# Izu-Oshima Geopark –Monitoring the Collapsed Site of Mudslides Disaster

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In Oct. 2013, there occurred serious damage in Izu-Oshima Island caused by mudslides triggered by the heavy rain of Typhoon No. 26. Local residents had felt nervous on rainy days about muddy water flowed from the bare soil of the slid slope.
In Nov. 2014, Tokyo metropolitan government scattered seeds of greening plants including non-indigenous species such as leguminous plants and Japanese green alder, in order to stabilize the slope. Although it is said that those plants will be covered by local plants, some residents are concerned about their effects on local vegetation.
On Mar. 14, 2015, Izu-Oshima Geopark started monitoring the site, joined by local people, based on the consideration that what important for the community is to live accepting, observing and thinking natural changes as it is. Izu-Oshima Geopark Promoting Committee has conducted survey once 1-2 months on several items such as weather conditions including precipitation, the amount of top soil erosion and the state of revegetation, in cooperation with Tokyo University of Agriculture and Technology, Ministry of the Environment and Civil engineering division of Tokyo Metropolitan Oshima Island Branch Office.
We report the past year observation progress and results as of Mar. 2016 and future issues.

Keywords: Geopark, Monitoring the Collapsed Site, Mudslide Disaster

 

# Mt.Kurikoma Area geopark/Education of disaster prevention are promoted by against side reader of Disaster prevention!

*Rie Nakagawa[1]

1.At the foot of Mt.Kurikoma Geopark Promotion Conference

Mt.Kurikoma Area geopark which makes the Miyagi-ken Kurihara city whole field an area makes the catchword of the match Iwate-Miyagi earthquake in 2008. That stops weathering of a memory of an earthquake disaster, this experience, children in posterity, it can be utilized, it's for the purpose. But it's also fact that new resources were brought by this earthquake to an area. Kurikomayama located in the center of the Ou Mountains made with a volcanic activity in new time relatively is symbolic existence of Mt.Kurikoma Area geopark in the history of the Earth. It's because people's work in an area has been supported by the favor this Kurikomayama brings. But Kurikomayama made new time was rotted in the Kurikomayama foot of a mountain the part and fell in case of an inland earthquake because there was a feature which tends to collapse, and a mudslide such as landslides and avalanches of earth and rocks occurred by about 3000 points. "Aratozawa (offal and, ZAWA) landslide" in an interesting place in Mt.Kurikoma Area geopark also has value as the place where the activity that the earth is dynamic is felt from its size and the violent form at the inside. The Tsumetazawa (it's cooled, ZAWA) fall place" changed completely to the form which is completely different from earthquake before by a landslide, a collapse and occurrence of an avalanche of earth and rocks is the place where flood control afferestation construction was performed and is the place it's possible to see the form of the area that I live as well as nature where. Thus it was brought by an inland earthquake to the highlight Kurihara city where work in the new earth is felt relatively in the history of the Earth.
I'm utilizing such resources, am putting the emphasis on disaster prevention and gensai education and am promoting activity in Mt.Kurikoma Area geopark, and because it's geopark, I'm wrestling variously saying children can understand the accident special quality of the area through the interactive education which can be achieved.
After all every time I meet with a catastrophe in Japan where an earthquake, a typhoon, a flood and landslide disaster are located in an accident spot of frequent occurrence, various measure has been got as the lesson. For example the voice to which I'll advance earthquake-proof diagnosis in a building and aseismic reinforcement at all part taking this accident as an opportunity by the Hyogo prefecture south area Earthquake which occurred in 1995 is strengthened, and Building Standards Law is revised about a seismic criterion and, newscasting and the experience by which it's also the past that an urgent earthquake newsletter flows to a cellular phone, it's based, and. Kurihara city which promotes Mt.Kurikoma Area geopark would like also to put the emphasis on disaster prevention in this area.

Keywords: Geopark, Disaster prevention, Education

 

# Activity report of the Geoheritage research group consisting mainly of the local people in Yuzawa Geopark

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1.Yuzawa Geopark Promotion Group, 2.Network of Earth Science Museums in whole Akita Prefecture

A geopark is defined in an area. This has some importantplaces to understanding the area. There are 16 important places of Yuzawa Geopark in Tohoku, Japan. These places were selected based on the result of scientific investigation by the Network of Earth Science Museums in whole Akita Prefecture. This investigation was conducted from 2010 to 2014. We must continue the investigation for sustainable development. The local people know in detail about the area of geopark. We set up the geoheritage research group consisting mainly the local people in Yuzawa Geopark.
In 2014, the Geoheritage research group was established in Yuzawa Geopark. The members of the group read the reports compiled by the Network of Earth Science Museums in whole Akita Prefecture in turns. In 2015, they separated into two groups, and studied about two topics. One topic is origin of Futatsumori. The Futatsumori is two small hills famous for dacitecolumnar joint. The members of the Futatsumori group took samples of four type rocks: Futatsumori rock, Bosawa andesite rock, Kawaiyamadacite rick and Kabuyama andesite rick. They described characteristics of these rocks. Another group study about the grain size distribution of the fun deposition. The group members took samples of five points in one alluvial fan. They divided into five grain size groups, and calculated the grain size distribution of each point.

Keywords: Geopark, activities of the local people, Yuzawa Geopark

 

# Introduction of the Kamui Geopark: The watered land of Kamikawa basin and Kamuikotan belt with deep forest of Taisetsu volcano

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1.Earth Science Laboratory, Hokkaido University of Education at Asahikawa, 2.Geopark club of Asahikawa

The Geopark club of Asahikawa, a voluntary organization, was launched in five members in 2012 for the purpose of contributing towards a certification with Japanese Geopark Network as Kamui Geopark. Entitled “Kamui”, including the name of the geological heritage region of the Kamui-kotan belt and Taisetsu volcano (*Kamui-mintara*) is in honor of the indigenous people Ainu who love nature and has been living with nature. This area of Kamui Geopark concept contains the Ishikari River zone including Kamuikotan canyon and Kamikawa basin, and its source region of the Taisetsu volcano. In the municipality, the geopark concept area are contains Asahikawa city, and Takasu, Higashikagura, Higashikawa, Toma, Pippu, Aibetsu, and Kamikawa towns.

Keywords: Kamui Geopark, Taisetsu volcano, Ishikari River, Kamikawa basin, Kamuikotan belt, Asahikawa

 

# Cooperation with through Local resident toward the Relization of Tokachidake(Biei-Kamifurano Area)Geopark

*Takeaki Saito[1], Hasegawa Takahiro[1], Ishikawa Masanori[1]

1.Tokachidake foot of a mountain Geopark Promotion Council

Tokachidake (Biei-Kamifurano area) Geopark plan, the history of which is an active volcano Tokachidake has brought the region, vast undulating hills, to preserve the region's heritage, such as a variety of alpine plants, foster regional Love, regional activity the for the purpose, as the efforts for the local residents by the local residents of the local residents, launched a Tokachidake foot of a moutain Geopark Promotion Council consisting of 2towns of Hokkaido Biei-kamifurano from April 2015, It began its activities.
Configure the Tokachidake foo of a moutain Geopark Promotion Council five subcommittees, each of which expand the activities that take advantage of the features in a professional point of view. As the effect of advancing the well-known activities such as talks and lectures in the Subcommittee, it was reflected in the survey results that the interest in the Geopark of residents is growing little by little. Activities in each of the Group has shown a deepening, it can also be expected spread of future activities.
As a result obtained in the bottom-up activities of the past in this announcement, to introduce local residents to the Group of the key person. I want to place a Geopark making local residents is the protagonist from the Geopark.

Keywords: Geopark, Tokachidake, Biei, Kamifurano, Bottom-up activity

 

# Dairy in Yakumo - The tentative plan for "Yurappu Geopark -

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1.The Association of Geopark Plan, in Yurappu, 2.Earth Science Co.Ltd

Yakumo-cho is a town that has the chief industries of the dairy farming and the fishery which owns the two seas of the Pacific Ocean and Sea of Japan, being in the narrowest part in Oshima Peninsula.
Since 2012, it is doing an activity while the geopark conception preparatory meeting of the private base gets the support from Yakumo town, too.
The tentative plan for Yurappu Geopark is in the process of being selected geo-site Yakumo in the entire as its range. In the past, introduced the “Locality exploration of archaeological relics and a theme of geopark - an example of the Yakumo geopark plan”,” A geological history of the Oshima peninsula, southern Hokkaido, Japan - The tentative plan for "Yurappu Geopark"” as one of the main theme. This time, is one of the main industries of Yakumo a "dairy" in theme, to introduce geo-site candidate.
1.Meiji-Taisho
Using bovine as Koushi, time that has been sold by processing the starch from the potatoes.
2.Taisho-Syowa
Shepherd a cow or more in each farmer, they were going to field crops while restoring the soil fertility in the compost
3.Syowa- Nowadays
Shepherd a lot of cattle to grow the grass, doing a dairy with a focus on milking. Some dairy farmers to make cheese and ice cream.

Keywords: The tentative plan for Yurappu Geopark, Dairy, the Oshima peninsula, HOKKAIDO

 

# Let's enjoy Shimokita Geopark!

*Tomofumi Araya[1], Kazuhiko Hirata[1]

1.Association for Promotion of Shimokita Geopark Plan

Attractions and recent activities in Shimokita Geopark Plan will be shown.

Keywords: public activities, culture

 

# Activities of GASSAN GEOPARK PLAN

*TADAKATSU GOTO[1], Tomohiro Shibata[1], Tomoo Hashimoto[1], Asami Saito[1]

## 1.Association for Promotion of Gassan Geopark

Mt.Gassan (1,984 m) is located in the Dewa mountain range, nearly at the center of Yamagata prefecture. It has two different looks; gentle from the east, but rough from the west. The cliff on its western side causes strong winds and snow clouds in winter, and that results in the deep accumulation of snow rarely seen anywhere else in the world.
The heavy snow is a burden to people who live around Mt.Gassan. Along with geology, the plentiful water produced from snowmelt is a major cause of landslides. This part of the country is a notable landslide-prone area. On the other side, snow contributes to people there, becoming pristine water that refreshes the agricultural lands in summer. We live with these gifts from Mt.Gassan.
Natural features of Mt.Gassan such as heavy snow, strong winds, and landslide-prone geology may be disastrous, but lead to rich ecosystem and fruitfulness of this area. Therefore, people have been revering the mountain as a symbol of religious belief called “Dewa-Sanzan Sinko (Faith in the three mountains of Dewa)The Association for Promotion of Gassan Geopark was formed in March 2015, and is composed of Tsuruoka city, Shonai town, Nishikawa town, Ohkura village and Tozawa village in Yamagata prefecture. The purpose of our activity is to acknowledge the values of our life, culture and nature in our area and to be proud of our lives. We think it is important for continuing existence of our cities.
As a first step of our activities, we did workshops and fieldworks with Ministry of the Environment to value our local resources one more time. And then, we did a workshop involving 5 cities to share these results. In addition, we gave lectures to be a Gassan Geo Guide with a help from Yamagata University. And now, we are going to accept inbound Geo-tour from Southeast Asia and other parts of Japan.
At this poster-session, we are going to present our activities and the results of Gassan inbound geo-tour.

 

 

# Mt.Tsukuba area geopark project

*toshitsugu Shibahara[1]

1.Mt.Tsukuba Area Geopark Promotion Council

Mt.tsukuba area geopark project“Mountains and a lake on the Kanto plains” is the main theme of Mt. Tsukuba Area Geopark, and “rock, soil and water connecting people to nature” is the sub-theme.Three geographical features are highlights of the Geopark. The first, you can see mountains. The Tsukuba Mountains, whose massif is Mt. Tsukuba, one of the Japanese hundred greatest mountains, are at the center of the area, and the Keisoku Mountains are in northern area. The second, there is Lake Kasumigaura. The lake is used to be an inland sea and traces still remain. The last, there spread the Kanto Plains. These wide open plains embrace these mountains and the lake.In Mt. Tsukuba Area Geopark, you can enjoy natural landscapes and history of geomorphology and geology. People living in Mt. Tsukuba area have made better use of rocks, soil and water, and have developed agriculture, fisheries, the ceramic industry, the stone industry and so on. Moreover, people have created culture and religion unique to the area.We should appreciate the blessings of nature and industries, cultures and religion born in the Mt. Tsukuba area. It is our mission to hand down the local traditions to the next generation.

 

# Consideration of the concept of the Akigawa Valley Geo Park Project

*Tomoki Aotani[1], Toshiaki Osada[2], Takeharu Ohkubo[3], Tadashi Tsutiya[3]

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In the Akigawa basin of the western part of Tokyo province, this Geopark project members hope to established Geopark for the Hirai River and Akigawa River was one of the main tributary of the Tama River. The Geopark project is not yet construct in this place except the islands part of Tokyo. The authors think that can contribute to the development of the Geopark network, if it is construct of Geopark that only one Tokyo province which existed land area, can send important message to the whole country. There are many places which has the earth science phenomena and make use of an advantage to be near to Tokyo , as one of the place learning which is breeding of the geoguide of Tokyo can functionalize it, as sample and test field of the whole country Geopark.
About this project, the authors are examining the concept and established geostory, In addition, led by the main member of the geo-guide training lecture that the authors held for two years, the authors advancing forward the choice and the routing of the geo-site. The authors can give a point following as a characteristic of this project area located in the southeastern foot of Kanto Mountains while the authors think about a keyword making a concept.
1.Being the place where a clear stream that the basin does not have a big city and dam, and the river repair is minimal, and to rarely watch in Tokyo is seen in
2.A variety of geological features and topography which it is brought up by a flow of Akigawa and the Hirai River, and were established be seen
3.The local thing that it hold the key for the evolution of the earth elucidation of the Japanese Islands by being located in the central part of the Japanese Islands, and being located in the meeting department of the island arc
Not only this area provided the place of the simple geo-tourism, but also the writers made use of the variety of the local earth science and examined it how you could contribute to this local sustained development. Furthermore, with the participation of many people, the authors want to widen a ring of the design realization The authors make a concept clear and want to harden footwear for the authorization of the Geopark by having other local Geopark people concerned and experts exchange opinions.

Keywords: province of the Akigawa valley geo park project, clear water river, concept, earth, Akikawa, Hiraigawa

 

# Activities of Tosashimizu Geopark Plan

*Hisaaki Sato[1], Wataru Hasegawa[1], Kaori Inada[1], Michiru Sakai[1]

1.Tosashimizu Geopark Promotion Council

Tosashimizu Geopark Plan is a geopark concept includes Tosashimizu city, southwest Shikoku Island and aim to designate as a member of Japanese Geopark Network in 2017. The promotion unit is established in April, 2014 and the promotion council is launched in February 2015. This poster informs geo-tours, side-readers, and a geo-tour guide training course which starts from 2016.

Keywords: Geopark, Tosashimizu

 

# Hakone Geopark aim for further development by admissioning Minamiashigara City.

*Tomofumi Aoyama[1]

1.Hakone Geopark Promotion Council

Hakone Geopark consists of 1 city and 3 towns at present, Hakone Town, Odawara City, Manazuru Town and Yugawara Town, was authorized by Japanese Geoparks in 2012. We have worked on holding of Geotours, educational activities and environmental improvement for these 4 years.
We will apply new authorized examination including Minamiashigara City which neighbors Hakone Geopark, in 2016. When Minamiashigara City is added to Hakone Geopark, it will produce further depth and expanse in Hakone Geopark's theme and story and leads to further development in the future.

Keywords: Geopark, volcano

 

# The process to reach the Happo-Shirakami geopark from the World Heritage Site

*Hidemi Kudo[1]

1.Promotional Meeting for Happo-Shirakami Geopark.

When a part of Shirakami mountains were registered as an UNESCO World Heritage site in 1993, many people in Happo-town wondered why no valuable mountains became treasure mountains in the world. But some people found that is the most important occurrence.
At that time, the Happo town were underpopulated area. Then the administration of Happo town became to built a new woodpass from Happo town to Nishimeya village in Aomori pref. through Shirakami mountains covered with virgin beech forests. But this plan went out because of Japanese recognized the forests were true treasure in the world.
In Happo town, two volunteer organized Association of Shirakami nature and Association of Shirakami guid. Who wants to be guid the area must get the qualification for this purpose, they learn botany, zoology, physiography, and geology. Who learned above mentioned them might have preceeded experiments. So they could understand the purpose of Geopark easily.
An important point of learning shows as follow.
1. Greentuff movement
2. Lifting up land and physiography
3. How to guid at the field
4. How to teach for children outdoor lessons

Keywords: the Shirakami mountain, the Seisyu woodpath, UNESCO world heritage site, outdoor lessons, preceded experiments

 

# For the Geopark promotion of the bottom up type that became inhabitant of Shimonita

*YASUYUKI KANAI[1]

1.geopark shimonita council

Introduction
Shimonita in Gunma is the town which is full of nature which assumed Shimonita-negi(green reek) and konjac(devil's tongue) a main special product. In the town which prospered in industry using underground resources and the topography including a mandarin konjac flour milling and Nakaosaka mine including Arafune fu-ketsu (World heritage), the trace stays now. It is the place where geological feature phenomena crowd, and a trace of the diastrophism is left in the town.
We began Geopark promotion as the citizen-based town planning that utilized local resources. Re-examination to maintain the quality of the Geopark is carried out last year; Shimonita town called the authorization with the condition it followed. In this announcement, I reported it about the problem of the Shimonita Geopark that became clear by Re-examinaiton of Geopark and the later countermeasure.
Reexaminaiton for Geopark
We received reexamination in November, 2015. In reexamination, hearing was carried out about the 4-year activity contents and administration method of the Geopark Shimonita council. Shimonita Junior High School, Shimonita nature research center, Nihon-Geopak-Shimonita-Ouendan introduced activity. They exchanged opinions with a judge.
The problem of Shimonita Geopark and the future promotion system
By this reexamination, it was a good evaluation about each activity contents of the group about the Shimonita Geopark. However, the following things were pointed out. Primarily those activity was active by the policy of individual groups, and what Geopark Shimonita council to take the center of the Geopark administration on did not place for this local overall Geopark activity had it pointed out. Second it was pointed out that was not organized that a meeting organization drew up the opinion of inhabitants enough.
Therefore the We decided to organize a meeting again.We organized the sectional meeting(Sectional meeting specialized in the arts and sciences, industrial tourism sectional meeting, guide sectional meeting, education sectional meeting) that I composed of the member of each group which played an active part in a town in the lower part of the meeting and decided to perform the problem solution along the theme each. We are going to change it to the administration of the bottom up method to let Geopark promotion reflect content discussed by a sectional meeting.
In the Geopark Shimonita council that became the new system, We want to make the solution to local problem and the vision of Shimonita Geopark in the future.

Keywords: Geopark, Earth Science Education, Gunma Prefecture

 

# Sado Island Geopark guides have just started to produce their own guided tour

*Yayoi Ichihashi[1]

1.Sado City Board of Education

Sado Island Geopark Promotion Council has given much support to Sado Island Geopark Guide Association to hold their workshops and to operate their geotours since it was established. Guides have just started to produce their new courses since 2015.We have a lot of guided-tours in the southern area. On the contrary, we don't have many tours in the eastern and northern area. Then, geoguides have just started to have workshops to research the area and to produce new courses. Their own workshops and researches work incredibly well to make new interesting courses. Moreover, each guide can feel more responsibilities and affection on their own cources through activities.
2 Write down everything such as food, culture and tradition in their hometown or favorite area
3 Link everything, which you wrote down in 2, together
4 Consider the relationship with the earth When they needed some advice for references andfurther information of geological geology and geomorphology, Sado Island Geopark Promotion Council gave much help to every guide, especially when they did method4.We've already had workshops twice in the past and in these workshops, 8 new courses were produced. Also, each group of guides often visits the area to study on their own. These courses are the first geo-tour-courses with using these methods. Now, we will have some workshops to produce some new courses to make it commercialize.

Keywords: geopark, sado island, guide

 

# A Geo-Tourism Experiment to Utilize the Know How of Mountain Guides

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1.Tateyama Kurobe Geopark Council, 2.Tateyama Guide Council, 3.Travearth, 4.Tateyama Caldera Sabo Museum, Toyama Prefecture

Inside Tateyama Kurobe Geopark, there are a variety of sightseeing spots besides Mt. Tateyama such as the Tateyama Kurobe Alpine Route, the Torokko train that runs through the Kurobe Gorge, Unazuki Onsen, and many more. For example, at the Tateyama Kurobe Alpine Route, which more than one million tourists have visited, there has been a shift from traveling in groups to traveling on one's own and an increase in tourists from foreign countries mostly from Taiwan and Southeast Asia but also from the West. In these conditions, Tateyama Kurobe Geopark has been able to present sights such as the mountainside view and the plant and animal life in the alpine area. By combining the topographical and geological features, the plant and animal life environment, and the relationship with people, this value-added tourism has continued to develop.

To make this come true, Geopark utilizes private organizations special to Tateyama Kurobe. Cooperating with Tateyama Kurobe Kanko Co. (which develops the Tateyama Kurobe Alpine Route), small, ambitious tour companies, and transportation companies (which develop trains, buses, etc.), we are currently planning a project with the goal of creating a new tourism business. We believe that Geopark's features, including the preservation of the global environment and the development of businesses using sustainable methods, can be passed on to the next generation and be utilized as appealing commodities.

The Travearth holds a tour that follows a gushing spring starting in the center of Toyama City and ending in Tateyama Murodo located 2450m away. Tateyama Kurobe Geopark values this kind of travel commodity that contributes to and widely introduces Geopark and presents the possibility of becoming business partners.

To conduct tourism in the mountain district we are prepared for the dangerous areas and sudden weather changes. Tateyama Kurobe Geopark trains the Geoguides of the Tateyama region only around Murodo where there are few dangerous areas and not in areas that require mountain climbing. To conduct tours in these types of areas, we cooperate with the Tateyama Guide Council and prepare essentials for the mountain guide to conduct the tours. For example, glaciers exist directly under Mt. Tateyama (Oyama 3003m), therefore, products required for the tours of these glaciers are expected. Geopark places great significance on the cooperation with the Tateyama mountain guides for these tours. From now on, to carry out Geopark's mountain tourism we will be holding tour guide lessons for Tateyama mountain guides.

The significance of the prevention of growing dangers and the response to accidents by Tateyama mountain guides until now can even be applied to the tourism of non-mountainous areas. We are now holding a Geoguide training course and a risk management course as a required course for Tateyama mountain guides.

Keywords: Mountain Guide, Tateyama Kurobe Geopark, Geo-tourisum

 

# Seeking for the solutions on the issues of geotourism in a workshop ~Report of the 3rd Chubu Regional Conference of Japanese Geoparks~

*Ryoichi Onishi[1], Shinsuke Nakamura[1], Tsuyoshi Hibino[1]

1.Hakusan Tedorigawa Geopark Promotion Council

Geopark is an initiative aiming for local development using geological heritages. Although geotourism is one of the main geopark activities along with education and conservation, there are many problems among it.

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One of the reasons is the feature that the situation differs among each geopark and we cannot take a standard solution. Therefore, each geopark needs to seek for their own solution and this is leading to some difficulties in finding solutions. However, if people from different geoparks or different positions can exchange their ideas, we may be able to find a new viewpoint and find out the hint for the solution.

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Accordingly, we held a workshop in the 3rd Chubu Regional Conference of Japanese Geoparks on 17th-18th November 2015 which took place in Hakusan Tedorigawa Japanese Geopark. We had a group discussion seeking for solution of the problems which each geopark in Chubu region is facing. On the second day we had a geotour, searching problems in our geopark's tour and hints for each geopark tours' improvement.

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In the group discussion, we discussed the solutions for each problem on geotours or geoguides, which each geopark is really facing. The topics were decide based on the questionnaire submitted by each geopark prior to the conference, which asked the subject, the ideal, the background etc. 8 topics were picked up in 8 groups, each composed of around 6 members. A delegate from the geopark facing the problem topic was included in the members, in order to explain the situation. Members were composed of management staffs and geoguides, avoiding members from the same geopark. After the discussion, each group presented their results in front of all the participants.

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For example, in the group which discussed the Itoigawa Geopark case, the situation was explained that the aging of guides is serious and it's difficult to make their lives only by guide. In the discussion, a solution to certify guides in divided areas was proposed. The delegate from Itoigawa Geopark noticed that it is one of the solution to train and certify the local people conserving each geosite, in despite of the criteria for certified guides is to know equally about the whole geopark area in order to keep the high quality of guides.

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In the geotour, we had 3 courses based on the real tour held in our geopark for customers. In the end, we had a monitor survey to pick up the honest opinions or feelings of the participants. We asked the reason selecting this course, satisfaction level of meals, perspicuity of guides, satisfaction level of the whole tour, etc. One participant who walked around the town by an old map mentioned that the future development using the old map was difficult to understand, which we noticed firstly on this survey. Another one who joined the salmon tour mentioned that he would like to adopt the style involving the local people in the tour.

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As the conclusion, the group discussion was helpful for each geopark to get the hints for solving their problem. In addition, each geopark seems to have brought back some realistic solutions since

 

the guides were involved in the discussion.
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The geotour also seems to have offered some hints for solution to not only our geopark but also to the other geoparks, by finding some good points and bad points through the participation in the real tour.

Keywords: Geopark, Geotourism, Problem solving, Workshop

 

# The Izu Peninsula Geopark awareness survey

Iida Masato[1], *Tetsuya Ota[1], Yoshikawa Kaoru[1], Yuna Matsumoto[1]

## 1.Izu Peninsula Geopark

The Izu Peninsula Geopark Promotion Council was established in March 2011, and the area was certified as a Japanese Geopark in 2012. This geopark is currently carrying out activities for becoming a UNESCO Global Geopark. The main story of the geopark centers on the collision between the Izu massif and Honshu due to the motion of the Philippine Sea Plate and volcanic landforms of different types that can be seen in the peninsula as a result. The geopark is spread over a large area of 2027 sq.km and is composed of 15 cities and towns. The area has an independent Geoguide association where local citizens are actively engaged in geopark promotion. However so far there was no large survey undertaken in the geopark to measure people's understanding of the geopark (a survey of 350 respondents were carried out during the basic management plan formulation in 2013). The geopark has a total population of about 690,000 people. In order to understand how people think of the geopark, a questionnaire survey was conducted with a sample size of nearly 1100 respondents. There were 25 questions, and these questions were designed to probe attitudes from simple awareness of geoparks to expectations towards the geopark and opinions about specific components like guide panels. This presentation will present the results of that survey and the insight this result provides for future geopark activity in the area. As this is possibly the first large scale survey of people's attitudes to be held in a Japanese geopark, the results will be helpful for other members of the Japanese Geoparks Network.

Keywords: geopark, Awareness survey, residents

 

# Current status and the direction of Geotourism: A case study at the San’in Kaigan UNESCO Global Geopark

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Sustainable development of the region, by preserving the natural heritage, take advantage of education and dissemination and tourism is important for geoparks. Tourism is possibly the one of effective tools for sustainable development in geopark area. By quantitative research in the trend of geotourism in geopark, we analyzed web trend analysis and investigated questionnaire and interviews, to visitors and verified the validity of the geopark guides and outdoor activity providers. We obtained several important results of these investigation, became clear that a) Interest of tourists are a beautiful landscape and outdoor activities, in most case. A result of questionnaire survey, became clear that b) Tourists who used a guide, got satisfaction more than the tourists who didn’t use a guide. Same tendency is obtained for the outdoor activity. From the above, we concluded that the points in the tourism in Geopark is beautiful landscape, outdoor activities and guide. On the other hand, activity providers does not think about importance of guidance in outdoor activities tended to not feel the satisfaction for tourist of the guide, in some cases. Geopark guides does not think about the satisfaction of the tourist of the in extraordinary experience and refresh of the tourist. We suggest the importance of the network creation in the Geopark with the guides and outdoor activity providers, and also other persons who concern about geoparks.

Keywords: San'in Kaigan UNESCO Geopark, Geotourism, Tourist Satisfaction, Geopark Guides, Outdoor Activities

# Business Creation Support Project in the San'in Kaigan UNESCO Global Geopark

*Masakazu Furukawa[1]

1.San'in Kaigan Geopark Promotion Council

For the sustainable development and vitalization of local community, Business Creation Support Project encourages groups/companies which are aiming to start new business, utilizing various regional resources of Geopark.

Keywords: Sustainable Development, Regional Resource, Business

# “ARUKORA Taiji Townscape version” Let’s enjoy! Attempt of disaster prevention Geo-Tour

*Masami Hashiguchi[1,2], Shigeko Kuse[1,2], Emi Washizu[1,2], Tomoki Motozuka[3]

1.TAI-GEO, 2.Nanki Kumano Geopark Guide, 3.Wakayama University

The above title “ARUKORA” means “Let’s walk” in the local language or a dialect. Taiji is a small town. It is known as the town of whale. Its population is about 3300. In those days, people used to live in a small area facing the bay because there was no big river and a few plain fields though there was a coastal terrace. We organized a Geo-Tour in an area which remains attractive to have participants feel our predecessors’ wisdom and the current disaster prevention such as how settlement was made based on geological factors, how to prepare for natural disasters (tsunami, typhoons, etc.)
This tour was co-hosted by TAI-GEO and Center for Research and Education of Disaster Reduction, Wakayama University.
Date June 13, 2015 (Saturday)
Required time about 2 hours and 30 minutes
Course Taiji fishing port -- Rock Gate of Wada (geosite) -- the streetscape where people who were involved in the Whale fishing -- Taiji elementary school (in case of emergency, this is designated as a disaster shelter, observed the local disaster prevention map created by elementary school students) -- Taiji fisheries cooperative office (registered tangible cultural property) -- Ebisu Shrine (torii of whalebones) -- Kosukeya (community space of the vacant house use)
Participants 27 people (male 15, female 12) Age: less than 10 years old - 70’s Living place: Taiji town 7, neighboring cities and towns 6, other cities 9, from other prefectures 5
According to Kiizokufudoki, a topography Kishu clan compiled in the late Edo Period (around 1780 -1867), it says “The entrance of the village at the seashore made a gate by boring the mountain. After going through the entrance, we encountered a place that was suitable for living. Wada clan, who began the ancient whale fishing, governed this place. Once we get into Rock Gate of Wada (geosite), there is a streetscape influenced from Edo era (1603 -1868) Its features are paint coating wooden houses and intricate narrow alleys. Many of these houses were built from 1910s to 1950s. In the southern part of Kii peninsula, typhoons often come here causing heavy rain and strong winds in autumn. Rock Gate of Wada also plays a role in blocking the strong wind from the sea. The terrain of this village is a hinterland that is slightly higher towards the sea.
We can see the situation in which people evacuated the ship there during the typhoon in old pictures. In addition, most of the drainages to minimize the flooding of the village have now become culverts.
During the tour, what we paid attention to was that we did not want participants to think a geo tour was equal to the study of geology or geo was very difficult. In this course, in addition to being able to enjoy walking on a narrow alley, we could see a lot of things such as a house which looked one-story building but actually it was a two-story building, use of painting color, the housing foundation, called “Herishi", grates and eaves back people were particular about, Western-style houses that former immigrants and migrants had built. Also, we kept in mind that participants could feel the environment and the culture of the town which lived with whale fishing from several information. For example, there are a lot of unique nameplates that are related to whale fishing, Seko(deliver a final blow), Tomi (scout), Ryono (fishing) and seeing the origin of fisheries cooperatives and whalebones torii (a shrine gate) in Ebisu Shrine.
Nanki Kumano Geopark was certified as a Japanese Geopark just in 2014. Unfortunately, local people’s awareness about it is not high. We hear comments from them like “What is a Geopark?” “What

do you do for a Geopark “It seems difficult”
We as TAI-GEO would like to promote casual Geo, familiar Geo, attractive local things through Geo-tour planning, participation in events, and the like.

Keywords: disaster prevention, walk through the town, geopark

南紀熊野ジオパーク

# たいジオ。× 和大

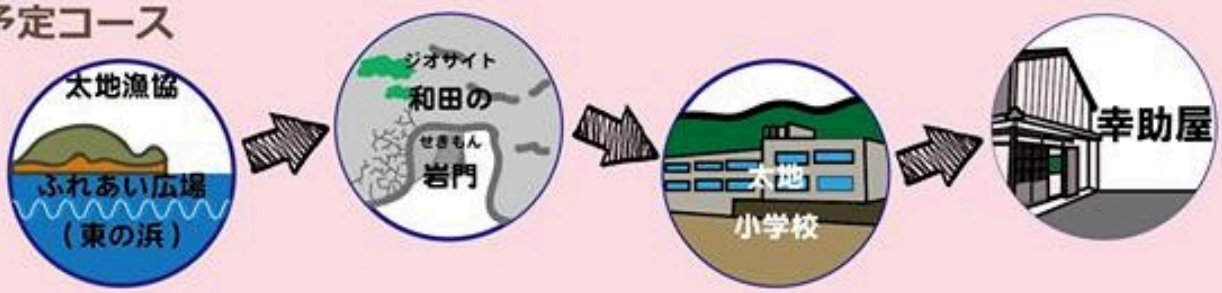
# アルコラ太地

## まちなみ編

太地町を中心に活動する「たいジオ。」がいよいよ始動！
第一弾は和歌山大学防災研究教育センターとコラボ企画した
ジオと防災のモニターツアーです!!

## 6月13日(土) 午後1時～3時30分 / 雨天決行

予定コース




集合・受付：太地漁港ふれあい広場　東の浜
(12:30 分受付開始)
参加費：無料(モニターツアーにつき)
募集人数：30名(先着順)
申込締切：6月10日　17:00 迄
申込：太地町役場産業建設課観光係(担当 濱地)
Tel 0735 (59) 2335
問い合わせ：
和歌山大学防災研究教育センター(担当 本塚)
moku@center.wakayama-u.ac.jp


主催：たいジオ。　和歌山大学防災研究教育センター
共催：太地町、南紀熊野ジオパーク推進協議会
後援：太地町教育委員会、太地町社会福祉協議会、南紀熊野ジオパークガイドの会
スペシャルサンクス　山本新平さん

# New Actions for reduction of troubles on visitors to Mine-Akiyoshidai Karst Plateau Geopark

*Tomoko Yamagata[1], Hokuto Obara[1]

1.Mine-Akiyoshidai Karst Plateau Geopark Promotion Council

Mine-Akiyoshidai Karst Plateau Geopark was approved in last September. Japan Geopark Committee is evaluated that inhabitants understand value of area resources and involve conservation, investigation, research, and children study area resources through an on-site training at school. On the other hand, we must solve the construction of the guide system, the maintenance of base facilities, and the improvement of sign and brochure. In this presentation, we introduce activities and action plan to solve the problem.

Keywords: Mine-Akiyoshidai Karst Plateau Geopark, geotourism, Geo Cafe

# How to Create the Geotour

*yusei miyanaohara[1]

1.Kirishima Geopark Promotion Council

Kirishima Geopark, which hosted the 6th National Conference on Japanese Geopark Network, had launched a networking group about a year before for the geotour, one of the program on the conference. The most of its member were geoguides and they put together a geotour. The “geotour” mentioned above is the tour that takes place on the last day of the conference and is specifically for people involved with Geopark. About half of the participants on conference took part in it and it could be an investigation on the spot. Since participants of the geotour have different knowledge (some of them being administrative officers, geoguides, scholars and businessmen), it allows the geoguides to give more advanced tour than the ones given to locals and tourists.
On the other hand, According to current trend, participants are no longer satisfied with just a bus trip. In our tours it is quite common for the travel time to be longer than tour time, because geosites could locate far from each. In addition, though the geoguides know much about each geosites, they must also have broad knowledge such as the connection between geosites and a scenery seen from a car window, along with speaking skill. Therefore geotour should include not only local history and culture but also an activity. We need to create a new tour that participants will not be bored with using forms of transport other than buses.
This poster beside me focuses on what we though was important in planning a geotour while taking the one held on the conference for example and I would like to consider a potential on new geotourism in Kirishima Geopark

Keywords: Kirishima Volcanoes, Geostory, Geotourism, Regional Diversity

# Efforts to increase the interest in Shikoku Seiyo Geopark -Shikoku Seiyo Geopark Music Contest-

Tsukasa Takahashi[1], Fumito Doi[1], Motoki Yamashita[1], *Yuya Kato[1]

1.Shikoku Seiyo Geopark Promotion Council

Certification of Global Geopark became an official UNESCO program in 2015. It is expected to improve awareness of geopark more and more. On the other hand to make geopark take root in the region, it is essential to increase the number of people interested in geopark by making efforts to not only the interest layer but also the indifferent layer.
In fiscal 2015 we held “Shikoku Seiyo Geopark Music Contest" as efforts to expand the base of people interested in geopark. We had focused on the effect of music in the role-playing game in which children are enthusiastic, and tried to make BGMs enliven the journey in Shikoku Seiyo Geopark. We recruited entries of the contest on the SNS web site "Creofuga" which was used by music creators.There were 2187 applicants finally. In the future it is expected that the selected works entertain the people of the region and beyond as official songs.
In the poster we introduce about challenges and prospects of this music contest.

Keywords: Geotourism, Music, Outreach

# Promotion of "Bandaisan Geopark" in the libraries

*Makoto Hasuoka[1], Hiroshi Sato[2], Yojiro Taketani[3]

1.Bandaisan Geopark Council, 2.Bandai Museum, 3.Fukushima Museum

Promotion of "Bandaisan Geopark" in the libraries

# Role of the Citizen's College at the Core of the Regional Community in Itoigawa UNESCO Global Geopark

Kousuke Miya[1], Shinji Takeuchi[2], Mitsue Yokokawa[3], Katsuhiko Ue[4], Ania Jurago[5], Yoshihiro Terasaki[6], Toshihiro Uchiyama[7], *Ko Takenouchi[8]

1.Tokyo University Gardening Club, 2.Itoigawa City Omi Junior High school, 3.Itoigawa Geopark College, 4.Japan Forest Forum, 5.Warsaw University, 6.Tokyo-Itoigawa Society, 7.Itoigawa Geopark Promotion Office, 8.Fossa Magna Museum

The Tokyo University Gardening Club, a private organization, is composed of graduates and students of the former School of Forestry at Tokyo University. Through the landscape garden theme of "Man's relationship with nature," the club has conducted research since 2008 in the Itoigawa Region. Through this research a number of high quality resources were discovered, leading to the creation of a regional college campus in the study of "Geopark Studies" and the forming of the "Geo Campus Geo College Plan" in 2010 with the goal of regional revitalization.
The reason landscape architects are drawn to Itoigawa is that the potential in the people of Itoigawa for mutual coexistence with natural forces and the natural and cultural resources are similar to the landscape architecture fundamental concept of Man's relationship with nature. This connects the creation of new territory in both geopark studies and landscape architecture and through their fusion a method of regional conservation and actualization is created in practice. As it has been considered to be a place where landscape architecture can be idealized while areas that have not been deepened can be progressed, we established ourselves in Itoigawa City.
The opening of the Itoigawa Geopark College in 2012 was envisioned to have its campus cover the entirety of the Itoigawa UNESCO Global Geopark. We have conducted activities to create a regional community, experience, learn, research and plan with the opening of our school.
We are hoping that by cooperating with the Geopark we will be able to act as a prototype model for other regional cities. This program can bring visitors from outside the region by bringing together regional lecturers for scientific and cultural exchange through Sustainable Development Studies and through the inclusion of specialists. Partnerships with the Itoigawa Geopark Council, Chamber of Commerce, and Board of Education are proactively being advanced helping to advance the creation of a new field of "Geopark Studies" and a result is being seen through the promotion of this to universities and government ministries.
From the above, the Itoigawa Geopark College's outline, goal and plan are as follows:
Outline: "A school in a city of greenery rich in culture, wildlife and topography."
Goal: "An Itoigawa where people have a connection with nature. An Itoigawa here people can coexist with natural forces."
Plan: "Conservation and use of the Geopark. Planning of a sustainable environment. Planning and implementation of environmental education."

Local people take a primary role in the Geopark College and through the joint planning between outside specialists and local people, a trimester-based curriculum has been developed.
The first trimester covers the fundamentals of landscape architecture, the second applies those fundamentals to discussions about examples found in Itoigawa and the third involves individual research of the Itoigawa UNESCO Global Geopark, the writing of reports and the preparation of theses with the support of specialists. Since 2012, 35 papers have been produce through this program. Students express joy in improving the results of their research and activities, so the college has gone on to create a step-up program for graduates.

Since 2013, college graduates have used their theses as a basis to attempt a new community called the “Geo Cafe" and in the following year they developed the “Itoigawa Geopark College Research Lab,” they have begun to teach environmental education through recreational activities aimed at primary school aged children at the local “GeoPal” tourism center and they have produced Geopark-branded goods.
Through these activities, we plan to increase the interest in the Geopark and community among school children and in the future plan a graduate student-centered university plan.

Keywords: Itoigawa UNESCO Global Geopark, Geopark Studies, Landscape Architecture, Natural Environment, Cultural Environment, Regional Revitalization

# School educational program in Mikasa geopark

*Kei Shimomura[1,2], Isamu Kabaki[1,2]

1.Secretary of Mikasa Geopark Promotion Council, 2.Regional Development and Geopark Promotion Division, Mikasa City Office

Since 2005, The City of Mikasa has carried out the integrated educational project of elementary-junior high school about their region's history in order to inspire community spirit and promote pride in their local heritage.
In this educational project, there is a subject "Regional Studies".
Originally, Regional Study’s function was to educate children about their hometown. After Mikasa Geopark was recognized as an official Japanese Geopark, schools began to add geopark lessons into their curriculums. Accordingly, we work closely with local schools.
We provide Geopark staff members to serve as guides and lecturers when students study at geopark sites around Mikasa. In addition, we have made guidebooks for students to use in the classroom free of charge.
Every year, new high school students come to Mikasa from all over Japan, and the Mikasa Geopark conducts geotours around Mikasa so that these students can become familiar with Mikasa and its history.
We have been hosting promotional activities and have been connecting with schools, so the number of students participating in field trips to Mikasa Geopark has increased year by year.
In the following presentation, we will introduce Mikasa Geopark’s education initiative, while also discussing its effects, results, and future endeavors.

Keywords: education, field trip, class about student's hometown, geopark activities, Mikasa Gepark

# Report of Geopark education in schools

*Takenori Hatanaka[1], Hirosuke Yoshikawa[1], Yoshiki Kitagawa[2]

1.Dinosaur Valley Fukui Katsuyama Geopark Promotion Council, 2.Katsuyama City Board of Education

This report demonstrates the results and educational effectiveness of our Geopark education in schools. Education outreach for children is the most important area in Geopark. We must teach the about the fun of geo-science and the charm of Geopark. Children will develop awareness of conservation geo-heritage and local emotional attachment by Geopark education.

1.Outdoor education utilizing Geopark resources
2.Volcanology education in areas with no volcanoes
3.Education for disaster prevention using the scenery and three-dimensional model

Keywords: School education, Geopark resources, Outdoor education, Volcanology education, Education for disaster, Education for Sustainable Development

# Drawing up of “teaching plan” applying Sakurajima-Kinkowan Geopark’s regional resources “volcanic ash”.

*Miyuki Yoshikawa[1]

1.Geopark Promotion Office, Kagoshima City Hall

[Introduction]
Sakurajima-Kinkowan Geopark which designated in 2013 as a Japanese national geopark is located in southern park of Kyushu, in the middle of Kagoshima prefecture. An active volcano, Sakurajima which is as symbol to people in Kagoshima has repeated its vulcanian eruption for over 60 years since 1955. Our geopark is uncommon to have phenomenon of ash fall on a daily basis and volcanic ash is very familiar to us.
[Applying resources of geopark to school education]
According to “Course of Study (of earth science fields)” of the Minister of Education. Culture, Sports, Science and Technology, it says “applying regional resources and nurture the love for their home”. However teachers do not have enough time to research those teaching materials and as a result, many teachers develop science classes by following school books and existing teaching books. Therefore, our geopark wrote out “teaching plan” by cooperating with teachers of local community which can be applied to unit of “land structure and crustal deformation” of science class in $6^{th}$ grade of elementary school. The materials used in the teaching plan was “volcanic ash” which is representative regional resources in our geopark.
[Content]
Content of teaching plan was “punning experiment” by using volcanic ash. By carrying out an experiment using volcanic ash which is familiar to students’ daily lives was not only learning about land structure and an active volcano Sakurajima, but also linked to opportunity to think about disaster prevention.
[An idea to adapt it to school]
“Teaching plan” that we wrote out is packaged with 1. Predictive response and questions of students and example answer of teachers to those, 2. Spreadsheet, 3. Experiment recipe and list of minerals that it widely spread to school teachers. We also made data for examples of materials which are made by properties of magma, pattern of explosion, and distinctive volcanic landscape to learn deeper including disaster prevention.
[Achievements]
The educator of our geopark held 1 class in 1 school in 2014 and 5 classes in 3 schools in 2015 based on “teaching plan” made by cooperation with teachers in local community which took half a year. Teachers of local community themselves also hold class by using this “teaching plan”. According to the surveys of the students after they participated classes said “annoying volcanic ash turned out to be volcanic ash contains jewels (minerals).” or “Sakurajima which we used to only look out is now looks more fascinated.” That we successfully made a new way to look resources and rediscovery of region.
[Future prospects]
We are planning to develop and deepen the educational materials by cooperating with teachers and researchers to apply our “teaching plan” widely in elementary and junior high schools outside of our geopark. Not only school educations but also to elaborate on education using regional resources by cooperating with more stakeholders are required such as to enrich “geo-kids class” which is offered by colllaborating with museum, science museum, and aquarium in the region.

Keywords: sakurajima, sakurajima-kinkowan geopark, geopark, school, learning program, education

# In cooperation with the school education in Hagi Geopark Plan efforts

*Yasuko Ito[1,2], Yasuyuki Fukushima[1,2], Naoki Higuchi[2], Kazuyuki Mashino[2]

1.Geopark Promotion Office, Hagi City, 2.Hagi Geopark Promotion Council

We are in the initiatives to promote Hagi Geopark concept, in the education sector has put a force in cooperation with school education.
This time, and reports we have carried out in fiscal 2015 initiatives.

Keywords: Hagi Geopark concept , Abu Volcano Group, Comprehensive learning, Community School, School Education

# Effects of special education program of Geopark for high school students - In case of San’in Kaigan Geopark -

*Noritaka Matsubara[1,2]

1.Graduate School of Regional Resource Management, University of Hyogo, 2.San'in Kaigan Geopark Promotion Council

Recently, a practicing education program is necessary in a high school education. The Japanese Ministry of Education, Culture, Sports, Science and Technology (MEXT) proposed that it was important to cooperate with a research institute and university in a high school education by education guidelines. But a university and research institute doesn’t have a special educational program for high school, and it is difficult to cooperate with a university and research institute for high school. The other hand, a school education is one of important programs in geopark activities. Geopark can offer various educational programs and act as an intermediary between high school and university.
In San’in Kaigan Geopark, we offer various educational programs by cooperating with a university and local research institutes. University of Hyogo cooperates with Toyooka high school in SSH from 2010. We utilized San’in Kaigan Geopark, Itoigawa Geopark, Hakusan-tedorigawa Geopark, Valley Fukui Katsuyama Geopark, Muroto Geopark, Jeju Geopark and Lesvos Geopark for high school educations.

Keywords: Geopark, High school education, Super Science High School

# Practice of university education by Kunibiki Geopark Project Center, Shimane University

*Akira Tsujimoto[1,4], Ritsuo Nomura[1,4], Akira Takasu[2,4], Toshiaki Irizuki[2,4], Hiroki Hayashi[2,4], Ikuo Tasaka[3,4]

1.Faculty of Education, Shimane University, 2.Interdisciplinary Faculty of Science and Engineering, Shimane University, 3.Faculty of Law & Literature, Shimane University, 4.Kunibiki Geopark Project Center, Shimane University

Kunibiki Geopark Project Center was created in Shimane University to promote “Kunibiki Geopark Plan” based on the knowledge accumulated in the University. The theme of “Kunibiki Geopark Plan” is the merging of mythology and geology in the Shimane Peninsula.
Special Minor Programs were established in Shimane University by organizing the class subjects systematically. The objective of Special Minor Program of Geopark is human resources development who have a knowledge of diverse region heritages and can support regional revitalization using Geopark with interdisciplinary perspective.
We have three class subjects, specializing in Geopark, named “Introduction to the Geopark”, “Elements of the Geopark”, and “Practice in Geopark”. The goals and objectives of “Introduction to the Geopark” are as follows.
i) understand basic concept of Geopark
ii) understand regional resources, such as geology, geography, and history
iii) understand the relationship between regional tradition and culture and climate
iv) understand the maintenance and utilization of natural resources
Students attending these lectures are increasing yearly, so these lectures contribute to the understanding of students about Geopark.
We will present university education by Special Minor Program of Geopark in Shimane University.

Keywords: university education, geopark, Shimane Peninsula, Kunibiki myths

# Educational exchange program using Geopark network

Toshikatsu Chujo[1], Kumiko Ando[2], Kentaro Tsunega[3], *Yu Horiuchi[1]

1.Oita Himeshima Geopark Promotion Office, 2.Oita Bungoono Geopark, 3.Oita Prefectural Government

Oita Himeshima and Oita Bungoono Geoparks have carried out educational exchange for elementary school children and junior high school students in every summer. Outline, results and future tasks of this educational exchange program are introduced in this presentation.
Educational exchange between the Geoparks in Oita prefecture has been conducted every year since 2013. Third times of educational exchange for elementary school children was carried out in summer of 2015. The objective of this exchange program is that the children understand both regions through learning about local resources and visiting each other's area during the summer vacation. Learning process of educational exchange is as follows. First, children learn about their region and prepare for presentation to introduce their own region before the exchange in summer vacation. Then, on the day of exchange, children introduce their region and guide in Geosites for visitors. After the exchange, children review and summarize the learned content, and present the results at such as meeting or symposium. Children can be recognized the "difference" strongly from the comparison between the areas where they live and the other through this process, which resulted in discovery of regional charm. In addition, the experience of presentation to public audience cultivates consciousness of children to disseminate the charm of the region. Furthermore, formation of new connection between the two regions made the effect of expanding the network of people.
Educational exchange with the Geopark outside of Oita Prefecture was carried out for the first time in 2015. Elementary school children and junior high school students in Oita Himeshima, Oita Bungoono and Kirishima Geoparks carried out the educational exchange in Kirishima Geopark. Since the moving distance is long, this attempt needs further improvement at the point of time consuming. Pre- and post-learning are important for learning effectively in limited time of exchange at distant place.

Keywords: Oita Himeshima Geopark, Oita Bungoono Geopark, Kirishima Geopark, Himeshima elementary school, Sugao elementary school

# About the activities of education WG in Japanese Geoparks Network (2015)

*takanori makita[1], Ryuta YAMAMOTO[2], Tsuyoshi HIBINO[3]

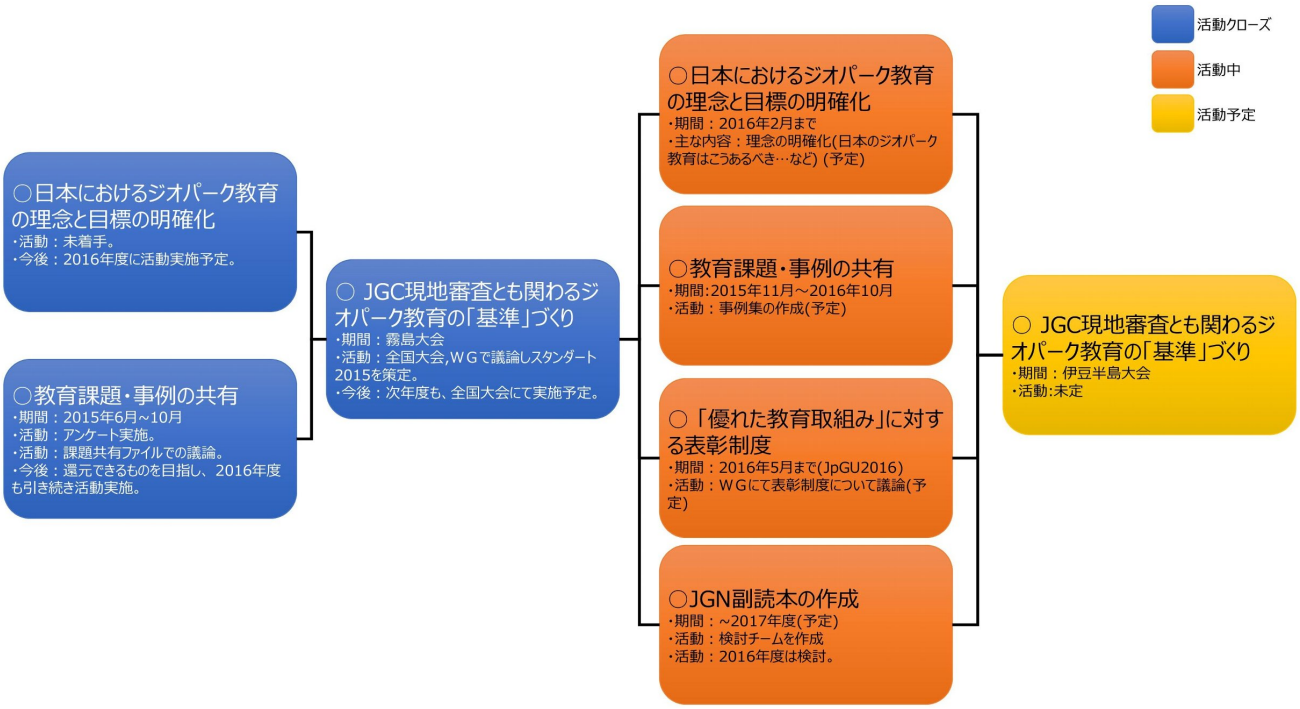
1.Sikokuseiyo Geopark Promotion Council, 2.Shizuoka University, 3.Hakusan Tedorigawa Geopark Promotion Council

Japanese Geoparks network set up an activation subcommittee (administration meeting) as one of the organizations and performed activity to examine various problems such as a Japanese Geopark authorization policy and an examination standard.
However, can not do discussions with a view of the face inside the activities, challenges should be considered there was a lot of problems, such as pile.
Therefore, for the purpose of developing activity with the independence of will as a thing, the network which solved many problems, six subcommittees (examination, organization, education) were established by the activation subcommittee (management meeting) of May, 2015, and the information sharing about a problem and the example was performed by every subcommittee.
I will install working group (following WG) afterwards to perform a detailed discussion by every theme.

Education WG, in order to advance the discussion toward solving problems in Geopark educational activities of that was shared by the education subcommittee in May, was started up in June, 2015.
In 2015, I carried out making for it, activity such as the side reader examination of the Japanese Geoparks network about an action of the education in each area in collection of casebooks, holding of the Japanese Geoparks network national convention Kirishima meeting education subcommittee, standard 2015 of the Geopark education.
In this announcement, I report activity contents of education WG of 2015 and I put it together and report the activity plan of 2016.

Keywords: Japanese Geoparks network, Geopark education, Working group, Contribution to the network



# Toya Caldera and Usu Volcano UNESCO Global Geopark Coexistence with the changing Earth."Toya-Usu Volcano Meister"

Masato Takekawa[1], Takashi Tani[1], Yoshiaki Hata[1], *Asami Nakaya[1], Mikiko Kitakoshi[1]

1.Toya Caldera and Usu Volcano UNESCO Global Geopark

Mt.Usu, in south west Hokkaido has been active since the Edo period in 1663. Recently, Mt.Usu has been erupting every 20-30 years, so to coexist with the volcano has become an important to the surrounding area.
Toya-Usu Volcano Meisters are the organization who develop sustainabele human resources for learning and sharing.Volcano Meisters are the ones qualified to spread disaster preparedness and share the blessings of this area, such as the beautiful scenery, fertile farmland, and healing hot springs.

Keywords: Volcano, Human resources, disaster risk reduction

# Report of the 16th Children's Summer School on Earthquakes and Volcanoes

*Riyeko Fujii[1], Ryuta Kobayashi[1], Committee for Children's Summer School on Earthquakes and Volcanoes[2]

1.Minami Alps (MTL Area) Geopark Conference, 2.Seismological Society of Japan, Volcanological Society of Japan, Geologial Society of Japan

The Seismological Society of Japan(SSJ), the Volcanological Society of Japan(SSJ) and the Geological Society of Japan(GSJ) manage the Children’s Summer School on Earthquakes and Volcanoes (http://www.kodomoss.jp/) every summer. The 16th Children’s Summer School on Earthquakes and Volcanoes was held in Minami Alps (MTL Area) Geopark in Nagano Prefecture from August 8 to 9, 2015. Twenty-six children in the 3$^{rd}$ to 11$^{th}$ grade who participated in it observed the outcrops, the sceneries and the stones along the river and made some experiments in order to solve the secrets of Minami Alps and the Median Tectonic Line. In Children's Forum on Earthquakes and Volcanoes on the second day, the children presented the results they had achieved on their own.
This program can prompt children to feel the movement of the earth. We are going to report the outline of this year's program and the children’s presentation.

Keywords: geopark, Minami Alps, Median Tectonic Line

# Survey report in Naeba-sanroku Geopark

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1.Tsunan Board of Education Secretariat, 2.Naeb-sanroku GeoPark

The Naeba-sanroku Geopark is located in Tsunan-machi, Niigata and Sakae-mura, Nagano. This area has the topography and river terrace by the volcanic activity, the landslide topography. And much snow falls. There are natural environments and the history culture that fitted it. In this report, I report the geological survey in the area. In the investigation, I carried out an outcrop investigation and a drilling investigation and confirmed volcanic ashes. In addition, at a place called "Suganuma", I performed a general investigation into geological feature, vegetation, history. I report two investigations as things mentioned above.

Keywords: volcanic ashes, geological feature, vegetation

 

# Geological study and community vitalization in Tajimamihonoura area, San'in Kaigan UNESCO Global Geopark

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< In case of geological study in San’in Kaigan UNESCO Global Geopark >
San'in Kaigan Geopark is one of the UNESCO Global Geoparks with the vast area located in the northern part of Kinki region. In this Geopark, visitors and residents can find lots of valuable geological assets related to the formation of the Sea of Japan.
A theme of San’in Kaigan UNESCO Global Geopark is “Geological features, the natural environment, peoples' lives, and the formation of the Sea of Japan”.
The theme was brought by the existence of the stratum which is considered as a Miocene key bed, called a “green tuff”.
Green tuff formed during the opening of the Sea of Japan is widely distributed along the coastal area of the Sea of Japan. It recorded the process of the evolution of the Japan island arc system.
The study area is Tajimamihonoura Geosite. Not enough sedimentological study is done in this area, and the detailed sedimentary environments are still not clear. The purpose of this study is to clarify the previous stratigraphy of the study area, and reconstruct the paleo volcanoes and sedimentary environment. Based on the facies analysis, I learned that sedimentary environment can divide into three stages. In the first stage, effusive lava was formed by volcanic activities on the land and sedimentary environment went under fresh water in the second stage. Subaqueous volcanoes erupted in this stage. After that, freshwater changed to the sea in the third stage.

< Community vitalization inTajimamihonoura Geosite >
This study got great cooperation from many local residents in an investigation area. I believe that my visits for study raised the interest of residents in Geopark. The result was shared with local residents and used for enhancing guide skill scientifically.
A study of the resident type in the area leads to the interest of the local residents and improvement of academic knowledge.

Keywords: San' in Kaigan Geopark, Green tuff

 

# Reexamination of geological setting of the Neogene rhyolites in Takeno Geosite, San'in Kaigan Global Geopark, Japan

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Various geological assets related to rifting and spreading of back arc basin (Sea of Japan) and formation of island arc (Japanese Islands) are distributed in San'in Kaigan Global Geopark. One of the geomorphic characteristics of the San'in Kaigan Global Geopark is variety of coastline, and central area of the coast line is characterized by ria coast. Geomorphology of the ria coasts of this area reflect the difference of hardness of rocks composing the area. Especially, rhyolitic rocks often compose the peninsulas, capes, large cliffs and solitary islands, because they are harder than surround sedimentary rocks. Some of them are designated as natural monuments and known as the representative geosite (ex. Mio-Oshima island, Yoroi-no-Sode sheet, Nekozaki-Peninsula and Ui Village) in the Geopark. They are noted by not only the beautiful scenery which created by columnar joint and flow structure but also field of outdoor activities. (ex. sea kayak, pleasure boat, fishing, diving, snorkeling, etc.)
It is the important to understand and report the value of geosite in the activity of the Geopark. But, the geological setting of the rhyolite bodies has not been clarified in detail. Wadatsumi et.al (1966), and Hyogo Prefecture (1996) proposed that these rhyolite bodies area correlated to late Pliocene Utaosa Thyolite in Teragi Group. But relationship of those rhyolite bodies are unidentified, because that they are isolated each other.
We have researched geologically the Ui-Nekozaki Rhyolite Body which is the largest rhyolite body in the San'in Kaigan Global Geopark and is drawn as a lava flow by previous geological map. As the result, get a different result from previous research.
Result of the survey shows that main part of the rhyolite body is divided following two bodies, one is pyroxene and amphibole bearing rhyolite around Mt. Kuruhi, another one is composed of typical rhyolite with flow structure sometimes bearing spheilite around Ui and Takui Villages. They are interrupted by basement rocks composed of Miocene Hokutan Group. On the other hand, a igneous rock body composing Nekozaki Peninsula located on the northwest of Ui Rhyolite Body is consist of amphibole dacite. As mentioned above, rhyolite body is divided into some separate rock bodies.
The flow structure of rhyolite distributed around Ui village to Takui village is steeply dipping generally 60-80 degrees and is disturbed with strongly appressed folding. Such occurrences of rhyolites indicate that they are not lava flow extruded on the surface of the earth but lava dome or intrusive body in the shallow underground.
Boundary between decite and basement sedimentary rocks (Hokutan Group) is observed at west cliff of Nekozaki Peninsula and is known as representative geosite showing unconformity between Miocene Hokutan Group and Pliocene Teragi Group. But the evidences of time gap between two bodies and flowage of lava on the ground surface (clinker, trace of erosion, basal conglomerate and so on) are not observed. Flow structure and bottom surface plane of the dacite mass is sub parallel to bedding plane of underlying sedimentary rocks of Hokutan Group. These facts may suggest that the dacite body has been formed the same time as sedimentation of Hokutan Group.
As mentioned above, Ui-Rhyolite body is divided into plural bodies and some of them may be formed at different ages. These results show that reconsideration of geological setting about other rhyolite bodies in San'in Kaigan Global Geopark (ex. Mio-Oshima island, Yoroi-no-Sode sheet) is necessary.

 

Keywords: Geopark, Geosite, Igneous rock

 

# Support for field survey in the Mishima Kikai Caldera Geopark

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The Mishima Kikai Caldera Geopark is supporting researchers and students for their field surveys. For example, we arrange cars and guest houses for researchers, we take them to the best place for sampling, and we introduce counterparts in islands for researchers. In this presentation, we show some examples of our support and efforts for improvement.

Keywords: geopark

 

# Conservation and restoration activity at mountain of alpine flowers 'Apoi'

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Mt. Apoi, a main site of Mt. Apoi UNESCO Global Geopark, is a treasure trove of alpine plants even though it is 810.2 meters high. The flora is strongly affected by the ultrabasic rock 'Peridotite' and the environment around there. Peridotite has a remarkably high content of Nickel and Magnesium -elements know to inhibit plant growth. Also, the location of Mt. Apoi is a good environment for alpine plants with strong wind from the Pacific Ocean. In terms of climate, temperature is stable at low in summer and limited snow fall in winter. It is good for alpine plants.
Mt. Apoi's alpine plant communities have been designated as a Special Natural Monument of Japan since 1952. However current situation of Mt. Apoi have changed. We are facing the crisis of reduction of alpine plants. Also these are many difficulties such as illegal digging of endemic plants especially Hidakaso (Callianthemum miyabeanum), rapid environment change which possibly caused by global warming, and grazing pressure from deers.
Dealing with these problems, we have started activities such as patrol around the mountain and develop mountain trail to protect alpine plants with Mt. Apoi supporters club. Also, group of local people and scientists investigate the vegetation of alpine plants, the situation of overconsumption by deer and the effect of restorative alpine plants. Through these activities and investigations, we found the whole of recent situation of Mt. Apoi. However, it is necessary that we should change our actions for more effective and strategic. In addition, Mt. Apoi is located in a Hidaka-sanmyaku Erimo Quasi-National Park according to the National Parks Act. Development activities and any other activities in the area are subject to regulation by act. So it took a long time to promote rapid decision making and take a government approvals and licenses for activities inside the National Park. This is why we could not investigate and enforce our conservation activities smoothly.
Therefore, October 2015, Samani Town set up a 'Mt. Apoi Nature Restoration Expert Panel' of specialists. The panel consists 8 individual specialists (five botanists, two zoologists and one Mt Apoi supporter's club member) and secretariat is assumed by Samani Town and Hokkaido Government. The purpose of the panel is to asset and serve about alpine plants and any other natural environment at Mt. Apoi scientifically that is not restricted complex relations such as existing local rules. And the panel give advice for each related organizations which do with conservation activities and coordinate these. Depending on the instruction from panel, related organization should reflect these for Geo-conservation project. Setting up this panel, we are steadily engage in the promotion of our conservation and restoration activity with related trinity (scientists, local people and government).
Clarifying our activities, from 2016 to 2018, we start new 3-year restoration of natural monument project which is subsidized menu from Agency for Cultural Affairs. It's expected to utilize use for each investigations such as connection among increasing deer and influence on environment, numbers and distribution of individual endemic flowers, measure for overuse due to increase of visiting people, impact of the increase stone pine and other tree at upper station of Mt. Apoi, conservation and restoration of Hidakaso (Callianthemum miyabeanum) activity at fieldwork, and proceed monitoring and observe the existing experimentations more systematically.
Our goal is for Mt. Apoi to make a comeback as a mountain of flowers. To keep processing our activities as a Geopark, it is necessary that we set comprehensive and systematical plan and basis to operate each conservation activity in accordance with National Park Act.
The posters we made show the details of our Geo-conservation structure and plan.

 

Keywords: Geopark, Alpine Plant, Conservation, Restoration

 

# Conservation efforts in Shirataki Geopark.

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The Geopark is program for conservation of geoheritage. Based on this concept, we conduct activities such as education and tourlism. Thus, conservation of geoheritages is key concept. In order to brush up and shear our efforts on conservation, we introduce our activities with focus on conservation.

Keywords: geoconservation

 

# Many outcrops and fossils of the mammals of Geopark Chichibu. -Designated as a National Natural Monument -

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1.chichibu geopark promotion council

Six outcrops which remain in the area of the Geopark Chichibu and nine fossils of the mammals owned by Saitama Museum of Natural History were designed as a National Natural Monument in 2016. Collectively, they are called “Sedimentary layers of the old Chichibu bay, and marine mammals fossil assemblages”. Above all, searching outcrops shows the geological history of the Chichibu basin from beginning to end.
That was the first case which the geological formations and a number of fossils were designated together as a National Natural Monument in Japan. (Individually, the fossils of animals are for the third case and the fossils of mammals are for the first case.)
These outcrops and fossils had been protected by only the researchers with the results for a long time, but now the government will be saved them under the protection law. That effects the promotion for Geopark Chichibu which works for environment preservation of the monuments.
*Six outcrops
“Unconformity in Maehara”, “Unconformity in Inuki”, “A huge outcrop in Torikata”, “A big cliff, called Yo-bake”, “A conglomerate outcrop in Aratabashi”, “A fossil locality of Paleoparadoxia in Onohara”
*Mammal fossils
Fossil localities of Paleoparadoxia; [Chichibu city] Onohara, Terao, Tochiya, [Ogano town] Hannya, San-yama, [Minano town] Ofuchi
Fossil localities of whalebone whales; [Chichibu city] Onohara, Tatenuma, [Ogano town]Hannya
We installed the guide plates around them, and the Geo-tours including the introduction of those outcrops are often held by Geopark Chichibu Promotion Coucil. Viewing from the top of Mt. Minoyama located in the east of Chichibu basin reminds you of the old Chichibu bay about 15million years ago.
In spite of the active research since Meiji period, those outcrops and fossils were not familiar with the local people. However, a lot of people know those value geological places by the recent promoting activities of Geopark Chichibu Promotion Council. We conduct the lectures such as the lead to fine the vertebrate fossils which takes notice of the spongy structure of bones appearing on the surface of the rock. At the same time, you can learn how to treat fossils without losing any value when accidentally you find them. We also have the Geopark field-study excursions for elementary and junior high school students, and support for exhibition of fossils at junior high school. You can experience to make a replica of fossil at Ogano Fossil Museum.
Goepark Chichibu Promotion Council hopes that our efforts lead to discover new fossils, and we continue to research on Geopark Chichibu in order to enhance awareness.

Keywords: Chichibu area, Natural Monument(Nationally Designated)

 

# Achievements and challenges of international exchange in Unzen Volcanic Area UNESCO Global Geopark

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Participation in international network activities is very important for GGN member, because if a given Geopark learns excellent activities from other geoparks, the Geopark can utilize these activities for its development. Network activities and international exchanges, therefore, bring development of quality of geopark. Unzen Volcanic Area has concluded sister Geopark with Jeju and cooperative partnership with Hong Kong UNESCO Global Geoparks since 2013 in order to achieve their development. In this poster, we introduce achievements of international exchange Jeju and Hong Kong UNESCO Global Geoparks with Unzen Volcanic Area, and challenge to keep these relations with sustainable way.

Keywords: Unzen Volcanic Area UNESCO Global Geopark, International exchange, Jeju Island geopark, Hongkong Geopark

 

# Activity Report of the Snow Country Geoparks Forum in Yuzawa

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1.Yuzawa Geopark Promotion Group

Some geological sites are isolated by heavy snow in the winter in snow country geoparks. Geotourisms activities are curtailed in this season. Heavy snow is resource of the geopark. We have to utilize the heavy snow. We convened the Snow Country Geoparks Forum in Yuzawa Geopark. In this forum, we discussed about how to use heavy snow for the tourisms in the winter.
The Snow Country Geopark Forum was held on February 12, 2016. The number of participants exceeds 120 in the Forum. We held the workshop for the goetourisms activities in the winter after the Forum. This is the first time for the Forum to discuss the geotourisms in the winter with some Snow Country Geoparks.

Keywords: Geopark, Heavy snow, Geopark Forum

 

# What should we pay attention to conference management in relation to geopark?
# - A example of the conference of Japanese Geoparks in Kanto district in 2015 (Choshi conference) -

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1.Choshi Geopark Promotion Council

A conference of Japanese Geoparks in Kanto district (Choshi Conference) had been held from21 to 22 November 2015. In this conference, geoparkian from Geoparks and aspiring Geoparks of Kanto region as well as the general public attended. The number of the participants including staff members was about 600. After this conference, a questionnaire survey was conducted in relation to the impression of the conference. The number of respondents inside Choshi was 27 and respondents outside Choshi was 28. This questionnaire survey was analyzed using a text mining tool.
According to the results of frequently used words of the survey collected from the respondents outside Choshi, they enjoyed staying in Choshi and attending the conference because there are various related events for two days. In the meanwhile, they gave the opinions that session meetings were not long enough and there was not enough space for display booths. On the other hand, respondents inside Choshi,they got much cooperation from many groups, but they gave the opinions that giving information in relation to the conference to public in advance was delayed and the walking route of participants in the conference site should have been considered. In addition, most of the organizers concentrate on providing many good services to the guests that they could not afford to enjoy the meeting.
For more successful and better conference in the future, we concluded that it is important to prepare as early as possible that the organizers can also enjoy the meeting, making joyful project for participants, having much cooperation from various groups and preparing enjoyable geo-tour for participants.

Keywords: geopark, questionnaire survey, text mining

 

# The concept of National Geopark Convention at Izu Peninsula Geopark

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1.Izu Peninsula Geopark

The National Convention of Japanese Geoparks will be held in Izu peninsula Geopark in Autumn 2016. Izu Peninsula is promoting its geological heritage through the concept of collision between the Izu massif and Honshu due to subduction of the Philippine Sea Plate. Visitors can enjoy a variety of volcanic landforms like submarine volcanoes (remnants), terrestrial volcanoes and monogenetic volcanoes. The area is close to Tokyo and a famous hot spring hub so there is additional attraction for tourists.
The main theme of this year's Convention is 'Constructing and Deepening Ties.' This theme is divided into the following 3 components:
Getting together with other geoparks: This will help in better formulation of stories unique to Japanese geoparks and formulation of stories on the birth of Japanese archipelago and each region (geopark). We will conduct joint tours with nearby geoparks.
Ties with World Heritage, Biosphere Reserves etc.: Properties like Mt. Fuji (World Heritage), Nirayama Furnace (Part of World Heritage Properties), Minami Alps Biosphere Reserve, and Kakegawa Tea Gardens (GIAHS) are present near the geopark. Based on concepts like conservation, education and people's participation we will seek to develop ties with these neighboring properties.
Ties with food: Our geopark has started a system of 'geopark supporters where business enterprises and individuals who feel interested to the concept can become a geopark supporter. Geopark supporters have different specialties, on this occasion we will focus on the concept of food and explore how to foster ties through serving local food in the Convention.
Izu peninsula is a large geopark with a total area of 2,027 sq.km. There are 15 towns and cities that actively support geopark, and an independent guide organization. In addition there are education activities in various schools of the peninsula. Our specialist researcher is collaborating with local schools to develop easy to understand scientific education programs for young children. Holding the National Convention in this large and diverse geopark is both an opportunity and a challenge for geopark managers.

Keywords: geopark, National Convention

 