FUNDING AND FINANCING

Options and Considerations for Coastal Resilience Projects

Use this quick reference to learn about different types of funding and financing for coastal resilience projects, and considerations for each.

Investments in coastal resilience are made under the auspices of comprehensive planning, hazard mitigation, climate adaptation, continuity of operations, and public health, to name a few. Identifying and accessing funding and financing opportunities can be challenging, but leveraging diverse investment streams can help communities advance multi-objective projects. Communities consider a number of factors when choosing appropriate funding and financing approaches, including project scale, complexity of selected investment method, time frame, and others.

"Funding" refers to money that ultimately pays for a specific project. It is not repaid. "Financing," on the other hand, generally creates an obligation to repay the funds along with a premium for their use. Financing may create opportunities to reduce project costs, generate the capital funds needed for a project, or shift the risk of loss (or possibility of gain) to another party. The term may also refer to the layering of different funding sources for a project.

Examples of funding and financing mechanisms are provided in the tables below. Traditional approaches generally lead the list, followed by emerging possibilities.

FUNDING

Money raised and spent with no need for repayment

TAX PROCEEDS

Taxes on the general population or some subset, such as residential or business property owners, are collected and then paid into a general fund that can be used toward resilience projects. Taxes include property, property transfer, income, and sales, among others.

Benefits

- Already established process
- Consistent funding source
- Relatively inexpensive funding source from an administrative standpoint

Considerations

- Will need to divide tax proceeds between projects
- Could increase local tax burden (special allocation districts could shift cost to those who benefit from service or project)
- Taxes approved via ballot measure will require public support

Examples

- Increase in property tax in Norfolk, Virginia: *static1.squarespace.com/static/5736713fb654f9749a4f13d8/t/5d275d9135b62f0001df44b5/1562860947122/Playbook+1.0+How+Cities+Are+Paying+for+Climate+Resilience+July+2019.pdf*
- Parcel tax in San Francisco, California: *sfestuary.org/estuary-news-going-local*
- Tax allocation districts in St. Mary's, Georgia: *stmarysga.gov/stmarysnew/department/economic_development/tax_allocation_district/uploads/TAD_Information_Sheet.pdf*
- Tax increment financing in Chicago, Illinois: *chicago.gov/city/en/depts/dcd/provdrs/tif.html*

FEES

Funds raised through charging fees for services or permits, or in-lieu fees from compensatory mitigation.

Benefits

- Already established process
- Consistent funding source
- Can be intentional about usage by implementing fees in places that relate to coastal resilience (e.g., stormwater or development impact fees)

Considerations

- Requires an administrative network to manage and implement
- Income from fees can be difficult to predict over time, since some actions, such as development, are cyclical or one-time in nature

Examples

- Stormwater fee program in Newton, Massachusetts: *www.newtonma.gov/government/public-works/water-sewer-division/stormwater-resources#:~:text=Stormwater%20Fees&text=For%20simplicity%2C%20all%20residential%20homeowners,impervious%20area%20on%20their%20property*
- Stormwater utility in Lewiston, Maine:
- *lewistonmaine.gov/DocumentCenter/View/4063/Storm-Water-Utility-Brochure?bidId*
- Wetland mitigation in-lieu fee program in Wisconsin:
- *dnr.wisconsin.gov/topic/Wetlands/wwct/credits.html*

GRANTS

Funds provided by state or federal governments, or philanthropic organizations; can also be from programs developed to allocate funds from penalties or fines (e.g., Clean Water Act penalties).

Benefits

- Frequently tailored to a specific use or project
- Can usually be leveraged to obtain additional funding (but not with compensatory mitigation funds)

Considerations

- Typically involves a competitive application process
- May not cover the complete project costs
- May require matching funds and, for federal grant programs, often non-federal sources

Examples

- Coastal Resilience Grant Program award in Gloucester, Massachusetts: *mass.gov/service-details/gloucester-climate-change-vulnerability-assessment*
- Federal funding and technical assistance resources for nature-based solutions to climate change: *eesi.org/papers/view/fact-sheet-federal-resources-for-nature-based-solutions-to-climate-change*
- Deepwater Horizon oil spill natural resources damage assessment settlement: *doi.gov/deepwaterhorizon*

PUBLIC-PRIVATE PARTNERSHIP

A cooperation between a public-sector agency and a private-sector entity that allows government and businesses to work together to provide a service to the community.

Benefits

- Reduces cost to government
- Spreads risk across entities
- Ensures dedicated funding
- Has potential to create local jobs and improve economy

Considerations

- Can be perceived as a loss of public control
- Requires strong leadership and working relationships

Examples

- Public-private partnership for stormwater management in Prince George's County, Maryland: *watercenter.sas.upenn.edu/a-public-private-partnership-works-for-stormwater-management-in-prince-georges-county-maryland*
- 1% for Watersheds McKenzie River Trust partnership with Oakshire Brewing: *oakbrew.com/onepercent*

CROWDFUNDING PLATFORMS

A creative approach to traditional philanthropic gifts that uses technology and social media to attract and engage donors.

Benefits

- May attract new donors and constituents
- Facilitates sharing of the cause or campaign and can enable connections to social networks, in-kind donations, volunteers, and advocacy
- Enables simple electronic donations
- Low level of difficulty

Considerations

- Charitable motivation and capacity is limited
- Size and potential scale is small

Example

- In Our Backyards crowdfunding: *ioby.org/about/impact*

VOLUNTARY SURCHARGE

A small voluntary charge (~1%) or fee (~$2) added to a customer's retail, hospitality, or lodging bill.

Benefits

- Charged to customer, not participating businesses
- Builds durable relationships with local business community
- Low level of difficulty

Considerations

- Best for communities with nature-based tourism, targeting visitors and not residents
- Requires ongoing engagement and management
- Eventually will reach "saturation" level among businesses
- Size and potential scale is small

Examples

- St. Simons Land Trust's Pennies for Preservation: *sslt.org/index.php/donate/1-campaign*
- Voluntary surcharges: *conservationfinancenetwork.org/2018/01/08/voluntary-surcharges*

FINANCING

Money that is borrowed, spent, and repaid

LOANS

Money borrowed from either a private banking or philanthropic source or from the government (state or federal) for a specific purpose.

Benefits

- Effective bridge or interim financing
- Valuable in providing capital needed more quickly than revenue (taxes/fees) can provide
- Useful when public funding caps have been met
- Can be leveraged in the private sector to accelerate implementation

Considerations

- Generally require full repayment with interest
- Can be zero, low-interest, or market rate
- Typically a one-time use of funds
- Federal loan programs require authorization from Congress

Examples

- Low-interest loan in Connecticut: *adaptationclearinghouse.org/resources/shore-up-connecticut-loan-program.html*
- The Conservation Fund Conservation Loans program: *conservationfund.org/our-work/conservation-finance/conservation-lending*
- Craft3 loan to the Wild Rivers Land Trust in Elk River, Oregon: *craft3.org/results/StoriesOfChange/story-details/WRCHLT*

STATE REVOLVING FUNDS

Federal funds allocated annually to state governments to be granted as loans.

Benefits

- Often dedicated to specific issues, such as water and infrastructure programs
- Can be used by private parties if connected to an eligible public project

Considerations

- Application process can be difficult and complex
- Longevity of measure is contingent upon repayment of loans

Examples

- Clean Water State Revolving Fund (CWSRF): *epa.gov/cwsrf*
- State Implementation of CWSRF for water quality improvements in Maryland: *epa.gov/newsreleases/epa-approves-maryland-plan-improve-water-quality*
- U.S. Environmental Protection Agency Water Infrastructure Finance and Innovation Act program: *epa.gov/wifia/what-wifia*

MUNICIPAL (AND OTHER LOCAL GOVERNMENT) BONDS

Issued by local governments to finance capital projects in the form of either revenue bonds, secured by future revenue to be generated by project, or general obligation bonds, secured by the government and its future tax revenue. Special purpose entities, such as port authorities or regional utilities, might also have the authority to issue bonds.

Benefits

- Relatively low-cost mechanism to borrow money for capital uses
- Issuer can be either municipal or private entity (see Private-Public Partnerships)

Considerations

- Revenue bonds are typically used to finance large capital expenditures and are backed by a specific revenue stream (e.g., toll roads, hospitals, higher education systems)
- General obligation bonds are frequently used for public projects, such as bridges, and are backed by the general revenue of the municipality, not a specific source
- Relatively low interest rate

Examples

- General obligation bond in Miami, Florida: *southeastfloridaclimatecompact.org/news/financing-resilience-city-miami-invests-400m-build-stronger-future*
- Milwaukee Metropolitan Sewerage District's Climate Bond: *mmsd.com/about-us/news/mmsd-issue-certified-climate-bond*

ENVIRONMENTAL IMPACT BONDS

Innovative tool that uses a pay-for-success method where investors are paid back at rates that depend upon satisfactory achievement of a specified environmental outcome, such as a predetermined amount of avoided land erosion.

Benefits

- Attractive to investors who are interested in the social and environmental benefits of projects
- Provides a concrete way to measure outcomes
- Spreads financial risk across both public and private sectors

Considerations

- Can require more time and effort to find an investing group with aligned interests
- Must identify a revenue source that will be used for repayment

Example

- Environmental impact bonds: *quantifiedventures.com/blog/what-is-an-environmental-impact-bond*

GREEN BONDS

Similar to municipal bonds but labeled for environmentally beneficial projects.

Benefits

- Appeal to social impact investors
- Certified by a third party

Considerations

- Certification of "green bond" status can add costs

Example

- Green bonds in the District of Columbia: *dcwater.com/green-bonds*

RESILIENCE BONDS

A bond designed to expand financial protections in the event of a disaster by linking insurance coverage with capital investments in resilient projects that will decrease risk.

Benefits

- Link insurance premiums and resilience projects in order to monetize avoided loss
- Avoided loss or rebate can serve as predictable funding that can be invested into projects that reduce risk
- Expands financial protections to vulnerable communities

Considerations

- Engages multiple sponsors, including local or state government officials, insurers, and utility operators
- Designed for catastrophic events, not chronic stress like water scarcity
- There have been no municipal-level resilience bonds issued yet

Example

- European Bank for Reconstruction and Development climate resilience bond: *ebrd.com/news/2019/worlds-first-dedicated-climate-resilience-bond-for-us-700m-is-issued-by-ebrd-.html*

EVENT-BASED INSURANCE (PARAMETRIC INSURANCE)

Insurance pays out based on previously agreed-upon parameters, consisting of a trigger, such as type of hazard event (e.g., hurricane, earthquake); a predefined metric, such as level of damages that could generate negative or catastrophic impact; and a defined area. If the defined area includes natural assets such as coral reefs, beaches, and dunes, then the payout can be used to repair damages to those assets and maintain resilience benefits provided by those habitats.

marketwatch.com/story/how-the-u-s-could-be-smarter-about-insuring-against-extreme-weather-related-disasters-11603905925?mod=home-page

Benefits

- Can insure natural assets or green infrastructure
- Enables flexibility because it insures against an event, not a specific asset (e.g., building), so this allows the insured party to use the payout where it is most needed
- Money reaches the insured faster because there is no need for an assessment of actual losses

Considerations

- Payout may not cover damages to the asset if triggering parameters are not met
- May need to know the value of the natural asset providing protection in order to submit an insurance claim to repair it

Examples

- Parametric reef insurance for the Mesoamerican Reef: *earthjournalism.net/stories/mesoamerican-reef-insuring-a-natural-asset-in-the-name-of-conservation*
- Coral reef insurance policy in Mexico: *nature.org/en-us/what-we-do/our-insights/perspectives/insuring-nature-to-ensure-a-resilient-future*