Laboratory Profile

LRU Lab : Local Resources Utilization Laboratory

Representative:

Guest Professor Atsuo Yoshida

Research Interests: Structuring of programs for "management support, business startups, business rehabilitation and business succession" based on financial accounting strategy, and the promotion and evaluation of industrial clusters in regional resource-utilization projects

Members:

Associate Professor Tetsuya Toma

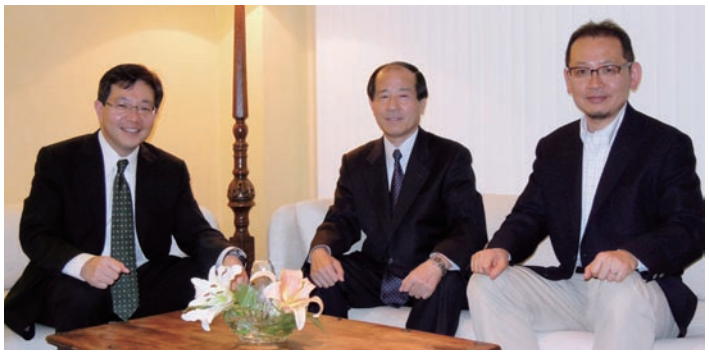
Research Interests: Advanced system development and global marketing for broadband society

Professor Ryuichi Teshima

Research Interests: Intelligence and crisis management of huge and complex systems

Project Professor Toshiyuki Yasui

Research Interests: Human machine system design, social system design, science technology theory, science psychology



With Professor Maeno, representative of Social Design Center

Japan is rich in marine and forest resources!

Japan is blessed with a unique geographical location and a climate that is highly favorable to the nurturing of marine and forest resources. The total coastline runs north to south for 3,500 km. The land area is 380,000 km^2 of which 68% is forest. Two cold ocean currents from the north and two warm currents from the south flow along both coasts of Japan. They become rivers, and distribute water to crop fields before returning to the ocean and then evaporating, thus continuing this sustainable environmental cycle. Japan benefits greatly from this perfect and natural cycle.

Of course, this extraordinary climate and geography is not always a blessing. We experience our share of natural disasters, such as the 3-11 Great East Japan Earthquake, the 1995 Kobe earthquake, and volcanic eruptions from Mount Unzen-Fugen, in addition to the other earthquakes, tsunamis, hurricanes, and volcanic eruptions that occur regularly throughout Japan. Thus, it is a part of our unique culture and civilization to accept what nature brings, to respect the elements, and to live in harmony with them.

LRU Lab is involved in creating "sustainable self-supporting economy zones" using the rich and varied resources particular to each region. It goes without saying that the creation of sustainable societies is the ultimate issue facing human beings in the 21st century. The cultivation of forests in Japan provides an example.

Create "regional self-supporting economy zones" using forest resources

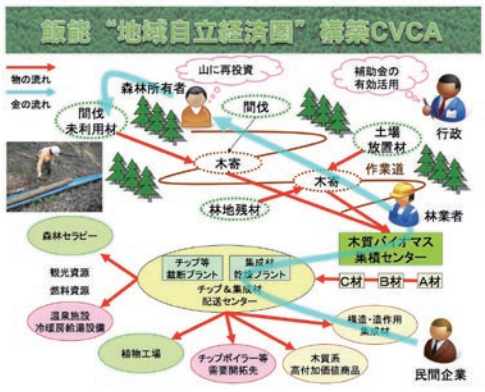
Forests are indispensable to the continued existence of all humanity. They offer renewable and carbon-neutral resources, such as timber and biomass energy sources. At the same time, they help maintain biodiversity, conserve water, soil, and aquatic resources, and absorb carbon dioxide. Especially in Japan, our forests play an important role in creating a sustainable society because the forest covers 25 million ha, they cover two-thirds of the country. However, in reality, forests are being devastated and therefore, its functions are seriously impaired. It is not an exaggeration to say that the successful creation of sustainable societies depends on sound forest management that helps to sustain its many functions.

Aware of this situation, LRU Lab has conducted research on reforestation through financial accounting approach and the management and use of forest resources, based on the idea that forest is a valuable regional resource.

Timber-related industries (lumber, housing, and biomass) utilize forest resources in a cascading way. In many cases, these industries consist of local small-and-medium-sized enterprises. Therefore, they can be a strong force to support each region if their value chains to create added-value function well. For example, in Germany, which boasts the world's fourth largest GDP behind Japan, timber-related industries are organized into regional industrial clusters with a sales equal to 5% of the GDP. Because the forest resources are scattered, timber-related industries are usually located in disadvantaged areas where no other industries can exist. The timber clusters in Germany are called "Timber chains" and their value to society is recognized far beyond their contribution to GDP. In the case of Japan, 5% of GDP is 25 trillion yen. This implies that the timber-related industries in Japan have the potential to grow into a massive market of approximately 25 trillion yen.

Jointly promote regional development with the Social Design Center

Thus, LRU Lab aims to support to the creation of regional self-supporting economy zones all over Japan that maximize their own geographical characteristics and in which citizens are proud to live. We will cooperate with the SDM Research Institute's Social Design Center, which studies public regional designs, in a wide range of activities in research and in practice for the regional revitalization.



CVCA on creation of regional self-supporting economy zones (illustrated by a Lab member student)

SDM Research Institute, Graduate School of System Design and Management at Keio University
Collaboration Complex, Keio University, 4-1-1 Hiyoshi, Kohoku-Ku, Yokohama, Kanagawa 223-8526
Tel：045-564-2518 Fax：045-562-3502 E-mail：sdm@info.keio.ac.jp

SDM System Design and Management