Community and Sustainable Development

Professor Peter Newman
Director, Institute for Science and Technology Policy, Murdoch University

Introduction
Sustainable development is presented in this paper as the concept for our era, defining the agenda for change. Inherent to any change process is the need for the market, for government and for the community. The role of the community is outlined to show its essential characteristics, it is then applied to management processes associated with water.

Sustainability and Global Politics
Academic definitions of sustainable development, or sustainability for short, are never very satisfying as the concept has not come from there. It has come from a global political process that has tried to bring together the most powerful needs of our time:
- the need for economic development to overcome poverty,
- the need for environmental protection of air, water, soil and biodiversity upon which we all ultimately depend, and
- the need for cultural diversity and processes to allow local communities to express their values.

The UN Bruntland Commission set out the vision for sustainability nearly 10 years ago and so the slow process began of determining how the world, nations, regions, cities and communities could respond. Agenda 21 set out the detail in 500 pages of actions, agreed on by every nation on earth as the agenda for the 21st century. Then in June we had 'the city summit' Habitat 2 with much more on how urban management can ensure development improves the environment and responds to communities. These global conferences are setting the world agenda. In 1997 a UN Special General Assembly will evaluate how well the goal of sustainable development is being implemented in local communities.

Change Processes and Community
The way that society changes is usually a combination of three processes as set out below showing how they overlap (Figure 1).

![Overlapping processes involved in change.](image)

The market is a powerful force for individual consumer choice to be expressed but it cannot manage change which is anything more than short term or anything which is not a money exchange. Governments set the regulatory framework to guide change into more desirable long term directions or into non-money goals such as a clean environment, or social justice. But government is powerless to create what is desirable or determine how big is the priority on the environment. Communities create the moral tone for society, they provide the set of values on what is desirable for the future and it is this ethical force which is ultimately the guiding force behind change.

There is new awareness around the world that the limitations of the market and the limitations of government must be overcome by a reinforcement of the role of communities (Korten 1990, Singh and Titi, undated; Greene 1994). This call for a strengthening of 'civil society' or
communitarianism, is totally bound up in any significant processes of change. It is also seen as a critical part of the processes of sustainability which are the agenda for our era (Keating 1993; Commission on Global Governance, 1995).

After outlining the increasing role for processes that emphasise global solutions Hillary French of WorldWatch Institute concludes:

"It is thus a paradox of our time that effective governance requires control being simultaneously passed down to local communities and up to international institutions." (French 1995)

What can this increased emphasis on the community mean for urban management, particularly on water inputs and outputs in cities?

**Technology, Urban Management and Community**

The sustainability agenda in cities can be summarised by a simple model that shows how we need to simultaneously be moving to use less resources, create less waste and improve human livability (Figure 2).

![Figure 2 Extended metabolism model for sustainability in settlements. After Newman et al (1996).](image)

This may seem like a difficult task but this is the challenge of sustainability for cities. It is also increasingly being shown to be feasible as innovative cities develop new urban technology and new urban management processes (Figure 3).
Both technological innovation and urban management innovation are required if the market, government and community forces for change are to proceed together. For example in the management of urban water there is a combination of these occurring (Figure 4).

Central to the new urban technology and to the new urban management processes in their application to water systems is a greater role for local community involvement. Technology choices are different when communities are the focus. Urban management systems are different when communities are the focus. Similar approaches are also possible to see emerging in technological trends in renewable energy, in solid waste, in transport... (see Figure 5).
Environmental Technology: Applications in Principle and Practice

These community technologies are not technological trends that are deterministic like the pundits of brave new world suggest when they forecast inevitable trends based on machines. Where trends towards community technology are occurring they are because the technology expresses the new set of values which the sustainability agenda is demanding from us. They are indicating how we are becoming more clever with our infrastructure but also how we are becoming more sensitive to the environment. It seems that inevitably this means a more localised scale of technology where communities can express their desire for a better future for them and their children.

Thus community-based approaches to sustainable development are not soft options, they are the cutting edge of what sustainability means.

How?

The question then comes down to 'how'? How can communities be effectively linked to the processes of sustainable development? Every sphere of government can be oriented to a process that recognises communities but it also must enable communities to be effective in their input. Throughout the world there have been 'Local Agenda 21 Plans', 'Local Sustainability Plans' and 'Local State of the Environment Plans'. All are designed to involve communities in assessing where they are at and planning for a better future. There are many innovative examples eg Toronto (Canadian Urban Institute, 1991) Adelaide (City of Adelaide, 1996) and Seattle (City of Seattle, 1993 ). New Zealand has restructured its local government boundaries to coincide with natural catchment boundaries so that the environmental management system can coincide with local decision-making.

There are various levels of community participation from controlling the agenda and the process right through a representative kind of role to simple involvement which is little more than sharing information (see Figure 6).

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<thead>
<tr>
<th>Level of Community Participation</th>
<th>Agenda Set By</th>
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<tr>
<td>COMMUNITY CONTROL</td>
<td>COMMUNITY MOSTLY</td>
</tr>
<tr>
<td>COMMUNITY REPRESENTATION</td>
<td>BOTH COMMUNITY AND EXTERNAL BODIES</td>
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<tr>
<td>COMMUNITY INVOLVEMENT</td>
<td>EXTERNAL BODIES MOSTLY</td>
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Figure 6 Levels of Community Involvement.
The task is to match the level of participation to the issue (see Ife, 1995). Where wastewater management is concerned it is hard to see how community control would be sufficient; a city would need to be setting the agenda, within a regional and national framework. But involving the community would also need to go beyond a mere telling people what to do as otherwise the local potential for innovative solutions would be cut short.

In Mexico management of water in rural areas has passed from a central public authority to a series of 'water user associations' which enable farmers to better find local solutions to their problems (Gorriz, Subramanian and Simas, 1995). Is there not a similar process that could happen in cities as they struggle with new issues of sustainability and water?

Indonesia already has in place the Rk, Rw, Rt system in its local administration which is the potential community framework for a range of sustainability processes. The question that I hope to pursue, working with Suriptono and Peter Koffel, is whether the Rk, Rw, Rt system could be adapted to help manage water systems, particularly sewerage. Is it possible to find technologies which could be fitted to the scale of decision-making and cultural sensitivity of Rk, Rw, Rt community processes? Is it possible to find ways of paying for the infrastructure to be put in and then on-going management to reside fundamentally with communities? Obviously, a city-wide and regional government approach will be needed to co-ordinate it, all within a national government framework. We will try to pursue this question and any feedback on problems or possibilities would be greatly appreciated.

The first step in the quest would be to find out how people feel about such a prospect. This will probably need survey techniques but more importantly community meetings with selected groups. Such processes of community consultation we have documented for Australian communities (Sarkissian and Walsh, 1994). How they ought to work in Indonesia is another question and one we would like to take seriously.

**Sustainability And Hope**

The sustainability agenda often seems totally impossible. The world seems to be charging on towards an abyss and little seems to happen beyond words. However, when you look at local action you can find a different perspective. Here is a possible way to see the beginnings of change in some places, and once it is shown to be possible somewhere it becomes possible everywhere. Beneath all of this process is a belief that people do respond to questions about their common good, they are citizens at heart, not just individualistic consumers. Such a belief is borne out of my observations of other's work and of my own involvement in issues of sustainable development (Sirroli 1995, Newman, Neville and Duxbury, 1988, Stocker and Pollard 1995 Newman, Kenworthy and Robinson 1992 ). A characteristic of all these case studies has been the sense of 'hope' that they generate. This sense is the most important spiritual motivating force behind communities.

My desire is that we can document a similar set of stories of hope about how Indonesia can create sustainable development solutions for its cities, particularly in its water and waste management.

**Conclusion**

Sustainability and community are irrevocably linked. It is not possible to imagine how a totally top down process could lead to sustainable solutions with its roots in innovative technologies and innovative management processes that simultaneously solve economic and environmental problems. Communities need help in determining their future - from experts, from banks, from governments - but in the end they are the ones who will drive the sustainability agenda and it is that recognition which must be the first step in a long walk towards sustainability.

**References**


City of Seattle (1993) *Sustainable Seattle: Indicators of Sustainable Community*, City of Seattle.


Newman PWG, Neville and Duxbury L (1990) Case Studies in Environmental Hope, ISTP, Murdoch University.