

Equitable Adaptation in Action

Lessons from Local Planning and Implementation

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GEORGETOWN CLIMATE CENTER

Contents

- Introduction 2**
- Building Equity through Engagement and Process 3**
 - Equity-Centered Planning: Boston’s Equity Council for Urban Forestry Planning 3**
Strategy: Prioritizing community voices in adaptation planning processes.
 - Equity through Data: San Diego’s Equity Index 4**
Strategy: Using quantitative, consistent metrics to identify and prioritize underserved and overburdened communities.
 - Equity through Data: Seattle’s Healthy Living Assessment for the Duwamish Valley 5**
Strategy: Using data about health disparities to guide decision making about policies and investments.
 - Prioritizing Community Projects: Seattle’s Duwamish River Opportunity Fund..... 6**
Strategy: Matching the projects that matter most to community members with public funding and other resources.
- Achieving More Equitable Programs and Investments..... 7**
 - Wildfire Mitigation for Low-Income Homes: California’s Home Hardening Initiative Pilot in San Diego 7**
Strategy: Connecting risk assessment, disaster planning, and preventative action to protect disadvantaged individuals and their communities.
 - Green Career Pathways: Cleveland’s Summer Youth Employment Program..... 8**
Strategy: Leveraging a youth employment program to make progress on stormwater management while developing tomorrow’s workforce.

Fostering Economic Resilience of Small Business: The New Orleans Green Infrastructure Maintenance Plan..... 10
Strategy: Rethinking government contracting to enable green infrastructure projects to support community economic development.

Equitable Energy Resilience and Disaster Preparedness: New Orleans Community Lighthouse Project..... 11
Strategy: Enlisting community centers, churches, and restaurants to form a network of disaster resilience hubs.

Prioritizing Public Health and Natural Investments: Tampa’s Urban Heat Pilot Program ... 12
Strategy: Matching urban heat action plans to bring relief to historically redlined neighborhoods.

Capacity-Building for Disaster Preparedness: Miami’s Community Emergency Response Team Program 12
Strategy: Training residents to boost emergency response capability in lower-income neighborhoods.

Funding for Accessible Affordable Housing: Savannah’s use of sales tax dollars to redevelop vacant structures 13
Strategy: Using an innovative funding mechanism to turn community-selected projects into real progress on the ground for affordable housing.

Introduction

As cities grapple with worsening hazards and extreme weather as a result of climate change, socioeconomic disparities and inequities are amplifying the need for more equitable approaches to climate adaptation. Many U.S. cities have recognized that implementing equitable climate adaptation policies requires more inclusive processes in planning and decision making, as well as more equitable outcomes, primarily in the distribution of the benefits of city programs. Some cities and counties have made tangible progress towards these goals by creating more equitable structures for decision making, building lasting relationships with communities, and ensuring that community needs are prioritized in government programs and investments.

Drawing on Georgetown Climate Center’s ongoing work to assess and document state and local adaptation approaches,¹ this Issue Brief highlights 11 innovative approaches cities are using to foster more equitable processes and programs. The examples are divided into two categories:

1. Approaches that build equity through engagement and processes that elevate the voices of people in marginalized communities; and
2. Approaches that achieve more equitable outcomes by prioritizing programming and investments that benefit the communities with the greatest need.

These examples demonstrate how equitable adaptation can be implemented through government structures and programs that foster accountability, build relationships with communities, and center community voices and priorities in adaptation decisionmaking. The approaches highlighted in this report provide examples that can be adopted or adapted by other cities and counties looking to operationalize equitable adaptation.

Building Equity through Engagement and Process

The four examples below illustrate different approaches to building equity through process and planning: engaging community members in planning advisory roles, gathering and combining data to inform where investments are most needed, and prioritizing community projects through designated grant programs and inclusive grant decision making processes.

Equity-Centered Planning: Boston’s Equity Council for Urban Forestry Planning

Strategy: Prioritizing community voices in adaptation planning processes.

In recent years, the City of Boston has experienced record-breaking heat waves, and can anticipate even more prolonged periods of dangerous temperatures in the future. The *Boston Urban Forest Plan* (BUFP) aims to create a network of trees that controls drainage and flooding, filters groundwater, cools and purifies air, and mitigates the dangers of extreme heat in the city.

¹ In 2024, the Georgetown Climate Center’s Adaptation Program worked in partnership with teams at University of Louisville and Georgia State University, with funding from the National Sea Grant Law Center, to assess ways that eight coastal cities and counties have implemented strategies to build resilience of marginalized communities, with a particular focus on low-income neighborhoods and populations of color. This assessment builds on our contributions to that analysis.

To ensure that this network of trees is distributed in a way that benefits all residents, the city placed equity at the center of the planning process by convening and assigning decisionmaking power to an advisory board of representatives from community-based organizations.

The BUFP project was led at the city-level by the Chief of Environment, Energy, and Open Space and members of the Parks and Recreation Department, but was developed through a Community Advisory Board and with input from the broader community. The Community Advisory Board's three subgroups included an Equity Council of twenty-four representatives from grassroots community-based organizations working within historically excluded and marginalized communities. This Council's responsibilities included developing equity frameworks for the plan and reviewing the work of other working groups for successful integration of these equity concepts. The Equity Council guided the creation of four "equity centered goals" that shaped other working groups' processes. Those goals included focusing investments in under-canopied, historically excluded and socially vulnerable areas. This structure illustrates the way in which centering community voices in the planning process can direct equity goals toward local priorities.

Learn more:

- [City of Boston Urban Forest Plan](#)
- [Urban Forest Plan Website](#)

Equity through Data: San Diego's Equity Index

Strategy: Using quantitative, consistent metrics to identify and prioritize underserved and overburdened communities.

The City of San Diego relies on a variety of plans to create a climate change response framework. A common thread uniting the plans is an emphasis on equity. Although many cities have made commitments to centering equity or prioritizing low-income and disadvantaged communities in their climate change adaptation plans, San Diego takes a unique approach in identifying these communities. *The San Diego Climate Equity Index*, first released in 2021, measures the level of "access to opportunity" for residents within each census tract, then assesses the degree of potential impact from climate change to these areas. A wide variety of factors related to environment, mobility, health, housing, and socioeconomic opportunity were analyzed for each census tract to determine which areas of the city fell into "Communities of Concern," defined as census tracts with "Very Low," "Low," or "Moderate" access to opportunity.

This strategy for identifying Communities of Concern within defined geographic areas of the city created an efficient tool that could be easily used in future city planning efforts. Instead of alluding vaguely to the prioritization of low-opportunity communities or allocating valuable resources to re-identifying these communities, other San Diego adaptation planners were able

to use this data as a common, clearly-defined terminology shorthand within their own plans. *The San Diego Climate Action Plan, the Climate Resilient San Diego Plan, the San Diego Climate Action Implementation Report, and the San Diego Climate Equity Index Report* all include explicit references to the categorized Communities of Concern identified in *the San Diego Climate Equity Index*.

Learn more:

- [San Diego Equity Index 2019](#)
- [San Diego Climate Equity Index Report](#)
- [San Diego Climate Action Plan](#)
- [San Diego Climate Action Implementation Plan](#)
- [Climate Resilient San Diego Plan](#)

Equity through Data: Seattle’s Healthy Living Assessment for the Duwamish Valley

Strategy: Using data about health disparities to guide decision making about policies and investments.

The Duwamish Valley of Seattle houses the city’s only river, the Duwamish. It is an area of regional economic importance — given the location of port infrastructure, manufacturing, and other industries in the vicinity — as well as cultural significance to Native American tribes in the region. Communities in the Duwamish Valley experience disproportionate effects of flooding due to tidal changes, which are expected to worsen with sea-level rise, and environmental pollution, as the area includes a Superfund site and has greater exposure to highways and air pollution. These neighborhoods also have less access to open space and healthy foods than many other Seattle neighborhoods. The *Duwamish Valley Action Plan* is a vision for the Duwamish Valley neighborhoods of South Park and Georgetown, developed in 2018 through a city partnership between community members and leaders. It grew out of the City of Seattle’s Duwamish Valley Program and is intended to guide the city’s work and investments in the Duwamish Valley neighborhoods in order to promote community priorities related to environmental justice, resilience, housing, economic growth, and other topics.

In developing the plan, the city’s Duwamish Valley Program completed a “healthy living assessment” (HLA) to supplement existing data about documented health disparities in the Duwamish Valley neighborhoods, by aiming to better understand interconnections between the built and social environments of these neighborhoods. The HLA used neighborhood-level data for 16 health indicators to help identify strengths and areas for improvement in the infrastructure that promotes health and well-being within the Duwamish Valley. The HLA yielded findings related to life expectancy, exercise, food security, crime, mobility, and more; ultimately, these

findings demonstrated additional disparities between the Duwamish Valley neighborhoods compared to city averages. Building on the findings from the HLA, as noted in the *DVAP*, the city planned to develop a set series of “Equity Indicators” to “help track growth and displacement issues according to race, ethnicity, and income whenever possible.” Other goals include improving efforts to track who is benefiting from city investments and better target these investments equitably in the future. In 2023, the city published a Racial and Social Equity Composite Index that combines census-tract level data on race, ethnicity, and other demographics with data about socioeconomic and health disadvantages to help prioritize areas in need of city programs, planning, and investments.

The Duwamish Valley HLA and subsequent city efforts to gather and combine demographic, health, and other data provide a good example of ways that cities can use data to better understand community needs and prioritize investments in marginalized areas.

Learn more:

- [Duwamish Valley Action Plan](#)
- [Seattle Racial and Social Equity Composite Index](#)

Prioritizing Community Projects: Seattle’s Duwamish River Opportunity Fund

Strategy: Matching the projects that matter most to community members with public funding and other resources.

Another initiative linked to Seattle’s Duwamish Valley Program is the Duwamish River Opportunity Fund (DROF), a city program that provides grants for community-led projects that advance priorities laid out in Seattle’s *Duwamish Valley Action Plan*. The *DVAP* identifies key goals and action items for addressing environmental, health, economic, and other challenges faced by the neighborhoods in the Duwamish Valley of Seattle.

Since 2014, the DROF has awarded annual grants, generally ranging from \$10,000 – \$75,000 each, for projects such as installing community gardens, providing job training programs for green infrastructure maintenance, improving neighborhood parks and open space, preserving affordable housing, and more. The program can fund environmental projects, such as those that improve air quality or restore degraded areas, parks and open space improvements, community resilience projects, affordable housing, and many other project types that further the *DVAP* priorities. To be eligible for the program, projects must “be conducted within the Duwamish River Valley and have leadership from people who live and work there.” Projects must also demonstrate community involvement and emphasize racial and social equity, and be accessible to the public. City staff are available to consult with individuals interested in submitting an

application for funding, to help them align their project idea with one of the priority areas of the DVAP and DROF. After pre-screening for eligibility, proposals are reviewed by a team that includes a Duwamish Valley Program staffer and community members with lived experience in the Duwamish Valley and a strong understanding of community needs.

The DROF stands out as a leading example for city programs that invest in community priorities because of the emphasis on community leadership in selected projects, and community involvement in the review process for grant proposals.

Learn more:

- [Duwamish Valley Action Plan](#)
- [Duwamish River Opportunity Fund](#)
- [DROF 2023 Program Guidelines](#)

Achieving More Equitable Programs and Investments

In addition to the need for processes and decisionmaking structures that center community voices and priorities, some city and county programs work to ensure that the outcomes of public investments are bringing resilience benefits to disadvantaged communities. The seven examples below highlight ways that government programs and investments can create tangible resilience outcomes in these communities.

Wildfire Mitigation for Low-Income Homes: California's Home Hardening Initiative Pilot in San Diego

Strategy: Connecting risk assessment, disaster planning, and preventative action to protect disadvantaged individuals and their communities.

San Diego County's 2023 Multi-Jurisdictional Hazard Mitigation Plan (HMP) establishes San Diego's planning process and goals for reducing disaster risks. City, county, and state-level HMPs address location-specific risk, preparedness, and planning measures pre-disaster to ensure resilience in the case of an emergency. San Diego's HMP is the result of an interdisciplinary effort across planning, sustainability, development, transportation, engineering, housing, medicine, first response, and forestry. As such, the mitigation strategy encompasses preparedness across sectors. The HMP goals include fostering safe environments, reducing possibility of damage and

loss, capacity-building, and awareness. Given the high risk of wildfires across the state, and in Southern California specifically, wildfire mitigation is a high priority throughout the document.

The California Wildfire Mitigation Program (CWMP), which includes the Home-Hardening Initiative, is a priority action for the 2023 San Diego HMP. This initiative provides direct financial assistance to low- or moderate-income homeowners to create defensible space or retrofit homes to improve resilience to wildfire. The County Fire Department has partnered with CA Emergency Services to test the first-of-its-kind assistance program as a pilot community for the state-wide initiative. Dulzura in San Diego County is one of three pilot communities testing the initiative, with the goal of expanding to other communities across the state.

CALFIRE and EMS prioritize applicants who are elderly, impoverished, disabled, speak limited English, or do not have a car. Various residence types qualify for assistance, including mobile homes and rental units. The demonstration phase of the initiative allows homeowners to receive assistance, regardless of citizenship status, and pays for contracted work directly rather than requiring homeowners to seek reimbursement. This means that the work will cost nothing to the homeowner in some cases. Reimbursement models for grant programs can be barriers to equitable adaptation, as disproportionately impacted populations often lack the financial means to front project payment. The Home Hardening Program attempts to provide safety measures to “clusters” of homes, ensuring that impacted neighborhoods can decrease their wildfire risk as a community. The home improvements also create opportunities for discounted home insurance, fostering both climate and financial resilience for homeowners.

Learn more:

- [San Diego County 2023 HMP](#)
- [Home Hardening Initiative](#)
- [CWMP - HHI Dashboard](#)

Green Career Pathways: Cleveland’s Summer Youth Employment Program

Strategy: Leveraging a youth employment program to make progress on stormwater management while developing tomorrow’s workforce.

In partnership with the Cleveland Mayor’s Office of Prevention, Intervention, and Opportunity for Youth and Young Adults, Youth Opportunities Unlimited (Y.O.U.) has provided work experience for high-school aged Cleveland youth from low-income families since 1982. Y.O.U. programs equip youth with skills for economic self-sufficiency, and help break the cycles of poverty and crime. The Summer Youth Employment Program is Ohio’s largest program for employing teenagers, providing participants with mentorship and year-round professional

development opportunities. Work opportunities span various disciplines, but have involved opportunities for participants to learn about nature-based solutions at the residential and city scale. Teenagers and young adults in Cuyahoga County are paid a competitive wage to develop their professional skills, network, and learn about a career of potential future interest, such as Environmental Sciences and green infrastructure installation and maintenance. Starting in 2018, Cleveland tied climate resilience to economic equity through their *Climate Action Plan* (CAP). The youth employment program is one way the city is working to further both goals.

Cleveland's *Climate Action Plan*, initially published in 2013 as a *Municipal Action Plan*, outlines the city's strategy for achieving resilience across diverse sectors. CAP objectives span energy, infrastructure, transportation, water, public access, and food. Plan priorities also include equity, employment, resilience, and business. The 2018 Cleveland CAP's "Scale up stormwater management" objective mentioned the Mayor's Summer Youth Employment Program, which installed rain gardens and provided over 4000 rain barrels to Cleveland residents from 2013 – 2018. The employment program created assembly, inventory, and delivery teams for the Rain Barrel Project to respond to resident requests for installation, while the Rain Garden Team helped create rain gardens across the city. The connection has continued, and the 2024 draft Cleveland CAP incorporates other youth employment opportunities in the "Nature-Based Solutions" section. The 2024 CAP draft mentions another youth development opportunity in nature based solutions – the Community Forestry Corps. Launched by the Student Conservation Association and Center for Regenerative Solutions, Community Forestry Corps provides urban forestry workforce development for youth in Cleveland. Programs like these help youth gain workforce and financial skills, improve mental health, and foster strong community connections.

Learn more:

- [2018 Cleveland CAP](#)
- [2024 Cleveland CAP Draft](#)
- [Summer Youth Employment Program](#)
- [2015 Rain Barrel Project & Rain Garden Project](#)
- [2023 - 2024 Y.O.U. Annual Report](#)

Fostering Economic Resilience of Small Business: The New Orleans Green Infrastructure Maintenance Plan

Strategy: Rethinking government contracting to enable green infrastructure projects to support community economic development.

The City of New Orleans, in collaboration with the Departments of Parks & Parkways, Workforce Development, Economic Development, the New Orleans Business Alliance (NOLABA), and community workforce development groups, has initiated a green infrastructure maintenance plan aimed at enhancing opportunities for small businesses and Disadvantaged Business Enterprises (DBEs). A key component of this plan is the "debundling" of contracts, which involves segmenting larger projects into smaller, more manageable contracts. This strategy enables small and minority-owned businesses to competitively bid for and secure those smaller city contracts for green infrastructure maintenance.

One example of how the city has implemented this contracting approach is through the Community Adaptation Program (CAP), developed in partnership with the New Orleans Redevelopment Authority (NORA). The CAP program has allocated \$5 million for residential stormwater management improvements, offering grants ranging from \$10,000 to \$25,000 to eligible low-to-moderate-income homeowners within the Gentilly Resilience District. These grants facilitate the installation of green infrastructure features such as permeable pavement, rain gardens, and stormwater planter boxes, with the design and construction work often awarded to small contractors, including DBEs. The City has also introduced a Set-Aside Program that permits the allocation of up to 25 percent of its contracts for specific procurements to certified DBEs. This initiative ensures DBEs can compete for designated contracts among themselves. Additionally, the Sewerage and Water Board of New Orleans encourages DBE certification through its Economically Disadvantaged Business Program and maintains a directory of minority-owned small businesses specializing in green infrastructure.

Learn more:

- [Net Zero by 2050](#)
- [Minority-Owned Small Businesses in Green Infrastructure](#)
- [Community Adaptation Program](#)
- [Example DBE](#)

Equitable Energy Resilience and Disaster Preparedness: New Orleans Community Lighthouse Project

Strategy: Enlisting community centers, churches, and restaurants to form a network of disaster resilience hubs.

The City of New Orleans has focused on enhancing community resilience and resources available to communities leading up to, during, and after hurricanes. One such effort involves a city partnership with Together New Orleans, a coalition of community-based organizations and congregations, to advance the Community Lighthouse Project. The Community Lighthouse Project aims to establish a network of solar- and battery-powered resilience hubs across churches and community centers throughout south Louisiana. This project aims to provide reliable energy access during emergencies, particularly in communities vulnerable to power outages. The initial phase has built 15 such hubs in New Orleans, with plans to expand to 85 community lighthouses over several years. These hubs will serve as safe havens, offering charging stations, cooling centers, and essential services during disasters.

Complementing this effort, the Get Lit, Stay Lit initiative by nonprofit Feed the Second Line focuses on equipping local restaurants with solar panels and battery backups, enabling them to serve as community hubs during disasters. The program envisions outfitting 300 restaurants, providing residents with accessible locations for meals, device charging, and shelter during power outages. The city provided funding to pilot this initiative and is still exploring opportunities to expand its partnership with Get Lit, Stay Lit in order to increase impact.

These initiatives were effective during Hurricane Francine in September 2024, when Community Lighthouses provided essential services to approximately 900 individuals. The Lighthouse Project is currently the largest renewable energy community resilience hub network according to 127 Energy and has raised millions of dollars in support.

Learn more:

- [Funding Announcement](#)
- [Developer 127 Energy Information](#)
- [City of New Orleans Office of Resilience and Sustainability – Energy](#)
- [Instagram of Feed the Second Line](#) (highlights individual Stay Lit Restaurants Together New Orleans [Community Lighthouse Project](#))

Prioritizing Public Health and Natural Investments: Tampa's Urban Heat Pilot Program

Strategy: Matching urban heat action plans to bring relief to historically redlined neighborhoods.

The City of Tampa's Heat Resilience Playbook, released in July 2024, is the outcome of the city's Urban Heat Pilot Program, a research and policy initiative developed in collaboration with the University of South Florida and Resilient Cities Catalyst. The pilot program analyzed local heat risks and disparities, forming the foundation for the playbook's recommendations. The final document outlines 18 actionable strategies across four priority areas: reducing heat risk for all, increasing access to cool spaces, maximizing the benefits of tree canopies, and adapting the built environment to extreme heat. A major goal is to plant 30,000 new trees by 2030 as a natural cooling strategy, with an emphasis on heat-vulnerable neighborhoods.

One finding from the Urban Heat Pilot Program was the identification of heat-related disparities in East Tampa, a formerly redlined part of the city with higher rates of health disparities and where many older, less insulated homes are located farther from green spaces, increasing exposure to dangerous temperatures. In response, the city launched the "Cool Corridor" pilot project along East Tampa's 22nd Street, incorporating tree-shaded walkways, hydration stations, misters, and community gardens to reduce urban heat exposure. The Heat Resilience Playbook builds on these pilot efforts to guide long-term infrastructure and environmental adaptations across Tampa.

Learn more:

- [Tampa Heat Playbook](#)

Capacity-Building for Disaster Preparedness: Miami's Community Emergency Response Team Program

Strategy: Training residents to boost emergency response capability in lower-income neighborhoods.

The Cities of Miami and Miami Beach, located within Miami-Dade County, Florida, face increasing threats of disaster exacerbated by climate change, including hurricanes, storm surge, extreme heat, and flooding. Previous disasters have illustrated the need for community preparedness in disaster situations. The Division of Emergency Management within the City of Miami Department of Fire Rescue developed the Miami Community Emergency Response Team (CERT) Program to enable community members to better care for themselves, their families, and their neighbors during an emergency or disaster. The Miami CERT program is designed to train citizens in basic

emergency response skills so that they are positioned to supplement and support professional emergency responders during times of crisis. Volunteer members may be called upon to support emergency or disaster operations and are also encouraged to take an active role in emergency preparedness projects in their communities.

The *Resilient305 Strategy*, a plan addressing climate change resilience in Miami-Dade County, the City of Miami, and the City of Miami Beach, acknowledges that the impacts of climate change disproportionately affect lower-income communities. In an effort to increase community response in an equitable manner, the plan directs municipal CERT coordinators to identify underserved communities to “recruit where most needed.” This need includes a variety of metrics, but a focus is placed on increasing the number of CERT trained individuals residing in low-income neighborhoods.

Learn more:

- [Miami CERT Program](#)
- [Resilient305 Strategy](#)
- [Resilient305 First Annual Progress Report](#)

Funding for Accessible Affordable Housing: Savannah’s use of sales tax dollars to redevelop vacant structures

Strategy: Using an innovative funding mechanism to turn community-selected projects into real progress on the ground for affordable housing.

Every 6 years since 1985, Chatham County, Georgia, has voted to renew the county’s “Special Purpose Local Option Sales Tax” (SPLOST) program, a [sales tax](#) that provides 1 cent on the dollar to be invested in capital projects. SPLOST has allocated nearly \$525 million to the City of Savannah for various public projects, which are selected through a combination of community, municipal, and county actions. Potential projects are proposed for public input via community surveys, then developed into project lists that are submitted by individual municipalities. The Chatham County Board of Commissioners votes on how to spend the funds based on the submitted project lists, and the public then approves the use of SPLOST funding for the finalized project list in a county-wide ballot referendum. Cumulatively, nearly a third of the funds have been used for drainage projects, and other funds have been invested in parks, streets, sidewalks, and other facilities.

In 2019, \$10 million of SPLOST funding was approved to support the “1K-in-10” Abandoned Property Acquisition and Redevelopment initiative. The 1k-in-10 plan aims to purchase 1,000 abandoned homes and renovate or convert them into affordable single-family homes over 10

years (2022-2032). Homes are intended to be repaired and sold to residents with modest income, or developed into affordable housing. The initiative will increase housing stock in Savannah and help mitigate gentrification. As of February 2025, over 70 houses have been acquired, and hundreds of thousands of dollars have been invested.

The Chatham County - Savannah Metropolitan Planning Commission adopted “Plan 2040” in 2021, a comprehensive joint plan to “maintain and enhance the health and viability of the jurisdictions,” and this plan includes the 1k-in-10 program as a prime example of resiliency in housing. Safe, well-built, affordable housing helps individuals and communities adapt to a changing climate by reducing vulnerability to severe weather and climate, such as flooding and hurricanes. Climate disasters can also lead to large demographic shifts and “climate gentrification,” further motivating the need for housing that keeps communities safe and in place. The 1k-in-10 program is a model for establishing and managing a dedicated, local funding source to underwrite community priorities, whether related to adaptation or other actions.

Learn more:

- [SPLOST7 Report](#)
- [Housing Savannah Action Plan](#)
- [Savannah region begins planning on next SPLOST referendum](#)
- [MPC Comprehensive Plan](#)
- [City launches special purpose local option sales tax \(SPLOST\) 8 survey | WSAV-TV](#)