



The coastal city of Wollongong is the focus for one of the SCI's future projects aiming to develop plans for a long-term, more sustainable future. CSIRO, SCI

## A partnership approach to TACKLING SUSTAINABILITY

**Under the Sustainable Communities Initiative (SCI), CSIRO brings together partners from business, government and non-government organisations to work with communities to develop innovative solutions that address their local sustainability challenges.**

Sustainability issues involve complex inter-relationships between economic, social and environmental drivers and their outcomes. This makes responding effectively quite testing.

UK scholar Tim O'Riordan<sup>1</sup> sees sustainability issues as comprising three core components:

*Wicked problems:* First coined by Rittel and Webber,<sup>2</sup> 'wicked problems' are described as having contradictory and changing requirements. Effective solutions to them are difficult to realise due to complex interdependencies across a range of factors.

*Uncomfortable knowledge:* New and emerging knowledge that challenges our current beliefs and behaviours. A recent example is the IPCC's Fourth Assessment Report, which links changing climate patterns to human behaviour.<sup>3</sup>

*Clumsy solutions:* Applying conventional solutions to unconventional problems – our propensity to try to solve 'wicked problems' with traditional approaches.

This perspective highlights that we generally aren't well equipped to respond to the complex challenges we face, or to realise the opportunities they present. We need to change our thinking. We need to develop better ways of understanding the issues and to cultivate new behaviours and skills in response.

From a research perspective, science has a role to play in shaping new thinking and behaviours and addressing each of

the elements of a sustainable path. In particular, roles for science include:

- conceptualising and understanding the complex nature of 'wicked problems' through interdisciplinary research;
- providing robust evidence and theoretical foundations to both create and assure emerging knowledge; and
- researching and developing solution seeking processes and technologies in response to complex problems.

Researchers and research organisations, though, can't act alone – no one organisation or sector has all the answers. Effective solutions lie in our ability to work collaboratively to integrate the skills, resources, knowledge and passion from across a wide range of organisations and focus effort on collective approaches. This requires leadership and learning.

### The Sustainable Communities Initiative

The idea of integrating the various contributions and perspectives from different organisations and focusing them on tangible outcomes for communities is compelling, but not easy to achieve. There are competing drivers and values, inconsistent terminologies, divergent expectations and various institutional and attitudinal barriers. Although not insurmountable, these hurdles need new skills and ways of working together.

The Sustainable Communities Initiative is therefore designed to operate as an 'action learning' program over a three-year period (2006 to 2009), focusing on innovation and learning, as well as effective outcomes from on-ground action.

The SCI provides a vehicle that brings together participants to learn and experience how to work together better on complex local sustainability issues that deliver community scale outcomes.

Collectively, SCI community projects provide insight and help inform sustainable development policy, as well as wider programs and practice across Australia.

In this context, innovation is not limited to the invention of new technologies. It includes ways to better understand and work with complexity, and to integrate often disparate perspectives and knowledge. It also requires an understanding of the interactions between and across social, economic, environmental and governance systems.

Through this understanding, solutions can then be designed, tested and applied to

1 In *Sustainability and the Future of Partnerships* (2007). Cambridge University Programme for Industry.  
2 Rittel HWJ and Webber MM (1973). Dilemmas in a general theory of planning. *Policy Sciences* 4: 155–169.  
3 Intergovernmental Panel on Climate Change, [www.ipcc](http://www.ipcc).

# Progress

combine innovations in the ways we work together, plan our futures, develop new technologies and implement change.

## Research experience employed

The SCI is underpinned by more than a decade of CSIRO research that combines participatory processes with systems-based methods and tools to identify the drivers of local sustainability issues. It develops, tests and implements innovative and evidence-based responses.

The conceptual framework of the SCI is represented by the SPARK model which outlines that Solutions to complex issues are a function of Partnering, Actions, Reflection and Knowledge.



**Stakeholders in the SCI's 'Lockerbie' project workshop planning for the intended new greenfield suburb which is to be established near Kalkallo, about 30 km north of Melbourne.** CSIRO, SCI

In this way the SCI fulfills a number of roles. It acts as a catalyst and initiator through partnerships and projects that deliver mutual learning, operational and, possibly, economic benefits, for all its different sector participants. It helps with collaborations and connecting people, organisations and communities to networks, resources and knowledge that support and enable sustainable development. It provides credibility and leadership, enhancing project activities and outcomes. And in being innovative and action-oriented, it discovers, develops, delivers and shares new ways to realise sustainability outcomes in Australian communities.

The SCI is hosted and managed by CSIRO's Sustainable Ecosystems Division and is funded by contributions from member organisations and CSIRO. SCI's projects are based on a co-investment model where resources, both cash and in-kind, are provided by project partners and relevant government funding programs.

Current SCI foundation members are:

State	Region	Theme
ACT	East Lake	'Brownfield' redevelopment
VIC	Castlemaine	GHG emissions reduction and energy security
QLD	Whitsundays	Sustainable Whitsundays – Realising the Vision
WA	Avon Catchment	Integrating NRM in local government
QLD	Surat Basin	Regional Futures – Managing Change
VIC	'Lockerbie'	'Greenfield' development

## SCI projects already underway.

CSIRO, Westpac, GRM International, IAG, Harvey Norman, Ricoh, Delfin Lend Lease, Parsons Brinckerhoff, Origin Energy and the Federal Department of Environment, Water, Heritage and the Arts.

CSI's associate members are: WWF Australia; ICLEI (Local Governments for Sustainability); The Natural Edge Project; the Department of Infrastructure, Transport, Regional Development and Local Government; the Department of Innovation, Industry, Science and Research; and the Department of Agriculture, Fisheries and Forestry.

The SCI expects to develop and deliver up to 12 projects over the three-year 'action learning' period. Presently there are six projects underway in four states, with a further five in various stages of development.

## Learning through action

Formal evaluation and reflection on year one of the SCI has yielded valuable insight. Recent increase in the profile of sustainability issues in Australia highlights the importance of working together to respond effectively. The SCI's focus on both solution-seeking and learning is recognised as timely, valid and much needed.

Also, individual and organisational leadership has been integral to SCI performance. The initiative's innovative nature demands effective leadership because risk, ambiguity and uncertainty must be managed as organisations and communities pursue collaborative solutions to complex issues.

When aiming for collaboration, innovation and learning across multiple organisations from different sectors, and of varying sizes, there are many institutional barriers (such as structures, systems, cultures and timing) to overcome. Addressing these has led to frustration for many participants and showed the need for some reform of initial approaches so that an organisation's intention to partner

can be better translated into on-ground outcomes.

The engagement of such a diverse range of participants has provided a breadth of experiences and resources to draw from in developing and delivering SCI projects. However, this also requires a focus on managing expectations – across a range of organisational values, drivers and cultures.

## Looking forward

When it comes to responding to the sustainability challenges of our time, no one organisation has all the answers. Effective solutions lie in our ability to partner. Through the Sustainable Communities Initiative, CSIRO is bringing together expertise, resources and passion from across government, business, NGO and research sectors, and combining this with local knowledge and drive, to focus everyone on collaborative solution-seeking. The lessons learnt from these experiences will go a long way in assisting others to take action.

As the SCI reaches the midway point in the program, the focus is presently on reflecting on our collective experiences to date and taking forward the lessons learnt. Over the coming 18 months we expect to deliver a further four to six projects in a number of Australian communities. Areas of particular interest are participatory planning in communities undergoing change, and working with indigenous communities.

### ● Sean Rooney

*Sean Rooney was appointed Director of CSIRO's Sustainable Communities Initiative in 2006. He has a background in business and finance roles in national cultural institutions and the private sector, and joined CSIRO in 2002 as Business Manager in the Sustainable Ecosystems Division.*

### More information:

The Sustainable Communities Initiative:  
[www.csiro.au/science/SCI.html](http://www.csiro.au/science/SCI.html)