



Sydney Coastal Councils Group Climate Change Forum: For Community.

Sunday August 23 2009
The Barnet Long Room
Customs House
Circular Quay
Sydney

This event has been kindly supported by:



Topics Include: Science **Adaptation** **Systems Thinking**
Community **Transitioning** **Urban Food Supply** Change
Empowerment **Youth** + **Facilitating Action**



SCCG
Capacity
Building
Program

'Today is Tomorrow'

For More Information Please Visit:
www.sydneycoastalcouncils.com.au



General Information:

The Sydney Coastal Councils Group was established in 1989 to promote co-ordination between member councils on environmental and natural resource management issues relating to the sustainable management of the urban coastal environment.

The Group consists of 15 councils adjacent to Sydney marine and estuarine environments and associated waterways (Botany Bay, Hornsby, Leichhardt, Manly, Mosman, North Sydney, Pittwater, Randwick, Rockdale, Sutherland, City of Sydney, Warringah, Waverley, Willoughby and Woollahra).

The Group represents over 1.4 million Sydneysiders.

This area encompasses the waterways of Broken Bay; Pittwater; Port Jackson, the lower Lane Cove River, Middle and North Harbour; Botany Bay, the Lower Georges and Cooks River; and Port Hacking.



The Sydney Coastal Councils Group would like to thank the Sydney Metropolitan Catchment Management Authority and the City of Sydney for their generous support of this event.

Many thanks also go to the presenters and facilitators who have invested time and effort in making this such an informative and empowering event for Sydney's community.



For More Information Please Visit:
www.sydneycoastalcouncils.com.au



Program

Time	Topic
11am	Opening and Welcome Clr. Wendy McMurdo, Chairperson, Sydney Coastal Councils Group Mr. Geoff Withycombe, Executive Officer, Sydney Coastal Councils Group
11:10 am	Introduction Mr. Ragnar Haabjoern, Project Officer: Capacity Building, Sydney Coastal Councils Group + Facilitated Discussion & Inter-action
11:25 am	Key Note Address Australian Conservation Foundation Climate Connectors Presentation Ms. Nell Schofield, Climate Project Presenter, Australian Conservation Foundation
12:05 pm	SCCG and CSIRO Systems Approach Report: Climate Change Inspired Vulnerabilities Mr. Geoff Withycombe, Executive Officer, Sydney Coastal Councils Group
12:25 pm	Facilitated Discussion & Inter-action
12:40 pm	Lunch
1:10 pm	Becoming Transition Leaders Mr. Andrew Gaines, Alliance for Sustainable Well Being
1:30 pm	Facilitated Discussion & Inter-action
1:40 pm	Strategy for Sustainability and Community Empowerment: Peri-Urban Agriculture Adjunct Associate Professor Dr. Frances Parker & Sheryl Jarecki, Sydney Food Fairness Alliance
2:00 pm	Climate Change Youth Perspective and Action Ms. Sarah Campbell & Ms. Jodi Smith, Australian Youth Climate Coalition
2:20 pm	Sustainability By Design Mr. Chris Bosse, Director, LAVA : the laboratory for visionary architecture
2:40 pm	Facilitated Discussion & Inter-action
2:55 pm	Afternoon Tea
3:10 pm	Climate Action: How citizens acting together can save the planet. Dr. Mark Diesendorf, Senior Lecturer, Institute of Environmental Studies, UNSW
3:30 pm	Workshop
3:55 pm	Closing
Facilitated Discussion, Inter-action + Workshop Proudly Facilitated in Partnership with Ensemble Partners David Hodes and Megan Seneque	



Presenters

Mr. Chris Bosse, Director, LAVA : the laboratory for visionary architecture

Chris Bosse was a key designer of the Beijing National Aquatics Centre that was built for the 2008 Summer Olympics. For many years, Bosse has based his work on the computational study of organic structures and resulting spatial conceptions. His research lies in the exploration of unusual structures pushing the boundaries of the traditional understanding of structure and architecture with digital and experimental form finding. He is a Adjunct Professor and Innovation Fellow at the University of Technology, Sydney.

Ms. Sarah Campbell & Ms. Jodi Smith, Australian Youth Climate Coalition

Sarah and Jodi are both completing Masters in Environmental Science and Law at the University of Sydney. They have worked for the Australian Youth Climate Coalition (AYCC) for over a year on various projects. The AYCC is a diverse youth organisation aiming to build a generation-wide movement to solve climate change.

Dr. Mark Diesendorf, Senior Lecturer, Institute of Environmental Studies, UNSW

Dr Diesendorf is Deputy Director of the Institute of Environmental Studies, UNSW. Previously he was a Principal Research Scientist at CSIRO and Professor of Environmental Science at UTS. He is author of *Greenhouse Solutions with Sustainable Energy* and a forthcoming book *Climate Action: A Campaign Manual for Greenhouse Solutions*

Mr. Andrew Gaines, Alliance for Sustainable Well Being

Andrew Gaines is the convenor of the Alliance for Sustainable Wellbeing, and author of *Evolving a World That Works* and *Orienting to Creating a Viable Future*. He is organising a Creative Thinking Forum on Transitioning to a Viable Society in late October for leaders of national organisations and other influential people in Australia

Mr. Ragnar Haabjoern, Project Officer: Capacity Building, Sydney Coastal Councils Group

Thus far in his career, Ragnar has had a notable and extensive teaching and learning journey. Starting out as a science teacher he found his passion was in researching and developing the human-nature connection. From this realisation he became a sustainability education officer in the private sector and also had a brief tenure as a lecturer of pre-service teachers. He turned his focus from teachers and teaching to change and action, Program coordinating for a not-for-profit Education for Sustainability provider. Alongside his vocational journey he has also obtained postgraduate knowledge from a Masters in Science and Environmental Education, a Graduate Certificate in Sustainable Practice and presently he is a PhD Candidate at Macquarie University studying ecological philosophy.

Mr. David Hodes, Managing Director, Ensemble Partners

David Hodes is one of Australia's most renowned management consultants and a qualified System Thinker and Practitioner. He was awarded a National Engineering Scholarship in the UK and attended Imperial College of Science and Technology in London, where he graduated with a BSc Mechanical Engineering in 1983. David's vast and detailed experience includes employment and project work in Africa, Asia, North America, Europe and Australia. In leading Ensemble, his intention is no less than perfection in the delivery of business and social systems that add extraordinary value by adopting both robust scientific methods and a profound understanding of human endeavour. In this vein David has orchestrated highly successful consulting and improvement projects in the Manufacturing, Engineering, Mining, Retail and Supply Chain industries.



Presenters

Clr. Wendy McMurdo, Chair, Sydney Coastal Councils Group

Councillor McMurdo is Chair of the Sydney Coastal Councils Group. She was elected as a Greens representative to Hornsby Council in March 2004, and re-elected in September 2008. As a member of the NSW Greens, she supports the principles of social justice and equity, ecological sustainability and grass roots democracy. Her commitment to sustainability includes the promotion of strong links between the community and Council and support for Council's sustainability initiatives, in particular through her work as Chair of Council's Sustainable Action Committee, Lower Hawkesbury Estuary Management Committee, and the Bushland Management Advisory Committee. She also represents Hornsby residents as an Executive member of the Hawkesbury Nepean Local Govt. Advisory Group.

Dr Frances Parker, Sydney Food Fairness Alliance

Dr. Parker is Associate Professor at the University of Western Sydney. Her Research with farmers from culturally and linguistically diverse backgrounds has focussed on linking community development with policy initiatives by Government. Her specialisations are: Rural development, agriculture and non-English speaking backgrounds.

Ms. Nell Schofield, Television presenter, Showtime

For over a decade Nell has worked as a presenter with the subscription channel Showtime. In 2007/08 she was the film reviewer for Channel 9's flagship program 'Sunday'. On CNN International she has appeared as the Australasian presenter of 'The Art Club' and CNN's travel show 'Hot Spots'. She worked as a reporter for ABC TV's weekly arts program 'Review' and her voice is still heard on that channel's popular program 'Media Watch'

Ms. Megan Seneque, Leading, Learning & Innovation, Ensemble Partners

Megan specializes in helping organisations engage and align people within and across divisions, departments or units around the organisation's strategy. Megan's work delivers effective conceptualization and delivery of key strategic initiatives. Through the process of design and delivery, individuals and groups learn how to organize themselves so as to achieve not only personal development goals, but also contribute to a contextualized understanding and delivery of organisational goals. Megan draws on her extensive practical experience as an academic, as well as a social process and development professional and communication consultant. Megan facilitates workshops that promote organisational communication and learning and development, and build a sense of community. She draws on her facilitation skills and expertise as well as a vast knowledge of adult learning, language, communication and organisational theory and complexity-based understandings of change and leadership.

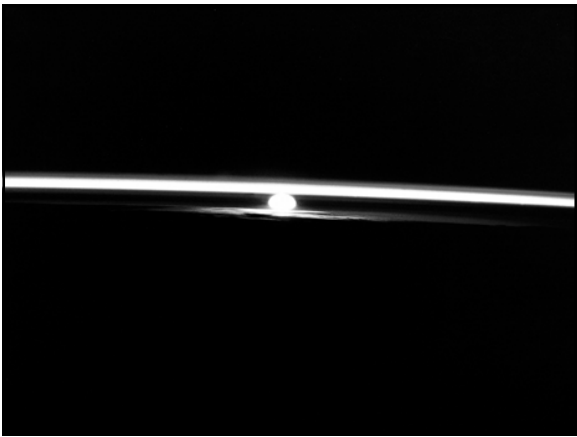
Mr. Geoff Withycombe, Executive Officer, Sydney Coastal Councils Group

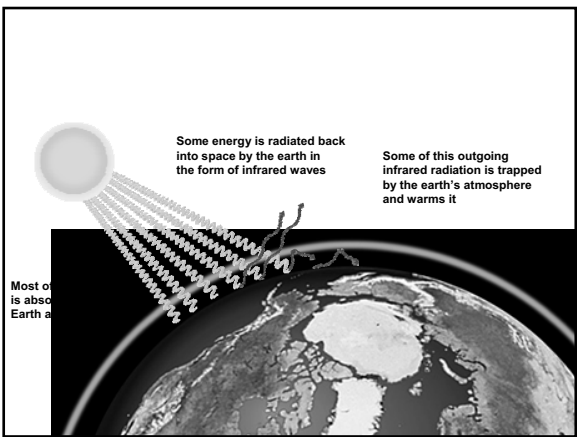
Geoff Withycombe has an Applied Science degree in coastal management and works for the Sydney Coastal Councils Group. In his role as Executive Officer, Geoff has responsibility to implement the Group's Strategic Plan. Geoff provides advice, policy development and decision making support for the 15 member councils. Geoff is also a Director of Surf Rider Foundation Australia and holds other Director and Trustee positions.

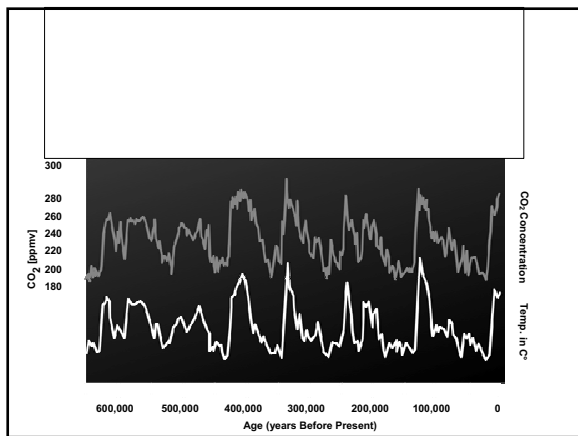


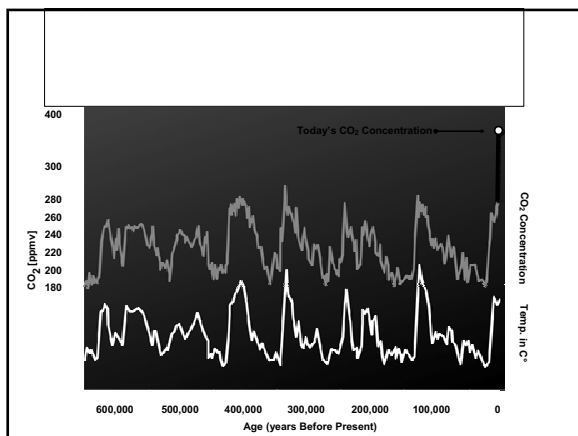
Presentations

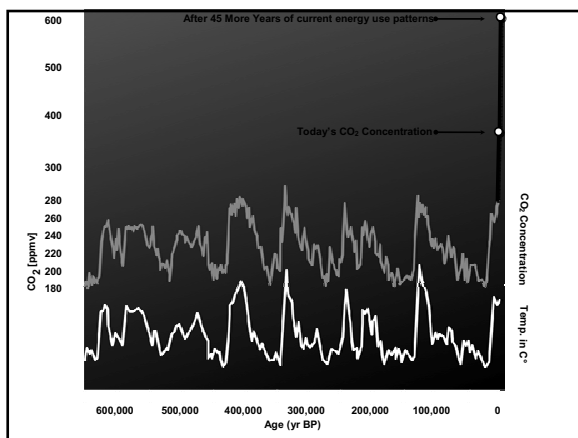














Murray Darling Basin devastation



Photo: Darren Sellar

The IPCC indicates that global emissions must peak by 2015 to keep warming under 2.5°C by the year 2050

**Australia needs a target
to cut greenhouse pollution
by at least 30 per cent by 2020**

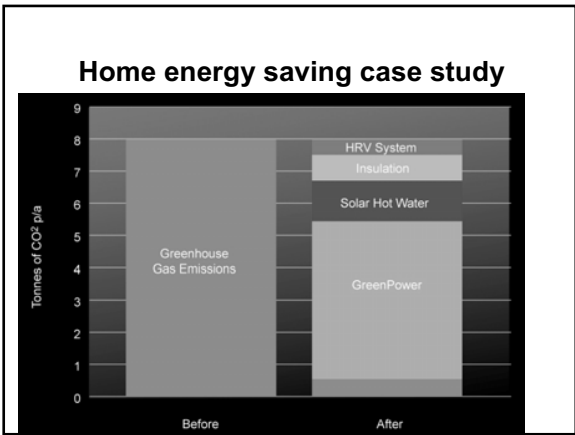


**BUT
WHAT
CAN
I DO?**

We are in this together









Climate Change Vulnerability and Adaptation in the SCCG

SCCG Climate Change Community Forum
23 August 2009

Geoff Withycombe
Executive Officer
Sydney Coastal Councils Group Inc.



Presentation Outline

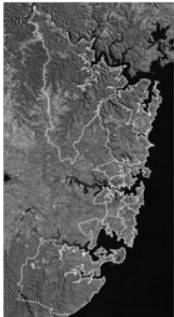
- The Sydney Coastal Councils Group Inc.
- What are we adapting to ?

***"Systems Approach to Regional
Climate Change Adaptation Strategies"***

- **Phase One:** A vulnerability assessment and creation of vulnerability maps
- **Phase Two:** Stakeholder workshops with the 15 Local Governments of the SCCG
- **Phase Three:** Case study investigation of Local Government capacity for adaptation



The Sydney Coastal Councils Group Inc. (SCCG)



The SCCG A Regional Organisation of Councils (ROC)

- Established in 1989 with 7 'ocean' councils addressing beach sewage pollution (pre ocean outfalls)
- SCCG has expanded to include estuarine councils and has a membership of 15 councils, representing over 1.3 million Sydneysiders

Membership

Botany Bay, Hornsby Shire, Leichhardt, Manly, Mosman, Pittwater, Randwick City, Rockdale City, City of Sydney, North Sydney, Warringah, Waverley, Willoughby City and Woollahra Councils




SCCG Aim and Objectives

AIM


To promote cooperation between, and coordination of actions by member councils in consultation with the broader community on issues of regional significance concerning the sustainable management of the urban coastal environment.

SCCG OUTCOME STATEMENTS

- The **exchange of information** on urban coastal management to member councils is coordinated and facilitated,
- **Community awareness** on matters related to the urban coastal management is enhanced,
- The **role and capacity of member councils** to manage the coastal environment is improved,
- Member **Council interests are represented** on issues in relation to regional and national coastal management
- **Sustainable and Integrated Coastal Zone Planning & Management** is facilitated



What Are We Adapting to ?




- *“Warming of the climate system is unequivocal, as is now evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice, and rising global average sea level.”*
- *“Most of the observed increase in globally averaged temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic greenhouse gas concentrations.”*
- *“For the next two decades a warming of about 0.2°C per decade is projected for a range of SRES emission scenarios. Even if the concentrations of all greenhouse gases and aerosols had been kept constant at year 2000 levels, a further warming of about 0.1°C per decade would be expected.”*

IPCC (2007)

Key Climate Change Impacts

- **Increase in Storm intensity**
 - Less storms (maybe) but more intense
 - Wind speeds / wind directions / cyclones -> storm surges / inundation / erosion
- **Sea level rise (18-59cm by 2100 (IPCC-07) / 9-88cm by 100yrs (IPCC - 01)**
 - No account of ice sheet decline (past: -2.7% \pm 0.6 / decade, more recently: ~10% / decade)
 - AIG - 700,000 properties at risk nationally / 200,000 in NSW
 - NSW Govt. Draft SLR Policy Statement = 40cm 2050 and 90cm 2100 (based on 1990 levels)
- **Changes to rainfall**
 - Regional uncertainty
 - Drought
 - Flooding
 - Infrastructure capacity (eg rainfall intensity)
- **Temperature (Southern Hemisphere 2.4-2.9°C by 2100 (IPCC-07)**
 - General Increase in temperature (both mean & peaks)
 - Increases in heat waves,
 - Issues of energy demand (eg air cond. requirements, > populations)
 - Heat island effects (urban) / Public health concerns (deaths X3 by 2050 - CSIRO)
- **Increases in Bushfire incidences**
- **Ecological changes** ecological functions & economic impacts (wetlands / intertidal areas - farming / industries)
- **Population growth in coastal areas**
 - (eg NSW - 60% increase in 25 years (DoP), ~ 1000 move to Sydney each week)

Systems Approach to Regional Climate Change Adaptation Strategies in Metropolises



Aim
To develop and trial a method for a systems approach to regional climate change adaptation strategies in large urban areas


SCCG / CSIRO partnership

- SCCG partnership with CSIRO Sustainable Ecosystems and Marine and Atmospheric Research (now the CSIRO Climate Adaptation Flagship) and working in collaboration with the University of the Sunshine Coast (USC)

Phase One: A vulnerability assessment and creation of vulnerability maps
Phase Two: Stakeholder workshops with the 15 Local Governments of the SCCG
Phase Three: Case study investigation of Local Government capacity for adaptation
Phase Four: Assessment of transferability of the method to other regions

Researchers
CSIRO: Dr Ben Preston; Russell Gordard; Dr Tom Measham; Dr Kathy McInnes; Dr Debbie Abbs
USC: Prof. Tim Smith
WWF: Dr Cassandra Brooke
SCCG: Geoff Withycombe; Craig Morrison; Beth Beveridge

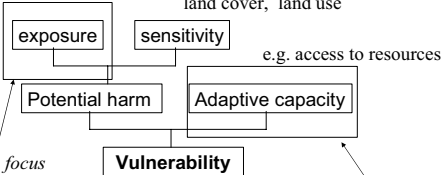
Funding: Australian Government Department of Climate Change (DCC) National Climate Change Adaptation Program



Vulnerability Mapping in the SCCG

"Vulnerability is the degree to which a system is susceptible to, or unable to cope with, adverse effects of climate change, including climate variability and extremes (IPCC, 2001)."

e.g. increased temperature e.g. aging population, land cover, land use




Past science focus Emerging focus

Phase One: Vulnerability Assessment & Mapping

Five areas of potential climate impact:

- **Human health effects** (*extreme heat events*)
- **Coastal impacts** (*sea-level rise, storm surge, winds*)
- **Urban stormwater** (*extreme rainfall*)
- **Bushfire** (*temperature and rainfall changes*)
- **Natural ecosystems and assets** (*temperature and rainfall changes*)



Sample Indicators

- **Exposure**
 - Observed patterns of temperature and rainfall
 - Projections of average changes in temperature and rainfall
 - Projections of changes in extreme rainfall
 - Projections of current extreme storm surge events
 - Land elevation
- **Sensitivity**
 - Land cover and use
 - Population density and age distribution
 - Landscape slope, aspect
 - Water and soil condition
 - Wetland locations
- **Adaptive Capacity**
 - Household income, mortgage repayments
 - Household English literacy, access to internet
 - Council rates, community services expenses, recycling volume

From Indicators to Vulnerability

Indicators

52 Indicators

Exposure, Sensitivity, Adaptive Capacity

Vulnerability

- For each category of impact, a suite of indicators was identified representing exposure, sensitivity and adaptive capacity
- Relevant indicators were integrated to map net vulnerability

Sea-Level Rise and Coastal Management

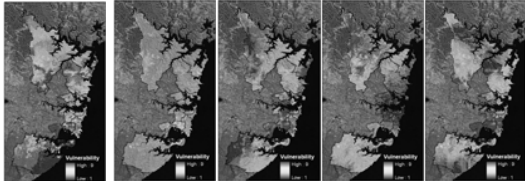
For each area of potential climate impact, a suite of indicators was identified representing exposure, sensitivity and adaptive capacity. Preston et al. (2008)

EXPOSURE	SENSITIVITY	ADAPTIVE CAPACITY
<ul style="list-style-type: none"> • Distance to coastline • Present relative storm surge along SCCG coast • SEPP 71-defined exposed coastal locations 	<ul style="list-style-type: none"> • Coastal elevation • Slope • Land cover • Population density • Projected population growth to 2019 • Acid sulphate soils 	<ul style="list-style-type: none"> • % population completing yr2 • % population with English literacy • Average mortgage • Average income • % home internet • % population with internet access • Current ratios <ul style="list-style-type: none"> • Per capita business rates • Per capita residential rates • Per capita community service expenses

Vulnerability
High 9
Low 1


Preston et al. (2008)

Regional Climate Change Relative Vulnerability



Extreme Heat Events Sea-Level Rise Extreme Rainfall Bushfire Ecosystems

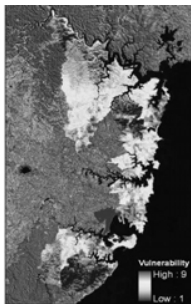

➤ The goal of vulnerability assessment, "is not to produce a score or rating of a particular community's current or future vulnerability. Rather, the aim is to attain information on the nature of vulnerability and its components and determinates" (Smit and Wandel, 2006)."



Net Relative Vulnerability of the SCCG Region

Key Results

- Vulnerability is closely correlated with human development patterns
- Localised hotspots occur throughout the region
- Climate vulnerability is driven as much by the physical changes in the climate, as factors such as demographics, economics, landscape and infrastructure
- Different areas of Sydney will experience climate change in different ways depending on their geographic location, demographics, and the resources and tools at their disposal to manage future climate change risk
- Almost every council has at least one area of critical vulnerability. Every council has at least one impact to which it appears to be particularly resilient. The majority of councils appear to face multiple vulnerabilities

Lessons Learned

- **Vulnerability assessment aids in:**
 - Communication and awareness raising
 - Identification of most vulnerable areas (hot spots)
 - Identification of determinants of vulnerability
 - Emphasising role of human dimensions
 - Providing information in a regional context
- **But, vulnerability assessment often does not provide:**
 - Specific predictions regarding which impacts will occur
 - Estimates of the absolute scale of future consequences
 - Estimates of likelihood
 - Direct decision support

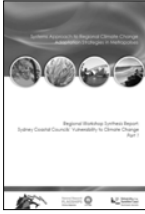
Conclusion: We must dig deeper !!


Subsequent Stages

- **In the SCCG project, vulnerability assessment was simply the first step**
 - Introduce the concept of vulnerability
 - Provide stakeholders with a tangible product
 - Widen the scope of local government thinking
- **Subsequent stages focused on using assessment results to examine the capacity of local government to manage climate risk from the bottom-up**
 - **Local government workshops (15)**
 - Mental models
 - Identification of adaptation barriers and opportunities
 - **Case studies of adaptive capacity**
 - Face-to-face interviews with local government staff

15 Workshops = Regional Workshop Synthesis Report

- Provides a regional snap shot of outcomes from the 15 workshops
- Identifies and discusses the key regional crosscutting issues, barriers and opportunities to managing climate change vulnerability
- Recommends key actions to improve councils' adaptive capacity to manage those vulnerabilities
- It informs Councils internally and other levels of government and other organisations of the key barriers that Councils' face in adapting to climate change;
- It provides support to the development of projects (*individual council, cross council and regional*) that will assist Local Government better manage climate change.
- Report findings were also used to support the selection of case study councils and topics for Phase 3







Project Phase Three Case Studies of Adaptive Capacity

Case Study Objectives:

- assess councils' adaptive capacity and to assist member councils to ultimately increase their capacity to adapt to climate change
- Deepen the understanding of the most common cross-cutting barriers (identified through the 15 council workshops);
- Inform the feasibility of future strategies to better manage the cross-cutting barriers;
- Provide a benchmark of council response to the barriers that may form the basis for an on-going monitoring and evaluation framework; and
- Provide recommendations to improve the adaptive capacity of Local Councils to manage priority climate change issues.





Adaptation streams for increasing Adaptive Capacity of Local Government

Stream Name	Description of Covered Actions
"Know Your Enemy"	Enhancing understanding regarding existing and future climate hazards and social and ecological vulnerability
"Plan for Change"	Incorporating climate change into existing and novel Local Government planning frameworks
"Get Smart"	Implementing education and outreach programs to increase the knowledge of Council and the broader community with respect to climate change, vulnerability and adaptation
"Act, Watch and Learn"	Implementing monitoring, evaluation and reporting measures for Local Government to track outcomes with respect to policies and measures associated with climate adaptation
"Put the House in Order"	Developing both internal and external institutional arrangements that build adaptive capacity within and across Councils and other levels of government
"Money Talks"	Enhancing revenue streams to Councils to assist in financing adaptation and cost-sharing mechanisms to spread the burden among multiple tiers of government

Key for Table Colours: Low Cost or High Benefit Moderate Cost or Moderate Benefit High Cost or Low Benefit



For more information visit the project page on the SCCG Web Site

www.sydneycoastalcouncils.com.au



- Papers
- Presentations

Fact sheets

SCCG – Climate Change 2009

> Current Projects

- Identify funding support for "Stage 2 – Adaptation Demonstration"
- Beach Valuation Project (PhD program – Dave Anning)
- Offshore Sands for Beach Nourishment Project (NDMP)
- "Coastal Councils Planning for Climate Change" (*Climate Change Legal Assessment*)
- "Mapping and Responding to Coastal Inundation" (partners CSIRO, NSW EDO & Education consultant(s))
- 4 SCCG Climate Change Forums in 2009:
 - SCCG 'Alternative Energy for Coastal Cities Forum' (27 May)
 - Community Forum, (23 August)
 - Councillors Forum (30 August) (Funding support Sydney CMA)
 - Adaptation Planning Forum for practitioners (October)

Recent Grant Applications

- *Building Resilience of Sydney Salty Communities* - devolved grants program (*Caring for Country*)
- *Cooling CALD Communities* (*Australian Govt. Jobs Fund*)

Ongoing Regional Coordination, Capacity Building and Advocacy !!

Thank you

Questions / Comments

For Further Information Contact:

Geoff Withycombe
Regional Coastal Environment Officer / Executive Officer
Sydney Coastal Councils Group Inc.
Level 14, 456 Kent Street
GPO Box 1591
SYDNEY NSW 2001
Ph: 9246 7791
Fax: 9265 9660
Email: info@sydneycoastalcouncils.com.au
Web: www.sydneycoastalcouncils.com.au



SCCG Secretariat

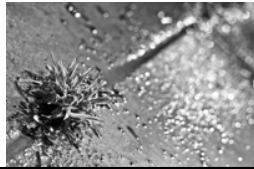
- Geoff Withycombe Executive Officer
- Craig Morrison Senior Coastal Projects Officer
- Ragnar Haabjorn Capacity Building Officer

Actual presentation unavailable at time of printing.
(Presentation from the event will be made available on website www.sydneycoastalcouncils.com.au)

Mr. Andrew Gaines

Convenor
Alliance for Sustainable
Wellbeing













Justice Change

S J S C
Research Centre

Community Case Study
Strategy for Sustainability and
Community Empowerment
Peri-urban agriculture

Adjunct Associate Professor (Dr) Frances Parker &
Sheryl Jarecki
for Sydney Food Fairness Alliance

Social
Justice &
Social
Change
Research
Centre

University of
Western Sydney
Progressiveness

www.uws.edu.au/sjsc

FOOD SECURITY IN AUSTRALIA

- When all people at all times have the ability to access and prepare sufficient, nutritious and affordable food necessary for an active and healthy life
(Sydney Food Fairness Alliance, <http://sydneyfoodfairness.org.au/>)
- Common view is that food security is only a problem in developing countries
- *Running on Empty?* Project (SSWAHS) in SW Sydney found
 - 21.9% of households have experienced food insecurity
 - 30% of households with children were food insecure
 - 45% of single parent households were food insecure
- Indigenous communities
- Food insecurity is likely to increase with increasing mortgage stress and high rentals

INCREASING MOVEMENT FOR LOCAL, FRESH FOOD

- Community & rooftop gardens
- Farmers' markets
- Community aspirations greater than government commitment eg Metro Strategy with no strategy for food production / agriculture
- Lack of food policy

EFFECT OF CLIMATE CHANGE

- Climate change is likely to reduce rainfall in interior & SE Australia, increasing evaporation, increase in temperature
- Murray-Darling Basin under extreme stress
- Rainfall likely to increase in Northern Australia, but cannot directly transfer food systems suitable for Southern Australia to North
- Increasingly severe weather events, droughts, storms

Value of Australian Periurban Agriculture ie land on fringe of cities

- 25% of gross value of agricultural production on 3% of land
- Houston (2005)
- Compare with US 17% of production on 5% of land, 20% of population but 40% of growth^(Smit),
 - In North America 79% fruit, 69% of vegetables, 52% of dairy products produced in urban areas

Periurban & Urban Agriculture

- Provides employment
- Improves social determinants of health through improved communities, nutrition etc

Production in Sydney Basin Compared with NSW

- Approx 50% of tonnage of total vegetable production in NSW is in the Murray-Darling and Murrumbidgee which are under water stress
- Sydney Basin is the second most important area in NSW (20% in 2003, estimated to be 40% of the value, 16% of tonnage most recently)
- Sydney produces 90% of perishable vegetables

AGRICULTURE IN THE SYDNEY BASIN

- > \$1 billion pa
- Value of production per hectare, state average \$ 136 per hectare, Sydney Basin, \$5,433
- Small, intensive family farms
- Employs at least 12,000 people.
- Sydney has largest number of horticulturalists of any region in Australia, and the largest number and proportion of Horticulturalists from Culturally and Linguistically diverse backgrounds (CLDB)

CONTRIBUTION OF AGRICULTURE – SYDNEY BASIN

- 90% perishable vegetables
- 100% Asian vegetables, 91% spring onions and shallots
- 70% fresh tomatoes (100% cherry tomatoes)
- 50% lettuce
- 80% mushrooms (\$4 million per hectare, employs 700 people)
- 40% poultry, 100% duck production (60,000 birds processed per week in South Windsor)
- 64% turf
- 40% State's Nurseries
- Almost 100% State's cut flower production
(Gillespie & Mason, NSW DPI)

ECONOMIC VALUE OF AGRICULTURE IN THE SYDNEY BASIN

	\$million
■ Vegetables	216 (20% tonnage, but 40% value)
■ Hydroponic lettuce	21.5 (50%)
■ Greenhouse cucumbers	38.5 (most)
■ Asian vegetables	33 (90-100%)
■ Traditional market gardens	70
■ Greenhouse tomatoes	35 (60-70%)
Mushrooms	71 (80%)
Dairy	35
Poultry	278 (40%)
Cut flowers	185
Turf	55
Fruit & Berries	60

Gillespie & Mason, NSW DPI

Sydney Basin has always been a rich and important source of food

- For the indigenous population
- Since white settlement
- Food production a migrant success story for successive waves of migrants
- Italians, Maltese, Chinese, Arabic speakers (Lebanese), former Yugoslavia, Vietnamese, Cambodians, most recently African workers

Case study: Agriculture & food
production in the Sydney Basin.
A migrant success story

MARKET GARDENING IN THE SYDNEY BASIN

- Small (5 acres) family farms; around 1000-2000 farms.
- 90% of farmers are from culturally and linguistically diverse backgrounds.
- 90% cannot read English.
- Italians, Maltese, Lebanese, Chinese, Vietnamese, Cambodians etc.
- Economic importance: Produce 90% of Sydney's perishable vegetables.
- Value of industry more than \$250 million per annum.
- **Developed new crops themselves without government assistance**
- **Self reliant, resilient, entrepreneurial**
- **Many young families**

THREATS

- Urbanisation: ***50% of market gardens are in designated growth areas in NW & SW Sydney***
- Increasing regulation and control, difficult for farmers with little political power and limited English language
- Market forces: agents, supermarkets

COMMON PERCEPTIONS

- We can get our food from anywhere
- Farmers want to sell their land- it's their superannuation
- Farmers are white, male, "west of the divide" producing wheat, sheep, cattle

INCREASING URBANIZATION

- > 50% of current world's population in cities
- > 60% by 2015

Increasingly urbanization has the potential of improving human life or increasing human misery

State of World Population, 1996

URBAN SPRAWL IS NOT INEVITABLE

- "Results from zoning laws by legislators
- Low density buildings designed by developers
- Marketing strategies
- Tax breaks"

Thakara 'In the bubble' cited by Roberts (2008) p321

PLANNERS, POLITICIANS & BUREAUCRATS CONTINUE TO REGARD FOOD PRODUCTION AS A RURAL ISSUE

- Cities worldwide produce 30% of food consumed by residents
- 800 million people engaged in urban agriculture
- 200 million for employment / livelihood (Smit)
- Food Deserts: inner city areas with no green grocers or fresh food outlets (Halwell, 2004)

IMPORTANCE OF PERIURBAN AUSTRALIAN AGRICULTURE HAS BEEN IGNORED

- Institutional blindness
- Strategically significant given its value but absent from policy deliberation and data collection
- Need informed policy making , which recognises its value adding and employment generation in local economies (Houston, 2005)

WHY HAVE THESE FARMERS BEEN FORGOTTEN? AND THEIR CONTRIBUTION NOT ACKNOWLEDGED?

- No "voice", these farmers have lacked political power
- Not seen as "legitimate farmers"
- Broad scale agriculture has more political influence
- The vegetable industry is highly fragmented
- Different cultural backgrounds, often lack English and knowledge of the political system
- The importance of periurban agriculture has not been recognised

RELOCATION

- Water may not be available
- Increased transport, poorer soils, less water.
- Availability of land, especially small areas for capital intensive production.
- Planning and Council regulations
- Price for land may not cover cost of relocation.
- Many farmers lease their land
- The farm is the home and the business.
- Disrupts family and community & social networks

INCREASING FOOD MILES

- Increase in transport costs
- Increase in food prices
- Increase in carbon footprint
- Peak oil

INCREASING FOOD PRICES IN AUSTRALIA

- In the past food prices led inflation
- Previously a relatively small part of household budget
- Family on average income needs 22% of income for groceries
- Households in lowest income bracket need 56% of their income to purchase a healthy food basket.

The Cancer Council NSW: Healthy Food Basket Cost Availability and Quality Survey, 2007

WHY SHOULD WE SUPPORT & RETAIN FOOD PRODUCTION IN THE SYDNEY BASIN?

- Sustainability of Sydney as a healthy city
- Food Security: Control over primary food source, food safety etc.
- Locally grown food
- Natural resource management
- Economic and social livelihoods for diverse communities
- Building communities

EFFECT ON ENVIRONMENT

- "Any action that can maintain...farmland, even relatively dirty farmland, is likely to be a better solution than to have another all-consuming, all polluting, water-repelling, commuting-requiring tract-housing project"
- Need security of tenure to encourage implementation of good environmental practice.
- Many farmers lease their land.

DO WE WANT A CITY WHICH IS RICH AND DIVERSE

- Economically
- Culturally
- Socially
- Environmentally

A symbiotic relationship where each community, urban and farmers "on the fringe", benefit.

WHAT DO WE NEED TO DO?

- Issue is being led "from the ground"
- Raise community and government awareness of the critical importance of periurban and urban agriculture for food security and sustainability
- Develop a food policy
- Address planning issues
- Future of food production must be considered in planning and at the same time as urbanisation.

WHAT DO WE NEED TO DO?

- A range of approaches, no one recipe
- Farmers need to be included in the process, often not included in usual consultation processes
- Process must be equitable and inclusive
- Need to establish a process to include full participation of all stakeholders not merely consultation.
- Farmers need security of tenure to encourage implementation of good environmental practice
(The future of the rural lands in Sydney www.ruralplanning.com.au)

WHAT DO WE NEED TO DO?

- A question of values: what do we value?
- Issues often contentious, but can be addressed if there is **political will and commitment**
- **We can be leaders: it can be done**

Role of Government

- Develop a food policy through a consultative process
- Encourage R & D for urban and periurban food production: Simple low cost alternatives as well as "high tech" solutions
- Policy initiatives that encourage balanced development of periurban land, not only for housing
- Recognise the importance of local food in contributing to food safety
- Encourage the participation of farmers from diverse backgrounds in decision making processes

BARRIERS TO CHANGE SHORT-TERM THINKING

- Process needs to be inclusive and creative: Who participates. How, who benefits?
- A question of values- what do we value?

FOOD IS NOT JUST A COMMODITY

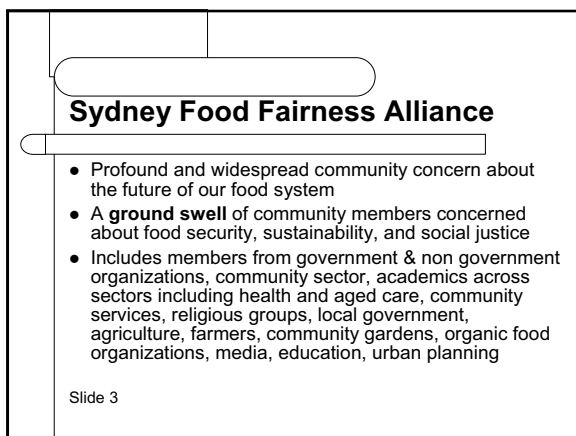
- Food connects people to their environment and to each other (Food Connect)
- "Nothing is so simultaneously fundamental to survival and yet so embroidering of civilization as food" (Symons, 2006, One continuous picnic)

Winston, Professor of town planning University of Sydney, 1957

- Australia has nearly 3 mill sq miles but good growing land with adequate rainfall makes up only a very small % of the total
- Where such land occurs near a large population centre it is of double importance
- For only from such areas can really fresh vegetables come to the city markets
- Good quality green vegetables are the rarest of foods today, but the first essential is to preserve the land where they can be grown
- To raise bungalows on first class agricultural land may be profitable for the "developers" but a serious loss for everyone else







Sydney Food Fairness Alliance

- Food Fairness Forum Liverpool 2005
 - Launched and incorporated in 2006
 - Food Summit 2009
 - May: Launch
 - June-Sept: Local events in greater Sydney
 - Oct: Food Summit
- Hungry for Change: Shaping a Sustainable Food Policy***

Slide 4



- Aims to promote **food security** and **sustainable food systems** in the Sydney region
- How? *Advocacy, education, research and networking*
- ***WE NEED TO SEE THE FOOD SYSTEM THROUGH NEW EYES***

Slide 5

Food Summit Sydney 2009

- Endorsement of summit by 40 organizations including peak bodies highlights public concern and interest in developing sustainable food systems
- Aims to develop a food policy for NSW
- Movement led by community concern-"Spontaneous" initiation of events in other areas

Slide 6

Endorsements include:

NSW Council of Social Services, City of Sydney, Western Sydney Regional Organization of Councils (WSROC), Macarthur Community Forum, Urban Research Centre, University of Western Sydney, Red Cross, Public Health Association of Australia Australian Health Promotion Association (NSW Branch), The Conference of Leaders of Religious Institutes (NSW), Edmund Rice Centre, Organic Federation of Australia, Australian City Farms & Community Gardens Network.

Slide 7

FOOD CRUNCH

- Credit crunch & collapse of world's financial system
- Climate Change
- Peak Oil, increasing transport costs
- Term coined by Patrick Holden CBE, Director of Soil Association, UK

Slide 8

Food is not just an economic commodity

- "Nothing is so simultaneously fundamental to survival and yet so embroidering of civilization as food" (Symons, 2006, *One continuous picnic*)
- Food connects people to each other and is "the basis of many of our social, family and spiritual traditions" (Roberts, 2008, *The end of food*)
- Integral to our social and cultural lives
- Political, social, cultural and economic importance

Slide 9

What do we mean by...

• **Food security?**

... when all people at all times have the ability to access and prepare sufficient, safe, appropriate, nutritious and affordable food necessary for an active and healthy life

Slide 10

What do we mean by

• **Sustainable food systems?**

...systems that make use of regional agriculture, technology, distribution and economic methods that enable food to be produced and fairly shared over a long period of time

... today's food production should not undermine the rights of future generations to be food secure.

Slide 11

Increasing support for organic food systems

- If US converted to organic agriculture on all farmland 25% of US greenhouse gases could be saved (Rodale Institute, Pennsylvania)
- "Organic agriculture offers one of the most promising options to meet global challenges" (Secretary General of UNCTAD, UN Conference on Trade And Development, supported by UN FAO, Food and Agriculture Organization)

Slide 12

Developing a Canadian Food Policy

Issues to be considered include:

- Global forces and food security
- Ecological threats to food security
- Food production & Distribution
- Food safety & public health
- Food security & poverty

Slide 13

Issues?

The SFFA is currently interested in...

- Raising awareness of food insecurity
- Supporting community food initiatives eg. gardens, cooperatives, eating!
- Retention of productive urban agricultural land
- Fairer policies and practice to address these issues
How do we ensure healthier people and places?
- A **Sydney Food Policy** by 2010


● **SFFA is an organisation driven by its members**

Slide 14



Who is the AYCC?

- Founded in November 2006
- Coalition of over 20 diverse Australian youth groups
- Several other Australian, international and multinational member groups and affiliates (eg. Indian Youth Climate Network)
- Four full-time staff, some part-time staff, but mostly run by student volunteers
- Collaborate with other groups and NGO's on campaigns and projects (eg. World Vision on YOUthdecide)



What is the AYCC?

- Aim = to build a generation-wide movement to solve climate change.
- Leverage forces to foster a just, clean, renewable energy future.
- Inspire, educate and mobilise young Australians to act on climate change.
- Run shared projects and campaigns.

Projects of the AYCC

- Switched On Schools
- Your targets = our future
- Project Survival Pacific
- Youth Climate Leadership
- Power Shift 2009
- UN youth delegations: Bali 2007, Poznan 2008, and COP15 Copenhagen 2009
- YOUth Decide
- Regular policy submissions



Achievements

- Nation-wide AYCC representation and membership; offices in Sydney, Melbourne and Brisbane.
- National and international media coverage (Reuters, Huffington Post, Channel 10, SMH/The Age, ABC TV and radio).
- Co-directors consultation in senate committees on climate change, youth representatives on parliamentary processes.
- Outreach to hundreds of schools and communities throughout Australia, dissemination of information packs and AYCC presentations.
- Extensive dialogue with youth (inter-faith, marginalised and minority groups).

Importance

- Climate adaptation
- Stronger carbon emission reduction targets
your targets = our future
- Green jobs for our generation
- Enhanced opportunities of a low carbon economy
- Commitment to the renewable energy sector



Why the AYCC?

- "We must do the impossible to avoid the unimaginable"
- Amanda McKenzie, Co-director, AYCC
- Ecological pragmatism
- Australia is one of the sunniest countries in the world, we should be at the forefront of renewable energy
- Opportunities for involvement, 4.8 million young Australians
- Today's youth are tomorrows leaders , we will have to correct the inefficiencies of past governments

What's next?

- YOUth Decide '09
- National youth vote on climate change
- Events in schools, TAFE's, universities and communities Australia-wide
- 14-21st September, 2009
- To be presented to government prior to COP15 in Copenhagen, December 2009





www.aycc.org.au

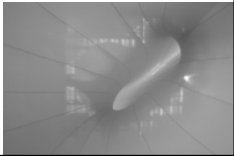
www.switchedonschools.org.au

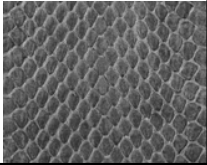
www.youthdecide.com.au

Actual presentation unavailable at time of printing.
(Presentation from the event will be made available on website www.sydneycoastalcouncils.com.au)

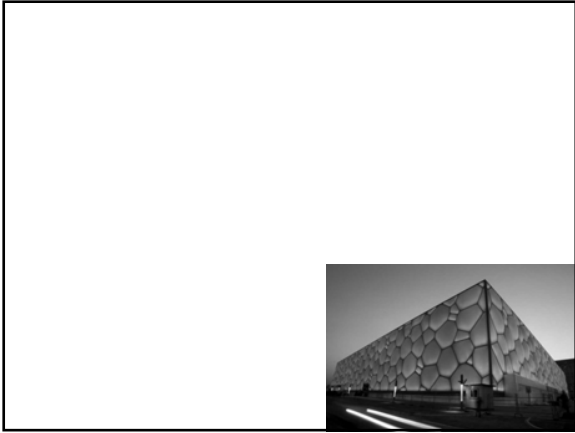
L.A.V.A
Laboratory for Visionary
Architecture

Mr. Chris Bosse, Director, LAVA
Adjunct Professor and Innovation Fellow,
University of Technology, Sydney













Climate Action

How Citizens Acting Together Can Save the Planet



Dr Mark Diesendorf

Institute of Environmental Studies, UNSW
m.diesendorf@unsw.edu.au

1

Plan

1. Failure of government action by Labor & Coalition
2. Role of vested interests: 'the Greenhouse Mafia'
3. This is a job for the climate action movement
4. Exercising power
5. Strategies
6. Tactics



Failure of Labor Government Action, 2008–09

- * Implemented symbolic election promises:
 - Ratified Kyoto
 - Set longterm greenhouse target of 60% reduction from 2000 level by 2050
- * Failed to implement almost 2007 election promises for renewable energy up to mid 2009
- * Implemented modest measures to promote energy efficiency
- * Greatly increased funding for coal power with CCS in 2008 onwards
- * Promoting an ineffective 'Carbon Pollution Reduction Scheme'

CPRS = Carbon Pollution REINFORCEMENT Scheme

- * Stated purpose of a carbon price is to make the polluters pay
- * But, in CPRS, \$16 billion in free permits is transferred to the biggest polluters
- * Allocation to Emissions Intensive Trade Exposed Industries INCREASES to 2020
- * Medium-scale polluters can buy cheap emission permits of dubious effectiveness overseas
- * Weak unconditional greenhouse target, 5% by 2020, all of which can be offset overseas
- * Household emission reductions diminish reductions by big polluters
- * Cap on carbon price, initially \$40/tonne CO₂, excludes renewable energy and all other alternatives to dirty coal

Outcomes of Carbon Pollution Reinforcement Scheme

- * Households and small business will pay, while big polluters escape.
- * Weak target locks in low carbon price possibly until 2020.
- * Perverse incentive to increase emissions given to EITE industries
- * No guarantee that Australia's emissions will decline at all
- * In absence of other policies, renewable energy delayed possibly until 2020s when government hopes carbon capture & sequestration might become available

State Governments

Still focused on:

- * new fossil-fuelled power stations and coal mines;
- * privatisation of electricity industry;
- * more roads & more parking;
- * little support for public transport (except in WA) or cycling

How to Explain Discrepancy between Gov't Inaction and Public Opinion



Vested interests in coal, oil, aluminium, steel, cement, motor vehicles, forestry and agriculture: the 'Greenhouse Mafia'

Discrepancy between Gov't Inaction and Public Opinion ctd



Coal mine, Hunter Valley NSW

- * Also influence of some trade unions, e.g. AWU; CFMEU
- * Economic system and associated ideology that promotes endless economic growth and makes the public pay for the damage it causes

Examples of Fallacies Spread by Greenhouse Mafia

- * Carbon pricing & renewable energy destroy jobs.
- * Since Australia only emits 1.5% of global GHG emissions, action by Australia is pointless
- * Renewable energy can't supply base-load (24-hour) electricity
- * Renewable energy uses more land than fossil fuels
- * These and 11 other myths busted in *Climate Action*



Options for Social Change

- * Ballot box – very limited influence in 2-party system



- * Individual action – necessary but not nearly sufficient



- * Collective action by a social movement – huge potential



Successful Nonviolent Social Movements

- * Anti-slavery (William Wilberforce)
- * Anti-colonialism in India (Mahatma Gandhi)
- * Civil rights for black Americans (Martin Luther King Jr)
- * Votes for women
- * Overthrowing dictatorships in eastern Europe, Philippines, etc.
- * Ban on nuclear weapons tests in the atmosphere
- * Anti-nuclear power movements in USA and Germany
- * Many campaigns recognised by Right Livelihood Awards

Activist Bill Moyer (2001) *Doing Democracy*, describes Social Movements

- * Social movements are collective actions in which the populace is alerted, educated and mobilized, sometimes over years and decades, to challenge the power-holders and the whole society to redress social problems or grievances and restore critical social values
- * Social movements are a powerful means for ordinary people to successfully create positive social change, particularly when the formal channels of democratic political participation are not working and obstinate powerful elites prevail.

It's all about Power

Gene Sharp (1973):

"Some conflicts do not yield to compromise and can be resolved only through struggle... Advocates of nonviolent action do not seek to 'control' power by rejecting it or abolishing it. Instead, they recognise that power is inherent in practically all social and political relationships ... They also see that it is necessary to wield power in order to control the power of threatening political groups or regimes."

Saul Alinsky (1989):

"Change comes from power, and power comes from organisation. In order to act, people must get together ... Power and organisation are one and the same."

Should Social Movements Exercise Power?

- * Power needed to counter lobbying and media by vested interests
- * Political decisions are centralised and made primarily on basis of power rather than reason
- * Political power comes ultimately from the people, not government, and it can be withdrawn (Gene Sharp)
- * The power of the people comes from organisation, not from the gun (Saul Alinsky)
- * In practical terms, power is the ability to increase/decrease votes for a political party; to increase/decrease sales for businesses; to resist bad decisions nonviolently.

Strategy: Definitions

- * 'The planning and conduct of long-term campaigns to achieve broad goals.' (dictionaries)
- * 'Charting the course of action which makes it most likely to get from the present to a desired situation in the future.' (Gene Sharp)

Strategic Advantages of Vested Interests Vs Social Movements

Vested Interests

- * Wealth, giving power to influence government and the media

Social Movements

- * Numbers (needing organisation)
- * Diversity (needing unity in broad objectives)
- * Integrity of purpose (serving the community & planet instead of profits)

Growth in National Organisation Climate Action Summit, Canberra, Jan-Feb 2009





Types of Tactics available to Social Movements

ACTIONS	PRESENT ACTORS
Lobbying power-holders and building partnerships with influential organisations	Large generalist NGOs
Nonviolent direct action	One large + a few small dedicated CAGs; Greenpeace, Rising Tide
Education, information and research for particular groups and the general public	All
Networking among NGOs	All
Setting up alternatives	Some small dedicated CAGs
Media	All – local, state & national scales
Legal (limited options in Australia)	Large NGOs & alliances

Types of Nonviolent Direct Actions

- * Demonstrations, marches, sit-ins and pickets
- * Consumer boycotts; worker boycotts
- * Carrotmob = reverse boycott
- * Naming and shaming
- * Corporate campaigning: shareholders' meetings; proxies
- * Withdrawal of deposits

Resources for the Climate Action Movement



2009

UNSW Press



2007



The SCCG Capacity Building Program aims to discover, integrate and develop best practice thinking, learning and action for its Member Councils and relevant Stakeholders to be more effective and efficient with Coastal and Estuary Natural Resource Management, Climate Change Responses and emerging Sustainable Development issues and needs by;

**Raising Awareness
Transferring Information and Knowledge
Increasing Skills and Training
Facilitating Coordination and Supporting Member Councils**

For more information please contact:

Sydney Coastal Councils Group Inc.

Level 14, 456 Kent St
GPO Box 1591
Sydney NSW 2001
Phone: (02) 9246 7810
Fax: (02) 92659660



For More Information Please Visit:
www.sydneycoastalcouncils.com.au