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UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION

CONVENTION CONCERNING THE PROTECTION OF THE WORLD CULTURAL AND NATURAL HERITAGE

WORLD HERITAGE COMMITTEE

Forty-third session

Baku, Republic of Azerbaijan
30 June - 10 July 2019

Item 8 of the Provisional Agenda: Establishment of the World Heritage List and of the List of World Heritage in Danger

8E: Adoption of retrospective Statements of Outstanding Universal Value

SUMMARY

This document presents for adoption 17 retrospective Statements of Outstanding Universal Value submitted by 6 States Parties for properties which had no Statement of Outstanding Universal Value adopted at the time of their inscription on the World Heritage List.

The Annex contains the full texts of the retrospective Statements of Outstanding Universal Value in the original language, as submitted to the Secretariat.

Draft Decisions: 43 COM 8E see point II.

I. BACKGROUND

1. The Statement of Outstanding Universal Value was introduced in the *Operational Guidelines for the Implementation of the World Heritage Convention* in 2005 as an essential requirement for the inscription of a property on the World Heritage List. All properties inscribed since 2007 present such a Statement.
2. In 2007, the World Heritage Committee, in its Decision **31 COM 11D.1**, requested that Statements of Outstanding Universal Value be drafted and adopted retrospectively for all World Heritage properties inscribed between 1978 and 2006.
3. As a consequence, States Parties draft retrospective Statements of Outstanding Universal Value for World Heritage properties located within their territories. These are then reviewed by the Secretariat and the relevant Advisory Body(ies).
4. This document presents 17 draft retrospective Statements of Outstanding Universal Value for which the review process has been finalized since the 42nd session of the World Heritage Committee (Manama, 2018), for adoption by the World Heritage Committee. The Draft Decision presents a list of the properties, 6 in Asia and the Pacific and 11 in Europe and North America regions, in alphabetical order by region and by State Party.
5. The 17 draft retrospective Statements are included in the Annex of this document and are presented in the language in which they were submitted to the Secretariat. Once adopted, they will be translated into the other official language of the *Convention* and uploaded progressively on the World Heritage Centre's website, subject to availability of funds.
6. Since 2009, the World Heritage Committee adopted 715 retrospective Statements. 78 Statements are still to be finalized and presented to the Committee: 2 in Africa, 14 in Arab States, 15 in Asia and the Pacific, 45 in Europe and North America and 2 in Latin America and Caribbean region.
7. In compliance with paragraph 155 of the *Operational Guidelines*, the protection and management part of the Statement of Outstanding Universal Value may be updated by the World Heritage Committee, in consultation with the concerned State Party and further to a review by the Advisory Bodies.
8. Furthermore, in compliance with paragraph 155 of the *Operational Guidelines*, the World Heritage Centre automatically updates the Statements further to subsequent decisions taken by the Committee concerning a change of name of the property and change of surface further to minor boundary modifications. The Centre also corrects any factual errors as agreed with the relevant Advisory Bodies.

II. DRAFT DECISION

Draft Decision: 43 COM 8E

The World Heritage Committee,

1. Having examined Document WHC/19/43.COM/8E,

2. *Commends the States Parties for the work accomplished in the elaboration of retrospective Statements of Outstanding Universal Value for World Heritage properties located within their territories;*

3. *Adopts the retrospective Statements of Outstanding Universal Value, as presented in the Annex of Document WHC/19/43.COM/8E, for the following World Heritage properties:*

   ASIA AND THE PACIFIC

   - *India, Champaner-Pavagadh Archaeological Park*
   - *India, Churches and Convents of Goa*
   - *India, Ellora Caves*
   - *India, Fatehpur Sikri*
   - *India, Group of Monuments at Mahabalipuram*
   - *India, Khajuraho Group of Monuments*

   EUROPE AND NORTH AMERICA

   - *Canada, Canadian Rocky Mountain Parks*
   - *Croatia, Plitvice Lakes National Park*
   - *France, Canal du Midi*
   - *Italy, Archaeological Areas of Pompei, Herculaneum and Torre Annunziata*
   - *Italy, Assisi, the Basilica of San Francesco and Other Franciscan Sites*
   - *Italy, Historic Centre of Urbino*
   - *Italy, Val d'Orcia*
   - *United States of America, Carlsbad Caverns National Park*
   - *United States of America, Everglades National Park*
   - *United States of America, Grand Canyon National Park*
   - *United States of America, Redwood National and State Parks;*

4. *Decides that retrospective Statements of Outstanding Universal Value for World Heritage properties inscribed on the List of World Heritage in Danger will be reviewed in priority by the Advisory Bodies;*

5. *Requests the World Heritage Centre to upload the two language versions on its website.*

Annex

ASIA AND THE PACIFIC

India

Champaner-Pavagadh Archaeological Park

Brief synthesis

Champaner-Pavagadh Archaeological Park, located in the Panchmahal District of Gujarat State in north-western India, features a concentration of archaeological, historical, and living cultural heritage properties cradled in an impressive landscape. Focused on Pavagadh Hill, a volcanic formation that rises 800 m above the surrounding plains, the property includes the remains of settlements dating from the prehistoric to medieval periods, the latter represented by a hill-fortress of an early (14th-century) Hindu capital and the remains of an Islamic state capital founded in the 15th century. The large property, comprised of 12 separate areas, contains the remains of fortifications, palaces, religious buildings, residential precincts, and water-retaining installations, as well as the living village of Champaner.

This area was conquered in the 13th century by the Khichi Chauhan Rajputs, who built their first settlement on top of Pavagadh Hill and fortification walls along the plateau below the hill. The earliest built remains from this period include temples, and amongst the important vestiges are water-retention systems. The Turkish rulers of Gujarat conquered the hill-fortress in 1484. With Sultan Mehmud Begda's decision to make this his capital, the most important historic phase of this site began. The settlement of Champaner at the foot of the hill was rebuilt and remained the capital of Gujarat until 1536, when it was abandoned.

Except for the structural remains of the main buildings and forts, most parts of the capital city remain buried and unexcavated, though the planning and integration of the essential features of a city – royal estates, utilities, religious edifices, and spaces – can be seen and interpreted. Champaner-Pavagadh's 14th-century temples and water-retaining installations, together with the later capital city's religious, military, and agricultural structures, represent both Hindu and Muslim architecture. Champaner's importance as a capital and residence of a sultan are best illustrated in the Great Mosque (Jama Masjid), which became a model for later mosque architecture in India. At Champaner, the land, the people, and the built heritage are each components of a complex, and dynamic process. The Brahmanical temple of Kalika Mata (the guardian goddess of the hill) atop Pavagadh Hill is an important living shrine, attracting a large number of pilgrims from Gujarat and other parts of the country throughout the year.

Criterion (iii): The Champaner-Pavagadh Archaeological Park with its ancient architecture, temples and special water retaining installations together with its religious, military and agricultural structures, dating back to the regional Capital City built by Mehmud Begda in the 16th century, represents cultures which have disappeared.

Criterion (iv): The structures represent a perfect blend of Hindu-Moslem architecture, mainly in the Great Mosque (Jama Masjid), which became a model for later mosque architecture in India. This special style comes from the significant period of regional sultanates.

Criterion (v): The Champaner-Pavagadh Archaeological Park is an outstanding example of a very short living Capital, making the best use of its setting, topography and natural features. It is quite vulnerable due to abandonment, forest takeover and modern life.

Criterion (vi): The Champaner-Pavagadh Archaeological Park is a place of worship and continuous pilgrimage for Hindu believers.

Integrity

Within the boundaries of Champaner-Pavagadh Archaeological Park are located all the known elements necessary to express the Outstanding Universal Value of the property, including the ensemble of prehistoric and early- and late-medieval period royal, sophisticated, and ordinary settlements and building complexes. The archaeological deposits are largely unexcavated. The 1328.89-ha property is of adequate size to ensure the complete representation of the features and processes that convey its significance. The property deals with small numbers of visitors at its centrally protected monuments, but with a large number of visitors at its Brahmanical religious shrine, the Kalika Mata temple, atop the hill. The landscape and buildings are well kept and complete despite considerable structural conservation work required. The preserved architecture blends flawlessly with the surrounding cityscape, underlying and overlooking the picturesque rim of nearby hillocks. There are no perceptible threats to the cultural relics, nor does the property suffer from adverse effects owing to development and/or neglect. There are buffer zones that total 2911.74 ha.

Authenticity

The property is fully authentic in terms of its location and setting, forms and designs, and materials and substances. Structural and chemical conservation of the protected monuments and sites has been undertaken, while other monuments and archaeological remains have been left largely as they were found in order to keep the possibility open for others to understand the original attributes and value of a given heritage ensemble, and

especially for future generations to develop other interpretations along current scientific lines. In a limited number of cases where the stability of a monument was under threat, minimal restoration has been undertaken, clearly demarcating and documenting the scale of restoration. No change in design, workmanship or setting was made. The attributes that sustain the Outstanding Universal Value of the property – which is the only remaining complete and unchanged Islamic pre-Mughal city – are thus truthfully and credibly expressed, and fully convey the value of the property.

Protection and management requirements

Champaner-Pavagadh Archaeological Park, whose multiple owners includes the Archaeological Survey of India, the Gujarat State Forest Department, State Department of Archaeology, and State Revenue Department, Jai Kalika Temple Trust, Jain Temple Trusts, Fakir Sect Trust, and the private sector, is protected under the Ancient Monuments and Archaeological Sites and Remains (AMASR) Act (1958) and Rules (1959), amendments (1992), and Amendment and Validation Act (2010), Gujarat Ancient Monuments and Archaeological Sites and Remains Act (1965), and Champaner-Pavagadh World Heritage Area Management Authority Act (2006), as well as various Forest Acts and the Gujarat Panchayats Act (1961). Thirty-nine monuments and sites are individually protected.

A hierarchical framework of archaeologists and conservators at the federal as well as State levels is available to inform the conservation, preservation, and management of the property. The Archaeological Survey of India works with the Champaner-Pavagadh World Heritage Area Management Authority to manage the property. The latter has been formulated under the chairmanship of the Chief Secretary to the Government of Gujarat, and to which all stakeholders are members, including the Director General of the Archaeological Survey of India. An Integrated Management Plan, as recommended by the World Heritage Committee to underpin conservation decisions and interventions, has been developed and adopted. Sustaining the Outstanding Universal Value of the property over time will require continuing to monitor the state of conservation of the property and to assess the implementation of the legal and institutional tools and the Management Plan.

Churches and Convents of Goa

Brief synthesis

The Churches and Convents of Goa is a serial property located in the former capital of the Portuguese Indies, which is on the west coast of India about 10 km east of the state capital Panjim. These seven monuments exerted great influence in the 16th to 18th centuries on the development of architecture, sculpture, and painting by spreading forms of Manueline, Mannerist, and Baroque art and architecture throughout the countries of Asia where Catholic missions were established. In doing so they eminently illustrated the work of missionaries in Asia.

The earlier village of Ella developed into Goa (present day Old Goa) after it was taken over by the Portuguese, who designated this city as the capital for their occupied territories in Asia in 1730. Many royal, public, and secular edifices were built, as were many sumptuous and magnificent chapels, churches, convents, and cathedrals following the arrival of European religious orders such as the Franciscans, Carmelites, Augustinians, Dominicans, Jesuits, and Theatines. The surviving churches and convents in Goa are the Chapel of St. Catherine (1510), which was raised to the status of cathedral by Pope Paul III in 1534; the Church and Convent of St. Francis of Assisi (1517; rebuilt in 1521 and 1661), with elements in the Manueline, Gothic, and Baroque styles; the Church of Our Lady of Rosary (1549), the earliest of the existing churches built in the Manueline style; Se' Cathedral (1652), with its Tuscan style exterior and Classical orders; the Church of St. Augustine (1602), a complex that fell into ruins, with only one-third of the bell tower standing; the Basilica of Bom Jesus (1605), with its prominent Classical orders; and the Chapel of St. Cajetan (1661), modelled on the original design of St. Peter's Church in Rome.

The architectural styles followed those in vogue in Europe during the contemporary period, but were adapted to suit the native conditions through the use of local materials and artefacts. The buildings represent the roots of a unique Indo-Portuguese style that developed during Portuguese control of the territory, which lasted for 450 years until 1961. This long period deeply influenced the way of life as well as the architectural style of the place, which spread to missions beyond Goa, creating a unique fusion of Western and Eastern traditions.

Criterion (ii): The monuments of Goa, "Rome of the Orient," exerted great influence from the 16th to the 18th century on the development of architecture, sculpture and painting by spreading forms of Manoeline, Mannerist and Baroque art throughout the countries of Asia where Catholic missions were established.

Criterion (iv): The churches and convents of Goa are an outstanding example of an architectural ensemble which illustrates the work of missionaries in Asia. The wealth of the ensemble compares with the Latin American ensembles included in the World Heritage List (Cuzco, 1983; Ouro Preto, 1980; Olinda, 1982; Salvador de Bahia, 1985).

Criterion (vi): At the Church of Bom Jesus, Goa conserves Saint Francis-Xavier's tomb. Beyond its fine artistic quality (commissioned in 1665 by the Grand Duke Ferdinand II of Tuscany, it was executed in Florence and includes admirable bronze work by Giovanni Battista Foggini), the tomb of the apostle of India and Japan symbolizes an event of universal significance of the influence of the Catholic religion in the Asian world in the modern period.

Integrity

The serial property boundary encloses all the structures which together demonstrate the assimilation of Manueline, Mannerist, and Baroque styles with local practices. The property is therefore of adequate size to ensure the complete representation of the features and processes that convey its significance, and does not suffer from adverse effects of development and/or neglect. Regular monitoring and conservation works are undertaken to safeguard the integrity of structural and surface features. Identified potential threats to the integrity of the property include weathering; capillary action on the monuments; and termite action on the wooden carvings and panel paintings.

Authenticity

The churches have been systematically conserved to safeguard the integrity of their structures, which allows several stakeholders to maintain their historic use and function, and occasional services to be held in the other churches, thus safeguarding the functional authenticity of the property. The excavation, the in-situ conservation, and the re-fixing of *azulejos* (tiles) have had a positive impact on the ruins of the St. Augustine complex site. Ceremonial functions, prayers, weddings, and funerals are also held in the living monuments, along with the feast of the patron saint, Francis Xavier, and the exposition of the sacred relics to commemorate significant events of the Christian ethos. The authenticity of the property is enhanced due to discoveries revealed through excavations within the St. Augustine complex, including the discovery of the relics of St. Ketevan of Georgia, adding to the intangible value of the property.

Protection and management requirements

The serial property is protected and regulated by the Planning and Development Authority (Development Plan) Regulations (1989, 2000), an overarching regulation which clearly demarcates special conservation and preservation zones in the State of Goa, including Old Goa, under the Town and Country Act, under which a Conservation Committee is constituted to oversee and give license to, or reject, applications for infrastructural interventions. Another specific statutory provision applicable nationwide to all centrally protected monuments is the Ancient Monuments and Archaeological Sites and Remains (AMASR) Act (1958) and Rules (1959), amendments (1992), and Amendment and Validation Act (2010). While there are no special provisions for World Heritage properties, nor is there a Management Plan, the property is being managed by the Management System/Module of the Archaeological Survey of India. The State Party (India) has also empowered the local community through the 72/73rd Amendment to its Constitution to enable local governance; that is, the panchayat of Se' Old Goa, within whose boundaries the World Heritage property is situated, is empowered to participate in and to deliberate on the management of the property.

The World Heritage property is managed and protected at the National level through the local head office by implementing various provisions of the existing Acts and Rules in co-ordination with the State Government authorities. The local head office has adequate manpower, both administrative and well-trained technical personnel, and the funds allotted are sufficient. The National Heritage is managed at the National level under the AMASR (1958) and Rules (1959), and its Amendment and Validation Act (2010). The latter limits any type of construction and/or mining activities in prohibited and regulated areas, 100 m and 200 m respectively from the protected site.

Sustaining the Outstanding Universal Value of the property over time will require taking measures to identify and treat problems related to weathering, capillary action on the monuments, and termite action on the wooden carvings and panel paintings, all of which are to be factored into the annual work-plan of the Archaeological Survey of India.

Ellora Caves

Brief synthesis

The invaluable ensemble of 34 caves at Ellora in the Charanandri hills of western India's Maharashtra State showcases a spirit of co-existence and religious tolerance through the outstanding architectural activities carried out by the followers of three prominent religions: Buddhism, Brahmanism, and Jainism. The rock-cut activity was carried out in three phases from the 6th century to the 12th century. The earliest caves (caves 1–12), excavated between the 5th and 8th centuries, reflect the Mahayana philosophy of Buddhism then prevalent in this region. The Brahmanical group of caves (caves 13–29), including the renowned Kailasa temple (cave 16), was excavated between the 7th and 10th centuries. The last phase, between the 9th and 12th centuries, saw the excavation of a group of caves (caves 30–34) reflecting Jaina philosophy.

Amongst the caves of the Buddhist group, Cave 10 (Visvakarma or Sutar-ki-jhopari, the Carpenter's cave), Cave 11, and Cave 12 (Teen Tal, or three-storied monastery, the largest in this category) are particularly important. These caves mark the development of the Vajrayana form of Buddhism and represent a host of Buddhist deities. The prominent caves of the Brahmanical group are Cave 15 (Dasavatara, or Cave of Ten Incarnations), Cave 16 (Kailasa, the largest monolithic temple), Cave 21 (Ramesvara), and Cave 29 (Dumar Lena). Amongst these, Cave 16 is an excellent example of structural innovation, and marks the culmination of rock-cut architecture in India featuring elaborate workmanship and striking proportions. The temple is decorated with some of the boldest and finest sculptural compositions to be found in India. The sculpture depicting Ravana attempting to lift Mount

Kailasa, the abode of Siva, is especially noteworthy. The remains of beautiful paintings belonging two different periods are preserved on the ceilings of the front mandapa (pillared hall) of this temple. The Jaina group of caves (caves 30 – 34) is exquisitely carved with fine, delicate sculptures, and includes fine paintings dedicated to the Digambara sect. Through their art and architecture, the Ellora Caves serve as a window to ancient India, including socio-cultural phenomena, material culture, politics, and lifestyles.

Criterion (i): The ensemble of Ellora is a unique artistic achievement, a masterpiece of human creative genius. If one considers only the work of excavating the rock, a monument such as the Kailasa Temple is a technological exploit without equal. However, this temple, which transposes models from "constructed" architecture, offers an extraordinary repertory of sculpted and painted forms of a very high plastic quality and an encyclopaedic program.

Criterion (iii): Ellora brings to life again the civilization of ancient India with its uninterrupted sequence of monuments from AD 600 to 1000.

Criterion (vi): The Ellora Caves not only bear witness to three great religions, i.e. Buddhism, Brahmanism, and Jainism, they illustrate the spirit of tolerance, characteristic of ancient India, which permitted these three religions to establish their sanctuaries and their communities in a single place, which thus served to reinforce its universal value.

Integrity

Ellora Caves includes all the elements necessary to express its Outstanding Universal Value, including the architectural and sculptural elements that bear witness to Buddhism, Brahmanism, and Jainism in an uninterrupted sequence of monuments from AD 600 to 1000. The property, which encompasses the ensemble along with its natural setting, is of adequate size to ensure the complete representation of features and processes that convey the property's significance, and does not suffer from adverse effects of development and/or neglect. Identified potential threats to the integrity of the property include visitor and environmental management, seepage and cracking in the caves, and the capacity of conservation staff at the property.

Authenticity

The authenticity of Ellora Caves is expressed through the architectural forms and designs such as the viharas (monasteries), chaityagriha (sanctuary), and monolithic temples belonging to three different faiths. The materials, locations, and natural setting also play significant roles in determining the authenticity of the property. The Ellora Caves are authentic in terms of the forms and designs, materials and substance, and locations and setting of paintings, rock-cut architecture, sculptures, and unfinished temples of three different faiths, i.e. Buddhism, Brahmanism, and Jainism.

Protection and management requirements

The management of the Ellora Caves is carried out by the Archaeological Survey of India (ASI), while the buffer zones are jointly managed by the ASI, the Forest Department, and the Government of Maharashtra. Various legislation, including the Ancient Monuments and Archaeological Sites and Remains Act (1958) and its Rules (1959), Ancient Monuments and Archaeological Sites and Remains (Amendment and Validation) Act (2010), Forest Act (1927), Forest Conservation Act (1980), Municipal Councils, Nagar Panchayats and Industrial Townships Act, Maharashtra (1965), and Regional and Town Planning Act, Maharashtra (1966), governs the overall administration of the property and its buffer zones. A detailed condition survey of all caves has been undertaken as a part of the Comprehensive Conservation Management Plan and implementation is underway.

Sustaining the Outstanding Universal Value of the property over time will require developing and implementing a framework to address issues such as visitor management as well as environment management; long-term monitoring for seepage and cracking patterns in all the caves; and capacity building of conservation staff at the property, with the objective of ensuring the long-term protection of attributes that sustain the Outstanding Universal Value, integrity and authenticity of the property.

Fatehpur Sikri

Brief synthesis

Fatehpur Sikri is located in Agra District in the State of Uttar Pradesh in northern India. It was constructed southeast of an artificial lake, on the slopping levels of the outcrops of the Vindhyan hill ranges. Known as the "city of victory", it was made capital by the Mughal emperor Akbar (r. 1556-1605 CE) and constructed between 1571 and 1573. Fatehpur Sikri was the first planned city of the Mughals to be marked by magnificent administrative, residential, and religious buildings comprised of palaces, public buildings, mosques, and living areas for the court, the army, the servants of the king and an entire city. Upon moving the capital to Lahore in 1585, Fatehpur Sikri remained as an area for temporary visits by the Mughal emperors.

The inscribed property covers 60.735 ha, with a buffer zone of 475.542 ha. The city, which is bounded on three sides by a wall 6 km long fortified by towers and pierced by nine gates, includes a number of impressive edifices of secular and religious nature that exhibit a fusion of prolific and versatile Indo-Islamic styles. The city was originally rectangular in plan, with a grid pattern of roads and by-lanes which cut at right angles, and featured an efficient drainage and water management system. The well-defined administrative block, royal palaces, and Jama Masjid are located in the centre of the city. The buildings are constructed in red sandstone with little use of

marble. Diwan-i-Am (Hall of Public Audience) is encircled by a series of porticos broken up at the west by the insertion of the emperor's seat in the form of a small raised chamber separated by perforated stone screens and provided with pitched stone roof. This chamber communicates directly with the imperial palace complex clustered along a vast court. At the north side of it stands a building popularly known as Diwan-i-Khas (Hall of Private Audience), also known as the 'Jewel House'. Other monuments of exceptional quality are Panch Mahal, an extraordinary, entirely columnar five-storey structure disposed asymmetrically on the pattern of a Persian badgir, or wind-catcher tower; the pavilion of Turkish Sultana; Anup Talao (Peerless Pool); Diwan-Khana-i-Khas and Khwabgah (Sleeping Chamber); palace of Jodha Bai, the largest building of the residential complex, which has richly carved interior pillars, balconies, perforated stone windows, and an azure-blue ribbed roof on the north and south sides; Birbal's House; and the Caravan Sarai, Haram Sara, baths, water works, stables and Hiran tower. Architecturally, the buildings are a beautiful amalgamation of indigenous and Persian styles.

Amongst the religious monuments at Fatehpur Sikri, Jama Masjid is the earliest building constructed on the summit of the ridge, completed in 1571-72. This mosque incorporates the tomb of Saikh Salim Chisti, an extraordinary masterpiece of sculpted decoration completed in 1580-81 and further embellished under the reign of Jahangir in 1606. To the south of the court is an imposing structure, Buland Darwaza (Lofty Gate), with a height of 40 m, completed in 1575 to commemorate the victory of Gujarat in 1572. It is by far the greatest monumental structure of emperor Akbar's entire reign and also one of the most perfect architectural achievements in India.

Criterion (ii): The construction of Fatehpur Sikri exercised a definite influence on the evolution of Mughal town planning, namely, at Shahjahanabad.

Criterion (iii): The city of Fatehpur Sikri bears an exceptional testimony to the Mughal civilization at the end of 16th century.

Criterion (iv): The city as a whole is an unique example of architectural ensembles of very high quality constructed between 1571 and 1585.

Integrity

The inscribed property contains all the attributes necessary to express its Outstanding Universal Value, and these are in a good state of conservation. Factors that previously threatened the integrity of the property, such as mining activities, have been controlled by the banning of mining within a 10-km radius of Fatehpur Sikri, but will require continuous monitoring, particularly in regard to illegal blasting. The extension of the buffer zone, and the establishment of pertinent regulatory measures, are critical to controlling the unplanned growth of the township and the potential threat to the visual integrity of the property. Adequate planning and the definition of clear guidelines for visitor use are also essential to maintain the qualities of the property, especially as relates to the potential development of infrastructure at and nearby the property.

Authenticity

The authenticity of Fatehpur Sikri has been preserved in the palaces, public buildings, mosques, and living areas for the court, the army, and the servants of the king. Several repairs and conservation works have been carried out from as early as the British Government period in India to the Buland Darwaza, Royal Alms House, Hakim Hammam, Jama Masjid, Panch Mahal, Jodha Bai palace, Diwan-i-Am, pavilion of the Turkish Sultana, Birbal's House, mint house, treasury house, etc., without changing the original structures. In addition, paintings and painted inscriptions in Jama Masjid, Shaikh Salim Chisti's tomb, Akbar's Khwabgah, and Mariam's house have also been chemically preserved and restored according to their original conditions. To maintain the condition of authenticity, guidelines are needed to ensure that form and design, as well as location and setting, are protected.

Protection and management requirements

The management of Fatehpur Sikri is carried out by the Archaeological Survey of India. Legal protection of the property and control over the regulated area around it is through legislation, including the Ancient Monuments and Archaeological Sites and Remains (AMASR) Act (1958) and its Rules (1959) and Amendment and Validation Act (2010), which is adequate to the overall administration of the property and buffer zone. In addition, the passing of orders by the Honourable Supreme Court of India assists the Archaeological Survey of India in the protection and conservation of monuments. An area of 10,400 sq km around the Taj Mahal is defined to protect the monument from pollution. The Supreme Court of India in December 1996 delivered a ruling that banned the use of coal/coke in industries located in this "Taj Trapezium Zone" (TTZ), and required these industries to switch over to natural gas or relocate outside the TTZ. The TTZ comprises 40 protected monuments, including three World Heritage properties: the Taj Mahal, Agra Fort, and Fatehpur Sikri.

To prevent the entry of unauthorized persons into the tourist movement area and to avoid encroachments in the property area, a boundary wall has been constructed on the protected limits of the palace complex. In addition to the physical delimitation, regulatory measures are needed to prevent further encroachment and impacts on the visual integrity of the property.

The sustained implementation of the Integrated Management Plan is required for the adequate protection, conservation, and management of the property and its buffer zone. It is also the necessary mechanism to coordinate the actions implemented by different agencies at the central and local levels having mandates that have an impact on the property, including the Town and Country Planning Organization, the Agra Development Authority, the Municipal Corporation, and the Public Works Department, among others. Although the

Archaeological Survey of India has been managing the visitors to the property by means of its management system, the Integrated Management Plan will need to ensure adequate visitor management and guidelines for the potential development of additional infrastructure, which will need to be preceded in all cases by a Heritage Impact Assessment.

The fund provided by the federal government is adequate for the overall conservation, preservation, and maintenance of the monuments of Fatehpur Sikri. It supports the presence of a Conservation Assistant who works under the guidance of the regional office of the Archaeological Survey of India and coordinates activities at the property.

Group of Monuments at Mahabalipuram

Brief synthesis

Mahabalipuram (or Mamallapuram), located along southeastern India's Coromandel Coast, was a celebrated port city of the Pallavas. The group of monuments there consists of rock-cut cave temples, monolithic temples, bas-relief sculptures, and structural temples as well as the excavated remains of temples. The Pallava dynasty, which ruled this area between 6th and 9th centuries CE, created these majestic edifices.

The Group of Monuments at Mahabalipuram occupies a distinct position in classical Indian architecture. These majestic edifices mark the high quality of craftsmanship in the region during 6th century CE. The natural landscape was utilized in carving out these structures, thereby making the ability of the Pallava craftsmen universally known. The monuments may be subdivided into five categories:

The mandapas (rock-cut caves): During the time of Narasimhavarman-I Mamalla, new innovations were introduced in the rock medium in the form of cave temples. Notable examples of the cave temple are Konerimandapa, Mahishmardhini cave, and Varahamandapa. These rock-cut caves are richly embellished with sculptural representations known for their natural grace and suppleness. Noteworthy among them are Mahishamardhini, Bhuvaraha, Gajalakshmi, Tirivikrama, and Durga.

The rathas (monolithic temples): The monolithic temples are locally called "ratha" (chariot), as they resemble the processional chariots of a temple. These five monolithic temples are each hewn out of a huge boulder. They display the full form and features of the contemporary temple form and show variations both in ground plan and elevation. They are richly carved with artistic motifs and wall panels depicting many Hindu divinities and royal portraits.

The rock reliefs: The sculptural bas reliefs are another very important class of masterly creations created during Mamalla's reign. There are four such reliefs at Mamallapuram, the most noteworthy among them being the Arjuna's Penance and Govardhanadhari.

The temples: King Rajasimha introduced structural architecture on a grand scale. The earliest and most modest is the Mukundanayananar temple, followed by the Olakkanesvara temple, perched on a rock near the lighthouse. The tempo of structural edifices culminated in the creation of the famous Shore temple, having the most finite layout of a Dravida vimana, majestically fringing the sea.

The excavated remains: Sustained removal of the sand over a period of time has brought to light several buried structures around the Shore temple. Unique among them is a stepped structure, a the miniature shrine, a Bhuvaraha image, a reclining image of Vishnu, and a well from Pallava King Narasimhavarman Rajasimha's reign (638-660 CE), all of which are carved in the live bedrock. Remains of additional temples have recently been excavated, including one to the south of the Shore temple.

Criterion (i): The bas-relief of the "Descent of the Ganges" is – like that of the island of Elephanta – a unique artistic achievement.

Criterion (ii): The influence of the sculptures of Mahabalipuram, characterized by the softness and suppleness of their modelling, spread afar to places such as Cambodia, Annam and Java.

Criterion (iii): Mahabalipuram is, pre-eminently, the testimony to the Pallavas civilization of southeast India.

Criterion (vi): The sanctuary is one of the major centres of the cult of Siva.

Integrity

Within the boundaries of the Group of Monuments at Mahabalipuram are located all the elements necessary to express the Outstanding Universal Value of the serial property, including the mandapas, rathas, rock reliefs, temples, and excavated remains of the great Pallava dynasty. The property is in a good state of conservation. There are no major threats affecting the property, which is monitored and well maintained by Archaeological Survey of India. Identified potential threats to the integrity of the property include encroachment and unauthorized constructions in the prohibited/regulated areas.

Authenticity

The property remains in its authentic state in terms of locations, forms, materials, and designs. The authenticity of the property focuses on the creation and experimentation in rupestral architecture, which culminated in the

evolution of structural temples. The artefacts revealed during recent excavations add to the value of the property as the representation of a masterpiece of human creative genius.

Protection and management requirements

The property is protected, conserved, and managed by the Archaeological Survey of India (ASI) through the Ancient Monuments and Archaeological Sites and Remains (AMASR) Act (1958) and its Rules (1959), amendment (1992) and Amendment and Validation Act (2010). The prohibited (100 m) and regulated (200 m) areas surrounding the World Heritage property are constantly monitored to minimize adverse impacts. A regular conservation and monitoring schedule is maintained by the ASI to ensure the property is in good state of conservation. Assessment of the state of conservation of the property, as well as visitor and landscape management plans, form the basis of long-term management aimed at maintaining the Outstanding Universal Value.

No major development pressures or threats are affecting the property. Sustaining the Outstanding Universal Value of the property over time will require continuing the coordinated efforts with the help of state departments to stop encroachment and unauthorized constructions in the prohibited and regulated areas.

Khajuraho Group of Monuments

Brief synthesis

The group of temples of Khajuraho testifies to the culmination of northern Indian temple art and architecture of the Chandella dynasty who ruled the region in the 10th to 11th centuries CE. Distributed over an area of 6 square km in a picturesque landscape, the 23 temples (including one partly excavated structure) that form the western, eastern, and southern clusters of the Khajuraho Group of Monuments are rare surviving examples that display the originality and high quality of Nagara-style temple architecture.

The Khajuraho Group of Monuments demonstrates in layout and physical form, the pinnacle of temple architectural development in northern India. Built in sandstone, each temple is elevated from its environs by a highly ornate terraced platform, or jagati, on which stands the body, or jangha, whose sanctum is topped by a tower, or shikhara, of a type unique to Nagara, where the verticality of the principal spire atop the sanctum is accentuated by a series of miniature spires flanking it, each symbolizing Mount Kailasa, the abode of the Gods.

The plan of the temples shows the spatial hierarchy of axially aligned interconnected spaces. The temples are entered through an ornate entrance porch (ardhamandapa), which leads to the main hall (mandapa), through which one accesses the vestibule (antarala) before reaching the sanctum (garbhagriha). The main halls of the temples were often accompanied by lateral transepts with projecting windows as well as a circumambulatory path around the sanctum. Larger temples had an additional pair of transepts and were accompanied by subsidiary shrines on the four corners of its jagati.

The temples of Khajuraho are known for the harmonious integration of sculptures with their architecture. All surfaces are profusely carved with anthropomorphic and non-anthropomorphic motifs depicting sacred and secular themes. Sculptures depicting acts of worship, clan and minor deities, and couples in union, all reflect the sacred belief system. Other themes mirror social life through depictions of domestic scenes, teachers and disciples, dancers and musicians, and amorous couples. The composition and finesse achieved by the master craftsmen give the stone surfaces of the Khajuraho temples a rare vibrancy and sensitivity to the warmth of human emotions.

Criterion (i): The complex of Khajuraho represents a unique artistic creation, as much for its highly original architecture as for the high-quality sculpted décor made up of a mythological repertory of numerous scenes of amusements that includes scenes susceptible to various interpretations, sacred or profane.

Criterion (iii): The temples of Khajuraho bear an exceptional testimony to the Chandella culture, which flourished in central India before the establishment of the Delhi Sultanate at the beginning of the 13th century CE.

Integrity

Khajuraho Group of Monuments includes all the elements necessary to express its Outstanding Universal Value, including 23 temples that together demonstrate the originality and high quality attained in northern Indian Nagara-style temple architecture. The property is of adequate size to ensure the complete representation of the features and processes that convey the property's significance, and does not suffer from adverse effects of development and/or neglect.

To safeguard the temples within their landscape setting, the western, eastern, and southern clusters are each fenced, thus delineating the protected limits. This curbs the spill-over of settlements that once comprised a part of the Chandella Empire. Identified potential threats to the integrity of the property include the nearby Khajuraho Airport, in the form of possible vibrations, increased volume of dust particles, etc.

Authenticity

The property is fully authentic in terms of its location and setting, forms and designs, and materials and substance. Its historic location has not changed. The forms, designs, and materials authentically illustrate the

elements of the mature form of northern Indian temple architecture, including a combination of saptaratha plan topped by a form of shikhara unique to the Nagara style. Set in a picturesque landscape, these temples show the celebration of Chandella culture and power.

Protection and management requirements

Khajuraho Group of Monuments is owned by the Government of India and managed by the Archaeological Survey of India through the Ancient Monuments and Archaeological Sites and Remains (AMASR) Act (1958) and its Rules (1959), amendment (1992), and Amendment and Validation Act (2010). The AMASR Acts also delineate prohibited and regulated areas extending 100 m and 200 m respectively from the designated monument. The land abutting the monuments is managed jointly by the Revenue official (i.e., District Collector, State government of Madhya Pradesh) and the Archaeological Survey of India, with the latter responsible for final approvals. In addition to the aforementioned protective designations, the rural landscape is managed by the Nagar panchayat (town-level governance) through the Madhya Pradesh Bhumi Vikas Rules (1984), which can regulate and protect heritage sites. Clause 17 of Section 49 of the Madhya Pradesh Panchayati Rajya Adhiniyam Act (1993) includes a provision for the preservation and maintenance of monuments. The Archaeological Survey of India reviews and strategizes the allocation of resources in consonance with the identified needs. Issues such as interventions, training, research, and outreach are determined annually on the basis of site inspections and assessments. These actions form an integral part of the operational management mechanism, augmented with experts as needed.

Sustaining the Outstanding Universal Value of the property over time will require continuing to protect and control the area immediately surrounding the property and monitoring the situation at the nearby airport to identify and eliminate any negative impacts on the value, integrity or authenticity of the property.

EUROPE AND NORTH AMERICA

Canada

Canadian Rocky Mountain Parks

Brief synthesis

Renowned for their scenic splendor, the Canadian Rocky Mountain Parks are comprised of Banff, Jasper, Kootenay and Yoho national parks and Mount Robson, Mount Assiniboine and Hamber provincial parks. Together, they exemplify the outstanding physical features of the Rocky Mountain Biogeographical Province. Classic illustrations of glacial geological processes — including ice fields, remnant valley glaciers, canyons and exceptional examples of erosion and deposition — are found throughout the area. The Burgess Shale Cambrian fossil sites and nearby Precambrian sites contain important information about the earth's evolution.

Criterion (vii): The seven parks of the Canadian Rockies form a striking mountain landscape. With rugged mountain peaks, ice fields, and glaciers, alpine meadows, lakes, waterfalls, extensive karst cave systems, thermal springs and deeply incised canyons, the Canadian Rocky Mountain Parks possess exceptional natural beauty, attracting millions of visitors annually.

Criterion (viii): The Burgess Shale is one of the most significant fossil areas in the world. Exquisitely preserved fossils record a diverse, abundant marine community dominated by soft- bodied organisms. Originating soon after the rapid unfolding of animal life about 540 million years ago, the Burgess Shale fossils provide key evidence of the history and early evolution of most animal groups known today, and yield a more complete view of life in the sea than any other site for that time period. The seven parks of the Canadian Rockies are a classic representation of significant and on-going glacial processes along the continental divide on highly faulted, folded and uplifted sedimentary rocks.

Integrity

The Canadian Rocky Mountain Parks protect many of the outstanding scenic natural features, landscapes and views for which they are renowned. Spectacular mountain peaks, ice fields, glaciers, canyons, alpine meadows, lakes, waterfalls, karst-cave systems and thermal springs fully represent glacial features and landforms typical of the Rocky Mountain Biogeographical Province. The site encompasses the renowned Burgess Shale fossiliferous sites.

The large size of the property (2,306,884 ha), its configuration (400 kms long and up to 100 kms wide), and the fact that over 95% of the area is legally or administratively maintained in a completely natural condition ensure that the outstanding features and views remain nested in an unaltered natural setting, buffered from development and activities on adjacent lands. Much of the property is surrounded by over one million hectares of adjacent parkland that is managed to similar standards.

Glacier recession due to climate change is evident within the property.

Protection and management requirements

Management of each of the seven parks that make up the property is governed by an approved management plan, prepared in accordance with the standards and requirements of the agency responsible for that park, either Parks Canada or British Columbia Parks. The plans acknowledge the World Heritage inscription, and also their park's role in protecting representative Rocky Mountain ecosystems and offering high quality wilderness visitor opportunities.

Each of the management plans contains: a description of key features and values of the park; a long-term vision for the park and management objectives to be met; a set of management strategies that respond to current and predicted future stressors; and a zoning system that articulates acceptable land uses. The management plans are developed by their respective jurisdictions through planning processes that involve consultations with Indigenous groups, local governments, the public and other interested parties. They are periodically reviewed and updated.

Banff, Jasper, Yoho and Kootenay National Parks collaborate on trans-boundary issues such as species-at-risk conservation, resource protection and restoration, and the provision of visitor opportunities. Neighbouring provincial and national parks within the property work together periodically to address issues of common interest, such as park access, wildlife and wildfire management. It is a stated management objective of all the parks that comprise the property to also work with surrounding jurisdictions that have management responsibilities in order to maintain the OUV of the property and the integrity of the ecosystems encompassed by it.

Park management plans have identified a number of resource protection measures, such as environmental assessment processes, zoning, ecological integrity monitoring, as well as education programs, to address pressures on the property and raise public awareness. Developments approved for national transportation, for park administration and for visitor services are concentrated in less than 5 per cent of the property's area, strictly regulated and limited by management plans, in order to minimize their impacts. Attention will be given over the long term to monitoring glacier melt that is evident within the property. Other effects of climate change, such as flooding and changes in wildfire frequency and patterns are addressed through management planning, monitoring and appropriate specific action as required.

Croatia

Plitvice Lakes National Park

Brief synthesis

Plitvice Lakes National Park, Croatia's largest national park covering almost 30,000 hectares, is situated in the lower elevations of the Dinarides in the central part of the country. Within a beautiful karst landscape dominated by a mix of forests and meadows, the magnificent Plitvice lake system stands out, fascinating scientists and visitors alike. Interconnected by many waterfalls and watercourses above and below ground, the lakes are grouped into the upper and lower lakes. The former are formed on dolomites, with mild relief, not so steep shores and enclosed by thick forests, whereas the latter, smaller and shallower, are situated in limestone canyon with partially steep shores. The lake system is the result of millennia of ongoing geological and biochemical processes creating natural dams known as tufa barriers. These are formed by the deposition of calcium carbonate from the waters flowing through the property. In the case of the Plitvice lake system, this geochemical process of tufa formation interacts with living organisms, most importantly mosses, algae and aquatic bacteria. The scale of the overall lake system and the natural barriers are an exceptional expression of the aesthetically stunning phenomenon, acknowledged since the late 19th Century. Plitvice Lakes National Park area is mainly covered with very well preserved forests essential for the continuity of geochemical processes in water system (above and below ground), which include an area of 84 ha of old-growth forest of beech and fir. Besides the striking landscape beauty and the processes that continue to shape the lakes, the park is also home to noteworthy biodiversity. The tufa barriers themselves provide habitat for diverse and highly specialized communities of non-vascular plants. Brown Bear, Grey Wolf and Lynx along with many rare species roam the forests, while the meadows are known for their rich flora.

Criterion (vii): Embedded in a mosaic of forests and meadows in the lower elevations of the Dinarides, Plitvice Lakes National Park conserves a strikingly beautiful and intact series of lakes formed by natural tufa barriers. The tufa barriers are the result of longstanding and ongoing interaction between water, air, sediments (geological foundation) and organisms. The extension of the dynamic, constantly evolving lake system, the proportion of the tufa barriers, jointly with the numerous dynamic waterfalls and clear water courses and the expression of colours, make Plitvice Lakes National Park an aesthetically outstanding natural spectacle of global importance.

Criterion (viii): The key extraordinary process which has been shaping and continues to shape the Plitvice lake system is the tufa creation which forms barriers across the watercourse. Due to the characteristics of karst base, the waters of Plitvice Lakes are naturally supersaturated with calcium carbonate. Under certain physico-chemical and biological conditions, the dissolved calcium carbonate is deposited on the bottoms and margins of the lakes, as well as on obstacles in the water courses. Over time, this process leads to the formation of porous, simultaneously hard and fragile limestone barriers, which retain the water of creeks and rivers. The lake system is a subject to constant changes largely due to the dynamics of growth and erosion of tufa barriers. A closer look of

the barriers reveals the ubiquitous remains of mosses and other terrestrial and aquatic organisms inhabiting the highly specialized habitat. The scale and intactness of the tufa formation phenomena at Plitvice Lakes amount to an outstanding example of a largely undisturbed on-going process. Extensive research on the formation, age and structure and ecological characteristics illustrate the major scientific importance of the property.

Criterion (ix): Overlapping with the above "geological criterion", Plitvice's famous process of the tufa creation is also the result of exceptional ecological processes. Living organisms play a decisive role in the sedimentation of calcium carbonate in Plitvice. More concretely, highly specialized mosses, algae and bacteria enable and enhance the sedimentation, thereby contributing to the creation of the natural barriers. This is why the presence of these easily overlooked organisms and micro-organisms is an integral and essential component of the ancient processes which gave rise to the outstanding lake system. It becomes clear that the process and system requires a water quality that permits the presence of the often sensitive organisms. The extensive tufa formations of the Plitvice Lakes National Park are a testimony of an exceptional interplay between sediments (geological foundation), water, air and living organisms.

Integrity

Following an extension in 2000, Plitvice Lakes National Park covers the entire catchment area and most of the underground system of the lake system. The lakes, the fragile heart of the property, are surrounded by a belt of well-preserved forest, contributing to the maintenance of water supply and quality and thereby supporting the on-going and dynamic process of calcium carbonate deposition and tufa creation. Logging is prohibited in the forests within the national park, and such legal prohibition is an important measure to maintain the integrity of the Plitvice lake system. A state road crosses the park area but its use is restricted in order to minimize disturbance. It comes as no surprise that Plitvice Lakes National Park attracts impressive numbers of visitors. Inevitably, heavy visitation potentially poses direct and indirect risks to the integrity of the property.

Protection and management requirements

The creation of the "Association for the Conservation and Enhancement of the Plitvice Lakes" in 1893 illustrates a long history of dedication to the best possible conservation of what today constitutes the World Heritage property. Early conservation efforts were formalized when Plitvice Lakes became a national park in 1949. In 1997, the national park was enlarged on the grounds of protecting the entire catchment area of the lakes and most of the groundwater system. Since the extension of the World Heritage property in 2000, the surface area of Plitvice Lakes National Park and the World Heritage property are identical. The majority of the land is state owned. Legally, the property falls under the Nature Protection Act and complementary legislation. A specialized public institution established by the Croatian Government and under supervision of the Ministry responsible for the nature protection, implements management of the national park. Staff, infrastructure and activities are funded from the park's own resources. Regularly updated, participatory physical and management planning guides all aspects of management and use. An adequately staffed and equipped research centre carries out important research, providing important insights for both science and management.

Plitvice Lakes National Park is well-managed in line with its long history of conservation. The legal, administrative and financial conditions in place need to be maintained and, if needed, consolidated and adapted to respond to the visitation, which is constantly growing. While this puts Plitvice in a privileged position from economic and educational perspectives, the well-documented downsides of tourism require careful consideration. Beyond the risk of direct physical damage to the highly sensitive system, tourism also bears indirect risks stemming from water contamination and excess nutrients through wastewater. As high water quality of the entire freshwater system is a crucial foundation of fundamental processes that underlie the OUV of the property, physical and management planning, education of stakeholders and surveillance of the property are indispensable. Permanent monitoring of the water quality and aquatic organisms

France

Canal du Midi

Brève synthèse

Situé en région Occitanie, le Canal du Midi compte 360 kilomètres navigables et 328 ouvrages (écluses, aqueducs, ponts, déversoirs, tunnels …). Cette réalisation de génie civil parmi les plus extraordinaires de l'ère moderne, construite entre 1667 et 1694, ouvrit la voie à la révolution industrielle. Le souci de l'esthétique architecturale et des paysages créés qui anima son concepteur, Pierre-Paul Riquet, en fit non seulement une prouesse technique, mais aussi une œuvre d'art.

Le Canal du Midi constitue la partie initialement réalisée du projet de canal des Deux-Mers devant assurer la liaison entre la Méditerranée et l'Atlantique en reliant plusieurs tronçons de voies navigables. Il est le témoignage vivant de l'art et de la créativité des ingénieurs de l'époque de Louis XIV qui ont triomphé des conditions difficiles de la géographie et de l'hydrographie pour réaliser le rêve immémorial de la « jonction des mers ». Son vaste rayonnement technique et culturel a inauguré et influencé l'époque moderne de création des réseaux navigables des pays industrialisés de l'Europe et de l'Amérique du Nord.

Le Canal du Midi comporte cinq éléments, soit le tronçon principal qui relie Toulouse (Haute-Garonne) à l'Étang de Thau à Marseillan au bord de la Méditerranée (Hérault) sur une longueur de 240 km ; le tronçon de 36,6 km entre Moussan et Port-la-Nouvelle (Aude) qui incorpore une partie de l'ancien Canal de la Robine ; les deux bras qui fusionnent et se jettent dans le canal à Naurouze (Aude) déversant les eaux de la Montagne Noire ; le canal de Saint-Pierre (1,6 km) qui relie le tronçon principal du Canal à la Garonne à Toulouse ; le court tronçon (0,5 km) qui joint l'Hérault à l'écluse ronde d'Agde. L'un des traits les plus remarquables est le barrage de Saint-Ferréol sur la rivière Laudot dans la région de la Montagne Noire. Il s'agit du plus grand ouvrage de l'ensemble du Canal et du chantier d'ingénierie civile le plus important de l'époque.

Critère (i) : Le Canal du Midi est l'une des réalisations d'ingénierie civile les plus extraordinaires de l'ère moderne.

Critère (ii) : Le Canal du Midi est représentatif de l'éclosion technologique qui a ouvert la voie à la révolution industrielle et à la technologie contemporaine. En outre, il associe à l'innovation technologique un grand souci esthétique sur le plan architectural et sur le plan des paysages créés par l'homme, approche que l'on retrouve rarement ailleurs.

Critère (iv) : Le Canal du Midi est remarquable en tant que premier grand canal à bief de partage, construit pour répondre à un objectif stratégique d'aménagement du territoire. Il représente par excellence une période significative de l'histoire européenne, celle des transports fluviaux par la maîtrise du génie civil hydraulique.

Critère (v) : Le Canal du Midi est devenu dès sa construction l'élément le plus marquant du territoire traversé, d'autant mieux assimilé par l'environnement qu'il a modelé le paysage en douceur.

Intégrité

Le Canal du Midi est encore en fonctionnement avec des caractéristiques pour l'essentiel inchangées depuis sa création. Les nombreuses modifications qu'il a subies au fil des siècles (début de mise au gabarit Freycinet, réparations, automatisation, franchissements, modernisation....) ont touché les ouvrages de génie civil mais sans atteindre leur spécificité ni leur valeur patrimoniale.

Toutefois, le vieillissement et le dépérissement des plantations d'alignement, du fait notamment de la contamination des platanes par le chancre coloré, feront inévitablement évoluer fortement les paysages du Canal du Midi dans les années à venir.

Authenticité

L'œuvre de génie due à Pierre-Paul Riquet, concepteur et constructeur du canal, est intacte dans son tracé, dans son système d'alimentation en eau, et dans bon nombre de ses ouvrages. Toutefois, dès le début du XVIIIe siècle, des modifications et des adaptations (en particulier les travaux de Vauban), puis des reconstructions d'ouvrages, des modernisations, ont fait évoluer le canal pour en améliorer l'efficacité.

L'œuvre de Riquet est toujours présente matériellement et ni son sens ni sa portée historique n'ont été altérées. Les changements eux-mêmes ont une authenticité et une valeur qui leur est propre, dans la mesure où ils reflètent l'évolution de l'ingénierie, des techniques appliquées et des pratiques de gestion des canaux.

Éléments requis en matière de protection et de gestion

La protection et la valorisation de l'ouvrage sont assurées par des mesures réglementaires de niveau national (au titre du Code du patrimoine et du Code de l'environnement). Le Canal est protégé au titre des sites classés et certains de ses éléments sont également protégés au titre des monuments historiques. En outre, les abords du canal font désormais l'objet d'une protection, avec le classement au titre des sites des paysages du Canal du Midi, d'une superficie de 18 200 ha, concernant 74 communes urbaines et péri-urbaines. Des procédures de classement se poursuivent encore sur les paysages des rigoles d'alimentation du canal afin de compléter le dispositif de protection autour du bien, dans la perspective d'une nouvelle délimitation de la zone tampon.

L'Etat, propriétaire du bien, en a confié la conservation et la gestion à *Voies navigables de France (VNF),* établissement public sous sa tutelle*,* qui met en œuvre les ressources nécessaires à cette fin.

Le préfet de la région Occitanie est chargé de coordonner les services de l'État impliqués dans la gestion du site avec VNF. Une « charte d'insertion paysagère et architecturale » définit des orientations générales qui serviront de base au plan de gestion en cours d'élaboration. En parallèle, des contrats formalisent des partenariats locaux.

Enfin, pour répondre à la dégradation massive des plantations d'alignement, le gestionnaire met en œuvre avec les pouvoirs publics une démarche globale de conservation et de restauration dans le respect des caractéristiques paysagères du canal, visant notamment à limiter la propagation du chancre coloré et à reconstituer, à terme, des alignements d'arbres le long des berges.

Italy

Archaeological Areas of Pompei, Herculaneum and Torre Annunziata

Brief synthesis

The World Heritage property includes three different archaeological areas: the ancient towns of Pompeii and Herculaneum together with the Villa of the Mysteries (to the west of Pompeii) and the Villa of the Papyri (to the west of Herculaneum), and the Villa A (Villa of Poppaea) and Villa B (Villa of Lucius Crassius Tertius) in Torre Annunziata. The vast expanse of the commercial town of Pompeii contrasts with the smaller but better-preserved remains of the smaller Herculaneum, while Villa A in Torre Annunziata gives a vivid impression of the opulent lifestyle enjoyed by the wealthier citizens of the early Roman Empire.

When Vesuvius erupted in 79 AD, it engulfed the two flourishing Roman towns of Pompeii and Herculaneum, as well as the many wealthy countryside villas in the area. Pompeii was buried largely by a thick layer of volcanic ash and lapilli and Herculaneum disappeared under pyroclastic surges and flows. These sites have been progressively excavated and made accessible to the public since the mid-18th century. However, in the case of Herculaneum large areas of the ancient town still lie under the modern town and have only been explored and surveyed by the network of 18th-century tunnels that drew the attention of Grand Tour visitors, the basis still today for visiting the Herculaneum's underground ancient theatre. These areas are mostly not currently included in the World Heritage property.

Pompeii, with its well-preserved buildings in an excavated area of 44 ha, is the only archaeological site in the world that provides a complete picture of an ancient Roman city. The main forum is flanked by a number of imposing public buildings, such as the Capitolium, the Basilica and temples and within the city there are also many public bath complexes, two theatres and an amphitheatre.

In Herculaneum several impressive public buildings are well preserved, including a spacious *palaestra* accessed through a monumental gateway, two sets of public baths, one of which (Central *Thermae*) is monumental and vividly decorated, the College of the Priests of Augustus, and a theatre of standard form. The Villa of the Papyri, outside the city walls, is an opulent establishment. The town is also noteworthy for the completeness of its shops, still containing equipment such as enormous wine jars.

Herculaneum’s urban districts and seafront display a higher level of preservation with noteworthy conservation of upper floors thanks to the pyroclastic material that buried the town. Organic matter was often carbonized by the high temperatures and exceptionally preserved finds include everyday objects such as foodstuffs, architectural elements and wooden furniture.

Both Pompeii and Herculaneum are renowned for their remarkable series of residential and commercial buildings, built along well-paved streets. The earliest is the atrium house, entirely inward-looking with a courtyard at its centre: the House of the Surgeon at Pompeii is a good example. Under Hellenistic influences, this type of house was enlarged and decorated with columns and arcades and equipped with large representative rooms. In its highest form, this type of Roman house, known from towns all over the Empire, developed into a veritable mansion, richly decorated and with many rooms, of which the House of the Faun and the House of the Chaste Lovers are outstanding examples.

The suburban villas across the Vesuvian area are perhaps even more exceptional in terms of the scale of their buildings and grounds, as well as their lavish decorations. The Villa of the Mysteries is an enormous residence just outside Pompeii’s city walls, developed from a modest house built in the 3rd century BC, named from the remarkable wall paintings in the *triclinium*, which depict the initiation rites ('mysteries') of the cult of Dionysus.

The two villas in Torre Annunziata are both extraordinary examples of suburban buildings in the countryside of Pompeii. The villa A, so-called “of Poppaea”, is a huge maritime residence built in the middle of the 1st century BCE, enlarged during the Imperial period and under restoration at the moment of the eruption. It is especially well known for its magnificent and well-preserved wall paintings, one of the most important examples of Roman painting with their superb *illusionistic* frescos of doors, colonnades and *garden* views. On the other hand, villa B is an excellent example of *villa rustica* provided with rooms and spaces designated for market activities such as storage of amphoras and trading of locally produced foodstuffs, especially wine.

There were many changes to these buildings over time in response to changing circumstances of the owners; these include repairs and adjustments that were a response to the seismic events that led up to the AD 79 eruption and reflect a community living with changing environmental and economic conditions.

A special feature of Pompeii is the wealth of graffiti on its walls. An election was imminent at the time of the eruption, and there are many political slogans scrawled on walls, as well as others of a more personal nature, often defamatory. At Herculaneum, the volcanic deposits preserved hundreds of wax tablets, some of which conserve legal documents, and more than 1,800 papyri scrolls containing Greek philosophical texts were found at the Villa of the Papyri.

The diverse range of literary sources available in Pompeii and Herculaneum provides a picture of the final decades of these ancient cities and the image of socially complex and dynamic communities, representing

exceptional evidence of typical ways of life in Roman society in the first century AD and the importance of texts in political and private life.

Other important sources of archaeological evidence are the human remains of those who died in the eruption. Pompeii witnessed an early archaeological experiment when plaster was poured into voids found in the volcanic material and which allowed casts to be made of the forms of the human and animal victims and other organic material. At Herculaneum, on the other hand, about 300 skeletons were discovered along the ancient shoreline. The study of these significant samples of victims from the towns provides insight into their health, lifestyles and death and a chance to compare the two data sets. The casts themselves are important resources as they contain both skeletal remains and evidence of 19th- and 20th-century archaeological practice.

Another important legacy of the twentieth century was the presentation of Herculaneum to the public as an 'open-air museum', perhaps Europe's first, with buildings reconstructed based on archaeological evidence and displays of original objects within the archaeological site. This concept of 'open-air museum' had already been adopted in some buildings in Pompeii, as a medium to communicate the meaning of ancient spaces, at the end of the 19th century.

The impressive remains of the towns of Pompeii and Herculaneum and their associated villas, destroyed and yet preserved by Mount Vesuvius, provide a complete and vivid picture of society and daily life at a specific moment in the past that is unparalleled elsewhere. The rediscovery and history of these places as archaeological sites has captured the collective imagination century after century, shaping archaeological, art historical, conservation and interpretation practices in Europe and beyond.

Criterion (iii): Pompeii and Herculaneum are the only Roman cities ruins preserved in such an exceptional way and have no parallels in integrity and extent in the world. The villas in Torre Annunziata have the best preserved wall paintings of the Roman period.

Criterion (iv): The sites of Pompeii, Herculaneum and Torre Annunziata provide a full picture of Roman life from the 1st century BC to the 1st century AD through the urban, architectural, decorative and daily life aspects that have been preserved. The villa A in Torre Annunziata is the most significant example of suburban villa of the Roman period.

Criterion (v): The sites of Pompeii, Herculaneum and Torre Annunziata are outstanding examples of urban and suburban Roman settlements. They also provide a vivid and comprehensive picture of Roman life at one precise moment: the eruption of Vesuvius in 79 AD.

Integrity

The inscribed property has an area of 98 ha, with a buffer zone of 24 ha currently under review. Owing to the eruptions, the archaeological remains are unparalleled anywhere in the world for their completeness and extent. The three parts of the property are of adequate size to contain the attributes to express its Outstanding Universal Value, except at Herculaneum where integrity would be improved by inclusion within the property, via a minor boundary modification, of the theatre and the largest part of the ancient town with its most significant public monuments still lying beneath the modern Ercolano, and known only through 18th century tunnels.

The individual components and ancient urban fabric are in overall good condition and the town plan, structures and setting with regard to the Vesuvius are still sufficiently intact. Some structures continue to be at risk of collapse or loss of decorative detail given the scale of active decay in archaeological sites of this size and nature where original urban infrastructure (drainage, roofing etc.) can only be partially reinstated. A property with such extensive ruins exposed will always require continuous and continuing maintenance.

Authenticity

Since the first discoveries, excavation, conservation, consolidation, restoration and maintenance works have been implemented on the remarkable remains of these sites with varying intensity. The sites show the evolution of archaeological practices, conservation techniques and approaches to presentation over the past two centuries. The level of reconstruction and the use of materials, such as concrete and steel utilized in restorations before the 1980s, would be approached differently today. More enduring techniques and materials have been progressively introduced. It may be argued that these early restorations have, in some cases, a historical significance of their own which should be safeguarded when they contribute to the overall coherence at an urban scale, as in the case of Amedeo Maiuri's open-air museum at Herculaneum at its peak in the 1950s.

A general shift in conservation approaches in the 21st century is favouring authenticity; instead of concentrating on single buildings, conservation campaigns are focusing on entire districts of the ancient towns, consisting of one or more *insulae,* and so achieving a more coordinated and homogenous result.

Despite the nature and quality of earlier restoration and reconstruction works, the authenticity of the individual components and the ancient urban and suburban fabric as a whole is very high.

Protection and management requirements

The property was protected by the provisions of past Law No 1089/1939 and since 2004 is under the Legislative Decree No 42/2004 ("Cultural Heritage and Landscape Code"). The perimeter of the Pompeii site is protected by the Decree of June 10th 1929. Environmental legislation in the form of the Legislative Decree No 42/2004

extended this protection to a wider area. All buildings and excavation works within the modern towns around the sites must be approved by the relevant heritage authorities.

At Herculaneum, where most of the ancient city lies under the modern town, additional protection is offered by development restrictions of the high-risk zone of Mount Vesuvius and wider Regional territorial plans.

The Vesuvius National Park also provides additional layers of protection of the broader setting while the MAB Biosphere designation provides a framework to promote further coordination.

The 3 component parts are owned by the State and, together with the immediate surrounding areas, are managed by the Archaeological Park of Pompeii (also overseeing the villas in Torre Annunziata) and the Archaeological Park of Herculaneum, two autonomous institutions established recently as part of a broader ministerial reform which attempts to bring decision making closer to the sites themselves.

These local heritage authorities include technical/scientific (archaeologists, architects, restorers), security and reception staff. Annual visitor numbers at the sites exceeds two and a half million (half of these are estimated to be foreign visitors).

A major public-private partnership, the Herculaneum Conservation Project, has shaped conservation and site management and enhancement at Herculaneum since 2001. The 'Grande Progetto Pompei', approximately a 5-year project begun in 2012 with the European Union has, among other things, stabilized and conserved buildings in the areas of highest risk at Pompeii.

A new management plan was presented to the World Heritage Centre for review in 2014. The development of this management plan has already proved an important tool to identify and implement provisions to regulate and control development in the setting of the property components in addition to existing measures. Increasing emphasis on a management planning approach, also at Herculaneum, will help integrate management, conservation and maintenance programmes in all three components of the property. This is central to reducing causes of decay, managing public enjoyment and use, guaranteeing risk management and securing these sites a constructive role in the sustainable development of the broader Vesuvian area.

Assisi, the Basilica of San Francesco and Other Franciscan Sites

Brief Synthesis

The property is situated in the central Italian region Umbria, on the slopes of the hill of Asio at the foot of the Subasio mountain, and comprises a rather large territory in which most of the important Franciscan places are located. Assisi and its built territory represent an outstanding example of an Umbrian hill town and cultural landscape that has maintained its historical stratigraphy since antiquity.

Assisi, developed in ancient Roman times achieving importance, in part, as a religious and spiritual centre. It continues that role into the present with its association with the birth and life of Saint Francis (1182-1226) and development of the Franciscan Order since the 13th century, which gives it an important influence in Italy and around the world. The medieval historic centre grew on the foundations of the terraced Roman town extends from the southeast to the northwest. It is flanked by the San Francesco Basilica at one end and the Basilica Santa Chiara at the other. At the summit of the hill town is the Rennaisance fort of Rocca Maggiore. Beyond the town's walls, the site includes the Carceri Hermitage, in the valley, originally a series of caves occupied by Saint Francis and his companions, and the Saint Damian and Rivotorto sanctuaries along with the Santa Maria degli Angeli Basilica in the plain. It is an extensive site, covering 14,563 hectares with an additional 4,087-hectare buffer zone.

Its association with the works of medieval masters and related art masterpieces, from the Basilica of San Francesco along with the paintings by Cimabue, Pietro Lorenzetti, Simone Martini and Giotto, have made Assisi a fundamental reference point for the development of Italian and European art and architecture.

Criterion (i): Assisi represents an ensemble of masterpieces of human creative genius, such as the Basilica of San Francesco, which have made it a fundamental reference for art history in Europe and in the world.

Criterion (ii): The interchange of artistic and spiritual message of the Franciscan Order has significantly contributed to developments in art and architecture in the world.

Criterion (iii): Assisi represents a unique example of continuity of a city-sanctuary within its environmental setting from its Umbrian-Roman and medieval origins to the present, represented in the cultural landscape, the religious ensembles, systems of communication, and traditional land-use.

Criterion (iv): The Basilica of San Francesco is an outstanding example of a type of architectural ensemble that has significantly influenced the development of art and architecture.

Criterion (vi): Being the birthplace of the Franciscan Order, Assisi has from the Middle Ages been closely associated with the cult and diffusion of the Franciscan movement in the world, focusing on the universal message of peace and tolerance even to other religions or beliefs.

Integrity

The site boundary is adequate as it comprises all the elements, which contribute to the property's Outstanding Universal Value. The layers of history are preserved with the present town being constructed on the foundations of the ancient Roman town. The territory's extent assures that a comprehensive representation of the characteristics of its cultural heritage is taken into account, allowing an understanding of their relationships with the landscape, which still maintains its high visual impact. In particular, the boundary comprises the San Francesco Basilica, within the extraordinary and stratified Assisi historic center, and the other Franciscan places, which have marked the artistic history in Europe as well as in other continents.

Threats to the historic fabric include earthquakes, which have been a factor in Assisi and the surrounding Umbrian region since early times. Tourism may present an additional threat, as this is one of Italy's major tourist sites and a principal Christian pilgrim site after the Vatican.

Authenticity

Assisi has maintained its authenticity in a remarkable manner. The town's urban fabric continues to reflect the influences of various époques. Evidence of the Umbrian-Roman town survives on which later urban projects developed. For example, the medieval defence system incorporated elements of ancient Roman structures. The present urban form evolved primarily from the late 15th through the 18th centuries and very little construction has taken place since the mid 20th century. The Roman form continues outside of the town walls with evidence of the ancient road system and land divisions, adapted in the medieval era. The forests and natural areas north and east of the town contain hermitage sites and monastic complexes. Moreover, forested areas linked with Saint Francis are still extant. In addition to the built fabric and cultural landscape, the important artistic works by Cimabue, Giotto, and other masters have been well preserved.

Much of the construction, from ancient times to the present, has been in limestone creating a distinctive Assisi type of stone construction giving unity throughout the various development periods as well as building types.

Assisi continues its medieval role as a spiritual centre for the Franciscan order and an important Christian pilgrimage. Even though the recent earthquake did cause some damage (e.g. collapse of parts of the vaults in the Basilica of San Francesco), the monuments and important art works have since been subject to restoration works following internationally accepted policies. A large number of historic documents found in the libraries, archives and museum, provide information on the individual monuments as well as the entire historic territory.

Protection and management requirements

The legal protective structure and management system are adequate, as the site exhibits a good state of conservation. The historic center and the religious complexes distributed in the territory are kept in an excellent conservation state, thanks to a systematic and continuous monitoring.

Protection of the site is guaranteed by several legal measures of protection that operate at national, regional, local level. The principal monuments and listed buildings of Assisi, such as the basilicas and other religious complexes as well as the listed urban and rural buildings, are protected by law and under the direct control of the competent offices of the Ministry of Cultural Heritage and Activities, responsible for art and architecture, archaeology, or archives. The local authority is in charge of controlling the implementation of the law and the legal norms. In addition, since 1950s, the entire municipal area is under legal protection for its natural environment and landscape value. In 1972, a first Master Plan, which identified the areas of protection and conservation and regulated the land use, was approved. This Master Plan is regularly updated to provide additional protection for heritage, including an inventory of extisting resources in the rural territory.

At a municipal level, the safeguarding of cultural heritage is reinforced both by an urban planning tool (the Structural Plan) and the World Heritage Management Plan. Together they support an integrated policy for the protection, preservation and valorization of the property. Specific guidelines for Assisi's cultural landscape conservation have also been developed and implemented. In addition, a study for the creation of an Observatory to monitor all the natural and anthropic factors related to the property has been undertaken.

An ad hoc office created by the Assisi Municipality is responsible for the management of the World Heritage property. The office is in charge of the Management Plan for the World Heritage property as well as for its valorization, promotion and monitoring over time. The Management Plan is re-evaluated and updated every five year in order to reassure the adequate safeguarding of the cultural heritage within the town and its territory. Further aims of the Management Plan are to support traditional artisan activities and agricultural production, and to promote cultural and educational initiatives that will bring attention to and understanding of the tangible and intangible heritage resources of the property.

Historic Centre of Urbino

Brief Synthesis

The small Italian hill town of Urbino became, for a short time during the Renaissance era, one of the major cultural centures of Europe. Today, the historic centre is defined by its Renaissance walls that survive virtually intact, complete with bastions. Within these walls, several buildings of extraordinary quality have been retained such as the Ducal Palace, the cathedral, the Monastery of Santa Chiara and a complex system of oratories.

The initial nucleus of the city evolved from a fortified Roman settlement dating from the 3rd and 2nd centuries BCE. The Romans built on the top of the hill where the Ducal Palace now stands and until the 11th century, the city remained within these limits. At the end of that century, its urban expansion required the construction of a new system of defensive walls. In the mid 15th century, Federico da Montefeltro undertook a radical rebuilding campaign within these original walls without disturbing the overall urban structure. The city was later further expanded to a second hill lying to the north, giving the area, now enclosed by the Renaissance walls an elongated outline.

Urbino is a small city in the hills that experienced an astonishing cultural flowering in the 15th century. During this period, it attracted artists and scholars from all over Italy and beyond which, in turn, influenced cultural developments elsewhere in Europe. Between 1444 and 1482, Federico da Montefeltro ruled in Urbino and his court brought together some of the era's leaders: foremost humanists of the time such as Leone Battista Alberti, Marsilio Ficino, and Giovanni Bessarione; mathematicians like Paul van Middelburg; and artists such as Luciano Laurana, Francesco di Giorgio Martini, Paolo Uccello, Piero della Francesca and Ambrogio Barocci. These men created and implemented outstanding cultural and urban projects. This cultural climate made it possible for Raffaello, Donato Bramante and the mathematician Luca Pacioli to flourish in their own art and science.

Criterion (ii): During its short cultural pre-eminence, Urbino attracted some of the most outstanding humanist scholars and artists of the Renaissance, who created there an exceptional urban complex of remarkable homogeneity, the influence of which was carried far into the rest of Europe.

Criterion (iv): Urbino represents a pinnacle of Renaissance art and architecture, harmoniously adapted to its physical site and to its medieval precursor in an exceptional manner.

Integrity

Urbino appears as a continuous and unified space defined today, as it has been for many centuries, by the Renaissance walls. Within these walls, a significant number of buildings from that era survive. Some demolitions occurred in the early 19th century, however, when the squares and roads were expanded. No major threats to the historic centre have been identified.

Authenticity

The authenticity of the Historic Centre of Urbino is high as it has retained much of its urban form in terms of street layout within the Renaissance walls. As a result, it has preserved its spatial characteristics and volumes, dating back to the older medieval layout, with its narrow streets, as well as to the subsequent Renaissance additions. Even the interventions from the 18th and 19th centuries left the Renaissance layout almost completely untouched. The building of a new theatre, designed by Vincenzo Ghinelli situated beside Francesco di Giorgio's tower, was compatible in style and proportions with its neighbours.

Moreover, it has preserved its authenticity through the use of traditional and historical techniques and building materials in the maintenance and restoration work on buildings and in the public areas of the historic centre, preserving the formal characteristics, types and dimensions of existing architecture. The interventions in the town planning have never transformed the older constructions, perfectly complying with the urban landscape and the morphological conformation of the site.

Protection and management requirements

The historic centre is regulated by national laws and by town planning and local building regulations.

National laws directly safeguard many individual monumental buildings in the historic centre as well as in the surrounding fortifications. The centre is also protected as a conservation area with a specific landscape protection planning control as well as an archaeology protection control.

Local town planning and building laws define the criteria and methods used for preserving the historic heritage. These standards and regulations guarantee the protection of the urban layout, architectural character, type of buildings, embellishments, and finishing techniques for building fronts. Specifically, the Municipality has undertaken a planimetric survey of all buildings in the historic centre, which made it possible to classify them according to type, degree of integrity and definition of permitted intervention limits. In addition to this inventory, detailed surveys of building façades along the main thoroughfares, together with painstaking archival research has provided documentary and methodological support for the planning of maintenance and restoration interventions to those façades.

The safeguarding of the landscape in support of the image of the historic centre is implemented through regulations for integral protection as laid down in the General Zoning Plan applied to the whole area of hills that can be seen from the circuit of the city walls. This area coincides with the buffer zone. Within this zone it is only possible to carry out requalification interventions to the plant and tree resources and to cultural and historic heritage, together with limited and properly calibrated interventions for the provision of underground parking to improve access to the historic area and to implement a definitive area for pedestrians only.

Based on these protection tools, all conversion works in the World Heritage property are subject to council planning permission, and to the specific opinion of the competent territorial office of the Ministry of Cultural Heritage and Activities. These procedures are in place to prevent any harm to the integrity of cultural heritage as

well as any damage to the perspective, or light or any alteration to environmental conditions or decorative features.

The World Heritage property of Urbino is managed by a group of public entities working in different roles and at different levels. The Ministry for Cultural Heritage and Activities manages the safeguarding and conservation of cultural heritage through its competent offices. The city administration has the task of defining and putting strategies in place for conservation and management through town planning means, developing laws regulating activities within the site, and cultural promotion actions. Other bodies, such as the regional authorities, collaborate in protection, conservation and management activities as well as in promoting actions for capitalizing the town's cultural heritage. The Archdiocese and the University of Urbino, as well as the Province of Pesaro and Urbino and the city administration plays an essential role in maintaining and enhancing their heritage. The city administration is also responsible for developing, coordinating and implementing the Management Plan that was first approved in 2013.

Val d'Orcia

Brief Synthesis

Val d'Orcia, in the Province of Sienna, Tuscany (central Italy), is a rural agricultural landscape that retains much of its Renaissance layout, character and aesthetic. The landscape of Val d'Orcia is layered with evidence of human occupation and settlement extending over thousands of years. The area was important during the Etruscan period and developed during the era of the Roman Empire. In the Middle Ages, agricultural and pastoral production declined and much of the area seems to have been abandoned. A period of economic revival and political stability in the 10th and 11th centuries led to the establishment of monasteries, increased use of the Roman-period Via Francigena (an important religious and trade route linking Rome and northern Italy) and the development of villages under a feudal system.

However, it was the dramatic expansion of the city-state of Sienna in the 13th and 14th centuries that led to the creation of Val d'Orcia's distinctive rural landscape. The landscape became strongly associated with Renaissance (14th-15th centuries) utopian ideals and an ideology expressed, for example, in a circa 1339 painting by Ambrogio Lorenzetti in the Sienna Town Hall. Wealthy Siennese merchants invested in the development of agriculture, turned the Val d'Orcia landscape into productive farmland, and introduced an innovative land tenure framework (whereby small-landowners paid half of their agricultural produce to merchants as rent). Merchants supported the development of settlements, built fortifications, villas and churches and commissioned paintings by artists such as Giovanni di Paolo and Sano di Petri, artists who reinforced the Renaissance utopian ideals on which the landscape was created.

Following the weakening of Siennese power at the end of the 16th century, the Val d'Orcia gradually declined in economic importance. The comparative poverty and marginalization of the area over the following four centuries had the effect of sustaining traditional land-use patterns and structures and thus retaining the Renaissance layout, character and aesthetic of the landscape. In 1999, on the initiative of five municipalities, the area was declared a regional park whose purpose was to protect and manage the cultural and natural values of the area.

The Val d'Orcia distinctive landscape comprises a network of farms, villages and towns reflecting the Renaissance agricultural prosperity, the mercantile wealth of Sienna, the need for defence, and a utopian aesthetic. The working landscape of fields, farms, trees, and woodlands, is interspersed with low, conical hills on the summits of which are situated towns and villages. The major hill towns of the area include Pienza (a separate World Heritage property), Montalcino, San Quirico d'Orcia, Castiglione d'Orcia, Rocca d'Orcia, Monticchello and Radicofani. Distinctive groups and avenues of cypress pine trees mark out the settlements and define routes.

The area comprises small-scale, mixed-produce farms on which grain, vines, olives, fruit, and vegetables are cultivated. The landscape is interspersed with hay meadows and open pasture fields with livestock. The agricultural landscape, which was inspired by and influenced Siennese painters of the Renaissance, has continued to incite – for example, travellers of the European 'Grand Tour' and modern-day photographers. Their images and descriptions have come to exemplify an idealised aesthetic of a Renaissance agricultural landscape.

The boundary of the World Heritage property coincides with the boundaries of the modern-day Park of Val d'Orcia (Parco Artistico Naturale e Culturale della Val d'Orcia).

Criterion (iv): The Val d'Orcia is an exceptional reflection of the way the landscape was re-written in Renaissance times to reflect the ideals of good governance and to create an aesthetically pleasing picture.

Criterion (vi): The landscape of the Val d'Orcia was celebrated by painters from the Sienese School, which flourished during the Renaissance. Images of the Val d'Orcia, and particularly depictions of landscapes where people are depicted as living in harmony with nature, have come to be seen as icons of the Renaissance and have profoundly influenced the development of landscape thinking.

Integrity

The 61,188 hectare property, along with the 5,660 hectare Buffer Zone, encompasses all the elements necessary to understand the Renaissance cultural landscape that is the basis for Outstanding Universal Value. The intactness of the property is evidenced in the size, extent, layout, and character of the planned Renaissance

agricultural landscape with its largely intact settlements (towns, villages, farm complexes) and evidence of the Roman Via Francigena (and associated abbeys, inns, shrines, and bridges). The property incorporates most of the five municipalities established when the landscape was created in the 14th-15th centuries. The wholeness of the Val d'Orcia is visible in the number of surviving and largely original Renaissance-period structures; in the well-preserved layout of the towns and farms; and in the continued agricultural usage of the landscape. The cypress pines that mark out settlements and routes make a distinctive contribution to the wholeness and integrity of the property.

A few areas of the original planned Val d'Orcia landscape have been incorporated into the Buffer Zone because they have been subject to intensive change related to modernisation of agriculture. However, the cultural landscape remains generally well-preserved and can be easily understood by visitors for its Renaissance aesthetic.

Authenticity

The Val d'Orcia is a cultural landscape and rural agricultural ensemble that is well preserved and authentic in its form and design, materials, use and function, management system, setting, and spirit and feeling. The high degree of authenticity of the Val d'Orcia derives notably from its history of comparative neglect and marginalization after the sixteenth century.

The layout of the property is clearly recognisable as a Renaissance agricultural landscape that reflects an idealised form and design. The form and design is further evidenced in paintings of the Siennese School of the period. The materials of the built structures (fortifications, villas, churches, streets, farmhouses), many dating to the Renaissance period, along with their architectural forms, homogeneity and extent, are distinctive and historically truthful. The use and function of the land and built structures display long-term continuity with their Renaissance antecedents. Though the management system has changed through time, the Renaissance land tenure framework is evident in the scale and layout of the land divisions.

The landscape evidences the spirit and feeling of the Siennese painters and merchants who inspired and created the landscape of the Val d'Orcia. Artworks, such as those by Ambrogio Lorenzetti, Giovanni di Paolo and Sano di Petri, attest to the aesthetic influence of art on landscape and landscape on art. The aesthetic of the Val d'Orcia landscape is authentic in its ability to continue to inspire the production of art from the Renaissance to the modern day. Local citizens, politicians, farmers and entrepreneurs hold strong feelings of identity with, and pride in the Val d'Orcia.

Threats to the World Heritage property include tourism pressures, modernisation of farming, soil erosion, and gentrification of dwellings, of which the latter is perhaps of the greatest concern for its impact on the viability of local farming communities. Currently Val d'Orcia retains a high-level of truthfulness and credibility with regard to its expression of Outstanding Universal Value.

Protection and management requirements

National legislation for the protection and conservation of cultural heritage (Code for Cultural Heritage and Landscape) provides protection for some individual buildings and complexes in the Val d'Orcia. In addition, it protects ten acres of the World Heritage property including some town centres, surrounding areas and settings around individual sites. Competent offices of the Ministry of Cultural Heritage and Activities undertake monitoring to ensure compliance with national legislation.

'The Val d'Orcia Artistic, Natural and Cultural Park' (Parco Artistico Naturale e Culturale della Val d'Orcia) was created in 1999 to coordinate the management of the natural and cultural features of the region. Management responsibility in the Park of Val d'Orcia lies with the five municipalities (Montalcino, Pienza, San Quirico d'Orcia, Castiglione d'Orcia, Radicofani). Land tenure includes a mix of public, ecclesiastical, and private ownership.

The principal management tool for the property is the Management Plan, which focuses on the management of the area as a 'living landscape'. The Management Plan is comprehensive, ambitious, and inclusive; and stresses the need to share knowledge and increase awareness of local history and heritage values among administrators and the local population. The plan's objectives include environmental tourism development, promotion and support of traditional agriculture and agricultural products, ecological rehabilitation; and coordination of infrastructure works (e.g., power lines, road projects).

Despite the limited resources, the small size of the population living within the park enables effective levels of direct communication between park residents and management through consultation and information sharing. The park director meets regularly with the municipal authorities to discuss on-going park management.

Sustaining the Outstanding Universal Value of the property over time, will require the continued support of the local population; cooperation of the municipalities; resourcing for skilled staff and conservation projects; maintaining the landscape layout, character and 'Renaissance aesthetic', maintenance of built structures, natural features and cultural plantings such as the cypress pines and economic viability of the park through agricultural produce and tourism. These priorities must ensure that there is no negative impact on the attributes of Outstanding Universal Value, and on authenticity and integrity.

United States of America

Carlsbad Caverns National Park

Brief Synthesis

The more than 120 limestone caves within Carlsbad Caverns National Park are outstanding and notable world-wide because of their size, mode of origin, and the abundance, diversity and beauty of the speleothems (decorative rock formations) within. On-going geologic processes continue to form rare and unique speleothems, particularly in Lechuguilla Cave. Carlsbad Caverns and Lechuguilla Cave are well known for their great natural beauty, exceptional geologic features, and unique reef and rock formations. The Permian-aged Capitan Reef complex (in which Carlsbad Caverns, Lechuguilla and other caves formed) is one of the best preserved and most accessible complexes available for scientific study in the world.

Criterion (vii): The park's primary caves, Carlsbad and Lechuguilla, are well known for the abundance, diversity, and beauty of their decorative rock formations. Lechuguilla Cave exhibits rare and unique speleothems, including the largest accumulation of gypsum "chandeliers," some of which extend more than six meters (18 feet) in length.

Criterion (viii): Carlsbad Caverns National Park is one of the few places in the world where on-going geologic processes are most apparent and rare speleothems continue to form, enabling scientists to study geological processes in a virtually undisturbed environment. These speleothems include helictites forming underwater, calcite and gypsum speleothems, and an astonishing collection of "biothems," cave formations assisted in their formation by bacteria. Researchers can study both the Capitan reef's inside through cave passages that penetrate in and through it as well as eroded canyon-exposed cross sections outside.

Integrity

Aside from a relatively small percentage of the park which sees significant visitation, access to the backcountry caves is strictly controlled and limited. In Carlsbad Cavern, infrastructure and heavy visitation have caused significant changes to the delicate ecosystem. Invertebrate transects throughout Carlsbad Cavern have shown that infrastructure has changed cave habitats, and that materials left by visitors, such as hair, trash, and lint, have altered population distributions as well as the ecosystem as a whole. Research on microbes in both Spider and Lechuguilla Caves has been vital in improving our understanding of the role they play in geologic processes.

Outside pressure from oil, gas, and water extraction have the potential to impact cave and karst resources, as well as biological and even cultural resources of the park. Oil and gas development, including their associated drilling and seismic activities have continued to expand around and towards the park. The city of Carlsbad and other local users have increased the amount of water extracted from the Capitan Aquifer, a karst aquifer that underlies the park. Because these activities have the potential to adversely impact cave and karst resources in the park, it is vital that the park continue to identify and monitor those resources.

Protection and management requirements

Designated by the U.S. Congress in 1930 as a national park, Carlsbad Caverns National Park is managed under the authority of the *Organic Act* of August 25, 1916 which established the United States National Park Service. In addition, the park has specific enabling legislation which provides broad congressional direction regarding the primary purposes of the park. Numerous other federal laws bring additional layers of protection to the park and its resources. Cave specific legislation includes the Federal Cave Resources Protection Act of 1988 and the Lechuguilla Cave Protection Act of 1993, the latter of which was created to protect that specific cave from extractive activities near the park. Day to day management is directed by the Park Superintendent.

The management of the property is guided through a General Management Plan, Cave and Karst Management Plan, Management Policies, and a Comprehensive Interpretive Plan.

Park management plans for the property have identified a number of resource protection measures, such as environmental assessment processes, zoning, ecological integrity, visitor monitoring, and education programs to address pressures arising from issues both inside and outside the park.

Long-term protection and effective management of the site from potential threats require continued monitoring of resource conditions, additional research, and assessment of potential threats. The NPS Inventory and Monitoring (I&M) program, and the Chihuahuan Desert I&M network, of which Carlsbad Caverns National Park is a part, have developed several "vital signs" to track a subset of physical, chemical and biological elements and processes selected to represent the overall health or condition of park resources. In Carlsbad Caverns National Park, these vital signs include air quality, climate, invasive plants, landbirds, landscape dynamics, spring ecosystems, uplands vegetation and soils. Air quality monitoring of volatile organic compounds is used to determine threats from sources outside of the park, especially from adjacent oil and gas fields.

Everglades National Park

Brief Synthesis

Everglades National Park is the largest designated sub-tropical wilderness reserve on the North American continent. Its juncture at the interface of temperate and sub-tropical America, fresh and brackish water, shallow bays and deeper coastal waters creates a complex of habitats supporting a high diversity of flora and fauna. It contains the largest mangrove ecosystem in the Western Hemisphere, the largest continuous stand of sawgrass prairie and the most significant breeding ground for wading birds in North America.

Criterion (viii): The Everglades is a vast, nearly flat, seabed that was submerged at the end of the last Ice Age. Its limestone substrate is one of the most active areas of modern carbonate sedimentation.

Criterion (ix): The Everglades contains vast subtropical wetlands and coastal/marine ecosystems including freshwater marshes, tropical hardwood hammocks, pine rocklands, extensive mangrove forests, saltwater marshes, and seagrass ecosystems important to commercial and recreational fisheries. Complex biological processes range from basic algal associations through progressively higher species and ultimately to primary predators such as the alligator, crocodile, and Florida panther; the food chain is superbly evident and unbroken. The mixture of subtropical and temperate wildlife species is found nowhere else in the United States.

Criterion (x): Everglades National Park is a noteworthy example of viable biological processes. The exceptional variety of its water habitats has made it a sanctuary for a large number of birds and reptiles and it provides refuge for over 20 rare, endangered, and threatened species. These include the Florida panther, snail kite, alligator, crocodile, and manatee. It provides important foraging and breeding habitat for more than 400 species of birds, includes the most significant breeding grounds for wading birds in North America and is a major corridor for migration.

Integrity

Everglades National Park, at 610,670 hectares, of which 567,000 hectares were inscribed as a World Heritage site (the park has since been expanded), is at the center of a complex of federal and state (Florida) protected areas, including the Big Cypress National Preserve (295,000 hectares), Biscayne National Park (70,000 hectares), Dry Tortugas National Park (24,300 hectares), 10 National Wildlife Refuges, and the Florida Keys National Marine Sanctuary. Just to the north (upstream) of the park the wetlands are protected within Florida state-managed Water Conservation Areas (350,000 hectares). To the east of the park Miami-Dade County has established an urban development boundary, preserving a buffer area of rural and agricultural lands from rapid urbanization.

Within Everglades National Park strict natural, managed natural and developed zones have been identified, and 86% of the park is in federally legislated wilderness. In keeping with the tenor of the 1934 authorizing legislation, the development of visitor facilities has progressed according to a concept of preserving the park's essential wilderness qualities and keeping developmental encroachments to a minimum. About 0.1% of the park can be considered developed. While the park contains just 20 percent of the original Everglades ecosystem, it is a good representation of the range of original habitats.

Water management manipulations have been recognized as the largest environmental threat to the park and the larger Everglades ecosystem. The water flow volumes into the northern boundary of the park are believed to have decreased by approximately 60 percent compared to estimates of pre-drainage flows. Problems with water quality and with changes in the timing and distribution of inflows have also been well documented, and these have had detrimental impacts on the native wildlife and vegetation populations. The park's legal boundaries encompass the southern end of a 4,660,000 hectares watershed that covers the southern third of the State of Florida. Water is diverted in upstream areas to provide flood protection and water supply for the expanding south Florida human population. In the northern wetlands of the park, reduced inflows have caused a loss of deep-water slough communities that are required to support healthy populations of fish and aquatic invertebrates, and wading bird populations are estimated at just 10% of pre-drainage levels. Elevated nutrients from agricultural effluents have altered the natural populations of emergent plants, leading to invasions by nutrient tolerant species, and a loss of the algal associations known as periphyton. Increased salinity in Florida Bay, due to reduced freshwater deliveries, has contributed to major changes in submerged aquatic vegetation, declines in many sportfish, and the spread of algal blooms.

The park is also facing a challenge from the introduction of numerous non-native species, including in particular the Burmese python, which has proliferated in the park. Loss of organic soils across park habitats, due to wildfires and oxidation associated with overdrainage, occurred during and after the major elements of the water management system were constructed between 1900 and 1970. Although hurricanes are a natural phenomenon in the region, intense or frequent storms can damage the already strained ecosystem. Finally, increasing ocean acidification may affect biogeochemical processes related to carbonate precipitation, particularly along the southwestern boundary between Florida Bay and the Gulf of Mexico.

Protection and management requirements

Designated by the U.S. Congress in 1934 as a national park, Everglades National Park is managed under the authority of the *Organic Act* of August 25, 1916 which established the United States National Park Service (NPS). In addition, the park has specific enabling legislation which provides broad congressional direction regarding the

primary purposes of the park. Numerous other federal laws bring additional layers of protection to the park and its resources. Day to day management is directed by the Park Superintendent.

Management goals and objectives for the property are guided through the General Management Plan and the park's Foundation Document, which provides additional guidance for planning and management. In addition, the NPS has established Management Policies which provide broader direction for all units nation-wide, including Everglades National Park.

Strong cooperative partnerships and/or formal agreements are in place with the various Federal, State, Local, and Tribal governments that manage the Everglades. The South Florida Ecosystem Restoration Task Force formally coordinates the ecosystem restoration related programs of all of these agencies. Consultation with stakeholders is a requirement of the Everglades Restoration process. The Everglades Coalition, which brings together the major environmental non-governmental stakeholders in south Florida, works to bring greater attention to environmental protection requirements.

The native plant and animal communities of southern Florida are extremely vulnerable to disturbance from human activities, and are threatened by agricultural and urban expansion, drainage, deliberate and accidental burning, water and air pollution, and the introduction of exotic species.

Management actions primarily involve the implementation of flow restoration and water quality improvement projects to be constructed in the upstream basins, and focus on re-establishment of flow in the central part of the ecosystem, including the park.

Grand Canyon National Park

Brief Synthesis

The Grand Canyon is among the earth's greatest on-going geological spectacles. Its vastness is stunning, and the evidence it reveals about the earth's history is invaluable. The 1.5-kilometer (0.9 mile) deep gorge ranges in width from 500 m to 30 km (0.3 mile to 18.6 miles). It twists and turns 445 km (276.5 miles) and was formed during 6 million years of geological activity and erosion by the Colorado River on the upraised earth's crust. The buttes, spires, mesas and temples in the canyon are in fact mountains looked down upon from the rims. Horizontal strata exposed in the canyon retrace geological history over 2 billion years and represent the four major geologic eras.

Criterion (vii): Widely known for its exceptional natural beauty and considered one of the world's most visually powerful landscapes, the Grand Canyon is celebrated for its plunging depths; temple-like buttes; and vast, multihued, labyrinthine topography. Scenic wonders within park boundaries include high plateaus, plains, deserts, forests, cinder cones, lava flows, streams, waterfalls, and one of America's great whitewater rivers.

Criterion (viii): Within park boundaries, the geologic record spans all four eras of the earth's evolutionary history, from the Precambrian to the Cenozoic. The Precambrian and Paleozoic portions of this record are particularly well exposed in canyon walls and include a rich fossil assemblage. Numerous caves shelter fossils and animal remains that extend the paleontological record into the Pleistocene.

Criterion (ix): Grand Canyon is an exceptional example of biological environments at different elevations that evolved as the river cut deeper portraying five of North America's seven life zones within canyon walls. Flora and fauna species overlap in many of the zones and are found throughout the canyon.

Criterion (x): The park's diverse topography has resulted in equally diverse ecosystems. The five life zones within the canyon are represented in a remarkably small geographic area. Grand Canyon National Park is an ecological refuge, with relatively undisturbed remnants of dwindling ecosystems (such as boreal forest and desert riparian communities), and numerous endemic, rare or endangered plant and animal species.

Integrity

At nearly 500,000 hectares, and with 94% of the park managed for wilderness values, the property is large enough to ensure protection of all the geological and geomorphological values for which it was inscribed. Scenic values are also well protected, though these can be significantly impacted by air pollution originating from outside park boundaries. Natural quiet, an important component of the visitor experience, is impacted by aircraft overflights and other human caused sounds in some parts of the property. While visitor numbers can be considered high, impacts are concentrated in the relatively small part of the property that is developed.

The hydrological and ecological health of the Colorado River and its associated riparian zones have been altered and deteriorated since the building of the Glen Canyon Dam upriver from the property, completed in 1963. Work is on-going to modify flows from Glen Canyon Dam to promote additional restoration of near shore habitats and resource conditions.

Uranium mining has occurred outside park boundaries and is governed by a 2011 Secretarial decision that limits development to valid existing rights and places a moratorium on new mining activity. Any future development will need to be carefully permitted and managed through Best Management Practices to ensure protection of the property's Outstanding Universal Value.

Non-native species, from plants to fish to large mammals such as bison and elk also pose a management challenge. An increasing bison population in particular is emerging as a potentially important threat to the property.

Based on regional climate models, the Grand Canyon will be a warmer, drier place in the future. Precipitation levels are predicted to decline with warmer temperatures extending the dry season and reducing snowpack. A loss of moisture and snowpack can lead to an increase in wildfire activity. Increased wildfires release large amounts of greenhouse gases that increase carbon dioxide production into the atmosphere. Air pollution can also result from increasing temperatures. Climate change can cause erratic precipitation patterns that have the potential to increase the likelihood of flooding. As a result, these extreme events can lead to rockslides and wash-outs. Currently, the park monitors water resources and air quality and hopes to embark on geohazard monitoring in the near future.

Protection and management requirements

Designated by the U.S. Congress in 1919 as a national park, Grand Canyon is managed under the authority of the *Organic Act* of August 25, 1916 which established the United States National Park Service, and which directs park resources to managed "in such manner and by such means as will leave them unimpaired for the

enjoyment of future generations." In addition, the park has specific enabling legislation which provides broad congressional direction regarding the primary purposes of the park. Numerous other federal laws bring additional layers of protection to the park. Day to day management is directed by the Park Superintendent.

Management goals and objectives for the property have been developed through a General Management Plan, which has been supplemented with more site-specific planning exercises as well as numerous plans for specific issues and resources. In addition, the National Park Service has established Management Policies which provide broader direction for all National Park Service units, including Grand Canyon.

Park management plans for the property have identified a number of resource protection measures, such as environmental assessment processes, zoning, ecological integrity and visitor monitoring, and education programs to address pressures arising from issues both inside and outside the property. Specific measures have been introduced to address visitor capacity needs in sensitive resources areas of the Colorado River and wilderness areas of the park through management plans which structure visitor uses to best preserve park resources and values. Research, monitoring and management intervention are designed and implemented to mirror potential resource condition concerns. Active engagement with park partners, both within and outside park boundaries, assists in evaluating impacts to resources at a landscape scale. Examples include working directly with water managers in state and federal government agencies on flows from Glen Canyon Dam designed to protect and mitigate adverse impacts and improve the values within the property. Similarly, efforts continue to work with the gateway community of Tusayan to reduce potential developmental impacts upon the park so that compatible and sustainable developments are incorporated into future plans.

The national park works closely with other land and water management agencies in the larger region to protect shared resources. One example is the Southern Rockies Landscape Conservation Cooperative, a partnership of federal agencies which brings together science and resource management expertise to inform climate adaptation strategies and address other stressors within this ecological region.

Long-term protection and effective management of the park from potential threats require continued monitoring of resource conditions, such as through the NPS Inventory and Monitoring (I&M) program. The Southern Colorado Plateau I&M Network, of which Grand Canyon National Park is a part, has developed several "vital signs" to track a subset of physical, chemical and biological elements and processes selected to represent the overall health or condition of park resources. In Grand Canyon National Park, these vital signs include water quality, bird communities, springs, aquatic macroinvertebrates and upland vegetation and soils.

Management of the OUV of the property is undertaken alongside close attention to the park's important cultural heritage, which lies in its classic example of human adaptation to a severe climatic and physiographic environment. Unique cultural adaptations made by diverse cultural groups over millennia —such as establishing travel routes from river to rim, high elevation farming, and using varied microenvironments seasonally across the region—nurtured life in the rugged, remote Grand Canyon. These same adaptive strategies are found in neighboring tribes' historic and present-day land use. This ancestral tie to the park and the land is manifest in the recognition of traditional association with at least 11 federally recognized American Indian tribes including the Havasupai, Hualapai, Hopi, Navajo, Southern Paiute, and Zuni. Park management routinely works with these tribes on various issues including access and accommodation to park resources, development of interpretive plans, formal consultation on planning documents and directives, and educational outreach.

Redwood National and State Parks

Brief Synthesis

The parks' primary feature is the coastal redwood forest, a surviving remnant of the group of trees that has existed for 160 million years and was once found throughout many of the moist temperate regions of the world, but is now confined to the wet regions of the west coast of North America. The parks contain some of the tallest

and oldest known trees in the world. Rich intertidal, marine and freshwater stream flora and fauna are also present in the two distinctive physiographic environments of coastline and coastal mountains that include the old growth forest and stream communities.

Criterion (vii): Redwood National and State Parks comprise a region of coastal mountains bordering the Pacific Ocean. It is covered with a magnificent forest of Coast Redwoods *(Sequoia sempervirens)*, the tallest living things and among the most impressive trees in the world. Several of the world's tallest known trees grow within the property.

Criterion (ix): Redwood National and State Parks preserve the largest remaining contiguous ancient coast redwood forest in the world in their original forest and streamside settings.

Integrity

The 16,442 hectares of old growth redwood forest in Redwood National and State Parks preserves some of the largest remaining contiguous ancient coast redwood forest in the world. However, at the time of inscription, the property also included approximately 15,400 hectares which had been intensively logged for coast redwoods and other old growth forest species. Much of the land that was added to the national park in 1978 was logged prior to inscription. The legislation expanding the park called for a watershed rehabilitation program to restore the damage caused by clearcutting. Uncut old growth forests in the site are being afforded maximum protection under laws and policies governing the management of all U.S. National Park Service units and California State Parks (CSP).

Some of the logged lands were replanted by timber companies, but typical post-logging silvicultural practices such as thinning were not completed after the lands became parklands. Other lands in the site were not planted but were allowed to regrow without any management. These stands of second-growth forest do not possess structural, ecological, and aesthetic characteristics typical of uncut old growth forests. Vegetation ecologists and foresters believe that development of late seral/old growth conditions will be delayed in some second growth stands unless silvicultural practices are employed. Because of the extent of past logging, thousands of hectares within the property do not possess the qualities that give outstanding international significance to the site or provide adequate habitat for threatened species such as the marbled murrelet. The National Park Service and California State Parks are developing plans to restore second growth forests and to shorten the time needed for logged forests to re-attain characteristics of late seral forests.

The watershed rehabilitation program has removed several hundred km of old logging roads that threatened the integrity and function of park watersheds. Redwood National and State Parks continue to work with private landowners to reduce threats to park resources by reducing the impacts from poorly constructed and maintained logging roads outside park boundaries.

The property includes 60 km of remote coastline that provides important habitat and breeding grounds for shorebirds, seabirds, marine mammals, and rockfish. The ocean waters off the coast of the property are additionally designated as the Redwood National Park Area of Special Biological Significance (ASBS) and are protected from waste discharges by regulations of the State Water Resources Control Board. However, the property does face an ongoing challenge from sea level rise, changes in ocean acidity, and invasive species.

Protection and management requirements

Redwood National and State Parks are owned by the United States Government and by the State of California.

Redwood National Park was established by the U.S. Congress in 1968 to provide permanent protection of old growth redwood forests and associated ecosystems, including lands within three state parks established by the California Legislature in the 1920s (Prairie Creek Redwoods, Del Norte Coast Redwoods, and Jedediah Smith Redwoods). In establishing Redwood National Park with the three State Parks embedded within its boundaries, Congress established a federal park with a total acreage of 22,646 hectares. In 1978, Congress expanded the park to protect irreplaceable redwood forests from damaging upslope and upstream land uses. Congress acquired 19,281 hectares for a total park size of 41,927 hectares. Total area of old growth redwood forest inscribed in 1980 was 16,193 hectares.

Since 1980, the park boundary has been modified a number of times, most notably in 1981, 1985, 2000, and 2005. From these modifications, the parks have acquired 12,241 hectares of new lands, of which 249 hectares are old growth redwood forests. As of 2018, the size of Redwood National and State Parks is 54,168 hectares and the total area of old growth redwood forests is 16,442 hectares.

In May 1994, the National Park Service and the California Department of Parks and Recreation signed a Cooperative Management Agreement to manage the four park units cooperatively as Redwood National and State Parks. The parks are managed in perpetuity for protection of resources and visitor enjoyment under Federal and State statutes. Redwood National Park is managed under the authority of the National Park Service Organic Act which established the United States National Park Service. In addition, the park has specific enabling legislation which provides broad congressional direction regarding the primary purposes of the park. Numerous other federal laws bring additional layers of protection to the park and its resources. Day to day management is directed by the Park Superintendent.

Management goals and objectives for the property have been developed through a joint General Management Plan/General Plan, which has been supplemented in recent years with more site-specific planning exercises as

well as numerous plans for specific issues and resources. In addition, both the National Park Service and California State Parks have established Management Policies which provide broader direction for all National Park Service units and California State Park units, including Redwood National and State Parks.

The national park works closely with other land and water management agencies in larger North Pacific region to protect shared resources.

The California State Parks also works closely with other land and water management agencies in larger northwest region of the State to protect shared resources. Long-term protection and effective management of the site from potential threats requires continued monitoring of resource conditions, such as through the NPS Inventory and Monitoring (I&M) program. The Klamath I&M network, of which Redwood is a part, has developed several “vital signs” to track a subset of physical, chemical and biological elements and processes selected to represent the overall health or condition of park resources. In Redwood, these vital signs include bird populations, invasive species, intertidal communities, terrestrial vegetation, land cover and land use, and others.

Park managers conduct planning and park operations with input and support from partners including scientific and educational institutions such as Humboldt State University, NGOs including Save the Redwoods League and Smith River Alliance, local land managers and stakeholders, and indigenous peoples, including the Yurok Tribe, Tolowa Dee-ni’ Nation, and Elk Valley Rancheria. These valuable and increasingly important partnerships help ensure that the redwood forests and associated ecosystems are well protected and where needed, implementation of restoration projects are funded to preserve in perpetuity these magnificent world resources.