Mt.Apoi Geopark,Japan

Annex 1

(November 2010)

Applicant's self-evaluation form for Global Geoparks Network

SELF EVALUATION DOCUMENT

The information contained in this form will serve GGN evaluators in providing an overview on the application.

Geopark Self Evaluation Document

- Administrative part (applicants identity, signature, overview)
- Identification of the territory
    - I. Geology and Landscape
    - II. Management Structure
    - III. Information and Environmental Education
    - IV. Geotourism
    - V. Sustainable Regional Economy

Global Geoparks Network
Applicant's Self Evaluation Document

Applicants Identity

1. Name and Country of Applicant territory.

Mt. Apoi Geopark, Japan

2. Name of the Applicant's Management Body

Mt. Apoi Geopark Promotion Council in Samani

3. Address of Applicant Management Body

Postal Address: **1-21 Odori Samani-cho Hokkaido, 058-8501, Japan**	
Region:	**Hokkaido**
Country:	**JAPAN**
Telephone:	**+81-146-36-2120**
Fax:	**+81-146-36-2662**
Email:	**apoi.geopark@festa.ocn.ne.jp**

4. Size of Territory and Geographical Coordinates

Size in km^2	364.33 km^2
Coordinates	42° 07′ 40″ N, 142° 56′ 01″ E

5. Contact Person

Management Body Director	Kazuyuki Sakashita
Geoscientist	Kiyoaki Niida
Specialist on Regional Development	Hiroshi Sasaki

FOR EUROPEAN APPLICATIONS ONLY
Statement of acceptance of European Geopark Network Charter
Requirements: *The Management Body of the Applicant Territory red the EGN charter and accepts all of its provisions.*

Name	Position	Date
Signature		
Name	Position	Date
Signature		

Application Overview

	Category	Weighting (%)	Self-assessment	Evaluators Estimate
I	Geology and Landscape			
1.1	Territory	5	4.3(860/1000)	
1.2	Geoconservation	20	20.0(1000/1000)	
1.3	Natural and Cultural Heritage	10	9.5(950/1000)	
II.	Management Structures	25	19.1(765/1000)	
III	Interpretation and Environmental Education	15	13.0(865/1000)	
IV	Geotourism	15	11.7(780/1000)	
V	Sustainable Regional Economic Development	10	8.0(800/1000)	
Total		100	85.6	

EVALUATORS VERIFIVATION

Name	Position	Date
Signature		
Name	Position	Date
Signature		

Notes For Applicants

- Documentary evidence should be provided for all positive statements made in this evaluation document.
- No new applicant is expected to score 100 %. However, a score of 50 % within each category is required

I. Geology and Landscape	Marks available	Self Assessment	Detailed Information
1.1 TERRITORY			
1.1.1.Geosite list			
List of "Geosites" located within territory identified for use (Please give a geosite list)			
20 "Geosites" or more	100	**100**	35 Geosites (See the Appendix 2 Geosite List.)
40 "Geosites" or more	200		
Maximum Total	**200**	**100**	
1.1.2. Geodiversity			
How many geological periods are represented in your area? (10 points each, maximum 100 points). (Please give a list)	100	**60**	6 (Precambrian, Triassic, Jurassic, Cretaceous, Paleogene and Neogene periods) (See the Appendix 2 Geosite List.)
How many clearly defined rock types are represented in your area? (10 points each, maximum 100 points). (Please give a list)	100	**100**	14 (6 igneous rock types: peridotite, serpentinite, gabbro, granite, tonalite and porphyrite; 5 sedimentary rock types: conglomerate, sandstone, mudstone, chert and limestone; 3 metamorphic rock types: amphibolite, hornfels and biotite gneiss) (See the Appendix 2 Geosite List.)
How many distinct geological or geomorphological features are present within your area? (Please give a list) (10 points each, maximum 100 points).	100	**100**	10 geological features (Horoman Peridotite Complex in the lowermost zone of the Hidaka Metamorphic Belt, lower to middle parts of the Middle Zone of the Hidaka Metamorphic Belt, lower part of the Middle Zone of the Hidaka Metamorphic Belt, dike intruding into the Cretaceous System, shallow sea sediment containing shell fossils, Cretaceous fore-arc basin area, Fuyushima metamorphic rocks in the Idonnappu Belt, accretionary prism mélange in the Idonnappu Belt, Hidaka Main Thrust (HMT), Poroshiri Ophiolite Belt) 6 geomorphological features (gorge, pothole, erosion, peridotite massif, sea cave, sea cliff) (See the Appendix 2 Geosite List.)
Maximum Total	**300**	**260**	

1.1.3. Public Interpretation of the Geopark's sites of interest				
Number of sites with public Interpretation (trails, interpretation panels or leaflets) (Please give a list)				
	5-10	40		
	10-20	80		
	20 or more	120	**120**	34 geosites with information boards (See the Appendix 2 Geosite List.)
Geosites of Scientific Importance (Please give a list)	> 25 %	40	**40**	19 out of 35 geosites (See the Appendix 2 Geosite List.)
Geosites used for Education (Please give a list)	> 25 %	40	**40**	31 out of 35 geosites (See the Appendix 2 Geosite List.)
Geosites used for Geotourism (Please give a list)	> 25 %	40	**40**	20 out of 35 geosites (See the Appendix 2 Geosite List.)
Non-Geological Sites used by the Geopark (intergraded in Geoparks activities) (Please give a list)		40	**40**	3 out of 35 geosites (See the Appendix 2 Geosite List.)
	Maximum Total	**200**	**200**	
1.1.5 Relationship to existing Geoparks *(select one from the following options)*				
There is no comparison with any other existing Geopark within GGN		300	**300**	The most distinctive feature of Mt. Apoi is its fresh and diverse peridotites that provide a window into the earth's deep mantle. Sesia-Val Grande Geopark in Italy (a member of the GGN) also has peridotites, but they are not comparable to those of Mt. Apoi due to the latter's diverse characteristics and sizes. Other features of Mt. Apoi include internationally recognized alpine flora, which developed under the significant influence of the local peridotites, and close connections of geological and geomorphological resources with local history and industry. Accordingly, the results of comprehensive judgment indicate no comparison with any other existing geopark within the GGN.
There is another Geopark within GGN with comparable geology.		200		

There is another Geopark within GGN with comparable geology or infrastructure in the same country.		100		
There is another Geopark within GGN with comparable geology or infrastructure in the same country's geographical Region (Clarification in time and distance)		50		
	Maximum Total	**300**	**300**	

Territory Subtotal	Maximum points	Self Assessment
	1000	**860**

1.2. GEOLOGICAL CONSERVATION	Marks Available	Self Assessment	Detailed Information
1.2.1. Inventory and significance of Geosites can be found in your area (SELF AWARDED total cannot exceed 300).			
At least one geosite of internationally significant geology and geomorphology. (100 for each). (Give a list and justification)	160	**160**	Groups of geosites in the Horomankyo Area and the Mt. Apoi Area where internationally recognized peridotites are found (See the Appendix 2 Geosite List and B-2-1 and B-2-2 from p.15 to p.16 of the Application Dossier.) Justification: See B-1-3 from p.13 to p.14 and B-3-3 on p.19 of the Application Dossier.
At least five geosites of national significance (Give a list and justification)	100	**100**	Group of geosites in the Mt. Apoi Area, which is home to a variety of endemic and other alpine plant species despite its low altitude (See the Appendix 2 Geosite List and B-2-2 on p.16 of the Application Dossier.) Justification: See B-4-2(1) and B-4-2(2) from p.21 to p.23 of the Application Dossier.
At least 20 geosites of educational interest and used by schools and universities. (Give a list and justification)	100	**100**	31 out of 35 geosites have educational significance. (See the Appendix 2 Geosite List and B-2-1 to B-2-5 from p.15 to p.18 of the Application Dossier.) Justification: Numerous university field trips are hosted in the area every year. → See D-4-3 on p.35 of the Application Dossier and the attached. Schools are also active in teaching earth science and local area studies using these educational geosites. → See D-4-2 (1) on p.34 of the Application Dossier.
Do you have a geosites database for the Geopark? (Give a list and justification)	50		
Do you have a geosites map for the Geopark? (Give a list and justification)	50	**50**	Yes. There is a geosite map (See p.15 of the Application Dossier and the Annex 4 Mt. Apoi Geopark Map.)
Maximum Total	**300**	**300**	
1.2.2. Strategy and legislation to protect against damage of geological sites and features (one answer only)			

The entire territory has legal protection because of it's geological values.	300		
Part of the area is protected by law for its geological interest. (please refer to which part and why)	150	**150**	In 1981, the Mt. Apoi area was designated as part of Hidaka-sanmyaku Erimo Quasi-National Park under the Natural Parks Act because of its geological value, as represented by its peridotites, and its unspoiled natural environment. Location: See p.15 of the Application Dossier and the Annex 4 Mt. Apoi Geopark Map.
Prohibition of destroying and removing parts of the geological heritage.	150	**150**	The Natural Parks Act prohibits the collection of sand, stones and plants in Special Zones and Special Protection Zones of quasi-national parks without prior authorization from the prefectural administration (i.e., the Hokkaido Government).
Maximum Total	**300**	**300**	
1.2.3. How are the geosites protected against misuse and damage?			
General announcement of regulations against misuse and damage for the entire Geopark area	100	**100**	Regulations on quasi-national parks are posted on the website (in Japanese and English) and included in guidebooks (in Japanese). In particular, regulations on the collection of alpine plants are listed on the website (in Japanese and English), in guidebooks (in Japanese), in pamphlets (in Japanese) and on visitor center commentary panels (in Japanese and English).
Announcement of regulations against misuse and damage at individual sites of the Geopark	50		
Use of observation posts, guarding and patrolling by wardens	60	**60**	Rangers and other officials based in the visitor center regularly conduct patrols and checks in the area.
Provision for enforcement of regulations (no digging and collection) in website, flyers, etc.	40	**40**	Regulations against illegal collection of alpine plants are effectively enforced via a system of focused monitoring activities, including biannual patrols with police officers.
Offering collecting of geological specimens under supervision at selected sites (clarification)	40		
Maximum Total	**200**	**200**	
1.2.4. What measures are carried out to protect geosites and infrastructure against damage and natural			

degradation?			
Regular maintenance and cleaning. (Please give details. How often are they checked?)	60	60	Although no particular measures are taken for rock outcrops themselves, weeding, cleaning and other environmental improvement initiatives are implemented around geosites three times a year. An alpine patrol official regularly conducts checks to ensure the ongoing maintenance of Mt. Apoi's trails. Additionally, local residents implement annual cleaning of the whole area. (See C-3 on p.28 to p.29 of the Application Dossier.)
Conservation measures (Please give details)	70	70	Alpine plant regeneration experiments are conducted on Mt. Apoi for habitat restoration. These include surface soil disturbance and dwarf stone pine removal. (See C-2-2 on p.28 of the Application Dossier.)
Protective measures (preparation, sealing to avoid natural degradation) (Please give details)	70	70	A range of initiatives are conducted to conserve alpine plants. These include patrols, mountain trail development, investigation of deer-related plant damage, and public awareness enhancement activities. (See C-2-2 on p.28 of the Application Dossier.)
Maximum Total	**200**	200	

Geoconservation Subtotal	Maximum points	Self Assessment
	1000	**1000**

1.3 Natural and Cultural Heritage	Marks Available	Self Assessment	Detailed Information
1.3.1 Natural Rank (SELF AWARDED total cannot exceed 300).			
World Heritage Site (Natural or Mixed) (Please give a list and justification)	300		
Other International Designation in part of the Geopark territory (MAB = 200, Ramsar wetland = 200, Other = 100) (Please give a list and justification)	200		
National designation in part of the Geopark territory (Please give a list and justification)	200	**200**	Hidaka-sanmyaku Erimo Quasi-National Park: the whole of the Mt. Apoi area Special Natural Monument: alpine plant communities on Mt. Apoi Natural Monuments: Horoman Japanese white pine habitat, Himechamadaraseseri (*Pyrgus malvae*) butterfly, black woodpeckers, Blakiston's fish owls, Steller's sea eagles, white-tailed eagles, bean geese and white-fronted geese (See the Appendix 3 Natural and Cultural Heritage List and A-3-5 (2) on p.3 to p.4 of the Application Dossier.)
Regional designation in part of the Geopark territory (Please give a list and justification)	100	**100**	Wildlife Protection Area: the whole of the Mt. Apoi and Mt. Horoman areas, Mt. Kannon Tree designated for protection: Sacred Tree on Mt. Kannon (See the Appendix 3 Natural and Cultural Heritage List.)
Local designation in part of the Geopark territory (Please give a list and justification)	50		
Maximum Total	**300**	**300**	
1.3.2 Cultural Rank (SELF AWARDED total cannot exceed 300).			
World Heritage Site in part of the Geopark territory (Cultural or Mixed) (Please give a list and justification)	300		
Other International Designation in part of the Geopark territory (Please give a list and justification)	200		

National designation in part of the Geopark territory (Please give a list and justification)	200	**200**	Important Cultural Property: materials concerning Tojuin Temple – one of the Three Government Temples of Ezo Important Intangible Folk Cultural Property: Traditional Ainu dance (See the Appendix 3 Natural and Cultural Heritage List, A-3-6 (1) on p.5, B-4-1 (3) on p.21, B-4-3 (2) on p.25 and D-2-2 on p.31 of the Application Dossier.)
Regional designation in part of the Geopark territory (Please give a list and justification)	100		
Local designation in part of the Geopark territory (Please give a list and justification)	50	**50**	Cultural properties: Gomado Hall in Tojuin Temple, old documents held by Tojuin Temple, statue of Prince Shotoku (*Namubutsu Taishi*), the three statues comprising the Yakushi Triad (Yakushi Nyorai, or Healing Buddha, and two attendants), statue of Sho Kanzeon Bosatsu (Avalokitesvara-bodhisattva), statue of the goddess Benzaiten, statue of the children's guardian deity Wasuke, Samani Mountain Path (See the Appendix 3 Natural and Cultural Heritage List, B-4-1 (3)~(4) on p.21 and B-4-3 (2) on p.25 of the Application Dossier.)
Maximum Total	**300**	**250**	
1.3.3 Promotion and maintenance of Natural and Cultural Heritage			
Interpretation (Please give details)	100	**100**	Natural and cultural heritage resources are described on the website, in pamphlets and in other publications. Geopark guides and local residents also provide commentary and show visitors around these resources on geo tours and in public workshops. (See D-4-1 (1) on p.32 to p.33 and D-5-1 on p.36 of the Application Dossier.)
Education programmes (Please give details)	100	**100**	Local elementary and junior high schools provide comprehensive education using natural and cultural heritage resources. (See D-4-2 (1) on p.34 of the Application Dossier.)
Communication (Please give details)	100	**100**	Local workshops involving the use of natural and cultural heritage resources are held on an ongoing basis in conjunction with nature conservation organization staff and

				the local board of education. Collaboration with other regions is also promoted through exchanges in the Hokkaido Alpine Plant Conservation Network, including information provision and mutual mountaineering visits.
Promotion of the links between Geological Heritage sites and the existing Natural and cultural sites within the Geopark (Prove with examples) (Please give details)		100	**100**	Information on connections between geological/geomorphological resources and ecosystems/local daily life is provided on the website, in handbooks and through visitor center exhibits. (See the themes of Mt. Apoi Geopark on the website.)
	Maximum Total	**400**	**400**	

Natural and Cultural Heritage Subtotal	**Maximum points**	**Self Assessment**
	1000	**950**

Total Points Awarded For Section I: Geology and Landscape	**Maximum points**	**Self Assessment**
	3000	**2810**

II. MANAGEMENT STRUCTURE	Marks Available	Self Assessment	Detailed Information
2.1 How is the Applicants management structure organised?			
Does the Geopark has a clear and well defined boundary? (Please elaborate)	50	**50**	The boundary of Mt. Apoi Geopark coincides with the administrative boundary of Samani Town centering on Mt. Apoi, where the Horoman peridotite complex is visible above the ground. (See A-2 on p.1 and A-3-1 on p.2 of the Application Dossier.)
Does the Geopark have well defined and effective management structure able to take and implement decisions to enhance protection of Geological Heritage and promote sustainable regional development for the Geopark area? (Please give details)	50	**50**	Mt. Apoi Geopark is operated by the Mt. Apoi Geopark Promotion Council in Samani, which is composed of representatives from the local government, industrial/nature conservation organizations and related private enterprises. Business plans are formulated by the Secretariat based on sectoral subcommittee discussions. Staffed by Samani Town Government employees, the Secretariat engages in comprehensive heritage conservation, education and geotourism activities. (See A-4 on p.6 to p.7 of the Application Dossier.)
Is the Geopark staff employed directly or indirectly by Geopark partners? (Please elaborate)	50	**50**	The Secretariat is staffed by employees of the Samani Town Government (a geopark partner). As local government organizations and other public sector operators play a major role in the small communities of Samani, it is natural that government employees should take charge of the Secretariat and promote the geopark in collaboration with local residents.
An independently administered budget (Please give details)	50	**50**	The Mt. Apoi Geopark Promotion Council in Samani independently administers and executes budgets based on funding primarily consisting of subsidies from the Samani Town Government, tour revenue and income from merchandise sales.
Maximum Total	**200**	**200**	
2.2 Does a management or Master Plan exist?			

Management or Master Plan exists (not older than 10 years) (You should refer to the main components in accompanying documentation)	40	**40**	Although Mt. Apoi Geopark does not yet have its own management plan, its future direction is clarified in the master plan for Samani Town, which lays the foundations for community development. (See the Appendix 4 Outline of Geopark Policy Measures in the 8th Samani Town Comprehensive Plan.) The components listed below are described in the Application Dossier based on the direction stated in the master plan. A master plan for Mt. Apoi Geopark will be formulated in fiscal 2015 based on the examination of these components.
2.3 Master Plan Components What components does it includes?			
Earth Heritage (Geosite and Landscape).	10	**10**	See B-1 from p.8 to p.14 and B-3 from p.18 to p.19 of the Application Dossier.
Other Natural and Cultural Heritage	10	**10**	See B-4 from p.20 to p.26 of the Application Dossier.
Links between Natural and Cultural Heritage	10	**10**	See B-4-1 from p.20 to p.21 of the Application Dossier.
Tourism development (infrastructure and activities)	10	**10**	See D-2 from p.30 to p.31 and D-4-1 from p.32 to p.34 of the Application Dossier.
Education activities	10	**10**	See D-4-2 from p.34 to p.35 of the Application Dossier.
Local development	10	**10**	See D-5 from p.36 to p.38 of the Application Dossier.
Regional products (agrotourism)	10	**10**	See D-6 from p.38 of the Application Dossier.
Community links	10		
Funding	10	**10**	A funding plan is included in the master plan for Samani Town.
Marketing strategy	10		
Strength and Weakness Analysis of Management and administration	20	**20**	See D-3 from p.31 to p.32 of the Application Dossier.
An audit of the geological and other resources	20		
Do you have targets for the following goals? (Identify specific goals)			
Geology	5	**5**	See D-4-2 to D-4-3 from p.34 to p.35 of the Application Dossier.

	Landscape protection	5	**5**	See C-2-2 and C-3 from p.28 to p.29 of the Application Dossier.
	Tourism “geotourism”	5	**5**	See D-3-3 and D-4-1 from p.32 to p.34 of the Application Dossier.
	Agriculture and forestry	5		
Analysis of local/regional development potentials		10		
	Maximum Total	**200**	**155**	
2.4 Does your Application have a Marketing Strategy				
Strategy exists (not older than 10 years) (You should refer to the main components in accompanying documentation)		50		
	Maximum Total	**50**		
2.5 Geopark should protect its geological heritage and create sustainable geotourism. What has been done to fulfil this duty?				
Definition of areas which will be the focus of tourism development		25	25	Tourist spots were clarified by demarcating five small areas based on geo-narratives when geosites were designated.
Definition of areas where no tourism is allowed, (with focus on protection and research)		20		
Measures taken to regulate and reduce traffic (restricted access, central parking lots, traffic guiding system, signposting etc.)		15		
Environmental friendly hiking path system		10	10	Two trail routes (footpaths) have been established in the geopark area, and maps and guideposts have been developed. (See information on Recommended Routes on the website.)
Clearly defined cycle or other trails such as bridleways or river trails.		10		
	Maximum Total	**80**	35	
2.6 Are there any initiatives or working groups who discuss promotion of natural and cultural heritage				
Regular "Working Group" meetings on specific topics		20	20	The Tourism and Industry Subcommittee and the Education and Public Awareness Subcommittee under the Mt. Apoi Geopark Promotion Council in Samani meet regularly.

Individual cooperation and contracts between Applicant, tourist organisations and other interest groups	10	10	The Applicant (Mt. Apoi Geopark Promotion Council in Samani) has established a collaborative structure for the promotion and utilization of the quasi-national park and related natural conservation in conjunction with the prefectural Hokkaido Government, which is the administrator of the park.
Other regular activities, not described by the answers above.	10		
Maximum Total	**20**	**20**	
2.7 Has your geopark area received any awards or other formal recognition for its activities in the fields of geodiversity, conservation or sustainable geo-tourism during the last five years? (SELF AWARDED total cannot exceed 100)			
International awards (name and date of award)	100		
National awards (name and date of award)	50	50	Japanese Geopark designation: February 20, 2009 Japan's Top 100 Geological Features recognition: May 10, 2009 (Mt. Apoi and its alpine plant communities) Hokkaido Social Contribution Award: July 24, 2009 (for conservation activities) Japan Mountain Heritage status: October 23, 2013 (for conservation activities)
Other (e.g. from industry) (name and date of award)	20	20	Donation from the Hokku Fund established by the local North Pacific Bank: May 13, 2014 (for conservation activities)
Maximum Total	**100**	**70**	
2.9 Are competent geological and scientific experts available to promote further research work on a scientific basis? (SELF AWARDED total cannot exceed 140)			
At least one person with a degree in geosciences or other related discipline in the permanent staff (employed directly).	10	10	Ms. Satomi Kato (Master's degree in petrology)
At least five people with a degree in geosciences or other related discipline on the staff of the Applicant (employed by partner)	20		
Do additional experts exist in the permanent staff (e.g. biologists)	10		

Regular and formal joint activity with at least one scientific institution (University, National Geological Survey)	20	20	1. Joint activities, including local resource conservation/utilization and industrial promotion, in conjunction with the Hokkaido University Field Science Center for Northern Biosphere based on a comprehensive partnership agreement 2. Monitoring of the state of alpine plant growth in conjunction with the prefectural Institute of Environmental Sciences (part of the Hokkaido Research Organization)
Regular consulting is maintained by:			
Persons with scientific background in geosciences	15	15	(See the Appendix 5 Expert Network List.)
Persons with experience in geosciences	10	10	(See the Appendix 5 Expert Network List.)
Amateurs available from local community	5	5	(See the Appendix 5 Expert Network List.)
How many different scientific disciplines are in the expert network			
< 5	5		
> 5	10	**10**	(See the Appendix 5 Expert Network List.)
Does a marketing expert exist? If not who does the work?	5	**5**	No. Secretariat member Mr. Shiro Sakashita is responsible for marketing.
Does a press office exist? If not who does the work?	5	**5**	No. Secretariat member Mr. Masatoshi Kodama is responsible for public relations.
Are staff members available to run field trips/guided walks?	5	5	Yes. All Secretariat members may run field trips/guided walks.
Maximum Total	**150**	**85**	
2.10 Does your Applicant area have the following Infrastructure			
Museum within the area of Application managed by yourself or a partner in your organization	100	100	The geopark has a visitor center similar to a museum. The center is complemented by the GeoLAB Mt. Apoi laboratory. (See the website.)
Information Centre within the area of Application	80	80	The geopark area's tourist information center and visitor center provide local information.
'Info-kiosks' or other 'local information points' within the area carry information about the Applicant and its aims and work	40	40	Information on the aims and work of the Mt. Apoi Geopark Promotion Council in Samani is provided at the tourist information center and the visitor center.
Information panels within the area	40	40	General information boards and guide boards are

				positioned throughout the geopark area.
Geological Trails within the area of Applicant, which the Applicant has developed or been involved in developing		40	40	Trail routes are designated by area.
	Maximum Total	**200**	200	

Total Points Awarded For Section II: Management Structure	**Maximum points**	**Self Assessment**
	1000	**765**

III. Information and Environmental Education	Marks available	Self Assessment	Detailed Information
3.1 Research, information and education scientific activity in Earth sciences within the territory			
At least one scientific/academic institution working in the Applicant's area.	50	**50**	Hokkaido University Field Science Center for Northern Biosphere Institute of Environmental Sciences, Hokkaido Research Organization (prefectural institution)
At least one student final report (mapping etc.) in the Applicant's area per year	40	**40**	See the Appendix 6 Academic Paper List.
At least one of PhD thesis on Applicant's area within the past three years	50	**50**	See the Appendix 6 Academic Paper List.
At least five scientific or tourism focused academic papers from the work within the Applicant's area during last 5 years	40	**40**	See the Appendix 6 Academic Paper List.
Maximum Total	**180**	**180**	
3.2 Do you operate programs of environmental education in your Applicant area?			
Does your permanent staff include specialists in environmental education, who undertake such work as their main role within your team.	50	50	Curator Mr. Masahito Tanaka and geological specialist Ms. Satomi Kato are responsible for environmental education.
Do you operate at least one formal education programme (please outline the nature of the programme (s)	30	30	A series of public presentations known as Hometown Geo-workshops have been held since 2010 (total number held: 49; total number of attendees: 1,521; as of August 2014). (See D-5-1 on p.36 of the Application Dossier.)
Do you contribute towards at least one formal education programme developed by other organisations. (museums etc.)	20	20	The Applicant contributes to comprehensive education provided by elementary and junior high schools and to community education provided by high schools. (See D-4-2 (1) on p.34 of the Application Dossier.)
Personal and individual program offered to children visiting the Applicant's area	20	20	Geo-item creation programs provided at the visitor center
Do you operate a special program for primary/elementary school classes?	20	20	Kids' Geo-workshops held two or three times a year provide opportunities for children to engage in geo-item creation and experiential outdoor programs.

Do you operate a special program for secondary/high school classes?	20	20	Programs are provided for junior high school comprehensive education and for high school community studies. (See D-4-2 (1) on p.34 of the Application Dossier.)
Do you operate a special program for university students?	20	**20**	GeoLAB Mt. Apoi laboratory provides geosite guidance for university geological field trips on request. (See D-4-2 (2) on p.34 of the Application Dossier.)
Are there any university camps/education centres in the Applicant's area	20		
Maximum Total	**200**	**180**	
3.3. What kind of educational materials exist? (The SELF AWARDED total cannot exceed 120)			
Have you developed new educational material for school classes?	20		
Films, video, slideshow etc.	20	20	Video on the origins of Mt. Apoi and other aspects of the geopark is shown at the visitor center.
Interactive elements/ internet	20		
Different special exhibitions changing on a regular basis	20	20	Special exhibitions are held at the visitor center on a regular basis. The center hosted an exhibition on Hokkaido sika deer in 2014, and plans are being made to hold a special exhibition on Hokkaido geoparks in 2015. The Central Public Hall in the geopark area held a special exhibition featuring Oman in the Middle East this year. (See D-5-3 (2) on p.37 to p.38 of the Application Dossier.)
Special education equipment (puzzles, special constructions, etc)	20	20	The visitor center features rock-related hands-on resources including 10 cm^3 polished rock specimens that visitors can pick up to gauge their weight.
Do you produce other material for children below 8 years?	20	20	Storytelling boards (known as *kamishibai*) featuring old tales are provided for young children.
Maximum Total	**120**	**80**	
3.4 What kind of published information is available in your Applicant area?			
Protection of geological heritage	20	20	Newsletter entitled Apoimaimai (*Paraegista apoiensis*) (in Japanese; Mt. Apoi Supporters' Club: since 1997)

Geology of the area	15	15	Monograph on the Geology of Japan, Vol. 1: Hokkaido (in Japanese; Asakura Publishing Co., Ltd.: 2010), Walking in the Nature of Sapporo (in Japanese; Hokkaido University Press: 2011), others
Publication linking geology, nature and culture of the area	20	20	Mt. Apoi Geopark Guidebook (Samani Town Government: 2013), Mt. Apoi Geopark Handbook (Samani Town Government: 2012)
Environmentally friendly behaviour in the area	15	15	Newsletter titled Apoimaimai (*Paraegista apoiensis*) (in Japanese; Mt. Apoi Supporters' Club: since 1997), Mt. Apoi Geopark Guidebook (Samani Town Government: 2013)
Other aspects of natural history which can be found within the area	15	15	Geobotanical Study on the Alpine Vegetation of Hokkaido, Japan (in Japanese; Hokkaido University Press: 2007), Alpine Plants and Grass on Mt. Apoi (in Japanese; Mt. Apoi Supporters' Club: 2003) and other publications
Historical elements	15	15	Samani Town History (in Japanese; Samani Town Government: 1992), Tojuin Temple Documents (in Japanese; Samani Town Board of Education: 2003), others
Maximum Total	**100**	**100**	
3.5 Geology provision for school groups. For example, organized visits etc. (The SELF AWARDED total cannot exceed 90)			
Guided tours by Applicant's staff (explain and justify)	30	30	GeoLAB Mt. Apoi laboratory provides geosite guidance for university geological field trips on request. (See D-4-2 (2) on p.34 of the Application Dossier.) The Applicant's curator and geological expert also provide guidance for elementary and junior high school students climbing Mt. Apoi.
Guided tours through a member organisation (explain and justify)	15		
Standard programs, regularly offered for all park visitors (explain and justify)	10		
Limited group size (max. 30 persons per guide) (explain and justify)	10	10	Up to 20 people per guide

Are alternatives available if tour impossible due to bad weather conditions? (explain and justify)	10	10	Presentations and experiments are given at the visitor center and GeoLAB Mt. Apoi laboratory.
Do programs exist for different ages? (explain and justify)	20		
Do special, scientific programs exist? (explain and justify)	20	20	GeoLAB Mt. Apoi provides earth science programs with focus on peridotites. The Applicant's geological expert also runs science programs for elementary school students.
Is teacher training offered in matters relating to the Applicant? (explain and justify)	20	20	Yes. Training is provided for elementary and junior high school teachers.
Maximum Total	**100**	**90**	
3.6 Education – Guides			
Do you have at least one qualified expert in Geopark permanent staff providing guided visit that your organization has a role in developing? (explain and justify)	20	20	Secretariat members capable of providing guided tours are Mr. Masahito Tanaka (curator), Ms. Satomi Kato (geological expert), Mr. Takumi Harada (staff member), Mr. Masatoshi Kodama (staff member) and Mr. Shiro Sakashita (staff member).
Do you have at least one qualified expert in partner organization providing guided visit that your organization has a role in developing? (explain and justify)	15		
Personal guides in Geopark permanent staff (explain and justify)	20	20	The above Secretariat staff also serve as personal guides.
Personal guides by partner organisation (explain and justify)	15	15	Members of the Mt. Apoi Supporters' Club (a member organization of the Mt. Apoi Geopark Promotion Council in Samani) also serve as personal guides.
Freelance guides whose training and / or program is supported by your organization (explain and justify)	20		
Training courses for guides (explain and justify)	20	**20**	The Mt. Apoi Geopark Promotion Council in Samani provides guide training on courses established as appropriate.
Maximum Total	**100**	**75**	
3.7 What kind of information do you provide to educational groups, which encourage them to visit your area?			
Letters to schools and universities	20	20	Guidebook and other resources are distributed to elementary and junior high schools in the geopark area.

			Representatives of the Applicant also meet up with teachers and other related officials to promote the use of Mt. Apoi Geopark.
Brochure	20	20	Pamphlets, guidebooks, leaflets and other resources are distributed. For universities, the website has a page dedicated to researcher support to promote the use of the geopark. (See the researcher support page on the website.)
Press announcements (Newspapers, Radio, TV)	20	20	Press releases are issued to promote geopark-related events.
Newspaper or newsletter	20		
Maximum Total	**80**	60	
3.8 Do you use the internet for school programmes? What kind of service do you provide?			
Own website with general information about environmental education within the area	50	50	Geo-narratives on Mt. Apoi Geopark are posted on the website. Information on educational programs and other related events is also posted on the website as appropriate.
Those responsible for the education programme may be reached by E-Mail	30	30	An inquiry form is provided on the website.
Regular electronic newsletter	20		
Up to date calendar of activities	20	20	A year-round schedule is provided on the website.
Maximum Total	**120**	**100**	

Total Points Awarded For Section III: Education	**Maximum points**	**Self Assessment**
	1000	**865**

IV. Geotourism	Marks available	Self Assessment	Detailed Information
4.1 What kind of promotional material of the area takes place?			
Printed material (e.g. leaflets, magazines)	25	25	Pamphlets, leaflets, posters
Popular literature for public (e.g. books, guide books)	15	15	Guidebooks, handbooks and alpine plant books
CD or video material	15	15	Introductory video (DVD)
Other promotional material or merchandise	15	15	Website, tablet computer map app, banners, papercraft, tin badges, others
Maximum Total	**70**	**70**	
4.2 In how many languages is the marketing material produced? (The SELF AWARDED total cannot exceed 80)			
English	10	**10**	Leaflets (2; 1 more to be published by the end of fiscal 2014), pamphlet (1; partial translation of a Japanese pamphlet), website, tablet computer map app, introductory video (DVD subtitles)
French	10		
Spanish	10		
Russian	10		
Chinese	10	**10**	Pamphlet (1; partial translation of a Japanese pamphlet)
Arabic	10		
Add 10 points for each other language. (explain and justify)	10	**10**	Japanese (all marketing materials)
Multi-languages in one publication	10	**10**	Japanese pamphlet with partial translation into English and Chinese
Maximum Total	**80**	**40**	
4.3 Do information centres or exhibitions concerning the area exist in the Applicant's area? (SELF AWARDED total cannot exceed 100)			

At least one information centre centre, managed directly by the Geopark or one of the partner members of your organization	30	30	Samani Tourist Information Center (tourist association)
Existing 'info points' or similar facilities throughout the area managed by directly by the Geopark or one of the partner members of your organization	20	20	Mt. Apoi Geopark Visitor Center (Samani Town Government), Apoi Sanso Hotel (Samani Kanko Kaihatsu Kosha Co., Ltd.), Samani Folk Museum (Samani Town Board of Education)
Information centre “meeting and starting” point for excursions	10	10	Samani Tourist Information Center, Mt. Apoi Geopark Visitor Center
Is the Information centre accessible for wheelchair users and does it cater for individuals with other disabilities?	10	5	The visitor center is wheelchair-accessible.
Personal and individual information offered to visitors about possible activities in the area.	10	10	Tour information is directly emailed to past tour takers.
Centre open to the public at least 6 days a week, all year round weather permitting	10	5	Apoi Sanso Hotel is open all year round.
Maximum Total	**100**	**80**	
4.4. How is information and interpretation about the area presented in info centres, information points etc?			
Static display material	10	10	A bulletin board is displayed at the visitor center, and simple panels are displayed at the tourist information center.
Films, video, slideshow etc.	10	10	Introductory video is shown at the visitor center and is also provided on the website.
Interactive displays	10		
Different special exhibitions changing on a regular basis	40	40	Mountain climbing information at the visitor center
Maximum Total	**70**	**60**	
4.5 Public Access and facilities(SELF AWARDED total cannot exceed 100)			
Is it possible to reach the geopark area by public transport	50	50	Yes. It is accessible by train and inter-city bus.
Do you provide your own tourist transport	20	20	The Applicant provides bus services for its tours as appropriate.
Is public transport integrated with walking, cycling trails	20	20	There are train stations and bus stops (for regular routes) at the start and end points of the Samani Top Eight Scenic Spots Route and the Samani Mountain Path Route. (See Footpath Routes on the website.)

Do you have car park facilities connected to the trails which you have developed	20	20	There are parking lots near the start points of the Samani Top Eight Scenic Spots Route and the Samani Mountain Path Route. (See Footpath Routes on the website.)
Are there toilets available in the parking areas	20	10	There are public toilets near the start point of the Samani Top Eight Scenic Spots Route. (See Footpath Routes on the website.)
Maximum Total	**100**	**100**	
4.6 Are visitors informed about public transport in the area and encouraged to use it before they come?			
Promotional material about the area (leaflets, brochures, internet) contains information about public transport	20	20	Information on access to the proposed geopark is provided on the website. (See Access to Samani on the website.)
Websites of the Applicant and/or local tourism organizations are linked to web-based timetables and transport information held by others.	20	20	The web page providing information on access to the proposed geopark includes timetables and links to the websites of public transportation service providers (in Japanese).
Special offers for tourists using public transport, bicycle or other forms of sustainable transport	10		
Maximum Total	**50**	**40**	
4.7 What kind of guided tours have been developed by your management body or your partners?			
Groups with special interests in geology and geomorphology	10	10	Tour itineraries are proposed and guidance is provided for groups with special interests in geology and geomorphology. Such arrangements have been made for Sanyukai (an alpine club), the Pumice Club (a Waseda University alumni lifelong learning association), school teachers, the Association for the Geological Collaboration in Japan and others.
Tours take place regularly during the season	10	10	The Applicant hosts five or six tours annually.
Tours for a broad audience	20	20	The above tours are intended for a wide range of participants.
Do you offer tours for disabled visitors	10		
Alternatives available if tour impossible due to bad weather conditions	10	10	Facility tours such as outings to the visitor center, the folk museum, a traditional *cise* Ainu dwelling, and Tojuin Temple

Flexible registration system (day to day basis) for participants or no registration necessary	10	10	The above tours require reservations, but registration is handled flexibly when capacity is not reached.
Maximum Total	**70**	**60**	
4.8 What else do you use to inform visitors about your area			
Easy to read interpretation panels in entrance areas or at Tourist locations	20	20	General information boards and PR signboards are positioned at key places within the geopark. Large signboards will be installed to welcome visitors at two Mt. Apoi Geopark entrance points in fiscal 2015.
There is at least one promoted trail dealing with geological subjects, developed by your team, alongside any developed by partners.	20	20	Visitors to Mt. Apoi Geopark are encouraged to visit its five small areas demarcated on the basis of geo-narratives. (See Areas of Mt. Apoi Geopark on the website.)
Maximum Total	**40**	**40**	
4.9 How are information or activities of different organisations co-ordinated			
Joint information or promotional material	20	**20**	The Applicant shares information with other organizations by linking to their websites. Joint promotional materials include pamphlets and fliers produced in conjunction with the Japanese Geoparks Network (JGN) and natural park/tourism organization networks.
Maximum Total	**20**	**20**	
4.10 Do you use the internet and what kind of service do you provide?			
Own website with general information about the area	40	**40**	The website provides a wide variety of local information (with greater detail in the Japanese version).
Links to other websites of tourist board, communities, local government, which provide a broad range of information on the Applicants area.	10	**10**	The website includes links to sites run by local and other organizations and to private blogs (in Japanese).
Geopark management may be reached by email	5	**5**	Mt. Apoi Geopark's management can be contacted via the inquiry form on the website.
Regular electronic newsletter	10	**10**	The Applicant directly mails information on tours (not regular newsletters). A Hometown Geo-workshop News publication containing details of the public presentation series is provided on the website (in Japanese).
Facility to order publications on-line	10	**10**	Information on mail-order services is provided on the website (in Japanese).

Up to date calendar of activities	15	**15**	A year-round schedule is provided on the website (in Japanese).
Guidance for visitors on potential excursions	10	**10**	Notices on upcoming tours are provided on the website (in Japanese).
Maximum Total	**80**	**80**	
4.11 What kind of infrastructure is available for activities such as horse riding, canoeing and cycling ? (SELF AWARDED total cannot exceed 100)			
Network of footpaths which include the main touristic and scientific points of interest	10	10	Mt. Apoi trails (Mt. Apoi Area), Samani Top Eight Scenic Spots Footpath Route (Samani Coast Area), Samani Mountain Path Footpath Route (Hidaka Yabakei Area) (See Areas of Mt. Apoi Geopark and footpath routes on the website.)
Uniform/standard signposting of paths	10	10	The above trails and footpaths have uniform-style guideposts.
Regular checks of infrastructure and immediate repair guaranteed	10	10	Quasi-national park wardens regularly patrol Mt. Apoi trails. Staff of the Applicant also patrol other routes to ensure prompt response to issues that may arise.
Special maps and information sheets for hikers, cyclists, etc.	10	10	Maps of mountain trails and footpath routes are provided on the website. (See Recommend Routes on the website.)
At least one path concerning a special subject (mining, archaeology, architecture not previously counted in your score under another heading	10		
Guided cycling, walking, etc. tours, provided or actively supported by a member organization	10	10	The Applicant hosts mountain climbing and footpath tours.
Such tours include several days all inclusive offer (hotel, half or full board) for hiking and cycling tours provided or actively supported by a member organization	10	10	The above mountain climbing and footpath tours are two-day package arrangements.
Such tours include several days all inclusive package with luggage transport provided or actively supported by a member organization	10		
There is a network of hiking/biking friendly hotels/pensions, defined by a catalogue of criteria who work in partnership with your organisation.	20		
Maximum Total	**100**	**60**	
4.12 How do you communicate the goals of Geotourism, especially			

with those responsible for tourism.			
Direct personal meetings or through their involvement in your organization.	10	10	The Applicant promotes geotourism via business fairs, direct private meetings and other channels.
A regular award scheme to promote good practice.	20		
The selection and nomination of official partners/mentors/sponsors	20		
Maximum Total	**50**	10	
4.13 Do you have the following sustainable (e.g. non car based) trails?			
Geo-trails	20	20	Mt. Apoi trails, Samani Top Eight Scenic Spots Footpath Route
Cultural trails	10	10	Mt. Apoi trails, Samani Top Eight Scenic Spots Footpath Route, Samani Mountain Path Footpath Route
Forest trails	10	10	Mt. Apoi trails, Mt. Kannon, Samani Mountain Path Footpath Route
Other trails	10	10	Apoi Arboretum
Other out-door activities not mentioned elsewhere.	10	10	Marine tours on a fishing boat
Maximum Total	**60**	**60**	
4.14 Visitor evaluation			
Do you count visitors?	20	20	Estimation of Mt. Apoi Geopark visitor numbers is based on data from lists of mountaineers, facility visitor figures and other information.
By entrance tickets / trail counters		Yes	Visitor center, tourist information center, others
By field trip participants?		Yes	Tour takers and guide clients
By estimation?		Yes	Tourist activity surveys
By visitor survey?		Yes	List of mountaineers
Do you evaluate where your visitors come from?	20	20	List of mountaineers, hotel register
By booking addresses?		Yes	Group tour members, guide clients, hotel guests
By market analysis?			
By university study?			
Do you use visitor evaluation for your forward planning?	20		
Do you have analysis of the socio-economic profile of your visitors (families, school classes, pension groups, tourist groups, etc)?	10	10	The results of questionnaires on tours hosted by the Applicant are assessed.

Questionnaire on visitors' satisfaction levels?		10	10	Questionnaires on tours hosted by the Applicant
	Maximum Total	**80**	**60**	

Total Points Awarded For Section IV: Geotourism	**Maximum points**	**Self Assessment**
	1000	**780**

V. Sustainable Regional Economy	Marks available	Self Assessment	Detailed Information
5. 1 What efforts are undertaken to promote regional food and craft products, integrating the catering trade?			
Initiatives promoting food from regional and/or ecological production, which your organisation develops or actively supports.	50	50	Local food products are recommended on the website and elsewhere (in Japanese). These include honey, sake, brewed vinegar, ice cream, jam and *kombu* kelp chips.
Meals from regional and/or ecological production are available in restaurants	30	30	There are restaurants and a coffee shop serving food made with local ingredients. These establishments are called Benkei, Ominaeshi, Ezoshika, Avion and Mother.
The Applicant organizes markets, where mainly regional agricultural products are sold	50		
A label for regional food products or local gastronomy exists	30	30	Hidaka Kombu kelp, Fuyushima Kombu kelp, Hidaka strawberries, Ginsei salmon, Oucho flounder
Direct marketing of regional agricultural products is promoted	40	40	The Samani Town Government hosts a seasonal farmers' market. Regional agricultural products are also on offer at Apoi Sanso Hotel, and a local harvest festival is held in autumn.
Maximum Total	**200**	**150**	
5.2. Which efforts are undertaken to create and promote regional geotourism products? (The SELF-AWARDED total cannot exceed 100)			
Initiatives promoting geological replicas production exist	50	**50**	Mt. Apoi papercraft pieces as geopark-related merchandise
Casts and souvenirs from local production are available	100	**100**	Locally produced geopark merchandise is sold at the visitor center, the tourist information center and elsewhere.
The organization or its active partners has a retail outlet or outlets where mainly regional products are sold.	50	**50**	Mt. Apoi Geopark Visitor Center (Samani Town Government, Mt. Apoi Supporters' Club), Samani Tourist Information Center (Samani Tourist Association), Apoi Sanso Hotel (Samani Kanko Kaihatsu Kosha Co., Ltd.)
Maximum Total	**200**	**200**	
5.3. How are regional crafts promoted?			

The marketing of local craft products is actively supported	50	50	Vases made using pieces of locally processed peridotite are sold at Apoi Sanso Hotel.
Local craft products are showcased	100	100	Apoi Sanso Hotel, Mt. Apoi Geopark Visitor Center, Samani Tourist Information Center
Maximum Total	**150**	**150**	
5.4 What efforts are undertaken to promote links between the Applicant and local businesses? (SELF AWARDED total cannot exceed 100)			
A label for regional services/products has been developed the Applicant or in partnership with others	50	**50**	Honey, sake, brewed vinegar, ice cream, jam, pickles in spicy soy sauce (preserves), *kombu* kelp chips, cell phone straps, rice, plush toy mascots, polo shirts, others
Direct marketing of regional products is undertaken by your organization	50	**50**	Items sold at Apoi Sanso Hotel, the visitor center, the tourist information center and elsewhere are promoted on Mt. Apoi Geopark's website and in its pamphlets.
Tourism offers include tours of collaboration with local businesses	20	**20**	Tours to a fishermen's market, a marine processing plant, a hydroelectric power plant and other facilities are organized in collaboration with local businesses.
Maximum Total	**100**	**100**	
5.6 What kind of contracts are regularly offered to businesses in your area?			
Services (repair, management)	50	**50**	Management of Apoi Sanso Hotel and Apoi Sanroku Park (consignment agreement: town government → Samani Kanko Kaihatsu Kosha Co., Ltd.), management of the Samani Tourist Information Center (consignment agreement: town government → Samani Tourist Association), infrastructural maintenance of geosites and other places (consignment agreement: town government → construction company)
Design, Print	50	**50**	Use of Mt. Apoi Geopark logo and mascots (request → permission)
Other equipment and services to support geotourism and interpretation, e.g. transport, display cabinets etc. (give details)	80		
Maximum Total	**150**	**100**	
5.7 Networking (SELF AWARDED total cannot exceed 200)			

A network of co-operating enterprises exists, fostered by the Applicant.		100	**100**	The Mt. Apoi Geopark Promotion Council in Samani includes representatives of industrial organizations (agricultural cooperative, fisheries cooperative, and an association of commerce and industry), which supports collaborative relations with related businesses.
There is a formal contract between the Applicant and its partners		100		
There are joint projects, financed, between the Applicant, private businesses and local authorities.		50		
	Maximum Total	**200**	**100**	

Total Points Awarded For Section V: Sustainable Regional Economy	**Maximum points**	**Self Assessment**
	1000	**800**

Appendix 3 Mt. Apoi Geopark Natural and Cultural Heritage List

Natural heritage				
Designator	**Category**	**Type**	**Name**	**Location**
National gov.	Quasi-national park	Natural park	Hidaka-sanmyaku Erimo Quasi-National Park	Entire Mt. Apoi area
National gov.	Special Natural Monument	Plant	Mt. Apoi Alpine Plant Community	Ridge area on Mt. Apoi
National gov.	Natural Monument	Plant	Horoman Japanese white pine habitat	Horomankyo gorge
National gov.	Natural Monument	Butterfly	Himechamadaraseseri (*Pyrgus malvae*)	Ridge area of Mt. Apoi
National gov.	Natural Monument	Bird	Black woodpeckers	Entire Mt. Apoi area
National gov.	Natural Monument	Bird	Blakiston's fish owls	Oizumi District and elsewhere
National gov.	Natural Monument	Bird	Steller's sea eagles	Mt. Apoi area and elsewhere
National gov.	Natural Monument	Bird	White-tailed eagles	Mt. Apoi area and elsewhere
National gov.	Natural Monument	Bird	Bean geese	Tashiro District and elsewhere
National gov.	Natural Monument	Bird	White-fronted geese	Tashiro District and elsewhere
Prefectural gov.	Wildlife Protection Area	Protection zone	Wildlife Protection Area	Entire areas of Mt. Apoi and Mt. Horoman, Mt. Kannon
Prefectural gov.	Protected tree	Tree	Sacred Tree on Mt. Kannon	Mt. Kannon
Cultural heritage				
Designator	**Category**	**Type**	**Name**	**Location**
UNESCO	Intangible Cultural Heritage	Dance	Traditional Ainu dance	Higashi Samani Seikatsukan Hall
National gov.	Important Intangible Folk Cultural Property	Dance	Traditional Ainu dance	Higashi Samani Seikatsukan Hall
National gov.	Important Cultural Property	Old documentation	Materials concerning Tojuin Temple – one of the Three Government Temples of Ezo	Samani Folk Museum
Municipal gov.	Cultural Property	Building	Gomado Hall in Tojuin Temple	Tojuin Temple
Municipal gov.	Cultural Property	Old documentation	Old documents held by Tojuin Temple	Samani Folk Museum
Municipal gov.	Cultural Property	Sculpture	Statue of Prince Shotoku (Namubutsu Taishi) (great man, wooden)	Tojuin Temple
Municipal gov.	Cultural Property	Sculpture	Three statues comprising the Yakushi Triad (Yakushi Nyorai, or Healing Buddha, and two attendants) (Buddhist deity, wooden)	Tojuin Temple
Municipal gov.	Cultural Property	Sculpture	Statue of Sho Kanzeon Bosatsu (Avalokitesvara-bodhisattva) (Buddhist deity, wooden)	Tojuin Temple
Municipal gov.	Cultural Property	Sculpture	Statue of the goddess Benzaiten (Buddhist deity, wooden)	Tojuin Temple
Municipal gov.	Cultural Property	Sculpture	Wasuke Jizo guardian deity of travelers and children (great man, stone)	Horoman District
Municipal gov.	Cultural Property	Historic site	Samani Mountain Path (ancient road)	Foot of Mt. Apoi

Appendix 4
Outline of Geopark Policy Measures in the 8th Samani Town Comprehensive Plan

The Samani Town Comprehensive Plan outlines the basic principles of policy measures promoted by the Samani Town Government and related implementation plans, and is formulated every 10 years. It consists of three parts: 1. Introduction, which gives an overview of the town's current situation; 2. Basic Concepts, which present a vision for the town; and 3) Basic Plans, which summarize sectoral measures for policy promotion.

The basic principles and objectives of Mt. Apoi Geopark are included in the Comprehensive Plan, which serves as a basis for community development. This paper outlines the plan's composition and highlights matters concerning the geopark as described in each section.

1. Introduction

1-1. Significance of the Comprehensive Plan's Formulation

1-2. Background to the Comprehensive Plan's Formulation

This section's overview of Samani includes information on the area's 2008 certification as a Japanese Geopark in recognition of its valuable natural environment as represented by Mt. Apoi.

1-3. Basis of the Comprehensive Plan

The 8th Comprehensive Plan covers a period of 10 years from 2011 to 2020.

2. Basic Concepts

2-1. Vision

The sectoral aims of the town outlined in this section include goals to be achieved through geopark initiatives. The first relates to the natural environment, and involves preserving and passing down Mt. Apoi's ecosystem based on the promotion of initiatives to conserve its alpine plants. The second concerns education, and involves developing hometown affinity, academic ability and well-rounded characters among local children through initiatives to provide education on the local natural environment and culture. The third is associated with industry, and involves increasing the number of visitors to the town and revitalizing local industry (e.g., via efforts to develop regional specialties) based on geopark-related initiatives.

2-2. Direction of Development

2-3. Structure of Measures

2-4. Basic Directions of Measures

This section outlines the direction to be taken for each set of structured measures discussed in **2-3 and 2-4.** In this regard, efforts are made to achieve sustainable

development of the town through initiatives toward Global Geoparks Network (GGN) membership.

2-5. Population Projection

3. Basic Plans

3-1. Establishment of Promotion Systems

3-2. Development of Pleasant Environments

This section outlines objectives regarding the natural environment, landscapes and housing. In relation to the geopark, it describes the appropriate management of geosites, the conservation of landscapes as an important geosite element, and the protection of alpine plants on Mt. Apoi.

3-3. Promotion of Safe Everyday Living

This section outlines objectives regarding disaster management, fire prevention, emergency medical care and traffic safety. In relation to the geopark, it describes the promotion of education on natural disasters.

3-4. Promotion of Healthy and Happy Living

3-5. Development of Well-rounded Characters

This section outlines objectives regarding early childhood education, school education, social education and the promotion of culture and sports. In relation to the geopark, it describes the development of hometown affinity and academic ability among children through the promotion of community studies as well as the conservation and utilization of natural and cultural heritage resources.

3-6. Promotion of Affluent Lifestyles

This section outlines objectives regarding local industry, such as agriculture, forestry, fisheries, commerce and industry. In relation to the geopark, it describes efforts for tourism promotion based on enhancement of the town’s visitor-readiness, such as guide training and tour development.

3-7. Infrastructure Development for Prosperity

This section outlines objectives regarding geopark promotion and infrastructure development. In relation to the geopark, it defines initiatives toward Global Geoparks Network (GGN) membership as a means of regional revitalization. The section highlights the municipal government’s efforts to boost the town’s economy based on coordination with local industries and geotourism promotion initiatives, to cultivate hometown affinity among local children through educational activities, and to develop communities via public participation.

Appendix

Required Funding for the Comprehensive Plan

Appendix 5　Mt. Apoi Geopark Expert Network List

Geology and petrology			
Name	**Title**	**Affiliation**	**Specialty**
Kiyoaki Niida	Director	GeoLab Mt. Apoi	Petrology, mineralogy and economic geology
Hideo Takagi	Professor	Faculty of Education and Integrated Arts and Sciences, Waseda University	Structural geology
Tsuyoshi Toyoshima	Professor	Graduate School of Science and Technology, Niigata University	Geology, structural geology
Eiichi Takazawa	Professor	Graduate School of Science and Technology, Niigata University	Petrology, mineralogy and economic geology
Noriyoshi Tsuchiya	Professor	Graduate School of Environmental Studies, Tohoku University	Resource development engineering
Eiji Ohtani	Professor	Graduate School of Science, Tohoku University	High-pressure geophysics
Akira Ishiwatari	Professor	Graduate School of Science, Tohoku University	Petrology, geology
Naoto Hirano	Associate professor	Center for Northeast Asian Studies, Tohoku University	Ocean floor tectonics
Atsushi Toramaru	Professor	Graduate School of Science, Kyushu University	Volcanology, physics of magmatic processes
Shoji Arai	Specially appointed professor	Faculty of Natural Systems, Institute of Science and Engineering, Kanazawa University	Petrology, mineralogy and economic geology
Tomoaki Morishita	Professor	Faculty of Natural Systems, Institute of Science and Engineering, Kanazawa University	Petrology, mineralogy and economic geology
Katsuyoshi Michibayashi	Professor	Department of Geosciences, Faculty of Science, Shizuoka University	Structural geology
Hayato Ueta	Associate professor	Department of Geology, Faculty of Science, Niigata University	Geology
Takashi Sawaguchi	Associate professor	Department of Economics, Faculty of Economics, Toyo University	Structural geology
Kazuhito Ozawa	Professor	Department of Earth and Planetary Environmental Science, Faculty of Science, The University of Tokyo	Petrology
Akihiko Suzuki	Professor	Sapporo Campus, Hokkaido University of Education	Geology, stratigraphy and paleontology
Natsue Abe	Senior research scientist	Institute for Research on Earth Evolution, Japan Agency for Marine-Earth Science and Technology	Petrology
Mitsuru Yokoyama	Associate professor	Department of Education, School of Education and Culture, Hokusho University	Science education
Takayuki Kato	President and representative director	Earth Science Co., Ltd.	Architectural consulting
Tetsuya Shimada	Teacher	Shizunai Elementary School in Shinhidaka Town	Science education

Biology and ecology			
Sadamoto Watanabe	Professional engineer	Forest Environmental Institute	Environmental science
Takehiro Masuzawa	Specially appointed professor	Faculty of Science, Shizuoka University	Plant ecology
Ken Sato	Professor	Department of Life Science and Technology, Faculty of Engineering, Hokkai-Gakuen University	Plant ecology
Masashi Ohara	Professor	Faculty of Environmental Earth Science, Hokkaido University	Plant ecology
Yugo Ono	Professor emeritus	Hokkaido University	Geoecology, environmental geography
Mitsuhiro Hayashida	Professor	Department of Food, Life, and Environmental Sciences, Faculty of Agriculture, Yamagata University	Forest ecological conservation
Yoko Nishikawa	Principal researcher	Institute of Environmental Sciences, Hokkaido Research Organization	Plant ecology, conservation ecology
Yoshimi Takahashi	Researcher		Botany (former junior high school teacher)
Osamu Watanabe	Representative director	Sapporo Shizen Chosakan	(Alpine plant conservation network secretariat)
Shinichi Niwa	Chief engineer	Sapporo Shizen Chosakan	(Alpine plant conservation network secretariat)
Yasuhiro Nakamura	Secretariat director-general	Japan Butterfly Conservation Society	
Culture, history, tourism, et al.			
Akihisa Tanimoto	Associate professor	Graduate School of Letters, Hokkaido University	History (Japanese early-modern era)
Takehaya Matsumoto	Professor	Department of History, School of Letters, Tokai University	Archaeology
Tadashi Takizawa	Researcher	Graduate School of Letters, Hokkaido University	History (modern history of Hokkaido)
Hideki Minoshima	Associate professor	Center for Ainu & Indigenous Studies, Hokkaido University	History (Northeast Asian history, Ainu history)
Norishige Yotsukura	Associate professor	Field Science Center for Northern Biosphere, Hokkaido University	Marine botany
Kyoko Sato	Research director	Hokkaidoshi Kenkyu Kyogikai	Paleography
Masato Tamura	Specially appointed associate professor	Sapporo University	Cultural anthropology, folklore
Yasuyuki Miura	Curator	Historical Museum of Hokkaido	History (Japanese early-modern era)
Tetsuhito Ono	Counselor	Samani Branch, Ainu Association of Hokkaido	Ainu language
Tessyu Ito	Writer	Free-Lance writer	Regional planning, copywriting
Koichiro Ogawa	Vice president	Eco Network (civic organization)	Footpaths

Appendix 6 Mt. Apoi Geopark Academic Paper List

Guraduation Theses and Master's Theses

Author	Year	Title	Type	Specialty	University Name
Kamijyo, H.	2009	T-P-d path estimation for the upper mantle peridotite based on clinoyroxene porphyroclasts: Application to the ascent history of the Horoman peridotite complex (In Japanese).	Master's Thesis	Geology	Tokyo University
Fujimura, T.	2009	Petrological study of plagioclase lherzolite in upper mantle peridotite, Horoman, Hidaka metamorphic belt (In Japanese).	Guraduation Thesis	Geology	Niigata University
Shishido, T.	2009	Study of rocks in Hidaka metamorphic belt (In Japanese).	Guraduation Thesis	Geology	Niigata University
Yoshida, K.	2009	Reexamination of the layered structure in the Lower Zone of the Horoman peridotite, the Hidaka Metamorphic Belt (In Japanese).	Guraduation Thesis	Geology	Niigata University
Hasegawa, S.	2009	Consideration of deformation mechanism of peridotite (In Japanese).	Master's Thesis	Geology	Chiba University
Ito, M.	2009	Molecular ecological analysis of the stone pine and Pinus parviflora var. pentaphylla hibrid zone (In Japanese).	Master's Thesis	Ecology	Chiba University
Nagashima, R.	2009	Tissue formation of symplectite of the Horoman peridotite complex (In Japanese).	Master's Thesis	Geology	Kanazawa University
Kaneda, S.	2010	Variation and origin of sulfide minerals in the Horoman peridotite, the Hidaka Metamorphic Belt (In Japanese).	Guraduation Thesis	Geology	Niigata University
Yoshimura, K.	2010	Structural geologocal study on metamorphic rocks and tonalites of the southeren part of the Hidaka metamorphic belt in the Nikanbetu river area and its surrounding area, Hokkaido, Japan (In Japanese).	Guraduation Thesis	Geology	Niigata University
Hagino, K.	2011	Searching deep mantle information from the Horoman peridotite complex (In Japanese).	Guraduation Thesis	Geology	Tokyo University
Nishitani, S.	2011	Structual geology on metamorphic rocks and plutonic rocks from Rubeshupe-gawa and Fuchimi-gawa area of the Hidaka Metamorphic Belt, Samani town, Hokkaido, Japan (In Japanese).	Guraduation Thesis	Geology	Niigata University
Shimoda, Y.	2011	Molluscan fauna from the Kamikineusu Formation, Samani Town, central Hokkaido (In Japanese).	Guraduation Thesis	Geology	Hokkaido University of Education
Umezawa, K.	2011	Dunite channel of Horoman peridotite complex (In Japanese).	Guraduation Thesis	Geology	Hokkaido University

Nakano, T.	2011	Compositional variation of minerals in the Horoman layering peridotite and mafic rock, Hokkaido, Japan (In Japanese).	Master's Thesis	Geology	Kyushu University
Sato, A.	2011	Molecular phylogenetic analysis of Arabis serrata (In Japanese).	Master's Thesis	Ecology	Tohoku University
Hisa, S.	2012	Heat and material transport in the lower crust beneath island arcs: Investigation of the thermal interaction between the mantle and lower most crust in the Hidaka metamorphic belt (In Japanese).	Guraduation Thesis	Geology	Tokyo University
Isaka, M.	2012	Impacts of Sika deer (Cervus nippon yesoensis) browsing to the vegetation in Mt.Apoi, Hokkaido (In Japanese).	Guraduation Thesis	Ecology	Rakuno Gakuen University
Kano, Y.	2012	Study of metamorphic history of amphibolite body of Mitsuishi area, Hokkaido (In Japanese).	Guraduation Thesis	Geology	Hirosaki University
Miura, M.	2012	Study of structual stratigraphy of Neogene using the diatom fossiles; Espesially the relationship to uplift of the serpentinite body (In Japanese).	Guraduation Thesis	Geology	Hirosaki University
Moriyama, K.	2012	Basic research of crystal orientation analysis of olivine by using SEM-EBSD (In Japanese).	Guraduation Thesis	Geology	Waseda University
Hoshikawa, T.	2013	Origin of SDW peridotites (In Japanese).	Guraduation Thesis	Geology	Kanazawa University
Shibata, Y.	2013	Microstructure and crystallographic fabric of the Horoman peridotite complex dunite ～Especially morphology of spinel～ (In Japanese).	Guraduation Thesis	Geology	Shizuoka University
Hagiwara, T.	2013	Structural geology of mylonite rocks of the southern part of the Hidaka metamorphic belt in the upper reaches of the Horoman-gawa River (In Japanese).	Master's Thesis	Geology	Niigata University
Sakurai, H.	2014	Structural geology on metamorphic rocks and tonalites from the Kamiutabetu-gawa area in the southernmost part of the Hidaka Metamorphic Belt, Hokkaido, Japan (In Japanese).	Guraduation Thesis	Geology	Niigata University
Isaka, M.	2014	Impacts of Sika deer (Cervus nippon yesoensis) browsing to the vegetation in Mt.Apoi, Hokkaido (In Japanese).	Master's Thesis	Ecology	Rakuno Gakuen University
Moriyama, K.	2014	Crystallographic fabrics of olivine and deformation mechanisms in the Internal Shear Zone of the Horoman peridotite complex, Japan (In Japanese).	Master's Thesis	Geology	Waseda University

Ph.D Theses

Author	Year	Title	Type	Specialty	University Name
Wang, Q.	2011	Determination of F and Cl in silicates and its application to geochemistry.	Ph.D Thesis	Geology	Okayama University
Shindo, K.	2011	Mineralogical and Chemical Study of Sulfide Minerals in Selected Japanese Ultramafic Rocks: Their Implication for Generation, Evolution, and Alteration.	Ph.D Thesis	Geology	Tsukuba University
Takizawa, T.	2011	Fisheries policy of the Development Commission and Ainu people in the early Meiji era (In Japanese).	Ph.D Thesis	Historiography	Hokkaido University
Ranaweera Lalindra Vishwajith	2012	F, Cl, S, Water, and Li-O-Sr-Nd isotope systematics in Horoman peridotite and gabbro: Implications for fluid- and melt-rock interactions and chemical evolution of the mantle.	Ph.D Thesis	Geology	Okayama University

Academic papers

Author	Year	Title	Publication	Specialty
Nishikawa, Y., Sumita, M., Natsume, S.	2009	Changes in flowering phenology of Callianthemum miyabeanun in response to progressive warming at Mt. Apoi, Hokkaido, northern Japan (In Japanese).	The Ecological Society of Japan, 14, 2, 211-222.	Ecology
The Headquarters for Earthquake Research Promotion	2009	The Headquarters for Earthquake Research Promotion (In Japanese).	The Headquarters for Earthquake Research Promotion	Geology
Biodiversity center of Japan, Ministry of the Environment	2010	Natural environment conservation foundation investigation vegetation survey「Mt. Apoi」(In Japanese).	Biodiversity center of Japan, Ministry of the Environment	Ecology
Biodiversity center of Japan, Ministry of the Environment	2010	Natural environment conservation foundation investigation vegetation survey「Samani」(In Japanese).	Biodiversity center of Japan, Ministry of the Environment	Ecology
Kita, S., Okada, T., Hasegawa, A., Nakajima, J., & Matsuzawa, T.	2010	Anomalous deepening of a seismic belt in the upper-plane of the double seismic zone in the Pacific slab beneath the Hokkaido corner: Possible evidence for thermal shielding caused by subducted forearc crust materials.	Earth and Planetary Science Letters 290.3, 415-426.	Geology
Kitakaze, A.	2010	Sugakiite discovered as a new mineral species from the Horoman peridotite massif, Hokkaido, Japan (In Japanese).	Japanese magazine of mineralogical and petrological sciences, 39(1), 32-33.	Geology

Malaviarachchi, S.P.K, Makishima, A., and Nakamura, E.	2010	Melt–peridotite reactions and fluid metasomatism in the upper mantle, revealed from the geochemistry of peridotite and gabbro from the Horoman peridotite massif, Japan.	Journal of Petrology 51.7, 1417-1445.	Geology
Morishita, T., Ozawa, K. and Obata, M.	2010	A recent trend in sciences on mantle-derived materials, with special emphases on refertilization, rheology, and ophiolite problems : a report of the Fifth International Conference on Orogenic Lherzolite (In Japanese).	Japanese magazine of mineralogical and petrological sciences., 39(3), 85-103.	Geology
Takahashi, Y., Tanaka, M.	2010	Plants in Peridotite soil, Nikanbetsu area, Erimo town (In Japanese).	Hopposanso, 27, 17-30.	Ecology
Yamamoto, H., Nakamori, N., Terabayashi, M., Rehman, U, H., Ishikawa, M., Kaneko, Y., Matsui, T.	2010	Subhorizontal tectonic framework of the Horoman peridotite complex and enveloping crustal rocks, south-central Hokkaido, Japan.	Island Arc, Volume 19, Issue 3, 458-469.	Geology
Kawakami, G. and Tsunami survey team of the Geological Survey of Hokkaido	2011	Report of the geological survey of Hokkaido, 83 (In Japanese).	Report of the geological survey of Hokkaido, 83.	Geology
Kitakaze, A., Itho, H., Komatsu, R.	2011	Horomanite, (Fe, Ni, Co, Cu)9S8, and samaniite, Cu2(Fe,Ni)7S8, new mineral species from the Horoman peridotite massif, Hokkaido, Japan.	Journal of Mineralogical and Petrological Sciences 106, 204-210.	Geology
Okazaki, N. and Tsunami Survey Team of the Geological Survey of Hokkaido	2011	Survey on the 2011 off the Pacific coast of Tohoku Earthquake Tsunami of March 11, 2011 on the Pacific Coast in Hokkaido (In Japanese).	Report of the geological survey of Hokkaido, 83.	Geology
Sawaguchi, T.	2011	Strain Analysis of Ellipsoidal Pyroxene-Spinel Seams in the Horoman Peridotites.	Journal of Toyo University, Natural Science, 55, 1–16.	Geology
Ikehata, K., Hirata, T.	2012	Copper isotope characteristics of copper-rich minerals from the Horoman peridotite complex, Hokkaido, northern Japan.	Economic Geology, 107(7), 1489-1497.	Geology
Kita, S., Hasegawa, A., Nakajima, J., Okada, T., Matsuzawa, T., & Katsumata, K.	2012	High-resolution seismic velocity structure beneath the Hokkaido corner, northern Japan: Arc-arc collision and origins of the 1970 M 6.7 Hidaka and 1982 M 7.1 Urakawa-oki earthquakes.	Journal of Geophysical Research: Solid Earth (1978–2012), 117(B12).	Geology