

LATIN AMERICA / CARIBBEAN

**TEHUACÁN-CUICATALÁN VALLEY:
ORIGINARY HABITAT OF MESOAMERICA**

MEXICO



Cactus Landscape, Purrón © IUCN / Thora Amend

WORLD HERITAGE NOMINATION – IUCN TECHNICAL EVALUATION

TEHUACÁN-CUICATLÁN VALLEY: ORIGINARY HABITAT OF MESOAMERICA (MEXICO) – ID N° 1534 Rev

IUCN RECOMMENDATION TO WORLD HERITAGE COMMITTEE: To inscribe the nominated property under natural criterion (x).

Key paragraphs of Operational Guidelines:

Paragraph 77: Nominated property meets natural criterion (x).

Paragraph 78: Nominated property meets integrity, and protection and management requirements.

Background note: In 2016, Tehuacán-Cuicatlán Valley: originary habitat of Mesoamerica was nominated as a mixed site under cultural criteria (iii),(iv) and (vi) and natural criterion (x) and considered by the World Heritage Committee at its 41st session in 2017. At that time, the Committee, through decision 41 COM 8B.9, referred the nomination back to the State Party of Mexico to address a range of issues concerning both natural and cultural heritage. The State Party was also asked to elaborate on proposals to better integrate the management of natural and cultural heritage institutionally and within management plans; to strengthen management resources and capacity; to address a range of issues pertaining to nature tourism planning and visitor management; and to refine governance systems to be more participatory. On natural heritage the State Party was requested to clarify that all attributes contributing to its proposed Outstanding Universal Value (OUV) were included within the serial property's boundaries as configured. Finally the State Party was asked to consider re-nominating the property also under criterion (ix) in view of its potential ecological significance.

To avoid repeating information, the Committee's attention is drawn to IUCN's previous evaluation of this property which provides detailed analysis (see WHC/17/41COM/INF.8B2).

1. DOCUMENTATION

a) Date nomination received by IUCN: Original nomination file received on 24 March 2016. Complementary information subsequent to Decision 41 COM 8B.9 was received by IUCN on 31 January 2018.

b) Additional information officially requested from and provided by the State Party: IUCN received the material submitted in response to Decision 41 COM 8B.9 following the World Heritage Panel meeting of December 2017. The dossier was reviewed and then considered by the IUCN Panel at its second and final meeting on 20 March 2018.

c) Additional literature consulted: IUCN reviewed numerous references which are listed in its 2017 evaluation of this nominated property.

d) Consultations: 6 desk reviews were received and considered in IUCN's 2017 evaluation of the nominated property. The IUCN representative from the 2016 field mission reviewed the referral document.

e) Field Visit: The original field mission was carried out by Thora Amend (IUCN) and Luisa Díaz Arriola (ICOMOS), 16-24 October 2016. As this was a referral decision, no further field visit was undertaken.

f) Date of IUCN approval of this report: May 2018

2. SUMMARY OF NATURAL VALUES

The Tehuacán-Cuicatlán Valley: originary habitat of Mesoamerica (TCV) is nominated for inscription on the World Heritage List as a national serial, mixed property under criteria (iii), (iv), (vi) and (x). The nominated property thus continues to be nominated under the same mix of cultural and natural criteria as originally proposed. The re-submitted material reports an overall nominated area of 145,255.20 ha with two different measurements provided for the buffer zone enveloping three components (344,931.68 ha in the text, and 284,239.78 ha in the table). Maps provided show an identical boundary to that which was originally nominated. However, the area measurements provided for each component and for the buffer zone and shown in tabular form are slightly different to those originally proposed: the nominated area is marginally larger (by 9.91 ha) whilst the buffer zone is 60,691 ha smaller (see updated Table 1 below). Given the total areas which are repeatedly used throughout the resubmitted nomination and the maps provided, IUCN understands these are inconsistencies in the information, but that the property as resubmitted is the same as originally nominated; however the precise areas should be confirmed with the State Party.

The nominated property is shared between the states of Puebla and Oaxaca in central-southern Mexico, within the country's southernmost arid and semi-arid region. TCV includes three component areas (called zones in the nomination dossier): Zapotitlán-Cuicatlán

(the largest of the component areas), San Juan Raya, and Purrón. Table 1 details the breakdown of areas making up the site.

Components	Region/District	Nominated area (ha)	Buffer zone (ha)
Zapotitlán-Cuicatlán	Puebla & Oaxaca	136,597.43	284,239.78
San Juan Raya	Puebla	6,106.64	
Purrón	Puebla	2,561.04	
TOTAL		145,265.11	284,239.78

Table 1 Component parts constituting the nominated property (note above that the nominated area and buffer zone measurements in the text are different, and should be clarified).

The nominated property continues to have a complicated alignment with the UNESCO Tehuacán-Cuicatlán Biosphere Reserve (TCBR), designated in 2012. The nominated area is entirely within the TCBR, however, there is an apparently different alignment of the nominated area with the biosphere reserve core zones.

IUCN provided a detailed description of the natural values reported for the nominated property in its 2017 evaluation and this will not be repeated in full here. In summary, TCV includes a diverse array of xeric shrublands, tropical deciduous forests, oak and pine forests as well as vegetation types of smaller extent such as palm groves or gallery forests. The smaller Purrón component has an area of 2,561 ha, mostly covered by tropical deciduous forest and to a lesser degree by xeric shrubland with a small area of riparian vegetation in good state of conservation. The San Juan Raya component, at 6,107 ha, is more isolated in the Tehuacán Desert. It is covered mainly by columnar cacti forest and by desert rosette shrubland. The Zapotitlán-Cuicatlán component is located in the main core zone of the TCBR. Of its area of 136,588 ha, 97,000 ha are covered by tropical deciduous forest, 13,420 ha by xeric shrubland - mainly columnar cacti forest, 4,651 ha by desert rosette shrubland, and the remainder is comprised of pine forests, oak forests, mixed pine-oak forests, yucca forests, grasslands and riparian vegetation. The region is reported as an arid or semiarid zone with one of the highest levels of biological diversity in North America, and the Valley is noted as a global biodiversity hotspot. It contains rare flora and plant biomes characterized by high levels of endemic and endangered species. Its fauna diversity surpasses that of any other drylands on the planet and, moreover, it is an outstanding agrobiodiversity centre. This region is renowned for its botanical significance across several plant families including the cactuses (Cactaceae), agaves, yuccas (Agavaceae), bromeliads (Bromeliaceae), Burseraceae and oaks (*Quercus* within the Fagaceae). IUCN also recalls its previous evaluation chronicled impressively high levels of faunal diversity in this region including very high levels of endemism among mammals, birds, amphibians and fish. TCV also hosts an unusually high number of threatened species with some 38 listed in the IUCN Red List of Threatened Species.

One of IUCN's chief concerns, documented within its original evaluation, was to confirm that the configuration of the site included a significant

proportion of the globally recognized natural values reported for the TCBR as a whole and the wider Tehuacán-Cuicatlán Valley. The State Party has provided detailed analysis of both floral and faunal diversity and endemism based on data from the National System of Biodiversity Information (SNIB) and from the National Commission for the Knowledge and Use of Biodiversity (CONABIO). Further spatial analysis has been undertaken corresponding to the polygon of the larger TCBR natural protected area which includes the nominated property. This additional analysis provides convincing evidence that the nominated property includes significant levels of the rich biodiversity which characterizes this region. Revised species lists are provided indicating, for plants, that the property includes some 44% of flora within the wider Tehuacán-Cuicatlán Valley and 50% of the species of the TCBR. It is noted that actual numbers might be even greater, since the records obtained from the SNIB database correspond only to the figures supplied by some 90 projects and studies. Additional analysis has also been provided for faunal diversity confirming that some 99 endemic vertebrate species are distributed within the nominated property.

In conclusion, IUCN considers that the deepened analysis has confirmed the property as configured includes significant levels of biodiversity which are characteristic of this known high-biodiversity region. It is clear however that values may extend beyond the property as nominated, and there would be scope to extend the property once more detailed species inventories are understood. One example is the reported findings of the Ecology Group from the Autonomous Metropolitan University (UAM) of Iztapalapa, who have registered 71 different species of plants established under the canopy of *Prosopis laevigata* (mezquite) in the sub-basin of Zapotitlán, north of the nominated property. It is also clear that there remain many gaps in the understanding of the biodiversity. The SNIB data is based on a range of projects with differing objectives and parameters and the information is acknowledged as incomplete.

3. COMPARISONS WITH OTHER AREAS

The Committee's attention is drawn to IUCN's 2017 evaluation of the comparative values of the nominated property at a global scale. In summary it was clear at the time of the previous evaluation that the TCV coincided with a region of known high biodiversity evidenced by the spatial overlay with global biodiversity prioritization systems such as biodiversity hotspots, priority ecoregions, centres of plant and genetic diversity and priority areas for birds. In addition, the TCV region has been identified in various past studies as a gap on the World Heritage List in terms of exceptional biodiversity values.

IUCN noted at the time shortcomings of the comparative analysis related to the inter-linkages in the landscape of human and natural features, which are the basis of the property's proposed Outstanding Universal Value story. While the dossier focuses on the "originary habitat of Mesoamerica", highlighting the

close relationship of people and nature, the comparative analysis, nonetheless, dealt with natural and cultural values and each criterion through separate independent analyses. This is still the case and reflects the need to progressively seek better integration, understanding and interpretation of the interplay between nature and culture in this mixed cultural landscape nomination.

In its previous evaluation IUCN noted that TCV is not nominated for criterion (ix), notwithstanding strong potential to meet this criterion based on the global comparative analysis. The State Party has responded to this suggestion noting it is not ready, at this time, to advance the property under criterion (ix) due to inconclusive evidence and the need for further analysis. IUCN notes that the nomination dossier begins to document the ecological and evolutionary significance of the region which coincides with three known ecoregions (Balsas Dry Forests, Tehuacán Valley Matorral and Sierra Madre del Sur Pine-Oak Forests) which are not yet represented on the World Heritage List. Moreover, over 70% of the nominated property is also found in the Southern Mexican Dry Forests priority ecoregion thus supporting the potential for future consideration of re-nominating the property also under criterion (ix).

Concerning criterion (x), IUCN's evaluation of the re-submitted nomination concludes that the site sustains high levels of plant biodiversity including cacti, agaves, yuccas, bromeliads, bursera and oaks. Furthermore, it hosts one of the highest animal biodiversity levels in a dryland, at least with regard to some taxa such as amphibians, reptiles and birds. There is also a very high level of endemism, both among plant and animal species (including rodents, reptiles and birds), as well as several globally threatened species. The TCBR, which encloses the nominated property, is listed amongst the top 0.20% most irreplaceable protected areas in the world for the survival of threatened species. TCBR encompasses over 10% of the global distribution range of four amphibian species, and is ranked as one of the two most important protected areas in the world for the conservation of seven amphibian and three bird species.

4. INTEGRITY, PROTECTION AND MANAGEMENT

4.1. Protection

IUCN in its previous evaluation concluded that protection status of the nominated property met the requirements of the Operational Guidelines, principally through the legal protection afforded to the TCBR through the Mexican General Law of Ecological Balance and Environmental Protection (LGEEPA). The LGEEPA law guarantees effective legal protection for the nominated property and directed the preparation of a management plan for TCBR with objectives to preserve the biodiversity of the Floristic Province of Tehuacán-Cuicatlán, thus maintaining the continuity of the ecological and evolutionary processes that take place in the area, as well as preserving the associated cultural and historical heritage. The management

framework and legal protection seem adequate and interactions with the wider landscape and connectivity needs are being taken into account in ensuring the adequate protection of the biosphere reserve.

There were, however, concerns regarding the overlaps with implementation of the TCBR. IUCN notes the mixture of zoning within the TCBR which overlaps with the nominated area and may complicate management. Nevertheless it appears the legal protection is sound.

IUCN considers that the protection status of the nominated property meets the requirements of the Operational Guidelines.

4.2 Boundaries

IUCN's concerns in the previous evaluation regarding boundaries stemmed from the lack of clarity surrounding the inclusion of attributes of OUV inside the three component areas being nominated. As noted above, the additional analysis of values provided by the State Party provides more convincing evidence that the necessary attributes to express OUV are indeed included within the nominated property. It is worth reiterating that the nominated area comprises 29.6% of the core and buffer zone area of the TCBR and the larger transition zone of the biosphere reserve provides a good degree of graded protection for the site. As noted above, the species inventory analysis indicates important values may still be found outside the areas as nominated suggesting potential for future extensions to the nominated property should it be inscribed.

The three components of the nominated property share the same single buffer zone which appears is of an adequate size to provide an additional layer of protection for nature conservation values within the component parts. The buffer zone also facilitates habitat connectivity between the three component parts and beyond, whilst also accommodating the sustainable use of certain zones within the TCBR.

More detailed maps provided by the State Party clarify the overlay between zoning system of the TCBR and the nominated property. This remains complex and potentially confusing however, it appears to represent an adequate management regime for the mixed property as is further discussed in 4.3 below.

IUCN considers that the boundaries of the nominated property meet the requirements of the Operational Guidelines.

4.3 Management

IUCN previously concluded that in general, an effective and well-established management system is in place for the natural values of the TCBR and thus the nominated property. The management of natural heritage is primarily through the National Commission of Natural Protected Areas (CONANP) which has a long established record of sound management. Cultural heritage and archaeological aspects are managed through the National Institute of Anthropology and History (INAH) and there is evidence

of increasing engagement between CONANP and INAH in the context of the mixed site nomination. The re-submitted information reports on positive relevant investments and strategic actions carried-out in a coordinated manner by these institutions, both to strengthen protection and management and build staff capacity. Agreements between CONANP and INAH include a commitment to meet at least once each 6-month period to coordinate and monitor compliance with specific projects being implemented in the property. Continued efforts are required to build a stronger integrative approach to managing natural and cultural issues assets at site level and to foster participatory approaches which empower local communities in planning and decision-making.

The State Party reports an update of the Strategic Management Plan through 2016/17 which better integrates the management of natural heritage with archeological features through a series of interrelated objectives, informed by the requirements of the Operational Guidelines. The plan provides a more up to date description of natural and cultural assets within the framework of a mixed World Heritage property and prescribes additional measures for the conservation and management of intangible cultural heritage, such as linguistic diversity and communities' sustainable development.

Additional information is also provided on the overlay of the nominated property with the zoning system of the TCBR. This shows the nominated property aligns with a mixture of protection, traditional use, sustainable natural use and special use zones. Whilst this diversity of zonings reflects the mixed site approach, it is nevertheless complex and challenging for stakeholders, users and even managers to interpret. Ongoing efforts are encouraged where possible to simplify and harmonize the zoning system within the nominated property.

The State Party has also outlined investments in the protection and management of the nominated property including a Global Environment Facility project on Strengthening of Management Effectiveness and Resilience of Natural Protected Areas aimed at protecting biodiversity threatened by climate change. Four consultancies are planned for 2018 covering public use programmes in the context of climate change scenarios; a monitoring and management programme for forest plagues and diseases in temperate forests; analysis of the distribution of vegetation and its connectivity in climate change conditions, through the updating of floristic inventories; and evaluating the sustainability of current and potential productive activities under future climate change scenarios. These additional investments are welcome, however, IUCN notes there is continued concern regarding the overall funding and staffing dedicated to the nominated property given the size of the TCBR and management responsibilities.

IUCN considers that the management of the nominated property meets the requirements of the Operational Guidelines.

4.4 Community

The State Party reported several new positive developments with respect to the Committee's request encouraging improved participatory governance for the property. These include a review of successful participatory processes and proposals to adopt CONANP's model governance systems from other sites in Mexico. The nominated property benefits from an Advisory Council established for the TCBR under the LGEEPA law and several other well-established mechanisms that support community livelihoods and sustainable development. A range of initiatives are documented; for example, plans to adopt and adapt the Sello Colectivo Calakmul (Collective Seal Calakmul) initiative designed and driven by the Calakmul Biosphere Reserve. This aims to create a regional identity and the marketing of products and services. As it applies to the mixed World Heritage site of Ancient Maya City and Protected Tropical Forests of Calakmul, Campeche, inscribed in 2014, it is seen as highly relevant for TCV.

IUCN noted a range of community related issues in its 2017 evaluation. There is clearly a long term commitment to working with communities, particularly through CONANP's policies in natural areas across Mexico. It will be important to grow the efforts to capture and share the benefits of a potential World Heritage inscription and to empower local communities in decision making, thus creating a culture of stewardship toward the site.

4.5 Threats

IUCN noted in its previous evaluation that the scope of threats was quite low. Population density is low and there is a trend of emigration. Nevertheless, the lack of personnel and funding is hampering the ability to manage a range of threats to the nominated property which include illegal trafficking of cacti, extraction of agave and natural resources for fuel and other purposes, hunting, overgrazing, deforestation, as well as secondary road impacts.

The nominated property has to date received relatively low numbers of visitors, in the order of 20,000 visitors per year. The State Party has advised of substantive progress in preparing an updated Nature Tourism Strategy for the TCBR. This responds positively and quickly to Committee Decision 41 COM 8B.9. The strategy was prepared in 2017 and considers responsible visitation as a potential World Heritage property. It is also aligned with the goals, strategies, actions and indicators of state and federal public policies for tourism, as well as with the wider management programme of the biosphere reserve. The strategy was developed consensually with community tourism businesses and of a group of ecotourism specialists. The document outlines the touristic systems as well as the community enterprises in each of the three main touristic regions of the TCBR. The strategy prescribes visitor carrying capacities in key areas. However, the challenge remains to see the

strategy implemented, including the envisaged infrastructure, long-term impact monitoring, and capacity building on many aspects for local communities.

IUCN in its previous evaluation detailed a number of other threats which continue to impact or potentially impact the nominated property; however programmes are in place and, for the moment, these are considered to be under control.

In conclusion, IUCN considers that in light of the additional information provided and advances in several areas, the integrity and protection and management requirements of the Operational Guidelines are met.

5. ADDITIONAL COMMENTS

5.1 Justification for Serial Approach

a) What is the justification for a serial approach?

IUCN has previously noted that the justification for a serial approach was not explicitly spelled out beyond an argument that the three component areas constitute the places which best represent the stated Outstanding Universal Value (including archaeological “highlights”) and which are in the best condition. The additional information from the State Party has confirmed the values existing within the nominated areas but it appears evident that these values potentially extend beyond the areas nominated.

b) Are the separate component parts of the nominated property functionally linked in relation to the requirements of the Operational Guidelines?

From the point of view of the natural values the serial configuration is ecologically linked by the good connectivity afforded by the much larger enveloping buffer zone which broadly aligns with the core and buffer zone of the TCBR. This ensures continuity of ecological processes and room for the continued development of ecological processes and critical habitats. IUCN continues to have some concerns regarding the viability of the smaller components. The improved species data suggests the possibility of future extensions should the nominated property be inscribed. It is noteworthy that there are significant areas within the biosphere reserve’s core preservation zone that have not been included within the three nominated components. With further research and inventory it may be found that many of these areas also contain significant nature conservation values.

c) Is there an effective overall management framework for all the component parts of the nominated property?

All three component areas form part of the TCBR which places them under a common legal framework and a single management system. The good inter-institutional coordination between CONANP and INAH is at an early stage but advances on cooperation and coordination are reportedly happening quite quickly and are thus encouraging. As noted in IUCN’s previous evaluation it will be critical to continue to work

toward the goal of stronger, long-term integration between nature and culture in the site.

5.2 Mixed site configuration

The cultural criteria, including evaluation of the justification of the nomination as a cultural landscape, will be evaluated by ICOMOS. Whilst IUCN considers the natural values of this site make a strong case for inscription there remain conceptual shortcomings as to how the property presents itself as a cultural landscape in line with paragraph 47 of the Operational Guidelines. The situation noted in 2017 remains. As IUCN noted at that time, the 22 archaeological sites included in the dossier are mostly discussed as stand-alone features, not in their natural context, or in terms of their co-evolution / dependencies on the natural setting. The nomination dossier suggests that exceptional biodiversity has led to great cultural diversity. This cultural diversity is argued to be reflected in archaeological remains, languages and pictographic evidences, technical innovations driven by adaptation to the harsh arid and semi-arid climate, leading to the domestication of wild plant species and development of the region as one of the important Vavilov centres of agro-biodiversity. However, in the field, the close interaction of humans with nature is only visible to the trained eye, as most features and infrastructure (like channels and Purrón Dam) have been reclaimed by natural succession. Should TCV be inscribed as a cultural landscape, IUCN recommends further fundamental reflection on how linkages in the landscape are identified, presented and better managed in an integrated fashion.

6. APPLICATION OF CRITERIA

Tehuacán-Cuicatlán Valley: originary habitat of Mesoamerica has been nominated under natural criterion (x) as well as under cultural criteria (iii), (iv) and (vi) which will be evaluated by ICOMOS.

Criterion (x): Biodiversity and threatened species

The Tehuacán-Cuicatlán Valley demonstrates exceptional significance for the remarkable level of biological diversity in an arid and semiarid zone in North America. A remarkable 70% of worldwide floral families are represented in the Valley, by at least one species, and the area is one of the main centres of diversification for the cacti family, which is highly threatened worldwide. A remarkable diversity of cacti exists within the nominated property often in exceptional densities of up to 1,800 columnar cacti per hectare. The nominated property exhibits particularly high diversity among other plant types, namely the agaves, yuccas, bromeliads, bursera and oaks. Worldwide, it hosts one of the highest animal biodiversity levels in a dryland, at least with regard to taxa such as amphibians, reptiles and birds. The nominated property coincides with one of the most important protected areas worldwide for the conservation of threatened species encompassing over 10% of the global distribution range of four amphibian species, and is ranked as the one of the two most important protected areas in the world for the

conservation of seven amphibian and three bird species. The biodiversity of this region has a long history of sustaining human development and today a third of the total diversity of the Tehuacán-Cuicatlán Valley, some 1,000 species, are used by local people.

IUCN considers that the nominated property meets this criterion.

7. RECOMMENDATIONS

IUCN recommends that the World Heritage Committee adopts the following draft decision, noting that this will be harmonised as appropriate with the recommendations of ICOMOS regarding their evaluation of this mixed site nomination under the cultural criteria and included in the working document WHC/18/42.COM/8B.ADD:

The World Heritage Committee,

1. Having examined documents WHC/18/42.COM/8B.ADD and WHC/18/42.COM/INF.8B2.ADD;
2. Recalling decision 41 COM 8B.9;
3. Inscribes Tehuacán-Cuicatlán Valley: originary habitat of Mesoamerica (Mexico) on the World Heritage List under criterion (x);
4. Adopts the following Statement of Outstanding Universal Value:

Brief synthesis

The Tehuacán-Cuicatlán: originary habitat of Mesoamerica is located in central-southern Mexico, at the southeast of the State of Puebla and north of the State of Oaxaca. The property is a serial site of some 145,255 ha composed of three components: Zapotitlán-Cuicatlán, San Juan Raya and Purrón. All these share the same buffer zone of some 344,932 ha. The entire property is located within the Tehuacán-Cuicatlán Biosphere Reserve. The property coincides with a global biodiversity hotspot and lies within an arid or semiarid zone with one of the highest levels of biological diversity in North America, giving rise to human adaptations crucial to the emergence of Mesoamerica, one of the cradles of civilisation in the world.

Of the 36 plant communities, 15 different xeric shrublands are exclusive to the Tehuacán-Cuicatlán Valley. The valley includes representatives of a remarkable 70% of worldwide flora families and includes over 3,000 species of vascular plants of which 10% are endemic to the Valley. It is also a global centre of agrobiodiversity and diversification for numerous groups of plants, in which the cacti stand out, with 28 genera and 86 species of which 21 are endemic. Large "cacti-forests" shape some landscapes of the Valley making it one of the most unique areas in the world.

The property exhibits the impressively high levels of faunal diversity known in this region including very high levels of endemism among mammals, birds, amphibians and fish. It also hosts an unusually high number of threatened species with some 38 listed under the IUCN Red List of Threatened Species. The property is one of the richest protected areas in Mexico in terms of terrestrial mammals (134 species registered, two of them endemic to the Valley). The TCV is part of the Balsas Region and Interior Oaxaca Endemic Bird Area (EBA). There are 353 birds recorded, of which nine are endemic to Mexico. The property has eight known roosting areas of the threatened Green Macaw including a breeding colony.

Criteria

Criterion (x)

The Tehuacán-Cuicatlán Valley demonstrates exceptional significance for the remarkable level of biological diversity in an arid and semiarid zone in North America. A remarkable 70% of worldwide floral families are represented in the Valley, by at least one species, and the area is one of the main centres of diversification for the cacti family, which is highly threatened worldwide. A remarkable diversity of cacti exists within the property often in exceptional densities of up to 1,800 columnar cacti per hectare. The property exhibits particularly high diversity among other plant types, namely the agaves, yuccas, bromeliads, bursera and oaks. Worldwide, it hosts one of the highest animal biodiversity levels in a dryland, at least with regard to taxa such as amphibians, reptiles and birds. The property coincides with one of the most important protected areas worldwide for the conservation of threatened species encompassing over 10% of the global distribution range of four amphibian species, and is ranked as the one of the two most important protected areas in the world for the conservation of seven amphibian and three bird species. The biodiversity of this region has a long history of sustaining human development and today a third of the total diversity of the Tehuacán-Cuicatlán Valley, some 1,000 species, are used by local people.

Integrity

The property is of sufficient overall size and contains the key representative habitats and plant communities of the floristic province Tehuacán-Cuicatlán that convey its Outstanding Universal Value under criterion (x). The three components include relatively undisturbed areas of high conservation value quality and are embedded within a larger buffer zone all of which coincides with the Tehuacán-Cuicatlán Biosphere Reserve. Further protection is afforded by the biosphere reserve's larger transitional zone. The management systems are in place to address the various threats to the area and establish objectives, strategies and specific actions in coordination with key local, national and international stakeholders to address these threats including any adverse effects of development.

Protection and management requirements

The property Tehuacán-Cuicatlán Valley: originary habitat of Mesoamerica has effective legal protection to ensure the maintenance of its Outstanding Universal Value. At the time of inscription the property has a recently updated Strategic Management Plan which aims to integrate the management of natural heritage with archeological features through a series of interrelated objectives. The plan provides a description of natural and cultural assets within the framework of a mixed World Heritage property and prescribes additional measures for the conservation and management of intangible cultural heritage, such as linguistic diversity and communities' sustainable development.

The institutions in charge of implementing protective measures are the Ministry of Environment, the National Commission for Protected Areas (CONANP), the Federal Attorney General for Environmental Protection and the National Institute for Anthropology and History (INAH). For monitoring of biodiversity the National Commission for Knowledge and Use of Biodiversity and the National Forestry Commission coordinate with CONANP. All these institutions work together with the Administration Office of the Tehuacán-Cuicatlán Biosphere Reserve. Ongoing efforts are needed to ensure full integration and institutional coordination across issues related to natural and cultural heritage in accordance with the respective mandates of CONANP and IHAH. Both managing institutions are committed to actively working with local communities and efforts to strengthen these approaches are ongoing.

In comparison to other regions, current and potential threats are considered quite low, and the population density is low. Tourism use at time of inscription is relatively minimal, however, has the potential to rapidly grow. A Nature Tourism Strategy for the Tehuacán-Cuicatlán Biosphere Reserve (2018-2023) seeks to balance the protection of the property's Outstanding Universal Value with fostering responsible visitation that empowers local communities. Priority needs to be given to the adaptive implementation of this strategy based on monitoring the impacts.

Requests the State Party to:

- a) confirm to the World Heritage Centre the correct exact areas of the nominated components and buffer zone;
- b) conduct a more systematic inventory of fauna and flora within the property and the wider biosphere reserve and Tehuacán-Cuicatlán Valley to guide opportunities for further extension of the property;
- c) continue to strengthen participatory governance arrangements which work with local communities in harnessing tangible benefits from the World Heritage property.

5. **Welcomes** the improved integration of natural aspects with archaeological features within the updated Strategic Management Plan for the Cultural Sites within the property which complements the actions set forth in the Management Programme of the Tehuacán-Cuicatlán Biosphere Reserve and **encourages** continued harmonization between natural and cultural heritage management.

6. **Further welcomes** the updated Nature Tourism Strategy for the Tehuacán-Cuicatlán Biosphere Reserve (2018-2023) which seeks to balance the protection of the property's Outstanding Universal Value with fostering responsible visitation that empowers local communities and **encourages** the State Party to implement the strategy including the envisaged infrastructure, long-term impact monitoring, and tourism-related capacity building for local communities.

7. **Encourages** the State Party to consider in future re-nominating the property under additional natural criterion (ix) in recognition of the global ecological significance of this region which coincides with an arid and semiarid zone with one of the highest levels of biological diversity in North America.

Map 1: nominated property and buffer zone

