

Chapter One – Introduction

1	Chapter One - Introduction	37
1.1	Introduction	37
1.1.1	Structure of this Chapter	37
1.2	Context	38
1.2.1	The Mersey Basin	39
1.3	The Research	42
1.4	Structure of the Thesis	43

1 Chapter One - Introduction

1.1 Introduction

"The sage's transformation of the World arises from solving the problem of water. If water is united, the human heart will be corrected" (Tzu and I. Mears (translator) 1922).

The water cycle is the basis of the circulatory system of the ecosphere. In Lovelock's (1991) approach of viewing the ecosphere of the Earth as a self-regulating system, the ecosphere can be seen as either in good or poor health. The state of the world's water can be seen as a clear indicator of the health of the systems through which it flows.

Humans have interacted with the waters of the world throughout history. The story of civilisation is inextricably related to the development of water resources, and the management of water has played a significant role in the development of democratic institutions.

With due acknowledgement to Bob Marley, the concept of sustainability suggests that we "Can't solve some of the problems some of the time, but you need to solve all of the problems, all of the time". It has become clear over the last two decades that effective water management can only occur when *all* of the problems that affect water quality are addressed in an integrated manner. Symptoms of water-related problems are often detected far from their sources. Efforts to improve the water environment are impeded by multiple authorities not working together and a lack of effective links between local actions and catchment-wide planning. Integrated management of water is essential for implementing sustainable development.

1.1.1 Structure of this Chapter

This chapter sets the context for the research, including its background, justification, aim and objectives. The Mersey Basin Campaign (MBC) (the ESRC CASE Award partner in this research) and the context of the Mersey Basin are introduced.

1.2 Context

"Imagine giving a speech to Parliament in 1750 predicting that within seventy years human productivity would rise to the point that one person could do the work of two hundred. The speaker would have been branded as daft or worse. Imagine a similar scene today. Experts are testifying in Congress, predicting that we will increase the productivity of our resources in the next seventy years by a factor of four, ten, even one hundred" (Hawken, Lovins and Lovins 1999, pg. 11).

The challenge of sustainable development lies in learning how to meet present human needs and improve quality of life without diminishing the Earth's capacity to provide for the needs of future generations. It is widely accepted that the concept of sustainable development itself can be understood in fairly simple terms, but that implementation, making the concept practically operable, is difficult to achieve in practice. There is a need to animate this process, making it more engaging and comprehensible for participants.

Engendering cross-sectoral partnerships and engaging community and business participation in planning is seen as playing a key role in sustainable development (e.g. Kidd 2000; Luz 2000; NWRA and GONW 2000). Researchers and practitioners are beginning to discuss the key role of design in creating a sustainable future (e.g. Hawken, Lovins and Lovins 1999; Lewis, P. H. 1996; Lyle 1994; Van der Ryn and Cowan 1995; Wann 1996). Attention has been paid to increasing public participation in 'integrated assessment' and 'long-term scenario building' within the broad field of 'planning for sustainability' (e.g. Darier et al. 1999; Feldmann, Vanderhaegen and Pirotte 2001; Gardiner 1995; Pouwels and Wind 1995; Therivel et al. 1992) but there has been little attention paid to developing a practical protocol for applying principles of sustainability through a communicable and clear process of design.

This research sought to remedy this deficiency within the context of integrated planning and design within a river catchment. It was located at the intersection of participatory processes and 'planning for sustainability'. DesignWays, an innovative methodology for engaging stakeholder and community participation in ecologically informed planning developed by the author, was tested in the context of the MBC in the NorthWest of England.

1.2.1 The Mersey Basin

"From this foul drain the greatest stream of human industry flows out to fertilise the whole world. From this filthy sewer, pure gold grows. Here humanity attains its most complete development and its most brutish; here civilization works its miracles, and civilised man is turned back almost into a savage" (de Tocqueville 1958, pg. 107-108, originally published in 1835)."

The Mersey Basin is a post-industrial landscape. Environmental problems have deep historical roots in this area. In 1851, it was 'the world's greatest manufacturing region' but increased competition from newly established industrial regions has led to a steep decline in industrial production and rise in unemployment since the Second World War (Handley and Wood 1999, pg. 247). The early growth in industrial production was matched by a rise in the urbanised population. In the mid 19th century, at a time when the rest of Britain was still primarily based in rural areas, approximately 68% of the population of the region was living in urban areas (Handley and Wood 1999). Today, areas of social deprivation and neglected housing (in particular the dense housing of former workers in the industrial areas) and derelict industrial buildings provide ample opportunities for regeneration.

There is a high heritage and tourism potential from the historical remains of the seat of the industrial revolution. The waterways of the area, including extensive areas of canals built to service the industries before the railways were built, offer a high potential for recreation. There are many rural areas, some of significant natural beauty, such as the Peak District.

Known for its early innovation and creativity, the region is seen as a contemporary leader in sustainable development, pioneering new approaches to industrial development and environmental technologies (Hillsdon 2003). Today, new techniques for bioremediation of contaminated land are being tested in the Mersey Basin (Gopal 2003). The waterways have seen a dramatic improvement in water quality over the last decades (e.g. Mersey Basin Campaign 2000; Wood, R., Handley and Kidd 1997).

Whilst significant improvements in environmental quality have been made, there are still large areas of contaminated and derelict land and significant water quality problems. The North West region has approximately 25% of England's derelict land

(Newlands 2003a). The Mersey Basin area is among the areas of Europe with the least amount of woodland cover, at 4% or less of the total land surface (Atkinson et al. 1999). An objective stated in *England's North West: a strategy towards 2020* is to: "*Restore the environmental deficit through regenerating areas of dereliction and poor environment and investing in the region's highest-quality environmental assets*" (North West Development Agency 2000, pg. 54).

1.2.1.1 Mersey Basin Campaign

The development of innovative partnerships to improve environmental and social conditions has been pioneered in the North West region. These partnerships include public sector organisations, such as the Environment Agency, private sector, community organisations and NGOs representing a broad range of interests and skills. Two well known examples are Groundwork (Handley et al. 1998) and the Mersey Basin Campaign (MBC) (Kidd and Shaw 2000; Wood, R., Handley and Kidd 1999).

The MBC was founded in 1985 as one of the initiatives aiming to regenerate the North West, following the Toxteth riots in Liverpool. Peter Walton, the former Chief Executive of the Mersey Basin Campaign (2001), described the early realisation that any attempt to clean up the Mersey would require a catchment-wide perspective. This followed the initial impetus for forming a Campaign in response to the comment of Heseltine (then Secretary of State for the Environment), that the Mersey was an '*affront to civilized society*' (Mersey Basin Campaign 2000, pg. 2). The Mersey Basin comprises 2000 kilometres of waterways and canals (Figure 1-1). The 4,680 km² area of the Basin is home to over 5 million people. It was launched as a twenty-five year initiative.

Figure 1-1 Map of the Mersey Basin Source Mid Term Report (Wood, R., Handley and Kidd 1997)



At the start of the Campaign the Mersey was the most polluted river in the UK (Wood, R., Handley and Kidd 1997), but today, the Mersey and its tributaries are "*cleaner than at any time since the end of the industrial revolution*" (Mersey Basin Campaign 2004). This improvement has stemmed in part from a major series of investment in the ageing sewage system, which began in 1974 (Douglas, I., Hodgson and Lawson 2002), and in part from the multi-sectoral awareness raising and action instigated by the Campaign. In 1999 the Campaign was awarded the inaugural International RiverPrize in recognition of its role as a pioneer in Integrated Catchment Management. In a paper entitled *Sustainable Development and Institutional Design: The Example of the Mersey Basin Campaign* Wood, Handley and Kidd (1999) suggested that the Campaign is well placed to take a leading role in the emerging sustainability agenda, and "*can now be seen as a model for engaging co-ordinated action through a partnership approach*".

The author's Masters dissertation built upon this research into the institutional structure of the Campaign, through an in-depth review of the processes and principles that facilitate effective partnership working and integration between the landscape and catchment levels of scale in the Campaign (Tippett, J. 2001). Interviews with twenty-seven key stakeholders were complemented by review of project documentation, field trips and participant observation at key and routine Campaign events. Several of the

interviewees stressed the importance of the Water Framework Directive for the Campaign, and the opportunities it offered to improve integrated planning.

1.3 The Research

DesignWays is a participatory planning process that the author has been developing for 10 years (described in the preface to this thesis). This development can be seen as a response to the challenge elucidated by Hawken in the quote above, accepting that we need to come up with a system just as revolutionary as that of the industrial revolution, but one that safeguards the environment both locally and globally, and that enhances human dignity and opportunities for a good quality of life both now and in the future.

The DesignWays process aims to encourage meaningful communication amongst different stakeholders, through a process of designing ecologically sound systems at different levels of scale. To this end, the author combined insights from several different theoretical and practitioner fields: from systems thinking, to ecological design, to educational theory. The process was evolved in practice. It has been used in the context of rural regeneration in Southern Africa, in business contexts and in an educational setting in Northern California.

In this research, the DesignWays methodology was tested in the context of river catchments, at a larger geographic scale than in its prior applications. The research design aimed to allow for a more rigorous and systematic test of the process than had previously been possible. It identified several key challenges posed by the Water Framework Directive, and explored the potential to maximise the value of participation in planning in terms of meeting these challenges.

The overall aim was to explore the use of a systems thinking paradigm to inform participatory ecological design. The vehicle for this exploration was testing a design process that encourages meaningful participation in planning based on ecologically informed principles, with a view to developing a toolkit for 'planning for sustainability' from the site to the landscape level of scale.

This posed five interrelated research questions:

1. What are the characteristics of an effective process for developing integrated, ecologically sound solutions in river catchments?
2. What are the characteristics of an effective process for engaging meaningful participation through capacity building in ecological planning?
3. What processes and tools help to link such planning across different geographical levels of scale?
4. What are the operational, institutional and policy implications of a holistic approach to active involvement in planning?
5. How do these findings fit into the broader theoretical framework of ecological planning and systems thinking?

1.4 Structure of the Thesis

In Chapter 2 the literature relevant to the context of this research is reviewed. Integrated Catchment Management is explored through its history and key concepts. Chapter 3 introduces the methodology and the stages of the research.

The policy context of this research is the recently enacted European Union Water Framework Directive, described in Haskins' *Rural Delivery Review* as the most significant piece of pending environmental legislation, which will require "a *fundamental shift in environmental practices for the UK*" (2003, pg. 27). Five key challenges posed by this legislation were identified in the literature search. These are explored in Chapter 4, and used to develop criteria for assessing participation in ecological planning.

In Chapter 5 the theoretical basis of DesignWays is developed through an exploration of its key attributes. A framework for characterising participatory methodologies is constructed. 28 participatory methodologies are compared using this framework.

The action-based part of this research was carried out with the Irk Valley Project, a partner of the MBC. The author facilitated a participatory planning process with community members and other stakeholders to create a long-term vision for sustainability for the Irk Valley in North Manchester. In addition to this framework for

development at the landscape level of scale, a plan was developed with stakeholders and residents for Moston Vale, a twenty-two hectare former landfill site. Chapter 6 describes the DesignWays process as it was applied in the Irk Valley and outlines the results of the process.

In Chapter 7 the theoretical framework developed in Chapter 5 is used to structure an in-depth analysis of participants' experience of DesignWays. In the discussion of these results, Chapter 8 employs the criteria for assessing participatory planning (developed in Chapter 4 from the challenges of the Water Framework Directive) to structure an assessment of the DesignWays process as applied in the Irk Valley. The first three research questions are addressed in this chapter.

The last two research questions are explored in Chapter 9. Factors that limit an integrated approach to active engagement in planning, such as that tested in this research, are analysed and discussed. Conclusions from this discussion and the findings of Chapter 8 are used to develop recommendations for improving participatory 'planning for sustainability'. This is followed by an exploration of how the research findings fit in the broader fields of ecological planning and systems thinking.

In Chapter 10 the research process itself is assessed, including a critical discussion of the methodology and a summary of its contribution to knowledge. This final chapter concludes with recommendations for further research.