

The Mediated Modelling component of Sustainable Pathways 2

Spatial Planning as the emerging paradigm in New Zealand

The Local Government (Auckland Council) Amendment Act 2010 requires Auckland to produce a Spatial Plan with a 20-30 year timeframe. The requirement for Auckland to produce a Spatial Plan indicates a conceptual move from the effects based planning of the RMA towards an integrated form of planning that “goes beyond traditional land use planning to integrate the economic, environmental, social and cultural well-beings”.ⁱ

Spatial Planning is used extensively in other developed countries to prepare for rapid change, population growth and urban development. The Auckland experience in developing its spatial plan may have ramifications for all local authorities in New Zealand, for many central government agencies, and for the way central and local government work together in future.

Systems Dynamics and Integrated Decision-making

The four well-beings have interrelationships that influence and impact on each other, with significant time-lags, and with feedback loops that may produce unintended or unexpected outcomes. Understanding these ‘dynamics’ within and among systems is an important part of making effective integrated strategic decisions.

There is a wide range of stakeholders in the public, private and NGO sectors involved in delivering the economic, social, cultural and environmental outcomes. The decision-making processes for each are shaped by legislative and regulatory frameworks, institutional settings, and even organisational cultures. This poses significant challenges for developing an integrated strategic plan that involves multiple stakeholders.

The Sustainable Pathways 2 (SP2) project (www.sp2.org.nz)

The SP2 project is a ForST funded (\$3.9m) project that focuses on developing processes and tools to support integrated, spatially explicit, strategic decision-making. It is currently listed as a key tool in the Auckland spatial planning process.ⁱⁱ

A key output of SP2 will be the development of Spatial Decision Support System (SDSS) for Auckland and Wellington. This is a data intensive computer simulation model, used to develop future scenarios and show the spatial impacts on land and resources. Such a model has already been developed for Environment Waikato, as part of the Creating Futures project (www.creatingfutures.org.nz) and provides visual outputs for future scenarios.

Mediated Modelling in SP2

The Mediated Modelling (MM) component of SP2 will provide a process for multiple stakeholders to combine their expertise, experience, and even intuition to inform the development of SDSS models in Auckland and Wellington.

In the MM workshops representative stakeholders are brought together for several workshops to interactively build a conceptual model for a particular topic. This is a scoping model, not spatially

explicit. Stakeholders identify and build their understanding and mutual appreciation of the key model attributes, (such as population density and land use, amongst others) and the dynamic interaction between these variables. The model with linkages and feedbacks can then be run over-time to illustrate long-term intended and unintended consequences of decisions. The participatory process, and the collaborative learning that takes place, are intended to facilitate buy-in for the development of and guide the more complex and data-intensive SDSS models.

MM is a tool that offers a consensus building process in a short timeframe with fewer resources than many participatory processes as well as a transparent way to identify strategic opportunities and constraints.ⁱⁱⁱ The MM methodology is highlighted as an integrative tool by the European Union Water Framework Directive^{iv} and by the US Environmental Protection Agency^v. The SP2 Science Leader, Assoc Prof Marjan van den Belt, has undertaken a number of MM projects including the Vermont State energy planning project^{vi} and the Upper Fox River plan in the USA.^{vii}

National Advisory Group

As part of the SP2 project a national advisory group will be established to provide input and guidance for integrated models to support spatial planning in New Zealand. This group aims to achieve coordination and consistency in tools and approaches, build capability and capacity and coordinate and disseminate information about modeling tools.

The advisory group is also intended to keep the SP2 project in step with changes to resource management regulations and processes to ensure they meet future needs and enable New Zealand cities to be internationally competitive.^{viii} Spatial planning holds opportunities for other cities, towns and regions in New Zealand.

Next steps Wellington

While Wellington isn't required to develop a Spatial Plan to date, the SP2 project provides the opportunity for Wellington stakeholders to pro-actively undertake the steps toward it.

Three workshops are planned for Wellington (10 March 2011, 7 April 2011, 19 May 2011) with the option to expand to a full MM process (5-10 workshops).

A range of stakeholders will be involved (see preliminary participant list). Participants will jointly create a computer-based simulation model to scope for broad inter-linkages between social, cultural, economic and environment considerations and how they change over time, to identify strategic opportunities and constraints for the region's future development.

The topic is to be decided by the stakeholders. Some options for consideration are:

1. Timely and valuable input into the Long Term Plan and other statutory decision making planning processes.
2. Dynamic Genuine Progress Indicator.
3. Vacant offices and CBD development with respect to how best to grow the region

4. Earthquake planning; SORT decided it was too big of a topic, but we could play out “quakes as an opportunity to increase resilience”
5. Spatial planning

Organisations involved will benefit from participating through learning, understanding, integration, long term thinking, and exposure to a new integrative process. SP2 through FRST funding provides international and national expertise in a process new to New Zealand. MM provides a tool to effectively utilize stakeholder expertise in Wellington and use this to identify strategic opportunities and constraints.

Notes:

ⁱ Part 6 in www.legislation.govt.nz/act/public/2010/0036/latest/DLM3016073.html

ⁱⁱ Clelland, D (2009) Auckland Transition Authority. New Planning Framework Project. Defining the preferred approach to spatial planning for Auckland. p.8, and pp 30-32.

ⁱⁱⁱ van den Belt (2004) Mediated Modeling. Island Press, Washington DC.

^{iv} http://ec.europa.eu/environment/water/water-framework/index_en.html

^v <http://www.epa.gov>

^{vi} <http://www.publicservice.vt.gov/planning/mediatedmodeling.html>

^{vii} van den Belt (2004) Mediated Modeling. Island Press, Washington DC.

^{viii} Ministry for the Environment (2010) Building competitive cities. Reform of the urban and infrastructure planning system. <http://www.mfe.govt.nz/rma/central/amendments/background-info-phase-ii-reforms/index.html>.

^{viii} Part 6 in www.legislation.govt.nz/act/public/2010/0036/latest/DLM3016073.html