Policy recommendations

FOR POLICY MAKERS AT LOCAL LEVEL

Smart Control of the Climate Resilience in European Coastal Cities (SCORE) is a four-year EU-funded project aimed at enhancing climate resilience in European coastal cities. This brief presents targeted policy recommendations tailored to local policymakers, offering practical guidance on integrating Ecosystem-Based Adaptation (EBA) measures, participatory planning, the living lab approach, and innovative technical and financial tools into existing policy and planning frameworks. They are based on SCORE's comprehensive research, pilot implementations, and stakeholder engagement across ten Coastal City Living Labs (CCLLs).

SCORE OUTPUTS & TOOLS

Ecosystem-Based Adaptation (EBA)
Socio-economic assessment of EBA
(cost-benefit analysis and multi-criteria analysis),
EBA Catalogue

Coastal Cities Living Labs (CCLLs)
CCLL Framework,
Co-Creation Toolkit,
Monitoring and Evaluation

Participatory and Citizen Science Approaches
Community Geosurveys platform,
Low-Cost Sensors Catalogue,
Citizen Science Playbook,
Geodesign game,
Citizen science framework

Educational, communicational and Capacity-Building Tools
Massive Open Online Courses,
EBA training schools,
EBAcraft workshops etc.

IT Solutions
ICT Platform,
Digital Twin Platform

Data collection, downscaling and modelling
Hazard flooding maps,
Long-term coastal erosion analysis

Financial Resilience and Risk Management Tools
Methodology for assessing climate risk for European coastal cities,
Quantitative Risk assessment,
Financial resilience strategies and decision support tool to address residual risks

COASTAL CITIES LIVING LABS (CCLLS)

Local governments should formally embed the Coastal Living Lab model within their urban planning and climate adaptation strategies. Use participatory tools, such as Multi-Criteria Analysis, co-creation toolkit and citizen science, to prioritize and validate Ecosystem-based Adaptation (EBA) solutions.

Local authorities should mandate the participation of urban planning, environment, and economic development stakeholders in CCLLs, ensuring cross-sectoral collaboration.

Introduce municipal grants and tax incentives to sustain CCLLs as permanent innovation hubs for climate adaptation. Secure funding from local budgets and public-private partnerships (PPPs) to sustain Living Lab operations over time.

Cities should adopt standardized monitoring and evaluation frameworks to measure the success of CCLLs in enhancing climate resilience and stakeholder engagement.

ECOSYSTEM-BASED ADAPTATION (EBA)

Encourage municipalities to include Ecosystem-based Adaptation measures in Local Climate Adaptation Plans and coastal management strategies.

Local governments could incorporate Multi-Criteria Analysis (and other socio-economic methods) as a participatory tool in decision-making processes to reflect diverse community and expert perspectives on adaptation measures.
Any participatory process should involve vulnerable communities as well. Attending for age and gender diversity should be also considered.

Municipalities could systematically utilize Multi-Criteria Analysis (or other participatory methods) to select few possible Ecosystem-based Adaptation (EBA) measures for the coastal area and then carry out Cost-benefit Analysis (CBA) on those selected EBA solutions to ensure investments are cost-effective and aligned with local priorities.

Cities could prioritize EBA when CBA or other socioeconomic assessments demonstrate higher long-term financial and environmental returns compared to traditional engineered solutions considered for the same adaptation goals. Effective climate change adaptation at the local level could potentially require a hybrid approach—one that integrates EBA with both hard measures (e.g. engineered infrastructure) and soft measures (e.g. monitoring systems, planning and prevention strategies).

Urban planners and environmental officers should be educated on coastal climate adaptation approaches, including Nature-based Solutions (NbS) and EBA, to enable informed decision-making. This will allow them to recommend replacing hard engineering measures with EBA where appropriate or integrating the two approaches effectively.
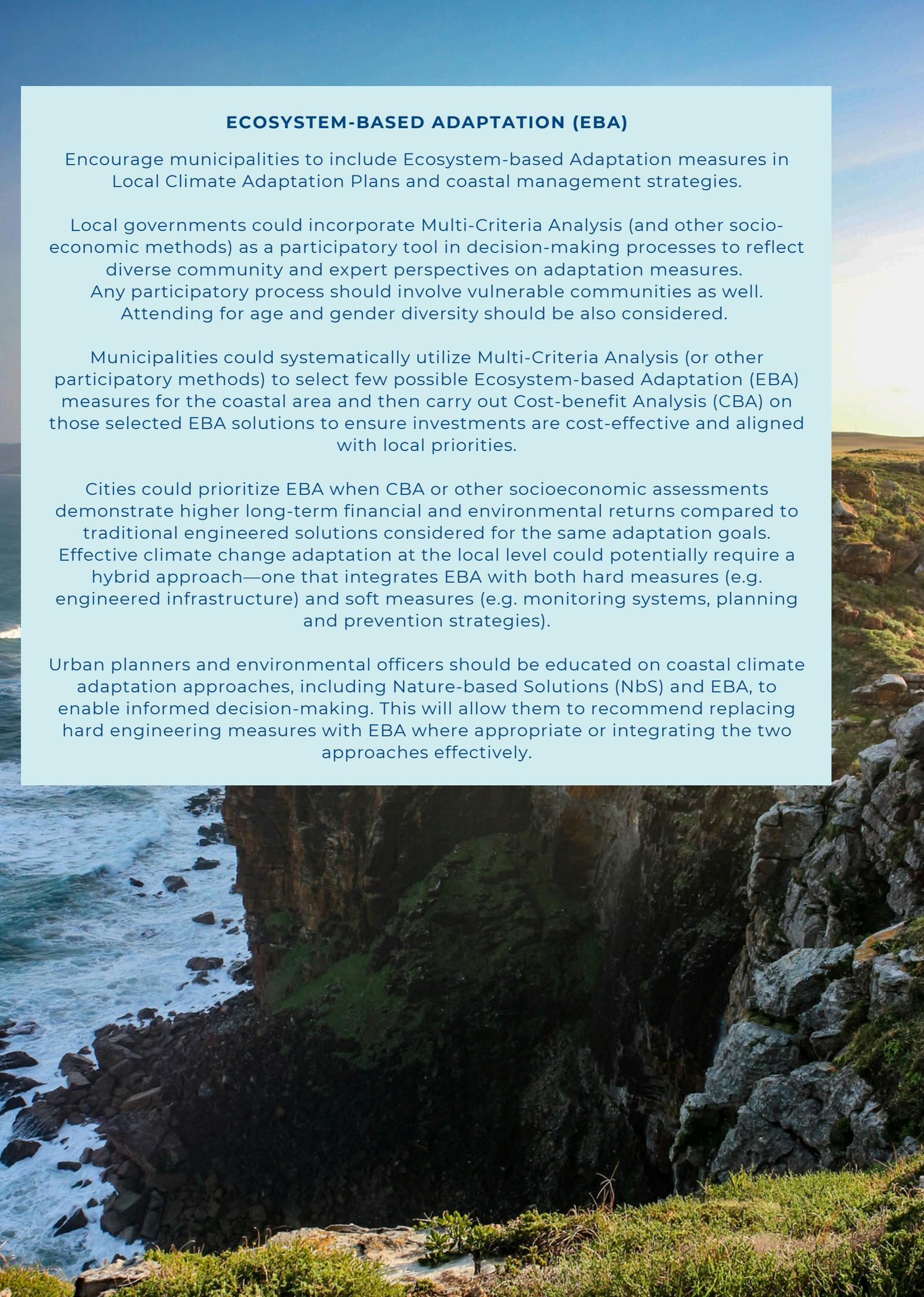
PARTICIPATORY AND CITIZEN SCIENCE APPROACHES

Local governments could be encouraged to utilize the Community Geosurveys platform (see SCORE resources) for mapping climate risks (e.g. flood zones, heat islands) with real-time community input. They could also mandate the use of citizen-collected data from the platform in climate adaptation strategies.

Local governments could establish municipal funding schemes to equip communities with low-cost environmental sensors (see SCORE resources). This will enhance the efficiency of coastal climate data monitoring (in variables such as air quality, temperature, and water levels), thereby informing climate policy.

Cities could integrate participatory planning games (such as the Geodesign Game, see SCORE resources) into public consultations and urban resilience workshops as a co-design tool to actively involve stakeholders in the decision-making process. It can also support building consensus around potential conflicts and exploring collaboratively developed solutions.

Local governments could allocate funding for training programs that teach residents how to collect and interpret environmental data. Organize workshops to educate communities on the Citizen Science Playbook (see SCORE resources) and its practical applications in co-monitoring climate hazards such as flooding and heatwaves. Ensure citizen science tools are accessible to vulnerable communities, providing training on digital platforms and sensor use.

FINANCIAL RESILIENCE AND RISK MANAGEMENT TOOLS

Local authorities are advised to adopt integrated risk assessment frameworks that account for both natural and human-induced factors affecting coastal areas. This holistic approach enables the identification of multiple hazards and supports more resilient urban planning and development.

Local communities, businesses, and civil society actors should be actively involved in the development and implementation of risk management strategies. Their participation ensures that policies are rooted in local realities, increase social acceptance, and benefit from diverse knowledge and perspectives. Engaging stakeholders in participatory risk mapping and the validation of vulnerability hotspots enhances the accuracy, relevance, and legitimacy of adaptation measures.

Local governments should establish dedicated climate resilience reserve funds to provide financial security against frequent but low-impact climate events. These funds should be structured to cover emergency response, infrastructure repairs, and pre-emptive adaptation measures. Localized baseline risk maps can also guide investment in resilience infrastructure.

Municipalities in coastal cities should adopt risk transfer mechanisms (like climate risk insurance schemes) and collaborate with private insurers to cover low-frequency, high-impact disasters like coastal floods and storm surges. These mechanisms help distribute financial risks and prevent municipalities from bearing unsustainable recovery costs.

Municipalities should integrate financial risk assessments into their urban planning frameworks to ensure that future investments in infrastructure are climate-resilient. This involves using GIS-based risk assessment tools to identify high-risk areas and prioritize adaptation investments.

DATA COLLECTION, DOWNSCALING AND MODELLING

Local governments should require municipalities to create and update high-resolution flood hazard maps to enable proactive disaster management in different phases.

Municipalities should mandate the use of high-resolution, long-term coastal evolution models in local urban planning, land-use regulations, and infrastructure development to minimize erosion risks in coastal zones.

Flood hazard maps erosion maps and risk models should be publicly accessible through municipal GIS platforms to enhance transparency and enable informed decision-making for land-use planning and disaster risk reduction.

Local policymakers responsible for beach usage and management planning could utilize shoreline evolution models to assess sediment transport, beach nourishment, and coastal defense effectiveness.

IT SOLUTIONS

Local governments could adopt open, interoperable data platforms to support climate-resilient urban planning and integrate local environmental monitoring systems with European data standards. These platforms should enable the collection, visualization, and sharing of real-time and historical data (covering climate risks, environmental quality, and EBA outcomes) to inform transparent, inclusive, and evidence-based decision-making.

Cities should use digital tools like SCORE's ICT platform (see SCORE resources) to support citizen science and participatory monitoring, empowering residents to contribute to urban resilience and adaptation strategies. The platform can also be used to communicate actionable insights to stakeholders, including schools, citizens, and businesses and inspire behavioural change.

City administrations could integrate Digital Twin (DT) simulations into their urban planning and climate adaptation workflows. Local authorities and technical departments should use the DT to visualize hazard exposure (especially flood risk and coastal erosion), test Nature-based Solutions (like EBAs), and involve citizens in co-creating resilient urban strategies.

EDUCATIONAL, COMMUNICATIONAL, AND CAPACITY-BUILDING TOOLS

Municipalities can organize training sessions and citizen engagement workshops (see SCORE resources) to enhance the capacity of local actors in flood and erosion risks, EBA solutions, living labs creation, citizen sciences approaches etc.

SCORE COASTAL CITY LIVING LABS

Sligo, Ireland

Dublin, Ireland

Gdańsk, Poland

Piran, Slovenia

Oarsoaldea, Spain

Benidorm, Spain

Vilanova i la Geltrú, Spain

Massa, Italy

Samsun, Turkey

Oeiras, Portugal

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RESOURCES

For further details on SCORE's outputs and tools, please visit **www.score-eu project**.

We also encourage you to review Deliverable **'D7.5 SCORE Policy Guidelines'**, which presents the full set of policy recommendations across local, national and EU policy levels.
It explains how each recommendation was developed, highlights the specific contributions of the SCORE project and outlines the policy gaps it aims to address.