Tools Salon | Wednesday, September 7

8:00 am-5:00 pm Renaissance Hotel | Dawson Room, 3rd Floor

At this interactive open house, you can experiment with new climate-change tools in a hands-on setting, evaluate how those tools can apply to real-life scenarios, and meet and collaborate with tool creators and your peers. Check out the tools salon during concurrent sessions or networking breaks.

■ Geospatial Innovation Facility

Cal-Adapt is an easy-to-use, web-based visualization tool that provides diverse audiences with a means of understanding the local relevance of climate-change risks and showcases the wealth of innovative climate-change research being produced by the scientific community in California. Development of Cal-Adapt was supported by the State of California under contract with UC Berkeley's Geospatial Innovation Facility. Through a combination of locally relevant information, visualization tools and access to primary data, Cal-Adapt allows local planners, scientists and residents in California to turn research results and climate projections into effective adaptation decisions and policies. ■ cal-adapt.org

■ Southern California Association of Governments (SCAG)

The Green Region Initiative Sustainability Indicators Map provides a detailed look into sustainability planning and programming across the Southern California Association of Governments region. The map presents policy and program data for 25 sustainability topics including climate action planning and greenhouse gas reduction, green infrastructure, waste reduction, water conservation and active transportation for all cities and counties in the region. The tool serves as a resource for jurisdictions to replicate existing projects and collaborate regionally to increase the sustainability of Southern California.

■ The Georgetown Climate Center

The Adaptation Clearinghouse is a web-based library providing access to more than 2,000 climate-adaptation resources including plans, policy recommendations, laws, case studies and best practices. Public officials, community-based organizations and others can use this library to identify and share tools, templates and guidance relevant to adaptation decisions in their own work. Sector and network portals allow users to explore a curated subset of resources that provide basic overviews and detailed guidance relevant to various interest areas. ■ adaptationclearinghouse.org

The Adaptation Progress Tracker tool catalogs the progress states are making on planning for and implementing adaptation plans. Each state profile provides an overview of state agency and local-government efforts to prepare for climate change. States with a comprehensive adaptation plan include detailed goal-by-goal analysis of the steps that the state has taken to implement each goal. The tracker provides easily accessible links to agency plans, state laws and policies, local adaptation plans and more. ■ georgetownclimate.org/adaptation/plans.html

The Green Infrastructure Toolkit will showcase examples and best practices from around the country about how cities are using green infrastructure to manage stormwater in the face of changing precipitation patterns. The infrastructure toolkit also includes analysis and guidance to help cities adopt green-infrastructure practices that will be most effective given their legal, geographical and political context. ■ georgetownclimate.org/adaptation/toolkits/green-infrastructure-toolkit/introduction.html

■ Climate Central

Surging Seas Risk Finder provides citizens, communities and policymakers with easily accessible, localized information to help understand and respond to the risks of sea-level rise and coastal flooding. Grounded in peer-reviewed science, it includes maps, local sea-level and flood risk projections, and potential impacts for more than 100 variables, from vulnerable populations to vital infrastructure elements. It compares risks across geographic units, from states to congressional districts to zip codes. ■ riskfinder.org

Surging Seas Risk Zone Map is Climate Central's global sea-level rise mapping tool, which you can use to visualize the impact of sea-level rise and coastal flooding on locations around the world at levels from 1 foot to 30 meters above the high-tide line. In the U.S., it incorporates data layers for population, income, property value, ethnicity, social vulnerability and landmarks. Globally, it provides local sea-level rise projections at more than 1,000 tide gauges on six continents. ■ sealevel.climatecentral.org

■ Environmental Science Associates

SLAMM West Coast: ESA worked with Warren Pinnacle and The Nature Conservancy to update the Sea Level Affecting Marshes Model (SLAMM) for West Coast systems. To date, SLAMM has been unable to properly model habitat evolution in response to sea-level rise for California bar-built estuaries that are closed for part of the year or longer. SLAMM updates include developing appropriate habitat types, conceptual modes and decision-tree pathways to be applicable to West Coast systems.

Habitat Evolution Model: ESA developed the GIS-based habitat evolution model (HEM) to improve site-specific predictions of habitat responses and vulnerability to sea-level rise. HEM is an improvement over the Sea Level Affecting Marshes Model (SLAMM) because it allows more flexibility with habitat categories and site-specific vegetation mapping, and incorporates more complex and locally specific topographic, hydrologic and biological relationships. HEM includes a habitat-evolution decision tree

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specific to site characteristics, and a module that predicts the establishment of seagrasses in newly inundated subtidal areas.

HEM Greenhouse Gas Calculator: This HEM module quantifies future changes in GHG fluxes due to sea-level rise and different coastal management strategies. Changes in CO2 and methane fluxes are estimated over time as habitats evolve as a result of sea-level rise. The framework uses locally and/or regionally appropriate values or estimates of biomass, soil carbon-sequestration rates, and methane emission rates for each habitat type to estimate GHG fluxes based on land-use changes.

Coastal Resilience Mapping Portal: ESA provided content and modeling support for this mapping portal developed by The Nature Conservancy. The portal provides various tools for visualizing sea-level rise and riverine flooding, inventorying assets, mapping exposures, and mapping vulnerabilities. ■ maps.coastalresilience.org/california/#

■ Point Blue Conversation Science

Our Coast, Our Future: Does your community need to understand, visualize and anticipate vulnerabilities to sea-level rise and coastal storms? Our Coast, Our Future provides coastal decision-makers with an interactive, online flood map and downloadable data sets at scales relevant to planning and management. A combination of 40 different sea-level rise and coastal-storm scenarios are available, displaying flood extent, depth, duration, wave heights and current velocity, based on USGS CoSMoS modeling. The project is led by USGS and Point Blue Conservation Science, with a host of partners in each region of the California coast. ■ ourcoastourfuture.org

Watershed Analyst lets you access high spatial- and temporal-resolution climate and hydrology data to help your community proactively plan for future climate effects on water resources and open spaces. Explore historic climate and water patterns, and compare them with modeled future scenarios, create graphs, and download customizable summaries for your watershed. Watershed Analyst is a project of the Terrestrial Biodiversity Climate Change Collaborative, Pepperwood Foundation, USGS and Point Blue Conservation Science. ■ Statewide: climate.calcommons.org/aux/BCM_WS_graph and high-res SF Bay: climate.calcommons.org/tbc3/sf-bay-watershed-analyst

■ EcoAdapt

The Climate Registry for the Assessment of Vulnerability (CRAVe) is a public-private partnership project administered by the USGS National Climate Change and Wildlife Science Center and EcoAdapt. CRAVe provides information on climate-change vulnerability assessments from across the nation. Developed in partnership with the Interagency Land Management Adaptation Group, CRAVe makes ongoing and completed vulnerability assessments more readily accessible and available, so that resources devoted to such assessments can be most efficiently used. ■ cakex.org/CRAVe

The Climate Adaptation Knowledge Exchange (CAKE) builds a shared knowledge base that supports managers, planners and practitioners as they work to prepare for and respond to climate change. CAKE contains over 1,200+ library resources, 320+ case studies, 70 tools and directory entries for people and organizations. All content types are geo-tagged and tagged by keyword (sector, habitat, scale). ■ cakex.org

Climate change affects all aspects of fisheries, including fish production, fish habitats and fishing-dependent communities. **The Climate Adaptation Toolkit for Fisheries Management** includes information on climate and fisheries data, tools and recommended priorities to enhance climate-smart fisheries management in an easy-to-use portal. Housed on CAKE, this toolkit leverages the existing database infrastructure, search and mapping functionality, and content to build customized portals for fishery managers. The final toolkit will be released in fall 2016.
■ cakex.org/dashboard/fisheries-toolkit

■ ICF and the City of Philadelphia Office of Sustainability

The Philadelphia Flood Risk Viewer allows users to identify projected depths of flooding for any location within the city, for a variety of sea-level rise and storm-surge scenarios. It also determines whether a location is in a FEMA floodplain. Access to projected flood depths can inform the long-term viability of developing a particular area and aid in selecting effective flood-protection measures.

■ ICF and the DOE Office of Electricity Delivery and Energy Reliability

Sea Level Rise and Storm Surge Effects on Energy Assets: Newly released, this innovative, interactive visualization tool highlights findings from work on the effects of sea-level rise and storm surge on energy infrastructure. It will enhance the communication of the results, and improve understanding of the context of the potential exposure, and explore spatial data used to create the maps. The tool includes full reports for 10 metropolitan statistical areas. ■ energy-oe.maps.arcgis.com/apps/MapSeries/ index.html?appid=244e96e24b5a47d28414b3c960198625

■ Kim Lundgren Associates

The KLA Sustainability Dashboard helps communicate progress on climate and sustainability goals to your community. It tells your climate-action success story through easy-to-understand explanations of why we care about specific indicators and how we measure them. With several dynamic feature areas, equivalencies and calls to action, this tool effectively fosters the ongoing engagement needed to change behavior.
■ kimlundgrenassociates.com/sustainabilitydashboard