

Eco Agro Urban Visions

Student seminar projects on ecologically and economically sustainable cities

University of Hawaii School of Architecture, 1998-99

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These seminar students are conducting research, preparing schematic design proposals, and have organized an interdisciplinary workshop exploring the potential for new urban structures to facilitate sustainable, dense human settlements coexistent with preserved natural environments and economically viable agricultural and forestry industries. This is a topic of great current relevance to Tropical regions in general and to Hawaii, in particular.

The vast majority of the world's population growth is occurring in tropical regions all around the earth. This rapid population growth presents great strains on the traditional cultures, settlements, economic systems, and natural eco-systems of these regions. One of the most publicized and most dangerous results of these changes in tropical regions is the rapid deforestation of the natural landscape. Tropical forests hold the earth's major reserves of diverse plant and animal life and are the major generators of oxygen, ozone and the essential elements of the earth's atmosphere. Destruction of tropical forests to create new agricultural land and increased human settlement represents great economic and ecological threats to all regions of the earth, and causes great scientific losses in rapid extinction of natural species which are increasingly recognized as potential keys to advances in medicine and the general improvement in the quality of life on earth.

These are issues of great scientific, political, and economic import, that hold tremendous challenges and opportunities for architects interested in the fundamental architectural issues of providing for the responsible construction of human settlements that provide for a high quality of life with an economically and scientifically sustainable interaction with the natural environment.

Hawaii represents an ideal laboratory for studies of these issues, as a natural landscape in need of positive new models of population and economic growth within a preserved and rehabilitated natural environment. The questions we ask and the answers we propose can have great relevance to the important current debates surrounding the future of Hawaii's dependence on tourism and a declining agricultural industry, and Hawaii's potential for economic diversification while preserving and resurrecting Hawaii's great natural resources and high quality of life.

PROJECT INTRODUCTION

As the new millennium approaches, we observe with concern the growing distance between humans and the natural world. More and more of our interactions with animals, plants, and the environment are remote, virtual or far removed from our daily lives. This increasing distance is both a cause and a consequence of the severe environmental problems we face in the next century. Part of the solution to this problem is to provide the next generation with the tools to foster an understanding and passion for the natural world through direct contact and frequent experience with it.

Nearly all efforts to carry out agriculture, recreation, and environmental education have been focused on bringing humans to rural regions or wildlands. Those people who dwell in urban regions tend to live in degraded environments where contact with the natural world is minimized or removed entirely. These conditions lead to a sense of alienation from the earth and apathy or even fear of the animals, plants, and the natural environment.

We propose to investigate a novel and potentially powerful approach to bringing humans into daily contact with whole plants. Our team of architects, designers, urban planners, forest ecologists, agriculturalists, horticulturists, and recreationists will design physical structures that place humans above the ground and in close contact with plants.

THE RESEARCH

Seminar participants are conducting research in the following areas:

Research on plants, animals, and agricultural products and processes that may be proposed to have a realistic, symbiotic, function integrated with a relatively dense urban settlement within a preserved, natural eco-system. Research on previous architectural or scientific proposals related to these ideas. Research to discover other people or institutions that may be working on related projects. Investigation of other departments and research projects at The University of Hawaii working on related topics with whom we could interact for this project. Technical research on the structures, systems and processes that could be employed to build such an urban, natural, agricultural environment.

THE DESIGN PROPOSALS

Seminar participants are working in writing, drawing, model building and multi-media presentations to imagine and present creative, plausible, utopian proposals as the schematic basis for development and further research.

THE WORKSHOP

Students participated in organizing a workshop in March, 1999, to explore and discuss these ideas among an interdisciplinary team of co-workers who contributed conceptual and applied thoughts on the topic. Focusing on the habitat of Hawaii, particularly the urban landscape of Honolulu, students at the University of Hawaii who have been doing project work on this concept with the organizers during the previous year, presented models and images of works-in-progress. These provided a springboard for discussion and planning of future research.

Architecture 399 Research Seminar, Fall 1998

Tropical Forest Urbanism; Ecological Investigations in Architecture, Agriculture, Economy
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