

ESSEN-KORIYAMA

Achievements of City-to-city Cooperation and Future Perspective

-Toward a future-oriented and mutually-beneficial relationship between the two cities-

Cities of Essen & Koriyama

ESSEN



Partnership
Essen – Koriyama



Geographical Features

-Comparison between the cities of Essen and Koriyama-

Essen City



State of North
Rhine-
Westphalia

51 Degrees

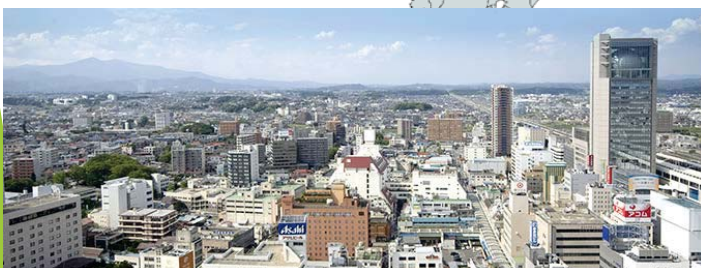
37 Degrees

- ✓ ‘Economic Capital City in Fukushima Prefecture’, boasting its biggest retail sales and largest number of retail businesses in the prefecture
- ✓ Largest number of agricultural households in Fukushima Prefecture, boasting biggest rice production in the prefecture



Koriyama City

Fukushima
Prefecture



Central urban area of Koriyama City (the west exit of Koriyama Station)



History of the Development of Koriyama

-Transition from a city of power generation to city of renewable energy-



Oyasuba Burial Mound, built in the early Kofun Period (250 AD-538 AD)



Numagami Hydroelectric Power Station, laid the foundation of Koriyama's development

5. Great East Japan Earthquake and Nuclear Accident at Fukushima Daiichi Nuclear Power Station in 2011



Building with its first floor collapsed due to the fierce earthquake

4. People gathered, schools and banks established, railroaded to become the center of Fukushima Prefecture



Fukushima Renewable Energy Institute, AIST (FREA) opened in April 2014

7. Enhance municipal resilience to climate change and natural disasters

6. Restoration from the disasters, promoting renewable energy and medical device development



Fukushima Medical Device Development Support Center (FMDDSC) opened in November 2016

3. New industry revolution, cotton and chemical industries flourished by hydro electric power generation, Hodogaya Chemical Co., LTD. and Nitto Boseki Co., LTD.

2. Modernization by Asaka Canal and Asaka Land Development (1882), paddy rice, silk and carp cultivation flourished

1. Post Station at Oshu Kaido [Edo Period (1603-1868)]



Toward a hub of Fukushima Prefecture

-Under the close collaboration among industry, academia, and government-



✓ Collaboration with Fukushima Renewable Energy Institute, AIST (FREA), hub for the research and development on renewable energy



✓ Operating Hydrogen Refueling Station and Fuel Cell Vehicle (FCV) Toward a front-runner in using hydrogen as power source



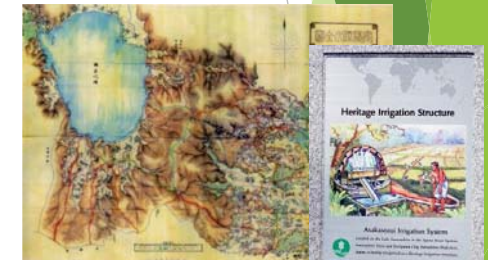
✓ Fukushima Medical Device Development Support Center (FMDDSC), support for the development and business of Medical Device



✓ Collaboration of research on geo heat with the College of Engineering, Nihon University, providing abolished school in Konan-machi which located at the south bank of Lake Inawashiro as a test bed, <http://mech.ce.nihon-u.ac.jp/~oguma>



✓ The first 'SDGs Future City' and 'Local Government SDGs Model Project' in Fukushima Prefecture in 2019 Selected by the Cabinet Office and strive to help Japan achieve the 17 goals set by the United Nations



✓ Asakasosui Irrigation System in Koriyama was registered as one of the ICID Heritage Irrigation Structures (HIS) Selected by International Commission on Irrigation and Drainage (ICID) in November 2016



Efforts for strengthening cooperation between Essen and Koriyama

**‘IUC Programme’ organized by EU -City-to-city cooperation
on sustainable urban development-**

Themes of Cooperation



Renewable Energy

Medical Device Related Industry

Water Management

Smart City

Regional and Urban Innovation,
Competitive, Inclusive and Sustainable
Economic Growth

Urban Transport

Education and Development of Future
Generations



Efforts for strengthening cooperation between Essen and Koriyama

Key Challenges of Cooperation Themes

Urgent need to enhance climate, social,
and economic urban resilience to shocks
and stresses

High demand for globally competitive
and innovative industries in the fields of
renewable energy and medical device

Development of next generations who
bear the future of urban innovations and
relationships between the cities of Essen
Koriyama

Insufficient resources, which could cause
inefficiency or failure of actions and have
an impact on the outcome of the
cooperation theme





Efforts for strengthening cooperation between Essen and Koriyama

Main Objective of UCAP

To enhance mutual understanding and strengthen the bilateral relationship for the purpose of achieving a prosperous future

To bolster local industries' competitiveness, create new businesses in each city

To create opportunities to learn 'advanced expertise and technologies which create the future of society', 'scientific thinking, decision-making and the ability of public relations', 'receptiveness to diverse and different values', 'active citizenship' and 'resilience'



Efforts for strengthening cooperation between Essen and Koriyama

Main Activities and Key Outputs

1. Knowledge transfer, study tours, joint seminars, and joint research activities regarding:

Knowledge transfer on sewage sludge treatment and disposal in consideration of contained pollutants in Essen

Knowledge transfer on transformation of digester gas to biogas in sewage treatment plants and its utilization in Essen

Knowledge transfer on municipal water management in Essen (climate resilience, rainwater management sewer management)

Study tour to Essen on energy generation, storage, and savings





Efforts for strengthening cooperation between Essen and Koriyama

Main Activities and Key Outputs

2. Business matching events and trade fairs in each city with involvement of industrial circles

Building business cooperation

Facilitating personnel exchanges of medical doctors and students and cooperation between medical institutions

Developing synergy effects and innovations in the fields of technology, processes and didactics for medical training centres

Creating a joint digital start-up platform

Developing storage and use of energy under the application of innovative energy carriers and technologies

Exploring possibilities to enter into German and Japanese markets and launch joint ventures

Sharing information on local major business enterprises in each city



FEBRUARY 11 - 13, 2020
ESSEN / GERMANY



The 9th REVIVAL OF FUKUSHIMA
Renewable Energy Industrial Fair20
2020. **REIF**
10.28*29*
Time : 10:00-17:00
Venue : BIG PALETTE FUKUSHIMA



Efforts for strengthening cooperation between Essen and Koriyama

Study tour in April 2018 (Essen → Koriyama)



College of Engineering, Nihon University
(in the fields of renewable energy and
medical device related industry)





Efforts for strengthening cooperation between Essen and Koriyama

Study tour in April 2018 (Essen → Koriyama)



National Institute of Advanced Industrial
Science and Technology Fukushima
Renewable Energy Institute, AIST



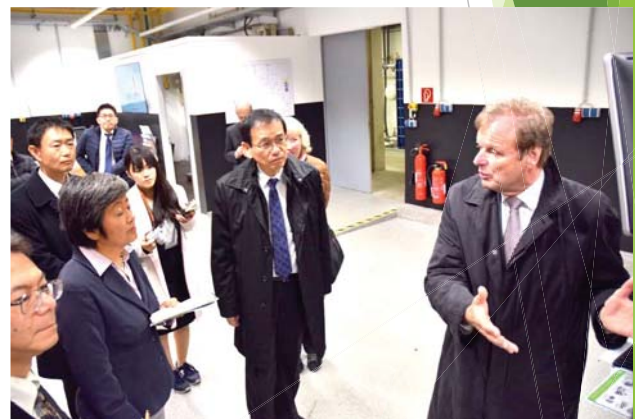
Efforts for strengthening cooperation between Essen and Koriyama

Study tour in November 2018 (Koriyama → Essen)



Innogy SE

GWI
(Gas- und Wärme-Institut e.V.)





Efforts for strengthening cooperation between Essen and Koriyama

Study tour in November 2018 (Koriyama → Essen)



EMSCHERGENOSSENSCHAFT

Universität Duisburg-Essen
Medizinische Fakultät, Lehr- und
Lernzentrum (LLZ)



Delegation Visit to Koriyama 2018 - Movie



Efforts for strengthening cooperation between Essen and Koriyama

Study tour in May 2019 (Essen → Koriyama)



Southern Tohoku General Hospital

Arai Water Purification Plant
Water and Sewerage Bureau



Efforts for strengthening cooperation between Essen and Koriyama

Main Activities and Key Outputs

Study tour on Stadtwerke to Essen by 'Fukushima Study Group on Energy Generation, Storage and Savings' in August 2019 (Essen → Koriyama)

Visit to Stadtwerke Essen AG on water resources public corporation and house renovation project

Visit to Museum Folkwang and study on air-conditioning by Stadtwerke Essen

Courtesy visit to Lord Mayor of the city of Essen to strengthen the relationship





Efforts for strengthening cooperation between Essen and Koriyama

Main Activities and Key Outputs

Visit to Koriyama by Lord Mayor of Essen and agreement on the continued intercity cooperation in September 2019 (Essen → Koriyama)

Visit to Mayor of Koriyama and Chirperson of Koriyama City Assembly

Organize Essen-Koriyama Joint Seminar

Visit to local enterprises, medical institutions and sports facilities related to Tokyo 2020 Olympic and Paralympic Games

Organize Signing Ceremony and Reception



Delegation Visit to Koriyama 2019 - Movie



Efforts for strengthening cooperation between Essen and Koriyama

Main Activities and Key Outputs

Academic internship and student exchange programs include:

An internship programme initiated by the Faculty of Medicine, Duisburg-Essen University which is conducted by the Southern Tohoku General Hospital in Koriyama in 2020

A student exchange programme by Fukushima Prefectural Asaka High School to promote innovative and scientific thinking in 2020

Two 17-year-old scholars from Essen are hosted in Koriyama on the Alfred Krupp Pupils Scholarship programme for practical business training



Efforts for strengthening cooperation between Essen and Koriyama

Expected Results - Benefits

Knowledge transfer of energy and water management

Development of a foundation for industries in close collaboration among industry, academia and government

Development of a foundation for the next generation in which globalisation, science and innovation serve as the basis of the education system





Partnership
Essen - Koriyama



Thank you for your attention!