

ICOMOS

INTERNATIONAL COUNCIL ON MONUMENTS AND SITES
CONSEIL INTERNATIONAL DES MONUMENTS ET DES SITES
CONSEJO INTERNACIONAL DE MONUMENTOS Y SITIOS
МЕЖДУНАРОДНЫЙ СОВЕТ ПО ВОПРОСАМ ПАМЯТНИКОВ И ДОСТОПРИМЕЧАТЕЛЬНЫХ МЕСТ

Our Ref. GB/EG/1740_Add.Inf

Charenton-le-Pont, 26 September 2024

H.E. Ms. Sang Mee Bak
Ambassador Extraordinary and Plenipotentiary,
Permanent Delegate
Permanent Delegation of the Republic of Korea
to UNESCO
100, avenue de Suffren
Batiment B, 6ème étage
Paris 75015

World Heritage List 2025 – Additional Information Petroglyphs along the Bangucheon Stream (Republic of Korea)

Dear Ambassador,

ICOMOS is currently assessing the nomination of the “Petroglyphs along the Bangucheon Stream” as a World Heritage property and an ICOMOS technical evaluation mission has visited the nominated property to consider matters related to its protection, management and conservation, as well as issues related to its integrity and authenticity.

In order to allow us to further evaluate this property, we would be grateful if the State Party could provide ICOMOS with additional information on the following points:

Conservation - flood management

The nomination dossier indicates that the “*Fifth Comprehensive Plan for the National Land (2020–40)* includes content on lowering the reservoir level behind Sayeon Dam and securing a water supply for Ulsan City. According to this national-level plan, a project is underway for constructing pipes to transport water from Unmun Dam in Cheongdo County to Ulsan City as a means to compensate for the reduction in water supplies expected following the lowering of water levels behind Sayeon Dam. This project, named *The Establishment of a Safe Water Supply System for the Nakdonggang River Region*, was determined to be viable in a preliminary feasibility study in 2022, and it was decided that it would be pursued at the central government level. Currently, consultations among pertinent local governments are underway” (p.156). In addition, ICOMOS understands that the decision to proceed with the re-engineering of the dam has been published in the Official Gazette, and that the works are expected to be completed by 2027.

ICOMOS would appreciate to receive an update from the State Party on the ongoing consultations among the local governments involved, as well as more detailed information on when the gazetted decision was taken. Could the State Party also indicate when the engineering works will start?

Tourism

ICOMOS would appreciate if the State Party could inform whether a strategy for tourism management is in place, or envisaged and if so according to which timeframe. ICOMOS would be particularly interested to receive additional information, if available, on how tourism will be managed once the works at the Sayeon Dam will be completed.

Management

ICOMOS notes that several plans are mentioned in the nomination dossier in relation to the management of nominated property (pp.156-158). However, none of these plans have been provided in annex of the

Copy to Bangucheon Petroglyphs World Heritage Nomination Team, Ulsan
Cultural Heritage Administration
UNESCO World Heritage Centre

Petroglyphs along the Bangucheon Stream

Additional Information Requested
by ICOMOS

Republic of Korea

Petroglyphs along the Bangucheon Stream

Additional Information Requested
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November 2024

Republic of Korea

CONTENTS

Additional Information Requested by ICOMOS

Item 1. Conservation – flood management	07
Item 2. Tourism	13
Item 3. Management	15
Item 4. Factors affecting the nominated property	30
Item 5. Ownership	32
Item 6. Local communities	36

Appendix

1. Changes in the organizational and legal framework for heritage management and conservation in the Republic of Korea	41
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Additional Information Requested by ICOMOS

November 2024

Item 1. Conservation – flood management

ICOMOS would appreciate to receive an update from the State Party on the ongoing consultations among the local governments involved, as well as more detailed information on when the gazetted decision was taken. Could the State Party also indicate when the engineering works will start?

Matters are progressing according to schedule regarding the planned installation of gates in the spillway of Sayeon Dam, a project considered critical to resolving the submersion issue at the Daegok-ri site and ultimately to maintaining the integrity of the nominated property. This re-engineering of Sayeon Dam is being implemented as a national project under the initiative of the central government.

The gate installation project was evaluated by the Public Project Evaluation Committee of the Ministry of Economy and Finance and approved in May 2023 (refer to p. 162 of the nomination dossier). Every large-scale project with a budget exceeding 50 billion KRW large-scale public project must undergo this process prior to implementation to ensure that its feasibility can be confirmed.

With the gate installation project approved by the Ministry of Economy and Finance, the Ministry of Environment, the central government agency responsible for the project, proceeded with finalizing the administrative requirements. A revised master plan for Sayeon Dam incorporating the approved installation of gates in the spillway (Figure 1) was published in the Government Gazette for April 19, 2024. The published plan clearly states that the purpose of the gate installation is to “strengthen the stability of the dam for the conservation of the Bangudae petroglyphs.” It also specifies that the entire 64.744 billion KRW budget for the project is being fully funded by the central government. It goes on to mention that the project is being implemented by K-water, a public institution under the supervision of the Ministry of Environment.

After the plan for the gate installation was published in the Government Gazette, K-water has recently revised the construction completion date from 2027 to 2029 after careful

consultations with relevant authorities. According to the revised schedule, design for the construction is expected to start in November 2024. With the completion of the blueprints, the ground is expected to be broken for the addition of gates in the spillway of Sayeon Dam in late 2026. If things continue as planned, the construction is expected to be completed by late 2029. When the construction of the gates is completed, K-water will employ the enhanced capacity for adjusting water levels behind Sayeon Dam.

In tandem with the gate installation project, the Ulsan City government has been carrying on in-depth discussions with the central government over how to secure additional water sources to compensate for the reduced capacity of Sayeon Dam and supply drinking water to Ulsan. The Ulsan metropolitan government recognizes the importance of securing additional water sources for ensuring the sustainability of the management of the nominated property's integrity. It is making every effort at resolving potential water shortages through in-depth communication with the central government.

The constant attention paid to this issue by the government of Ulsan City has made critical contributions to the preparation of a relevant plan by the Ministry of Environment. This plan, known as the Establishment of a Safe Water Supply System for the Nakdonggang River Region, is being implemented as a national project after having been approved by the Public Project Evaluation Committee of the Ministry of Economy and Finance in 2022 (refer to p. 156 of the nomination dossier). This Nakdonggang water supply project aims to re-organize and re-distribute water resources for cities in the southeastern portion of the country. As part of the project, Ulsan will secure an alternative source of water to address potential water supply shortages resulting from the installation of spillway gates at Sayeon Dam. In line with the ongoing principle of providing additional water supplies to Ulsan, the project is now pursuing consultations among pertinent local governments regarding the sources and volumes of water to be re-distributed across the Nakdonggang region. The central government is currently moving forward with the project with strong commitment.

Figure 1. The Revised Master Plan for Sayeon Dam as published in the Government Gazette
(Environment Ministry Notification No. 2024-84, dated April 19, 2024)

● **환경부고시 제2024-84호**

국토교통부 제2017-630호(2017.9.27)로 고시한 사연댐 건설 기본계획을 「댐건설·관리 및 주변 지역지원 등에 관한 법률」 제11조 및 동법 시행령 제12조의 규정에 의거 변경하고 이를 다음과 같이 고시합니다.

2024년 04월 19일

환경부장관

사연댐 건설사업 기본계획 변경(2차)

1. 건설의 목적 (변경)

- 울산광역시 및 주변지역에 생활용수 및 농업용수 공급
- 지진 및 댐 시설 노후화 대응, 반구대암각화 보존을 위한 댐 안전성 강화(변경)

2. 사업의 명칭 및 사업시행지의 위치 및 면적(변경 없음)

가. 명칭 : 사연댐

나. 위치 : 울산광역시 울주군 언양읍 반연리(우안) 및 범서읍 사연리(좌안)

3. 규모 및 형식

가. 댐(변경없음)

- 유역면적 : 67.0km²
- 댐 길이 : 300m
- 댐 높이 : 46m
- 댐 형식 : 중앙차수벽식사력댐
- 댐 체적 : 696,400m³

나. 여수로(변경)

- 형 식 : 수문조절 여수로
(Radial gate 15m×7.3m×3문)
- 월류정 표고 : EL.47.00m

4. 저수량 및 저수의 용도별 배분에 관한 사항(변경)

가. 총 저수량 : 12백만m³

나. 저수의 용도별 배분

- 용수공급 : 48.1백만m³/년
- 생활 및 농업용수 : 48.0백만m³/년
- 하천유지용수 : 0.1백만m³/년

5. 댐사용권을 설정받기로 예정된 자의 성명 또는 명칭과 댐사용권의 내용(변경없음)
 - 한국수자원공사(수도시설관리권)
6. 건설비용 및 그 부담에 관한 사항
 - 가. 건설비용
 - 댐건설 : 604백만원(변경없음)
 - 댐 안전성강화 : 64,744백만원(변경)
 - 나. 건설비용의 부담(변경없음)
 - 댐건설 : 국가
 - 댐 안전성강화 : 국가
7. 댐건설사업시행자
 - 가. 댐건설 : 국토교통부 장관(대행자:울산특별건설국장)(변경없음)
 - 나. 댐 안전성강화 : 환경부장관(대행자:한국수자원공사 사장)(변경)
8. 사업기간
 - 가. 댐 건설 : 1962년 ~ 1965년(변경없음)
 - 나. 댐 안전성강화 : 2017년 ~ 2027년(변경)
9. 수용·사용할 토지·건물 기타 물건이나 권리가 있는 경우 그 세목
 - 가. 댐 안전성강화에 수용·사용될 토지 : 토지세목조서 참조(변경)
10. 댐건설에 따라 예상되는 환경피해 및 이의 감소방안과 댐의 수질보전에 관한 사항(변경없음)
 - 게재생략
11. 댐주변지역의 사회·문화 및 경제발전에 기여할 수 있는 사업으로서 댐의 효용증진을 위한 사업에 관한 사항(변경없음)
 - 게재생략
12. 기타 댐건설에 관한 기본적인 사항(변경)
 - 금회 댐 안전성강화와 관련된 보상물건조사 보고서는 한국수자원공사 울산권지사(주소:울산광역시 남구 문수로 352 옥동제일새마을금고빌딩 4~6층, 전화번호 : 052-259-6211~2)에 비치하여 이해 관계인에게 열람(변경)

Environment Ministry Notification No. 2024-84

The Master Plan for Sayeon Dam, announced through the Land, Infrastructure, and Transport Ministry Notification No. 2017-630 (September 27, 2017), has been revised in accordance with the Act on Construction and Management of Dams and Assistance to Their Environs and is announced as follows since it has been revised.

April 19, 2024
Minister of Environment

Revised Master Plan for Sayeon Dam (2nd revision)

1. Purpose of construction (revised)

- To supply industrial and drinking water to Ulsan and surrounding areas
- To respond to earthquakes and to potential issues related to the aging of the dam; to strengthen the stability of the dam for the conservation of the Bangudae petroglyphs (revised)

2. Name and location of the project site (not revised)

A. Name: Sayeon Dam

B. Location: Banyeon-ri in Eonyang-eup and Sayeon-ri of Beomseo-eup, both in Ulju County, Ulsan Metropolitan City

3. Scale and form

A. Dam (not revised)

- Area of the river basin: 67 km²
- Length of the dam: 300 m
- Height of the dam : 46 m
- Type of the dam: Earth-core rockfill dam
- Volume of the dam: 696,400 m³

B. Spillway (revised)

- Type: Gated spillway (three radial gates, 15 x 7.3 m)
- Crest: 47 m in elevation

4. Storage capacity and distribution of stored water by purpose (revised)

A. Total storage capacity: 12 million m³

B. Distribution of stored water by purpose

- Total water supply: 48.1 million m³ per year
- Tap water and water for industrial use: 48 million m³ per year
- Water for maintaining the river: 0.1 million m³ per year

5. Name of the entity holding the right to use the dam or the name and the content of the right (not revised)
 - K-water / waterworks management right
6. Construction cost and cost-bearing
 - A. Construction cost
 - Construction of the dam: 604 million KRW (not revised)
 - Dam stability enhancement: 64.744 billion KRW (revised)
 - B. Cost-bearing (not revised)
 - Construction of the dam: The central government
 - Dam stability enhancement: The central government
7. Implementation of construction
 - A. Construction of the dam: Ministry of Land, Infrastructure and Transport (agent: Director-General of the Construction Bureau of Ulsan Metropolitan City) (not revised)
 - B. Dam stability enhancement: Minister of Environment (agent: Chairperson of K-water) (revised)
8. Construction period
 - A. Construction of the dam: 1962–65 (not revised)
 - B. Dam stability enhancement: 2017–27 (revised)
9. If there are land plots, buildings, and/or other items to be acquired or used, present detailed related records
 - A. Land plots to be acquired or used for the dam stability enhancement project: refer to the records of land plots to be acquired or used (revised)
10. Environmental impacts of construction, related mitigation measures, and preservation of water quality (not revised)
 - Omitted
11. Projects to enhance the utility of the dam that can contribute to the social, cultural, and economic development of the areas around the dam (not revised)
 - Omitted
12. Other matters related to construction (revised)
 - The report on the survey of compensation regarding the dam stability enhancement project is maintained at the Ulsan headquarters of K-water (address: 4th–6th Floors of Okdongjeil Saemaeulgeumgo Building, 352 Munsu-ro, Nam-gu, Ulsan Metropolitan City; Tel. 052-259-6211–2) for access by stakeholders. (revised)

Item 2. Tourism

ICOMOS would appreciate if the State Party could inform whether a strategy for tourism management is in place, or envisaged and if so according to which timeframe. ICOMOS would be particularly interested to receive additional information, if available, on how tourism will be managed once the works at the Sayeon Dam will be completed.

The fundamental strategy for tourism management at the nominated property is included in the Ulsan City Master Plan for Tourism Management and revised every five years. The nominated property and its surrounding areas were designated as a Cultural and Historical Tourism Zone in the Sixth Ulsan City Plan for Tourism Development (2016). Drawing upon this overarching tourism management blueprint, the Ulsan City government prepared a site-specific tourism management plan for the nominated property in 2020, known as the application of the Bangucheon area as a tourism resource is also included in the Seventh Ulsan City Plan for Tourism Development (2021).

The Ulsan City 2020 tourism management plan envisions disseminating the significance of the distinctive landscape of the Bangucheon area. This effort revolves around enhancing the visitor experience and alleviating potential tourism pressures via infrastructure improvements. At the core of this plan is revamping the footpaths in the Bangucheon area. In this regard, the Ulsan metropolitan government drew up a detailed plan for the visitor trails in the Bangucheon area in 2023, deemed the Master Plan for the Installation of Footpaths for Cultural Tours in the Bangudae Area. The visitor trail project set out in the 2023 plan is currently well underway.

The aim of the visitor trail project is interpreting and presenting the Bangucheon area in a holistic manner that encompasses the World Heritage property and also other cultural and historical sites within the area. This project is intended to protect the potential OUV of the nominated property by facilitating walking tours within the Bangucheon area. The visitor trail project is scheduled to proceed in two phases until the end of 2030.

The first phase, scheduled for 2022 through 2027, includes such tasks as revamping the existing footpaths, creating new trails for walking, sprucing up the surrounding environment,

establishing a Dongmaesan wetland park, and expanding visitor facilities (toilets, shelters, and parking spots).

The second phase will proceed from 2028 through 2030. This phase of the project includes the restoration of old walking trails that are expected to become accessible after the installation of spillway gates at Sayeon Dam. It is planned that the restored older trails will be connected to the footpaths established in the first phase of the project, enabling visitors to more comprehensively experience the distinctive landscape of the Bangucheon area. This project for facilitating walking tours at the nominated property is expected to contribute to reducing tourism pressures after inscription.

To further the effectiveness of the visitor trail project for alleviating potential tourism pressures, the Ulsan City government is planning to operate environmentally-friendly shuttle buses running between the parking lot near the boundary of the buffer zone and the starting point of the footpath leading to the property area (refer to p. 173 of the nomination dossier). This shuttle plan is currently in the phase of securing the required budgets. These projects at the nominated property will be implemented in a way that minimizes their impact on the nominated property and only following a thorough national-level review by the Korea Heritage Service (formerly known as the Cultural Heritage Administration).

It should be noted that the Ulsan City government will continue to update its tourism management at the nominated property in preparation for inscription on the World Heritage List and for the Periodic Reporting required of a World Heritage property. The Ulsan City government is planning to establish a complete conservation plan for the Bangucheon area (as a nationally protected area with the title Scenic Site) in 2025 through the Bangucheon Petroglyphs World Heritage Nomination Team. The budget for this planning has already been secured. This complete conservation plan will include a comprehensive tourism management strategy that reflects the results of the visitor trail project and incorporates potential changes in visitation after inscription.

Item 3. Management

ICOMOS notes that several plans are mentioned in the nomination dossier in relation to the management of nominated property (pp.156-158). However, none of these plans have been provided in annex of the main volume. ICOMOS would be pleased if the State Party could provide these, or at least a summary of their substance and their table of content in English. ICOMOS would especially be interested to receive the Master Plan for the Conservation and Management of the Bangucheon Petroglyphs as a World Heritage Site (2020).

In the nomination dossier, the State Party has provided the existing plans related to the Bangucheon petroglyphs (pp. 156–57; Table 5-8) and the management plans for the nominated property (p. 158; Figure 5-5) as follows:

• Existing plans

Category	Urban plan	Tourism plan	Safety plan	Cultural heritage plan
Central government	① 5th Comprehensive Plan for the National Land (2020–40)	② 4th Master Plan for Tourism Development (2022–31)	③ 4th Master Plan for Safety Management (2020–24)	④ Master Plan for Heritage Conservation, Management, and Utilization (2022–26) ⑤ Master Plan for the Conservation, Management, and Utilization of World Heritage (2022–26)
Local government	⑥ 2035 Ulsan City Master Plan for Urban Planning	⑦ 7th Ulsan City Plan for Tourism Development (2022–26)	⑧ 2023 Ulsan City Plan for Safety Management	⑨ 2023 Heritage Conservation, Management, and Utilization Plan

• Management plans

- ⑩ Master Plan for the Conservation and Management of the Bangucheon Petroglyphs as a World Heritage Site (2020)
- ⑪ Comprehensive Maintenance Plan for the Bangucheon Petroglyphs (2016)
- ⑫ Comprehensive Plan for Petroglyph Conservation, Management, and Utilization (2020)
- ⑬ Study on the Establishment of a Comprehensive Plan for Petroglyph Conservation and Management (2023)

The local government prepared its Comprehensive Maintenance Plan for the Bangucheon Petroglyphs in 2016 as a preliminary study for drawing up a management plan for the nominated property. In 2020, it delineated its Master Plan for the Conservation and Management of the Bangucheon Petroglyphs as a World Heritage Site. As the process of World Heritage inscription for the Bangucheon petroglyphs advanced, additional plans supporting and updating the 2020 plan were formulated, namely the Comprehensive Plan for Petroglyph Conservation, Management, and Utilization (2020) and the Study on the Establishment of a Comprehensive Plan for Petroglyph Conservation and Management (2023). These four documents were combined into the integrated management plan suggested on p. 158 and pp.270-280 of the nomination dossier. This integrated management plan is fundamentally derived from the 2020 plan in terms of its content and structure.

Summaries of these 13 plans are presented below.

①	5th Comprehensive Plan for the National Land (2020–40)	Central Government (Ministry of Land, Infrastructure, and Transport)
<p>This is the highest-level national spatial plan. It is prepared according to the Constitution of the Republic of Korea and the Framework Act on the National Land. The plan sets out fundamental long-term policies for the development of the national land, such as the efficient use of land resources (farmland, water resources, forest resources, marine resources, etc.) and the improvement of the environment for sustainable development.</p> <div data-bbox="287 667 1385 1370" style="border: 1px dashed black; padding: 10px; margin: 10px 0;"> <p>• Contents</p> <p>Part 1. Background of the Plan</p> <p>Part 2. Fundamental Directions of the Plan</p> <p>Part 3. Action Plan for Each Strategy</p> <p>Part 4. Implementation of the Plan</p> <p>Part 5. Regional Directions for Development</p> <ul style="list-style-type: none"> • Ulsan Metropolitan City: A High-tech Leader in Energy Renovation <ul style="list-style-type: none"> A. Goals B. Directions of Development <ol style="list-style-type: none"> 1. Formation of a broad regional sphere incorporating both urban and rural areas 2. Development of new energy industries 3. Development of a marine hub for traffic and logistics 4. Creation of a safe and pleasant urban environment 5. Promotion of a cultural city through the development of local resources </div> <p>• Major Content</p> <p>In Part 5 of the plan, Ulsan City suggests a vision of becoming “A High-tech Leader in Energy Renovation.” The “Directions of Development” for Ulsan City includes plans to adjust water levels behind Sayeon Dam and to secure an additional source of water for Ulsan. It also contains plans for developing cultural products with themes reflecting the prehistoric culture of the Bangucheon area and for using the petroglyphs as cultural and historical resources.</p>		

②	4th Master Plan for Tourism Development (2022–31)	Central government (Ministry of Culture, Tourism and Sports)
<p>This plan has been drawn up based on the Tourism Promotion Act, which targets the development and management of tourism resources across the nation. It covers matters such as existing conditions for tourism, tour trends, the supply and demand for tourism, the development, utilization, and management of tourism resources, and the designation of tourist zones.</p> <div data-bbox="212 595 1307 1527" style="border: 1px dashed black; padding: 10px;"> <p>• Contents</p> <p>Chapter 1. Roles of the Plan</p> <p>Chapter 2. Tourism Conditions and Trend Analysis</p> <p>Chapter 3. Future of the Plan</p> <p>Chapter 4. Strategy for the Implementation of the Plan</p> <p>Chapter 5. Regional Directions for Development</p> <p>Section 1. Basic Ideas for Tourist Zones</p> <ol style="list-style-type: none"> 1. Functions of Each Tourist Zone 2. Five Integrated Broad Tourist Districts 3. 17 Provinces and Cities 4. Regional Tourist Belts <p>Section 2. Regional Implementation Plans (Busan, Ulsan, and South Gyeongsang-do Province)</p> <ol style="list-style-type: none"> 1. Directions of Tourist Zones 2. Strategies for Each City or Province <p>B. Ulsan</p> <ol style="list-style-type: none"> (1) Vision and Strategy (2) Directions of Development <ul style="list-style-type: none"> A tourist destination offering both mountain and maritime attractions A tourist city boasting a harmonious combination of ecological and industrial strengths A tourism-friendly city valuing both residents and tourists <p>Chapter 6. System for the Implementation of the Plan</p> </div> <p>• Major Content</p> <p>Ulsan City belongs to the Integrated Broad Tourist District spanning Busan and the South Gyeongsang-do Province region. The goal of this Integrated Broad Tourist District is to develop regional maritime leisure activities and cultural tourism. Under this regional goal, Ulsan City has advanced three directions for its development: as a tourist destination offering both mountain and maritime attractions; as a tourist city boasting a harmonious combination of ecological and industrial strengths; and a tourism-friendly city valuing both residents and tourists. The vision and strategies of the 4th Master Plan for Tourism Development (2022–31) were reflected in preparing the 7th Ulsan City Plan for Tourism Development (2022–26).</p>		

③	4th Master Plan for Safety Management (2020–24)	Central government (Ministry of the Interior and Safety)
<p>This is the highest-level plan for national disaster and safety management. It is drawn up according to the Constitution of the Republic of Korea and the Framework Act on the Management of Disasters and Safety. This plan is designed to ensure that the government can protect the people from disasters and other safety accidents by actively responding to the changing social, cultural, and natural environments. Matters addressed in the plan include how to operate diverse safety management policies in an integrated manner; guidelines for the heads of safety management agencies as they prepare and implement safety programs; methods to enable integrated approaches to the use of funds distributed across different agencies; the coordination of the national capacity for preventing, preparing for, responding to, and recovering from disasters; the integration and re-organization of safety management responsibilities divided across diverse agencies; and methods for enhancing the disaster-related resilience of government agencies, public institutions, and private organizations.</p> <div data-bbox="288 981 1383 1326" style="border: 1px dashed #ccc; padding: 10px; margin: 10px 0;"> <p>• Contents</p> <p>Chapter 1. Summary of the Plan</p> <p>Chapter 2. Current Situation and Prospects</p> <p>Chapter 3. Fundamental Directions</p> <p>Chapter 4. Major Tasks for Each Strategy</p> <p>Chapter 5. Damage-specific Safety Measures</p> </div> <p>• Major Content</p> <p>Chapter 5 of the plan addresses damage to cultural and natural heritage. Included in this regard is the Plan for Strengthening the Cultural Heritage Safety Management System that is implemented by the Korea Heritage Service (formerly the Cultural Heritage Administration). This plan has purposes such as minimizing the risk of damage to heritage, preparing systematic recovery measures, and drawing up preparatory measures reflecting the specific conditions at a site. The tasks presented to achieve these purposes include strengthening the related legal and institutional foundations, improving the application of advanced technologies to the heritage safety environment, enhancing the on-site capacity to respond to disaster, and promoting public awareness of the importance of heritage safety.</p>		

④	Master Plan for Heritage Conservation, Management, and Utilization (2022–26)	Central government (Korea Heritage Service)
<p>This plan has been prepared according to the Cultural Heritage Protection Act as an overarching plan for heritage conservation, management, and utilization, based on which the respective provinces and cities draw up their annual implementation plans. The plan covers a full range of matters related to heritage, from the directions and goals of heritage conservation to principles for repair and restoration, issues surrounding safety management at heritage sites, and research and development efforts for heritage protection and promotion.</p> <div data-bbox="212 712 1305 1099" style="border: 1px dashed black; padding: 10px; margin: 10px 0;"> <p>• Contents</p> <ul style="list-style-type: none"> I . Background and Summary of the Plan II . Achievements and Limitations of the Previous Version III . Changes and Challenges IV . Vision and Strategy V . Measures for Implementation VI . Extra Materials </div> <p>• Major Content</p> <p>With an overall goal of deploying cultural heritage for a better future, the plan puts forward targets such as the digital transformation of heritage administration and services, harmonization of conservation and development, and creation of new social functions for heritage in the future. The strategies set out to achieve these goals include ensuring the sustainable conservation and transmission of heritage, using heritage to advance public wellbeing, sharing Korean heritage with the world, and introducing smart administrative processes. Among the tasks specified in the plan are some pertinent to World Heritage, such as expanding UNESCO inscriptions, maintaining and improving the OUV of existing World Heritage sites, and disseminating the significance of Korean heritage within the international community.</p>		

⑤	Master Plan for the Conservation, Management, and Utilization of World Heritage (2022–26)	Central government (Korea Heritage Service)
<p>This plan sets out medium- and long-term policy directions and detailed action plans for World Heritage protection and promotion in accordance with the Special Act on Conservation, Management, and Utilization of World Heritage. This national-level plan provides the basis upon which each province and city prepares their own five-year implementation plan. Matters covered in this plan include goals and directions for World Heritage conservation, management, and utilization; designation of World Heritage Districts and their revocation; procurement of funding; and informatization of heritage data.</p> <div data-bbox="288 757 1385 1099" style="border: 1px dashed #ccc; padding: 10px; margin: 10px 0;"> <p>• Contents</p> <ul style="list-style-type: none"> I . Background and Summary of the Plan II . Achievement Analysis III . Vision and Goals IV . Tasks for Each Goal V . Plans for Implementation </div> <p>• Major Content</p> <p>The vision for the plan is to deliver the OUV of World Heritage to future generations in an integral condition. Towards this aim a series of goals has been delineated, including protecting the OUV of World Heritage sites in a sustainable manner for future generations, enhancing management capacity to enable more systematic and integrated approaches to World Heritage sites, utilizing the OUV of World Heritage sites as cultural resources, and deploying World Heritage sites for enhancing international cooperation. Among the included tasks are some pertinent to the nominated property, such as diversifying the sites on the Tentative List to increase World Heritage inscriptions and expanding financial support for the conservation and management of World Heritage sites. Procedures are currently underway for the inscription of the Bangucheon petroglyphs on the World Heritage List.</p>		

⑥	2023 Ulsan City Master Plan for Urban Planning (2021–35)	Local government (Ulsan City government)
<p>This plan has been prepared by the Ulsan City government in reflection of higher-level plans such as the Comprehensive Plan for the National Land. It describes a vision for the city while offering guidance on urban development. It includes lower-level plans specific to themes such as land use, infrastructure, landscaping, environmental conservation, and social, cultural, and historical development.</p> <div data-bbox="212 663 1307 1099" style="border: 1px dashed black; padding: 10px; margin: 10px 0;"> <p>• Contents</p> <p>Part 1. Purpose of the Plan</p> <p>Part 2. Vision for the City and Planning Indicators</p> <p>Part 3. Urban Spatial Structure and Neighborhoods</p> <p>Part 4. Theme-specific Plans</p> <p style="padding-left: 20px;">Section 4. Plan for the Conservation and Management of the Environment</p> <p style="padding-left: 20px;">Section 9. Plan for Social, Cultural, and Historical Development</p> <p>Part 5. Implementation of the Plan</p> </div> <p>• Major Content</p> <p>The Plan for the Conservation and Management of the Environment as included in Section 4 of Part 4 states its goal as building a city that values environmental conservation and effectively responds to global warming and other climate crises. Preserving and managing clean water resources is one of its targets, and protecting the Bangucheon petroglyphs and securing additional water supplies are included. The vision of the Plan for Social, Cultural, and Historical Development is described as ensuring equality by expanding infrastructure for medical, welfare, educational, and cultural services. Building a dignified city with a flourishing culture and history is one of its goals. Encompassed within this goal are expanding cultural infrastructure, bringing culture and art closer into everyday life, repairing local heritage, and nominating the Bangucheon petroglyphs for inscription on the World Heritage List.</p>		

⑦	7th Ulsan City Plan for Tourism Development (2022–26)	Local government (Ulsan City government)
<p>Prepared based on the principles found in the 4th Master Plan for Tourism Development, this plan sets out detailed methods and policy details for tourism development in Ulsan City. The plan includes ideas for re-structuring the spatial layout of the city, plans for establishing a tourist complex, and methods for the development of tourism resources.</p> <div data-bbox="287 618 1383 918" style="border: 1px dashed #ccc; padding: 10px; margin: 10px 0;"> <p>• Contents</p> <p>I . Establishment of the Plan</p> <p>II . Analysis of the Conditions and Trends for Tourism Development</p> <p>III. Ideas and Plans for Tourism Development</p> <p>IV. Management of the Implementation of Tourism Projects</p> </div> <p>• Major Content</p> <p>Part III of the plan lists methods to develop tourism in the respective sections of the city with a goal of establishing Ulsan as an ecological tourist center. In it, the city is divided into six districts, with each assigned a specific focus for tourism development, such as forest ecology, urban ecology, historical and cultural tourism, and maritime ecology. As the Bangucheon area falls within the Historical and Cultural Tourism District, details on how to utilize the nominated property as a tourism resource are included.</p>		

⑧	2023 Ulsan City Plan for Safety Management	Local government (Ulsan City government)
<p>This plan has been prepared in reflection of the 4th Master Plan for Safety Management for the purpose of protecting Ulsan City from a range of types of disaster and enhancing the city's risk-preparedness. The plan takes a comprehensive and holistic view of the human and material resources available for preventing and responding to both natural and man-made disasters in the area while offering details on the response to and recovery from disaster in a speedy and efficient manner.</p> <div data-bbox="210 707 1305 1415" style="border: 1px dashed black; padding: 10px; margin: 10px 0;"> <p>• Contents</p> <ul style="list-style-type: none"> I . Overview II . Current Status and Future Prospects III . Vision and Goals IV . General Measures for Safety Management V . Disaster-specific Measures for Safety Management VI . Administrative Matters <p>Appendices</p> <ul style="list-style-type: none"> 1. Details on the Disaster-specific Measures 2. Details on Financial Investments 3. Current State of Safety Management Resources 4. Person in Charge for Respective Types of Disaster 5. List of Organizations Responsible for Safety Management </div> <p>• Major Content</p> <p>Safety management measures for heritage can be found in Chapter 1 of the Appendices of the plan. Measures specified here include revising and updating disaster-response manuals at the heritage site, dispatching safety monitors, staffing on-site managers, carrying out monitoring activities in cooperation with the Heritage Caretakers program, conducting joint disaster-response drills (more than ten times per year), implementing a disaster management system, and establishing an anti-disaster mechanism for mountain temples.</p>		

⑨	2023 Heritage Conservation, Management, and Utilization Plan	Local government (Ulsan City government)
<p>This is the annual implementation plan of the Master Plan for Heritage Conservation, Management, and Utilization Plan (2022–26) that has been drawn up for Ulsan City.</p> <div data-bbox="287 528 1382 1099"> <p>• Contents</p> <p>I . Summary</p> <p>II . Progress in 2022</p> <p>III . Planned Activities for 2023</p> <p>IV . Project-specific Action Plans</p> <ol style="list-style-type: none"> 1. Sustainable Designation and Transmission of Heritage 2. Systematic and Persistent Heritage Conservation and Management 3. Heritage Utilization with Community Participation 4. Transmission, Conservation, and Utilization of Traditional Cultural Facilities 5. World Heritage Inscription of the Bangucheon Petroglyphs and Their Utilization as Resources for Cultural and Historical Tourism </div> <p>• Major Content</p> <p>With a vision of establishing a dignified city with a flourishing culture and heritage, the plan sets out five major tasks: identifying, listing, and transmitting cultural heritage in a sustainable manner; applying a systematic and consistent approach to heritage conservation and management; engaging citizens in the utilization of heritage sites; preserving and promoting traditional cultural facilities; and entering the Bangucheon petroglyphs onto the World Heritage List and utilizing them as a tourism resource.</p>		

⑩	Master Plan for the Conservation and Management of the Bangucheon Petroglyphs as a World Heritage Site (2020)	Local government (Ulsan City government)
<p>The plan sets out directions and principles for the conservation and management of the Bangucheon petroglyphs within the context of the World Heritage system. The plan covers such matters as the current state of the Bangucheon petroglyphs, overarching conservation and management ideas, potential for conservation, management, utilization programs, and a roadmap for World Heritage inscription.</p> <div data-bbox="212 669 1307 1081" style="border: 1px dashed black; padding: 10px; margin: 10px 0;"> <p>• Contents</p> <ul style="list-style-type: none"> I . Goals and Scope of the Plan II . Relevant Laws, Plans, and Research III. Establishment of a Conservation and Management System IV. Threats and Response Measures V . Conservation and Management Projects VI. Finances VII. Monitoring </div> <p>• Major Content</p> <p>While the first four parts of the plan are mainly concerned with general matters, Part V and the following parts specifically address management and conservation agendas. The goals of the plan are suggested as (1) institutional and organizational reforms for enhancing the conservation capacity; (2) trust-building between authorities and citizens; (3) construction of a public-private cooperative mechanism; and (4) establishment of effective conservation and management methods. Project suggestions for each goal are made in Part V. Ideas for conservation, management, and utilization measures from the World Heritage perspective and for a dedicated management agency to operate until inscription are suggested for Goal 1. For Goals 2 and 3, launching community-centered public programs and establishing a World Heritage nomination committee involving government officials and local residents are respectively suggested. Proposals made for Goal 4 include establishing a circular-tour system (through such measures as operating environmentally friendly shuttle buses from the parking lot near the buffer zone to the starting point of the footpath into the property area); protecting the environment of the Bangucheon area (through such measures as caring for the vegetation in the area and creating a Dongmaesan wetland park); and establishing a management system for the cultural and historical environment of the Bangucheon area (through such measures as repairing visitor facilities and managing the landscape of the area). This plan offers comprehensive information on the conservation and management of the nominated property, serving as a basis for the content of the Integrated Management Plan suggested in the nomination dossier.</p>		

⑪	Comprehensive Maintenance Plan for the Bangucheon Petroglyphs (2016)	Local government (Ulju County)
<p>This plan suggests overarching conservation and utilization directions for the Bangucheon petroglyphs based on studies on looking into the nominated property as a tourism resource. This plan has been drawn up as part of the preparations of the World Heritage nomination of the Bangucheon petroglyphs.</p> <div data-bbox="287 618 1385 1234"> <p>• Contents</p> <ul style="list-style-type: none"> I . Summary II . Analysis of the Current State of the Property III. Basic Concepts for the Plan IV. Comprehensive Maintenance Plan <ul style="list-style-type: none"> 1. Petroglyph Conservation Plan 2. Facility Repair and Maintenance Plan 3. Academic Investigation Plan 4. Scope of World Heritage Nomination 5. Integrated Management Plan 6. Utilization Plan V . Project Implementation </div> <p>• Major Content</p> <p>The early sections focus on general matters while information on conservation and management is concentrated in Part IV. There are theme-specific sub-plans set out in Part IV. The Petroglyph Conservation Plan covers the purchase of private land plots around the Cheonjeon-ri site, more consistent management of water levels for the conservation of the Daegok-ri petroglyphs, and refining the protected area around the Bangucheon Stream. The Facility Repair and Maintenance Plan includes information on the repair of parking lots, enhancement of the functions of the Ulsan Petroglyph Museum, refurbishment of public parks, and repair of landscape and tour facilities. Plans for revamping footpaths are also included here. The Academic Investigation Plan elaborates the need for research on the value and scope of the Bangucheon petroglyphs as a potential World Heritage site, while the Integrated Management Plan suggests a preliminary timetable for World Heritage inscription.</p>		

⑫	Comprehensive Plan for Petroglyph Conservation, Management, and Utilization (2020)	Local government (Ulsan City government)
<p>This customized conservation and management plan for the nominated property was established based on existing laws and regulations. The plan suggests a medium- to long-term roadmap for the World Heritage inscription of the nominated property and its conservation and management after inscription.</p> <div data-bbox="212 629 1305 1379" style="border: 1px dashed black; padding: 10px; margin: 10px 0;"> <p>• Contents</p> <p>I . Summary</p> <p>II. History and Significance of the Bangucheon Petroglyphs</p> <p>III. Directions and Principles of the Conservation and Management of the Bangucheon Petroglyphs</p> <p>IV. The Current State of the Property and the Management System</p> <p>V. Basic Ideas for Conservation and Management</p> <p>VI. The Current State of Conservation, Management, and Utilization Projects</p> <p>VII. Conservation, Management, and Utilization Projects</p> <p> Chapter 1. Projects for the Conservation and Management of the Bangucheon Petroglyphs</p> <p> Chapter 2. Projects for Establishing a Management System for the Historical Urban Environment</p> <p> Chapter 3. Projects for Sharing and Boosting Awareness of the Significance of the Property</p> <p> Chapter 4. An Overview of Conservation, Management, and Utilization Projects</p> <p>VIII. Suggestions for a Roadmap and Epilogue</p> </div> <p>• Major Content</p> <p>Information on conservation and management is concentrated in Part VII. Chapter 1 of Part VII includes projects for forming and operating a management implementation body, establishing a circular-tour system, and caring for the vegetation around the Bangucheon Stream. Chapter 2 in the same part describes the efforts at creating a governing system for the historical environment of the city, repairing visitor facilities and tourist infrastructure, and managing the landscape of the Bangucheon area. Chapter 3 details the projects for establishing an integrated platform for tourist information, developing related tour programs, involving residents in the conservation of the site, and constructing a public outreach system for promoting tourism and raising public awareness. The plan offers information on the domestic and international steps needed for World Heritage inscription as well as on the projects that must be implemented for a successful inscription.</p>		

⑬	Study on the Establishment of a Comprehensive Plan for Petroglyph Conservation and Management (2023)	Local government (Ulsan City government)
<p>This plan presents a comprehensive approach to the management and conservation of the nominated property. It suggests conservation measures based on an analysis of threat factors as well as methods to study and disseminate the significance of the nominated property as a World Heritage site.</p> <div data-bbox="288 535 1383 1310" style="border: 1px dashed black; padding: 10px;"> <p>• Contents</p> <p>Chapter 1. Summary of the Plan</p> <p>Chapter 2. General Matters</p> <p>Chapter 3. Current State of Conservation</p> <p>Chapter 4. Directions and Principles of Conservation and Management</p> <p>Chapter 5. Conservation and Management Plan</p> <p>Chapter 6. Operation and Management Plan</p> <p>Chapter 7. Monitoring: Current State and Planned Activities</p> <p>Chapter 8. Theme-specific Management Plans</p> <p> Section 1. Heritage Conservation and Management Plan</p> <p> Section 2. Landscape Conservation and Management Plan</p> <p> Section 3. Disaster Management Plan</p> <p> Section 4. Tourism Management Plan</p> <p> Section 5. Financial Investment Plan</p> <p> Section 6. Agents of Conservation and Management</p> <p> Section 7. Research and Education Plan</p> <p> Section 8. Promotion and Utilization</p> <p> Section 9. Monitoring Plan</p> </div> <p>• Major Content</p> <p>With the preceding chapters offering background information and describing general matters, Chapter 8 specifically addresses conservation and management. Section 1 of Chapter 1 offers information on observing the environment of the property as well as monitoring the property and integrating the monitoring results into the repair plans. Section 2 sets out efforts at removing dead trees and preserving historical plant species in the area. Section 3 include efforts to systematically prepare for and respond to disasters (in alignment with the Ulsan City Plan for Safety Management). Section 4 incorporates plans to revamp footpaths for visitors, re-organize walking routes, refurbish signs and interpretation panels, repair visitor facilities, and expand the areas from which visitors can observe the property. Section 6 provides information on the expansion and re-organization of the dedicated management agency for the nominated property after its World Heritage inscription. Section 8 addresses documentation projects, the establishment of educational programs, and operation of an integrated platform. Section 9 provides information on the development of monitoring indicators and the construction of an AI-based monitoring system. This plan is an updated version of the previous plans with greatly expanded information on the utilization of the property.</p>		

Item 4. Factors affecting the nominated property

The statement of authenticity provided in the nomination dossier specifies that, *“Located outdoors, the nominated property inherently runs the risk of weathering and exfoliation to a certain degree”* (p.90). Subsequently, in the section on factors affecting the nominated property, it is clearly stated that a monitoring process with 3D technology is now available to facilitate the monitoring of exfoliation. ICOMOS would be pleased if the State Party could explain whether this process will also be relevant to monitor the weathering of the nominated property and whether there is any other form of monitoring specific to weathering.

The nominated rock panels periodically undergo 3D scanning. The rock panels are cleansed and then 3D scanned along with photography using precision lenses and other conservation surveys. This periodic field research generates a range of data informing on the weathering of the rock surfaces.

First, weathering is monitored by comparing former and current 3D scan datasets with regard to the depths and widths of the carvings and the cracks developing on the rock surfaces. Since the petroglyphs were produced by pecking, abrading, and incising, the depths and widths of the carved images can be subject to change as the result of exfoliation and weathering. In response, the weathering of the nominated property is being monitored by tracking the degree to which the carved images may have changed in depth and width.

The additional conservation analysis accompanying the 3D scanning include other methods for monitoring weathering, namely ultrasonic testing and portable X-ray fluorescence analysis (P-XRF). Ultrasonic testing provides information such as the velocity at which sound waves pass through the rock surfaces, which can be compared with data from previous ultrasonic tests to assess the strength and weathering of the rock panels. P-XRF tracking analyzes the elemental composition of the rock and detects changes due to the weathering process. For example, if the amount of calcium is calculated to have dropped compared to a previous survey, it can be determined that the weathering of the rock surfaces has advanced.

The weathering of the rock surfaces and carved motifs is being monitored through 3D scanning and other methods as described above. No significant change in the condition of the weathering has been identified to date.

It should be noted that weathering is a very slow process spanning lengthy periods of time and therefore defies easy observation. Both the central and local governments are well aware of this and agree on the need for accumulating data over extended periods of time. In response to this, a project is being implemented to establish an AI-based monitoring system for the nominated property.

3D scanning will continue to be carried out at five-year intervals. Endeavors are underway to develop special monitoring indicators, including high-tech monitoring approaches such as AI analysis of wide-angle and close-up photos to identify macro-level weathering and other forms of damage and examining data on vegetation via hyperspectral imaging. These high-tech indicators will be complemented with existing conventional techniques. The smart monitoring system currently under development is expected to enhance the conservation and monitoring of the nominated property.

Item 5. Ownership

ICOMOS notes that the *“process of purchasing all the remaining private land plots within the property area is slated to be completed by 2028 in close consultation with the owners”* (p.141, nomination dossier). Could the State Party provide updated information on this purchasing process?

Whether publicly or privately owned, all land plots within the property area receive government protection in accordance with the Cultural Heritage Protection Act (currently the Framework Act on National Heritage and the Act on Preservation and Utilization of Natural Heritage). According to domestic law, the central and local governments can allocate funds for the purchase of land parcels in nationally designated heritage areas. Efforts are currently underway to buy all remaining private land plots within the property area for the purpose of enhancing the conservation of the property, improving its landscape, and protecting the private property rights of landowners.

Approximately 20 billion KRW has been slated for appropriation for land purchases over the period of 2022 through 2028. Seventy percent of these funds will be provided by the Korea Heritage Service (formerly the Cultural Heritage Administration) and 15 percent each by the Ulsan City and Ulju County governments. The Ulju County government has been pursuing the land purchases based on ongoing consultations with landowners. In this regard, the State Party would like to inform ICOMOS that we have found minor errors in the numbers provided in Table 5-1 on p. 141 of the nomination dossier and are submitting the revised information here in Table 1 and Figure 2.

A total of 4.55 billion KRW was invested in purchasing land parcels from the start of 2022 to October 2024, and a budget of 3.3 billion KRW has been allocated for 2025. The land areas that have been purchased since February 2022, the date of reference for the figures included in the nomination dossier approximately 6.16 hectares. The proportion of public land plots within the property area is gradually increasing (Table 1, Figure 3).

As the property area is protected under various national laws, private landowners are

prevented by law from doing anything more than maintaining the current state of their plots. This situation further motivates the landowners toward selling their plots to the government. A plot in the northwest portion of the property area is also under negotiation for purchase.

Continuous efforts will be made to secure funding and carry out consultations with landowners until all private land parcels within the property area have been purchased.

Table 1. Ownership of land plots (refer to Table 5-1 on page 141 of the nomination dossier)

Category		Area (ha)		
		Figures in the nomination dossier (as of February 2022)		As of October 2024
Property area	Public land	Original	27.30(62.48%)	30.82(70.54%)
		Revised	26.80(61.35%)	
	Private land	Original	16.29(37.29%)	12.76(29.21%)
		Revised	16.78(38.40%)	
	Unregistered land	Original	0.10(0.23%)	0.11(0.25%)
		Revised	0.11(0.25%)	
	Total	43.69(100%)		43.69(100%)
Buffer zone	Public land	Original	28.36(19.67%)	30.41(21.10%)
		Revised	28.27(19.61%)	
	Private land	Original	115.69(80.26%)	113.63(78.83%)
		Revised	115.77(80.32%)	
	Unregistered land	Original	0.10(0.07%)	0.11(0.07%)
		Revised	0.11(0.07%)	
	Total	144.15(100%)		144.15(100%)

※ We have found minor errors in the figures on the areas of public and private land (in Table 5-1 on page 141 of the nomination dossier). The errors were made during the process of coloring maps and calculating the different types of ownership. We are now submitting the above revised numbers to replace those noted above as “original.”

Figure 2. Ownership of land plots (refer to Figure 5-1 on p. 142 of the nomination dossier)

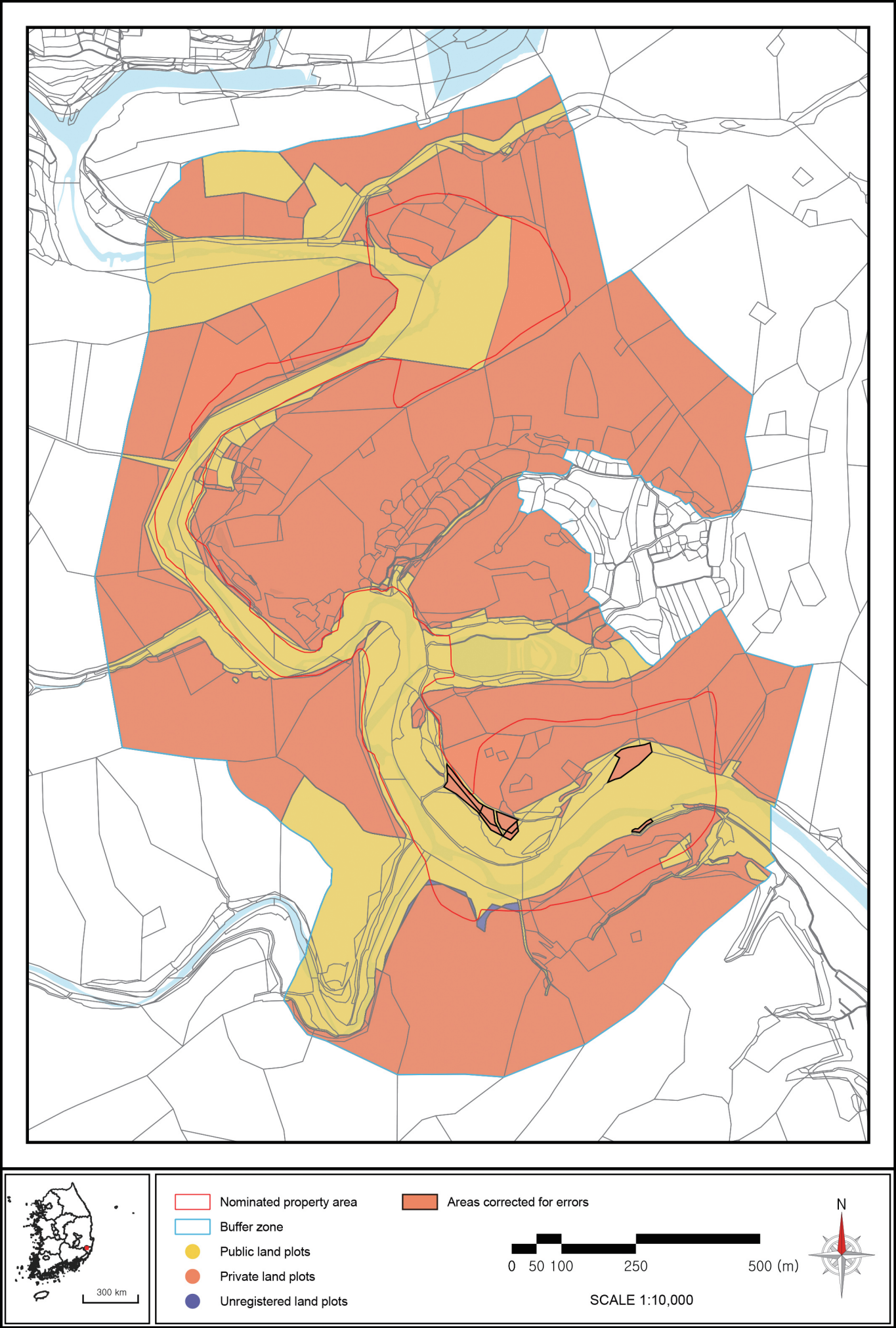
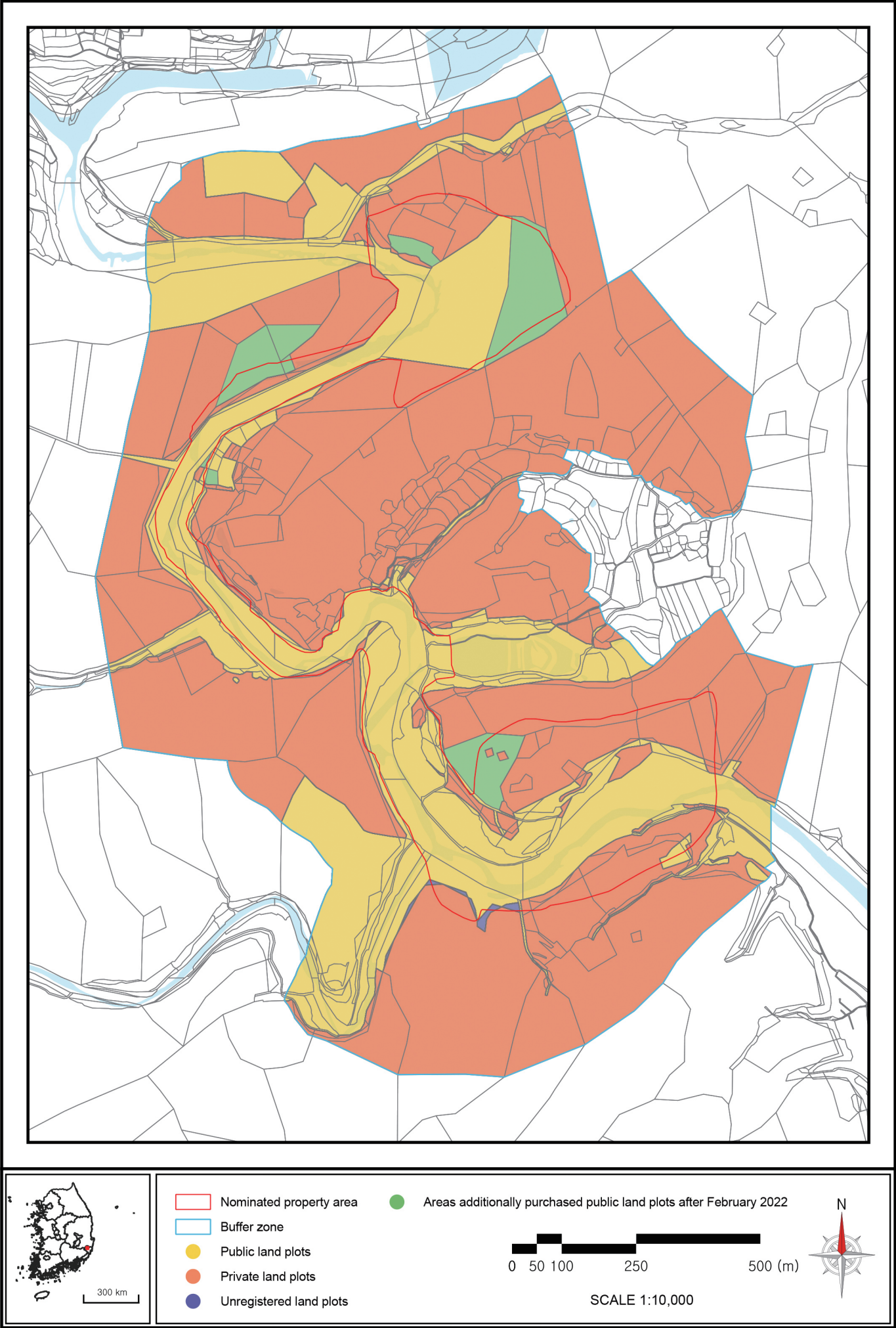


Figure 3. Updated ownership of land plots (as of October 2024)



Item 6. Local communities

The nomination dossier clearly describes the participation of area residents in various education programmes as well as touristic and conservation activities. ICOMOS would be interested to know whether residents are also involved in any way in the formal management system put in place.

Area residents operate the Bangudae Historic Community program within the formal management system. Under this program, they carry out activities such as tidying up the environment around the Bangucheon area, working as volunteer tour guides, creating community gardens, and providing traffic guidance services to visitors (refer to p. 145 of the nomination dossier).

Residents also participate in the Bangucheon Petroglyphs World Heritage Nomination Committee in accordance with the Ulsan City Ordinance on the World Heritage Nomination, Conservation, and Management of the Bangudae Petroglyphs. Representatives of the residents on the committee deliberate matters related to World Heritage nomination, conservation and management issues, and educational and promotional programs (refer to p. 161 and 246 of the nomination dossier).

Since June 2024, residents have been meeting regularly with officials from the central and local governments to hold conversations regarding the conservation and management of the nominated property. The purpose of this regular meeting between residents and government officials is to reflect people's ideas and opinions in the formal management system. This meeting is held every month in the residential areas near the nominated property.

In addition, the Act on Preservation and Utilization of Natural Heritage (enacted in May 2024) offers additional opportunities for area residents to participate in the decision-making process for the nominated property. Article 44 of the act states that the government can formulate an agreement with local residents on the conservation, management, and utilization of a natural heritage site (Table 2). Preparations are currently underway for the completion of an agreement between the central and local governments and residents living around the

nominated property. This agreement is expected to strengthen the scope of discussion and the legal basis of the regular meetings with residents.

These mechanisms for communication and cooperation are expected to enable people living near the nominated property to participate in its conservation and management and provide an important pillar for supporting the decision-making process.

Table 2. Act on Preservation and Utilization of Natural Heritage

<p>Act on Preservation and Utilization of Natural Heritage</p> <p>Article 44 (Natural Heritage Management Agreement)</p> <p>(1) The State or a local government may conclude an agreement stipulating the preservation, management, and utilization of natural monuments, etc., including education, tourism, and experience activities (hereinafter referred to as "management agreement") with the owners, etc. of natural monuments, etc. (including protective facilities, protection zones, and historic and cultural environment preservation areas; hereafter in this Article, the same shall apply).</p> <p>(2) The Administrator of the Cultural Heritage Administration may fully or partially provide subsidies to cover expenses incurred in performing a management agreement.</p> <p>(3) Where a party to a management agreement fails to perform or comply with the agreement, the State or a local government may terminate the management agreement and shall, if intended, notify the other party of such fact three months prior to the termination.</p> <p>(4) Other matters necessary for the methods, procedures, etc. for concluding a management agreement shall be prescribed by Presidential Decree.</p>

Appendix

Appendix 1. Changes in the organizational and legal framework for heritage management and conservation in the Republic of Korea

The national heritage agency of the Republic of Korea was renamed from the Cultural Heritage Administration to the Korea Heritage Service with the enforcement of the Framework Act on National Heritage on May 17, 2024. The Framework Act on National Heritage transcends the conventional perspective of heritage as properties or assets to adopt instead the concept of national heritage, heralding the agency's commitment to stressing more sustainable and future-oriented aspects of heritage. Along with the change in the name of the national heritage agency, the Framework Act on National Heritage has brought about changes in the institutional categorization of heritage as well as in the legal framework for heritage protection (as explained below). However, it should be noted that these changes have no impact on the content and strength of the legal protection previously provided to the nominated property.

Table 1. Changes in the categorization of heritage

Before					After	
Cultural heritage	Tangible cultural heritage			➤	National heritage	Cultural heritage
	Folklore resources					
	Monuments	Historic Sites, etc.				Natural heritage
		Scenic sites, Natural monument, etc.				
	Intangible cultural heritage					Intangible heritage

Table 2. Changes in the legal framework for heritage protection
(refer to Table 5-4 on p. 146 of the nomination dossier)

Rules on cultural heritage	Before			After	
	Cultural Heritage Protection Act		»	Framework Act on National Heritage	Act on Conservation and Utilization of Cultural Heritage
					Act on Conservation and Utilization of Natural Heritage
	Act on Protection and Inspection of Buried Cultural Heritage		Act on Protection and Inspection of Buried Cultural Heritage		
	Act on Repair of Cultural Heritage		Act on Repair of Cultural Heritage		
	Ulsan City Cultural Heritage Protection Ordinance		Ulsan City Conservation and Utilization of Cultural Heritage and Natural Heritage Ordinance		

Table 3. Laws and regulations related to the conservation of the nominated property (refer to Table 5-4 on page 146-147 of the nomination dossier)

Category	Before			After		
	Name	Relevant protective designations	Year of designation pertinent to the nominated property	Responsible agency	Name	Relevant protective designations
Rules on cultural heritage	Cultural Heritage Protection Act	Heritage Area; Historic and Cultural Environment Conservation Area	1962	Cultural Heritage Administration	Framework Act on National Heritage	Protection of the Historic and Cultural Environment Conservation Area
					Act on Conservation and Utilization of Cultural Heritage	Scope and designation of the Historic and Cultural Environment Conservation Area
					Act on Conservation and Utilization of Natural Heritage	Scope and designation of the Historic and Cultural Environment Conservation Area
	Act on Protection and Inspection of Buried Cultural Heritage	Areas with archaeological relics	2011	Cultural Heritage Administration	Act on Protection and Inspection of Buried Cultural Heritage	Areas with archaeological relics
	Act on Repair of Cultural Heritage	Act on Repair of Cultural Heritage	2011	Cultural Heritage Administration	Act on Repair of Cultural Heritage	Act on Repair of Cultural Heritage
	Ulsan City Cultural Heritage Protection Ordinance	Heritage Area; Historic and Cultural Environment Conservation Area	1997	Ulsan City	Ulsan City Conservation and Utilization of Cultural Heritage and Natural Heritage Ordinance	Heritage Area; Historic and Cultural Environment Conservation Area

Table 4. Major provisions of the Cultural Heritage Protection Act (refer to Table 5-5 on page 149-150 of the nomination dossier)

Category	Before			After		
	Theme	Relevant articles	Main content	Theme	Relevant articles	Main content
Principle	Cultural Heritage Protection Act Fundamental principle of protection of heritage	Article 3	The basic principle for the preservation, management, and utilization of cultural heritage is to preserve them in their original state	Act on Conservation and Utilization of Cultural Heritage Basic Principles of Protection of Cultural Heritage	Article 3	The basic principle for the preservation, management, and utilization of cultural heritage is to preserve them in their original state
				Act on Conservation and Utilization of Natural Heritage Basic Principles for Protection of Natural Heritage	Article 3	The preservation and management of natural heritage shall be in harmony with the sustainable use thereof
Designation ↓	Cultural Heritage Protection Act State-designated heritage	Articles 23, 25	The head of the Cultural Heritage Administration (CHA) designates important elements of city-designated cultural heritage on the national heritage list (as National Treasures, Treasures, Scenic Sites, etc.)	Framework Act on National Heritage Designation and Registration of National Heritage	Article 13-1	The State may designate or register important national heritage as State-designated heritage or State-registered heritage to protect such heritage.
	Cultural Heritage Protection Act City/province-designated heritage	Article 70	A mayor designates on the city-level heritage list cultural heritage deemed worthy of preservation among those under his or her jurisdiction which are not designated on the national heritage list	Framework Act on National Heritage Designation and Registration of National Heritage	Article 13-2	A local government may designate or register important national heritage not designated or registered as State-designated heritage or State-registered heritage under paragraph (1), as City/Do-designated heritage or City/Do-registered heritage to protect such heritage.

Category	Before			After		
	Theme	Relevant articles	Main content	Theme	Relevant articles	Main content
Designation ↓	Cultural Heritage Protection Act Designation of protective facilities and protection zone	Articles 27, 70-2 (Articles 13-15 of the Enforcement Decree of the Act)	The head of the CHA may designate protective facilities or protection zones when specially needed for the protection of state-designated heritage	Act on Conservation and Utilization of Cultural Heritage Designation of Protective Facilities or Protection Zones	Articles 27, 70-2 (Articles 13-15 of the Enforcement Decree of the Act)	The head of the KHS may designate protective facilities or protection zones when specially needed for the protection of state-designated heritage
				Act on Conservation and Utilization of Natural Heritage Designation of Protective Facilities or Protection Zones	Article 13 (Articles 21-24 of the Enforcement Decree of the Act)	The head of the KHS may designate protective facilities or protection zones when specially needed for the protection of natural monuments or scenic spots
	Cultural Heritage Protection Act Protection of Historic and Cultural Environment Conservation Areas	Article 13	A mayor should designate, in consultation with the head of the CHA, a Historic and Cultural Environment Conservation Area around a state-designated cultural property in accordance with provincial/ municipal ordinances	Act on Conservation and Utilization of Cultural Heritage Protection of Historic and Cultural Environment Preservation Areas	Article 13	A Mayor shall designate a historic and cultural environment preservation area by municipal ordinances, following consultation with the head of the KHS in order to protect the historic and cultural environment of designated cultural heritage
				Act on Conservation and Utilization of Natural Heritage Protection of Historic and Cultural Environment Preservation Areas	Article 10	A Mayor shall designate a historic and cultural environment preservation area by municipal ordinances, in consultation with the head of the KHS in order to protect the historic and cultural environment of natural monuments

Category	Before			After		
	Theme	Relevant articles	Main content	Theme	Relevant articles	Main content
↓ Designation	Cultural Heritage Protection Act World Heritage inscription and protection of World Heritage sites	Article 19	The head of the CHA may order any person who engages in any activity that could affect a World Heritage site and/or its historic and cultural environment to take necessary measures	Framework Act on National Heritage Registration and Protection of World Heritage	Article 31	The head of the KHS may order any person who engages in any activity that could affect a World Heritage site and/or its historic and cultural environment to take necessary measures
Management organizations ↓	Cultural Heritage Protection Act Management organizations of state-designated heritage	Article 34 (Article 20 of the Enforcement Decree of the Act; and Article 13 of the Enforcement Regulations of the Act)	Where the identity of the owner of a state-designated cultural property is unknown or it is deemed difficult or inappropriate for the owner to manage it, the head of the CHA may designate a local government, corporation, or group as its management organization	Act on Conservation and Utilization of Cultural Heritage Management by Management Organization	Article 34 (Article 20 of the Enforcement Decree of the Act; and Article 13 of the Enforcement Regulations of the Act)	Where the identity of an owner of State-designated cultural heritage is unknown or it is deemed difficult or inappropriate for the owner or custodian to manage the State-designated cultural heritage, the head of the KHS may designate a local government, corporation or organization
				Act on Conservation and Utilization of Natural Heritage Designation of Management Organization	Article 26 (Articles 35-36 of the Enforcement Decree of the Act; and Article 16 of the Enforcement Regulations of the Act)	Where the head of the KHS deems that the owner of a natural monument or scenic spot is unknown or it is difficult or inappropriate for the owner or custodian to manage it, he or she may designate a local government, or a corporation or organization

Category	Before			After		
	Theme	Relevant articles	Main content	Theme	Relevant articles	Main content
↓ Management organizations	Cultural Heritage Protection Act Management organizations of city or province-designated heritage	Article 74	Article 34 shall apply mutatis mutandis to city or province-designated cultural properties and cultural heritage resources	Act on Conservation and Utilization of Cultural Heritage Management organizations of city or province-designated heritage	Article 74	Articles 34 shall apply mutatis mutandis to the revocation of City/Do-designated cultural heritage and cultural heritage resources
	Cultural Heritage Protection Act Establishment of protection policies for cultural heritage	Articles 6-7	The head of the CHA, in cooperation with the mayor, should establish a Master Plan and its annual implementation plans for the conservation of a cultural heritage property	Act on Conservation and Utilization of Cultural Heritage Formulation of Master Plans for Cultural Heritage	Articles 6-7	The head of the KHS, in cooperation with the mayor, should establish a Master Plan and its annual implementation plans for the conservation of a cultural heritage property
	Cultural Heritage Protection Act Basic research	Articles 10-11 (Articles 6-7 of the Enforcement Decree of the Act)	The state and local governments investigate the current state and management condition of existing cultural heritage and prepare records thereon for preventing the loss of cultural heritage	Act on Conservation and Utilization of Cultural Heritage Formulation of Plans for Protecting Natural Heritage	Articles 6-7	The head of the KHS, in cooperation with the mayor, should formulate a plan for protecting natural heritage for the systematic preservation, management, and utilization of natural heritage
↓ Conservation activities	Cultural Heritage Protection Act Basic research	Articles 10-11 (Articles 6-7 of the Enforcement Decree of the Act)	The state and local governments investigate the current state and management condition of existing cultural heritage and prepare records thereon for preventing the loss of cultural heritage	Act on Conservation and Utilization of Cultural Heritage Basic Investigation of Cultural Heritage	Article 10 (Article 6 of the Enforcement Decree of the Act)	The state and local governments investigate the current state and management condition of existing cultural heritage and prepare records thereon for preventing the loss of cultural heritage
	Cultural Heritage Protection Act Basic research	Articles 10-11 (Articles 6-7 of the Enforcement Decree of the Act)	The state and local governments investigate the current state and management condition of existing cultural heritage and prepare records thereon for preventing the loss of cultural heritage	Act on Conservation and Utilization of Natural Heritage Survey on Natural Heritage	Article 8 (Article 15 of the Enforcement Decree of the Act)	The state and local governments may survey the current state of natural heritage, actual conditions of management and utilization thereof, etc. and prepare the records thereon in order to preserve, manage, and utilize natural heritage

Category	Before			After		
	Theme	Relevant articles	Main content	Theme	Relevant articles	Main content
↓ Conser- vation activities	Cultural Heritage Protection Act Training of heritage experts	Article 16	The head of the CHA nurture heritage professionals specializing in the protection, management, maintenance of cultural heritage	Act on Conservation and Utilization of Cultural Heritage Fostering of Cultural Heritage Experts	Article 16	The head of the KHS cultural heritage professionals specializing in the protection, management, maintenance of cultural heritage
				Act on Conservation and Utilization of Natural Heritage Development of Professional Human Resources	Article 46	The head of the KHS nurture heritage professionals specializing in the protection, management, maintenance of natural heritage
	Cultural Heritage Protection Act Regular Surveys	Article 44 (Article 28 of the Enforcement Decree of the Act)	Regular investigations should be carried out to examine the state of conservation of state-designated cultural heritage and its surrounding areas	Act on Conservation and Utilization of Cultural Heritage Regular Survey	Article 44 (Article 28 of the Enforcement Decree of the Act)	Regular investigations should be carried out to examine the state of conservation of state-designated cultural heritage and its surrounding areas
				Act on Conservation and Utilization of Natural Heritage Regular Survey	Article 28 (Articles 37-38 of the Enforcement Decree of the Act)	The head of the KHS shall survey the current status, etc. of the preservation, management, and utilization of natural monuments or scenic spots

Category	Before			After	
	Theme	Relevant articles	Main content	Theme	Relevant articles
Legal measures for conservation ↓	Cultural Heritage Protection Act Protection of cultural heritage during construction works	Article 12	Where cultural heritage is likely to be damaged, destroyed, or submerged due to construction works, or where it is necessary to protect the historic and cultural environment of cultural heritage, the implementer of such construction works shall take necessary measures in compliance with instructions by the head of the KHS. In such cases, expenses incurred in taking such measures shall be borne by the implementer of the construction works	Act on Conservation and Utilization of Cultural Heritage Protection of cultural heritage during construction works	Article 12
				Act on Conservation and Utilization of Natural Heritage Protection of Natural Monuments during Construction Works	Article 9
					Where natural monuments are likely to be damaged, destroyed, or submerged due to construction works or when it is necessary for protecting the historic and cultural environment of natural monuments, etc., the implementer of such construction works shall take necessary measures in compliance with instructions by the head of the KHS. In such cases, expenses incurred in taking such measures shall be borne by the implementer of the construction works

Category	Before			After		
	Theme	Relevant articles	Main content	Theme	Relevant articles	Main content
↓ Legal measures for conservation	Cultural Heritage Protection Act Formulating policy measures for prevention of Fire, etc. and conducting education and public relations campaigns	Article 14 (Article 8 of the Enforcement Decree of the Act)	The owner, manager, or managing organization should formulate and implement necessary policy measures to protect designated cultural heritage and registered cultural heritage from fire, disasters, and theft. They should be provided with training in risk preparedness and first responses fire, disasters, and theft	Act on Conservation and Utilization of Cultural Heritage Formulating policy measures for prevention of Fire, etc. and conducting education and public relations campaigns	Article 14 (Article 8 of the Enforcement Decree of the Act)	The owner, manager, or managing organization should formulate and implement necessary policy measures to protect designated cultural heritage and registered cultural heritage from fire, disasters, and theft. They should be provided with training in risk preparedness and first responses fire, disasters, and theft
				Act on Conservation and Utilization of Natural Heritage Prevention of and Recovery from Disasters	Article 38 (Article 42 of the Enforcement Decree of the Act)	The head of the KHS may request the owners, etc. of natural monuments or scenic spots to take measures necessary for the prevention of or recovery from a disaster
↓ Finances	Cultural Heritage Protection Act Subsidies	Article 51	The state may offer subsidies for the conservation and management of cultural heritage	Act on Conservation and Utilization of Cultural Heritage Subsidies	Article 51	The state may offer subsidies for the conservation and management of cultural heritage
				Act on Conservation and Utilization of Natural Heritage Subsidies	Article 58	The state may offer subsidies for the conservation and management of natural monuments or scenic spots

Category	Before			After		
	Theme	Relevant articles	Main content	Theme	Relevant articles	Main content
↓ Finances	Cultural Heritage Protection Act Expenses borne by local governments	Article 52	Local governments may bear or subsidize the expenses required for state-designated cultural heritage within their jurisdictional boundaries	Act on Conservation and Utilization of Cultural Heritage Expenses borne by local governments	Article 52	Local governments may bear or subsidize the expenses required for state-designated cultural heritage within their jurisdictional boundaries
				Act on Conservation and Utilization of Natural Heritage Expenses borne by local governments	Article 59	Local governments may bear or subsidize the expenses required for state-designated natural monuments or scenic spots within their jurisdictional boundaries

Petroglyphs along the Bangucheon Stream

Additional Information Requested
by ICOMOS

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February 2025

Republic of Korea

CONTENTS

Additional Information Requested by ICOMOS

Item 1. Conservation and management	07
Item 1-1	07
Item 1-2	09
Item 1-3	12
 Item 2. Visitor experience	 14
Item 2-1	14

Additional Information Requested by ICOMOS

February 2025

Item 1. Conservation and management

Item 1-1. Following the completion of the dam, the rock art panel is expected to experience a dry-up phenomenon. ICOMOS would be pleased to receive more information on how this environmental change and its potential impact on the petroglyphs will be monitored.

The gate installation project currently being performed to address the periodic submersion of the Daegok-ri petroglyphs during times of heavy rain is scheduled to be completed by the end of 2029. If installed as planned, the gates at the spillway of Sayeon Dam will greatly enhance the ability to control water levels and, as a result, keep the Daegok-ri petroglyphs permanently above water. The completion of the project will mean the Daegok-ri site will no longer be subject to the repeated submersions and exposures caused by the construction of Sayeon Dam in 1965 and persisting for approximately six decades thereafter. While the permanent re-exposure of the Daegok-ri petroglyphs is expected to bring about immense improvements in the issues associated with the submersion of the site, it is also likely to trigger certain changes to the rock surfaces. The State Party has been considering these potential changes in its monitoring policy for the nominated property both at the central and local government levels.

Potential changes likely to result from the permanent re-exposure of the Daegok-ri petroglyphs include a transition in the color of the rock surface. The growth of algae, mosses, and lichen on the surface is also possible with an increase in photosynthesis. Exfoliation is another potential change. As the Daegok-ri panel dries, salts in the rock could become crystalized as the water evaporates and the resulting crystallization pressures in the pores on the rock surface could potentially cause exfoliation.

Fully aware of these potential impacts, the State Party has been constantly monitoring factors such as color change, biological damage, exfoliation, and weathering at the nominated property at both the central and local government levels. Experts dispatched by the central government investigate the state of conservation of the nominated property on a regular basis. Automatic monitoring devices have been installed on-site to observe the rock panels. 3D

scanning and conservation analyses are periodically carried out at the local government level.

In addition to these existing programs, the State Party is pushing ahead with a project to establish an AI-based monitoring system to better respond to the changing environment surrounding the nominated property. This effort aims to keep the nominated property under constant monitoring. It includes such goals as developing a set of tailored monitoring indicators for the rock art based on the existing general and special monitoring indicators; deploying measurement devices to establish databases for conservation information; and creating AI-powered models to analyze data from the site and predict potential damage. The AI-based system will enable personnel on-site to respond immediately to critical situations, for example, in times of abnormal movement in the rock panels or extreme weather events. Once established, this smart monitoring system is expected to bring great benefits to the State Party's monitoring and conservation efforts for the nominated property.

The AI-based monitoring system will include analyses specifically addressing the potential changes expected to occur after the completion of gate installation. Multispectral and hyperspectral imaging will be used for tracking, analyzing, and predicting biological damage and changes in the color of the rock due to weathering or the accumulation of contaminants. In addition, thermal imaging cameras and devices monitoring structural stability will be useful for observing exfoliation on the rock surface.

Indicators for the Daegok-ri panel were developed in 2021 for the establishment of the smart monitoring system. The development of indicators for the Cheonjeon-ri panel was completed in October 2024. The State Party will continue with the monitoring efforts in full consideration of any potential changes in the conservation environment after the installation of the gates.

Item 1. Conservation and management

Item 1-2. ICOMOS notes that climate change also represents a significant threat to the nominated property. Could the State Party please explain how its impacts will be monitored and mitigated in relation to the petroglyphs?

According to the 2019 ICOMOS report *The Future of Our Pasts: Engaging Cultural Heritage in Climate Action*, climate change as a global phenomenon is expected to cause a significant increase in adverse impacts on the conservation of World Heritage sites.

The Korea Heritage Service has recently announced a blueprint for protecting heritage from the impacts of climate change through the publication of *The Climate Change Master Plan for National Heritage (2023–27)*. This document outlining an active and preemptive response to climate change reports that the Republic of Korea has witnessed a 1.6 increase in annual average temperatures over the last 30 years. During the same period, annual average precipitation has risen by 135.4mm, with rainfall showing an upward trend in intensity, duration, and frequency. The coastlines of the country have seen a sea level rise of 9.9cm over the last 33 years. These data confirm that, like the rest of the world, the Republic of Korea is experiencing an impact from climate change.

This document goes on to investigate domestic and overseas policy trends regarding climate change responses and analyze the impacts that climate change can have on national heritage. It sets out goals for a more effective response and the systematic protection of national heritage from its impacts. The goals presented include enhancing response capacities through the deployment of technology, strengthening the role national heritage can play in achieving net-zero emissions, and developing systematic mechanisms for monitoring and responding to the climate crisis. The document also suggests other climate change response policy measures, such as installing a dedicated office, establishing cooperative governance encompassing the central government and other actors such as local governments, academic communities, and local residents, nurturing climate change professionals, and enhancing education programs.

The KHS's commitment to climate change response as demonstrated in this document has a legal basis for its implementation: The Framework Act on National Heritage, enacted in May 2024, includes relevant provisions (as seen in Table 1).

Table 1. Provisions on climate change response from the Framework Act on National Heritage

<p>CHAPTER III PRESERVATION AND MANAGEMENT OF NATIONAL HERITAGE</p> <p>Article 22 (Response to Climate Change)</p> <p>(1) The State and local governments shall continuously survey the impacts of climate change on national heritage and the vulnerability of national heritage consequent thereon in order to manage national heritage safely from changes in the natural environment, natural disasters, etc. resulting from climate change.</p> <p>(2) The State and local governments shall examine the details of surveys conducted pursuant to paragraph (1) and devise measures to respond to such examination.</p>

The KHS's recent document on climate change response also details the damage climate change has already inflicted on national heritage and the specific types of risk it poses. Among the suggested climate change-induced risks, including torrential rains, typhoons, wildfires, heavy snow, droughts, and cold spells, weather events with the potential to cause floods and storms, such as torrential rains and typhoons, are cited as representing the greatest threat to national heritage (resulting in such damage as submersion, collapse, and loss).

Floods are also considered a major threat to the nominated property. Torrential rains and typhoons can rapidly raise water levels behind Sayeon Dam, which is located downstream from the buffer zone, and have temporarily inundated lower portions of the Daegok-ri petroglyphs.

The central and local governments have long been making cooperative efforts to mitigate the impact of submersion at the Daegok-ri site. According to the Plan for Controlling Sayeon Dam Water Levels that entered effect in 2014, while the water levels behind Sayeon Dam are maintained at 48m or below in normal times, the water levels behind the upstream dam (Daegok Dam) should be preemptively reduced when heavy rainfall is expected so that the Daegok-ri petroglyphs can be spared the impact of heavy rainfall to the degree possible. It is notable that K-water, the operator of the two dams associated with the nominated property, has recently

redoubled its efforts to enhance the precision of its weather prediction and the effectiveness of its water level control. As a result, the Daegok-ri petroglyphs were not submerged for even a single day in 2024.

In pursuit of a more fundamental solution to the submersion issue, the State Party is currently implementing a project to install gates in the spillways of Sayeon Dam that should be completed by the end of 2029. The installation of spillway gates in this downstream dam will enhance the control of water levels to such an extent that it will almost eradicate the risk of submersion at the Daegok-ri site.

In 2021 and 2023, the Ulsan City government carried out an exercise estimating both annual average precipitation and accumulated precipitation in Ulsan for the upcoming years through 2060. Based on this data and other information on climate information, the KHS and the Ulsan City and Ulju County governments are planning to cooperate with K-water and other actors to support the efforts to predict heavy rains and minimize their impacts on the nominated property. In addition, K-water is planning to introduce a sophisticated control scheme to more effectively utilize the two dams (Daegok Dam and Sayeon Dam) in preventing the Daegok-ri petroglyphs from submersion until the spillway gates are completed.

Item 1. Conservation and management

Item 1-3. Could the State Party please also clarify whether other risks have been identified? If so, how will they be mitigated and addressed in a risk management plan?

The Format for the Nomination of Properties for Inscription on the World Heritage List presented in Annex 5 of the Operational Guidelines requires the State Party to provide information on the factors affecting the OUV of the nominated property and on the measures being taken to address their adverse impacts. The 14 potential factors that can pose a threat to World Heritage sites are set out on UNESCO's webpage.¹ When the nominated property is analyzed in terms of these 14 potential threats, it is determined that there are no other factors affecting the petroglyphs other than those already explained in the nomination dossier (on pages 125 through 137).

Regarding the impacts of climate change, the State Party clearly understands that extreme weather events will continue to represent a major threat to the nominated property. Severe weather events caused by climate change, including sea level rise, changes in precipitation and temperature, torrential rains, and typhoons, are prone to causing physical, chemical, and biological damage to heritage. The State Party has concluded that in the case of the nominated property, these forms of damage are associated not only with climate change, but also with the risks already identified in the nomination dossier and with the changes expected to come about following the installation of spillway gates at Sayeon Dam. In order to take a more holistic approach to countering the damage likely to be caused by environmental factors, the State Party is in the process of establishing an AI-based monitoring system tailored to the characteristics of

1) The webpage (<https://whc.unesco.org/en/factors/>) specifies 14 primary threats to World Heritage sites: Buildings and development; transportation infrastructure; utilities or service infrastructure; pollution; biological resource use/modification; physical resource extraction; local conditions affecting physical fabric; social/cultural uses of heritage; other human activities; climate change and severe weather events; sudden ecological or geological events; invasive/alien species or hyper-abundant species; management and institutional factors; and other factors.

the nominated property.

The process of establishing the AI-based monitoring system described in the first section of this document contains three phases: Setting up a system for measuring the meteorological conditions in the area around the rock panels; building a diagnosis system for the rock surfaces; and establishing a system to predict damage and visualize the state of the rock faces. The first phase of the process was completed in September 2024 with the installation of measuring devices at both the Daegok-ri and Cheonjeon-ri sites. These devices collect and accumulate real-time data on roughly ten weather factors, including rainfall, sunlight, temperature, humidity, wind speed, and wind direction. The data will be used to ascertain the meteorological conditions of the nominated property on an ongoing basis. It will also be deployed as training data for establishing AI-powered monitoring models. The State Party is committed to continuing with the implementation of the remaining two phases of the project.

In addition, were a disaster to occur at this outdoor property, the State Party is aware of the importance of the on-site response. In this regard, the State Party is planning to expand the capacity of on-site personnel (such as on-site guards and Heritage Caretakers) through such endeavors as offering customized training programs, institutionalizing their roles, building a disaster-prevention system reflecting on-site needs, and enhancing first-response capabilities.

Item 2. Visitor experience

Item 2-1. ICOMOS notes that there are instruments and tools in place to help visitors understand and experience the rock art through various infrastructures. ICOMOS would appreciate if the State Party could provide further information on how these measures are enhancing the visitor experience and how this aspect will be considered and potentially improved (perhaps through additional tools) in the future.

Situated in close proximity to the nominated property, the Ulsan Petroglyph Museum displays a diverse range of permanent exhibits, including a one-to-one scale reconstruction of each rock panel. It organizes various special exhibitions and education programs as well. A visit to the museum can deepen the understanding of the property visitors gain from a field tour and, in some cases, can serve as a fitting alternative to an on-site visit. The museum is planning to redouble its efforts at refurbishing its facilities, developing customized exhibitions for children, and deploying virtual reality, media art, and other forms of advanced technology in its exhibitions so that visitors can acquire precise information on the nominated property with ease and enjoyment.

The State Party understands that on-site tours are instrumental to a quality visitor experience at the nominated property. Visitors today can gain a direct experience of the value of the nominated property by taking advantage of the visitor trails connecting the two rock panels. In the case of the Daegok-ri site, where the observatory platform is situated some distance from the petroglyphs, a close-up viewing program is meeting with an enthusiastic response from visitors. This tour program allows a group of approximately 30 visitors who have obtained prior permission from the Ulju County government to go beyond the protective fence and examine the petroglyphs close-up under the supervision of trained guides one or two times per day.

The Ulsan City government is currently implementing a visitor trail project for the purpose of further enhancing the on-site visitor experience. The visitor trail project started in 2022 and will continue through 2030. This project has a vision of providing more holistic and fuller visitor experience after the installation of spillway gates at Sayeon Dam and the subsequent

stabilization of water levels in the Bangucheon Stream. By refurbishing the existing footpaths, developing additional routes, and linking the current trails to older ones to be restored, the visitor trail project is expected to bring visitors closer to the nominated property. In tandem with the visitor trail project, serious consideration is being given to training local residents and deploying them as guides for tour programs at the nominated property. Also under consideration is a long-term plan to develop a mobile application enabling on-site visitors to access various forms of content (stories, augmented reality-powered images, etc.) at key spots along their walking tours of the nominated property.

It should be noted that the State Party is ensuring that all these visitor programs are implemented in a form and manner that contributes to the Outstanding Universal Value of the nominated property while avoiding any adverse impact on the petroglyphs stemming from visitation. The State Party will continue to pay careful attention to enhancing visitor experiences while meticulously assessing the impacts of the visitor programs on the value of the petroglyphs.

Petroglyphs along the Bangucheon Stream

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