Urbanization and Climate Change Adaptation in the Caspian Sea region

REGIONAL PROGRAMME PROPOSAL

Naomi Hoogervorst
Programme Management Officer
Planning, Finance and Economy Section
UN Habitat
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Countries: Republic of Azerbaijan
Islamic Republic of Iran

Thematic Focal Area: Urban Development, Coastal Zone Management, Disaster Risk Reduction and Early Warning Systems, Water Management

Implementing Entity: United Nations Human Settlements Programme - UN-Habitat

Executing Entities: United Nations Environment Programme UNEP
International Organisation for Migration – IOM
United Nations Human Settlements Programme - UN-Habitat

Duration: 4 years

Budget: USD 14M
Programme approach / 4 components

1. Climate change adaptation planning strategies enhanced at the Caspian Sea regional level

2. Adaptation planning at national level in both Azerbaijan and Iran

3. Implementation of transformative and catalytic projects at national, city and community levels that can be upscaled

4. Urban resilience, climate change adaptation partnerships, as well as institutional, legal, research cooperation and knowledge exchange

Iran and Azerbaijan are facing similar urbanization pressure on their coastlines
Main Climate Change Hazards

Rising average temperatures, coupled with overall decrease in precipitations and evaporation, leading to seawater decline and increased levels of salinity – all of which are affecting biodiversity

Changes in temperature patterns: increased frequency of extreme weather events such as heat waves and intense rainfall

Flash floods: causing mudflows and landslides, and severe damage in lower lands and mouth of transboundary rivers

Droughts: leading to deteriorating crops, pasture and forest land, rise in dust, and water shortages for agriculture and domestic consumption

Sea level fluctuations: affecting coastal ecosystems, communities, tourism and infrastructure.

Many areas are suffering from multiple hazards
Non-climatic drivers and pressures affecting the environment

Rapid and sprawling urbanisation, land use changes, untreated sewage, overuse of ground water, informal landfill sites, and infrastructure development are leading to the loss of agricultural land, deforestation, reduction of biodiversity, and pollution of land, ground water and air.

Thriving tourist/recreational activities and economic development have resulted in pressure on existing infrastructure, water stress, gaps in basic services delivery and shortages in affordable housing.

The degradation of the ecosystem is affecting the habitat of aquatic species, wetlands, and ecosystems that depend on rivers and sea – as well as the livelihoods and food security.
Climate adaptation

Adaptation anticipates adverse effects of climate change and takes appropriate action to prevent or minimize the damage they can cause.

Adaptation measures can also provide co-benefits for economic and social development, the environment and climate change mitigation.

Climate adaptation is a strongly localized process due to particular geographical, socio-demographic and economic characteristics of any target area.

Local governments are best placed to steer and address climate adaptation in urban areas, particularly in areas inhabited by low income and most vulnerable population groups.
Identification of communities vulnerable to climate change and ‘hot spots’

- Target areas and communities along the Caspian Sea shore identified through bilateral meetings, consultations, Evaluation Matrix, prioritization and confirmation of commitment.
Main challenges

- Lack of comparable data
- Greater levels of multi-dimensional poverty and inequalities along the coast
- Limited institutional capacities and coordination mechanism across sectors
- Gaps in the legislative frameworks and sector strategies (e.g. Azerbaijan does not have a Coastal Management Plan)
- Weak climate change related coordination mechanisms causing delays in fulfilling global commitments
- Poorly serviced and remote communities
- Inadequate irrigation and fertilizing practices
Programme approach

- Full alignment with:
  1. national and local government / institutional priorities and gaps identified,
  2. identified community and vulnerable groups needs
  3. the Adaptation Fund outcomes

- Comprehensive approach to enable and improve the adaptive capacity of communities and institutions

- Adoption of innovative solutions that have economic, social and environmental benefits

- Integrated planning and resilience building for long-term sustainability

- Regional cooperation, knowledge & data sharing, cross-fertilization and scaling up opportunities
DIAGNOSIS

A.1: Greater Baku – Wasteland along old rail tracks and depot through high-rise residential area lacking green spaces

A.2: Neftchala – Subject to flooding along River Kura in spring, but also intrusion of sea water due to drop of river level in summer

A.3: Astara – Low lying area prone to flooding and severe summer droughts causing the loss of green areas and tree cover
Target areas in the Republic of Azerbaijan

A.1: Greater Baku – Development of a public multi-purpose green corridor serving new development area

A.2: Neftchala – Delivery of an Early Warning System for salinity, droughts and flooding with monitoring devices and dashboard

A.3: Astara – Construction of a rainwater harvesting system to store excess water from winter for reuse for summer irrigation
### Target areas in the Republic of Iran

<table>
<thead>
<tr>
<th>Area</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>I.1 Astara</strong></td>
<td>Low laying area subject to both flooding, waterlogging of the terrain and prolonged droughts</td>
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<tr>
<td><strong>I.2 Bandar-e-Kiashahr</strong></td>
<td>Suffering droughts, heat, land degradation and strong dust phenomenon that are affecting people’s health</td>
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<tr>
<td><strong>I.3 Mahmoudabad</strong></td>
<td>Low lying area affected by severe stormwater runoff during flash floods and damage to infrastructure</td>
</tr>
<tr>
<td><strong>I.4 Bandar-e-Torkaman</strong></td>
<td>Low lying area prone to torrential rainfall, damage to infrastructure and severe summer droughts</td>
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**DIAGNOSIS**
Target areas in the Republic of Iran

**PROPOSED PROJECTS**

**I.1 Astara** – Delivery of rainwater harvesting system (RHS) to improve water management and public education

**I.2 Bandar-e-Kiashahr** – Ambitious reforestation and training project through local NGO and community labour – including women

**I.3. Mahmoudabad** – Delivery of stormwater drainage system (SDS) and water catchment areas within the settlement

**I.4 Bandar-e-Torkaman** – Delivery of Early Warning System and creation of climate-resilient non-farm livelihoods and awareness
A Green (and ‘Blue’) Transition of the Built Environment

The City we need is one that is Resilient to Climate Change
Thank you!

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