathways;
- Priority species are controlled or eradicated;
- Measures are in place to manage pathways to prevent their introduction and establishment

The Convention on Biological Diversity has provided a toolkit to support parties to the CBD in achieving the Aichi Target 9 on invasive species.¹⁷ The toolkit draws on a set of 15 “guiding principles” for management of IAS, which were adopted by the CBD’s Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) at its 5th meeting, in early 2000.¹⁸ The CBD’s 15 Guiding Principles are included as Appendix 1 to this report.

2. Legislation and Policy for Control and Management

- EU Regulation 1143/2014

This regulation on invasive alien species entered into force on 1 January 2015, which seeks to address the problem of invasive alien species in a comprehensive manner so as to protect native biodiversity and ecosystem services, as well as to minimize and mitigate the human health or economic impacts that these species can have. The list was drawn up together with the Member States, represented through the Scientific Forum and the Committee on Invasive Alien Species, on the basis of risk assessments and scientific evidence. According to Regulation 1143/2014, the list needs to be kept up to date and a first update of the list is under preparation.

The IAS Regulation introduces a comprehensive EU-wide system to tackle this issue, with a list of invasive alien species of Union concern at its core. This is the list of priority species which require EU action to prevent, minimize or mitigate their adverse impacts, and where EU action is expected to significantly improve the policy effectiveness, especially because some requirements are linked to internal market and trade rules. Member States need to carry out the following measures with regard to species on the list: (1) prevention, (2) early detection and rapid eradication of new invasions, and (3) management of invasions that are already widely spread. In other words, listed species can no longer be intentionally kept, transported, reproduced or released. If a new population is detected, there is an eradication obligation, while for the species that are already widely spread, management measures must be put in place.

¹⁷ See CBD, no date. “A TOOLKIT to facilitate Parties to achieve Aichi Biodiversity Target 9 on invasive alien species (Prototype).”

¹⁸ CBD, 1999. “Alien Species: Guiding Principles for the Prevention, Introduction and Mitigation of Impacts,” UNEP/CBD/SBSTTA/5/5, October 22, 1999.

The Commission prepared the list following the procedure provided for in the IAS Regulation. In a first step, IAS with risk assessments compliant with Article 5(1) of the Regulation were selected. The Scientific Forum, with experts appointed by all Member States, was then consulted on the robustness of the risk assessments. On this basis, a list of IAS with compliant risk assessments was developed and made available online in February 2015. In a second step, those IAS with compliant risk assessments were evaluated for their compliance with the criteria for listing as IAS of Union concern, as set out in Articles 4(3) and 4(6). This compliance assessment was discussed extensively with the Member States at the Standing Committee on IAS (IAS Committee). Both the Commission and the Member States can make proposals for inclusion.

- National fish, wildlife & plants climate adaptation strategy of the United States

The Strategy identifies seven goals to help fish, wildlife, plants and ecosystems cope with the impacts of climate change (Appendix 2). These goals were developed collectively by diverse teams of federal, state, and tribal technical experts, based on existing research and understanding regarding the needs of these valuable resources. Each goal identifies a set of initial strategies that should be taken or initiated over the next five to ten years.

3. Implementation of Legislation and Policy: Control and Management Measures

Marine IAS Risk Management

*Example organism & locality: *Mytilus galloprovincialis* / Hawaii*

The smooth shelled blue mussel, *Mytilus galloprovincialis* Lamarck (Bivalvia: Mollusca) arrived in Pearl Harbor, Oahu, Hawai'i on 22 June 1998 as a member of the fouling community of the USS Missouri, and mussel spawning activity was observed within 2 h of the vessel's arrival. Small mussels (<10 mm shell length, approximately 6 weeks postmetamorphosis) were collected on 30 September 1998 from a submarine ballast tank in Pearl Harbor, indicating that a successful recruitment event had taken place very soon after the first arrival of the species at this location. It is suggested that even if *M. galloprovincialis* is not able to establish permanently within Pearl Harbor, the fact that it has been able to successfully spawn and recruit to another shipping vector within the Harbor indicates that a 'stepping stone' model of range expansion from temperate to temperate region via an intermediary subtropical environment is quite feasible for this species. Data from worldwide distributions of mussels of the family Mytilidae indicate that preferred habitats are eutrophic continental shelf regions, which suggests that successful establishment within Pearl Harbor is possible. However, oceanic coral-reef environments are not preferred habitat types, suggesting that *M. galloprovincialis* is not likely to become widely distributed in the Hawaiian Islands (Apte et al. 2000).

Example organism & locality: Ballast originated IAS / Alaska

The relatively uninhabited coastline of Alaska currently faces a heightened risk of novel biological introductions as a result of increasing regional vessel traffic, emerging Arctic trade routes, and proposed coastal and nearshore development. Alaska currently receives the majority of its ballast water discharge in the port of Valdez (86%), largely from crude oil tankers engaged in coastwise trade. These crude oil tankers were exempted from managing and reporting ballast water prior to the United States Environmental Protection Agency's 2008 Vessel General Permit (VGP). Verna et al. (2016) have presented a comprehensive statewide risk assessment of ballast-borne marine invasive species throughout coastal Alaska, and the first study to characterize the risk from the ballast water vector following inclusion of ballast water reporting by the VGP. The authors examined ballast water discharge volume, environmental similarity between source and discharge regions, ballast water age, and marine invasive species richness in source regions annually from 2009 – 2012 for the top 15 ports/discharge locations in Alaska. The majority (80%) of the more than 54 million metric tons of reported ballast water discharged during this time period was sourced from the west coast of North America, including highly invaded port systems such as San Francisco Bay, California and Puget Sound, Washington. Overall about 38% of the ballast water discharged to our focus locations was managed using ballast water exchange. It is concluded that the risk of invasion is highest for the ports of Valdez and

Drift River Terminal and lowest for the ports of Klawock, Skagway, and Tolstoi Bay. This analysis and risk matrix (see Table below) can inform further fine-scale assessments of ballast water management activity and identify areas of Alaska most likely to benefit from focused management efforts.

Table. Ranking system of parameters used to categorize relative risk of ballast-borne marine invasive species in coastal Alaska (from Verna et al. 2016)

	Effective volume of ballast water discharge (log ₁₀ MT)	Environmental similarity	Ballast water age (days)	Species richness
(0) No risk		No ballast water received		
(1) Low risk	< 2.6	< 1	> 10	< 110
(2) Medium risk	2.6 – 5.1	1 – 2	6 – 10	110 – 219
(3) High risk	> 5.1	> 2	< 6	> 219

Marine IAS Early Detection

Example organism & locality: *Caulerpa taxifolia* / USA

In summer 2000, the first known Western Hemisphere infestations of the invasive strain of the tropical marine alga, *Caulerpa taxifolia*, were discovered in Agua Hedionda Lagoon, Carlsbad, California and in Huntington Harbour, Huntington Beach, California (Jousson et al. 2000), prompting one of the first marine rapid response efforts in the US. Commonly used in saltwater aquarium systems, earlier releases of *C. taxifolia* into coastal European and Australian waters have resulted in the establishment of extensive dense carpets of the seaweed, smothering diverse natural communities and dramatically reducing biodiversity by displacing native seaweeds and animals. Based on the aggressive nature of this species and the displacement of native marine resources observed upon its discovery in California, it was recognized that the infestations posed a major threat to coastal ecosystems, and recreational and commercial uses dependent upon coastal resources (Merkel & Associates, 2006).

Following the discovery in Carlsbad, a team of resource and regulatory agencies, marine biologists, and stakeholders were brought together under the name of the Southern California Caulerpa Action Team (SCCAT). The SCCAT Steering Committee is comprised of representatives from the San Diego Regional Water Quality Control Board, California Department of Fish and Game, National Oceanic and Atmospheric Administration National Marine Fisheries Service (Chair), Santa Ana Regional Water Quality Control Board, and U.S. Department of Agriculture-Agricultural Research Service. The goals of the SCCAT are the eradication of the known infestations of *C. taxifolia*, and the prevention and detection of new infestations through outreach and surveillance. Eradication efforts have been ongoing since June 2000 at a cost of over \$7,000,000.

The criteria for successful eradication of the *C. taxifolia* infestations are 1) the containment and lethal treatment of *C. taxifolia* at the infestation site, and 2) verified absence of *C. taxifolia* from the infestation site. Treatment efforts consisted of covering *C. taxifolia* with heavy black PVC tarps under which chlorine was either injected as sodium hypochlorite, or placed as a solid, pelleted formulation, which provided full containment of *C. taxifolia* while minimizing the water quality impacts of the treatment on the surrounding waters. The containment and treatment efforts lasted approximately two years, with divers undertaking intensive surveillance concurrently to search for remaining *C. taxifolia*. *Caulerpa taxifolia* was last detected in Agua Hedionda Lagoon in September 2002 and in Huntington Harbour in November 2002. No *C. taxifolia* has been discovered at either site during intensive, systematic surveillance conducted through December 2005.

The eradication of *C. taxifolia* demonstrates the value of investing in the early detection of and rapid response to non-native species before they cause substantial harm.

Marine IAS Control and Management

Example organism & locality: Pterois spp. / USA

Management and control actions of lionfish in U.S. coastal and U.S. Caribbean territorial waters has been challenging at best. Efforts have been localized and not well coordinated across agencies or with other stakeholders. However, within these entities there have been some successes. For example, NOAA has researched lionfish biology, ecology, and ecological impacts since the invasive species were first detected and continues to apply research findings to develop control and management options for coastal managers. NOAA's "Eat Lionfish" campaign, launched in 2010, advocates marketing and consumption of lionfish to provide removal incentives for both commercial and recreational fishers and divers. In addition, NOAA and REEF have trained more than 250 divers and snorkelers on how to identify and safely capture lionfish. These organizations coordinate lionfish derbies that have brought public attention to the lionfish invasion, removed lionfish from localized areas, and have highlighted the procedures for safe preparation and consumption of lionfish. The lionfish derbies also provide NOAA and USGS scientists with information on stomach contents, age classifications, and genetics of lionfish populations. The FKNMS developed a pro-active lionfish response program that was implemented in 2009, prior to the lionfish invasion of the sanctuary. Outreach campaigns associated with this program have led to significant reporting and capture efforts. The Flower Garden Banks National Marine Sanctuary (FGBNMS) has had an active lionfish removal and research program since 2011 when lionfish were first reported within the sanctuary. They have a lionfish response plan and targeted priority removal areas, conduct site removals and research, partner with NOAA's National Centers for Coastal Ocean Science and the FDA on ciguatera testing in lionfish, and have an active monitoring program. The NPS developed a lionfish response plan that has been used as a foundation for individual parks to develop local management plans. In the Caribbean, the Puerto Rico Department of Natural and Environmental Resources has worked with NGOs and key business partners to conduct outreach programs and collection workshops. Furthermore, the U.S. Virgin Islands have developed a lionfish management plan with significant stakeholder involvement. At a broader scale, reporting efforts across the entire invaded range have been facilitated by the USGS, USFWS, and NGOs that manage lionfish reporting hotlines and websites. Finally, Florida is implementing efforts to encourage public involvement in long-term control initiatives. Specifically, the Florida Fish and Wildlife Conservation Commission (FWC) supports and sponsors local removal efforts and derbies. In the spring of 2015, the FWC launched a Reef Rangers program, where groups or individuals pledge to conduct lionfish removals at local reefs of their choice. Removal efforts are logged into a reporting application and participants are recognized for their efforts.

In addition to efforts within the U.S., there have been concerted international efforts since 2010 to recognize the impacts of lionfish and develop regional approaches and knowledge sharing relative to best practices for control (Anonymous, 2015; Johnston et al., 2015). These efforts have included workshops, training programs, and development of a best-practices manual funded by the International Coral Reef Initiative (ICRI), the Government of France through SPAW-RAC, NOAA, REEF, the Government of Mexico, NGOs and private foundations. Lionfish control or response plans have also been developed for numerous countries and "Eat Lionfish" campaigns are widespread throughout the invaded range.

Ecosystem restoration in areas damaged by IAS

The *Caulerpa cylindracea* is one of the worst IAS in the Mediterranean (Streftaris and Zenetos, 2006) and have a great impact on the macroalgal assemblages on dead matters of *Posidonia oceanica* and rocky bottoms, reducing the species cover, number of species and diversity (affecting primarily turf and encrusting species, compared to erect species); the impact was so extensive that the algal assemblage did not seem to recover even when *Caulerpa cylindracea* diminished following a seasonal cycle (Piazzi et al, 2001; Piazzi and Cinelli, 2003; Balata et al, 2004). Klein and Verlaque (2011) experimentally observed the affects of eradication of *Caulerpa cylindracea* on native macroalgal assemblages. In the assemblage invaded by *Caulerpa cylindracea* the number of species, macrophyte cover, Shannon diversity and Pielou's evenness were lower than in the non-invaded assemblage. Erect perennial species were particularly affected and other introduced species were significantly reduced or completely excluded. After 18 months of removal/exclusion of *Caulerpa cylindracea*, the species numbers, total cover and erect perennial species cover were still significantly lower than in the non-invaded plots, however, a partial recovery of the macrophyte assemblage occurred.

Ballast Water Management

More than 160 different plants and animals have invaded the Great Lakes in the past 200 years (Ricciardi, 2001). About 70% of the invasive species which have established themselves in the Great Lakes are native to the Ponto-Caspian region (Ricciardi and MacIsaac, 2000). Majority of these species have been introduced via ballast waters (Mills et al., 1993). Some of these, such as the sea lamprey and the zebra mussel, have had economic as well as ecological impacts. The Great Lakes have been especially hard hit by the invasion of invasive species due to the presence of numerous canals and international ship traffic.

In response to calls from the International Joint Commission and the Great Lakes Fishery Commission over the discovery of the Eurasian ruffe (*Gymnocephalus cernua*) in Lake Superior, Canada established guidelines requesting all vessels entering the freshwaters of the St Lawrence River and the Great Lakes to exchange their ballast (Anonymous, 2014). The U.S. Coast Guard established regulations based on the Canadian Guideline in 1993 under the authority of the Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990 (NANPCA). The U.S. Coast Guard started testing Ballast Water on Board (BOB) vessels on a voluntary basis in 1991 and on a mandatory basis in 1993. The inspection process included testing the salinity of the ballast water to ensure salinity was at least 30 ppt. Ballast with a salinity of at least 30 ppt is considered evidence that the tanks have been adequately exchanged with seawater, providing a reasonably harsh environment for any remaining freshwater organisms.

The national voluntary ballast water management (BWM) program was changed to a mandatory one, requiring all vessels equipped with ballast water tanks and bound for ports or places of the United States to conduct a mid-ocean ballast water exchange (BWE), retain their ballast water onboard, or use an alternative environmentally sound BWM method approved by the Coast Guard. Canada promulgated the Ballast Water Control and Management Regulations under the Canada Shipping Act in June of 2006. The regulations enact the IMO D1 requirements for ballast water exchange for any vessel entering waters under Canadian jurisdiction from outside Canada's EEZ and include both trans oceanic and coastal voyages (BOB and no BOB).

The Great Lakes Ballast Water Working Group (BWWG) was formed in January 2006. The mission of the BWWG is to harmonize ballast water management efforts between the U.S. Coast Guard, Transport Canada-Marine Safety & Security, Saint Lawrence Seaway Development Corporation and the St. Lawrence Seaway Management Corporation. The BWWG coordinates enforcement and compliance efforts for reducing aquatic nuisance species invasions via ballast water and residuals in the Seaway and Great Lakes.

The U.S. and Canadian St. Lawrence Seaway agencies enacted new requirements effective at the start of the 2008 Navigation Season that requires vessels to conduct saltwater flushing of their ballast tanks that contain residual amounts of ballast water and/or sediment in an area 200 nautical miles from any shore before entering waters of the Seaway. Vessels must also maintain the ability to measure salinity levels in each tank onboard so that final salinities of at least 30 ppt can be ensured.

Bailey et al. (2011) examined the efficacy of ballast water policies enacted to prevent biological invasions in the Laurentian Great Lakes. They assembled data on dates of discovery of ship-mediated aquatic non-indigenous species (NIS) reported in the Great Lakes after the opening of the modern St. Lawrence Seaway in 1959. The rate of aquatic NIS records was relatively linear between 1959 and the mid-1980s, after which time it began to increase. The peak number of discoveries occurred in 1992 when six NIS were reported, including five parasitic species associated with the Eurasian ruffe; 1995 was identified as the most likely point of decline in discovery rate. This inflection point may correspond with a six-year time lag after the inception of voluntary ballast water management in 1989, or a two-year time lag after implementation of mandatory BWE regulations. Since 2000, shipping activities have been responsible for 37.5% of aquatic NIS introductions and no new species have been reported since 2006; this is the first time there has been a four-year gap in ship-mediated aquatic NIS discoveries since 1974-1977, indicating that tank-flushing regulations may have been an important addition to the management regime.

Appendices

Appendix 1: CBD 15 Guiding Principles on IAS Management and Control

1. Guiding Principle 1: Precautionary Approach
2. Guiding Principle 2: IAS Management Guiding Principles Three-Stage Hierarchical Approach:
 - o Stage 1: Preventive Measures on risk analysis, import regulation, management of border areas
 - o Stage 2: Early detection and rapid response not to spread invasive alien species. Once established, eradication or control is needed
 - o Stage 3: Mitigation of damage if ecosystems, habitats or species are threatened
3. Guiding Principle 3: Application of Ecosystem Approach to IAS Management
4. Guiding Principle 4: State Responsibility – Regulation and monitoring of movement of known invasive species, including pests and diseases within the country and beyond national borders
5. Guiding Principle 5: Research and Monitoring - appropriate research on and monitoring of alien invasive species, including history of invasions (origin, pathways and time-period), characteristics of the alien invasive species, ecology of the invasion, and the associated ecological and economic impacts and how they change over time.
6. Guiding Principle 6: Education and public awareness: Wide dissemination of information, education of public and other authorities, mobilization of citizen scientists, recreational divers, and tourists for early detection and rapid response
7. Guiding Principle 7: Border control and quarantine measures to ensure intentional introductions are subject to appropriate authorization, and unintentional introductions are minimized
8. Guiding Principle 8: Exchange of information, such as development of a database for compilation and dissemination of information on IAS
9. Guiding Principle 9: Cooperation, including capacity building – domestic and international
10. Guiding Principle 10: Intentional Introduction – national risk assessment and authorization
11. Guiding Principle 11: Unintentional Introductions – statutory and regulatory measures, institutions and agencies with appropriate responsibilities, operational resources for rapid and effective action
12. Guiding Principle 12: Mitigation of Impacts – eradication, containment and control to mitigate adverse effects, which is cost-effective, safe to the environment, safe to humans, safe to agriculture, and which is socially, culturally and ethically acceptable
13. Guiding Principle 13: Eradication – prioritized when feasible and cost-effective
14. Guiding Principle 14: Containment – limitation of spread when eradication is not feasible, including regular monitoring

15. Guiding Principle 15: Control – focus on reducing damage

Appendix 2: Goals of the National fish, wildlife & plants climate adaptation strategy

National Fish, Wildlife and Plants Climate Adaptation Strategy	
Goals & Strategies	
Goal	Strategy
Goal 1: Conserve habitat to support healthy fish, wildlife, and plant populations and ecosystem functions in a changing climate.	Strategy 1.1: Identify areas for an ecologically-connected network of terrestrial, freshwater, coastal, and marine conservation areas that are likely to be resilient to climate change and to support a broad range of fish, wildlife, and plants under changed conditions.
	Strategy 1.2: Secure appropriate conservation status on areas identified in Action 1.1.1 to complete an ecologically connected network of public and private conservation areas that will be resilient to climate change and support a broad range of species under changed conditions.
	Strategy 1.3: Restore habitat features where necessary and practicable to maintain ecosystem function and resiliency to climate change.
	Strategy 1.4: Conserve, restore, and as appropriate and practicable, establish new ecological connections among conservation areas to facilitate fish, wildlife, and plant migration, range shifts, and other transitions caused by climate change.
	Strategy 2.1: Update current or develop new species, habitat, and land and water management plans, programs and practices to consider climate change and support adaptation.
Goal 2: Manage species and habitats to protect ecosystem functions and provide sustainable cultural, subsistence, recreational, and commercial use in a changing climate.	Strategy 2.2: Develop and apply species-specific management approaches to address critical climate change impacts where necessary.
	Strategy 2.3: Conserve genetic diversity by protecting diverse populations and genetic material across the full range of species occurrences.
	Strategy 3.1: Increase the climate change awareness and capacity of natural resource managers and other decision makers and enhance their professional abilities to design, implement, and evaluate fish, wildlife, and plant adaptation programs.

	<p>Strategy 3.2: Facilitate a coordinated response to climate change at landscape, regional, national, and international scales across state, federal, and tribal natural resource agencies and private conservation organizations.</p> <p>Strategy 3.3: Review existing federal, state and tribal legal, regulatory and policy frameworks that provide the jurisdictional framework for conservation of fish, wildlife, and plants to identify opportunities to improve, where appropriate, their usefulness to address climate change impacts.</p> <p>Strategy 3.4: Optimize use of existing fish, wildlife, and plant conservation funding sources to design, deliver, and evaluate climate adaptation programs.</p> <p>Strategy 4.1: Support, coordinate, and where necessary develop distributed but integrated inventory, monitoring, observation, and information systems at multiple scales to detect and describe climate impacts on fish, wildlife, plants, and ecosystems.</p> <p>Strategy 4.2: Identify, develop, and employ decision support tools for managing under uncertainty (e.g., vulnerability and risk assessments, scenario planning, strategic habitat conservation approaches, forecasting, and adaptive management evaluation systems) via dialogue with scientists, managers (of natural resources and other sectors), economists, and stakeholders.</p> <p>Strategy 5.1: Identify knowledge gaps and define research priorities via a collaborative process among federal, state, tribal, private conservation organization, and academic resource managers and research scientists.</p> <p>Strategy 5.2: Conduct research into ecological aspects of climate change, including likely impacts and the adaptive capacity of species, communities and ecosystems, and their associated ecosystem services, working through existing partnerships or new collaborations as needed (e.g., USGCRP, NCA, CSCs, RISAs, and others).</p> <p>Strategy 5.3: Advance understanding of climate change impacts and species and ecosystem responses through modeling.</p>
<p>Goal 4: Support adaptive management in a changing climate through integrated observation and monitoring and use of decision support tools.</p>	
<p>Goal 5: Increase knowledge and information on impacts and responses of fish, wildlife, and plants to a changing climate.</p>	

Goal 6: Increase awareness and motivate action to safeguard fish, wildlife, and plants in a changing climate.	Strategy 6.1: Increase public awareness and understanding of climate impacts to natural resources and ecosystem services and the principles of climate adaptation at regionally and culturally-appropriate scales.
	Strategy 6.2: Engage the public through targeted education and outreach efforts and stewardship opportunities.
	Strategy 6.3: Coordinate climate change communication efforts across jurisdictions.
	Strategy 7.1: Slow and reverse habitat loss and fragmentation.
Goal 7: Reduce non-climate stressors to help fish, wildlife, plants, and ecosystems adapt to a changing climate.	Strategy 7.2: Slow, mitigate, and reverse where feasible ecosystem degradation from anthropogenic sources through land/ocean- use planning, water resource planning, pollution abatement, and the implementation of best management practices.
	Strategy 7.3: Use, evaluate, and as necessary, improve existing programs to prevent, control, and eradicate invasive species and manage pathogens.
	Strategy 7.4: Reduce destructive capture practices (e.g., fisheries bycatch, destructive fishing gear), over-harvesting and illegal trade to help increase fish, wildlife, and plant adaptation.

Appendix 3: References

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Annex O. Letter of Agreement between UNDP and Government of Turkey

STANDARD LETTER OF AGREEMENT BETWEEN UNDP AND THE GENERAL DIRECTORATE OF FORESTRY, MINISTRY OF FOREST AND WATIR AFFAIRS, OF THE REPUBLIC OF TURKEY FOR PROVISION OF SUPPORT SERVICES

Dear Mr. TAŞ,

1. Reference is made to consultations between officials of the General Directorate of Nature Conservation and National Parks, Ministry of Forest and Water Affairs, of the Republic of Turkey (hereinafter referred to as "General Directorate") and officials of UNDP Turkey hereinafter referred to as UNDP with respect to the provision of support services by the UNDP Turkey country office for nationally managed project "Addressing Invasive Alien Species Threats at Key Marine Biodiversity Areas " (Hereinafter referred to as Project). UNDP and the General Directorate hereby agree that the UNDP country office may provide such support services at the request of the General Directorate through its institution designated in the relevant project document, as described below.
2. The UNDP country office may provide support services for assistance with reporting requirements and direct payment. In providing such support services, the UNDP country office shall ensure that the capacity of the General Directorate -designated institution is strengthened to enable it to carry out such activities directly. The costs incurred by the UNDP country office in providing such support services shall be recovered from the administrative budget of the office.
3. The UNDP country office may provide, at the request of the designated institution, the following support services for the activities of the project:
 - a) Identification and recruitment of project and programme personnel;
 - b) Identification and facilitation of training activities;
 - c) Procurement of goods and services.
4. The procurement of goods and services and the recruitment of project and programme personnel by the UNDP country office shall be in accordance with the UNDP regulations, rules, policies and procedures. Support services described in paragraph 3 above shall be detailed in an annex to the project document, in the form provided in the Attachment hereto. If the requirements for support services by the country office change during the life of a project, the annex to the project document is revised with the mutual agreement of the UNDP resident representative and the designated institution.
5. The relevant provisions of the "Revised Standard Agreement" between UNDP and the Government of Turkey signed on 21 October 1965, including the provisions on liability and privileges and immunities, shall apply to the provision of such support services. The Government shall retain overall responsibility for the nationally managed project through the Ministry as its designated institution. The responsibility of the UNDP country office for the provision of the support services described herein shall be limited to the provision of such support services detailed in the annex to project document.
6. Any claim or dispute arising under or in connection with the provision of support services by the UNDP country office in accordance with this letter shall be handled pursuant to the relevant provisions of the Revised Standard Agreement signed on 21 October 1965.
7. The manner and method of cost-recovery by the UNDP country office in providing the support services described in paragraph 3 above shall be specified in the annex to project document.
8. The UNDP country office shall submit progress reports on the support services provided and shall report on the costs reimbursed in providing such services, as may be required.
9. Any modification of the present arrangements shall be effected by mutual written agreement of the parties hereto.

10. If you are in agreement with the provisions set forth above, please sign and return to this office two signed copies of this letter. Upon your signature, this letter shall constitute an agreement between the Ministry and UNDP on the terms and conditions for the provision of support services by the UNDP country office for nationally managed projects.

Yours sincerely,

For UNDP
Ms. Irena Vojáčková-Sollorano
UN Resident Coordinator
and UNDP Resident Representative in Turkey

For the General Directorate of Nature Conservation and National
Parks, Ministry of Forestry and Water Affairs of the Republic of Turkey
Mr. Nurettin TAŞ
General Director

Attachment

DESCRIPTION OF UNDP COUNTRY OFFICE SUPPORT SERVICES

1. Reference is made to consultations between the General Directorate of Nature Conservation and National Parks, Ministry of Forest and Water Affairs, the institution designated by the Government of Turkey and officials of UNDP with respect to the provision of support services by the UNDP country office for the nationally managed GEF funded project "Addressing Invasive Alien Species Threats at Key Marine Biodiversity Areas" (Project ID: 00097993)

2. In accordance with the provisions of the letter of agreement signed on .../.../2017 and the project document, the UNDP country office shall provide support services for the project "Addressing Invasive Alien Species Threats at Key Marine Biodiversity Areas", as described below.

3. Support services to be provided:

Support Services	Total Cost to UNDP	Method of Reimbursement of UNDP
1. Procurement Support	\$6,384.00	DPC & Billing
2. Finance and Resource Management	\$14,232.00	DPC & Billing
3. HR and Administrative Support	\$5,107.00	DPC & Billing
Total:	\$25,723.00	

4. Description of functions and responsibilities:

UNDP country office support services to national execution:

1. Recruitment of Project personnel:

- Assist in conducting search for suitable candidates (advertisement, website, roster)
- Involve in interviewing candidates
- Assist in issuing contracts
- Authorizing salary/consultancy fee/missions
- Assess performance

2. Sub – contracting/Procurement

- Assist in identifying suitable subcontractors (advertisement, website, posters)
- Assist in evaluation bids
- Assist in issuing contracts (when necessary)
- Assess sub – contractors work
- Ensure inputs as per contracts TOR's
- Ensure payments are made accordingly
- Ensure milestones are met
- Critical review of sub – contractor's performance

3. Financial Management and Accountability

- Making direct payments and ensuring flow of funds for project activities

- Training of staff of implementing agency on financial disbursement and reporting

4. Training/Workshops

- Making appropriate arrangements for the logistical and technical support of the training and workshop activities

5. Equipment

- Review specifications
- Identify suppliers of goods and services
- Approve specifications
- Assist in evaluating contracts
- Assist in awarding contracts (when necessary)
- Undertake Customs clearance
- Authorize payments.

Maximum DPC amount to be charged to GEF funds is USD 25,723.



REPUBLIC OF TURKEY
THE MINISTRY OF FORESTRY AND WATER AFFAIRS
General Directorate of Nature Conservation And National Parks



Executive Coordinator
GEF-UNDP
Ms. Adriana Dinu

04 May 2017

Cc: UNDP Resident Representative in the Republic of Turkey Ms. Irena Vojáčková-Sollorano

Dear Ms. Adriana Dinu,

The Ministry of Forestry and Water Affairs under the Government of the Republic of Turkey (MoFWA) has the honor to testify the deep respect for the projects and programs implemented by UNDP to support sustainable development in the Republic of Turkey.

This is to inform you about MoFWA's support in the implementation of the GEF-UNDP project on "Addressing Invasive Alien Species Threats at Key Marine Biodiversity Areas". We hope that within the framework of the project assistance will be provided to address threats from invasive alien species to the unique marine biodiversity in the Republic of Turkey, as well as the development of socio-economic benefits for our population living near key marine environments.

Hereby we confirm that MoFWA is ready to provide co-financing for the successful implementation of the GEF-UNDP project in the amount of about 13,000,000 (thirteen million US dollars) for the period of 2018-2022 years. This amount includes 12,500,000 (twelve million five hundred thousand million US dollar) to finance the activities for the biodiversity inventory including island and coastal ecosystem, conservation of coastal wetlands and protected areas, management effectiveness of targeted protected areas in terms of invasive alien species in Turkey. In addition, 500,000 (five hundred thousand US dollars) will serve as the immaterial contribution of MoFWA staff in support of the project implementation in Turkey's marine ecosystems. These funds are reflected in the Medium-Term Budget Framework for the period of 2018-2020 years approved by the Ministry of Finance of the Republic of Turkey.

Best regards,


Nurettin TAŞ
General Director
General Directorate of Nature Conservation and National Parks
Ministry of Forestry and Water Affairs

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20 June 2017

Subject: Co-financing letter for the "Addressing Invasive Alien Species Threats at Key Marine Biodiversity Areas" project

Dear Ms. Adriana Dinu,

I would like to express UNDP Turkey's support for the full-size GEF-UNDP project on "Addressing Invasive Alien Species Threats at Key Marine Biodiversity Areas". This project will help Turkey to address threats from invasive alien species to the unique marine biodiversity in the Republic of Turkey, as well as the development of socio-economic benefits for Turkey's population living near key marine environments.

As the Implementing Agency for this project, UNDP Turkey Country Office will provide in-kind and grant co-financing to the amount of 170,000 USD and 30,000 USD respectively, over the lifetime of project implementation.

Yours sincerely,


Claudio Tomasi
UNDP Country Director

Ms. Adriana Dinu
Executive Coordinator
Global Environment Finance
United Nations Development Programme
One United Nations Plaza
New York, NY 10017

Annex Q: Details of GDNCNP Contribution

Output	Contribution detail	Amount of contribution (USD)	
		In kind	Total
1.1 Regulations on introduction, early detection, prevention and management of IAS in marine and coastal wetland ecosystems developed and submitted for adoption.	GDNC&NP Staff cost	20.000	20.000
	Meeting costs	40.000	40.000
1.2 Main pathway and vectors for IAS identified.	GDNC&NP Staff cost	40.000	40.000
	Biodiversity inventory costs	1.480.000	1.480.000
	Wetlands inventory costs	1.200.000	1.200.000
1.3 Protocols and quarantine mechanisms consistent with bio-security requirements and international standards for IAS in marine and coastal wetland ecosystems in place	GDNC&NP Staff cost	10.000	10.000
	Meeting costs	40.000	40.000
1.4 Fiscal incentives introduced for effective removal of IAS (e.g. Lion fish, Balloon fish) in marine and coastal wetland ecosystems (to encourage selective fishing and removal of IAS by fishers) jointly with MFAL.	Meeting costs	40.000	40.000
1.5 Regulations and standards on control, minimization and removal of IAS from ballast water developed jointly with MTMAC and put for enforcement	Meeting costs	40.000	40.000
1.6 Sustainability and Replication mechanism: National Strategy and Action Plan on IAS in marine and coastal wetland ecosystems developed and approved to inform future actions on identifying priority habitats and species to be protected, evaluating financial and socio-economic effects of action/inaction for marine and freshwater IAS based on a thorough cost/benefit analysis.	GDNC&NP Staff costs	30.000	30.000
	Meeting costs	40.000	40.000
	Travel costs	20.000	20.000
2.1 Inter-sectoral multi-stakeholder Advisory Technical Board under Ministry of Forestry and Water Affairs capacitated to deal with IAS prevention, early detection, rapid response, management and eradication	GDNC&NP Staff costs	20.000	20.000
	Meeting costs	40.000	40.000
	Travel costs	40.000	40.000
2.2 Information system with official list of prohibited IAS, modules on risk analysis, early warning response and monitoring for IAS in marine and coastal ecosystems is in use by government regulators. The system enables a comprehensive inventory and monitoring of IAS threats at the most sensitive marine and coastal habitats and species (posidonia meadows, coralligenous, sea turtles, anchovy, mussel, oyster), as well as measures to detect and prevent entry of risky IAS at key points of entry.	GDNC&NP Staff costs	30.000	30.000
	Noah's Ark National Biodiversity Database costs (database, data, data input)	2.000.000	2.000.000
	Management costs	170.000	170.000
	GIS costs	350.000	350.000
2.3 Engagement with shipping industry, and transport and customs sectors, on implementation of regulations and standards on control, minimization and removal of IAS from ballast water; and on procedures for regulating the entry of species for ornamental and aquaculture purposes to mitigate the introduction of marine and freshwater IAS.	Training material costs	100.000	100.000
2.4 Increased knowledge and awareness on IAS threats, impacts, management options and best practices for relevant industries, enterprises (aquaculture, transport, custom, tourism, etc.) media, security forces (gendarme), schools etc.	GDNC&NP Staff costs	50.000	50.000
	Training material costs	150.000	150.000

through a comprehensive national communication, outreach program and delivery of community training			
	Meeting costs	50.000	50.000
3.1. Management plans designed and launched for 4 areas, with identification of site-specific measures for prevention, ensure eradication, control and management of IAS	GDNC&NP Staff cost	100.000	100.000
	Vehicle costs	350.000	350.000
	Fuel costs	150.000	150.000
	GIS costs	100.000	100.000
	Wetlands management plan costs	500.000	500.000
	Protected areas management plan costs	500.000	500.000
	Species action plan costs	350.000	350.000
3.2. Measures to detect, control spread of IAS at the target sites in collaboration with local communities, and targeted restoration of ecosystems degraded as a result of IAS.	GDNC&NP Staff cost	100.000	100.000
	Vehicle costs	550.000	550.000
	Fuel costs	350.000	350.000
	Conservation of coastal wetlands and protected areas costs	2.500.000	2.500.000
	Management costs	500.000	500.000
3.3.Support for the recovery of native species disturbed by IAS at selected sites	GDNC&NP Staff cost	100.000	100.000
	Vehicle costs	200.000	200.000
	Fuel costs	150.000	150.000
Grant Total		13,000,000	13,000,000