IUCN Conservation Outlook Assessment 2017 **(archived)**
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Tikal National Park

SITE INFORMATION

Country:
Guatemala
Inscribed in: 1979
Criteria:
(i) (iii) (iv) (ix) (x)

Site description:
In the heart of the jungle, surrounded by lush vegetation, lies one of the major sites of Mayan civilization, inhabited from the 6th century B.C. to the 10th century A.D. The ceremonial centre contains superb temples and palaces, and public squares accessed by means of ramps. Remains of dwellings are scattered throughout the surrounding countryside. © UNESCO

SUMMARY

2017 Conservation Outlook

Good with some concerns

Tikal National Park, a mixed World Heritage property and among the first inscriptions on the World Heritage List, has been conserving a particularly valuable part of the Selva Maya for many decades. The intricately linked ecological and species conservation values of the property cannot be separated from the broader Petén and the even larger transboundary Selva Maya region and the same holds true for the archeological values, which are part of much wider heritage. The natural values of the entire region are under increasing pressure (Guzmán, 2017; Hodgdon et al., 2015). While in a comparatively privileged position, the property is not immune to such pressure. Tourism has locally reached levels of mass tourism without adequate management responses and rapid population growth and simultaneous direct dependence on natural resources results in ever higher levels of hunting, poaching and collection of wild biodiversity products for subsistence and commercial purposes. Besides a permanent need to effectively manage the impacts of massive tourism and address illegal activities in the property, the future management and conservation of Tikal will also depend on the effectiveness of buffering the property from the broader developments in the Petén and the wider Selva Maya. The Maya Biosphere Reserve and existing transboundary efforts provide promising frameworks to cooperate at the landscape level.

Current state and trend of VALUES

Low Concern
Trend: Deteriorating

The intricately linked ecological and species conservation values of the property cannot be separated from the broader Petén and the even larger transboundary Selva Maya region. The natural values of the entire region are under increasing pressure. While in a comparatively privileged position, the property is not immune to such pressure. The pressure affecting the natural values is likely to

increase in the future due to the growing population in the immediate vicinity of the property. The species conservation values continue to be comparatively well-conserved so far. Nevertheless, it is clear that the future of far-ranging species with naturally low population densities, such as the large predators puma and jaguar relies upon the fate of the larger landscape.

Overall THREATS

High Threat

The declaration of the protected area and the simultaneous status as an archaeological site has buffered Tikal National Park from the profound landscape transformation in parts of the Petén region over the last decades. Nevertheless, as demand for land, pasture and natural resources is increasing so are the many threats, such as excessive poaching and harvesting, as well as fires. Tourism likewise runs the risk of exceeding the capacity of the property in the most visited areas. The threats from anticipated climate change and proposals for road construction in and near the property add further question marks.

Overall PROTECTION and MANAGEMENT

Some Concern

The highly visited areas of the relatively small property have an overall good level of management and protection even though the well-documented impacts of mass tourism to the archeological sites remain to be addressed comprehensively. The more remote areas of the property, however, are more vulnerable to real and potential risks without adequate management responses. In the longer run, the most important challenge will be the direct and indirect effects of the transformation of the broader Maya Forest region. The biosphere reserve model is an appropriate umbrella to address conservation and local development in integrated fashion but much remains to be done to translate the good intentions into practice.

FULL ASSESSMENT

Description of values

Values

World Heritage values

▶ **Intact ecosystem mosaic and processes**
Criterion:(ix)

Located on the southern reaches of the Yucatan Peninsula's karst plateau, Tikal National Park is one of the core zones of the vast Maya Biosphere Reserve, which in turn is part of the forest region sometimes referred to as Maya Forest, which extends into neighboring Belize and Mexico. The Maya Forest is one of Mesoamerica's largest and most important nature conservation gems, while also boasting an exceptional cultural heritage. The property hosts a very rich diversity of flora and fauna as a result of the ongoing evolution of species and ecological communities following the pre-Colombian collapse of the Mayan civilisation. The ongoing biological and ecological processes are conserved by the large scale of the Maya Forest, and particularly its many protected areas (World Heritage Committee, 2014).

▶ **High diversity of partially endangered fauna and flora**
Criterion:(x)

Major global biodiversity priority-setting exercises have identified the Petén Region and the Maya Forest as globally significant. Tikal National Park is one of several globally important protected areas in the Maya Forest, along with Calakmul in Mexico, likewise a mixed World Heritage property. More than 2,000 higher plants, including some 200 tree species, have been recorded in the national park, including numerous species of palms, epiphytes, orchids and bromeliads in the lush forests. Many endangered, threatened, vulnerable

and/or CITES listed species are found in the property. The more than 100 species of documented mammals include impressive 60 species of bats, five felids – Puma (Puma concolor), Ocelot (Leopardus pardalis), Jaguarundi (Herpailurus yagouaroundi) and the near-treatened Jaguar (Panthera onca) and Margay (Leopardus wiedii); the endangered Spider Monkey (Ateles geoffroyi), Mantled Howler Monkey (Alouatta palliata), river otter (Lontra longicaudis, NT) and the endangered Baird's Tapir (Tapirus bairdii). More than 330 bird species encompass the Ocellated Turkey (Meleagris ocellata), Crested Eagle (Morphnus guianensis) and Ornate Hawk-Eagle (Spizaetus ornatus), all near-threatened according to the IUCN Red List. Of the more than 100 reptiles the critically endangered Central American River Turtle (Dermatemys mawii) and 38 species of snakes stand out. In addition to 25 known amphibian species, there is a noteworthy freshwater fish fauna and a great diversity of invertebrates. Tikal and the broader Maya Forest are also known for the wild varieties of several important agricultural plants (World Heritage Committee, 2014).

Other important biodiversity values

► Other international designations

The Park lies within a Conservation International-designated Conservation Hotspot, a WWF Global 200 Eco-region, a WWF/IUCN Centre of Plant Diversity and is surrounded by a large UNESCO Biosphere Reserve.

Assessment information

Threats

Current Threats

High Threat

The broader landscape is in a process of rapid transformation due to considerable local population growth and corresponding demand for land,

pasture and natural resources. Hunting, fishing and collection of non-timber forest products for subsistence and commercial purposes, run the risk of exceeding the natural regeneration capacity. Regular wildfires of multiple origins jointly with severe weather events over the last years add further complexity.

▶ Other Biological Resource Use, Poaching

Low Threat
Inside site, extent of threat not known
Outside site

The rich and diverse forest resources have traditionally been used by indigenous peoples and local communities. Extraction of a broad range of non-timber forest products, including game and fish, is a common and much needed element of livelihood systems of indigenous peoples and local communities throughout the Maya Forest. Regulated legal harvesting of non-timber forest products occurs outside the park boundaries. While local resource use is an integral part of the longstanding human presence in the Petén, extraction is illegal in the property and harvesting levels need to be compatible with the productivity elsewhere (Ministerio de Cultura y Deportes, 2003; Parkswatch, 2002). It is clear that the use restrictions affect the relationship between local people and park management.

▶ Tourism/ visitors/ recreation

High Threat
Inside site, extent of threat not known

While primarily affecting the famous archaeological sites, tourism has locally reached levels of mass tourism raising concerns about impacts from disturbance, demand for illicit wildlife and plant products, and poorly managed sewage and solid waste (UNEP-WCMC, 2011; Fujisaki , 2002; Parkswatch, 2002; Trópico Verde. n.d.(c)). Even at the time of inscription, the World Heritage Committee (1979) expressed concern about tourism development and its potential impacts on the cultural and natural value of Tikal National Park.

▶ Housing/ Urban Areas, Livestock Farming / Grazing

High Threat

Outside site

A sharp population increase in a rural, resource-dependent setting inevitably increases pressure on natural resources. According to UNEP-WCMC (2011), the population of the Petén Province (Departamento) in which the property is located, has roughly quintupled between 1970 and 2000. Accordingly, the agricultural frontier and other pressures have advanced, especially on the southern boundary of the property. The property itself is indirectly affected, as the increasing pressure translates into higher risks of illegal activities in addition to affecting the surrounding landscape.

► Identity/ Social Cohesion/ Changes in local population and community

Low Threat
Inside site, extent of threat not known
Outside site

It is important to keep in mind that Guatemala has suffered from one of the longest and bloodiest civil wars in the region, which has deeply affected the societal fabric of the country. A peace agreement was struck only in 1996 after 36 years of war. Today, the Petén region is strongly affected by narcotrafficking and related violence (Elbein, 2016).

► Fire/ Fire Suppression

High Threat
Inside site, extent of threat not known
Outside site

Fires are one natural disturbance factor in the Selva Maya but the frequency and intensity of fires today is mostly anthropogenic. Fires are intentionally set to stimulate the growth of grass on pastureland, as a hunting and poaching method, and also used in the collection of wild honey (ACOFOP, 2017; Trópico Verde. n.d.(a)). Particularly along the southern boundary of the property settlers use fire to clear land. Other fires are caused by campfires of looters of archaeological sites and during harvesting of non-timber forest products. All these types of anthropogenic fires regularly run out of control. In other instances, illegal resource users caught by park staff are reported to have set forest fires in protest against the national park (Ministerio de Cultura y Deportes, 2003; Parkswatch, 2002). Despite full recognition of the challenge and important efforts to address it, fires remain a permanent threat, the importance of which is likely to increase under the expected

scenario of increasing temperature and more frequent weather extremes.

▶ Livestock Farming / Grazing

High Threat
Outside site

While the high-profile property provides a comparatively effective level of protection, the advancing agricultural frontier is a main driver of landscape change in the region (UNEP-WCMC, 2011; Ministerio de Cultura y Deportes, 2003; Parkswatch, 2002). Thereby, it affects the integrity of the entire region.

Potential Threats

High Threat

Climate change is among the overarching potential threats to the national park and its natural values in the longer term. As it is in essence beyond the scope of site management, the best investment in preparedness and adaptation is to not only prevent forest loss and degradation in the property but to address both at a landscape scale. The increasing road infrastructure in the Selva Maya affects the region by providing entry points for land and resource use. Further road construction or improvements of dirt roads within Tikal National Park would result in severe direct and indirect impacts.

▶ Temperature extremes

High Threat
Inside site, extent of threat not known
Outside site

Forest loss and degradation across large tracts of the trinational Selva Maya increases the vulnerability of the relatively small property to the anticipated impacts of climate change. Severe weather events, such as hurricanes, are expected to increase in frequency and intensity. If so, impacts on the property are highly likely (Ministerio de Cultura y Deportes, 2003).

▶ Roads/ Railroads

High Threat

Inside site, extent of threat not known
Outside site

Additional road infrastructure around the property - and even within it - has been repeatedly proposed. As well documented across the entire Selva Maya, road access to remote areas opens the door for a range of illicit activities and the agricultural frontier. This is already a challenge both on the northern and southern edges of the property (UNEP-WCMC, 2011; Ministerio de Cultura y Deportes, 2003). The most sensitive proposals for road construction are extensions of paved roads to the north: the paving the 23 kilometers of dirt road from the property's center to the village of Uaxactun linking a road from nearby Campeche and Quintana Roo to Tikal. Even though the probability of road construction remains unclear the threat is ranked as high due to the major impacts expected in case of construction.

Protection and management

Assessing Protection and Management

► Relationships with local people

Mostly Effective

The main conflict between the national park and nearby local communities and indigenous peoples in the surroundings are restrictions on the use of natural resources. Illegal activities are widespread and result in conflicts (Parkswatch, 2002). The approach of the Maya Biosphere Reserve encompassing the property is an attempt to balance conservation and sustainable use of natural resources.

► Legal framework

Mostly Effective

Tikal National Park has a legal protection status on both nature conservation and archaeological grounds (UNEP-WCMC, 2011). The framework is per se effective, while question marks remain in terms of the legal configuration of the property and the harmonization of objectives for natural and cultural heritage conservation, respectively.

▶ Enforcement

Some Concern

Law enforcement suffers from under-staffing and under-financing, as well as the focus on the central tourist areas. The more remote areas are vulnerable due to law enforcement constraints (UNEP-WCMC, 2011; CONAP, 2003; Parkswatch, 2002).

▶ Integration into regional and national planning systems

Mostly Effective

The integration of Tikal National Park as one of the core zones of the much larger Maya Biosphere Reserve provides a promising platform to integrate the management of the property into the wider landscape. Supported by external projects the government of Guatemala cooperates with neighboring Belize and Mexico on the conservation and management of the Selva Maya across national borders. While both the biosphere reserve approach and the transboundary efforts are promising, much remains to be done to realize the full potential.

▶ Management system

Some Concern

Management brings together the National Council of Protected Areas (CONAP) and the National Institute for History and Anthropology (IDAEH) (González, 2007). Management is coordinated with the surrounding Maya Biosphere Reserve, of which Tikal National Park is one of several core zones (Consejo Nacional de Áreas Protegidas, 2015). Ongoing conflicts and uncontrolled land and resource use in the surrounding indicate that the integrated biosphere reserve approach is working partially only. Guzmán (2017) noted that "rapidly changing land use has widened the gap between the official zoning scheme for the Reserve as established in the 2001-2006 Master Plan and the reality on the ground, further aggravating conflicts over land and resource use".

▶ Management effectiveness

Some Concern

Numerous international and national NGOs and research institutions, as well as bilateral and multilateral cooperation efforts support the management of the cultural and natural heritage. Ongoing illegal activities indicate ongoing constraints to effective management (UNEP-WCMC, 2011).

▶ Implementation of Committee decisions and recommendations

Data Deficient

As early as 1979, the inscription decision expressed concern about the possible impacts of a tourism development project on the cultural and natural values of the property (World Heritage Committee, 1979). In 1993, the Committee noted "prospects" to expand Tikal but this has so far not resulted in concrete attempts to do so. Follow-up to the Committee suggestion to promote sub-regional archaeological exchange is unknown and beyond the scope of this assessment.

▶ Boundaries

Some Concern

The boundaries of the property were designed to roughly cover what was considered the most important area from an archeological perspective in the 1950s. The rectangular shape is arbitrary from a nature conservation perspective. While the consequences are partially buffered by other protected areas and management measures in the surroundings, the usefulness of adapting the boundaries - noted by the World Heritage Committee - remains.

▶ Sustainable finance

Some Concern

Finance for management of the property stems from the government budget and revenues from entrance fees partially being re-invested. Project funding complements the overall financing. Concerns have been expressed about the transparency of the budget and the important tourism income (Parkswatch, 2002).

▶ Staff training and development

Data Deficient

Besides occasional opportunities for staff training in the framework of cooperation projects, there is no information available on a long-term training program. The management plan notes "limited staffing" due to resource constraints which hints at challenges (Consejo Nacional de Áreas Protegidas, 2015).

► Sustainable use

Some Concern

Key sources of information indicate that the use of wildlife and non-timber forest products is neither effectively controlled nor sustainable (Consejo Nacional de Áreas Protegidas, 2015; UNEP-WCMC, 2011; Parkswatch, 2002)

► Education and interpretation programs

Some Concern

Information about systematic efforts is limited. The management plan identifies the need to strengthen awareness-raising, education and interpretation on various occasions as a high priority, including as regards nearby communities in the context of looting of archeological heritage (Consejo Nacional de Áreas Protegidas, 2015). The same source notes "limited realization of the educational potential" in a tourism context.

► Tourism and visitation management

Some Concern

Tourism has significantly increased after decades of civil war with major potential for the local economy, conservation financing and visitor education. At the same time, there are important risks for both the cultural and natural heritage of the property. However, much remains to be done to maximize the benefits of tourism while minimizing its impacts. Since the inscription, there have been concerns about inappropriate tourism development (World Heritage Committee, 2014).

► Monitoring

Some Concern

Occasional studies conducted by research institutions and non-governmental

organizations shed important light on selected conservation issues. They do not amount to systematic monitoring though. The management plan for Tikal National Park (CONAP, 2003) identified more systematic monitoring as a priority while acknowledging considerable room for improvement.

▶ Research

Mostly Effective

Over the decades, a wealth of information has been generated through numerous research projects dedicated to various aspects of both the cultural and the natural heritage. Many studies fed into the elaboration of the 2003 Master Plan for the national park (CONAP, 2003). There is some concern that research on the natural heritage plays a secondary role compared to archeological studies (Parkswatch, 2002).

Overall assessment of protection and management

Some Concern

The highly visited areas of the relatively small property have an overall good level of management and protection even though the well-documented impacts of mass tourism to the archeological sites remain to be addressed comprehensively. The more remote areas of the property, however, are more vulnerable to real and potential risks without adequate management responses. In the longer run, the most important challenge will be the direct and indirect effects of the transformation of the broader Maya Forest region. The biosphere reserve model is an appropriate umbrella to address conservation and local development in integrated fashion but much remains to be done to translate the good intentions into practice.

▶ Assessment of the effectiveness of protection and management in addressing threats outside the site

Some Concern

Despite important and promising efforts to work with the growing communities around the property under the umbrella of the Maya Forest and transboundary initiatives in the Selva Maya, overall forest loss and degradation remain worrisome (ACOFOP, 2017; Guzmán, 2017; Hodgdon et

al., 2015; Trópico Verde. n.d.(a, b. c)).

State and trend of values

Assessing the current state and trend of values

World Heritage values

▶ **Intact ecosystem mosaic and processes**

Low Concern
Trend:Deteriorating

Similar to the directly linked species conservation values, the ecosystems within the national park are not only better protected than the surroundings but better protected than many other protected areas in the region due to the high profile of Tikal in Guatemala (Parkswatch, 2002). The major concerns are thus likewise the dynamics of the broader forest landscape and the direct and indirect effects of such processes on the property in the longer term rather than the property itself. In light of the projected impacts of climate change, increasing demographic pressure in the surroundings of the national park and consequently expected increases in poaching, illegal extraction and fires (Parkswatch, 2002) stronger efforts are needed for the management of the property itself.

▶ **High diversity of partially endangered fauna and flora**

Low Concern
Trend:Deteriorating

Many of the protected areas of the Guatemalan Petén and the vast trinational Maya Forest are subject to multiple and severe threats, including the ever advancing agricultural frontier, infrastructure development, climate change, poaching and illegal trade in species, looting and intentional and accidental fires. While Tikal National Park is not isolated from these broader trends, its national significance as a major archeological site and the international designations make it less vulnerable to some of the threats, such as land speculation. While detailed data is scarce, the assumption is that the overall situation is in line with the overall deteriorating trend of species conservation in the Maya Forest, while Tikal National Park is one of

the more effective protected areas within the region. Thereby, the species conservation values continue to be comparatively well-conserved. Nevertheless, it is clear that the future of far-ranging species with naturally low population densities, such as the large predators puma and jaguar relies upon the fate of the larger landscape.

Summary of the Values

▶ **Assessment of the current state and trend of World Heritage values**

Low Concern

Trend: Deteriorating

The intricately linked ecological and species conservation values of the property cannot be separated from the broader Petén and the even larger transboundary Selva Maya region. The natural values of the entire region are under increasing pressure. While in a comparatively privileged position, the property is not immune to such pressure. The pressure affecting the natural values is likely to increase in the future due to the growing population in the immediate vicinity of the property. The species conservation values continue to be comparatively well-conserved so far. Nevertheless, it is clear that the future of far-ranging species with naturally low population densities, such as the large predators puma and jaguar relies upon the fate of the larger landscape.

▶ **Assessment of the current state and trend of other important biodiversity values**

Data Deficient

Trend: Data Deficient

Additional information

Benefits

Understanding Benefits

► **Collection of wild plants and mushrooms, Fishing areas and conservation of fish stocks, Traditional agriculture, Livestock grazing areas**

Most local communities and indigenous peoples in the Petén largely and directly depend on natural resources for their livelihood systems. This creates conflicts in the national park, whereas the much larger biosphere reserve is an explicit umbrella for balancing strict conservation and sustainable use.

► **Outdoor recreation and tourism, Natural beauty and scenery**

Tikal is an internationally established tourism destination of national importance.

► **Importance for research, Contribution to education**

The property is of major significance for the understanding and demonstration of the ancient Maya civilization. From a natural sciences perspective, it is fascinating to conduct research in an ecosystem, which has been evolving since the still not fully understood catastrophic collapse of a highly sophisticated culture and civilization.

► **History and tradition, Wilderness and iconic features, Sacred natural sites or landscapes, Sacred or symbolic plants or animals, Cultural identity and sense of belonging**

The cultural heritage of the property is a major reference for the local and national identity. It must not be forgotten that the indigenous descendants of the Maya continue to live in what many today call the Selva Maya. The property is home to many iconic species of cultural and spiritual importance, including in contemporary nature conservation, such as the jaguar.

► **Carbon sequestration, Soil stabilisation**

The forests of the property contribute to all common benefits and environmental associated with forests, such as carbon sequestration and soil stabilization.

► **Collection of timber, e.g. fuelwood, Sustainable extraction of materials (e.g. coral, shells, resin, rubber, grass, rattan, etc)**

Across the entire Selva Maya local communities and indigenous peoples have been using timber for construction and energy, as well as a broad range of non-timber forest products for all sorts of purposes at all times. The restrictions of the national park create a dilemma in this regard.

► **Direct employment, Tourism-related income, Provision of jobs**

The mixed property generates local income and employment opportunities in park management, research projects and tourism.

Summary of benefits

The conservation of the extraordinary cultural and natural heritage of the property and the generation of information and knowledge are the overarching benefits. Tikal is a major, globally renowned tourism with important educational and local economic benefits. Embedded within the much larger Maya Biosphere Reserve, the property contributes to the maintenance of the many environmental services of a globally important forest region.

Projects

Compilation of active conservation projects

№	Organization/ individuals	Project duration	Brief description of Active Projects

1	CONAP; Ministry of Environment and Natural Resources of Guatemala (MARN); Inter-American Development Bank; Global Environment Facility	From: 2009 To: 2017	The project "Improvement of the Management Effectiveness in the Maya Biosphere Reserve" provided support across a range of areas, including fire control and monitoring; management tools and coordination; investments in infrastructure for protected area management, tourism and water treatment; incentives to adopt sustainable technologies and capacity building outside of protected areas; physical demarcation of protected area; design of Joint Operation Centers.
2	Conservation and sustainable use of the Selva Maya (GIZ and partners in Belize, Guatemala and Mexico)	From: 2011 To: 2019	Based on a trinational approach bringing together Belize, Guatemala and Mexico, the programme works with governmental and civil society actors to promote the coordinated conservation and sustainable use of biodiversity and natural resources in the Selva Maya. Main areas encompass protected areas and biodiversity; land use planning; sustainable income generating alternatives; and environmental governance. The project is to transition into a GIZ programme named "Support for the monitoring of biodiversity and climate change in the Selva Maya", which is planned to run until 2021. In addition, KfW is to provide complementary financial cooperation, envisaged also until 2021.
3	Wildlife Conservation Society (WCS) and numerous partners		The Wildlife Conservation Society (WCS) and numerous partners began the “Strengthening Emerging Local Governance Capacity to Conserve Natural and Cultural Resources and Secure Livelihoods in the Petén, Guatemala” project in 2008 to promote the sustainable management and conservation of the natural and cultural heritage of the Petén. Major partners are the National Council for Protected Areas (CONAP), the Center for Environmental and Social Legal Action of Guatemala (CALAS), the Association of Forest Communities of Petén (ACOFOP), Asociación BALAM, and the Center for Conservation Studies of USAC (CECON).
4	Rainforest Alliance		Among other activities, the Rainforest Alliance has been promoting community forestry for many years in the Maya Biosphere Reserve.

Compilation of potential site needs

№	Site need title	Brief description of potential site needs	Support needed for following years
1	Consolidation of the Maya Biosphere Reserve	Tikal National Park is one important core zone of the vast Maya Biosphere Reserve, the surface area of which exceeds two million hectares. Given that the spatial configuration of the property does not follow any obvious nature conservation rationale, the long-term future of the property will depend on the land and resource use of the broader biosphere reserve. Consequently, all investment in the broader biosphere reserve is a good investment in the future of the property.	
2	Extension of the boundaries	It has consistently been observed that the property is a relatively small area within a large landscape of international conservation significance. From a nature conservation planning perspective, the spatial configuration of the property has fundamental limitations. Rather than following any obvious conservation rationale, the boundaries appear to schematically cover key archaeological sites as understood in the late 1950s. From a contemporary conservation planning perspective, there are very good reasons to analyze the adequacy of the boundary configuration, as well as the usefulness and feasibility of adapting them. In fact, the World Heritage Committee (1993) has recommended the consideration of an extension. Any analysis should consider the many protected areas, which have been created in the Guatemalan part the Selva Maya since the World Heritage inscription almost 40 years ago at the time of writing. Many of the protected areas are located in the immediate vicinity of the property, which comes with opportunities in terms of possible conventional or serial extensions. One of several concrete examples is the San Miguel La Palotada Biotope, known as El Zotz, to the West of the property, a protected area of similar size with comparable and directly linked cultural and natural conservation values (Parkswatch, 2002).	

REFERENCES

№	References
1	ACOFOP. 2017. Evaluando la efectividad del control y prevención de incendios forestales en la Reserva de la Biósfera Maya. Asociación de Comunidades Forestales de Petén ACOFOP. Programa Regional de Investigación sobre Desarrollo y Medio Ambiente (PRISMA).
2	Consejo Nacional de Áreas Protegidas (CONAP). 2015. Reserva de la Biosfera Maya. Plan Maestro. Segunda Actualización. Tomos I-IV. Ministerio de Cultura y Deportes – Dirección General de Patrimonio Cultural y Natural; Centro de Estudios Conservacionistas de la Universidad de San Carlos; Fundación Defensores de la Naturaleza.
3	Elbein, S. 2016. From Cocaine Cowboys to Narco-Ranchers. Foreign Policy Magazine.
4	Fujisaki, I. 2002. Management of Resources-Based Tourism at Tikal National Park, Northern Guatemala. George Wright Society 19(2): 77-86.. Accessed 23 May 2017.
5	González, A.M.; Martin, A.S. 2007. Governance Trends in Protected Areas. Experiences from the Parks in Peril Program in Latin America and the Caribbean. Parks in Peril. TNC and USAID.
6	Guzmán, J. 2017. Terminal Evaluation "Improvement of Management Effectiveness of the Maya Biosphere Reserve" Project. GEFSEC ID: 2687. GEF Agency ID: GU-X1001. IDB No.: GRT/FM-11375-GU.
7	Hodgdon, B.D., Hughell, D., Ramos, V.H., Balas McNab, R. 2015. Tendencias en la deforestación de la Reserva de Biósfera Maya, Guatemala. 2000 – 2013. Rainforest Alliance. Consejo Nacional de Áreas Protegidas. Wildlife Conservation Society. . Accessed 23 may 2017.
8	IUCN. 1979. World Heritage Nomination – IUCN Technical Evaluation, Tikal National Park (Guatemala). Gland, Switzerland: IUCN. . Accessed 23 May 2017.
9	IUCN. 2014. Tikal National Park (Guatemala) Site Assessment. The IUCN World Heritage Outlook. . Accessed 23 May 2017.
10	Ministerio de Cultura y Deportes - Dirección del Patrimonio Cultural y Natural-Parque Nacional Tikal. 2003. Plan Maestro del Parque Nacional Tikal 2003-2008. The Nature Conservancy, RARE, Wildlife Conservation Society, UNESCO, USAID.
11	Parkswatch. 2002. Park Profile, Guatemala – Tikal National Park. . Accessed 23 May 2017.

№	References
12	State Party of Guatemala. 1979. World Heritage Nomination. Tikal National Park (Guatemala). . Accessed 23 May 2017.
13	Trópico Verde. n.d.(a). Incendios Forestales En La Selva. . Accessed 23 May 2017.
14	Trópico Verde. n.d.(c). La Selva Maya En Peligro. . Accessed 23 May 2017.
15	Trópico Verde. n.d.(c). ¿ Qué es el Proyecto Mundo Maya? . Accessed 23 May 2017.
16	UNEP-WCMC. 2011. Tikal National Park, Guatemala. UNEP-WCMC World Heritage Information Sheets. Cambridge, UK.
17	World Heritage Committee. 1979. CC-79/CONF.003/13. Tikal National Park (Guatemala). Luxor, Egypt. . Accessed 23 May 2017.
18	World Heritage Committee. 1993. Decision CONF 001 VIII.2 Tikal National Park (Guatemala). . Accessed 23 May 2017.
19	World Heritage Committee. 1993. Decision CONF 002 XTikal National Park (Guatemala). . Accessed 23 May 2017.
20	World Heritage Committee. 2014. Decision 38 COM 8B.5 Tikal National Park (Guatemala) Statement of Outstanding Universal Value. Doha, Qatar. . Accessed 23 May 2017.