



articulate sustainability and climate change solutions.

FACILITIES

The CALP studio is housed in the Centre for Interactive Research on Sustainability (CIRS) and is administered by UBC's Forest Resources Management. Working closely with colleagues in the School of Architecture and Landscape and Architecture (SALA), CALP uses state-of-the-art computer animation, interactive visualization, 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 created by the projection of landscape imagery and information graphics on to large screens, touch-tables, and handheld devices. It is 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

- **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.



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 informal group of researchers from the fields of Forestry, Landscape Architecture, Planning, Environmental studies, Environmental Psychology and Computer Science. Bridging from scientific research to applied planning and public outreach, the group specializes in climate change planning, Architecture, 3D landscape visualization, public engagement, GIS, aesthetics, renewable energy, and decision support. CALP members have worked with First Nations groups, Federal, Provincial and local governments, communities, NGOs, and the forest industry.

CALP's goals are to develop better ways of collaborative design, planning, and decision-making for more sustainable large-scale landscapes. We use innovative science-based visual tools to improve understanding of human perceptions and to help the public and experts visualize and explore alternative futures for our countryside, forests, and communities.

Currently, CALP researchers are applying these tools to local climate change planning, as exploring climate change solutions ranging from wind farms to biomass plants to denser communities. Planning for sustainability requires community engagement and learning, examination of complex trade-offs, and for professionals to cross knowledge "silos". Thus there is a need for integrative, easily understood, compelling tools and processes to



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



- Development and testing of **interactive tools**, to improve two-way communication of information between experts and lay-people, (e.g. an interactive 3D forest design tool [CALP Forester]), digital charrettes to assess sustainable planning scenarios, and virtual globe based tools, such as Google Earth, for portraying climate change impacts and possible response options.
- **Social mobilization** approaches for engaging the public and policy-makers on climate change, energy, and resilience issues.
- **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.

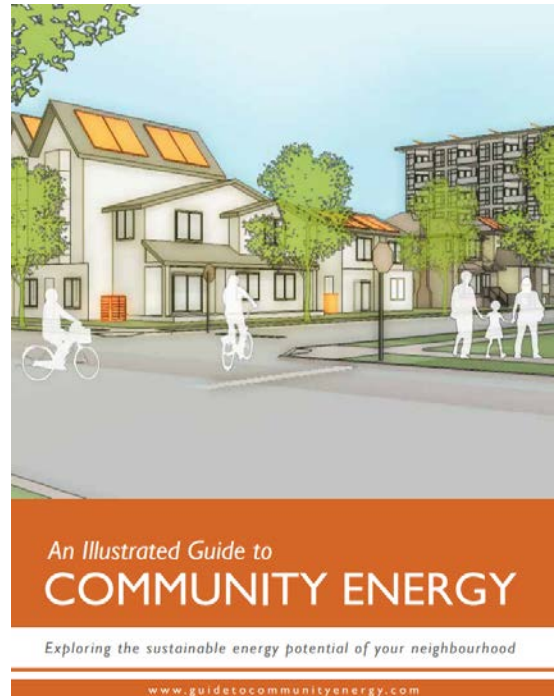


Visualization of a typical hillside neighbourhood showing possible retrofits for 2020 to meet BC Government greenhouse gas reduction targets. (Image by D. Flanders/J. Laurenz, CALP)

- **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.

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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