

THE 15TH INTERNATIONAL SYMPOSIUM ON GEO-DISASTER REDUCTION

PROGRAM BOOK



25-30 AUGUST 2017
OKI ISLANDS - MATSUE - KYOTO, JAPAN

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The 15th International Symposium on Geo-disaster Reduction

Global Strategy for Geo-disaster Reduction

Organizers

Project Center on Natural Disasters Reduction, Shimane University, Matsue, Japan

Joint International Center on Natural Hazard (JIC-Nh) of Shimane University, Beijing

University of Technology and the University of Florence

International Consortium on Geo-disaster Reduction (ICGdR)

Research Centre on Landslide, Disaster Prevention Research Institute, Kyoto
University, Japan

OKI Islands Global Geopark Office, Japan

Date: 25-30 August 2017

**Venue: Oki Islands & Terrsa, Matsue &
Obaku Plaza, Kyoto University, Kyoto, Japan
<https://icgdr.com/symposium/>**

General Schedule

DATE	TIME	LOCATION	EVENTS AND PROGRAMME
25 Aug.	14:00-18:00	1F, Terrsa, Matsue	Registration
	18:00-20:00	Capricciosa (2F, Terrsa)	Ice Break Party
26 Aug.	07:40-11:30	Oki Islands	Travel from Matsue to Oki Islands
	12:30-18:00		Field Excursion on landslide and rock cliff
27 Aug.	08:30-16:00	Oki Islands	Field Excursion on coastline erosion
	16:30-18:30	4F, Terrsa, Matsue	Annual Meeting of ICGdR
28 Aug.	09:00-09:30	1F, Terrsa, Matsue	Opening Ceremony
	09:30-10:30		High Level Forum
	10:30-10:40		Coffee Break
	10:40-12:10		High Level Forum
	12:10-13:10		Lunch Break
	13:10-14:40		High Level Forum
	14:45-15:35		Keynote Lectures
	15:35-15:55		Coffee Break
	15:55-18:00		Keynote Lectures
	19:00-21:00	Ichibata Hotel	Welcome Banquet
29 Aug.	08:30-10:10	4F, Terrsa, Matsue	Invited Lecture 1 & 2
	10:10-10:20		Coffee Break
	10:20-12:00		Invited Lecture 3 & 4
	12:00-13:00		Lunch Break
	13:00-14:00		Scientific Session 1 & 2
	14:00-16:00		Youth Forum 1 & 2
	16:15-21:00		Move to Kyoto
30 Aug.	09:00-10:30	Obaku Plaza, Kyoto	Keynote Lecture
	10:30-10:40		Coffee Break
	10:40-12:00		Invited Lecture 5
	12:00-13:00		Lunch Break
	13:00-14:00		Scientific Session 3 & 4
	14:00-14:10		Coffee Break
	14:10-16:40		Youth Forum 3 & 4
	16:40-17:30		Visit the laboratories in Kyoto University
	17:30-19:30		Closing Ceremony & Farewell Party

August 28 (Monday)

Opening Ceremony Terrsa Hall (1F)	
Facilitator	Fawu WANG
09:00-09:30	Opening Speech Yasunao HATTORI (President of Shimane University, Japan)
	Opening Speech Soichiro YASUKAWA (Programme Specialist, Section on Earth Sciences and Geo-hazards Risk Reduction, UNESCO)
	Opening Speech Masakatsu MIYAJIMA (President of ICGdR)
	Certificate & Award Ceremony
High Level Forum Terrsa Hall (1F)	
Facilitator	Sandro MORETTI, Toshitaka KAMAI
09:30-10:00	Soichiro YASUKAWA (Programme specialist, Section on Earth Sciences and Geo-hazards Risk Reduction, UNESCO) <i>UNESCO's contribution to geo-hazards risk reduction</i>
10:00-10:30	Masakatsu MIYAJIMA (President of ICGdR, Kanazawa University) <i>Large ground displacement caused by fault movement and its countermeasure to buried pipeline</i>
10:30-10:40	Coffee Break
High Level Forum	
Facilitator	Masakatsu MIYAJIMA, Tonglu LI
10:40-11:10	Paolo CANUTI (Director of UNESCO Chair in University of Florence) <i>UNESCO Chair on prevention and sustainable management of geo-hydrological hazards</i>
11:10-11:40	Toshitaka KAMAI (Director, RCL, DPRI, Kyoto University) <i>Raised-bed rivers in Japan –relics of the historical interaction between floods, landslides, and socioeconomic system</i>
11:40-12:10	Nicola CASAGLI (Vice President of ICGdR, University of Florence) <i>Innovative technologies for landslide monitoring and early warning</i>
12:10-13:10	Lunch Time

High Level Forum	
Facilitator	Nicola CASAGLI, Fawu WANG
13:10-13:40	Tonglu LI (Vice President of ICGdR, Chang'an University) <i>Soil-water interaction modeling based on discontinuous deformation analysis method</i>
13:40-14:10	Dwikorita KARNAWTI (Adviser of ICGdR) <i>Total quality management in landslide disaster risk reduction in Indonesia</i>
14:10-14:40	Atsushi YASHIMA (Professor in Gifu University) <i>SPH-based liquefaction analysis of detached house foundation</i>
Keynote Lecture Terrsa Hall (1F)	
Chairperson	Nicola CASAGLI; Soichiro YASUKAWA
14:45-15:10	Guangqi CHEN (Kyushu University) <i>An approach of landslide risk assessment in Japan by considering global climate change</i>
15:10-15:35	Yu HUANG (Tongji University) <i>Dynamic reliability analysis of slopes</i>
15:35-15:55	Coffee Break
Keynote Lecture	
Chairperson	Zhenghong LI; Vít VILIMEK
15:55-16:20	Sandro MORETTI (University of Florence) <i>EO (Earth Observation) data and technology to detect, map, monitor and forecast ground deformations</i>
16:20-16:45	Qiang XU (Chengdu University of Technology) <i>Characteristics and failure mechanism of the deadly June 24th 2017 Xinmo landslide, Maoxian, Sichuan, China</i>
16:45-17:10	Shengwen QI (Institute of Geology and Geophysics, Chinese Academy of Sciences) <i>A Toppling failure of the right bank slope in a hydropower station, SW China</i>
17:10-17:35	Binod TIWARI (California State University, Fullerton) <i>Importance of spectral acceleration in evaluating cyclic failure on soft clays – an experience from 2015 Gorkha Earthquake</i>
17:35-18:00	Weimin YE (Tongji University) <i>Deterioration mechanisms of cracked surface crust on salt-laden earthen heritages in northwest China</i>
19:00-21:00	Banquet

Poster Session	
1	Weihua ZHAO (Chengdu University of Technology) <i>Failure mechanism and post-disaster effect of Weijiashan landslide induced by Wenchuan Earthquake</i>
2	Youwei SUN (Institute of Disaster Prevention, China) <i>Technical problems in urban earthquake disaster mitigation planning</i>
3	Ming CHANG (Chengdu University of Technology) <i>Hazard assessment of debris flows in the Wenchuan Earthquake- stricken area, South West China</i>
4	Hiroshi NAKAZAWA (National Research Institute for Earth Science and Disaster Resilience) <i>Residual deformation in full-scale shake table test of a gabion retaining wall for road</i>
5	Hanxiang LIU (Chengdu University of Technology) <i>A statistical view of topographic effect on seismic vertical motions of slopes based on a series of shaking table tests</i>
6	Xunye DAI (Institute of Disaster Prevention, China) <i>Late-Quaternary paleoearthquake and seismic risk analysis of the Quanquanzi segment of the Fukang fault belt, in Xinjiang</i>
7	Chaoyang HE (Chengdu University of Technology) <i>Automatic real-time monitoring and early warning system of debris flow in the three major areas of Sichuan Province</i>
8	Paolo BILLI (University of Tottori) <i>Climate change, human impact and hydro-meteorological hazard in Dire Dawa District, Ethiopia</i>
9	Wenkai FENG (Chengdu University of Technology) <i>An analysis of the reactivation mechanism of ancient landslide</i>
10	Zili DAI (Shimane University) <i>Investigation on the landslides triggered by the 2016 Kumamoto Earthquake, Japan.</i>

NOTE: Posters must be brought to the symposium by the presenting author and should not be mailed in advance. The required dimensions are 90 cm (width) by 150 cm (height). The general display time is 9:00-18:00, 28 August.

August 29 (Tuesday)

	Invited Lecture 1 (Meeting Room L, 4F)	Invited Lecture 2 (Meeting Room M, 4F)
Chairperson	Andreas AUER, Tonglu LI	Binod TIWARI, Masaho YOSHIDA
08:30-08:50	Maosong HUANG (Tongji University) <i>Stability analysis of MSW landfill slopes based on upper bound limit analysis methods</i>	Qiangong CHENG (Southwest Jiaotong University) <i>3D numerical modelling of airblast generated by the Wangjiayan rockslide in the 2008 Wenchuan Earthquake</i>
08:50-09:10	Sabatino CUOMO (University of Salerno) <i>Numerical modeling of debris flows and debris avalanches</i>	Shijin FENG (Tongji University) <i>Slope stability analysis of bioreactor landfills</i>
09:10-09:30	Huabin WANG (Huazhong University of Science and Technology) <i>The methods in numerical simulations for slope failure due to rainfall infiltration</i>	Ping SUN (Chinese Academy of Geological Sciences) <i>Experimental study on mechanism of rainfall-induced shallow loess landslides</i>
09:30-09:50	Luis Ribeiro SOUSA (China University of Mining & Technology) <i>Hazards induced by the 2008 Wenchuan Earthquake</i>	Fei CAI (Gunma University) <i>A subgrade reaction solution for anchored piles to stabilize landslides</i>
09:50-10:10	Hong SUN (Shanghai Jiao Tong University) <i>Seismic behaviors of soil slope in permafrost regions using a large-scale shaking table</i>	Veronica TOFANI (University of Florence) <i>Application of regional physically-based landslide early warning model: field parametrization and validation of the results</i>
10:10-10:20	Coffee Break	
	Invited Lecture 3 (Meeting Room L, 4F)	Invited Lecture 4 (Meeting Room M, 4F)
Chairperson	Netra Prakash BHANDARY, Qiang XU	Qiangong CHENG, Jianhui DENG
10:20-10:40	Toshikazu IKEMOTO (Kanazawa University) <i>Deformation analysis of stone retaining masonry of the Kumamoto castle in the 2016 Kumamoto Earthquake</i>	Wenxing JIAN (China University of Geosciences, Wuhan) <i>Characteristics and mechanism of translational landslides in Three Gorges Reservoir, China</i>

10:40-11:00	Masaho YOSHIDA (National Institute of Technology, Fukui College) <i>Experimental study on a deformation mitigation method for road embankment during liquefaction by using gravel and geosynthetics</i>	Jun SHEN (Institute of Disaster Prevention, China) <i>Paleo-earthquake study with drilling core in the epicenter of 1679 M8 Sanhe-Pinggu earthquake along Xiadian Fault in Beijing Plain Area</i>
11:00-11:20	Takao HASHIMOTO (Kokushikan University) <i>Effect of countermeasures against liquefaction of groundwater level by propulsion method</i>	Chuan TANG (Chengdu University of Technology) <i>An empirical model to predict the debris flow volume</i>
11:20-11:40	Yingbin ZHANG (Kyushu University) <i>Initiation of near-fault landslides subjected to pulse-like ground motions</i>	Lizhou WU <i>Coupling problems of unsaturated soil slope under the conditions of rainfall infiltration</i>
11:40-12:00	Chun LIU (Tongji University) <i>Establishment of stereo multi-sensor network for giant landslide monitoring and its deployment in Xishancun Landslide Sichuan China</i>	Mo XU (Chengdu University of Technology) <i>Landslide soil parameters optimization based on successive approximation method</i>
12:00-13:00	Lunch Time	
	Scientific Session 1 (Meeting Room L, 4F)	Scientific Session 2 (Meeting Room M, 4F)
Chairperson	Sabatino CUOMO; Jun SHEN	Takao HASHIMOTO; Ping SUN
13:00-13:15	Andreas AUER (Shimane University) <i>The 2010 - 2013 eruption of Kizimen Volcano, Kamchatka</i>	Ming PENG (Tongji University) <i>Slope safety evaluation by integrating multi-source monitoring information</i>
13:15-13:30	Tetsuya KOGURE (Shimane University) <i>Attempt of strain measurements for a landslide through distributed fiber optic sensing</i>	Akira MURATA (Kanazawa University) <i>Estimation of strong motion using h/v spectral ratio during 2016 Kumamoto Earthquake</i>
13:30-13:45	Xiaoguang CAI (Institute of Disaster Prevention, China) <i>Analysis of geogrids strain and failure surface of two-stage reinforced soil-retaining wall under seismic loading</i>	Chong XU (Institute of Geology, China Earthquake Administration) <i>A detailed inventory of landslides induced by the 2016 Kumamoto Earthquake, Japan</i>
13:45-14:00	Setiawan HENDRA (Kanazawa University) <i>Fundamental shake table tests on mitigation of liquefaction-induced ground displacement by using gravel and geosynthetics</i>	Saied PIRASTEH (University of Waterloo) <i>An algorithm development for automated extraction of landslide geometry from LiDAR DEM: A novel landslide classification</i>

	Youth Forum 1 (Meeting Room L, 4F)	Youth Forum 2 (Meeting Room M, 4F)
Chairperson	Chaosheng TANG, Chong XU	Xuanmei FAN, Veronica TOFANI
14:00-14:15	Lu ZHENG (Sichuan University) <i>Frequency characteristics of acoustic emission in white marble under rock tests</i>	Qingqing YANG (Southwest Jiaotong University) <i>Influence of grain size distribution on the mobility of polydisperse granular flows</i>
14:15-14:30	Hufeng YANG (Southwest Jiaotong University) <i>Preliminary investigation on the formation mechanism of geomorphic features in Luanshibao rock avalanche</i>	Wentao YANG (Beijing Forestry University) <i>Post-seismic vegetation recovery and landslide changes after the Wenchuan Earthquake</i>
14:30-14:45	Keren DAI (Chengdu University of Technology) <i>Monitoring activity at the Daguangbao mega-landslide (China) using Sentinel-1 TOPS time series interferometry</i>	Yuko SERIKAWA (Kanazawa University) <i>Effects of liquefaction damage to houses on health problems in the 2016 Kumamoto Earthquakes in Japan</i>
14:45-15:00	Kenta KONDO (Kanazawa University) <i>A study on sediment disaster prediction method based on measurement of ground water level in slope</i>	Ahmad Qasim AKBAR (Kyushu University) <i>Comparison of major statistical methods and its combination for landslide susceptibility mapping</i>
15:00-15:15	Xilin XIA (Newcastle University) <i>An integrated hydrodynamic model for runoff initiated debris flow in mountainous catchments</i>	Tsukasa MITOGAWA (Shimane University) <i>Strain rate analysis in San'in area using GNSS data</i>
15:15-15:30	Ryosuke NOGUCHI (Kanazawa University) <i>Effects of damage on performance of hospital in the 2016 Kumamoto Earthquake</i>	Xiaohui YU (Institute of Disaster Prevention, China) <i>Gudian fault: triggering seismic fault of MS7.0, in 1119AD, Northeast China</i>
15:30-15:45	Xiaobo LI (Institute of Disaster Prevention, China) <i>Effect of bedrock terrain on seismic ground motion</i>	Zhandong SU (Institute of Disaster Prevention, China) <i>Antecedent effective rainfall attenuation model in the forecasting of impending debris flows</i>
15:45-16:00	Chengwen CAI (Kyushu University) <i>Simulation of vehicle toppled phenomenon induced by the 2016 Kumamoto Earthquake using 3D-DDA</i>	Heqing MU (South China University of Technology) <i>Selection of ground motion prediction equation by Bayesian learning approach</i>
16:15-21:00	Move to Kyoto	

August 30 (Wednesday)

Keynote Lecture		
Kihada Hall, Obaku Plaza (1F)		
Chairperson	Luis Ribeiro SOUSA, Wenxing JIAN	
09:00-09:30	Zhenhong LI (Newcastle University) <i>Satellite radar observations in support of geo-disaster risk reduction</i>	
09:30-10:00	Matteo BERTI (University of Bologna) <i>Reactivation of a dormant earthflow documented by field monitoring data</i>	
10:00-10:30	Vít VILIMEK (Charles University) <i>Hazard mitigation of GLOFs (Glacial Lake Outburst Floods) in the Cordillera Blanca, Peru</i>	
10:30-10:40	Coffee Break	
Invited Lecture 5		
Kihada Hall, Obaku Plaza (1F)		
Chairperson	Guoliang DAI, Shengwen QI	
10:40-11:00	Chaosheng TANG (Nanjing University) <i>Drought induced soil desiccation cracking behavior</i>	
11:00-11:20	Netra Prakash BHANDARY (Ehime University) <i>Ground motion and its engineering implications in Kathmandu Valley during the 2015 Nepal Earthquake</i>	
11:20-11:40	Xuanmei FAN (Chengdu University of Technology) <i>Sediment transfer patterns at the Yangjia catchment in Beichuan after the 2008 Wenchuan Earthquake</i>	
11:40-12:00	Christopher GOMEZ (Kobe University) <i>Living on the donuts – sea and coastal hazards in the age of climate change and the anthropocene</i>	
12:00-13:00	Lunch Time	
	Scientific Session 3 (Meeting Room No.1)	Scientific Session 4 (Meeting Room No.2)
Chairperson	Fei CAI, Huabin WANG	Christopher GOMEZ, Lizhou WU
13:00-13:15	Yan XU (Jilin University) <i>Analysis and design of engineering control measures of sub-erosion vertical separated collapse at the national geological park of Oian'an Mud Forest, China</i>	Bin YE (Tongji University) <i>Experimental study on the liquefaction resistance of sand reinforced with randomly distributed polypropylene fibers</i>

13:15-13:30	Xiaoqiang GU (Tongji University) <i>Measurement of small strain shear stiffness of saturated soft clay by bender element</i>	Yan LYU (Jilin University) <i>Research on heavy metal pollution of turf swamp under the influence of highways in Northeast China</i>
13:30-13:45	Guoliang DAI (Southeast University) <i>Study on seismic isolation effect of deepwater gravel cushion</i>	Ling XU (Xi'an Jiaotong University) <i>On the mechanisms of loess flowslides within the framework of critical state soil mechanics</i>
13:45-14:00	Guoqing CHEN (Chengdu University of Technology) <i>Search for sliding surface of slope based on Dynamic Strength Reduction Method</i>	Ram Chandra TIWARI (Ehime University) <i>Uncertainty to explore suspected anomaly in the main impact zone of Langtang snow avalanche</i>
14:00-14:10	Coffee Break	
	Youth Forum 3 (Meeting Room No.1)	Youth Forum 4 (Meeting Room No.2)
Chairperson	Xilin XIA, Yan XU	Hong SUN, Hufeng YANG
14:10-14:25	Hua LI (Chang'an University) <i>A new method for measuring the soil water characteristic function and permeability function of unsaturated soil with filter paper</i>	Fikri FARIS (Universitas Gadjah Mada) <i>Monitoring and mitigation plan of rainfall induced landslide creep movement of Cimanuk River Dam, Sumedang, Indonesia</i>
14:25-14:40	Kounghoon NAM (Shimane University) <i>Landslide susceptibility mapping considering swelling clay mineral</i>	Yutian KE (Lanzhou University) <i>Landscape hazards in Danxia landform of Kongtong Mountain</i>
14:40-14:55	Yang YANG (Tongji University) <i>Mechanical properties of sands subjected to local particle loss</i>	Yaolong HUANG (Jilin University) <i>Geological tectonic control on the landslide of the West open-pit mine in Fushun city, China</i>
14:55-15:10	Jie XU (Tongji University) <i>Effect of drying-wetting cycles on aggregate breakdown for yellow-brown earths in karst areas</i>	Hong WANG (Jilin University) <i>The rubber protective structure design of shed tunnel and its buffer mechanism research under impact load</i>
15:10-15:25	Prakash DHUNGANA (Shimane University) <i>Subsidence cause investigation on the Shinjiko embankment by microtremor chain array survey</i>	Kongming YAN (Southwest Jiaotong University) <i>Seismic responses of deep buried pipeline under non-uniform excitations from large scale shaking table test</i>
15:25-15:40	Yuan Yuan ZHOU (Tongji University) <i>Research on the influence of seepage on the unsaturated landslide dam</i>	Shuai ZHANG (Shimane University) <i>Formation mechanism of large landslides triggered by earthquakes in tianshui loess hilly region</i>

15:40-15:55	Yingying TIAN (Institute of Geology, China Earthquake Administration) <i>A model coupled with artificial neural network (ANN) for assessment of susceptibility to earthquake-induced landslides</i>	Chengpeng LING (Chengdu University of Technology) <i>A laboratory study of the correlation between electrical resistivity and matric suction of the loess</i>
15:55-16:10	Chenxiao TANG (University of Twente) <i>Analyzing post-earthquake landslide activity using multi-temporal landslide inventories near the epicentral area of the 2008 Wenchuan earthquake</i>	Kentaro KURIBAYASHI (Eight-Japan Engineering Consultants Inc.) <i>Study on tsunami-resistance of a reinforced soil wall based on water tank experiment</i>
16:10-16:25	Xiaoya WANG (Taiyuan University of Technology) <i>Research on the prediction method of starting water content of natural loess landslide</i>	Rong ZHOU (Qingdao University of Technology) <i>Fast shear behavior of saturated and dry Loess at South Plateau Landslide of Jingyang, Shanxi</i>
16:25-16:40	Yangjuan BAO (Tongji University) <i>SPH simulation for entire process of Tangjiashan landslide under the action of earthquake</i>	Xiaohang SHAO (Tongji University) <i>Landslide movement mechanism analysis using LiDAR technique through point cloud change detection</i>
16:40-17:30	Visit the laboratories in Kyoto University (Ring shear apparatus & Centrifuge apparatus)	
17:30-19:30	Closing Ceremony & Farewell Party	

Venue Floor Plan

Terrsa, Matsue



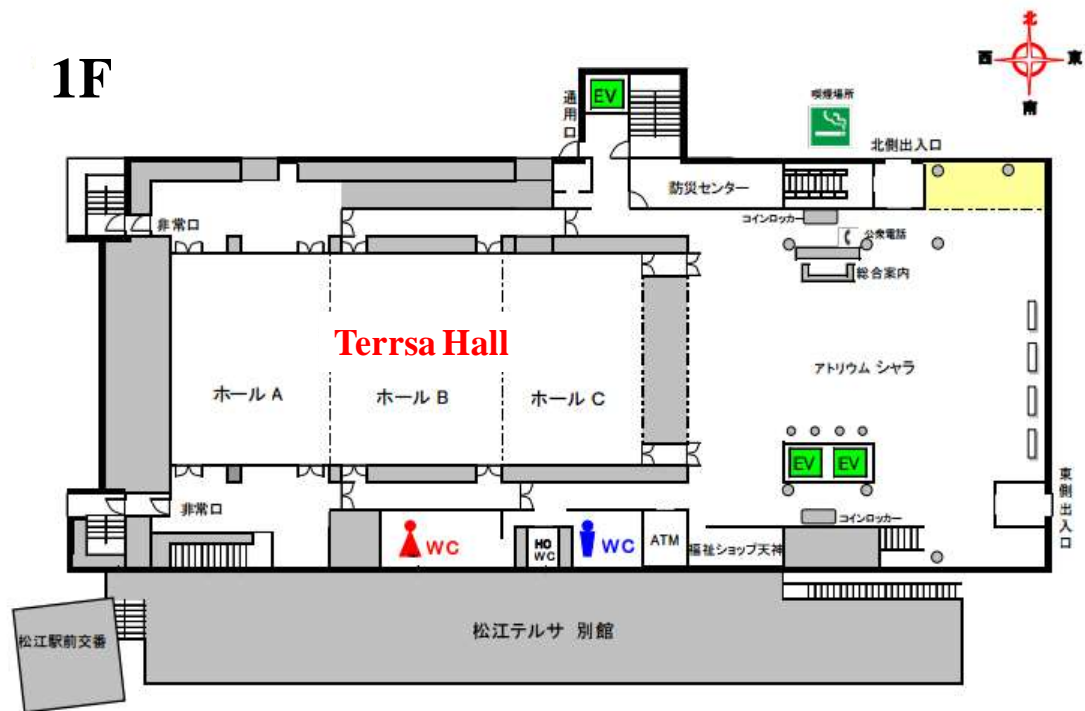
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|-------------------------------|------------------------------------|
| ★ Terrsa, Matsue (Main venue) | ○ Matsue Station |
| ① Hotel Alpha-1 | ④ Dormy inn express |
| ② Universal Hotel | ⑤ Excel Hotel Tokyu |
| ③ Green Rich Hotel | ⑥ Hotel Ichibata (Welcome Banquet) |

Location of the venues and surrounding hotels in Matsue



Terrsa, Asahi-cho, Matsue Tel: 0852-31-5550

Add: 478-18 Asahimachi, Matsue, Shimane Prefecture



Plan of 1F, Terrsa, Matsue



Plan of 4F, Terrsa, Matsue

Obaku Plaza, Kyoto

Take the Nara Line of JR train (240 JPY), get off at the Obaku station (08:13-08:37). The way from the Obaku station to the Obaku Plaza is shown in the following figure.



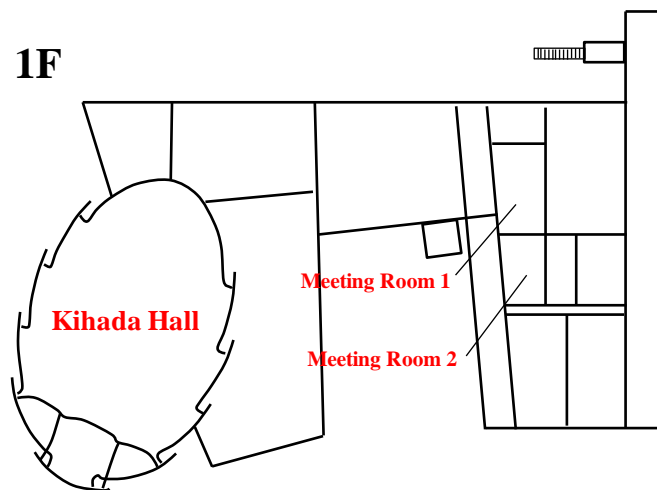
Location of the hotels near the Kyoto Station



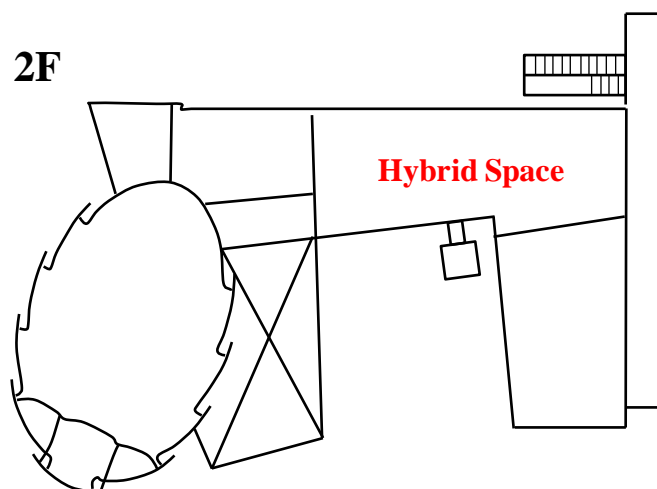
Location of the O-baku Plaza and the JR Station



Obaku Plaza, Uji, Kyoto Tel: 0774-38-4394
 Add: 611-0011 Kyōto-fu, Uji-shi, Gokashō, Kashiwada-67-1



Plan of 1F, Obaku Plaza, Uji, Kyoto



Plan of 2F, Obaku Plaza, Uji, Kyoto

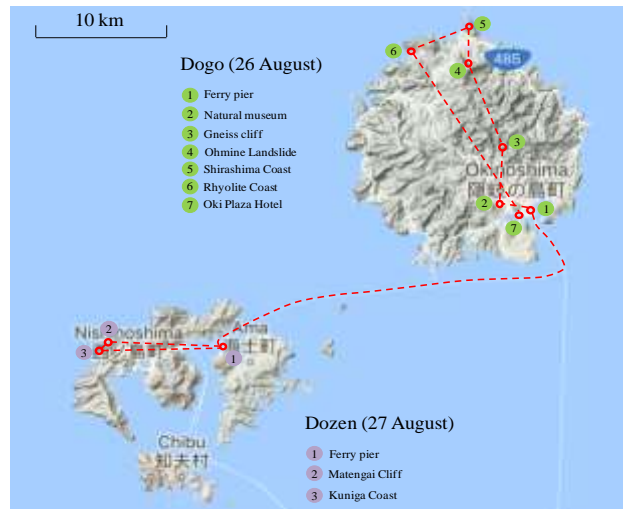
Field Excursion (Oki Islands)

26 August:

Departure time: 07:40 am, 26 August;

Gathering place: South gate of the JR Matsue Station.

- | | |
|-------------|--|
| 09:00-11:30 | Travel from Shichirui Port to Dogo by Ferry; |
| 12:30-14:00 | Natural Museum; |
| 14:00-14:30 | Gneiss cliff investigation; |
| 14:30-15:30 | Ohmine Landslide investigation; |
| 15:30-16:30 | Shirashima Coast investigation; |
| 16:30-17:30 | Coastal erosion investigation; |
| 18:00-20:00 | Dinner in Oki Plaza Hotel. |



Excursion route in Oki Islands

27 August:

- | | |
|-------------|--|
| 08:30-10:10 | Travel from Dogo to Dōzen by Ferry; |
| 10:30-11:30 | Rockfall investigation at Matengai Cliff; |
| 11:30-12:30 | Coastal erosion investigation at Kuniga Coast; |
| 14:10-16:00 | Travel from Dōzen to Matsue Station. |

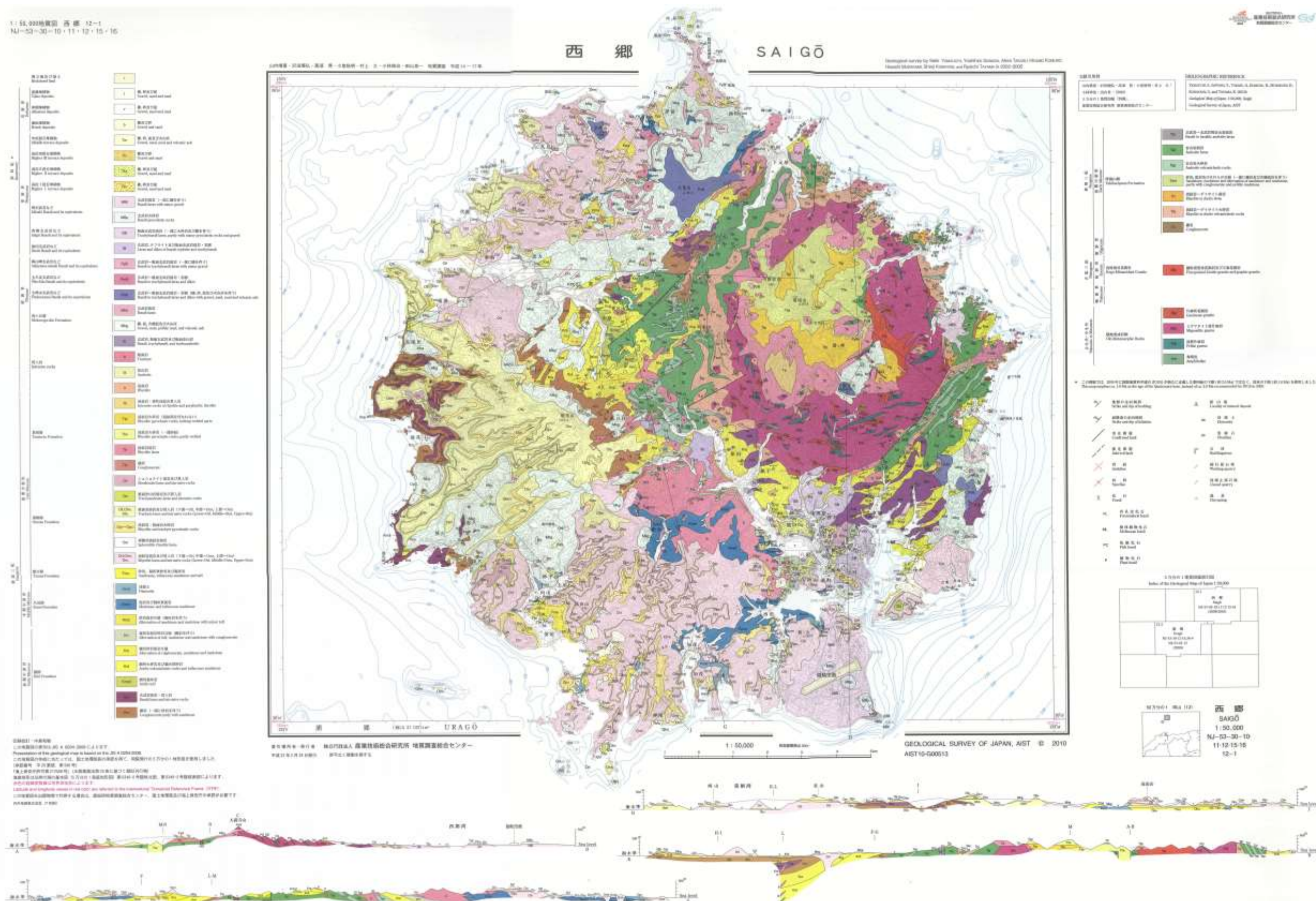


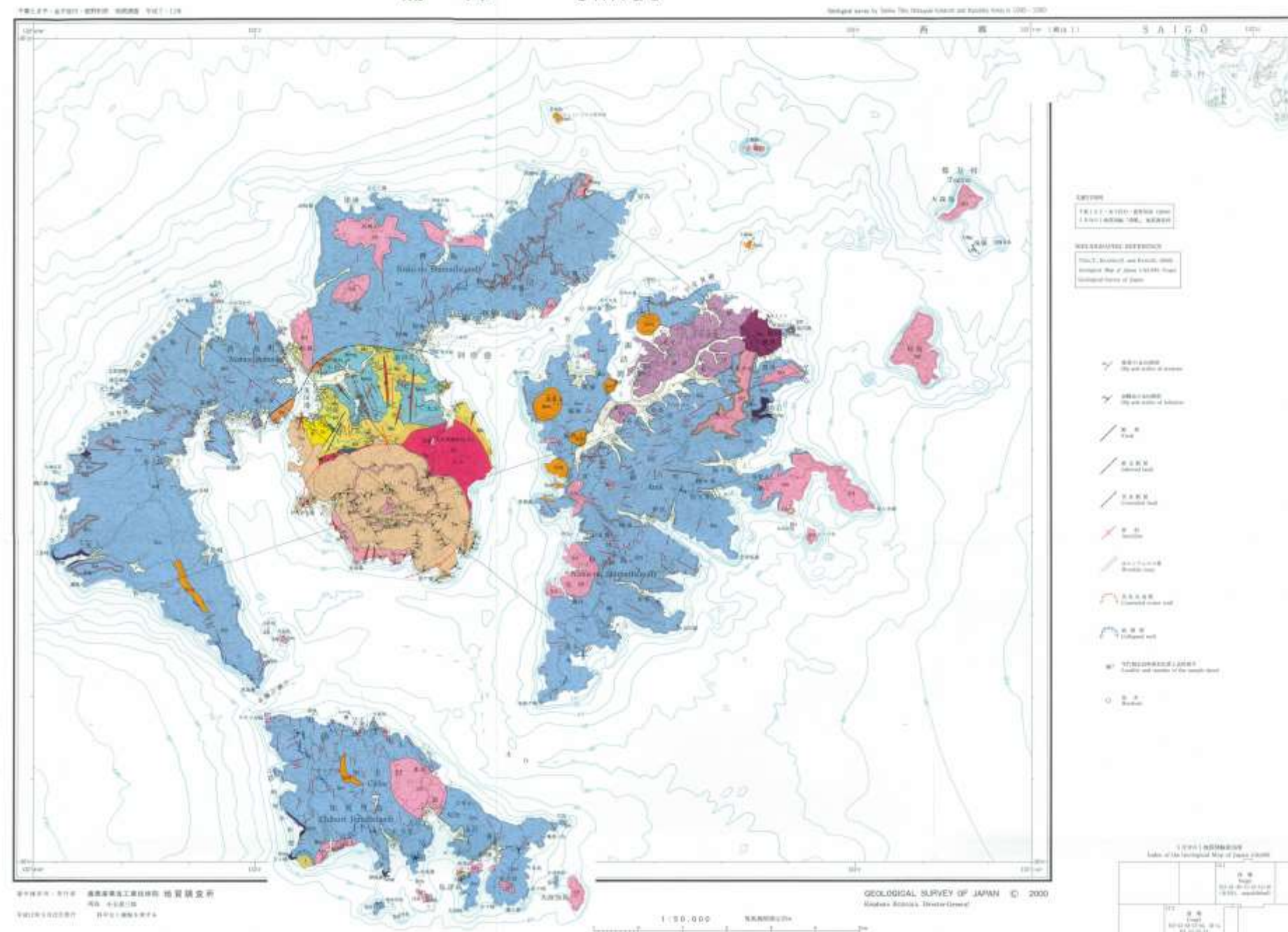
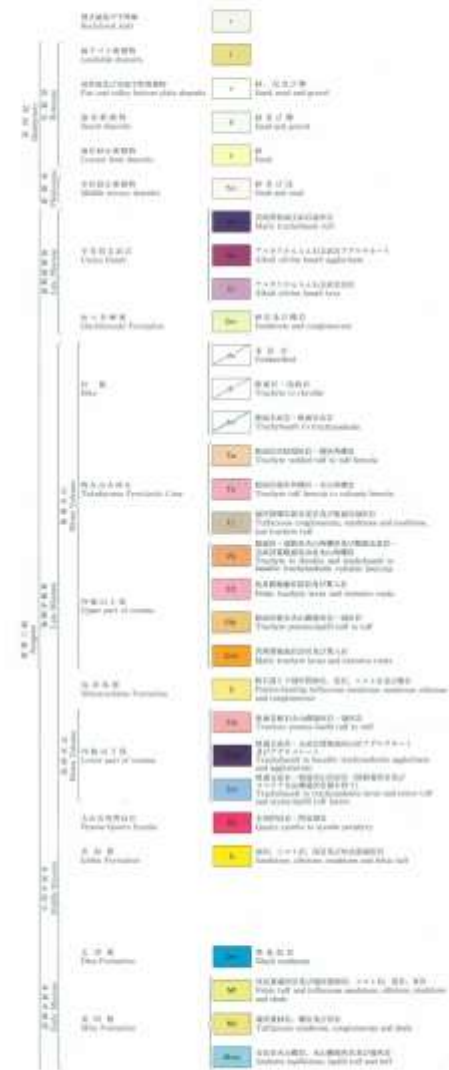
Oki Plaza Hotel



Ferry to Oki Islands

1: 51,000地质图 西 德 12-1
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