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Inquiry Name: Inquiry into Ecosystem Decline in Victoria

Dr (DEd) Bruce Watson
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SUBMISSION CONTENT:

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One particular issue regarding ecosystem protection that concerns me is the dominance of the housing estate model for providing accommodation for the expanding population. My issue is not with providing the necessary housing opportunities rather the way it is predominantly being provided.

I moved to The Bellarine Peninsula 5 years ago. It is a highly significant area for descendants of the Wathaurong people, also called Wathaurung, Wadawurrung and Wadda Wurrung. In that time there have been two massive housing estate developments that have a major effect on the delicate ecosystems. I am sure that there were better alternatives to provide good housing without boring hermetically sealed houses (e.g., air conditioning use predominant) with almost shared walls and concrete and bitumen covered land masses without adequate provision for trees (e.g., shade) and public spaces (ecosystems).

Despite local concern, an aged care facility expanded to provide a large car parking area that now covers what was a delicate ecosystem for water birds and other water life. There was an alternative to that outcome however it always seems the most destructive method rules the decision making. Alternatively, perhaps the developers just want to show "who is boss" in such situations. What was a healing type viewing aspect and ecosystem for aged care residents and staff is now destroyed simply for a car park. The wellbeing considerations and public usability of the waterland outlook was completely overlooked.

Add to this the fact that as bushfires escalate across Australia and the country falls significantly short of the targets set by other developed nations, concerns about climate change and the environment is one of Australia's most pressing issues.

I request that the Standing Committee on Environment and Planning thoroughly consider alternatives to traditional housing estate models. For example:

1. Eco-friendly housing
2. Basic aspects of sustainable housing design such as more substantial endeavours such as onsite food production,

energy generation and waste treatment,
3. Strategic Eco-Tourism

Summaries and detailed resources links:

1. RMIT University study finds The Cape a scalable blueprint for housing estates

QUOTE: A 12-month independent study conducted by RMIT University and analysis by Renew (<https://renew.org.au/>), sustainable not-for-profit, aimed to provide evidence of qualitative and quantitative lived experience of a housing development which is attempting to deliver high quality housing. The purpose of this research is to guide other new housing developments and future revisions of minimum performance regulations for housing Australia.

"As concerns about climate change and the environment achieve top billing as the greatest issue of concern for Australians, The Cape sustainable housing estate in Victoria's Bass Coast has been working to demonstrate how Australian housing estates can build better energy efficient housing and achieve a zero emissions, low cost future.

The study has confirmed that The Cape has successfully combined passive solar design and construction techniques with off the shelf, affordable technologies such as heat-pump heating, cooling and hot water systems, and solar power, to achieve carbon neutral, healthy homes that are comfortable, resilient and healthy in hot spells and heat waves, with super low running costs compared to conventional homes.

The Cape is also generating three – four times the energy it is using, demonstrating how new "energy positive" estates can become power stations in our suburbs, generating a surplus of clean energy for use on site, to help power electric vehicles, and to export to surrounding neighbourhoods and improving energy security.

The RMIT study, with data analysis by RENEW, monitors thermal performance, energy use and running costs across a sample of 14 of the first 40 homes to be built at The Cape estate, and has highlighted the value of a range of unique benchmarks being achieved at The Cape, including:

Cape homes are achieving a very high level of energy efficiency, averaging over eight stars on the NatHERS energy efficiency rating across the estate, a national first. This is achieved through passive solar design and construction principles, including optimal orientation, double glazing, shading, insulation and thermal mass. Thermal monitoring of the homes through winter and summer has demonstrated that the homes are sitting in a very stable and comfortable year-round temperature band of 18 – 25° with minimal heating and cooling required, even when external temperatures are extreme such as during heatwaves

The Cape estate has replaced gas, an increasingly expensive fossil fuel, with efficient all-electric heat pump heating and cooling systems such as Daikin seven-star split systems, heat-pump hot water systems such as Sanden heat pumps, and high performance induction cooktops. This combination of appliances allows homes and the estate to achieve sustainable, carbon neutral, gas free operations, eliminating gas bills altogether including connection and usage fees, as well as the cost to install gas plumbing and gas appliances within the homes. The increasing economic and environmental benefits of gas free houses and estates have been extensively modelled by RENEW and The Cape has proven on-scale that there is no economic or performance reason for new homes to use gas over an efficient all electric home

The combination of passive solar construction and energy efficient all-electric fitout has resulted in Cape houses achieving an enormous 88 per cent reduction in grid energy use compared to a standard new six-star gas/electric home built today on a standard housing estate. Cape homes are using an average of 5.2kWh/day of electricity, and no gas usage. This is about one-tenth of the energy grid usage of an average Victorian home, which consumes around 4400kWh of electricity per year along with 40 gigajoules (approx. 11100kWh) of mains gas

This has been achieved with costs to build the higher performance homes as The Cape, including fitting out the homes with leading energy efficient operating systems, of circa \$2200 per-square-meter, in line with industry standards

The homes and estate are generating a large surplus of clean solar energy, generating three – four times as much energy as they are using, showcasing the potential for new highly sustainable estates to become “power stations” – to generate clean renewable energy to the grid and surrounding older suburbs at times when it is needed, such as during heatwaves, and to help with energy security in areas prone to brownouts and grid outages Cape houses are achieving household energy bills that are a fraction of the national average, with most homes achieving annual energy bills well under \$500 per annum, compared to the \$2500 and above in conventional estates, and many Cape homes are achieving zero energy bills, as well as energy bills in credit in lieu of the solar surplus being supplied back to the electricity grid. This has been achieved without premium feed-in tariff rates

Cape homes are operationally carbon positive, achieving reductions of annual CO2 production of more than eight tonnes per annum, when compared to a typical Victorian home.

The Cape was formally recognised for its national leadership in sustainable housing through the 2018 national Urban Developer Industry Leadership Award." UNQUOTE

Reference: <https://greenmagazine.com.au/rmit-university-study-the-cape/>

Project dates: 2018-2022

What is the project?

This project aims to evaluate the lived experience of households and technical performance of housing at The Cape, a new sustainable housing development at Cape Paterson in Victoria. Interviews with households both before and after they moved in are being undertaken to understand the expectations and lived experiences of households. We are also collecting a range of performance data to see if the actual use matches the design intent. The results will help inform future building development in Australia and aim to inform policy and practice developments towards a more sustainability building future. We are also drawing out lessons which will help shape future housing design and performance.

<https://www.rmit.edu.au/about/schools-colleges/property-construction-and-project-management/research/research-centres-and-groups/sustainable-building-innovation-laboratory/projects/cape-sustainable-housing>

2. Messy humans, dirty economies and leaky houses: citizenship, sustainable livelihoods and housing in Australia

QUOTE: Basic aspects of sustainable housing design such as increasing density, mixed use and proximity to public transport are being adopted increasingly in Australian cities. Sustainable building codes such as NSW's BASIX and Victoria's Green Star rating systems are also being implemented and advanced. More substantial improvements and endeavours such as onsite food production, energy generation and waste treatment, are being seen increasingly as necessary for urban sustainability, yet little is being done to institutionalise or normalise these through Australia's housing system. Similarly, concerns about the social sustainability of housing identify the need for mixed, flexible tenure and dwelling types, with again little uptake despite evidence of demand. Given that we seem to know what needs doing to move towards sustainability, this paper investigates two ecologically and socially sound community-based housing developments in Australia, with a view to finding what helped or hindered these efforts and what may further the uptake of sustainable design. Assessment of the uptake of sustainable planning initiatives reveals the prevalence of a decidedly neoliberal agenda which shies away from the more substantial challenges eco-city design and community-based enterprise may represent. Such community-based initiatives must, however, be supported at a broader scale, to avoid possible outsourcing of governmental responsibility or the relegation of sustainable design to the sole realm of the wealthy.

Reference: Sustainable Housing Development in Urban Australia: exploring obstacles to and opportunities for ecocity efforts, Louise Crabtree, November 2005 Australian Geographer 36(3):333-350
DOI: 10.1080/00049180500325728

3. Study of Strategic Eco-Tourism Potential Based on Sustainable Development and Management

QUOTE: "While the focus of ecotourism has largely been on rural or sensitive areas, the vast majority of tourists visit

an urban environment. This article examines how the ecotourists developed the concept of urban green tourism a concept that promotes environmental responsibility, local economic vitality, cultural diversity and experiential richness. Basic aspects of sustainable housing design such as increasing density, mixed use and proximity to public transport are being adopted increasingly in Developed cities.

Assessment of the uptake of sustainable planning initiatives reveals the prevalence of a decidedly neoliberal agenda which shies away from the more substantial challenges ecocity design and community-based enterprise may represent. Such community-based initiatives must, however, be supported at a broader scale, to avoid possible outsourcing of governmental responsibility or the relegation of sustainable design to the sole realm of the wealthy.

This article elaborates on the promises and challenges permeating the management for development of ecocities community and highlights eco and green spaces and natural sustainable transportation options among other features. The development and launch of the map is discussed and some of the problems encountered are examined. Key strategies for launching ecotourism products are presented in the recommendations." UNQUOTE

Reference: OIDA International Journal of Sustainable Development, Vol. 04, No. 03, pp. 43-50, 2012 (attached)

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File1:

File2: [5f352939139e2-SSRN-id2054154.pdf](#)

File3:

STUDY OF STRATEGIC ECO-TOURISM POTENTIAL BASED ON SUSTAINABLE DEVELOPMENT AND MANAGEMENT

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Abstract: While the focus of ecotourism has largely been on rural or sensitive areas, the vast majority of tourists visit an urban environment. This article examines how the ecotourists developed the concept of urban green tourism a concept that promotes environmental responsibility, local economic vitality, cultural diversity and experiential richness. Basic aspects of sustainable housing design such as increasing density, mixed use and proximity to public transport are being adopted increasingly in Developed cities. Assessment of the uptake of sustainable planning initiatives reveals the prevalence of a decidedly neoliberal agenda which shies away from the more substantial challenges ecocity design and community-based enterprise may represent. Such community-based initiatives must, however, be supported at a broader scale, to avoid possible outsourcing of governmental responsibility or the relegation of sustainable design to the sole realm of the wealthy.

This article elaborates on the promises and challenges permeating the management for development of ecocities community and highlights eco and green spaces and natural sustainable transportation options among other features. The development and launch of the map is discussed and some of the problems encountered are examined. Key strategies for launching ecotourism products are presented in the recommendations.

Keywords: Strategic Eco-Tourism. Potential Planning, Sustainable, Development, Management

INTRODUCTION

This part of research deals with global situation of Ecotourism, Different Definition ,and essentially phenomenon of Sustainable development , functions and beneficial uses of Ecotourism Potential , the general Impacts and objectives of study.

This Research has three original aims, which consist of: (a) Original study of natural Attraction in Ecotourism Potential of Pune District (b) Study of impacts of human Exploitation on Natural situation (c) Production of long-time Environmental Strategic management for development of Environment ecotourism potentials in Pune.

There are lots of names for these new forms of Environmental Sciences: responsible tourism, alternative tourism, sustainable tourism, nature tourism, adventure tourism, educational tourism and more. Ecotourism probably involves a little of all of them.

Their criteria were established to determine a visitor's status as an 'ecotourist' and encompass three dimensions: the social motive (educational component); the desire to visit 'wilderness/undisturbed areas'; and a temporal commitment. The three criteria presented by Ballentine and Eagles to serve this evaluation are as follows: (a) The respondent must answer 'very important' or 'somewhat important' to 'learning about nature' as a motivation when planning a trip. (b) The respondent must answer 'very important' or

'somewhat important' to 'wilderness/undisturbed areas' as an attraction when choosing a trip (c) The respondent must spend at least one-third of their Kenyan vacation days on safari.

In western society, travel to experience wild nature is an old and well-accepted phenomenon. Starting in 1872 in the United States with Yellowstone Park, in 1879 in Australia with Royal Park and in 1885 in Canada with Banff Park and Niagara Falls, governments set aside natural areas for protection and recreation in the form of national parks.

In India the concept of Ecotourism is fast gaining popularity.. Ecotourism is defined as the "Responsible travel to natural areas that conserve the environments and improve the wellbeing of the local people". A well-understood Ecotourism program will work on these principles: (a) Minimizing impact on the environment (b) Building environmental and cultural awareness and respect (c) Creating financial benefits for conservation (c) Creating financial benefits for local people, providing positive experience for both hosts and visitors

ECOTOURISM PRINCIPLES

(a) Ecotourism should lead to nature conservation and local economic benefit. (b) Both public and private ecotour businesses should have an environmental strategy and an environmental officer. Well-educated staffs are essential (c) Tour operators and tourists should demand high environmental standards from their associates, hotels, transportation providers and destinations (d) Culturally and economically sensitive community development is necessary (e) Ecotourism should be designed to benefit local communities, socially, economically and ecologically. (f) High-quality information and service delivery are essential. Well educated guides are essential (g) Planning and management capabilities are essential for long-term success. (h) Environmental protection is based upon fiscal viability of management, both public and private (i) Ecotourism and environmental protection require the development of management structures to handle use of sensitive environments. (Paul F. J. Eagles)

Everyone has a different definition but most scientists agree that ecotourism must: (a) conserve the wildlife Biodiversity and culture of the area (b) benefit the local people and involve the local community (c) be sustainable, that is make a profit without destroying natural resources (d) provide an experience that tourists want to pay for.

LITERATURE REVIEW

This part reviews literature concerning the Ecotourism, Impact assessment, environmental analysis, International and National Scientific studies

on Ecotourism Potential and their management based on sustainable Development.

Conclusion of Literature Review consist of, several countries that are trying to find a compromise between economic development and environmental protection are championing Ecotourism. Those countries that are rich in natural resources but that are not yet implementing sustainable development strategies, are being encouraged to promote activities such as ecotourism (Bruni, 2001).

Ecotourism must be approached as a part of a number of initiatives to protect local ecosystems. At the macro level, a nation pursuing ecotourism should include as many federal, state, and local agencies as possible. Ecotourism must be a part of the country overall economic development and growth (Drumm, 1993).

As suggested by Weaver (2001), it defines ecotourism as having some basic elements.

First, the focus of attraction is the natural environment or some specific components of it. In the Philippine setting, we expand the focus to include elements of the cultural environment as well.

Second, an ecotourism initiative should emphasize learning as an outcome of the tourist's interaction with the natural environment.

Thus, programs that merely use the natural environment as a setting for tourist activity - such as some forms of adventure tourism or the traditional "sun, sand and beach" activities in beach tourism-without any educational objective do not qualify as ecotourism.

Finally, the initiative should be sustainable, implying a desire to ensure that the integrity of the resources are not undermined. Given the difficulty in measuring sustainability

A number of authors have proposed models, or frameworks, for describing and analysing the nature of ecotourism, and these have relevance for any discussion of scale. Valentine's (1992) framework included the three dimensions of visitor experience, style and location. The tourist's experience will be shaped by many factors, including the 'intensity of interaction' and 'intra-group dynamics'. 'Style' pertains to 'group size and type', the 'level of infrastructure support', 'cultural interaction' and other variables. The 'location' dimension includes 'fragility' and 'capacity'. This model clearly encompasses scale issues, but not in a prescriptive way.

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Assessment of Ecotourism Potential in Pune District

EIA incorporates the different parameters of Environmental Impact Assessment of human development mainly deals relationship between Environmental parameters, Frequency and attendance alternations and Location and distance parameters. In this chapter seven Impacts and seventeen present potential for eight sites were analyzed.

The multifactor correlation Matrix between seven parameters of ecotourism potential analyzed showed five score, strongly negative, Slightly negative, Ambivalent, Slightly positive and Strongly positive.

Investigation of Impacts on natural attraction of ecotourism potential showed two effects: Constructive Effects, such as Development of Environmental Ecotourism Potential, and Development of Native Socio-Economic and Negative Effects such as: Compression on Places, Frequency or attendance Alternation and Dispose of Solid wastes.

MATERIALS AND METHODS

This part of research deals with materials and method. It gives the method of Collection, Data Analysis and implementing different Techniques. This chapter also deals the selection of sampling stations that are very Important for development and management of Ecotourism potential. Basic information about present situation was used by surveying in eight ecotourism potential of Pune district.

In this study, 6 Ecotourism sites were surveyed around the Pune District, which there were mostly in two geographical locations. 1-West and 2- South of Pune city. The first location consist of Mulshi Lake, Bhugaon Lake ,Bhushi Lake and Valvan Lake and the second location including: Katraj Lake, Khadakwasala Lake.

RESULTS

After surveying and collecting data from Questionnaire some results was collected from six sites.

DISCUSSION AND CONCLUSION

Assessment in Katraj Lake shows that this lake does not have any potential to increasing activities but between present potential and activities booting has strongly positive for Environmental activities, and absense of sitting area and recycle bin is one of the big problem for environment which has strongly Negative impact.

Investigation of Collected data shows that some of the present potential and activities suggested design for tourists in Khadakwasala Lake have strongly positive impact on frequency and attendance alternation ,such as walking way, traveling and parking, fishing,...and making tourist camping area and dump Junk are big Environmental problem with strongly negative effect in Khadakwasala Lake.

Impact assessment shows that All the present potential and activities suggested design for tourists in Mulshi Lake which they depend on the extension and capacity o compression on places in this area. Some of suggested planning have strongly negative impact, and Dump Junk is one big Environmental problem with strongly negative effect on Ecotourism Quality and tourist camping area can make some Strongly negative effect on Fauna and Flora.

In the Valvan Lake District, All the present potential and activities suggested design for tourists depend on frequency attendance and compression on place with tourists. In Valvan Lake which is one attractive area for weekly holiday some of suggested planning have strongly negative impact ,such as walking way disposal waste and... also Green area planning have strongly positive effect on Ecotourism Quality .

Impact assessment in Bhushi Lake shows that All the present potential and activities suggested design have different impact on the environmental quality of district. .Some of suggested planning has strongly positive impact, and some of them have Strongly negative impact. Dump Junk and tourist camping area can make some strongly negative effect on Ecotourism attractions and Fauna and Flora.

Environmental impact assessment in Bhugaon Lake shows that All the present potential and activities suggested design have different impact on the environmental quality of district. Some of suggested planning such as children park, yoga center, green area planning and... have strongly positive impact ,and some of them such as Dump Junk and disposal waste have Strongly negative impact on the nature and ecotourism potential.

In this research there were seven Impact items which consist of: Ecotourism Attraction, Environmental Quality, Amazing Area and Views, Frequency and Attendance Alternation, Compression on Places, Native Economic, and Fauna and Flora. In which of them I allocated five order Scales consist of: 1-Strongly Negative, 2- Slightly positive, 3- Ambivalent, 4-Slightly Negative and 5- Strongly Negative. These Scales were used with seventeen character of present potential of Ecotourism activity.

To carry out Environmental Impact Assessment (EIA) we preferred to reduce our scales into three category, consist of: Positive, Ambivalent And Negative. Therefore Kruskal-Wallis test was done for our purpose. The Kruskal-Wallis test determined that Eight sites had significant difference on Ecotourism Attraction, Frequency Attendance Alternation, Compression on Places, with following statistical Character respectively: (a) (N=17, $\chi^2=40.039$, $df=7$, $p_value=0.000$) (b) (N=17, $\chi^2=29.88$, $df=7$, $p_value=0.000$) (c) (N=17, $\chi^2=29.992$, $df=7$, $p_value=0.000$).

Moreover results indicate that Bhugaon Lake and Mulshi were the best sites among another. Now Mann-Whitney test was conducted to compare between south and west sites of Pune District. In each Impact factor Results show that two location had significance difference on Ecotourism Attraction ($u=1796.00, p=0.018$) and comparison on places ($u=1650.00, p=0.001$). On which west location had the best Rank rather than south. Second part of this research is multivariate factor Analysis. In this case I am desirable to know the effect of combination of seven factors in eight sites. Therefore mostly factor Analysis, via principal component was used for our purpose.

Result shows that seven Impact Various reduce to Two factors with corresponding multiplier as a follows with. Where first factor is Linear Combination of all Impact variables with high weight Frequency Alternations, Amazing Area, Ecotourism Attraction respectively (0.801, 0.798, 0.758) and other variables had approximately same weight.

Therefore this factor can be considered as weighted average of all different Impact. Second factor is weighted Average of Environmental Quality and Fauna and Flora with Multiplier respectively (0.525, 0.690) contract of Linear Combination of Ecotourism Attraction and Native Ecotourism multiplier respectively (-0.345, -0.690).

CASE STUDY ABOUT BHUGAON LAKE

In this part Management Designs and Longtime strategies suggested for Bhugaon Lake as a sample ecotourism potential in Pune District.

MATERIALS AND METHODS

In this study it is interesting to compare between six sites based on two explained factors. Kruskal-Wallis test was determined that there is significant difference among six sites on factor one such that Bhugaon Lake had the highest Rank as a compare other Impacts.

The points raised and questions asked during the formulation of this design philosophy (a) How can the site degenerating historic value be reinstated in the public mind? (b) Can the site be treated as a PUBLIC PLACE of today, wherein the atmosphere for any and all the visitors will be conducive for their sharing a common attitude of admiring and respecting the spirit of the place? (c) Can the balance be achieved in making this place an interesting destination for varied visitor types while keeping off the danger of its made-up and manicured look?

The Design Philosophy for Restoring Bhugaon Lake is written for (a) Protecting (b) Preserving (c) Conserving (d) Restoring (e) Improving the site place (f) Inviting local, statewide and nationwide tourism for varied visitor types.

The place will be of interest to families, young children, students, historians, academicians, researchers and casual tourists. The new places and spots will be designed for active and passive recreation and for an at-location teaching and learning experience. Development will be in the fields of Architecture, Landscapes Architecture and learning learning experience. Development will be in the fields of Architecture, Landscapes Architecture and Environment for creating the lacking visual interest and to encourage individual exploration of the nature of region.

RESULT AND DISCUSSION

Unique approaches

The three approaches that will enhance the results of the Restoring Bhugaon lake movement will be: (a) Planning for Eco-tourism (b) Orienting the site to receive out of state and international tourists (c) Launching a new well-formed strategy for the management and Revenue collection

Practical politics management and exploitation, management of human activity such as dump junk for development of amazing are used in this research. Produced Longtime Environmental strategic management in this research are consist of: Increasing recreational place for ecotourists, Increasing the Environmental views and Amazing area, presentation of Environmental long time strategies with attention to local people occupation and demolition of natural resources, and increasing the pleasure Ecotourism for Pune district.

About district following main recommendations is suggested: Protection of native flora and conservation of native fauna, Jogging track, Children Park, Yoga and meditation center, Ethnic food for eco-tourists, Cultural traditional center, Amusement Park, Environmental Assessment of Ecotourists activities.

Conclusion

Total idea for Ecotourism designing in field of Human and Nature for case study consist of: Expansion Recreational and promenade are presented according to natural capabilities of projects suitable with land potential, such as: (a) establishment of Green Space Planning, Walking road on hill and Jogging Track Water Park (b) Placement of Ecotourists camp and service centers and Ecotourism Facilities. (c) establishment of restaurant and residence accepting tourists were mentioned. Necessary studies for each one of concentrated and expanded promenade projects and Ecotourism: children and young promenade mentioned Management of ecotourism area, Disposal And Reduction Of Waste Hosting –serving –cultural and coastal establishment Green space and exhibition Concentrated promenade-Ecotourism projects, Estimation expenditure promenade projects and Ecotourism. After some information about district following, main recommendations are suggested: Appropriate species are used for studying in these areas. Like: Plane tree-maple-elm-locust. In previous studies, various projects were introduced for usage of green spaces, such as: Creating of forest parks and zoos. (a) Protection of native plant species (b) Conservation of native fauna (c) Management of Environmental activities (d) Water Park and Boating (e) Jogging track and Walking road on hill (f) Yoga and meditation center (g) Children Park (h) Ethnic food for eco-tourists in natural traditional center (i) Amusement and children Eco Park

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