

CALP



Carbon emissions visualized in Future Delta 2.0 videogame on climate change. Credit: CALP

The **Collaborative for Advanced Landscape Planning (CALP)** at the University of British Columbia, Vancouver, is an interdisciplinary research group within the Dept. of Forest Resources Management focusing on innovative solutions that bridge research & practice, bringing visualization, science, modeling, land-use & landscape planning, & participatory processes to community engagement & capacity building on sustainability issues. CALP's goals are to develop & implement better ways of collaborative learning, planning & social mobilization on climate change, community energy, urban forestry & other aspects of sustainable landscapes; & we do so by collaborating with communities, NGOs, schools, industries & other researchers from the fields of Forestry, Landscape Architecture, Planning, Environmental Studies, Environmental Psychology and Computer Science.

CALP also leads UBC's Social Mobilization on Climate Change using Digital Tools (Cool Tools) Research Cluster <www.cooltoolswarmworld.ubc.ca>, which brings educators, psychologists, digital media experts, climate scientists & planners together to advise youth, communities & governments on building awareness & capacity, supporting policy change & mobilizing collective action to reduce carbon footprints & strengthen community resilience.

Currently, CALP researchers are applying these tools to local climate change solutions planning, formal and informal education sector and municipal and block-level community engagement practices.

Sustainability solutions requires an inter-disciplinary and multi-sectoral approach for integrative, easily understood, compelling tools and processes to result in lasting impact.

FACILITIES

The CALP studio is housed in the Centre for Interactive Research on Sustainability (CIRS) and uses state-of-the-art computer animation, interactive visualization, videogame, virtual globes and time-lapse sequences to explain complicated environmental conditions and land management plans, while adding to knowledge on the effectiveness of these tools. The CIRS BC Hydro Decision Theatre provides an immersive virtual environment that is often used test the effectiveness of new visual tools, as well as to assist participatory planning processes on real projects, and training for local communities.

RECENT RESEARCH TOPICS

- **Social mobilization** approaches for engaging the public and policy-makers on climate change, urban forestry, energy, and resilience issues.



Credit: Kiefer Irvine

- Co-development and testing of **cool tools**, to improve two-way communication of information between experts and lay-people, e.g. a fun educational videogame on climate change, a do-

it-yourself toolkit on urban forestry, and an interactive website on community energy.

- **Mapping, modeling, and visualization of community renewable energy capacity** projects such as biomass and solar thermal resources in the City of Prince George (NRCAN), and District Energy plant visual impacts.



Visualization of a typical hillside neighbourhood showing possible retrofits for 2020 to meet BC Government greenhouse gas reduction targets. (Image by D. Flanders/J. Laurenz, CALP)

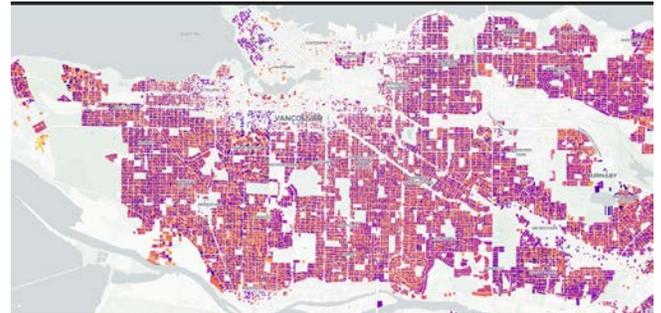
- **Climate change visioning** bridges the gap between global climate science and local policy. It is a new structured planning process that uses mapping realistic imagery of alternative climate futures at the local community scale based on spatial and numerical modeling. The intent is to make climate change choices more explicit to the public and decision-makers, in order to build awareness and support the transition to low-carbon, resilient communities.



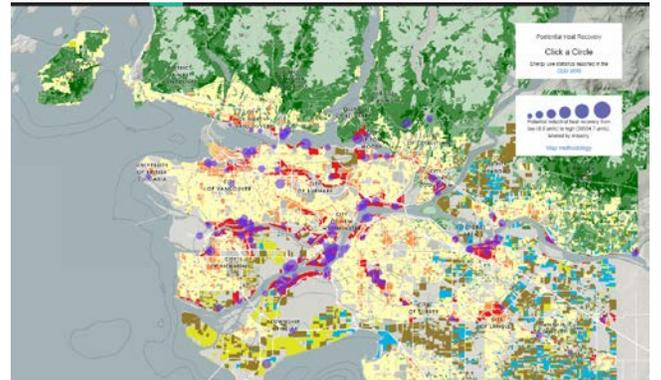
Visualizations for coastal community of Delta, BC, showing various responses to climate change in 3 alternative futures. (Images by D. Flanders, CALP)

- **Suitability mapping and visualization work** that includes urban agriculture options for low-carbon,

resilient and food secure communities; visual quality, community character and quality of life assessments; and energy demand and GHG emissions associated with different types of residential development and local retrofit options.



Modelled energy usage for single-family homes across Metro Vancouver. Credit: CALP



Renewable energy (solar, biomass & industrial heat selected) mapping. Credit: CALP

RESOURCES

An informal training program; guidance manual; educational videogame & teachers' resource on climate change; illustrated guide and interactive website on community energy; citizens coolkit on urban forestry; and other interactive tools on community engagement, visioning and outreach is available. Please contact us or visit our website for more information: www.calp.forestry.ubc.ca

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