



NEOM Nature Conservation Standard for Sustainable Developments

Beta Version: 31 December 2019

Beta Version

CONTENTS

<i>Introduction</i>	3
<i>NEOM's unrivalled commitment to Conservation</i>	3
<i>The Contribution of Development to Nature Conservation</i>	5
<i>NEOM's Nature Conservation Standard meets International Requirements</i>	5
<i>NEOM Nature</i>	6
Coastal and Marine Ecosystems	6
Terrestrial Ecosystems	7
Islands	7
<i>NEOM's Nature Conservation Standard: Protecting Priority Natural Values, Habitats, and Species</i>	8
Standard for protecting Natural Values	8
Standard for protecting Natural Habitats associated with Development	11
<i>Management of Ecosystem Services</i>	15
<i>Sustainable Use and Management of Living Natural Resources</i>	15

Introduction

The land and seascapes of the NEOM region contain a unique diversity of species and habitats and a rich cultural heritage that are central to NEOM's vision. These attributes represent regional and globally important sources of biodiversity and cultural identity. Recognizing this, NEOM aims to establish new standards in environmental stewardship so that we protect and enhance these natural areas for the benefit of the region and the World. NEOM's natural assets are also the foundations for achieving key elements of our development vision, including livability, wellbeing, tourism and sustainability. In a global arena of competing destinations and places to live, NEOM's natural and cultural assets set it apart and endow it with a unique advantage.

While the sea and land are ancient environments, many of the attributes that we value most are also sensitive and easily damaged or degraded. We must take great care to understand if any of our activities might affect these sensitive attributes and ensure that we design and conduct our activities to minimize risk. For some attributes, damage can take so long to repair, even with expensive or hi-tech interventions, that negative impacts are effectively irreversible within the context of NEOM's development.

Box 1: Our Environment Vision:

NEOM: In Harmony with Nature

Our Environmental Commitments include:

- *First region powered entirely by Renewable Energy*
- *Leading the revolution toward Circular Economy*
- *Cities that are Net Positive for biodiversity*
- *Unrivalled commitment to Nature Conservation*
- *The most Environmentally-engaged Citizenry on planet*

NEOM's unrivalled commitment to Conservation

The importance of nature to NEOM is captured in our Environmental Vision and our Environmental Commitments (see text Box 1). All of NEOM's development activities will be designed, planned and implemented to ensure NEOM delivers on its environmental commitments.

This document introduces our core Environmental Principles (see text box 2) and outlines our standards and processes that will ensure all development activities, from concept design to construction, contribute positively and measurably to NEOM's *Unrivalled Commitment to Nature Conservation*.

Protecting the important natural values within NEOM is the first priority under our environmental vision. However, there are a range of natural values and habitats within NEOM that are in relatively poor condition as a result of a long history of processes and human habitation that pre-date NEOM's inception. Through wise planning and strategic investments, NEOM will work with proponents to materially improve these values, delivering a net improvement in the condition and biodiversity value of NEOM's sea and landscapes.

This Nature Conservation Standard prescribes the considerations and constraints applicable to all development activities that will ensure that NEOM is developed in harmony with nature. The Standard operationalizes our environmental commitments and principles for use in Regional Land Use Planning, Urban Master Planning and other development planning activities. This Standard is a key component of our Environmental Standards, which includes specification of NEOM's environmental assessment and approvals procedures that will ensure the development of NEOM will result in net gains for nature.

Box 2: Our core Environmental Principles

NEOM's Environmental Vision and Commitments are operationalized through a set of five core Principles that underpin everything we do: understand, protect, enhance, sustain and inspire.

Understand: Science to action

NEOM's Environment Program is built on the best available science and a deep understanding of the values - and vulnerabilities - of our landscape and seas. From comprehensive studies and assessments, partnerships with leading science-providers and an unwavering commitment to learning from everything we do, NEOM's environmental journey will be a hallmark of innovative conservation, adaptive management and constant improvement.

Our baseline assessments and biodiversity surveys have identified that NEOM's landscapes, marine ecosystems and islands are home to habitats and species of global significance. We have come to understand that we are the stewards of some of the most important coral reefs in the world and custodians of habitats that may be vital to the future of Arabian wildlife. With this knowledge comes great responsibility, and NEOM is committed to protecting and nurturing our natural ecosystems through a comprehensive network of protected areas and rigorous environmental controls on all developments.

Protect: Do no harm

NEOM is committed to setting a new benchmark for environmentally-conscientious development. We will contain our development footprint to less than 4% of the entire NEOM land and seacape where we will implement an Environmental Performance Management System that builds on the best global practices to ensure all development activities meet and exceed key international standards.

Our developments will all meet sustainable design requirements and will be subject to rigorous assessment and approval processes that achieve or exceed the Environmental and Social Sustainability Performance Standards of the International Finance Corporation of the World Bank. Through an innovative environmental co-design approach, our development partners will be efficiently guided through a risk-based approvals process that will help propel them into the future of sustainable design and construction. The remaining 96% of NEOM holds outstanding and critical habitats and features that will be managed through a network of land and marine protected areas in priority conservation locations that ensure that threatened and keystone species are not harmed and critical habitats such as coral reefs and wadis are protected.

Enhance: Restore, repair, rewild

As the new custodian of this ancient land NEOM has an unprecedented opportunity to revitalize the landscape and its unique biodiversity.

Through a progressive program of habitat restoration, threat reduction and species recovery efforts NEOM will lead a renaissance of Arabian wildlife. Our national parks, marine sanctuaries and wilderness areas will make regionally and globally important contributions to conservation and deliver nature experiences for residents and visitors that will stay with them forever.

Sustain: Wise resource use

Our natural resources are the precious natural capital that underpins all areas of human progress. There is global recognition of the need to get humanity onto a more sustainable trajectory; NEOM will lead the way.

Through innovation, investment and a deep commitment to sustainability, NEOM's developments – our cities, industries and buildings – will be among the most sustainable on Earth. Harnessing technology and the world's greatest minds, we will use renewable power for all of NEOM's energy needs, produce water and goods without harmful emissions to the environment, and lead the revolution to circular economy and cradle-to-cradle as operating principles for our societies. Additionally, NEOM's natural resources such as fish stocks, arable and grazing lands, etc. will be best practice models of sustainable use through conservation partnerships with land users and fishers.

Inspire: Learn, share, showcase

NEOM paves the way for the future development of the Kingdom of Saudi Arabia, and the world. We will only succeed if we constantly learn, share our lessons and innovations and use our ideas and technological advances to inform and help the rest of humanity.

NEOM will inspire the world to re-imagine the relationship between people and nature through our commitments and our actions, and will establish itself as global showcase for sustainability and conservation innovation.

The Contribution of Development to Nature Conservation

NEOM has committed to restricting the combined footprint of development activities to no more than 4% of the total NEOM area. The remaining 96% of NEOM will be managed primarily for the purposes of nature conservation.

We have established a set of standards and accompanying procedures, that prescribe the considerations and constraints applicable to all development activities. These aim to ensure that development activities in the 4% of developed area meet the following objectives:

- Design all developments to have net positive effect on biodiversity throughout their operational life
- Minimize negative impacts on nature within the direct development footprint during construction
- Provide net positive biodiversity gains through urban green spaces
- Avoid negative impacts to nature in adjacent and adjoining areas
- Provide access to wild areas and other opportunities that improve the human-nature connection
- Deliver an enduring net gain in natural values through prudent application of the mitigation hierarchy¹.

Box 3: NEOM's Policy on Net Gain

Through innovative design and a commitment to NEOM's goals relating to livability and sustainability, all urban developments should be planned and implemented to achieve a net gain in biodiversity and ecosystem services.

Complying with these standards is also a key mechanism for ensuring that NEOM makes meaningful and measurable contributions to achieving the United Nations Sustainable Development Goals².

NEOM's Nature Conservation Standard meets International Requirements

¹ mitigation strategies should follow the Mitigation Hierarchy of avoid, reduce/minimize, rehabilitate/restore, offset (see Figure 1).

² <https://www.un.org/sustainabledevelopment/sustainable-development-goals/>

NEOM's Nature Conservation Standard is based on, and designed to meet or exceed, the relevant sections of the International Finance Corporation's Performance Standards on Environment and Social Sustainability³.

Of particular relevance is 'Performance Standard 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources', which includes goals relating to:

- Protecting and conserving biodiversity
- Maintaining the benefits from ecosystem services
- Sustainable management of natural resources through the integration of conservation and development.

We also draw upon IUCN's conservation guidelines for conducting development activities in Key Biodiversity Areas (KBAs)⁴. This includes detailed guidance on best practices for development in areas of high biodiversity, including:

- Establishing baseline conditions
- Protecting and restoring habitat
- Offsetting biodiversity losses
- Monitoring drivers of change and impact
- Consulting with stakeholders
- Ongoing mitigation of impact.

For marine conservation we are drawing upon the Ecologically or Biologically Significant Marine Areas⁵ (EBSA) initiative of the United Nations Convention on Biological Diversity (CBD). This provides the framework for identifying areas of sea and ocean that are especially important for biodiversity, marine ecosystem function and the generation of critical ecosystem services⁶ and meet one or more of the following scientific criteria: uniqueness or rarity; special importance for life history stages of species, and importance for threatened, endangered or declining species and/or habitats.

NEOM Nature

NEOM is rich in nature, spanning coastal and marine ecosystems, terrestrial ecosystems and an archipelago of islands. Understanding these attributes and maintaining their functions is the foundation for wise decisions and effective planning.

Coastal and Marine Ecosystems

NEOM is home to critical habitats such as seagrass and coral reefs that provide shelter, feeding, and nursery grounds to species of conservation importance such as turtles, dugongs, manta rays, whale sharks, and dolphins. There are more than 2000 species, including coral, fish, sponges, crustaceans, worms, sea urchins. Over 600 of those are endemic to the Red Sea and, therefore, cannot be found anywhere else in the world.

³ International Finance Corporation 2012 IFC Performance Standards on Environmental and Social Sustainability. International Finance Corporation, Washington.

⁴ The KBA Partnership: Guidelines on Business and KBAs: Managing Risk to Biodiversity, IUCN, Gland, Switzerland (2018)

⁵ Dunstan, P.K., Bax, N.J., Dambacher, J.M., Hayes, K.R., Hedge, P.T., Smith, D.C. and Smith, A.D., 2016. Using ecologically or biologically significant marine areas (EBSAs) to implement marine spatial planning. *Ocean & Coastal Management*, 121, pp.116-127.

⁶ <https://www.cbd.int/ebsa/about>

The region also supports globally-threatened and near-threatened species, including green turtle (Endangered), hawksbill turtle (Critically endangered), scalloped hammerhead shark (Critically endangered). NEOM's waters are also visited by the world's largest fish, the whale shark (Endangered). Adding to the conservation importance of NEOM is the growing scientific consensus that coral reefs of the northern Red Sea are some of the most important and resilient coral reefs in the world. Due to a combination of their unique geology, evolution, and oceanographic conditions, NEOM's coral reefs appear to be among the most resilient to climate change, raising them to global importance.

Terrestrial Ecosystems

NEOM's terrestrial conservation values and assets range across diverse geology, ecosystems and species, creating spectacular landscapes that are central to the region's character. NEOM's diverse and dramatic geology sets the region apart and makes it outstanding globally. Reflecting this geological variety is a diverse range of habitats and species, including life-sustaining wadis, wind-blasted mountain tops, and iconic Arabian wildlife. Notable iconic species include Arabian wolf, crested porcupine, caracal, striped hyena and Verreaux's eagle, many of which are very rare in the region. The conservation value of NEOM is further highlighted by the number of IUCN Red-Listed Threatened and Near-threatened species that still inhabit NEOM and which will form the basis for our internationally-important efforts at species and ecosystem recovery. These include spectacular birds of prey such as the Egyptian vulture (Endangered), bearded vulture (Near Threatened) and greater spotted eagle (Vulnerable), mammals such as the Nubian ibex (Vulnerable) and reptiles such as the Egyptian spiny-tailed lizard (Vulnerable).

Islands

In the interface between the marine and terrestrial environmental assets are a host of islands that form the NEOM archipelago. Of all NEOM's environmental assets, these islands are the most ecologically unspoiled areas in NEOM, featuring both terrestrial and marine ecosystems. They provide critical nesting habitat for a range of sea-turtles and breeding seabirds, and are critical to NEOM's populations of sooty falcon (IUCN Red-Listed as Vulnerable), and sooty and white-eyed gulls. White-eyed gulls are mostly endemic to the Red Sea, with significant proportions of their global population breeding on NEOM's islands. Thus the islands are critical bridges between land and sea, creating connections across biomes that support unique ecological processes and unrivalled nature experiences for visitors and that must not be interrupted.

NEOM's Nature Conservation Standard: Protecting Priority Natural Values, Habitats, and Species

To protect NEOM's natural environment, development activities must comply with a range of standards that specify the considerations required to avoid or minimize impacts and enhance natural values.

Standard for protecting Natural Values

Table 1 lists priority Natural Values (NVs) that represent the environmental attributes (species, habitats, features) of particular conservation importance. These must be considered when designing, approving and implementing any activity within NEOM.

For all of these attributes, project proponents and their implementers must:

- Produce an inventory of the natural values in the proposed development area
- Ensure net gain in the condition and sustainability of priority NVs through the prudent application of the Mitigation Hierarchy that includes Biodiversity Offsetting of any residual impacts.
- Achieve net gain in the condition and sustainability of priority NVs through Sustainable Urban Planning and Management

Table 1. This table should be used as guidance in the planning and design of all development activities. Activities that are planned to avoid impacts (indicated in green) on all Priority NCAs will be considered lowest environmental risk, and will require the lowest level of assessment (Tier 1). Activities that have the potential to impact on priority NVs will need to demonstrate plans and procedures for minimising, restoring or offsetting impacts. These mitigation strategies may be adequate to allow approval of an activity, but only where mitigation strategies are possible for that NV (indicated by yellow). Activities relying on strategies indicated in yellow will be subject to environment and social impact studies (ESIA) and more thorough assessment (Tier 2). Red indicates NVs that are not amenable to a particular mitigation strategy. Activities that rely on strategies that are not suitable for a particular priority NV will be deemed to be causing unmitigatable negative impacts and are unlikely to be permissible (Tier 3). This table is for guidance only and is not intended as an exhaustive list of all natural attributes that may be important to consider in the design and planning of activities. All

yellow). Activities relying on strategies indicated in yellow will be subject to environment and social impact studies (ESIA) and more thorough assessment (Tier 2). Red indicates NVs that are not amenable to a particular mitigation strategy. Activities that rely on strategies that are not suitable for a particular priority NV will be deemed to be causing unmitigatable negative impacts and are unlikely to be permissible (Tier 3). This table is for guidance only and is not intended as an exhaustive list of all natural attributes that may be important to consider in the design and planning of activities. All			Impact Mitigation Strategy			
Attribute	Description	Examples (illustrative only; not exhaustive)	Avoid	Minimise	Restore	Offset
Land						
Threatened and Near-Threatened species and sub-species	Native animals and plants that are recognised as internationally of conservation concern under IUCN	E.g. Spiny-tailed lizard, Nubian ibex, Arabian leopard, Egyptian vulture, greater spotted eagle, bearded vulture				
Rare, declining, or iconic species and sub-species	Native animals and plants that are of conservation concern, regionally rare, locally depleted, iconic or culturally important	E.g. Spiny-tailed lizard, striped hyena, Arabian wolf, Arabian leopard, Egyptian vulture, greater spotted eagle, resident and migratory shorebirds, doum palm				
Land components of islands	All areas of islands above waterline, and species that utilise them as habitat, resources, etc.	Shorebird nesting areas (e.g. white-eyed gull, lesser crested tern), shorebird migration and wintering areas (e.g. greater sand plover, crab plover), seacliff habitats (e.g. IUCN Vulnerable sooty falcon)				
Remnant native habitat	Habitats that are ecologically important or regionally depleted	Sabkha, acacia woodlands, highland juniper woodland				
Aquifers	Subterranean water bodies	Saq, Tabouk, Wajid aquifers				
Iconic landscapes	Landscapes that are important to NEOM’s identity, Masterplans or ecotourism vision	Sharma Valley				
Wadis	Waterways connecting catchments to the coast, with important ecological functions and ecosystem services	Wadi Ainouna, Wadi Sharma				

Marine			
Marine megafauna	Large, iconic marine species, including those potentially important to tourism	Dugong, whales, dolphins, whalesharks, turtles, large fish	
Coral reefs in sheltered bays	Coral reefs in enclosed bays with limited water exchange and limited connectivity to other reefs	Coral reefs within Sharma Bay	
Seaturtle nesting beaches	Beaches known to be important nesting sites for marine turtles	Abu Shusha and Sindalah Island	
Marine water quality	Chemical and physical properties of seawater that are important for health of marine flora and fauna; especially important for enclosed water bodies	Nitrogen concentrations and turbidity of waters in Sharma Bay	
Coral reefs of open coasts	Reefs along exposed coasts and islands benefit from greater water movement and connectivity	Coral reefs associated with Yub'a Island	
Islands & shoals	Islands and isolated reef areas that come close to the surface	Coral reefs, marine megafauna associated with Yub'a Island, Tiran Island, Sanafir Island	
Sandy areas with Seagrass	Sandy areas that contain some / insignificant patches of seagrasses	Seagrass beds close to Giyal coast	

While the emphasis is always on avoiding impacts to NVs, some impacts may be amenable to mitigation. As mentioned, mitigation strategies should follow the Mitigation Hierarchy of avoid, reduce/minimize, rehabilitate/restore, offset (Figure 1). NEOM follows international best practice in the application of the mitigation hierarchy, with specific requirements around the use of offsets (see Box 4).

Each NV or group of NVs has specific requirements in relation to the application of the mitigation hierarchy. We provide a general overview of the acceptability of different mitigation strategies in Table 1. This is for guidance only and is not intended as an exhaustive list of all natural and cultural attributes that may be important to consider in the design and planning of activities. The specific mitigation strategy to be employed for a particular development activity may require separate analysis and agreement. Therefore, this table should be used as guidance in the planning and design of development activities as part of a preliminary assessment.

When designing mitigation strategies, proponents should note the following. Activities that are planned to avoid impacts (indicated in green) on all Priority NVs will be considered lowest environmental risk; these will require the lowest level of assessment (Tier 1).

Activities that have the potential to impact on priority NVs will need to demonstrate plans and procedures for minimizing/reducing, restoring/rehabilitating or offsetting impacts. These mitigation strategies may be adequate to allow approval of an activity, but only where mitigation strategies are contemplable for that NV (indicated by yellow). Activities relying on strategies indicated in yellow will be subject to environment and social impact studies (ESIA) and more thorough assessment (Tier 2). Red indicates NVs that are not amenable to a particular mitigation strategy. Activities that rely on strategies that are not suitable for a particular priority NVs will be deemed to be causing un-mitigatable negative impacts and are unlikely to be permissible (Tier 3).

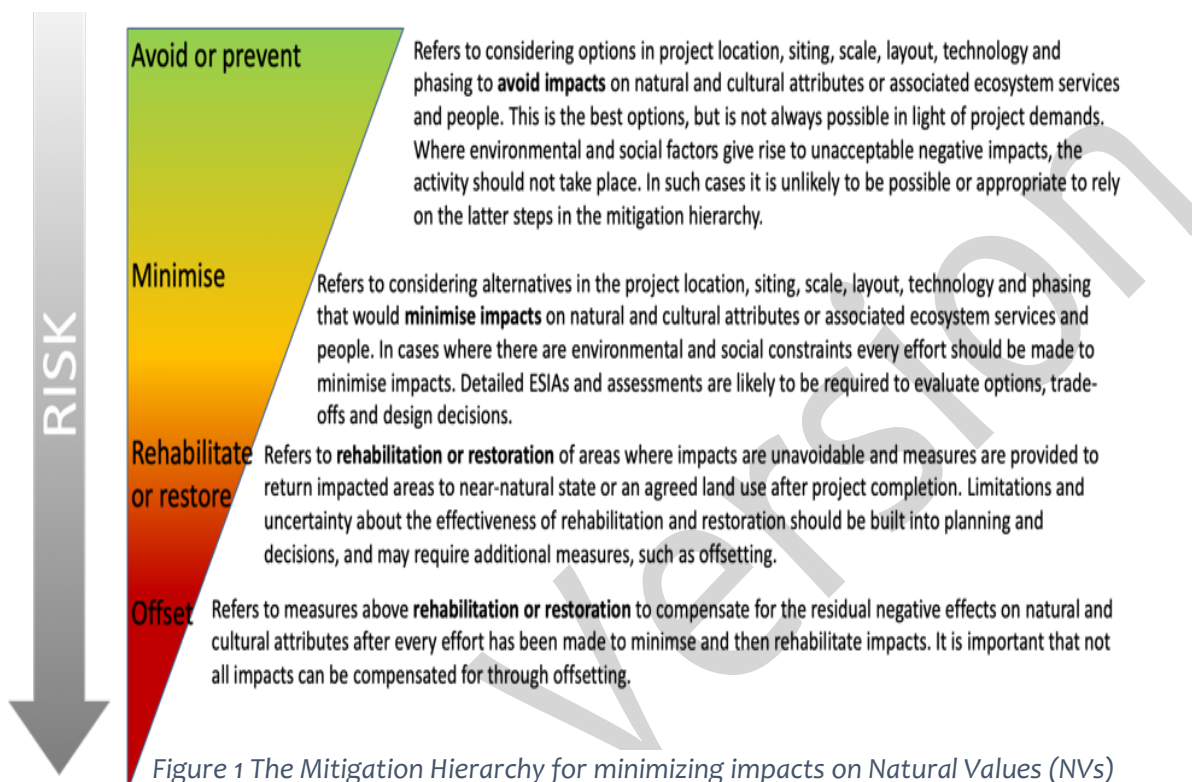
Box 4: NEOM's Policy on Offsetting

To protect the natural values of NEOM and achieve measurable conservation outcomes, the mitigation hierarchy includes biodiversity offsets, which may be considered only after appropriate avoidance, minimization, and restoration measures have been applied. A biodiversity offset should be designed and implemented to achieve measurable conservation outcomes that can reasonably be expected to result in no net loss and preferably a net gain of biodiversity; however, a demonstrated net gain is required in critical habitats (Simmonds et al. 2019). The design of a biodiversity offset must adhere to the "like-for-like or better" principle and must be carried out in alignment with the best available information and current practices. When a client is considering the development of an offset as part of the mitigation strategy, external experts with knowledge in offset design and implementation must be involved.

Standard for protecting Natural Habitats associated with Development

A habitat is defined as a terrestrial, freshwater, or marine geographical unit or airway that supports assemblages of living organisms and their interactions with the non-living environment. For the purposes of implementation of this Standard, habitats are divided into outstanding, critical, natural and modified within NEOM (Map 1). This section defines each habitat type and outlines the requirement that must be met by proponents planning development activities in these habitat types.

Outstanding Habitats are areas with irreplaceable biodiversity or features that are of global significance such as the climate-resilient coral reefs of Sharma Bay, the remote high montane and wadi ecological communities of Key Biodiversity Area Jabal Al-Lawz⁷, and the natural, cultural and historical features of Wadi Tayyb Al Ism. These areas are exceptional and transcend NEOM boundaries so as to be of collective importance for present and future generations of all humanity. Outstanding habitats merit the highest levels of protection.



Requirements

- *Outstanding Habitats must be protected in perpetuity and their conservation must be given the highest importance.*
- *The proponent will not convert or degrade Outstanding Habitats, given their global significance.*

Critical Habitats are areas with high biodiversity value, including (i) habitat of significant importance to Threatened species; (ii) habitat of significant importance to endemic and/or restricted-range species; (iii) habitat supporting globally significant concentrations of migratory species and/or congregatory species; (iv) highly threatened and/or unique ecosystems; and/or (v) areas associated with key evolutionary processes.

⁷ BirdLife International (2019) Important Bird Areas factsheet: Jabal al-Lawz. <http://www.birdlife.org> on 11/12/2019.

Requirements

- In areas of Critical Habitat, the proponent will not implement any project activities unless all of the following are demonstrated:
 - No other viable alternatives within the region exist for development of the project on habitats that are not critical;
 - The project does not lead to measurable adverse impacts on those biodiversity values for which the critical habitat was designated, and on the ecological processes supporting those biodiversity values;
 - The project does not lead to a net reduction in the global and/or national/regional population of any Threatened or Near Threatened species;
 - A site and case specific biodiversity action plan has been developed and will be implemented, that identifies threats to ecosystems, habitats, species and other environmental assets, and clearly identifies effective strategies to address (e.g. avoid, reduce, restore, via the mitigation hierarchy) these threats, and
 - A robust, appropriately designed, and long-term biodiversity monitoring and evaluation program is integrated into the Proponent's management program.

Natural Habitats are areas composed of viable assemblages of plant and/or animal species of largely native origin, and/or where human activity has not essentially modified an area's primary ecological functions and species composition.

Requirements

- The proponent will not significantly convert or degrade Natural Habitats, unless all of the following are demonstrated:
 - No other viable alternatives within the region exist for development of the project on Modified Habitat (see next category of habitats);
 - Impacts to stakeholders can be mitigated, as required by NEOM Environment Department; and
- Any conversion or degradation is mitigated according to the mitigation hierarchy.
- Mitigation measures will be designed to achieve net gain of biodiversity. Appropriate actions include:
 - Avoiding impacts on biodiversity through the identification and protection of set-asides⁸;
 - Implementing measures to minimize habitat fragmentation, such as biological corridors and increased landscape permeability;
 - Restoring habitats during operations and/or after operations; and
 - Implementing biodiversity offsets.

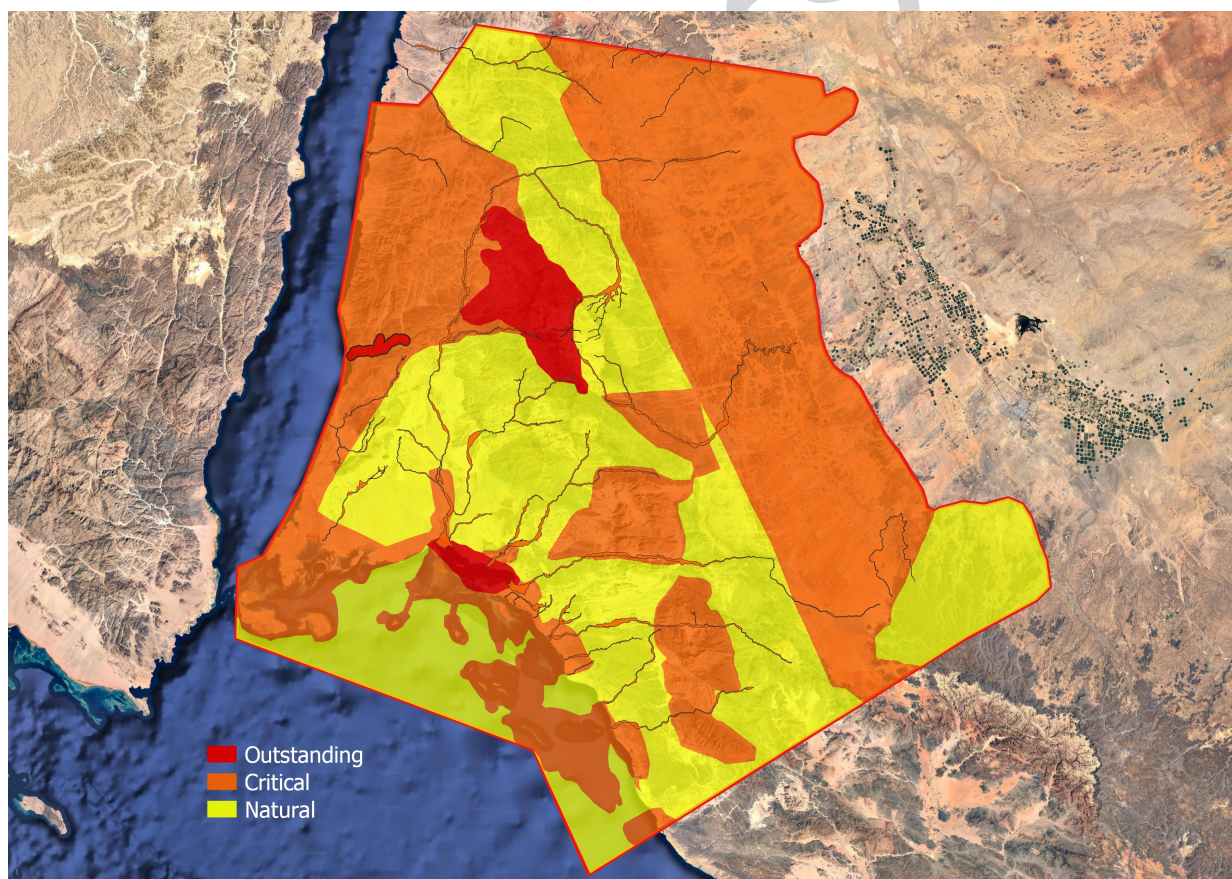
Modified Habitats are areas that may contain a large proportion of plant and/or animal species of non-native origin (introduced species), and/or where human activity has

⁸ Set-asides are land areas within the project site, or areas over which the client has management control, that are excluded from development and are targeted for the implementation of conservation enhancement measures. Set-asides will likely contain significant biodiversity values and/or provide ecosystem services of significance at the local, national and/or regional level. Set-asides should be defined using internationally recognized approaches or methodologies (e.g., High Conservation Value, systematic conservation planning).

substantially modified an area's primary ecological functions and species composition. Modified habitats may include areas managed for agriculture, forest plantations, reclaimed wetlands, reclaimed coastal areas, urban infrastructure, marinas and dredged ports and channels. Outstanding, Critical, and Natural habitats may have been modified by human activities in some sites before inception of the NEOM development and therefore are important areas for focusing restoration efforts. Modified areas of Outstanding habitats are the highest priority for restoration, followed by Critical, and then Natural habitats.

Requirements

- The following requirements apply to areas of Modified Habitat that include residual/remnant biodiversity values, as determined by the preliminary Risks and Impacts Identification process:
 - Minimize impacts on residual/remnant biodiversity and implement mitigation measures as appropriate.
 - Ensure that there is net biodiversity gain in a site containing modified habitat including use of restoration methods and threat reduction/elimination where applicable.



Map 1 The three categories of Conservation Areas in NEOM are Outstanding, Critical, and Natural Habitat. Wadis (depicted by orange 'veins') are also categorized as Critical Habitat.

Management of Ecosystem Services

Ecosystem services are the benefits that people, including businesses, derive from ecosystems. Ecosystem services are organized into four types:

- (i) provisioning services, which are the products people obtain from ecosystems;
- (ii) regulating services, which are the benefits people obtain from the regulation of ecosystem processes;
- (iii) cultural services, which are the nonmaterial benefits people obtain from ecosystems; and
- (iv) supporting services, which are the natural processes that maintain the other services.

Ecosystem services valued by humans are often underpinned by biodiversity (e.g. pollination, soil fertility maintenance). Impacts on biodiversity can therefore often adversely affect the delivery of ecosystem services. Below are listed the requirements on proponents to sustainably manage and mitigate impacts on ecosystem services throughout the project's lifecycle:

- *Where a project is likely to adversely impact ecosystem services, as determined by the risks and impacts identification process, the client will conduct a systematic review to identify priority ecosystem services and the sources and severity of impacts, and the stakeholders and beneficiaries who will be impacted.*
- *Priority ecosystem services are two-fold: (i) those services on which project operations are most likely to have an impact and, therefore, which result in adverse impacts to NEOM communities and affected stakeholders; and/or (ii) those services on which the project is directly dependent for its operations (e.g., water).*
- *When affected communities (individuals, groups or businesses) are likely to be impacted, they should participate in the determination of priority ecosystem services in accordance with comprehensive stakeholder engagement process.*
- *With respect to impacts on priority ecosystem services of relevance to affected communities and where the proponent has direct management control or significant influence over such ecosystem services:*
 - *Adverse impacts should be avoided, or*
 - *If these impacts are unavoidable, the proponent will minimize them and implement mitigation measures that aim to maintain the value and functionality and benefit distribution of priority services.*
- *With respect to impacts on priority ecosystem services on which the project depends, the proponent should minimize impacts on ecosystem services and implement measures that increase resource-use efficiency of their operations.*

Sustainable Use and Management of Living Natural Resources

Proponents that are engaged in the primary production of living natural resources, including natural and plantation forestry, agriculture, animal husbandry, aquaculture, and fisheries, will be subject to the following requirements in addition to the rest of this Standard:

- *Extraction of groundwater should be avoided and will only be considered for approval where there are no viable alternatives and where extraction will not have unacceptable impacts on supply and quality of groundwater.*
- *Where feasible, the client will locate land-based agribusiness and forestry projects on modified land or land already converted. Clients who are engaged in such industries will manage living natural resources in a sustainable manner, through the application of industry-specific good management practices and available technologies.*
- *Where such primary production practices are codified in globally, regionally, or nationally recognized standards, the client will implement sustainable management practices to one or more relevant and credible standards as demonstrated by independent verification or certification⁹.*
- *In the absence of a relevant and credible global, regional, or national standard for the particular living natural resource, the proponent will:*
 - *Commit to applying good international industry operating principles, management practices, and technologies; and*
 - *Actively engage and support the development of a NEOM standard, where relevant, including studies that contribute to the definition and demonstration of sustainable practices.*

⁹ Credible globally, regionally, or nationally recognized standards for sustainable management of living natural resources are those which (i) are objective and achievable; (ii) are founded on a multi-stakeholder consultative process; (iii) encourage step-wise and continual improvements; and (iv) provide for independent verification or certification through appropriate accredited bodies for such standards. Where relevant and credible standard(s) exist, but the proponent has not yet obtained independent verification or certification to such standard(s), the client will conduct a pre-assessment of its conformity to the applicable standard(s) and take actions to achieve such verification or certification over an appropriate period of time.