CONCEPT

Marine Biodiversity Conservation: Coral Reefs, Seagrass, Mangroves and Protected Areas

19 – 23 September 2027
Riyadh - KAFD district five-star



Marine Biodiversity Conservation: Coral Reefs, Seagrass, Mangroves and Protected Areas

Ref: 343_15661 **Date:** 19 – 23 September 2027 **Location:** Riyadh - KAFD district five-star **Fees:** 20000 SAR

Introduction:

Marine biodiversity conservation becomes a project risk when ports, waterfronts, desalination outfalls and reclamation schemes remove coral reefs, seagrass meadows or mangroves faster than anyone can measure or replace them. Weak baselines, offsets that fail and protected areas that exist only on paper then lead to permit conditions, financing delays and disputes with fishing communities. This Core Concept course equips developers, environmental managers and coastal authorities to value ecosystem services, apply the mitigation hierarchy, survey and monitor marine habitats, manage protected areas and plan restoration. Participants produce a Coastal Biodiversity Action Plan with a No Net Loss Balance Sheet.

Course Objectives:

- Characterise coral reef, seagrass and mangrove habitats and the ecosystem services they supply to a coastal project or jurisdiction
- Apply the mitigation hierarchy to dredging, reclamation and shoreline works and quantify residual loss against a no net loss or net gain goal
- Design marine baseline surveys and ecological monitoring programmes using transects, quadrats, visual census and remote sensing
- Prepare or review a marine protected area management plan with zoning rules, enforcement arrangements and effectiveness indicators
- Specify coral gardening and mangrove planting programmes with measurable success criteria and adaptive management triggers
- Explain IFC Performance Standard 6 and the TNFD recommendations at overview and involve fishing communities and other stakeholders in conservation decisions

Target Audience:

- Environmental and sustainability leads responsible for biodiversity performance on coastal development projects
- Environmental managers who oversee marine surveys, habitat monitoring and restoration contractors
- Coastal and marine authority officers who approve works, manage protected areas and set conservation conditions
- Marine ecology consultants who plan baseline surveys and advise on offsets and restoration
- Conservation programme managers who coordinate community, fisheries and partner organisations

Course Outline:

Day 1: Marine Biodiversity, Ecosystem Services and Coastal Habitats

- Biodiversity Levels: Genetic, Species and Ecosystem Diversity in Marine Settings
- Ecosystem Services Classification: Provisioning, Regulating, Cultural and Supporting Services
- Coral Reef Ecology: Reef-Building Corals, Reef Zonation and Bleaching Response
- Seagrass Meadows and Mangrove Stands: Nursery, Blue Carbon and Shoreline Protection Functions
- Coastal Pressure Mapping: Dredging, Reclamation, Pollution, Overfishing and Warming Seas

Day 2: Mitigation Hierarchy, IFC PS6 and Nature-Related Frameworks

- Mitigation Hierarchy Sequence: Avoid, Minimise, Restore and Offset
- IFC Performance Standard 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources at Overview
- No Net Loss and Net Gain Goals: Loss-Gain Accounting and Habitat Area Metrics
- BBOP Offset Design Principles: Additionality, Equivalence and Long-Term Security
- TNFD Four Pillars and the LEAP Approach for Nature-Related Dependencies and Risks

Day 3: Marine Baseline Surveys and Ecological Monitoring Methods

- Survey Design: Stratified Sampling, Control-Impact Sites and Survey Frequency
- Reef Survey Methods: Belt Transects, Photo Quadrats and Benthic Cover Scoring
- Fish and Mobile Fauna Surveys: Underwater Visual Census and Baited Remote Underwater Video
- Seagrass and Mangrove Assessment: Shoot Density, Canopy Cover and Satellite Habitat Mapping
- Dredge Plume Management: Turbidity and Sedimentation Trigger Levels Near Sensitive Habitats

Day 4: Marine Protected Areas, Habitat Restoration and Community Involvement

- IUCN Protected Area Management Categories and MPA Zoning: No-Take and Multiple-Use Zones
- MPA Management Plan Structure: Objectives, Zoning Rules, Enforcement and Effectiveness Indicators
- Coral Gardening: Line Nurseries, Land-Based Nurseries, Microfragmentation and Outplanting
- Mangrove Planting and Hydrological Restoration: Site Selection, Tidal Flow and Survival Monitoring
- Fishing Community Co-Management: Seasonal Closures, Spillover Benefits and Livelihood Safeguards

Day 5: Case Study: Coastal Development Biodiversity Planning

- Port Expansion Case: Applying the Mitigation Hierarchy to Dredge and Reclamation Footprints
- Waterfront Development Case: Seagrass Loss Accounting and No Net Loss Balance Sheet
- Restoration Programme Review: Coral and Mangrove Success Criteria and Adaptive Management
- Coastal Portfolio Case: Drafting Nature-Related Metrics and Targets for Disclosure
- Coastal Biodiversity Action Plan Drafting and Peer Review Panel

Skills You Will Gain:

- Ecosystem Services Valuation
- Marine Habitat Characterisation
- Biodiversity Loss-Gain Accounting
- Offset Design Review
- Benthic and Fish Survey Planning
- Protected Area Zoning
- Coral and Mangrove Restoration Planning
- Fisheries Stakeholder Engagement

Why Attend This Course:

- Take back a Coastal Biodiversity Action Plan with a No Net Loss Balance Sheet built on realistic port and waterfront cases
- Challenge survey designs, offset proposals and restoration claims from contractors and consultants with clear evidence tests
- Give approving authorities and financiers a defensible account of how habitat loss is avoided, reduced and compensated
- Exchange field and permitting practice with peers from ports, real estate, energy, fisheries and public agencies

Conclusion:

Coastal projects keep their licence to operate when coral reefs, seagrass and mangroves are treated as assets with measurable value rather than obstacles to clear. The week moves from habitats and ecosystem services, through the mitigation hierarchy, no net loss accounting, IFC Performance Standard 6 and TNFD, to baseline surveys, monitoring triggers, protected area management, restoration and community co-management. On the final day participants apply these methods to port, waterfront and portfolio cases and complete a Coastal Biodiversity Action Plan ready for their next project or reserve.