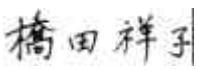
iii PREFACE

The “heat island” phenomenon in the urban areas is worsening in a high speed. Tough there are few possible causes for this, the many artificial materials covering the surface and the reduction of the latent heat flux, which is caused by the increase of the thermal storage and the decrease of the water-holding capacity, are thought to be the major causes.

For building sustainable city, the recovery of the green, such as farming land and timberland, and a creation of a comfortable environment is the most important factor. Different from the past age when architecture required an environmental sacrifice, in this century of the environment, an architectural design which lessens the burden on the environment by using natural energy and can also be sustainable to time is required.

The idea of this design book is to present those sustainable buildings such as, zero-emission refined building, passively designed energy-saving building and green building that contributes to the protection of the organisms' diversity and the recovery of the nature, which the Japanese architects have been introducing to the world. These buildings exist as, and will remain as the place of recreation and relaxation. I wish this book will serve as a useful reference for many students who will learn design from now on.



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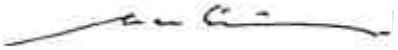
Bio-climatic Design, Environmental Architecture, Urban Regeneration, Ecology, Technology, Building Renovation... concepts that are now important part of the XXI century's lexicon. Global new vocabularies can be found from vernacular houses to large scale urban developments, in local communities or even in ecumenopoleis.

"Sustainability" must be a part of our daily life. Its magical attraction forms a part of the homogeneous elements of the quintessential characteristics in any place on earth... crossing across immerse in hidden dimensions... floating around trying to let us discover its undeniable benefits.

This year, Japan was selected to be the host of "The 2005 World Sustainable Building Conference". We considered it important to share Japan's sustainable new architectures but also to show examples from all over the globe.

Together with the 22 examples of sustainable buildings of japanese architects, we decided to publish in this booklet the works and researches about sustainability of the Student Session's participants. Among the works, 32 entries were received from 17 different countries of the 5 continents.

We are proud to present this "SUSTAINABLE BUILDING DESIGN BOOK" and we hope you can learn from the examples showed on it.



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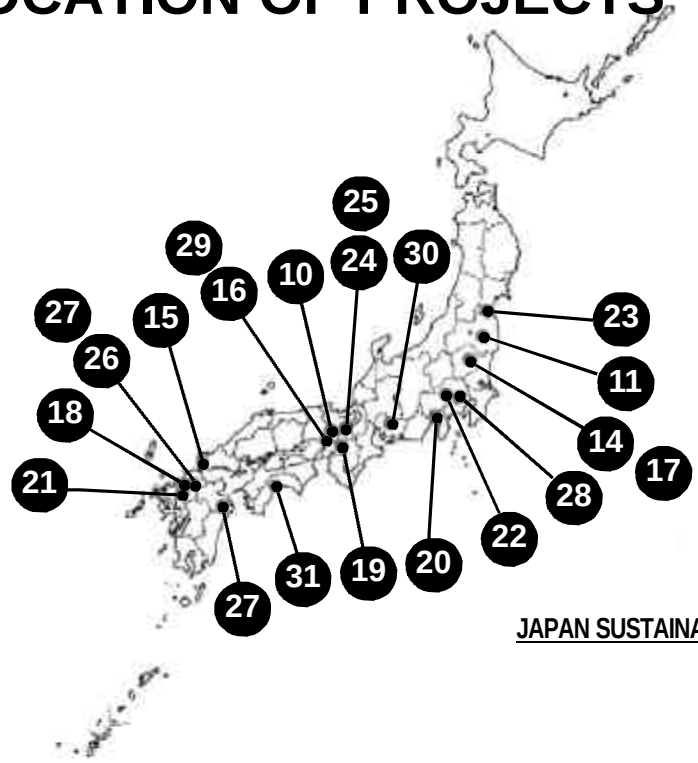
iv LOCATION OF PROJECTS



JAPAN SUSTAINABLE ARCHITECTURES

GLOBAL SUSTAINABLE DESIGN & RESEARCH