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A Governance Framework for Eco-centric Behaviour in Communities

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ABSTRACT
Climate change and its impacts have taken centre-stage in the media as well as academic research in recent years. This has led to better awareness of the sustainability issue among the general public. However, knowledge about sustainability is not necessarily matched by actual sustainable practices. The community plays an important role to effect lasting changes towards a more eco-centric behaviour. While various disciples such as marketing, psychology and urban design have undertaken research on this topic, these have often been done in isolation. The purpose of this paper is to draw together the knowledge from these well-established disciplines and develop a governance framework for eco-centric behaviour and community resilience. The Six–P governance framework includes psychological needs, physical facilities, personal motivations, public perception, price mechanisms and policies for community resilience. To illustrate the application of this governance framework, strategies adopted by green campus communities that reflect the Six-P framework are presented.

Keywords: Governance, Communities, Eco-Centric, Behaviour, Campus, Green, Resilience,

1.0 Introduction

Over the past decades, climate change scientists have warned of global warming and its catastrophic impact on planet earth and its inhabitants. The mounting evidence led to the start of the global climate change negotiations under the UN Framework Convention on Climate Change (UNFCCC) in 1990 and eventually the adoption of the Kyoto Protocol in 1997. Sustainable development is today a cornerstone of many political agendas.

To date, much of the effort in this direction has been top-down driven and understandably so given that the world is now one big global village. Eventually, the policies and programmes developed hope to change the consumption patterns of businesses and the communities. However, consider these findings published in DEFRA (2005): a) 30% of people claim to care about companies' environmental and social record; but only 3% reflect this in their purchases; b) Whilst 90% of people know that drink cans may be recycled, only 50% say they have actually done so.

While a survey showed that 60% of people think that global warming would be best tackled on a global level (www.dft.gov.uk), the role of the community in effecting eco-centric behaviour changes cannot be under-estimated. Professor Tim Jackson from the University of Surrey noted that 'negotiating change is best pursued at the level of groups and communities. Social support is particularly vital in breaking habits, and in devising social norms and more sustainable patterns of consumption' (DEFRA, 2005).

However, attitude and behaviour change is a difficult and complex subject. To this end, this topic has been widely researched in many disciplines, including psychology, marketing, sociology, environmental studies, built environment, etc. However, the rich knowledge in this topic has been accumulating in silos. The purpose of this paper is therefore to draw together the findings from these disciplines and develop a framework for nurturing eco-centric behaviour at the community level. Eco-centric behaviour is defined as sustained actions centred on minimising harm to the ecological system. The framework represents a working platform on which a robust governance model can be built to nurture eco-centric behaviour and therefore contributes to greater environmental resilience at the community level.

The paper is divided into four sections. The first section provides the backdrop for this study. Following this, the paper identifies the barriers and motivations to sustainable practices and through this, a framework for nurturing eco-centric behaviours is developed. Next, examples of strategies adopted by green campus communities that reflect the Six-P Eco-centric Behaviour Framework are given before the concluding remarks at the end.

2.0 Research Method

A combination of research methods is employed for this paper. First, desk literature research is vital to distil the knowledge generated from the different disciplines in relation to encouraging environmentally sensitive behaviour. This culminates in a framework that conceptualises the key factors for nurturing eco-centric behaviour. To illustrate the applicability of this model, case studies were undertaken. Case studies are a useful research tool to for a better understanding of a set of relationships through in-depth analysis of a single group, incident or community. They are empirical inquiries that explore a phenomenon within its real-life context, and are capable of generating and testing hypotheses (Yin, 2002).

3.0 Barriers and Motivations to Nurturing Eco-Centric Behaviour

Pearce (1993) defined motivation as a set of forces; either weak or strong that initiates, directs and sustains a particular behaviour. If motivation can be seen as a positive force

pushing an individual towards certain behaviour, barriers can be conceived as negative forces that cause one to hold back or move away from engaging in a specific activity.

According to McKenzie-Mohr (2000), barriers can be categorised as structural or non-structural. S*tructural* barriers are external to the consumer and can refer to societal barriers such as absence of a convenient public transportation system. On the other hand, n*on-structural* barriers are internal to an individual (e.g., lack of knowledge of how to participate in backyard composting). Where the barrier is non-structural (internal), McKenzie-Mohr (2000) noted that commitment and prompts are two useful methods to foster behaviour change. Nurturing eco-centric behaviour becomes more complex when the barriers are structural or when multiple barriers (a combination of both structural and non-structural barriers) exist. Elmualim et al. (2010) undertook a survey of facilities managers and found that time constraints, lack of knowledge and lack of senior management commitment are the main barriers for the implementation of consistent and comprehensive sustainable facilities management policy and practice.

In regard to motivators of eco-centric behaviour, the green marketing literature is useful in informing what drives consumer towards purchasing or adopting a more environmentally sensitive behaviour. Ottman et al. (2006) argued that 'green products and services must satisfy two objectives: improved environmental quality and customer satisfaction. Misjudging either or overemphasising the former at the expense of the latter can be termed *green marketing myopia'*. Ottman et al. (2006) in their study reviewed successful green products and concluded that there are at least five desirable benefits: efficiency and cost effectiveness, health and safety, performance, symbolism and status as well as convenience.

3.1 A Six-P Framework for Nurturing Eco-centric Behaviour

The preceding discussion identified barriers and motivators to foster more sustainable practice. While these conceptual and empirical studies yielded rich insights into nurturing eco-centric behaviours, a closer examination suggests that there are clear areas of overlap. Synthesising these findings, a Six-P framework is developed. The framework identifies the key factors arising from the current body of knowledge that are important for engaging the community in eco-centric behaviours. Figure 1 below explains this framework diagrammatically.

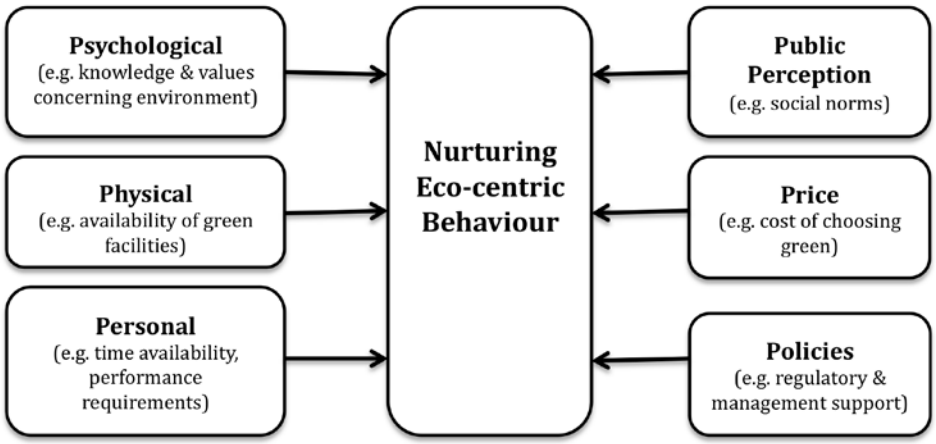

Figure 1 Six-P framework for nurturing eco-centric behaviours

4.0 Application of the Six-P Framework within University Communities

Having developed a holistic framework for nurturing eco-centric behaviour, the paper now applies the Six-P framework to university campuses by looking at sustainability initiatives within Australian and overseas universities.

a) Psychological

Current literature has shown that eco-centric behaviour is influenced by the psychological attitude towards the environment. Positive/negative attitude in turn is shaped by the knowledge of the consequences of environmentally irresponsible behaviour. In this regard, one of the ways to positively change the attitude and behaviour of campus community could be to integrate sustainability into teaching and research. A growing number of universities have given emphasis on integrating sustainability into the degree program coursework and research. For example, University of California, Berkeley conducts innovative research on sustainable technology and practices and emphasises the importance of increasing awareness of these values through instruction and example. Likewise, Australian National University has integrated sustainability into the degree programs by offering courses ranging from Greenhouse Science to Corporate Sustainability to Human Ecology.

b) Physical

The motivation for eco-centric behaviour can also be influenced by the availability of green facilities within the campus. For example, at Bond University, the Institute of Sustainable Development and Architecture building is the first six-star green educational building in Australia. Some of the sustainability features in the building are the extensive use of natural

lighting and ventilation, energy efficient appliances/devices, ecologically designed storm water and waste water treatment and building management system to monitor usage of energy, water and wastewater. The amount of water being used, the CO_2 emissions and the amount of power self-generated are monitored and benchmarked against outputs for normal buildings as a measure of operational performance. Consequently, energy and water savings are made more visible leading to a greater sensitivity to the conservation of natural resources.

Strategic masterplanning of campuses with provision of green open spaces, active transport (promoting public transport, cycling and walking) and energy efficient buildings can also play a positive role in motivating econ-centric behaviour within campuses. There is a need to examine current campus masterplans of universities to see how they can contribute to sustainability.

c) Personal

Personal gains are important considerations when engaging the community in eco-centric activities. This can take the form of convenience, time saving as well as health benefits. An integral part of becoming a sustainable campus is the development of specific plans to promote sustainable modes of transport. Departments in ANU use Timely Tredlies bicycles for transport around campus (ANU, 2008). With over 60 bikes covering more than 50,000 km per year, Timely Tredlies is the largest bike fleet of its kind in Australia. Timely Tredlies have been promoted as a fast way to travel that not only reduces environmental impacts but also improve physical wellbeing. University of Florida's campus sustainability committee raised parking charges to discourage car use and promote public transport. Cornell University's action plan for Transport gives all new students free transit for the first year to encourage public transit use and change their behaviour from early on.

d) Public Perception

Public perception can act as motivator to eco-centric behaviour in campus. At Bond University, the Institute of Sustainable Development and Architecture has won many local and international awards. To this end, the institute has received many requests to tour the building by many professional and educational groups. In this regard, this facility is an educational tool in driving home the message the importance of sustainable development to students and visitors alike. It allows high school students and visitors to experience first-hand the sustainable features of the building and how it can advance the goal of sustainability. The public perception generated from these visits can create the pressure to

'live up to expectations' among its occupants. To this end, greater eco-centricity is achieved albeit through an indirect way.

e) Price

This factor relates to the cost of choosing green. It is important to highlight potential economic gains if the community is to be convinced in making eco-centric choices. For many universities, the commitment to sustainability has meant changes in the procurement process. The emphasis here is on buying local, recycling, healthy living and life cycle costs. The impact on environment is minimised through identifying local green products and suppliers and procuring these services and products for the University. Additionally, consumers and suppliers both gain in getting a better price for the products and services. University of Oxford has a policy of sustainable purchasing by increased use of sustainable products and products that can be recycled after use. University of California Berkeley has a policy of purchasing environmentally preferable products, minimising use of toxic substances and handling wastes responsibly. .

f) Policies

In order to nurture eco-centric behaviour in campuses, it is important that the universities have a strong commitment to sustainability through strong management support. For example, the University of California, Berkeley (UCB) has an Office of Sustainability to regularly measure and report overall progress towards its aim of a sustainable campus. Additionally, there is also a Chancellor's Advisory Committee on Sustainability to give strategic guidance to the Office of Sustainability. Locally, the Australian National University has a University's environmental management office called ANUGreen which is part of the Facilities' and Services Division. Through the ANUGreen office, ongoing collaboration on sustainability across departments is encouraged and supported through financial backing and long-term corporate commitments.

5.0 CONCLUSION

This paper has developed a Six-P framework for nurturing eco-centric behaviour and applied it to university communities. The framework is useful in that it would serve as the foundation upon which further research can be based to identify the dominant factors that drive or deter eco-centric behaviours in other communities. In practice, the framework can be used as a guide for developing a community engagement strategy. The factors identified serve as a useful checklist during the formulation of sustainability programs. The paper has also demonstrated the benefits of this multidisciplinary framework and argued for the need of

both top-down commitment and bottom-up initiatives for sustainability. A community that is engaged in eco-centric behaviour is better prepared for an increasingly delicate natural environment.

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