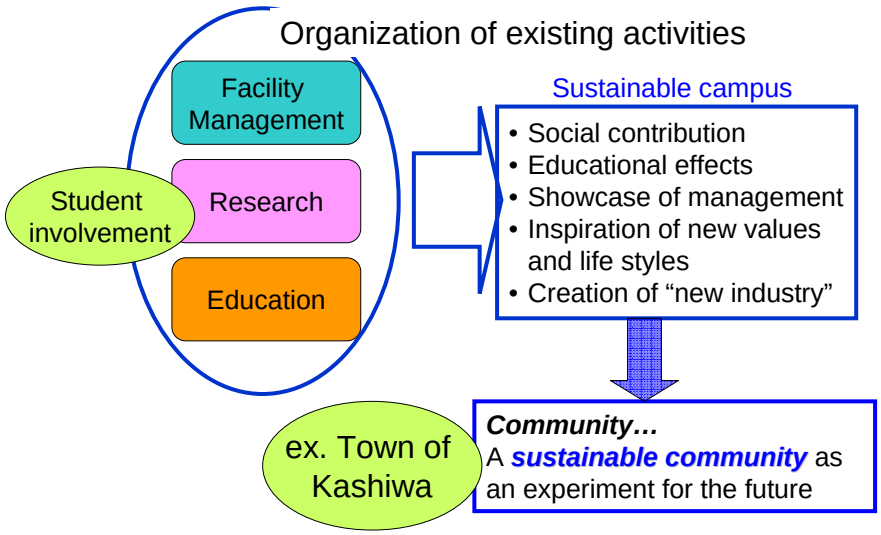
Sustainable Campus Activities in The University of Tokyo

- Todai Sustainable Campus Project (TSCP) -

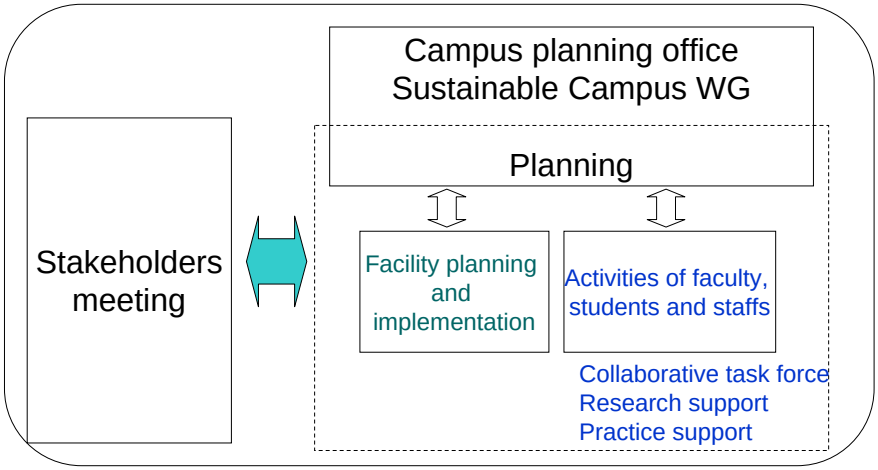
Professor Keisuke Hanaki
Department of Urban Engineering, and
Integrated Research System for Sustainability Science
The University of Tokyo (Todai)

Sustainable Campus Initiative at The University of Tokyo (Todai)



2

Scheme of initiative



Sustainable Campus WG: since May 2007

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3

Faculty and Students Involvement

- Financial support for research and practice on sustainable campus
- Workshop among faculty and students including international collaboration

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4

Financial support for research and practice on sustainable campus

- Research support
  - Analysis of campus sustainability
  - Evaluation and enhancement of forest sink
  - Social aspects of campus sustainability actions
  - Utilization of debris in campuses
  - Management of laboratories chemicals
- Practice support
  - Student network formation in Kashiwa environmental campus
  - Promotion of implementation of renewable energy
  - Networking with other universities
  - Implementation of deposit/refund of plastic bag in university coop stores
  - Public relations on sustainable campus activities

Blue letters: proposed by students

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5

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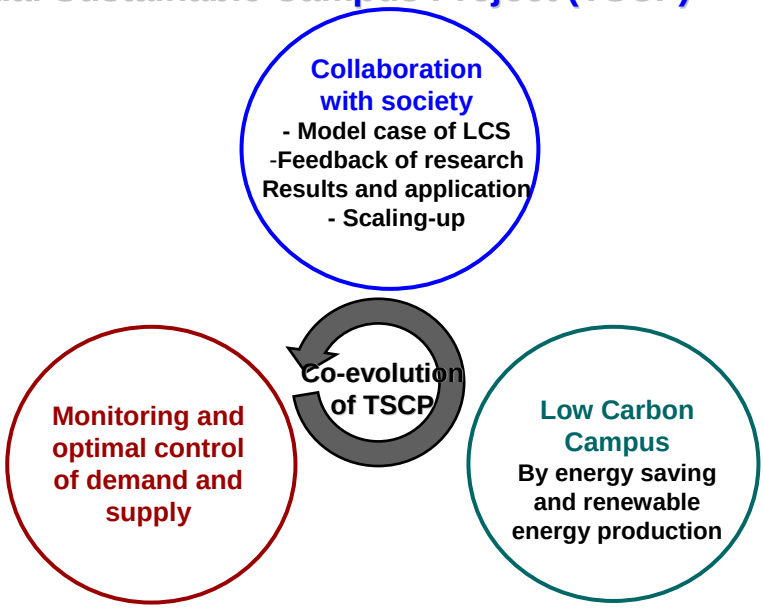

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6

Current footprint analysis

- CO_2 emission of Todai: 136,000 ton-CO_2/year (0.10 ton-CO_2/m^2-year, 3.9 ton-CO_2/person-year)
- Electricity is major CO_2 source (79%)
- Average electricity consumption:
  - Natural science schools, hospital: 240 kWh/m^2-year
  - Social science and humanity school : 72 kWh/m^2-year
- CO_2 from Travel:25,000 ton-CO_2/year
  - 90% is international air (mainly North America and Europe)

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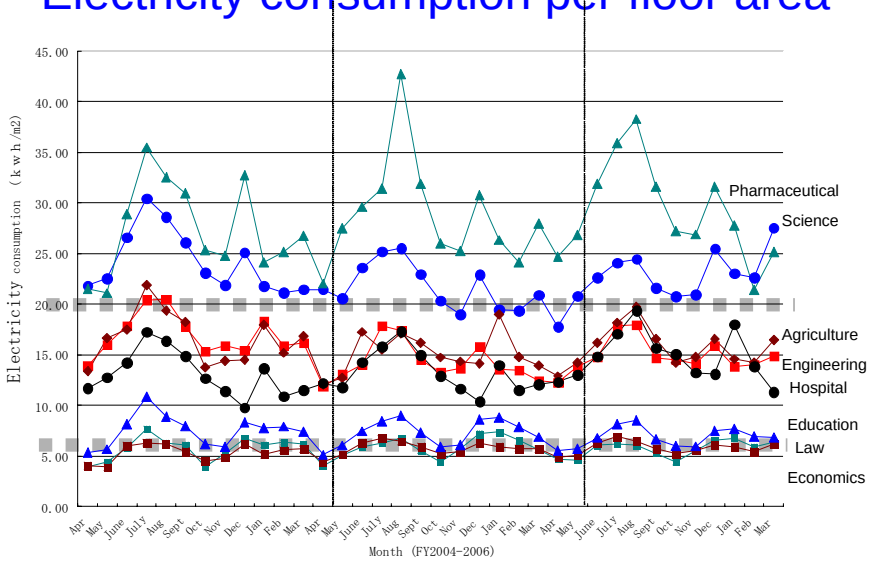
7

Electricity consumption per floor area



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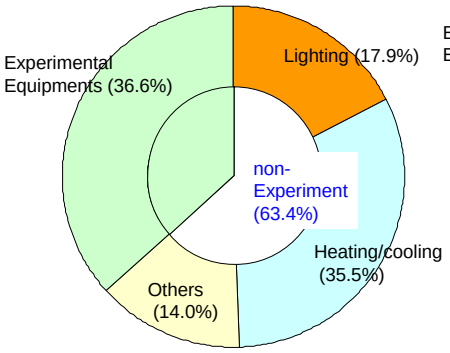
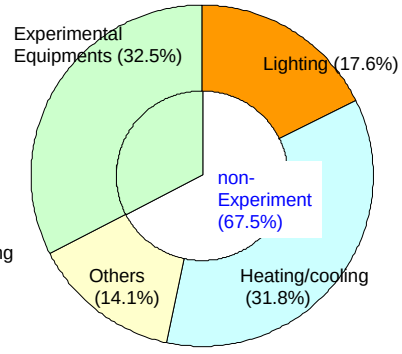
8

Electricity consumption in Todai



Hongo campus



Komaba-2 Research campus

As whole university, about 70% is from non-experimental activities

Short-term reduction target

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9

Action plan

TSCP 2012

- Target: **15% reduction of CO2 emission** in 2012 from 2006 level
  - monitoring and feedback to users
  - encouraging replacement of facilities and equipments with more energy- and cost-saving ones
  - promoting large-scale procurement: scale of economy for cost reduction
- Preparing agenda for 50% reduction in 2030.
- Starting in April 2008

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10

Short-term action strategy

- Prioritization criteria
  - High CO_2 reduction/investment cost
  - Low ratio of [payback time/life time]
- Actions to be taken
  - Replacement of boiler (from oil to gas) and heat supply unit
  - Replacement of fluorescent lamp to energy-saving type
  - Replacement of heat-pump air conditioner
  - Replacement of refrigerator

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Long-term actions

- Building energy performance
  - High energy saving performance for new building
  - Improving insulation when building is renovated
- Implementation of renewable energy
  - Photovoltaic cells

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Kashiwa - International campus town

Collaborative planning with local government, private sector and other university

Significant reduction of CO_2 emission (35% reduction from BAU level by 2030) is one of the development targets.

Todai

Axis of campus and green

Vegetation network

Bicycle road network

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13