

The Phase II Long-term Monitoring Plan for the Shiretoko World Natural Heritage Site

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Kushiro Nature Conservation Office
Hokkaido Regional Forest Office
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1. Objectives of the plan

This plan aims to position the monitoring items necessary to evaluate the current status and define the methods to evaluate them to adaptively manage the heritage values based on the Management Plan for the Shiretoko World Natural Heritage Site.

2. Period of the plan

The period of the Plan shall be from April 2022 to March 2032.

3. Timetable of the evaluation

Interim and comprehensive evaluations shall be conducted in the years indicated below.

<Timetable of the evaluation>

Fiscal year	2012~ 2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Period of the Plan	Phase I	Phase II										(Phase III)
Evaluation	Phase I Comprehensive evaluation						Phase II Interim evaluation					Phase II Comprehensive evaluation
Monitoring data												

- The interim evaluation shall be conducted in FY2027, covering the period from FY2022 to FY2026 (5 years).
- The comprehensive evaluation shall be conducted in FY2032, covering the period from FY2022 to FY2031 (10 years).
- The interim and overall evaluation shall be conducted based on the monitoring data obtained during each target period.

4. Framework of the evaluation

The heritage values' current status evaluation (comprehensive evaluation) shall be conducted based on the evaluation results of the evaluation items (A–L: 12 items) linked to each item according to the evaluation perspective defined for each of the four subjects eligible for evaluation.

Each evaluation item shall be evaluated based on the evaluation result linked to each monitoring item.

Table 1 shows the framework of the Evaluation mentioned above, Table 2 shows the list of monitoring items, and Table 3 shows the summary for the evaluation.

[History of Phase II Plan]

April 2022, establishment

March 2024, revision

[Table 1] Framework of the evaluation

Subjects eligible for the evaluation	Viewpoints of the evaluation	Evaluation items	
1 State of conservation (States)	Are the ecosystems and biodiversity of Shiretoko maintained, which is the criteria for registration as a World Natural Heritage site?	A	Is the productivity of the ecosystem at the time of heritage registration maintained? (Criteria (ix) Ecosystem)
		B	Are the interrelationships between marine and terrestrial ecosystems maintained? (Criteria (ix) Ecosystem)
		C	Is the biodiversity of the ecosystem at the time of heritage registration maintained? (Criteria (x) Biodiversity)
2 Environmental pressure - Tourism pressure (States, Trends)	Are there any environmental or tourism pressures that impact the value of Shiretoko as a World Natural Heritage site?	D	Are there any signs of climate change in the heritage site?
		E	Are there any effects or signs of impact of climate change on the value of Shiretoko as a World Natural Heritage site?
		F	Are there any effects or signs of the impact of human activities for recreation or similar purposes on the value of Shiretoko as a World Natural Heritage site?
3 Management results (Results)	Is the Site managed following the Management Plan for the Shiretoko World Natural Heritage Site?	G	Have management efforts been made to reduce the environmental impact caused by human activities to the extent possible?
		H	Has the response to the recommendations based on the field survey by UNESCO World Heritage Centre and IUCN progressed? (Is the response to each recommendation in progress)?
4 Management effects (Effects)	Are there any effects of the management based on the Management Plan for the Shiretoko World Natural Heritage Site?	I	Is there a balance between conserving marine ecosystems in the sea area within the heritage site and stable fisheries through sustainable use of marine resources?
		J	Is the river ecosystem capable of reproducing salmonid species maintained or restored by improving river constructions and other measures?
		K	No excessive impact on the ecosystem in the heritage area, caused by the high density of Sika deer, was observed.
		L	Is the ecology and population of brown bears maintained while protecting residents' livelihoods and industries and ensuring safe and quality nature experiences?

[Table 2] List of the monitoring items

(1) Items to be monitored mainly by relevant administrative agencies

No.	Monitoring items	Evaluation bodies	Corresponding evaluation items
1	Fixed-point observation of water temperature using ocean observation buoys	Ministry of the Environment	A, D, I
2	Survey of habitat status of seals and Steller sea lions	Hokkaido	A, C, E, I
3	Survey of biota in shore region	Ministry of the Environment	A, C, E
4	Shellfish quantitative survey in shore region	Ministry of the Environment	A, C, E
5	Survey of spectacled guillemot, black-tailed gull, slaty-backed gull, and Japanese cormorant populations, nesting site distribution, and number of nests	Ministry of the Environment	B, C, E, F, I
6	Survey of vegetation change (forest vegetation and grassland vegetation) in sika deer population control area	Ministry of the Environment, Ministry of Agriculture, Forestry and Fisheries	K
7	Survey of vegetation shift throughout the Shiretoko Peninsula (forest vegetation, coastal vegetation, and alpine vegetation)	Ministry of the Environment, Ministry of Agriculture, Forestry and Fisheries	C, E, K
8	Growth and distribution surveys of the rare plant <i>Viola kitamiana</i>	Ministry of the Environment	C, E
9	Survey of sika deer status in their main wintering grounds (aerial counting survey and terrestrial counting survey)	Ministry of the Environment	E, K
10	Survey of terrestrial insect fauna	Ministry of the Environment	C, E, K
11	Survey of terrestrial avifauna	Ministry of the Environment	C, E, K
12	Survey of habitat status of small and medium-sized mammals (including a survey of invasive alien species)	Ministry of Agriculture, Forestry and Fisheries	C
13	Preparing wide-area vegetation maps	Ministry of the Environment, Ministry of Agriculture, Forestry and Fisheries	C, E
14	Impact of users' problem behavior on brown bears' behavior	Ministry of the Environment	F
15	Management status based on the Brown Bear Management Plan in the Shiretoko Peninsula	Ministry of the Environment	L
16	The brown bear population in the Shiretoko Peninsula	Ministry of the Environment	B, C, E
17	Monitoring the number of salmonid species swimming upstream, their spawning grounds, the number of spawning beds, and the number of salmon fries swimming downstream in the river.	Ministry of Agriculture, Forestry and Fisheries, Hokkaido	B, I, J
18	Habitat status of freshwater fish, especially of Dolly Varden, which characterizes the freshwater ichthyofauna in Shiretoko (including a survey of invasive alien species)	Ministry of Agriculture, Forestry and Fisheries	C, D, E, J
19	Management and initiatives for appropriate use	Ministry of the Environment	G
20	Promotion of appropriate use and eco-tourism	Ministry of the Environment	F, G
21	Changes in the number of visitors	Ministry of the Environment	F, G
22	Survey of impact on alpine vegetation caused by climbers	Ministry of the Environment	F
23	Survey of the number of wintering sea eagles	Ministry of the Environment	B, E
24	Survey of the number of breeding couples, marked young birds, and dead/injured population of Blakiston's fish-owls.	Ministry of the Environment	C, E
25	Tracking of the project implementation status through preparation of annual reports	Ministry of the Environment	C, G, H
26	Tracking of the social environment through preparation of annual reports and so on	Ministry of the Environment	C, F, G, H, L
27	Meteorological observation	Ministry of the Environment	D
28	Meteorological observation in typical vegetation area	Ministry of the Environment	D

(2) Items to be monitored mainly by local governments, relevant organizations, experts, and other administrative agencies

No.	Monitoring items	Evaluation bodies	Corresponding evaluation items
[1]	Observing sea ice distribution status by aircraft, artificial satellites, etc.	First Regional Coast Guard Headquarters	A, D, I
[2]	Tracking of changes in fish catches based on Statistics on Fisheries in Hokkaido	Department of Fisheries and Forestry, Hokkaido	A, C, E, I
[3]	Ascertainment and assessment of walleye pollock stock (survey used to set total allowable catch [TAC])	Fisheries Agency	A, E, I
[4]	Survey of spawning volume of walleye pollock	Rausu Fisheries Cooperative Association, Kushiro Fisheries Research Institute	A, E, I
[5]	Number of Steller sea lions migrating to the coast of Japan, number of dead individuals due to human activities, and their sex and characteristics	Hokkaido National Fisheries Research Institute, etc.	A, E, I
[6]	Survey of damage caused by seals and Steller sea lions	Hokkaido	I
[7]	Survey of the reproduction status of the white-tailed eagle in their nesting sites and monitoring the number of fledglings	Monitoring survey group for white-tailed eagles	B, C, E
[8]	Survey of the number of wintering sea eagles in Hokkaido	Joint survey group	B
[9]	Analysis of oil, cadmium, mercury, etc. in seawater	Hydrographic and Oceanographic Department, Japan Coast Guard	I
[10]	Survey of habitat status of killer whales	Uni-HORP (University Alliance for Hokkaido Orca Research Project)	A, C, E, F, I

[Table 3] Summary for the evaluation

Comprehensive evaluation		Evaluation of the evaluation items	
Subjects eligible for the evaluation	Viewpoints of the evaluation	Evaluation items	Evaluation criteria
State of conservation (States)	Are the ecosystems and biodiversity of Shiretoko maintained, which is the criteria for registration as a World Natural Heritage site?	A Is the productivity of the ecosystem at the time of heritage registration maintained? (Criteria (ix) Ecosystem)	Compare the distribution of sea ice, which provides a growth environment for phytoplankton that supports the richness and diversity of the marine ecosystem, and the state of the biota, such as fish that feed on plankton and the aquatic animals that prey on them, with the state at the time of the heritage registration.
Evaluation bodies: Marine Area WG			

Evaluate the evaluation items based on the evaluation result of each monitoring item.

Evaluation of the monitoring items					
Monitoring items	Evaluation criteria	Evaluation indicators	Monitoring method	Evaluation bodies	Evaluation bodies (Responsible WG/AP)
2. Survey of habitat status of seals and Steller sea lions	- The number of seals and Steller sea lions migrating to the Shiretoko Heritage Site and its surrounding waters is maintained.	- Number of animals using the feeding area around Lake Saroma and Lake Notori, and the breeding population off Abashiri	Conduct a visual survey from the land around Lake Saroma and Lake Nodori and visual survey from the sea off Abashiri (Note: Perform about once every 2 years)	Hokkaido	Marine Area WG
3 Survey of biota in shore region	- The population's density at the registration time is roughly maintained.	- Biota (fish, seaweed, invertebrates) - Population density	Inventory survey of fish, seaweed, and invertebrates in shore region of the coast of Shiretoko Peninsula (Note: Perform about once every 10 years)	Ministry of the Environment	Marine Area WG
4 Shellfish quantitative survey in shore region	- The population's density at the registration time is roughly maintained.	- Shellfish fauna - Population density	Inventory survey of shellfish on the coast of Shiretoko Peninsula (Note: Perform about once every 5 years)	Ministry of the Environment	Marine Area WG
[3] Ascertainment and assessment of walleye pollock stock (survey used to set total allowable catch [TAC])	- The resource states at the time of registration are roughly maintained.	- Resource level and trends	Resource level and trends of walleye pollock	Fisheries Agency	Marine Area WG
[10] Survey of habitat status of killer whales	- Human activities do not impede killer whales' habitat use.	- Identified population	Survey of identified population	Uni-HORP (University Alliance for Hokkaido Orca Research Project)	Marine Area WG

Related monitoring				
(The purpose is to collect basic information, not the evaluation)				
Monitoring items	Indicator	Monitoring method	Evaluation bodies	Responsible WG/AP
1. Fixed-point observation of water temperature using ocean observation buoys	- Water temperature	Install one ocean observation buoy off Kombu Beach in Rausu Town and observe water temperatures from spring to fall.	Ministry of the Environment	Marine Area WG
[1] Observation of sea ice distribution status by aircraft, artificial satellites, etc.	- Distribution of sea ice	Survey of distribution sea ice	First Regional Coast Guard Headquarters	Marine Area WG
[2] Tracking of changes in fish catches based on Statistics on Fisheries in Hokkaido	- Catches	Surveying the catch	Department of Fisheries and Forestry, Hokkaido	Marine Area WG
[4] Survey of spawning volume of walleye pollock	- Distribution amount of eggs	Survey of distribution amount of walleye pollock eggs	Rausu Fisheries Cooperative Association, Kushiro Fisheries Research Institute	Marine Area WG
[5] Number of Steller sea lions migrating to the coast of Japan, number of dead individuals due to human activities, and their sex and characteristics	- Number of Steller sea lions migrating to the coast of Japan	Survey of the number of Steller sea lions migrating to the coast of Japan	Hokkaido National Fisheries Research Institute, etc.	Marine Area WG

Comprehensive evaluation		Evaluation of the evaluation items	
Subjects eligible for the evaluation	Viewpoints of the evaluation	Evaluation items	Evaluation criteria
[]State of conservation (States)	Are the ecosystems and biodiversity of Shiretoko maintained, which is the criteria for registration as a World Natural Heritage site?	B Are the interrelationships between marine and terrestrial ecosystems maintained? (Criteria (ix) Ecosystem)	Compare the state of salmonid species swimming upstream in each river and reproducing sustainably and of the brown bear population that preys on them with the state at the time of the heritage registration. Compare the habitat status and diversity of marine biota to the approximate time of the registration (or to the point that the database is available).

Evaluation bodies: Marine Area WG
Note: Coordinate with Brown Bear WG and River Construction AP

Evaluate the evaluation items based on the evaluation result of each monitoring item.

Evaluation of the monitoring items					
Monitoring items	Evaluation criteria	Evaluation indicators	Monitoring method	Evaluation bodies	Evaluation bodies (Responsible WG/AP)
5 Survey of spectacled guillemot, black-tailed gull, slaty-backed gull, and Japanese cormorant populations, nesting site distribution, and number of nests	- The number of nests at the time of registration is roughly maintained.	- Number of nests and colonies - Rapid fluctuations in specific colonies	Count the breeding number by section from Utoro Port to Aidomari Port via Cape Shiretoko. Count the number of spectacled guillemot at sea in the range where their habitat is confirmed. Record the changes in the number of nests.	Ministry of the Environment	Marine Area WG
16 The brown bear population in the Shiretoko Peninsula	- The number of female brown bears killed by anthropogenic causes is 108 or less over six years from FY2022 (based on the Phase 2 Brown Bear Management Plan in the Shiretoko Peninsula). - The brown bear population is not experiencing a significant downward trend.	- Number of male brown bears killed by anthropogenic causes - Number of brown bears	Research and survey to comprehend the number of brown bears killed by anthropogenic causes and the long-trends in the brown bear population (e.g., dynamic model based on capture, number of sightings from tourist vessels)	Ministry of the Environment	Brown Bear WS
17 Monitoring the number of salmonid species swimming upstream, their spawning grounds, number of spawning beds, and the number of salmon fries swimming downstream in the river.	- Salmonid species are swimming upstream in each river and reproducing sustainably. - Obstacle of swimming upstream due to river construction is avoided to the extent practicable	- Number of salmon swimming upstream - Number of spawning beds - Impact of river construction on salmon swimming upstream and spawning	In Rusha River, Teppanbetsu River, and Rusa River, conduct surveys on the number of parent fish swimming upstream, the number of spawning beds, and the number of salmon fries swimming downstream to estimate the number of pink salmon swimming upstream.	Ministry of Agriculture, Forestry and Fisheries Hokkaido	River construction AP
23 Survey of the number of wintering sea eagles	- The population's habitat status at the registration time is roughly maintained.	- Number of wintering sea eagles	Record the number of species, populations, and whether adult or juvenile, for eagles found along roads and rivers in the Shiretoko Peninsula coastal area and on the drift ice.	Ministry of the Environment	Marine Area WG
[7] Survey of the reproduction status of the white-tailed eagle in their nesting sites and monitoring the number of fledglings	- The population's number of breeding couples, breeding success, and productivity at the registration time is roughly maintained.	- Number of breeding couples - Breeding success - Breeding success, productivity (Number of young birds leaving the nest per breeding couple)	Visual check of the nesting site of white-tailed eagles	Monitoring survey group for white-tailed eagles	Marine Area WG

Related monitoring (The purpose is to collect basic information, not the evaluation)				
Monitoring items	Indicator	Monitoring method	Evaluation bodies	Responsible WG/AP
[8] Survey of the number of wintering sea eagles throughout Hokkaido	- Wintering carrying capacity of sea eagles	Survey of the total number of wintering sea eagles throughout Hokkaido	Joint survey group	Marine Area WG
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Comprehensive evaluation		Evaluation of the evaluation items		Evaluation of the monitoring items						Related monitoring						
Subjects eligible for the evaluation	Viewpoints of the evaluation	Evaluation items		Evaluation criteria		Monitoring items	Evaluation criteria	Evaluation indicators	Monitoring method	Evaluation bodies	Evaluation bodies (Responsible WG/AP)	Monitoring items	Indicator	Monitoring method	Evaluation bodies	Responsible WG/AP
1)State of conservation (States)	Are the ecosystems and biodiversity of Shiretoko maintained, which is the criteria for registration as a World Natural Heritage site?	C	Is the biodiversity of the ecosystem at the time of heritage registration maintained? (Criteria (x) Biodiversity)	At land and sea areas, compare the states of biotic communities, biota, population density, and distribution, as well as the habitat status and growth of rare species and the distribution of alien species, with the state at or before the heritage registration.	Evaluate the evaluation items based on the evaluation result of each monitoring item.	2. Survey of habitat status of seals and Steller sea lions	- The number of seals and Steller sea lions migrating to the Shiretoko Heritage Site and its surrounding waters is maintained.	- Number of animals using the feeding area around Lake Saroma and Lake Notori, and the breeding population off Abashiri	Conduct a visual survey from the land around Lake Saroma and Lake Nodori and visual survey from the sea off Abashiri (Note: Perform about once every 2 years)	Hokkaido	Marine Area WG	10 Survey of terrestrial insect fauna	- Insect fauna (ground prowling, butterflies, bumblebees) - Confirmed population - Alien species (<i>Bombus terrestris</i>)	Conduct by pitfall trap, fixed-point observation, and line census methods. (Note: Perform about once every five years)	Ministry of the Environment	Sika Deer WG
						3 Survey of biota in shore region	- The diversity at the time of registration is roughly maintained.	- Biota (fish, seaweed, invertebrates) - Distribution	Inventory survey of fish, seaweed, and invertebrates in shore region of the coast of Shiretoko Peninsula (Note: Perform about once every 10 years)	Ministry of the Environment	Marine Area WG	11 Survey of terrestrial avifauna	- Avifauna - Confirmed population	Conduct by line census method or spot census method. (Note: Perform about once every five years)	Ministry of the Environment	Sika Deer WG
						4 Shellfish quantitative survey in shore region	- The diversity at the time of registration is roughly maintained.	- Shellfish fauna - Distribution	Inventory survey of shellfish on the coast of Shiretoko Peninsula (Note: Perform about once every 5 years)	Ministry of the Environment	Marine Area WG	12 Survey of habitat status of small and medium-sized mammals (including a survey of invasive alien species)	- Mammalian fauna - Population density - Distribution - Distribution of alien species	Install automatic cameras and comprehend and monitor new invasive alien species. Also, record the habitat status of other mammals.	Ministry of Agriculture, Forestry and Fisheries	Sika Deer WG
						5 Survey of spectacled guillemot, black-tailed gull, slaty-backed gull, and Japanese cormorant populations, nesting site distribution, and number of nests	- The number of nests at the time of registration is roughly maintained.	- Number of nests and colonies - Rapid fluctuations in specific colonies	Count the breeding number by section from Utoro Port to Aidomari Port via Cape Shiretoko. Count the number of spectacled guillemot at sea in the range where their habitat is confirmed. Record the changes in the number of nests.	Ministry of the Environment	Marine Area WG	Tracking of the project implementation status through preparation of 2025 annual reports	- Project implementation status by related institutions and organizations	Project implementation status by related institutions and organizations	Ministry of the Environment	Science Committee (reported to the Secretariat)
						7 Survey of vegetation shift throughout the Shiretoko Peninsula (forest vegetation, coastal vegetation, and alpine vegetation)	Forest vegetation: - The state of the early 1980s is restored. Coastal vegetation / Alpine vegetation: - The state of the early 1980s is maintained or restored.	Forest vegetation: - Density of young trees - Density of lower branch - Composition and vegetation height of understory - Signs of feeding / Feeding amount Coastal vegetation / Alpine vegetation: - Composition and vegetation height of community - Signs of feeding / Feeding amount	Perform periodic vegetation surveys in fixed study areas set throughout the Shiretoko Peninsula.	Ministry of the Environment Ministry of Agriculture, Forestry and Fisheries	Sika Deer WG	Tracking of the social environment through preparation of 2026 annual reports and so on	- Population - Number of workers by industry	Compilation of various statistics on demographics, industrial activity, etc.	Ministry of the Environment	Science Committee (reported to the Secretariat)
						8 Growth and distribution surveys of the rare plant Viola kitamiana	- The population of rare plants is maintained.	- Population and coverage of tracked plants - Signs of feeding / Feeding amount	Survey of the changes in the population of Viola kitamiana, signs of feeding, and the amount of feeding by sika deer.	Ministry of the Environment	Sika Deer WG	[2] Tracking of changes in fish catches based on Statistics on Fisheries in Hokkaido	- Catches	Compilation of various statistics on catches	Department of Fisheries and Forestry, Hokkaido	Marine Area WG
						13 Preparing wide-area vegetation maps	- No anthropogenic change has seen due to land development or other human activities. - There is no change in high moors, forest lines, and the distribution of Japanese stone pines and Yezo spruces.	- Vegetation status - Change in high moors, forest lines, and the distribution of Japanese stone pines and Yezo spruces.	Read existing vegetation maps, aerial photographs, and satellite images and conduct field surveys to prepare a 1/25,000-scale vegetation map of alpine belts.	Ministry of the Environment Ministry of Agriculture, Forestry and Fisheries	Sika Deer WG	[5] Number of Steller sea lions migrating to the coat of Japan, number of dead individuals due to human activities, and their sex and characteristics	- Number of Steller sea lions migrating to the coast of Japan - Sex and characteristics of Steller sea lions killed by anthropogenic causes	Survey of the number of Steller sea lions migrating to the coast of Japan	Hokkaido National Fisheries Research Institute, etc.	Marine Area WG
								Evaluation bodies: Marine Area WG Note: Coordinate with Sika Deer WG, River Construction AP, and Brown Bear WG								

Comprehensive evaluation		Evaluation of the evaluation items	
Subjects eligible for the evaluation	Viewpoints of the evaluation	Evaluation items	Evaluation criteria
① State of conservation (States)	Are the ecosystems and biodiversity of Shiretoko maintained, which is the criteria for registration as a World Natural Heritage site?	C (Continued) Is the biodiversity of the ecosystem at the time of heritage registration maintained? (Criteria (x) Biodiversity)	At land and sea areas, compare the states of biotic communities, biota, population density, and distribution, as well as the habitat status and growth of rare species and the distribution of alien species, with the state at or before the
Evaluation bodies: Marine Area WG Note: Coordinate with Sika Deer WG, River Construction AP, and Brown Bear WG			

Evaluate the evaluation items based on the evaluation result of each monitoring item.

Evaluation of the monitoring items					
Monitoring items	Evaluation criteria	Evaluation indicators	Monitoring method	Evaluation bodies	Evaluation bodies (Responsible WG/AP)
16 The brown bear population in the Shiretoko Peninsula	- The number of female brown bears killed by anthropogenic causes is 108 or less over six years from FY2022 (based on the Phase 2 Brown Bear Management Plan in the Shiretoko Peninsula). - The brown bear population is not experiencing a significant downward trend.	- Number of male brown bears killed by anthropogenic causes - Number of brown bears	Research and survey to comprehend the number of brown bears killed by anthropogenic causes and the long-trends in the brown bear population (e.g., dynamic model based on capture, number of sightings from tourist vessels)	Ministry of the Environment	Brown Bear WS
18 Habitat status of freshwater fish, especially of Dolly Varden, which characterizes the freshwater ichthyofauna in Shiretoko (including a survey of invasive alien species)	- The amount of the resource is maintained. - The expansion of distribution and population growth of alien species is sufficiently controlled. - Anthropogenic impacts, such as river construction, do not accelerate the rise in water temperature associated with climate change.	- Biomass of Dolly Varden - Habitat status of alien species - River water temperature	Survey of changes in ichthyofauna, biomass of Dolly Varden, and water temperature in the Iwaubetsu River and other rivers.	Ministry of Agriculture, Forestry and Fisheries	River construction AP
24 Survey of the number of breeding couples, marked young birds, and dead/injured individuals of Blakiston's fish-owls.	- Number of couples: the number at the time of heritage registration is roughly maintained. - Breeding success (number of breeding couples succeeded in breeding/confirmed number of couples): breeding success at the time of heritage registration is roughly maintained.	- Number of breeding couples - Breeding success (Number of marked young birds, etc.)	Attach signs for the identification of young birds to the breeding couples of which the habitat is known. Death and injured birds are investigated for cause when found.	Ministry of the Environment	Protection and Propagation Study Group
[7] Survey of the reproduction status of the white-tailed eagle in their nesting sites and monitoring the number of fledglings	The population's number of breeding couples, breeding success, and productivity at the registration time is roughly maintained.	- Number of breeding couples - Breeding success, productivity (Number of young birds leaving the nest per a breeding couple)	Visual check of the nesting site of white-tailed eagles	Monitoring survey group for white-tailed eagles	Marine Area WG
[10] Survey of habitat status of killer whales	Human activities do not impede killer whales' habitat use.	Migration of killer whales including identified population	Survey of identified population	Uni-HORP (University Alliance for Hokkaido Orca Research Project)	Marine Area WG

Related monitoring (The purpose is to collect basic information, not the evaluation)				
Monitoring items	Indicator	Monitoring method	Evaluation bodies	Responsible WG/AP
-	-	-	-	-

Comprehensive evaluation		Evaluation of the evaluation items		
Subjects eligible for the evaluation	Viewpoints of the evaluation	Evaluation items		Evaluation criteria
2Environmental pressure - Tourism pressure (States / Trends)	Are there any environmental or tourism pressures that impact the value of Shiretoko as a World Natural Heritage site?	D	Are there any signs of climate change in the heritage site?	Evaluate whether there are signs of climate change in the changes or trends in climate data.
			Evaluation bodies: Sika deer WG Note: Coordinate with Marine WG and River construction AP	

Evaluate the evaluation items based on the evaluation result of each monitoring item.

Evaluation of the monitoring items					
Monitoring items	Evaluation criteria	Evaluation indicators	Monitoring method	Evaluation bodies	Evaluation bodies (Responsible WG/AP)
1. Fixed-point observation of water temperature using ocean observation buoys	- Does it deviate from the long-term variability range?	- Sea water temperature	Install one ocean observation buoy off Komu Beach in Rausu Town and observe water temperatures from spring to fall.	Ministry of the Environment	Marine Area WG
18 Habitat status of freshwater fish, especially of Dolly Varden, which characterizes the freshwater ichthyofauna in Shiretoko (including a survey of invasive alien species)	- The amount of the resource is maintained. - The expansion of distribution and population growth of alien species is sufficiently controlled. - Anthropogenic impacts, such as river construction, do not accelerate the rise in water temperature associated with climate change.	- Biomass of Dolly Varden - Habitat status of alien species - River water temperature	Survey of changes in ichthyofauna, biomass of Dolly Varden, and water temperature in the Iwauetsu River and other rivers.	Ministry of Agriculture, Forestry and Fisheries	River construction AP
27 Meteorological observation	- Does it deviate from the long-term variability range?	- Temperature - Precipitation - Final snow melting day - Sea surface water temperature - Sea ice duration (Abashiri)	Utilizing observation data by Japan Meteorological Agency, etc.	Ministry of the Environment	Sika Deer WG
28 Meteorological observation in typical vegetation area	- Does it deviate from the long-term variability range?	- Ground temperature - Land surface temperature - Spring snowmelt season	Survey of soil and ground and land surface temperatures in vegetation areas representative of Shiretoko from among the vegetation survey areas listed in Monitoring Item 7.	Ministry of the Environment	Sika Deer WG
[1] Observation of sea ice distribution status by aircraft, artificial satellites, etc.	- Does it deviate from the long-term variability range?	- Distribution of sea ice	Survey of distribution sea ice	First Regional Coast Guard Headquarters	Marine Area WG

Related monitoring (The purpose is to collect basic information, not the evaluation)				
Monitoring items	Indicator	Monitoring method	Evaluation bodies	Responsible WG/AP
-	-	-	-	-

Comprehensive evaluation		Evaluation of the evaluation items	
Subjects eligible for the evaluation	Viewpoints of the evaluation	Evaluation items	Evaluation criteria
2 Environmental pressure Tourism pressure (States / Trends)	Are there any environmental or tourism pressures that impact the value of Shiretoko as a World Natural Heritage site?	E Are there any effects or signs of impact of climate change on the value of Shiretoko as a World Natural Heritage site?	Evaluate whether there are changes in population, distribution range, phenology, species interactions, community structure, and species diversity and whether they result from climate change Implementing bodies: Sika deer WG Note: Coordinate with Marine WG, River Construction AP, and Brown Bear WG

Evaluate the evaluation items based on the evaluation result of each monitoring item.

Evaluation of the monitoring items					
Monitoring items	Evaluation criteria	Evaluation indicators	Monitoring method	Evaluation bodies	Evaluation bodies (Responsible WG/AP)
2. Survey of habitat status of seals and Steller sea lions	- Are there any changes that could be attributed to climate change?	- Number of animals using the feeding area around Lake Saroma and Lake Notori, and the breeding population off Abashiri	Conduct a visual survey from the land around Lake Saroma and Lake Nodori and visual survey from the sea off Abashiri (Note: Perform about once every 2 years)	Hokkaido	Marine Area WG
3 Survey of biota in shore region	- Are there any changes that could be attributed to climate change?	- Biota (fish, seaweed, invertebrates) - Distribution	Inventory survey of fish, seaweed, and invertebrates in shore region of the coast of Shiretoko Peninsula (Note: Perform about once every 10 years)	Ministry of the Environment	Marine Area WG
4 Shellfish quantitative survey in shore region	- Are there any changes that could be attributed to climate change?	- Shellfish fauna - Distribution	Inventory survey of shellfish on the coast of Shiretoko Peninsula (Note: Perform about once every 5 years)	Ministry of the Environment	Marine Area WG
5 Survey of spectacled guillemot, black-tailed gull, slaty-backed gull, and Japanese cormorant populations, nesting site distribution, and number of nests	- Are there any changes that could be attributed to climate change?	- Number of nests and colonies - Rapid fluctuations in specific colonies	Count the breeding number by section from Utoro Port to Aidomari Port via Cape Shiretoko. Count the number of spectacled guillemot at sea in the range where their habitat is confirmed. Record the changes in the number of nests.	Ministry of the Environment	Marine Area WG
7 Survey of vegetation shift throughout the Shiretoko Peninsula (forest vegetation, coastal vegetation, and alpine vegetation)	- Are there any changes that could be attributed to climate change?	Forest vegetation: - Density of young trees - Density of lower branch - Composition and vegetation height of understory Coastal vegetation / Alpine vegetation: - Composition and vegetation height of community	Perform periodic vegetation surveys in fixed study areas set throughout the Shiretoko Peninsula.	Ministry of the Environment Ministry of Agriculture, Forestry and Fisheries	Sika Deer WG
9 Survey of sika deer status in their main wintering grounds (aerial counting survey and terrestrial counting survey)	- Are there any changes that could be attributed to climate change?	- Aerial counting survey: Number of animals found during wintering season (density of animals found) - Terrestrial counting survey: Number of animals found per unit distance or index	Aerial counting survey: Once every five years, a helicopter flies low over the entire Shiretoko Peninsula to count the wintering Sika deer population and record their locations. It has been conducted yearly since 2014 in part of the Peninsula (throughout the heritage area). - Terrestrial counting survey: Light census in main wintering grounds, etc.	Ministry of the Environment	Sika Deer WG
10 Survey of terrestrial insect fauna	- Are there any changes that could be attributed to climate change?	- Insect fauna (ground prowling, butterflies, bumblebees) - Confirmed population - Alien species (<i>Bombus terrestris</i>)	Conduct by pitfall trap, fixed-point observation, and line census methods. (Note: Perform about once every five years)	Ministry of the Environment	Sika Deer WG
11 Survey of terrestrial avifauna	- Are there any changes that could be attributed to climate change?	- Avifauna - Confirmed population	Conduct by line census method or spot census method. (Note: Perform about once every five years)	Ministry of the Environment	Sika Deer WG

Related monitoring (The purpose is to collect basic information, not the evaluation)				
Monitoring items	Indicator	Monitoring method	Evaluation bodies	Responsible WG/AP
8 Growth and distribution surveys of the rare plant <i>Viola kitamiana</i>	Population and coverage of tracked plants	Survey of the changes in the population of <i>Viola kitamiana</i> , signs of feeding, and the amount of feeding by sika deer.	Ministry of the Environment	Sika Deer WG
[2] Tracking of changes in fish catches based on Statistics on Fisheries in Hokkaido	- Catches	Compilation of various statistics on catches	Department of Fisheries and Forestry, Hokkaido	Marine Area WG
[5] Number of Steller sea lions migrating to the coast of Japan, number of dead individuals due to human activities, and their sex and characteristics	- Number of Steller sea lions migrating to the coast of Japan	Survey of the number of Steller sea lions migrating to the coast of Japan	Hokkaido National Fisheries Research Institute, etc.	Marine Area WG
-	-	-	-	-

Comprehensive evaluation		Evaluation of the evaluation items	
Subjects eligible for the evaluation	Viewpoints of the evaluation	Evaluation items	Evaluation criteria
2 Environmental pressure Tourism pressure (States / Trends)	Are there any environmental or tourism pressures that impact the value of Shiretoko as a World Natural Heritage site?	E (Continued) Are there any effects or signs of impact of climate change on the value of Shiretoko as a World Natural Heritage site?	Evaluate whether there are changes in population, distribution range, phenology, species interactions, community structure, and species diversity and whether they result from climate change Implementing bodies: Sika deer WG Note: Coordinate with Marine WG, River Construction AP, and Brown Bear WG

Evaluate the evaluation items based on the evaluation result of each monitoring item.

Evaluation of the monitoring items					
Monitoring items	Evaluation criteria	Evaluation indicators	Monitoring method	Evaluation bodies	Evaluation bodies (Responsible WG/AP)
13 Preparing wide-area vegetation maps	- Are there any changes that could be attributed to climate change?	- Vegetation status - Change in high moors, forest lines, and the distribution of Japanese stone pines and Yezo spruces.	Read existing vegetation maps, aerial photographs, and satellite images and conduct field surveys to prepare a 1/25,000-scale vegetation map of alpine bells.	Ministry of the Environment Ministry of Agriculture, Forestry and Fisheries	Sika Deer WG
16 The brown bear population in the Shiretoko Peninsula	- Are there any changes that could be attributed to climate change?	- Number of brown bears	Research and survey to comprehend the number of brown bears killed by anthropogenic causes and the long-trends in the brown bear population (e.g., dynamic model based on capture, number of sightings from tourist vessels)	Ministry of the Environment	Brown Bear WS
18 Habitat status of freshwater fish, especially of Dolly Varden, which characterizes the freshwater ichthyofauna in Shiretoko (including a survey of invasive alien species)	- The amount of the resource is maintained. - The expansion of distribution and population growth of alien species is sufficiently controlled. - Anthropogenic impacts, such as river construction, do not accelerate the rise in water temperature associated with climate change.	- Biomass of Dolly Varden - Habitat status of alien species - River water temperature	Survey of changes in ichthyofauna, biomass of Dolly Varden, and water temperature in the Iwaubetsu River and other rivers.	Ministry of Agriculture, Forestry and Fisheries	River construction AP
23 Survey of the number of wintering sea eagles	- Are there any changes that could be attributed to climate change?	- Number of wintering sea eagles	Record the number of species, populations, and whether adult or juvenile, for eagles found along roads and rivers in the Shiretoko Peninsula coastal area and on the drift ice.	Ministry of the Environment	Marine Area WG
24 Survey of the number of breeding couples, marked young birds, and dead/injured individuals of Blakiston's fish-owls.	- Are there any changes that could be attributed to climate change?	- Number of breeding couples - Breeding success (Number of marked young birds, etc.)	Attach signs for the identification of young birds to the breeding couples of which the habitat is known. Death and injured birds are investigated for cause when found.	Ministry of the Environment	Protection and Propagation Study Group
[3] Ascertainment and assessment of walleye pollock stock (survey used to set total allowable catch [TAC])	- Are there any changes that could be attributed to climate change?	- Resource level and trends	Resource level and trends of walleye pollock	Fisheries Agency	Marine Area WG
[4] Survey of spawning volume of walleye pollock	- Are there any changes that could be attributed to climate change?	- Distribution amount of eggs	Survey of distribution amount of walleye pollock eggs	Rausu Fisheries Cooperative Association, Kushiro Fisheries Research Institute	Marine Area WG
[7] Survey of the reproduction status of the white-tailed eagle in their nesting sites and monitoring the number of fledglings	- Are there any changes that could be attributed to climate change?	- Number of breeding couples - Breeding success - Breeding success, productivity (Number of young birds leaving the nest per breeding couple)	Visual check of the nesting site of white-tailed eagles	Monitoring survey group for white-tailed eagles	Marine Area WG
[10] Survey of habitat status of killer whales	- Are there any changes in the killer whales' migration status?	- Migration of killer whales including identified population	Survey of identified population	Uni-HORP (University Alliance for Hokkaido Orca Research Project)	Marine Area WG

Related monitoring (The purpose is to collect basic information, not the evaluation)				
Monitoring items	Indicator	Monitoring method	Evaluation bodies	Responsible WG/AP
-	-	-	-	-

Comprehensive evaluation		Evaluation of the evaluation items	
Subjects eligible for the evaluation	Viewpoints of the evaluation	Evaluation items	Evaluation criteria
2 Environmental pressure - Tourism pressure (States / Trends)	Are there any environmental or tourism pressures that impact the value of Shiretoko as a World Natural Heritage site?	F Are there any effects or signs of the impact of human activities for recreation or similar purposes on the value of Shiretoko as a World Natural Heritage site?	Compare the current state of events considered to be affected by human activities with the states set in various plans and strategies developed during or after the heritage registration to check the changes.
Responsible for evaluation: Appropriate Use and Ecotourism Working Group WG Note: Coordinate with Marine WG and Brown Bear WG			

Evaluate the evaluation items based on the evaluation result of each monitoring item.

Evaluation of the monitoring items					
Monitoring items	Evaluation criteria	Evaluation indicators	Monitoring method	Evaluation bodies	Evaluation bodies (Responsible WG/AP)
5 Survey of spectacled guillemot, black-tailed gull, slaty-backed gull, and Japanese cormorant populations, nesting site distribution, and number of nests	- The number of nests at the time of registration is roughly maintained.	- Number of nests and colonies - Rapid fluctuations in specific colonies	Count the breeding number by section from Utoro Port to Aidomari Port via Cape Shiretoko. Count the number of spectacled guillemot at sea in the range where their habitat is confirmed. Record the changes in the number of nests.	Ministry of the Environment	Marine Area WG Appropriate Use and Ecotourism WG
14 Impact of users' problem behavior on brown bears' behavior	- Based on the Phrase 2 Brown Bear Management Plan in the Shiretoko Peninsula, the number of dangerous cases related to users' problem behavior is controlled below the current level.	- Number of hazardous incidents related to users' problem behavior - The state of human's problem behavior - Facility operation status (open/closed)	Through questionnaires, reports, and brown bear countermeasure duties, etc., collect information on damage and dangerous cases caused by brown bears, human's problem behavior, and the operation status (open/closed) of facilities (Shiretoko Goko Lakes Ground pathway, Furepe Waterfall pathway)	Ministry of the Environment	Brown Bear WS Appropriate Use and Ecotourism WG
20 Promotion of appropriate use and eco-tourism	- Based on "Shiretoko Eco-tourism Strategy 5. Basic Policies (1) and (2)," appropriate use and eco-tourism promotion are being conducted.	- Implementation status of projects following the basic policies of "Shiretoko Eco-tourism Strategy." - Changes in resource using patterns - Changes in customers - Concerned for the natural environment	Comprehend the progress in proper use and eco-tourism in the area using interview surveys with people involved in the use of heritage areas.	Ministry of the Environment	Appropriate Use and Ecotourism WG
22 Survey of impact on alpine vegetation caused by climbers	- No impact expansion	- Vegetation coverage and species composition - Changes in vegetation landscape	Establish monitoring sites, record vegetation coverage and, species composition and emergent species, and take photos of the vegetation landscape.	Ministry of the Environment	Appropriate Use and Ecotourism WG
[10] Survey of habitat status of killer whales	- Human activities do not impede killer whales' habitat use.	- Migration of killer whales including identified population	Survey of identified population	Uni-HORP (University Alliance for Hokkaido Orca Research Project)	Marine Area WG

Related monitoring (The purpose is to collect basic information, not the evaluation)				
Monitoring items	Indicator	Monitoring method	Evaluation bodies	Responsible WG/AP
21 Changes in the number of visitors	- Number of visitors of each destination	Comprehend the number of users in major user facilities through the user number count based on user counting and surveys, etc.	Ministry of the Environment	Appropriate Use and Ecotourism WG
Tracking of the social environment through preparation of 2026 annual reports and so on	- Population - Number of workers by industry	Compilation of various statistics on demographics, industrial activity, etc.	Ministry of the Environment	Science Committee (reported to the Secretariat)
-	-	-	-	-

Comprehensive evaluation		Evaluation of the evaluation items			Evaluation of the monitoring items						Related monitoring (The purpose is to collect basic information, not the evaluation)				
Subjects eligible for the evaluation	Viewpoints of the evaluation	Evaluation items		Evaluation criteria	Monitoring items	Evaluation criteria	Evaluation indicators	Monitoring method	Evaluation bodies	Evaluation bodies (Responsible WG/AP)	Monitoring items	Indicator	Monitoring method	Evaluation bodies	Responsible WG/AP
Management results (Results)	Is the Site managed following the Management Plan for the Shiretoko World Natural Heritage Site?	G	Have management efforts been made to reduce the environmental impact caused by human activities to the extent possible?	Evaluate the validity of management efforts and the activities for maintenance and improvement, focusing on the relationship and interaction between the use of pressure, management efforts, and environmental impact.	19 Management and initiatives for appropriate use	- Management and Initiatives are taken to realize “Shiretoko Eco-tourism Strategy 9. Specific Measures.”	- Implementation status of management and initiatives	Extract and list necessary management and initiatives for appropriate use of the area, based on the Shiretoko White Paper, materials for appropriate use, eco-tourism study meetings, interview surveys with administrative agencies, etc.	Ministry of the Environment	Appropriate Use and Ecotourism WG	21 Changes in the number of visitors	- Number of visitors of each destination	Comprehend the number of users and the changes in major user facilities through the user number count based on user counting and surveys, etc.	Ministry of the Environment	Appropriate Use and Ecotourism WG
				Responsible for evaluation: Appropriate Use and Ecotourism Working Group WG	20 Promotion of appropriate use and eco-tourism	- Based on “Shiretoko Eco-tourism Strategy 5. Basic Policies (1) and (2),” appropriate use and eco-tourism promotion are being conducted.	- Implementation status of projects following the basic policies of “Shiretoko Eco-tourism Strategy.”	Comprehend the progress in proper use and eco-tourism in the area using interview surveys with people involved in the use of heritage areas.	Ministry of the Environment	Appropriate Use and Ecotourism WG	Tracking of the project implementation status through preparation of 2025 annual reports	- Project implementation status by related institutions and organizations	Project implementation status by related institutions and organizations	Ministry of the Environment	Science Committee (reported to the Secretariat)
											Tracking of the social environment through preparation of 2026 annual reports and so on	- Population - Number of workers by industry	Compilation of various statistics on demographics, industrial activity, etc.	Ministry of the Environment	Science Committee (reported to the Secretariat)
		H	Has the response to the recommendations based on the field survey by UNESCO World Heritage Centre and IUCN progressed? (Is the response to each recommendation in progress)?	Evaluate the progress of each project based on the implementation of each project corresponding to the recommendations.	Note: The Science Committee evaluates the evaluation item H based on the survey results of the related monitoring.						Tracking of the project implementation status through preparation of 2025 annual reports	- Project implementation status by related institutions and organizations	Project implementation status by related institutions and organizations	Ministry of the Environment	Science Committee (reported to the Secretariat)
				Responsible for evaluation: Science Committee							Tracking of the social environment through preparation of 2026 annual reports and so on	- Population - Number of workers by industry	Compilation of various statistics on demographics, industrial activity, etc.	Ministry of the Environment	Science Committee (reported to the Secretariat)

Comprehensive evaluation		Evaluation of the evaluation items	
Subjects eligible for the evaluation	Viewpoints of the evaluation	Evaluation items	Evaluation criteria
 Management effects (Effects)	Are there any effects of the management based on the Management Plan for the Shiretoko World Natural Heritage Site?	I Is there a balance between conserving marine ecosystems in the sea area within the heritage site and stable fisheries through sustainable use of marine resources?	Evaluate the habitat states of and the damage they received from seals, Steller sea lions, and killer whales that characterize the marine ecosystems and the catch and resource states of walleye pollock.
		Evaluation bodies: Marine Area WG Note: Coordinate with River construction AP	
		J Is the river ecosystem capable of reproducing salmonid species maintained or restored by improving river constructions and other measures?	Obstacle of swimming upstream due to river construction is avoided to the extent practicable.
		Evaluation bodies: River construction AP	

Evaluate the evaluation items based on the evaluation result of each monitoring item.

Evaluation items shall be evaluated based on the evaluation result of each monitoring item.

Evaluation of the monitoring items					
Monitoring items	Evaluation criteria	Evaluation indicators	Monitoring method	Evaluation bodies	Evaluation bodies (Responsible WG/AP)
2. Survey of habitat status of seals and Steller sea lions	- The number of seals and Steller sea lions migrating to the Shiretoko Heritage Site and its surrounding waters is maintained.	- Number of animals using the feeding area around Lake Saroma and Lake Notori, and the breeding population off Abashiri	Conduct a visual survey from the land around Lake Saroma and Lake Nodori and visual survey from the sea off Abashiri (Note: Perform about once every 2 years)	Hokkaido	Marine Area WG
5 Survey of spectacled guillemot, black-tailed gull, slaty-backed gull, and Japanese cormorant populations, nesting site distribution, and number of nests	- The number of nests at the time of registration is roughly maintained.	- Number of nests and colonies - Rapid fluctuations in specific colonies	Count the breeding number by section from Uoro Port to Aidomari Port via Cape Shiretoko. Count the number of spectacled guillemot at sea in the range where their habitat is confirmed. Record the changes in the number of nests.	Ministry of the Environment	Marine Area WG
17 Monitoring the number of salmonid species swimming upstream, their spawning grounds, number of spawning beds, and the number of salmon fries swimming downstream in the river.	- Salmonid species are swimming upstream in each river and reproducing sustainably. - Obstacle of swimming upstream due to river construction is avoided to the extent practicable	- Number of salmon swimming upstream - Number of spawning beds - Impact of river construction on salmon swimming upstream and spawning	In Rusa River, Teppanbetsu River, and Rusa River, conduct surveys on the number of parent fish swimming upstream, the number of spawning beds, and the number of salmon fries swimming downstream to estimate the number of salmon swimming upstream of pink salmon.	Ministry of Agriculture, Forestry and Fisheries Hokkaido	River construction AP
[3] Ascertainment and assessment of walleye pollock stock (survey used to set total allowable catch [TAC])	- The resource states at the time of registration are roughly maintained.	- Resource level and trends	Resource level and trends of walleye pollock	Fisheries Agency	Marine Area WG
[9] Analysis of oil, cadmium, mercury, etc. in seawater	- It should be below the standard value.	- Concentration of contaminants such as petroleum, PCBs, and heavy metals in surface seawater and seabed sediments	Analysis of concentration of contaminants such as petroleum, PCBs, and heavy metals in surface seawater and seabed sediments	Hydrographic and Oceanographic Department, Japan Coast Guard	Marine WG
[10] Survey of habitat status of killer whales	- Human activities do not impede killer whales' habitat use.	- Migration of killer whales including identified population	Survey of identified population	Uni-HORP (University Alliance for Hokkaido Orea Research Project)	Marine Area WG
17 Monitoring the number of salmonid species swimming upstream, their spawning grounds, number of spawning beds, and the number of salmon fries swimming downstream in the river.	- Salmonid species are swimming upstream in each river and reproducing sustainably. - Obstacle of swimming upstream due to river construction is avoided to the extent practicable	- Number of salmon swimming upstream - Number of spawning beds - Impact of river construction on salmon swimming upstream and spawning	In Rusa River, Teppanbetsu River, and Rusa River, conduct surveys on the number of parent fish swimming upstream, the number of spawning beds, and the number of salmon fries swimming downstream to estimate the number of salmon swimming upstream of pink salmon.	Ministry of Agriculture, Forestry and Fisheries Hokkaido	River construction AP
18 Habitat status of freshwater fish, especially of Dolly Varden, which characterizes the freshwater ichthyofauna in Shiretoko (including a survey of invasive alien species)	- The amount of the resource is maintained. - The expansion of distribution and population growth of alien species is sufficiently controlled. • Anthropogenic impacts, such as river construction, do not accelerate the rise in water temperature associated with climate change.	- Biomass of Dolly Varden - Habitat status of alien species - River water temperature	Survey of changes in ichthyofauna, biomass of Dolly Varden, and water temperature in the Iwaubetsu River and other rivers.	Ministry of Agriculture, Forestry and Fisheries	River construction AP



Related monitoring (The purpose is to collect basic information, not the evaluation)				
Monitoring items	Indicator	Monitoring method	Evaluation bodies	Responsible WG/AP
1. Fixed-point observation of water temperature using ocean observation buoys	- Water temperature	Install one ocean observation buoy off Kombu Beach in Rausu Town and observe water temperatures from spring to fall.	Ministry of the Environment	Marine Area WG
[1] Observation of sea ice distribution status by aircraft, artificial satellites, etc.	- Distribution of sea ice	Survey of distribution sea ice	First Regional Coast Guard Headquarters	Marine Area WG
[2] Tracking of changes in fish catches based on Statistics on Fisheries in Hokkaido	- Catches	Surveying the catch	Department of Fisheries and Forestry, Hokkaido	Marine Area WG
[4] Survey of spawning volume of walleye pollock	- Distribution amount of eggs	Survey of distribution amount of walleye pollock eggs	Rausu Fisheries Cooperative Association, Kushiro Fisheries Research Institute	Marine Area WG
[5] Number of Steller sea lions migrating to the coast of Japan, number of dead individuals due to human activities, and their sex and characteristics	- Number of Steller sea lions migrating to the coast of Japan	Survey of the number of Steller sea lions migrating to the coast of Japan	Hokkaido National Fisheries Research Institute, etc.	Marine Area WG
(6) Survey of damage caused by seals and Steller sea lions	- Damage situation	Survey of fishery damage caused by seals and Steller sea lions	Hokkaido	Marine Area WG
-	-	-	-	-

Comprehensive evaluation		Evaluation of the evaluation items		Evaluation of the monitoring items						Related monitoring (The purpose is to collect basic information, not the evaluation)						
Subjects eligible for the evaluation	Viewpoints of the evaluation	Evaluation items		Evaluation criteria		Evaluation indicators		Monitoring method	Evaluation bodies	Evaluation bodies (Responsible WG/AP)	Monitoring items	Indicator	Monitoring method	Evaluation bodies	Responsible WG/AP	
4 Management effects (Effects)	Are there any effects of the management based on the Management Plan for the Shiretoko World Natural Heritage Site?	K	No excessive impact on the ecosystem in the heritage area, caused by the high density of Sika deer, was observed.	Comparing vegetation diversity to its status in the early 1980s, sika deer diversity to the level set for each section, and the diversity of insect and terrestrial bird habitats to that at the time of heritage registration does not show a significant decline.	Evaluation bodies: Sika deer WG	6 Survey of vegetation change (forest vegetation and grassland vegetation) in sika deer population control area	- The state of before the early 1980s is restored.	- Density of young trees - Density of lower branch - Composition and vegetation height of community - Number of flowering plants - Signs of feeding / Feeding amount	Establish fixed survey areas and lines for forest and grassland vegetation and survey vegetation composition, vegetation coverage, signs of feeding, feeding amount, and flowering density of indicator species. Also, guess the recovery process from the survey in the enclosed area where deer are eliminated.	Ministry of the Environment Ministry of Agriculture, Forestry and Fisheries	Sika Deer WG	10 Survey of terrestrial insect fauna	- Insect fauna (ground prowling, butterflies, bumblebees) - Confirmed population - Alien species (<i>Bombus terrestris</i>)	Conduct by pitfall trap, fixed-point observation, and line census methods. (Note: Perform about once every five years)	Ministry of the Environment	Sika Deer WG
						7 Survey of vegetation shift throughout the Shiretoko Peninsula (forest vegetation, coastal vegetation, and alpine vegetation)	<u>Forest vegetation:</u> - The state of the early 1980s is restored. <u>Coastal vegetation / Alpine vegetation:</u> - The state of the early 1980s is maintained or restored.	<u>Forest vegetation:</u> - Density of young trees - Density of lower branch - Composition and vegetation height of understory - Signs of feeding / Feeding amount <u>Coastal vegetation / Alpine vegetation:</u> - Composition and vegetation height of community - Signs of feeding / Feeding amount	Perform periodic vegetation surveys in fixed study areas set throughout the Shiretoko Peninsula.	Ministry of the Environment Ministry of Agriculture, Forestry and Fisheries	Sika Deer WG	11 Survey of terrestrial avifauna	- Avifauna - Confirmed population	Conduct by line census method or spot census method. (Note: Perform about once every five years)	Ministry of the Environment	Sika Deer WG
						9 Survey of sika deer status in their main wintering grounds (aerial counting survey and terrestrial counting survey)	- Aerial counting survey: To be less than 10/km ² in Cape Shiretoko section, and less than 5/km ² in Horobetsu-Iwaobetsu and Rusa-Aidomari section (not include Rusha section). - Terrestrial counting survey: To be less than the level at the time of the survey started in each survey site (1988 for the Horobetsu-Iwaobetsu section, 2009 for the Rusa-Aidomari section, 2007 for the Magoi section, and 2004 for the Minchama section).	- Aerial counting survey: Number of animals found during wintering season (density of animals found) - Terrestrial counting survey: Number of animals found per unit distance or index	Aerial counting survey: Once every five years, a helicopter flies low over the entire Shiretoko Peninsula to count the wintering Sika deer population and record their locations. It has been conducted yearly since 2014 in part of the Peninsula (throughout the heritage area). - Terrestrial counting survey: Light census in main wintering grounds, etc.	Ministry of the Environment	Sika Deer WG					
		L	Is the ecology and population of brown bears maintained while protecting residents' livelihoods and industries and ensuring safe and quality nature experiences?	Evaluate the survival and management implementation states of brown bears based on the criteria related to the goal of the Brown Bear Management Plan in the Shiretoko Peninsula.	Evaluation bodies: Brown Bear WG	15 Management status based on the Brown Bear Management Plan in the Shiretoko Peninsula	- Personal injury accidents caused by brown bears are not occurred. Evaluate the number of hazard cases related to users' problem behavior or fishery and damaged agricultural area in Shari Town based on the criteria associated with the goals of the Brown Bear Management Plan in the Shiretoko Peninsula.	- Number of cases of personal injury caused by brown bear incidents - Number of hazardous incidents - The state of human's problem behavior and initiatives - Facility operation status (open/closed) - Agricultural and fishery damage caused by brown bears	Through questionnaires, reports, and brown bear countermeasure duties, etc., collect information on damage and dangerous cases caused by brown bears, human's problem behavior (e.g., improper garbage disposal, frequency of advice to the community), initiatives in the community (e.g., installation of electric fences, mowing), and the operation status (open/closed) of facilities (Shiretoko Goko Lakes Ground pathway, Furepe Waterfall pathway)	Ministry of the Environment	Brown Bear WS	Tracking of the social environment through preparation of 2026 annual reports and so on	- Population - Nu mber of workers by industry	Compilation of various statistics on demographics, industrial activity, etc.	Ministry of the Environment	Science Committee (reported to the Secretariat)

Evaluate the evaluation items based on the evaluation result of each monitoring item.

Evaluation items shall be evaluated based on the evaluation result of each monitoring item.

5. Evaluation method

5.1 How to evaluate the monitoring items

(1) Evaluation policy

- Evaluation shall be conducted using monitoring data, etc., obtained during the evaluation period, based on the evaluation criteria and indicators set for each monitoring item.
- Evaluation shall be conducted by the lower Working Groups and Advisor Panel (WG/AP) of the Shiretoko World Natural Heritage Site Scientific Council, which are evaluation bodies set for each item.
- If multiple evaluation criteria are set for one monitoring item, WG/AP shall determine whether to compile the evaluation results by evaluation criteria or to compile integrally the evaluation results based on the evaluation results of each evaluation criteria.
- Monitoring items intended to collect basic information shall be “related monitoring” and not subject to the evaluation.

(2) Evaluation method

1) Items to be evaluated for conformity with the evaluation criteria

- Monitoring items linked to evaluation items A–C and F–L shall be evaluated from the conformity with the evaluation criteria and the trends in evaluation indicators during the evaluation period based on (1) to (4) below.

[1] Conformity with the evaluation criteria

- For each evaluation indicator set in each monitoring item, conformity with the evaluation criteria shall be determined as “conformed,” “not conformed,” or “No judgment,” and indicated with marks as shown in Table 4.

Table 4: How to express the evaluation results for the conformity to the evaluation criteria

Conformed	Not conformed	No judgment
		

[2] Trends in the evaluation indicators during the evaluation period

- The time when conformity to the evaluation criteria is determined shall be used as the criterion ^(Note). The trends of the evaluation indicators set for each monitoring item during the evaluation period shall be evaluated as “Restored/Improved,” “Maintaining the status quo,” “Got worse,” or “Lack of information,” and expressed as shown in Table 5.

(Note) For example, if the evaluation criterion for a monitoring item is “The site maintains approximately the same state at the time of World Natural Heritage registration (2005),” the trends in the evaluation indicators during the evaluation period shall be evaluated based on the states in 2005 (Figure 1).

Table 5 How to express the evaluation results for the trends in evaluation indicators during the evaluation period

Restored/improved	Maintaining the status quo	Got worse	Lack of information
			

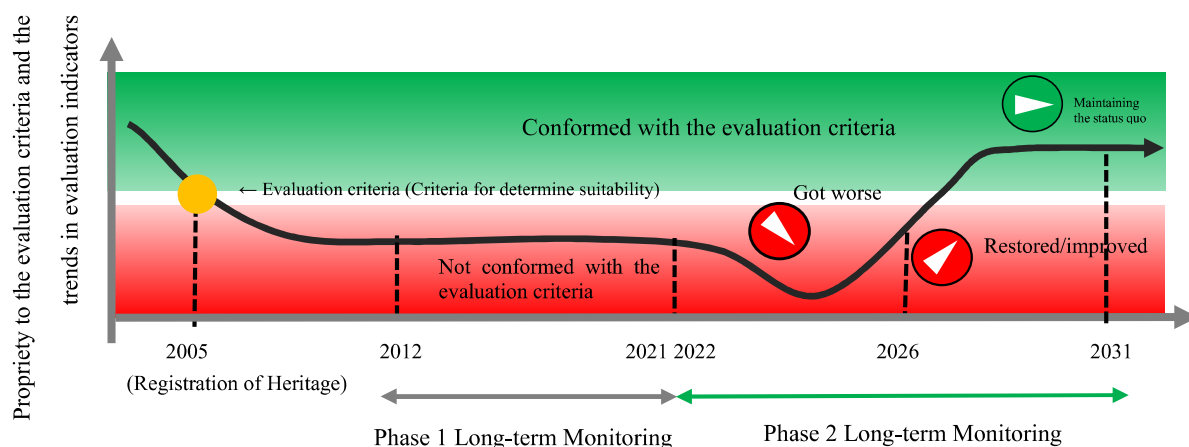


Figure 1. Conceptual diagram for the trends in the evaluation indicators

[3] Combination of the evaluation results

- Table 6 shows the combination of the evaluation results of [1] and [2].

Table 6 Combination of the evaluation results

Conformity to the evaluation criteria Trends in the evaluation indicators	Conformed	Not conformed	No judgment
Restored/improved			-
Maintaining the status quo			-
Got worse			-
Lack of information			

[4] Determination of the evaluation results

- Based on the evaluation results in [1] to [3] above, judgments are made for each monitoring item on a three-step scale (Good / Caution / Need improvement), as shown in Table 7.
- Monitoring items whose conformity cannot be determined due to the lack of information shall not be judged.

Table 7 Judgment of the evaluation results

Evaluation results						
Judgement	Good		Caution		Need improvement	

2) Items to evaluate for changes or impacts

- Monitoring items linked to evaluation items D and E shall be evaluated for changes or impacts.
- The evaluation results shall be judged on a two-step scale: Changes or impacts or signs of them are “Seen / Not seen.”

Table 8 Judgment of the evaluation results

Evaluation results	(Changes or impact) or (signs of change or impact) is “ Seen / Not seen ”
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(3) Compilation of the evaluation results of monitoring items

- The evaluation results of the monitoring items shall be compiled using the "Monitoring items: Evaluation Sheet" (Forms 1 and 2)."
- The results of the related monitoring shall be compiled using the “Related monitoring items: Arrangement sheet” (Form 3).

[Form 1] Monitoring items: Evaluation sheet (Example of entry)

* Examples of items to be evaluated for the conformity to the evaluation criteria

Monitoring items	No. 3	Survey of biota in shore region			
Evaluation bodies	Ministry of the Environment				
Evaluation bodies: (WG/AP)	Marine Area WG				
Monitoring period	MM/20YY to MM/20YY				
Monitoring method	At six survey sites set along the Shiretoko Peninsula coastal line, comprehend the Biota (fish, seaweed, invertebrates), targeting from the intertidal to the infralittoral zone of shore reefs.				
Month and year of the evaluation	MM/20YY				
Evaluation criteria	◆ Evaluation item A - The population's density at the registration time is roughly maintained. ◆ Evaluation item C - The diversity at the time of registration is roughly maintained.				
Evaluation indicators	◆ Evaluation item A - Biota (fish, seaweed, invertebrates) - Population density ◆ Evaluation item C - Biota (fish, seaweed, invertebrates) - Distribution				
Evaluation period	MM/20YY to MM/20YY				
Evaluation results (Evaluation item A)		Conformity to the evaluation criteria	■ Confirmed	□ Not conformed	□ No judgment
		Trends in the evaluation indicators	□ Restored/improved	■ Maintaining the status quo	□ Got worse □ Lack of information
		Judgement	■ Good	□ Caution	□ Need improvement
Evaluation results (Evaluation item C)		Conformity to the evaluation criteria	■ Confirmed	□ Not conformed	□ No judgment
		Trends in the evaluation indicators	□ Restored/improved	■ Maintaining the status quo	□ Got worse □ Lack of information
		Judgement	■ Good	□ Caution	□ Need improvement
Reasons for the evaluation	- The monitoring results shows that the current status of ichthyofauna is ○○. In the latest survey results, ○○ and other species were also confirmed. After a close examination of the breakdown of confirmed species, no major changes over time have been observed. ~ - Given the above, none of the Biota (fish, seaweed, invertebrates) surveyed showed significant changes from heritage registration, and stable populations were maintained.				
Remarks (Matters requiring attention, concerns, and other opinions, etc.)	- Confirmed species that are difficult to collect should be kept in mind during future surveys. - The trend of the alien species ○○, which was identified at the latest survey shall be closely monitored.				

[Form 2] Monitoring items: Evaluation sheet (Example of entry)

* Examples of items to evaluate for changes or impacts

Monitoring items	No. 28	Meteorological observation in typical vegetation area	
Evaluation bodies	Ministry of the Environment		
Evaluation bodies: (WG/AP)	Sika Deer WG		
Monitoring period	MM/20YY to MM/20YY		
Monitoring method	Using the loggers installed at the major vegetation monitoring sections (8 points), observe the ground temperature and ground surface temperature continuously.		
Month and year of the evaluation	MM/20YY		
Evaluation criteria	◆ Evaluation item D - Does it deviate from the long-term variability range?		
Evaluation indicators	◆ Evaluation item D - Ground temperature - Land surface temperature		
Evaluation period	MM/20YY to MM/20YY		
Evaluation results (Evaluation item D)	Changes or signs of changes due to climate change	☐ Seen	☒ Not seen
Reasons for the evaluation	- This monitoring began in 2022, and now, XX years later, no significant interannual changes in ground or surface temperatures have been observed at any of the sites, and it does not deviate from the long-term variability range. ~ - Given the above; we can say that changes or signs of changes due to climate change are currently not seen.		
Remarks (Matters requiring attention, concerns, and other opinions, etc.)	- Among the monitored sites, only the surface temperature data of the No. X point at an elevation of about 1500 m in the alpine zone suggested that the spring snowmelt season in XX year was Y days earlier than usual. Thus, we will keep a close eye on the future trend.		

[Form 3] Related monitoring items: Arrangement sheet (Example of entry)

Monitoring items	No. [1]	Observing sea ice distribution status by aircraft, artificial satellites, etc.
Evaluation bodies	First Regional Coast Guard Headquarters	
Responsible (WG/AP)	Marine Area WG	
Monitoring period	MM/20YY to MM/20YY	
Monitoring method	Survey of distribution sea ice	
Indicator	◆ Evaluation item A, D, I - Distribution state of sea ice	
Summary of the monitoring results	- The sea ice area in the Sea of Okhotsk has been declining in the long-term perspective. - However, since 2012, the area has remained roughly the same, although it was minimal in 2015. This trend continued in the 2019-2020 winter season. - Focusing on the coast of Hokkaido and the southern part of the Sea Okhotsk and looking at the number of days when drift ice is visually observed, and the maximum sea ice area observed by satellite, drift ice reached the Shiretoko Peninsula in all years, despite repeatedly increasing and decreasing the amount. In some years, such as 2015, the visually observed days and the sea ice area were tiny; however, the sea ice area in the southern part of the Sea of Okhotsk has not shown a remarkable decline.	
Remarks (Matters requiring attention, concerns, and other opinions, etc.)	- Sea ice area data in the southern part of the Sea of Okhotsk are critical for Survey of sea ice conditions in the Shiretoko Sea. From the monitoring data so far, it is clear that to evaluate the sea ice conditions in the Sea of Okhotsk, it is necessary to monitor sea ice changes at three different scales carefully: the entire Sea of Okhotsk, the southern part of the Sea of Okhotsk, and the Hokkaido coast. - Among them, the monitoring in the southern part of the Sea of Okhotsk has required expertise in satellite data analysis. Therefore, the monitoring must rely on the benevolence of experts, and it is uncertain whether it can be continued in the future. Since this is a critical monitoring item, we will consider simple methods and cooperation with research institutions.	

5.2 Evaluation methods for evaluation items

(1) Evaluation policy

- Evaluation shall be made based on the criteria set for each evaluation item A–L (12 items in total), overlooking the evaluation result linked to each monitoring item.
- The evaluation shall be made by WG/AP, which is the evaluation entity set for each item.
- When monitoring items for which multiple WGs/APs are evaluation bodies are included, the evaluation shall be made in cooperation by sharing information.

(2) Evaluation method

- Evaluation shall be conducted following the aforementioned "5.1 How to evaluate the monitoring items."
- Evaluation items A–C and F–L shall be judged on a three-step scale (Good / Caution / Need improvement), overlooking the evaluation and judgment results linked to each monitoring item and examining the conformity with the evaluation criteria and the trends.
- Evaluation items D and E shall be judged on a three-step scale (Seen / Seen in some indicators / Not Seen), overlooking the judgment results linked to each monitoring item.

(3) Compilation of the evaluation results of monitoring items

- The evaluation results of the evaluation items shall be compiled using the "Evaluation items: Evaluation sheet" (Forms 4 and 5).

[Form 4] Evaluation items: Evaluation Sheet (Example of entry)

* Examples of items to be evaluated for the conformity to the evaluation criteria

Evaluation items	A	Is the productivity of the ecosystem at the time of heritage registration maintained? (Criteria (ix) Ecosystem)				
Evaluation bodies: (WG/AP)	Marine Area WG					
Month and year of the evaluation	MM/20YY					
Evaluation period	MM/20YY to MM/20YY					
Evaluation criteria	Compare the distribution of sea ice, which provides a growth environment for phytoplankton that supports the richness and diversity of the marine ecosystem, and the state of the biota, such as fish that feed on plankton and the aquatic animals that prey on them, with the state at the time of the heritage registration.					
Evaluation results		Conformity to the evaluation criteria	☒ Conformed	☐ Not conformed	☐ No judgment	
		Trends	☐ Restored/improved	☒ Maintaining the status quo	☐ Got worse	☐ Lack of information
		Judgement	☒ Good	☐ Caution	☐ Need improvement	
Reasons for the evaluation	- For the distribution of sea ice, a long-term decreasing trend in quality and quantity compared to the state at the time of heritage registration was reported. In addition, ○○ survey identified a decline in the abundance of some species, which was determined to be “Need improvement.” - On the other hand, no appreciable changes are found in the habitat status of seals and Steller sea lions. The marine biota, such as the resource states of walleye pollock and the habitat status of shellfish in shore region, have been maintained at the time of heritage registration. - Among the related monitoring, the status of fixed-point observation of water temperature using ocean observation buoys also indicates ○○. ~ - Given the above, this evaluation item is judged as, "Conformed" with the evaluation criteria and determined as "maintaining the status quo" concerning the ecosystem's productivity at the time of heritage registration. In addition, the judgment result is concluded as “Good,” taking into account that the evaluation results of each monitoring are ○○ and ○○.					
Evaluation results of monitoring items used in the evaluation	No.	Monitoring items	Evaluation indicators	Evaluation results	Judgement	
	2	Survey of habitat status of seals and Steller sea lions	- Number of animals using the feeding area around Lake Saroma and Lake Notori, and the breeding population off Abashiri		Good	
	3	Survey of biota in shore region	- Biota (fish, seaweed, invertebrates) - Population density		Good	
	...	○○○○	...		Caution	
	...	○○○○	...		Need improvement	
Implementation status of related monitoring items ●: Implemented as planned ▲: Partially implemented ×: Not implemented	No.	Monitoring items	Evaluation indicators	Implementation status	—	
	1	Fixed-point observation of water temperature using ocean observation buoys	- Water temperature	●	—	
	[1]	Observing sea ice distribution status by aircraft, artificial satellites, etc.	- Distribution state of sea ice	●	—	
	...	○○○○		●	—	
Remarks (Matters requiring attention, concerns, and other opinions, etc.)	- It has been confirmed that alien species presumed to have invaded after 2009 have taken root, and their dynamics and impact on other species should be closely monitored.					

[Form 5] Evaluation items — Evaluation sheet (Example of entry)

* Examples of items to evaluate for changes or impacts

Evaluation items	D	Are there any signs of climate change in the heritage site?		
Evaluation bodies: (WG/AP)	Sika Deer WG (Coordinate with Marine Area WG and River Construction AP)			
Month and year of the evaluation	MM/20YY			
Evaluation period	MM/20YY to MM/20YY			
Evaluation criteria	Evaluate whether there are signs of climate change in the changes or trends in climate data.			
Evaluation results	Changes or signs of changes due to climate change	☐ Seen	☒ Seen in some of the evaluation indicators	☐ Not seen
Reasons for the evaluation	- Although annual fluctuations in sea and river temperatures are measured by ocean observation buoys; it does not deviate significantly from the long-term variability range. - However, statistical analysis of the number of days with a daily maximum temperature of 25°C or higher from the observation data of Japan Meteorological Agency taken in Utoro and Rausu (1978–2021) shows an upward trend in water temperatures. The record taken at Abashiri (1945–2021) shows that the first observation day and last observation days of drift ice tend to be delayed and advanced, respectively. (According to the results of sea ice distribution observation from aircraft, etc., the amount of floating ice has decreased over the long term. However, looking at the records since 2012, it has remained mostly flat, although it reached a minimum in 2015.) ~ - In view of the above, changes or signs of changes due to climate change are currently “Seen in some indicators.”			
Evaluation results of monitoring items used in the evaluation	No.	Monitoring items	Evaluation indicators	Evaluation results (Changes or signs of changes due to climate change)
	1	Fixed-point observation of water temperature using ocean observation buoys	- Sea water temperature	Not seen
	18	Habitat status of freshwater fish, especially Dolly Varden, which characterizes the freshwater ichthyofauna in Shiretoko	- River water temperature	Not seen
	27	Survey of observed weather conditions	- Temperature - Precipitation - Final snow melting day - Sea surface temperature - Sea ice duration (Abashiri)	Seen
	28	Meteorological observation in typical vegetation area	- Ground temperature - Land surface temperature	Not seen
	[1]	Observing sea ice distribution status by aircraft, artificial satellites, etc.	- Distribution state of sea ice	Not seen
Remarks (Matters requiring attention, concerns, and other opinions, etc.)	- We just started meteorological observation in typical vegetation areas in 2022 and will continue to monitor long-term changes closely.			

5.3 Method of the comprehensive evaluation

(1) Evaluation policy

- The comprehensive evaluation shall be conducted, overlooking the evaluation result linked to each evaluation item (A–L) based on the perspectives defined for the four subjects eligible for evaluation.
- The results of each evaluation shall be summarized and compiled to show the current status of the Shiretoko World Natural Heritage evaluation.
- Evaluation is carried out by the Shiretoko World Natural Heritage Site Scientific Council.

Table 9 Subjects eligible for the comprehensive evaluation and the perspectives of the evaluation

Subjects eligible for the evaluation	Viewpoints of the evaluation
1 State of conservation (States)	Are the ecosystems and biodiversity of Shiretoko maintained, which is the criteria for registration as a World Natural Heritage site?
2 Environmental pressure / Tourism pressure (State / Trends)	Are there any environmental or tourism pressures that impact the value of Shiretoko as a World Natural Heritage site?
3 Management results (Results)	Is the Site managed following the Management Plan for the Shiretoko World Natural Heritage Site?
4 Management effects (Effects)	Are there any effects of the management based on the Management Plan for the Shiretoko World Natural Heritage Site?

(2) Evaluation method

- The comprehensive evaluation shall be conducted, overlooking the evaluation result linked to each evaluation item (A–L) based on the perspectives defined for the four subjects eligible for evaluation.
- Then, based on the results of each evaluation, the current status of the Shiretoko World Natural Heritage site shall be compiled comprehensively.

(3) Compilation of the comprehensive evaluation

- The results of comprehensive evaluation shall be compiled using the "Comprehensive evaluation: Evaluation Sheet" (Form 6).

[Form 6] Comprehensive evaluation: Evaluation Sheet (Example of entry)

Subjects eligible for the evaluation	☐ State of conservation (Condition)					
Viewpoints of the evaluation	Are the ecosystems and biodiversity of Shiretoko maintained, which is the criteria for registration as a World Natural Heritage site?					
Evaluation bodies	Science Committee					
Month and year of the evaluation	MM/20YY					
Evaluation period	MM/20YY to MM/20YY					
Comprehensive evaluation	- In the Shiretoko ecosystem, marine mammals and marine biota maintained their status at the time of heritage registration. In addition, due to the improvement of river construction, salmonid species migration upstream and downstream has been promoted, and the interrelationship between the marine and terrestrial ecosystems has been improved. - On the other hand, some seabirds have declined in numbers, and the impact on biodiversity due to a decrease in the number of plants present in some areas as a result of foraging by sika deer, but no significant effect has been observed compared to the time when the site was registered as a heritage site. - As for XX, YY has been maintained. ~ - Given the above, the ecosystem and biodiversity of Shiretoko are currently well maintained. However, some issues need to be monitored regarding the results of some monitoring surveys.					
Evaluation results (Evaluation item A)		Conformity to the evaluation criteria	☒ Conformed	☐ Not conformed	☐ No judgment	
		Trends	☐ Restored/improved	☒ Maintaining the status quo	☐ Got worse	☐ Lack of information
		Judgement	☒ Good	☐ Caution	☐ Need improvement	
Evaluation results (Evaluation item B)		Conformity to the evaluation criteria	☒ Conformed	☐ Not conformed	☐ No judgment	
		Trends	☐ Restored/improved	☒ Maintaining the status quo	☐ Got worse	☐ Lack of information
		Judgement	☒ Good	☐ Caution	☐ Need improvement	
Evaluation results (Evaluation item C)		Conformity to the evaluation criteria	☒ Conformed	☐ Not conformed	☐ No judgment	
		Trends	☐ Restored/improved	☒ Maintaining the status quo	☐ Got worse	☐ Lack of information
		Judgement	☒ Good	☐ Caution	☐ Need improvement	
Remarks (Matters requiring attention, concerns, and other opinions, etc.)	- ○○○○○○					

Evaluation Sheet shall be prepared for subjects eligible for the evaluation ☐ to ☒.

Summary	- X years have passed since the heritage registration. According to the comprehensive evaluation results compiled based on the monitoring results, we can conclude that outstanding universal value has been generally well maintained since the interrelationship between sea and land ecosystems affected by seasonal sea ice has also been maintained, and the site has been an essential area for biodiversity conservation, with a wide range of species inhabiting and growing there, including many rare and endemic species. - On the other hand, ○○ and ○○ are observed as issues, thus we need to promote initiatives for ○○ and ○○. - Therefore, proper heritage management shall be conducted with due care of ○○ and ○○ in the future.
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