

Master Plan for the Unzen Volcanic Area Geopark

**Aiming for the realization of a sustainable society that
coexists with volcanoes**



December 2010

Unzen Volcanic Area Geopark Promotion Office



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Geoparks

Geoparks are parks that are located in the great outdoors, and take as their main highlight the assets of the earth's activities.

The word 'geopark' derives from 'geo,' which refers to topography and geology, and 'park,' which refers to an area of land for public use. A geopark is a sort of natural park covering the themes of how the earth was created, its topography and its geology.

The geopark concept

The geopark concept has been promoted throughout the world by the Global Geoparks Network, which was established with the support of UNESCO in the year 2004. The aims of the parks are to conserve precious geological heritage while at the same time using them in education, scientific development and the local tourist industries, and to achieve sustainable regional development by utilizing them as tools for local economic revitalization. UNESCO, which pursues the goals of international peace and the common welfare of mankind, provides encouragement for every sort of cooperation between the world's geoparks, particularly in the fields of education, management, tourism projects, sustainable development and regional planning.

The guidelines that must be followed in order to receive recognition as a member of the Global Geoparks Network stipulate the following conditions.

- Geological heritages shall be steadily protected in line with the traditions and the laws of each region.
- The region must have distinctly defined boundaries and include not only a number of geological heritage that clearly show its geological history and geological phenomena but also sites that have historical, ecological or cultural importance.
- Educational activities regarding earth science and environmental issues shall be conducted through the use of museums, nature observation paths and guided tours etc.
- A sustainable society and economic development shall be fostered in the region through geotourism etc.
- As a member of the Global Geoparks Network, the geopark shall share information with other members, attend conferences, and make a contribution to network's development.
- The geopark has a responsibility for the sound management and finance plans of its organization including the participation of public bodies, regional society and private sector organizations.

The difference between World Heritage sites and geoparks

While the purpose of the World Heritage sites is mainly to protect nature and culture, the geoparks attach importance to both protection and use, by protecting the geological heritage and at the same time using them for education, the popularization of science, and the development of the region. In other words, rather than merely protecting geological heritage geoparks have to endeavor to achieve the sustainable development of the region through the practical use of those heritages.

Master Plan of the Unzen Volcanic Area Geopark

Chapter I Objectives and background of the master plan

1. Background of the master plan

The damage caused by the eruption of Unzen Fugendake over the five years from 1990 was considerably more than just direct volcanic damage, and it exerted an enormous impact on the entire Shimabara Peninsula. The economic downturn was particularly marked, with both the local population and the number of tourists staying in the region declining. In the face of this situation Nagasaki Prefecture formulated its Action Plan for the Rebuilding of the Shimabara Region (the ‘Gamadasu Plan’) in 1996, a plan that united the governmental and private sectors with the goal of rebuilding and revitalizing the entire Shimabara Peninsula. A wide range of initiatives was implemented, and the plan managed to achieve considerable results.

Rebuilding projects continued to be implemented even after the conclusion of the term of the plan. The facilities environment was developed with the Mount Unzen Disaster Memorial Hall, which was opened in 2002 to educate and hand down the legacy of the disaster; the Oonokiba Sabo Miraikan, which was opened in the same year, exhibiting information about erosion control work and technology; and the Heisei Shinzan Nature Center, which was established in 2003, and provides information about the recovery of the volcano and its flora, and opportunities for nature study. At the same time, the initiative of the Heisei Shinzan Field Museum concept was also pursued.

In addition, since the volcanic activity of Unzen Fugendake had led to new natural landscape features including the Heisei Shinzan (magma dome) and pyroclastic flow deposits, and tremendous changes had taken place regarding the scenery of the national park and its use, the national and prefectural government established the ‘Green Diamond Plan.’ The Green Diamond Plan pursued the comprehensive and systematic development of user bases (such as visitor centers, camping sites, park areas and paths) for the enjoyment of nature, centering on the Unzen Amakusa National Park and Unzen region, and various measures were examined and executed in order to make use of these facilities.

This concept and these plans were expanded and put to further use to create a geopark that protects the numerous natural assets of the Shimabara Peninsula, utilizes them to popularize science, and aims to revitalize regional society.

Action Plan for the Rebuilding of the Shimabara Region (the ‘Gamadasu Plan’)

‘Gamadasu’ means ‘to try as hard as you can’ in the Shimabara region dialect. The term of the plan was a five-year period from 1997 to 2001, and it was comprised of joint public-private sector initiatives that achieved results including support through the Unzen Fugendake Countermeasures Fund, the Unzen Rebuilding Plan, the redevelopment of housing and agricultural land through the ground surface augmentation of the area that had been buried by debris flows in the Yasunaka triangle, preservation of the site of the Oonokiba Elementary School that was damaged by pyroclastic flows from the volcano, and volcano tourism efforts based on the conservation and use of the remnants of damaged structures.

Heisei Shinzan Field Museum Concept (known as ‘Heisei Shinzan Ganbaland’)

A network centering on the Mount Unzen Disaster Memorial Hall as the core facility, in which the Debris Flow-damaged Houses Conservation Park, the Heisei Shinzan Nature Center, the damaged former Oonokiba Elementary School and the remnants of buildings in its vicinity and other volcano-related facilities are treated as field museums with a common theme of the interaction between men and volcanoes.

Green Diamond Plan (comprehensive development plan for nature parks in the core region)

A project to implement the conservation and restoration of the natural environment and development of usage centers, in order to strengthen the conservation of the outstanding nature in Japan’s national and nationally designated parks, and ensure the systematic promotion of securing their comfortable use by the public. The plan was led from 1997 by the Ministry of the Environment and Nagasaki Prefecture, and restored the Genseinuma wetland and other natural areas damaged by the Fugendake eruption, built the Mount Unzen Visitors’ Center, the Suwanoike Visitors’ Center, Heise Shinzan Nature Center, Tashirobaru Trail Center, and various other parklands, paths and usage bases. It was also positioned as a priority project in the Gamadasu Plan.

2. Objectives of the master plan

The master plan of the Unzen Volcanic Area Geopark has been formulated with the objectives of ensuring the Shimabara regional residents, government, research institutes and private sector bodies of the Shimabara Peninsula will work together to conserve the natural heritages of the region, and through the use of education, and through unique and attractive geotourism opportunities that reflect the region's historic and cultural resources an attempt will be made to tie these in with the vitalization of a sustainable regional society.

In the future, the various participants will pursue effective and efficient initiatives to improve the quality of the Unzen Volcanic Area Geopark in line with the master plan.

3. The target area

The area covered by the master plan for the Unzen Volcanic Area Geopark will be the administrative districts of the three cities centering on Mount Unzen (Shimabara, Unzen and Minamishimabara).



Chapter II The current state of the Shimabara Peninsula and issues it faces

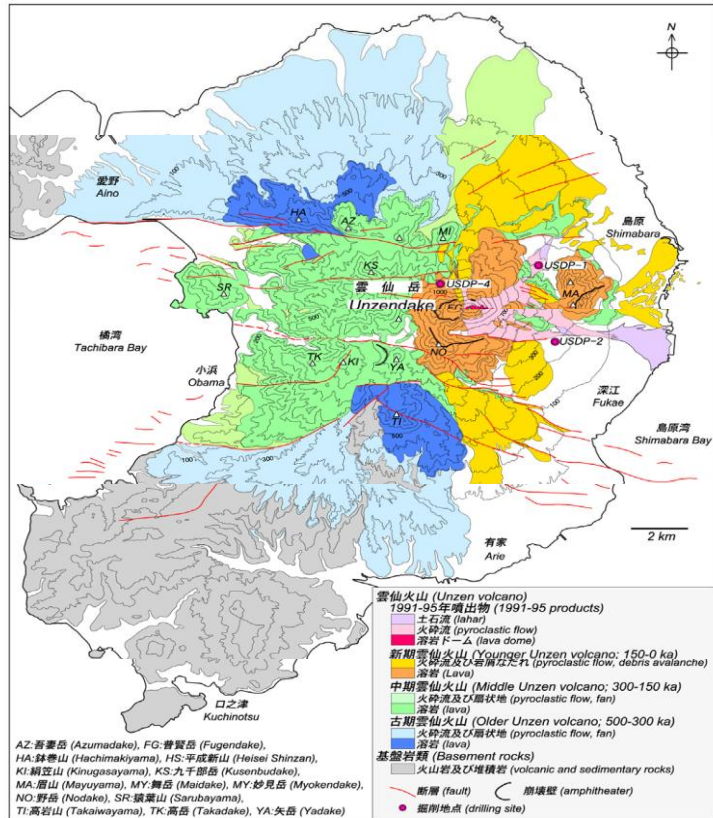
1. Special features of the Unzen Volcanic Area Geopark

The foremost feature of the Unzen Volcanic Area Geopark is the opportunity it affords for learning about the coexistence of people and volcanoes, based on the damage caused by the two major eruptions of the past, and how the local people subsequently rebuilt the region.

In terms of geological characteristics, the oldest part of the Shimabara Peninsula is the 40 million-year-old stratum of which a very small portion is exposed in the southern part. A layer of magma and pyroclastic material dating back around 4.3 million years, and a stratum built up from the seas to the land covers this. On top of this is a thick coating of ejecta from Mount Unzen that began to emerge in the center of the peninsula around 500,000 years ago.

Moreover, not only does the Shimabara Peninsula enjoy geodiversity with its volcanic topography and its fault topography, as typified by the Chijiwa fault, it has also experienced two major volcanic disasters. The first was the 1792 Shimabara Disaster, in which 15,000 people throughout the Ariake region died in a single night, Japan's worst single volcano catastrophe. The second was the Unzen Fugendake Disaster of 1990 to 1995, the pyroclastic flow of which resulted in 44 dead and missing persons and considerable damage to the region. However, few people moved away from the region as a result of the disaster, and there are still around 150,000 residents living in tandem with the volcano.

Furthermore, Mount Unzen Fugendake is also famed as one of the most thoroughly studied volcanoes of recent years, as the formation of the magma dome following the Heisei eruption in the 1990s, and part of the beginning and end of the eruption were observed with scientific precision. The Shimabara Peninsula is sprinkled with sites of geological interest including an active volcano and active faults so that we can make a field trip around such various noteworthy places.



Geological map of Mount Unzen and estimates of geological age (based on Watanabe and Hoshizumi 1995 and Hoshizumi *et al.* 1999)

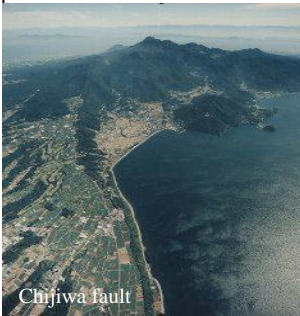
Geodiversity

Geodiversity describes a state in which there is a wide diversity in the geological characteristics of an area (rocks, minerals and fossils etc.), its topography (surface shape, topographical processes) and the natural distribution patterns of its soil quality and features.

List of the main geosites in Unzen Volcanic Area Geopark

Theme	Sub-theme	Geosites
Origins of Shimabara Peninsula	Beginnings of Shimabara Peninsula	Hayasaki Basalt
		Kunisaki Andesite
	Major eruptions in Kyushu	Hara Castle
	Origin of Unzen volcano	Tatsuishi
	The Sinking Unzen volcano	Chijiwa Fault
Suwanoike Pond		
People and Volcanic Eruptions	Pyroclastic flows of the Jomon Period	The Gongenwaki remains
	Shimabara Taihen (Catastrophe)	Shin'yake lava
		Mayuyama Collapse
		Lake Shirachi
	Heisei eruption	Heisei Shinzan (lava dome)
Nita Pass		
Disaster and Restoration	Damage from pyroclastic flows	Remains of Kamikoba
		Remains of Oonokoba
		Remains of Senbongi
	Damage from debris flows	Memorial park of Houses destroyed by Debris Flows
	Restoration of nature	Taruki Daichi nature restoration area
The Gift from Nature	Hot Springs	Obama Spa
		Unzen Spa
		Shimabara Spa
		Hot Springs of organic origin
	Groundwater	Abundant springs of groundwater
	Vegetation	Maple, Azalea, Enkianthus cemuus, etc.

Origins of the Shimabara Peninsula



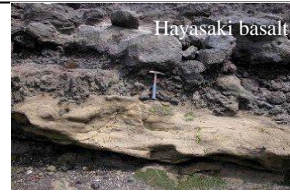
Chijiwa fault



Heisei Shinzan



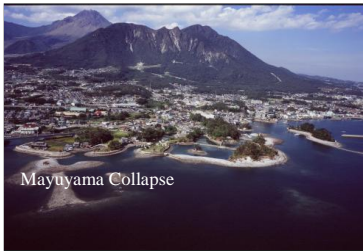
Tatsuishi



Hayasaki basalt



Hara Castle



Mayuyama Collapse



Heisei Shinzan (1990-1995)

Shinyake lava flow (1792)

People and Volcanic Eruptions

Disaster and rebuilding

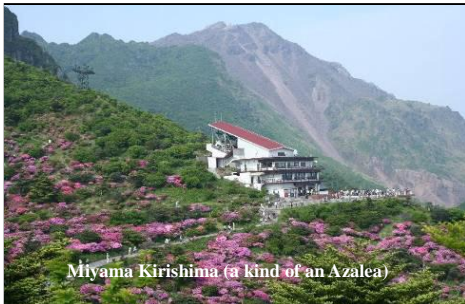


Memorial Park of Houses destroyed by debris flows



Remains of Senbongi

The Gift from nature



Miyama Kirishima (a kind of an Azalea)



Shimabara Spa



Unzen Spa



Obama Spa

2. The current state of the Shimabara Peninsula and issues it faces

(1) Protection and conservation

A special consideration has been paid to the conservation of the natural environment on the Shimabara Peninsula since a very long time ago. In the year 1693 Matsudaira Tadafusa, the head of the Shimabara clan, banned the killing of birds and animals or the picking of rhododendrons on Unzen-zan (Mount Unzen). In 1738 a stone was erected on the mountain with an inscription forbidding the killing of any living thing, and from 1775 the clan posted workers whose role was akin to that of a modern day park ranger, to protect Onsenyama. In 1911 it became Japan's first prefectural park, and in 1932 the nation's first National Park.

The present day Shimabara Peninsula is basically protected and conserved and its appropriate use ensured by various laws (the Natural Parks Act, and the Act on Protection of Cultural Properties), and ordinances (The Nagasaki Prefectural Ordinance on Natural Parks, and the cultural asset protection ordinances of the cities of Unzen, Shimabara and Minamishimabara). With regards to the Unzen-Amakusa National Park, the Ministry of the Environment has established an office for the administration of the protection of Unzen's natural assets, which promotes protection and appropriate use in collaboration with Nagasaki Prefecture. The Nagasaki Prefecture Instructional Committee on Protection of Cultural Assets patrols designated cultural assets and so on, and provides instruction concerning the protection of cultural assets.

With regards to national forests, the Nagasaki Forest Office possesses three offices conducting their conservation and use. The erosion prevention work caused by the Unzen Fugendake disaster is dealt with by the Unzen Rebuilding Office established in Shimabara City by the Ministry of Land, Infrastructure, Transport and Tourism, while Nagasaki Prefecture is in charge of promoting pyroclastic flow prevention and erosion prevention projects.

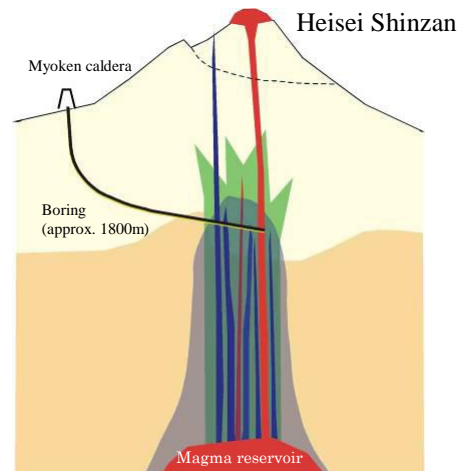
In addition to management based on laws and ordinances, the Ministry of the Environment has recruited and assembled 'natural park instructors' and park volunteers, and Nagasaki Prefecture 'natural environment monitors' from among the local public. These people are involved in various activities such as providing explanations at nature watching meetings, cleaning-up, and giving instructions on appropriate use, and are pursuing the spread of knowledge about protecting nature.

Besides these efforts, local residents and groups are playing a vital role in the conservation activities at the geo sites, by continuing to perform the traditions and practices that have been in place for centuries, such as keeping the region clean, and looking after springs and hot spas. There is also a great deal of tree-planting work carried out by private sector groups, centering on the areas where large amounts of forest were destroyed by the Unzen Fugendake eruption. Because these activities include children and students in efforts such as nurturing plants and planting trees, they have an educational effect of fostering a spirit of devotion to nature among them. Cultivating the local trees from seeds also leads to the conservation of biodiversity.

However, since from the point of view of the geopark these kinds of activities are still restricted in terms of region and field, encouraging activities based on a more comprehensive plan and the participation of local residents remains an issue that must be addressed.

(2) Research and education

During the eruptions of Mount Unzen between 1990 and 1995 joint university observatory teams and national research institutions conducted various volcanic observations, and even after the eruptions many studies and observations were made including artificial seismic surveys and volcanic drilling projects. These studies and observations have given us a great deal of information about the internal structure of Mount Unzen and the magma supply system.



Internal structure of Mt. Unzen volcano, revealed by the Unzen

Moreover, right from the disaster up to the present day numerous erosion prevention construction projects have been carried out, the damage arising from volcanic debris has been kept to a minimum, and this has spurred on the rebuilding efforts. Work was extremely difficult as the pyroclastic flow reached the site around five minutes after the eruption, but the “unmanned construction technologies” developed at Unzen were utilized during the eruption of Mount Usu in Hokkaido in the year 2000, and have proved to be useful in regional countermeasures against volcanic disasters. The continuous elevated highway (Shimabara Fukae highway), various guide walls, soil erosion barriers and anti-erosion dams have been constructed as disaster prevention and mitigation measures for life at the foot of a volcano, and by viewing these facilities we can learn more about volcanoes and disaster prevention.



In 2007 the Cities on Volcanoes 5 conference brought together researchers and people involved in disaster prevention from around the world to the Shimabara Peninsula, where discussions were held on coexistence with volcanoes and town planning, and the recovery from disaster of the peninsula was publicized.

Nineteen years after the Heisei explosion the Shimabara Peninsula has made a quite incredible recovery. At the same time, numerous facilities aimed at preserving the remnants of the disaster and rebuilding the area such as the Mount Unzen Disaster Memorial Hall and the Heisei Shinzan Nature Center have been constructed. These facilities pursue the Heisei Shinzan Field Museum concept in providing distinctive events that provide educational and legacy-building activities aimed at raising awareness about disaster prevention and fostering the knowledge requisite for coexistence with volcanoes.

In addition, the Institute of Seismology and Volcanology at Kyushu University conducts a climb of Heisei Shinzan every year, inviting disaster prevention agencies, the Self Defense Force and mass media in order to explain to them about the state of the volcano's activity.

Unmanned construction technology

Unmanned construction technology is a technology developed to enable the remote operation of bulldozers for dozing and soil collection, backhoes for excavation and filling, transport by dump trucks and all the work of removing the debris deposited. These technologies were developed because at the time of the Heisei eruption there was an urgent need to remove all the debris in the districts threatened by the arrival of the pyroclastic flow. Efforts are currently underway to further improve unmanned construction technology and enable it to perform even more complicated tasks.

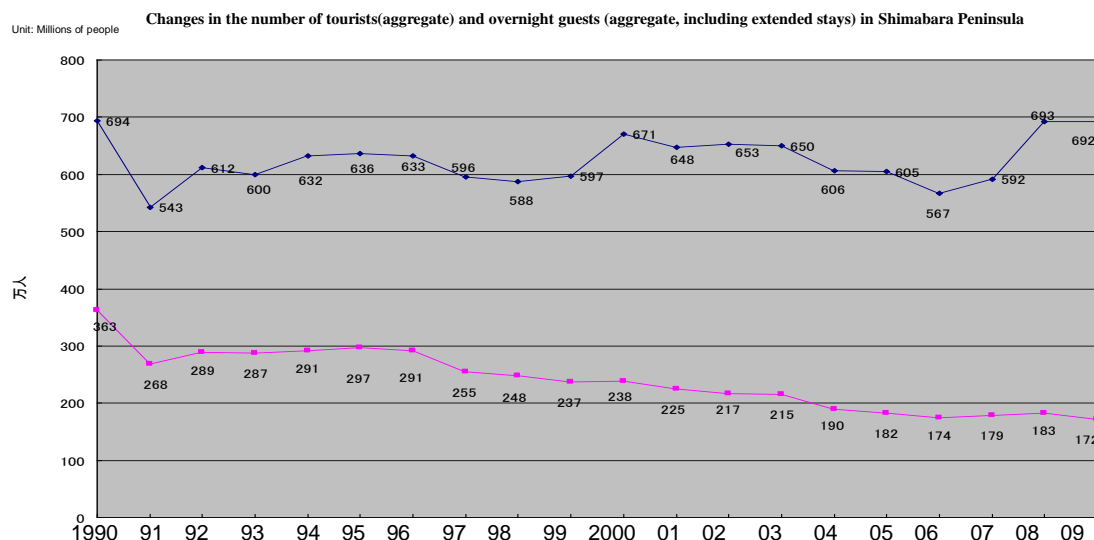
However, as time goes by generations of people that have not even heard of the Unzen Fugendake Disaster will emerge. Passing on to these generations a record of the threats and lessons of the disaster is both a responsibility and an immediate issue for those living in the region.

In tandem with passing on these things to future generations, geo-guides will play a major role as “interpreters” that convey the attractions of the geopark to many people. The nurturing and management of geo-guides is therefore a vital issue.

(3) Tourism and regional development

Shimabara Peninsula is the home of the Unzen-Amakusa National Park and the Shimabara Peninsula Prefectural Park, both of which spread across its three constituent cities, centering on Mount Unzen.

Since Nagasaki Prefecture has many tourism resources such as numerous Christian relics, and as the area is also the entrance to Kumamoto Prefecture it attracts many tourists throughout the four seasons.



However, the aggregate number of visitors to Shimabara Peninsula, which peaked at 6.94 million in 1990, declined by 21.8% to 5.43 million in 1991 after the eruption, while the number of tourists staying overnight declined by 52.6% from the 1990 figure of 3.63 million to 1.72 million in 2009. In addition to the direct damage caused by the disaster, the tourism industry has also been dealt a heavy blow.

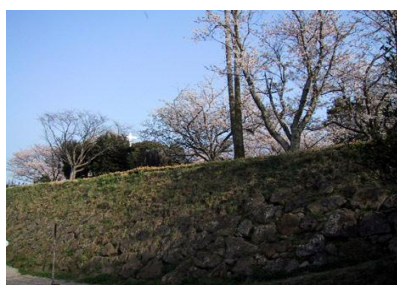
This is why the government and private sector joined together, shortly before and after an end was declared to the Unzen Fugendake volcanic activity in 1995-96, to conduct various projects aimed at comprehensively rebuilding and restoring the region following the disaster. As a part of these projects, the Mount Unzen Disaster Memorial Hall was constructed by Nagasaki prefecture as a core facility of the Heisei Shinzan Field Museum concept, a network of individual volcanology resources was created, environmental improvements were pursued that fitted in with the goals of tourism, experience, learning and observation, and initiatives taken to seek to utilize the damage of the eruptions as tourism resources.

Cities on Volcanoes Conference

This is an international forum hosted once every two years or so by the International Association of Volcanology and Chemistry of the Earth's Interior (IAVCEI), the international academic society in the field of volcanology. It is a forum not only for volcanology but also for researchers in many fields, government figures and people involved in disaster prevention to discuss the social impact of volcanic activity, and aims to mitigate the damage caused by volcanoes through collaborative efforts including crisis management, town planning, sociology, psychology and education.

In addition, in recent years the remains of Hara Castle and Hinoe Castle have been included as part of the Churches and Christian Sites in Nagasaki that have been added to the Tentative List of UNESCO World Heritage Sites, and the Shimabara Peninsula and Amakusa region have been designated as a Tourism Area by the Japan Tourism Agency. With the implementation of the Unzen-Amakusa Tourism Area Development Project and so on tourism initiatives are underway across a wide geographical area.

In the midst of this state of affairs the major issues are just how far numbers of tourists can be boosted through geotourism, and whether or not the Shimabara Peninsula's core industries of agriculture and fishing can be integrated with tourism. Another issue is the question of how the attraction of the geopark can be relayed to the public both within and outside the peninsula.



Hara Castle Ruins



Hinoe Castle Ruins

Interpreter

Interpreters act as 'intermediaries' between people and nature, explaining and interpreting nature for them. Not only do they have to be knowledgeable about nature, they also have to take care of participants' safety, bring pleasure to participants, draw out their individuality and be able to effectively design programs.

Tentative List of UNESCO World Heritage Sites

This is a record of resources that the governments of various countries think are worthy of being added to the UNESCO World Heritage List. These resources are thought to possess remarkable universal value and intentions are to promote their future registration.

Churches and Christian Sites in Nagasaki

In addition to churches built over the 19th and early 20th centuries and sites related to the coming of Christianity in the 16th century, this consists of the Twenty-Six Martyrs and the Hara Castle Remains, which was the setting for the Shimabara Rebellion, and settlements where people kept their Christian faith in the midst of persecution by the state and Japan's period of seclusion. These were included on the Tentative List of UNESCO World Heritage Sites in January 2007.

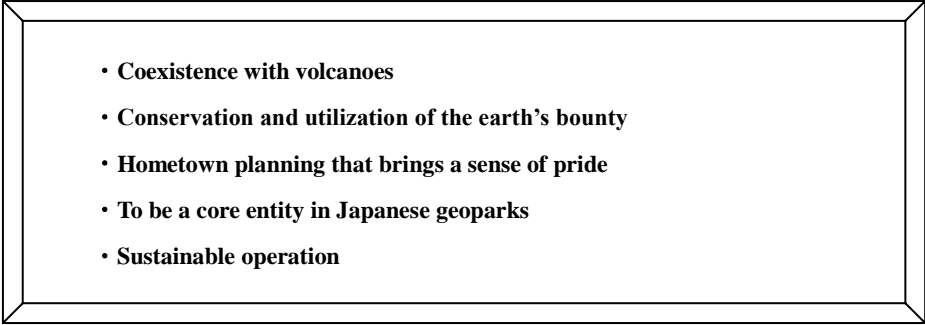
Unzen-Amakusa Tourism Area Development Project

By developing a tourism area covering a wide region through the cooperation of tourism locations, the Unzen-Amakusa Tourism Area Development Project aims to carry out various initiatives to create an area where domestic and international tourists can stay for 2-3 days.

Within Nagasaki prefecture, three regions have received certification including the Unzen-Amakusa Tourism Area as well as the Hirado, Sasebo and Saikai Long Stay Tourism Area in the Shimabara Peninsula, together with the Genkainada Tourism Area including Iki City. The Unzen Amakusa Tourism Area plans to carry out initiatives such as a project to create a system for tours offered by travel agencies at the destination by making use of a special case in the Travel Agency Law, projects to increase the attractiveness of inns for promoting consecutive stays, a project to plan tours for visiting three hot springs in the peninsula, a project to develop tourist routes and a project for the operation of non-stop buses.

1. Basic principles of the Unzen Volcanic Area Geopark (the future image)

Based on the following principles and by pursuing the conservation and utilization of the bounty of volcanoes and abundant nature, the Unzen Volcanic Area Geopark will head towards the future with aim of achieving a sustainable society that coexists with the Shimabara Peninsula's unique volcanoes, in order to raise the attractiveness of geoparks as a pioneering blueprint for the Japanese Geoparks Network.

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- **Coexistence with volcanoes**
 - **Conservation and utilization of the earth's bounty**
 - **Hometown planning that brings a sense of pride**
 - **To be a core entity in Japanese geoparks**
 - **Sustainable operation**

2. Term of the plan etc.

(1) Term of the plan

The plan will be for ten years from FY2010.

(2) Reviews of the plan

Though the term of the plan is the ten years from FY2010, each time the Global Geoparks Network conducts a reexamination their remarks and the state of progress of the action plan will be analyzed, the opinions of those involved adequately sought, and reviews of the plan, including the formulation of subsequent actions plans, will be conducted with an eye on the future image ten years later.

Furthermore, the plan will be reviewed where necessary in order to dovetail it with the instructions of the Global Geoparks Network and any revisions made to various governmental master plans.

In an attempt to realize the basic principles of the Unzen Volcanic Area Geopark as outlined in Chapter III, the following nine policies have been decided upon and various measures will be taken pursuant to them.

1. Protection and conservation

- (1) By clarifying the management, use and conservation policies of the geopark, effective protection and conservation of geosites will be aimed for.
- (2) By further expanding protection and conservation initiatives in which local residents are involved, the encouragement of conservation activities will be aimed for.
- (3) Conservation and equipping of the geopark will be encouraged and the uncovering of new geo-resources attempted.

2. Research and education

- (1) Support for geosites studies and research and collaboration through the geopark between university researchers and local residents will be aimed for.
- (2) The implementation of a wide range of situation-specific training will be aimed for, intended for children, students, teaching personnel and local residents.
- (3) The nurturing of geo-guides as interpreters, and the establishment of a Shimabara Peninsula geo qualification system will be aimed for.

3. Tourism and regional restoration

- (1) By expanding geotourism, an increase in the number of tourists visiting the Shimabara Peninsula will be aimed for.
- (2) By encouraging a fusing of the peninsula's agriculture, fishing, commerce and tourism industry, regional planning that breeds unique industries will be aimed for.
- (3) Internationalization will be put on the agenda, and attempts made to strengthen the transmission of local information inside and outside of Japan.

Chapter V Basic strategy of the Unzen Volcanic Area Geopark

In line with the Chapter IV (Basic policy of the Unzen Volcanic Area Geopark), the constituent members of the Unzen Volcanic Area Geopark Promotion Office – the three cities of the peninsula, National government, Nagasaki Prefecture, research institutions, and private sector groups – will all perform their various roles, and aim to realize the objectives through the following basic strategy with the cooperation of local residents and visitors. The concrete division of roles and schedule will be implemented according to the separately formulated action plan.

1. Protection and conservation

- (1) The following strategy is stipulated in order to achieve the clarification of management, use and conservation strategy.
 - a. By clarifying the policies of conservation, usage and management for each geosite (including rankings and zoning), guidelines for easily understandable conservation and appropriate management will be given.
 - b. With regard to areas secured under laws such as the Natural Parks Act, and the Act on Protection of Cultural Properties, conservation measures will be continued and conducted as prescribed therein. Furthermore, in geosites outside of these areas where measures need to be taken against grave robbing and so on, where necessary the conservation of geological and natural assets by their incorporation into areas secured by the Natural Parks Act and the Act on Protection of Cultural Properties will be considered.
 - c. Periodic inspections will be carried out of the state of protection and conservation at each geosite and the activities conducted there, and where necessary measures will be taken to improve these.

 - (2) The following strategy is stipulated in order to realize the encouragement of conservation activities by local residents.
 - a. In order to encourage the conservation by local residents of nature, landscapes, culture and traditions, numerous opportunities will be created for the children who forge the future of our society and for local residents to encounter the gifts of nature and deepen their appreciation of the value of nature, the precious regional assets around them.
 - b. In order to encourage the practice of grassroots activities for autonomous and concrete protection and conservation by local residents aimed at passing down precious natural assets to younger generations, efforts will be made to create mechanisms for fostering geo site keepers and conservation supporters, and conservation activities in which residents participate.

 - (3) The following strategy is stipulated in order to encourage conservation and improvement of the geo sites and the uncovering of new geopark resources.
 - a. The improvement of the geopark with explanatory signs and so on will be promoted, in order to enable enjoyable learning at the geo sites.
 - b. The periphery of the geo sites will be equipped with paths and information boards, the accessible area
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clearly indicated, and the degradation of the geo site through careless access and disorderly use will be prevented. At the same time, activities will be conducted that will enhance the attractions of the geo sites and their safety.

- c. Strenuous efforts will be made to uncover new geo sites so that the value of the geo sites is not reduced while the value of the precious geological assets goes unrecognized.

Geo site keepers and conservation supporters

These are people who have a regular interest in the region's geo sites, and take part in conserving the resources and cleaning the sites, instructing visitors in the etiquette of using the sites, and provide commentary and explanations. They also include those who support these activities.

2. Research and education

- (1) The following strategy is stipulated in order to realize support for geo site studies and research, and collaboration through the geopark between university researchers and local residents.
 - a. In addition to collecting data on the current state of the geosites and their changes, support will be provided for studies and research aimed at uncovering new geosites.
 - b. Through the collaboration of a network of related institutions, individual research into topics such as geosite themes and regionality, and studies aimed at the sustainable use of the regional resources will be conducted.

 - (2) The following strategy will be stipulated in order to aim for the implementation of a wide range of training suited to the various circumstances of children, students, teaching personnel and local residents.
 - a. With regard to elementary and junior high school students, attempts will be made to engender them with a feeling for the bounty of nature through direct experiences with it, and the educational message of the geopark will be promoted by telling them about knowledge, culture and technology based on use of the Shimabara Peninsula's natural gifts. Support will be provided for research and studies carried out by high school students on their own initiative, and opportunities for announcing their results created.
 - b. Geotours for members of the local public, symposiums and lecture meetings will be held in order to build up the momentum of geopark activities and enable people to acquire a wide range of knowledge about the geopark.
 - c. Research and development will be conducted so that the geology, topography, natural geography, history and culture of their home town can be incorporated into elementary and junior high school curricula, thereby enabling teachers to tell students about the importance of the earth's heritage.
 - d. With regard to passing down the history of the eruption disasters to future generations, by conserving the volcanic remnants and continuing to speak about the history of people's coexistence with volcanoes disaster prevention education will be promoted, and this will link up to preparations for disasters in the future.

 - (3) As well as making efforts to nurture geoguides as interpreters, the establishment of a Shimabara Peninsula geo qualification system will be aimed for, and the following strategy will be stipulated.
 - a. The nurturing of new geoguides will be pursued, and skill-enhancement training will be implemented in order to improve the quality of the geoguides who are already in action.
 - b. A system that will enable any member of the public to be a geoguide will be pursued, giving members of the public a feeling for the magnificence of their home region, making them take care of local culture and natural assets, and helping them to welcome visitors and explain to them about the peninsula.
 - c. Numerous opportunities to learn about the Unzen Volcanic Area Geopark will be provided, and a "Shimabara Peninsula geo qualification system" will be established with the objective of raising awareness of the geopark and fostering geopark guides.
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3. Tourism and regional development

(1) The following strategy will be stipulated to increase the number of tourists visiting the Shimabara Peninsula through the expansion of geotourism.

- a. By linking and using the geopark and the existing tourism resources, various attractive tours will be offered by travel agencies, and tourist sites drawing both excursion-based and overnight stay-based will be created.
- b. The establishment of a provisionally titled ‘geopark university’ will be promoted. The ‘university’ will teach visitors about the geopark through a geopark experience program, and award ‘graduates’ with completion certificates.
- c. Visitors from overseas will also be considered, and the Shimabara Peninsula will unite to create an international tourism site with the participation of local people.
- d. The management of geoguides through guide coordinators will be established, and a system created that will enable immediate reaction to requests from inside and outside of Japan.
- e. The personnel managing each of the geopark’s facilities will where necessary develop usage facilities and update or alter exhibition facilities.
- f. Initiatives will be taken to develop new mountain paths that enable visitors to observe Heisei Shinzan from close quarters, and these will be used as new tourism resources for the geopark.
- g. The network to share the information between all of the geopark facilities will be improved.

(2) The following strategy will be stipulated in order to aim for the creation of unique industries by fusing the agriculture, fisheries, commerce and tourism industry of the Shimabara Peninsula.

- a. In addition to rebuilding individual industries such as agriculture, fisheries, commerce and tourism, by linking the regional geopark resources and various industries, enhancing their synergistic effect and soliciting the ideas of the public and private sector, a geopark-based tourism menu and local products will be developed.
- b. Using geotourism the special characteristics of the region and the history and lifestyle culture that cultivated these will be fused with tourism, and the rebuilding of the Shimabara Peninsula’s tourist industry will be attempted through the development of tours, experience-oriented learning and a diverse array of travel products.

(3) An eye will be kept on internationalization, and the following strategy will be stipulated in order to strengthen the transmission of information throughout Japan and overseas.

- a. Information media will be effectively utilized, and an attempt to enrich the information relayed in Japan and abroad will be made.
- b. Comprehensive guidebooks and promotional DVDs with plenty of information about the region and how to access it will be produced, and these will be used in activities to lure visitors from within and outside of Japan to the region.

Tours offered by travel agencies at the destination

Tours that are planned, offered and carried out from a perspective of information about the individual tourism resources available at the tourist’s destination (nature, culture, industries, townscapes and culture etc.) and the perspective of the local people (for example experiences and learning opportunities in each region).