As one of the moderators said, he first wondered what might be the relationship between education and management, but by the presentations in this workshop it became clear, that both are well connected.

In the morning Prof. S. Iwakiri (Dean of CLA, ICU) welcomed the audience followed by keynote speaker J. Mikulina from Hawai‘i’s Blue Planet Foundation (BPF). BPF has successfully lobbied Hawai‘i’s State Assembly to declare in 2015 that by 2045 Hawai‘i would become a 100% renewable energy (RE100) supplied state. Working out the scenario Hawai‘i’s utility soon found that they could achieve RE100 already by 2040.

Elements of the campaign are teaching school classes, student energy summits, drawing rising water levels on pavement, a “We Are 100% RE” web campaign (including transport, efficiency, business, community, etc.), a “Hawaii Energy Report Card” website, a future picture drawing contest, newspaper editorials, etc. After succeeding, California, Nevada, New York, Washington, New Mexico and Puerto Rico all declared similar aims by 2045 or 2050. Costs tumble as the market grows and with new technologies: Since 2015 the price per kWh of solar electricity with battery storage has nearly halved from 14 to 7 cents. Innovative concepts include seawater cooling air conditioning, a third of all homes in Hawai‘i have solar roofs, utility scale energy storage (with TESLA technology) for covering peak electricity consumption, promotion of electric vehicles (that also provide flexible loads and storage). Challenges include community acceptance, combination with agriculture, and geothermal activities.

Next, Prof. S. Harashina of Chiba University of Commerce, the first Japanese university to achieve the 100% renewable energy supplied status, outlined the historical developments,
actions taken by the university management and educational activities that contributed to this aim and illuminated further developments, like the aim to found a 100RE university league in Japan. Finally, Prof. I. Ushiyama (Chair of BOT of Ashikaga University (AU), and founder of the Japan Wind Energy Association (JWEA) 42 years ago) gave an overview over the wide range of RE science and technology developments taking place at AU. Nowadays many graduate students from developing countries enroll at AU for learning about locally affordable and appropriate RE for their own countries. A lively panel discussion followed moderated by Prof. N. Miyazaki (ICU), including Prof. S. Iwakiri, Prof. S. Harashina and Prof. I. Ushiyama as participants.

In an expert luncheon, speakers, university executives, organizers and interpretation volunteers enjoyed lively personal exchanges.

In the first afternoon session, moderated by Prof. G.C. Kimura (Sophia University), Prof. H. Menkhaus (Meiji University, President of German JSPS Alumni Association) gave a greeting address on behalf of one of the SUDem2020 sponsors, the German JSPS Alumni Association, that has also helped to sponsor the previous two workshops SUDre2017 and SUDee2018. The first presentation in the afternoon was given by Prof. S. Okayama of the Chiba University Environmental ISO Secretariat. She explained the unique Chiba University Method in which a student NPO (with 200 members) continually assesses and consults the university on sustainability.

Students enter a 3 year course track and gradually become section leaders and take on increasing responsibility, are awarded credits, and acquire important social and business skills. Second, Ass. Prof. T. Ozasa of Hokkaido University and its Sustainability Office outlined methods for assessing the sustainability status of a university.

The panel discussion of session 2 included opinion exchange between the speakers and challenging questions from the audience, with comments on the fact that often student organizations aiming at sustainability struggle to ensure their own sustainable future continuation.

After a net working coffee break with chats between participants, speakers, volunteers, etc. session 3 started with an introduction to the “Student perspective: Student expectations and challenges for sustainable education and management” by Prof. A. Takeuchi of Toho University. She was followed by five student speakers Mr. K. Kawai (Sophia University Environmental Association SEA), Mr. T. Oikawa (ICU’s SUSTENA club), Ms. Y. Hoshina (CUC’s Student Organization for Natural Energy SONE), Ms. Y. Saito (Toho Ecolution club of Toho University) and Ms. N. Mori (Chiba University ISO Committee). SEA is a relatively new organization, SUSTENA introduced recyclable lunch packages but struggles with long term student participation, SONE actively researches further measures for energy efficiency (like super insulating windows), Toho Ecolution also consults local businesses, and the Chiba...
University ISO Committee of students works out proposals to the university management for increasing sustainability. Students and audience were deeply involved in the panel discussion concluding session 3.

Fig. 6. Panelists, interpreters and moderator of session 3:

N. Mori (Chiba University), R. Siriwardene, K. Kawasaki (Sophia University), Y. Saito (Toho University), M.E. Mori, T. Oikawa (ICU), S.M. Healy, Y. Hoshina (CUC), A. Takeuchi (moderator from Toho University), C. Okuyama.

After a short break the networking dinner concluded the evening. Rounds of personal conversations were interspersed with classical and Okinawan music by Prof. N. Miyazaki, Ms. Y. Sagi (Luther University) on renaissance flute and harp, respectively by Prof. M. Gillan (ICU) and his three talented students N. So, P. Reed and R. Michihata.

A dedicated team of about 25 volunteers supported the workshop, nine of them highly skilled amateur (or near professional) interpreters, most of them ICU students or alumni and one student from Waseda University. One of the students had experience of a one year interpreter job on Peace Boat, and one had even won a Grand Prix for simultaneous interpretation by students in a national contest in 2019. This enabled us already two weeks after the workshop to edit and upload all presentations in two language versions to YouTube (access through the online workshop programs in English and Japanese).

We are deeply thankful to our main sponsor JICUF for their continued support of this ever more popular workshop series, this time we had over 150 people involved. Likewise, we humbly thank for the continued support of the German JSPS Alumni Association.

Finally, some feedback we received. Volunteers commented: “Thank you for today!!! I had a really good experience and I could make many friends.”; “Thank you so much for giving me this opportunity. I enjoyed volunteering and made many friends.”; “It was great to be involved in the workshop yesterday. Thank you very much for organizing such a wonderful opportunity.”; “Thank you so much for mentoring and for giving me an opportunity to learn.” Speakers said: “Thank you very much for your efforts to hold such a fruitful workshop. Though, I had to leave after the morning session because of my obligation at my university, I could enjoy the workshop.”; “Congratulations for the success of the symposium. It was very nice for me to have such an occasion to attend it, and to get aware of the issues concerning the renewable energy. I hope it will make a good effect on (Y University), and onto the whole world.”; “Thank you for giving me this valuable opportunity at the SUDem Symposium. It was a very rich
symposium, so I felt that day was very short.” A musician told us: “Thank you for inviting us to play at the event on Saturday. It was a great experience for the students, and looked like a fantastic event.” And one of the organizers pointed out: “This was a very well done and content rich workshop! The final notes (literally) were also most beautiful. Thank you very much for your extraordinary efforts! For (X University) this was a great impulse that we really need.”

All information on program, presentation files, presentation and panel discussion video access, music videos, preprints, etc. is available in English and Japanese via the workshop series blog: https://sudworkshops.wordpress.com/

We plan a printed proceedings volume with contributions from all three workshops SUDre2017, SUDee2018 and SUDem2020. The workshop SUDem2020 was jointly organized by: Eckhard Hitzler (ICU), Yasushi Ito (CUC), Mark Langager (ICU), Nobuyuki Miyazaki (ICU), Takashi Kibe (ICU), Goro-Christoph Kimura (Sophia University), Momoko Mogi (Tokyo Kasei University), Masanori Shukuya (Tokyo City University), Joerg Raupach-Sumiya (Ritsumeikan University), Ayano Takeuchi (Toho University), Susumu Teshima (CUC).

"In the beginning God created the heavens and the earth."
(Genesis 1:1, NKJV)

"And the Lord God took the man, and put him into the garden of Eden to dress it and to keep it."
(Genesis 2:15, KJV)