IUCN Conservation Outlook Assessment 2014 **(archived)**
Finalised on 29 September 2014

Please note: this is an archived Conservation Outlook Assessment for Komodo National Park. To access the most up-to-date Conservation Outlook Assessment for this site, please visit https://www.worldheritageoutlook.iucn.org.

Komodo National Park

SITE INFORMATION

Country:
Indonesia
Inscribed in: 1991
Criteria:
(vii) (x)

Site description:
These volcanic islands are inhabited by a population of around 5,700 giant lizards, whose appearance and aggressive behaviour have led to them being called 'Komodo dragons'. They exist nowhere else in the world and are of great interest to scientists studying the theory of evolution. The rugged hillsides of dry savannah and pockets of thorny green vegetation contrast starkly with the brilliant white sandy beaches and the blue waters surging over coral. © UNESCO

SUMMARY

2014 Conservation Outlook

Significant concern

The exceptional land- and seascape beauty of the site remains well-preserved and largely intact. The site contains the majority of the world’s areas in which wild populations of the Komodo dragon lizard still exist with population estimated at around 5,700 individuals. The marine area of the site is, however, being impacted by a number of threats, including fishing, boat anchoring and pollution. While management efforts have so far been focused on increasing levels of visitation and issues related to conservation of the Komodo dragon, broadening of the management focus to address issues within the marine area is required to ensure effective long-term protection of the site. More effective enforcement is needed to prevent destructive fishing practices to ensure that natural assets could bring benefits to local people sustainably along with conserving natural assets.

Current state and trend of VALUES

Low Concern
Trend: Stable

The exceptional land- and seascape beauty of the site remains well-preserved and largely intact. The site contains the majority of the world’s areas in which wild populations of the Komodo dragon lizard still exist with population estimated at around 5,700 individuals. The marine area of the site is, however, being impacted by a number of threats and additional management efforts are required to address those.

Overall THREATS

High Threat

Major threats to the Park’s reef habitats include destructive fishing practices (cyanide, blast fishing) and over-exploitation. Moreover, population growth also

has become source of threats such as household sewage. Deer hunting deprives Komodo dragons from their vital source of food. With population increase the frequency of fire incidents might increase which would pose a threat to the Komodo dragon’s habitat. Coral bleaching events might occur more frequently in the future due to increase in sea water temperatures.

Overall PROTECTION and MANAGEMENT

Some Concern

The Komodo National Park was formally established in 1980 and was inscribed on the World Heritage list in 1991. The management of the park is guided by the 2000-2025 Management Plan and 2000-2014 Strategic Plan which will now require revision. While management efforts have so far been focused on increasing levels of visitation and issues related to conservation of the Komodo dragon, broadening of the management focus to address issues within the marine area is required to ensure effective long-term protection of the site.

FULL ASSESSMENT

Description of values

Values

World Heritage values

► Komodo dragon

Criterion:(x)

Komodo National Park contains the majority of the world's areas in which wild populations of the Komodo dragon lizard (Varanus komodoensis status: vulnerable based on IUCN red list of threatened species (www.iucnredlist.org) still exist. The largest and heaviest of the world's lizards, the species is widely known for its impressive size and fearsome appearance, its ability to effectively prey on large animals, and a tolerance of extremely harsh condition. The population, estimated at around 5,700 individuals is distributed across the islands of Komodo, Rinca, Gili Motong and some coastal regions of western and northern Flores (Unesco World Heritage Center, 2014).

► Exceptional landscape beauty

Criterion:(vii)

Komodo National Park is a landscape of contrasts between starkly rugged hillsides of dry savanna, pockets of thorny green vegetation, brilliant white sandy beaches and blue waters surging over coral, unquestionably one of the most dramatic landscapes in all of Indonesia. Demonstrating exceptional natural beauty that is all the more remarkable as a counterpoint to the dominant lushness of vegetation which characterizes vast areas of forested Indonesia, and with which most of the world associates the archipelago. An irregular coastline characterized by bays, beaches and inlets separated by

headlands, often with sheer cliffs falling vertically into the surrounding seas which are reported to be among the most productive in the world adds to the stunning natural beauty of landscapes dominated by contrasting vegetation types, providing a patchwork of colours (Unesco World Heritage Center, 2014).

▶ **Coral reefs and marine biodiversity**
Criterion:(x)

The rich coral reefs of Komodo host a great diversity of species, and the strong currents of the sea attract the presence of sea turtles, whales, dolphins and dugongs (Unesco World Heritage Center, 2014). There are 385 species of hard corals and over 1,000 species of reef fish have been recorded (Beger and Turak, 2005). Komodo National Park and World Heritage Area has been identified as one of the richest marine diversity sites in the Indo-Pacific. It also an important habitat and migration routes for at least 14 species of cetaceans (Kahn, James and Pet, 2000).

Assessment information

Threats

Current Threats
High Threat

Major threats to the Park’s reef habitats include destructive fishing practices (cyanide, blast fishing) and over-exploitation. Moreover, population growth also has become source of threats such as household sewage. Deer hunting deprives Komodo dragons from their vital source of food.

▶ **Shipping Lanes**
High Threat
Inside site

One of primary threats to the Komodo National Park marine ecosystems

include destructive fishing and anchor damage (Mous, Katherina, McCorry and Pet, 2007).

▶ Fishing / Harvesting Aquatic Resources

High Threat
Inside site
Outside site

Major threats to the Park's reef habitats: destructive fishing practices (cyanide, blast fishing, meting) and over-exploitation (Mous, Halim, Wiadnya and Subijanto, 2004).

▶ Household Sewage/ Urban Waste Water

Low Threat
Outside site

Indications of potential nutrient enrichment and eutrophication were detected within traditional use zones of the Komodo east region. This may be indicative of sewage, organic rubbish or animal waste enrichment from Komodo village (Harvey & Yusamandra, 2010).

▶ Fishing / Harvesting Aquatic Resources, Commercial hunting

Very High Threat
Inside site

Illegal fishing and poaching remain the main threats to the values of the property and its overall integrity (SoOUV, 2013).

▶ Other Biological Resource Use

High Threat
Inside site

Reef gleaning by Park residents is also a problem on shallow reefs in and around the Park although this destructive activity seems to be decreasing over recent years (Erdmann, 2004).

▶ Fishing / Harvesting Aquatic Resources, Other Biological Resource Use, Subsistence hunting

High Threat

Inside site

Komodo National Park is home to over 3,200 residents, but is also surrounded by over 16,000 people in the immediate vicinity of Flores and Sape, many of whom exploit resources from the Park for their livelihoods. The Park's eco-systems cannot sustain the growing population's increasing wants and needs indefinitely. Key resource utilization issues include over-fishing of reef resources, destructive fishing, poaching, cutting forests for firewood, and fresh water supply shortages (Erdmann, 2004).

Potential Threats

High Threat

With population increase the frequency of fire incidents might increase which would pose a threat to the Komodo dragon's habitat. Coral bleaching events might occur more frequently in the future due to increase in sea water temperatures.

► Fire/ Fire Suppression

High Threat
Inside site
Outside site

The habitats of Komodo dragons are in dry savanna and pockets of thorny green vegetation which are vulnerable to fire events (wildfire and fires caused by human). With population pressure this will increase threat to existing Komodo dragons in term of the increasing bush and forest fire intensity (Erdmann, 2004).

► Temperature changes

High Threat
Inside site
Outside site

Coral bleaching events were observed in Indonesia 1997 and 2009-2010 (Habibi, Setiasih and Sartin, 2007; Ampou, 2011). However the coral communities in Komodo National Park did not bleach due to strong current (West and Salm, 2007). Nevertheless, coral bleaching can be a threat in the future due to the raise of sea surface temperature as well as the potential of

Indonesia throughflow (Arlindo) across Lesser Sunda area that bring warmer water mass.

Protection and management

Assessing Protection and Management

▶ Tourism and interpretation

Mostly Effective

Increasing visitation has been one of the key issues that management efforts have been focused on (SoOUV, 2013)

▶ Education and interpretation programs

Data Deficient

Data deficient

▶ Research

Mostly Effective

Research and study of the unique biological features of the park is being promoted and supported by the management authority (SoOUV, 2013).

▶ Monitoring

Mostly Effective

Monitoring of as coral, fish, mangrove, sea grass, cetacean, sea turtle nesting area, resource use and community perception has been conducted regularly. These activities involve researchers and volunteers. (Mous, Halim, Wiadnya and Subijanto, 2004).

▶ Sustainable use

Mostly Effective

Training of reef fishers in pelagic fishing techniques and fish processing methods, supply of materials for pelagic fishing (including ice boxes, nylon, artificial bait, and small boats), technical and operational assistance for

fisher’s groups (kelompok nelayan), and development of Fish Aggregating Devices (FADs) in offshore waters to the North of Komodo National Park have been conducted (Mous, Halim, Wiadnya and Subijanto, 2004).

▶ Staff training and development

Mostly Effective

A number of programmes have been conducted such as, ecology, biodiversity and conservation training, staff exchange of lessons learned on park patrolling and enforcement (Mous, Halim, Wiadnya and Subijanto, 2004).

▶ Sustainable finance

Data Deficient

Data deficient

▶ Boundaries

Some Concern

The park boundaries were established by the park gazettment in 1991 and based on the park zoning (2001). Their physical markings are mostly prioritized to those bordering with settlements within the park areas. Most of the marine borders are not physically marked due to technicalities. Such also creates some challenges in their enforcement.

▶ Implementation of Committee decisions and recommendations

Data Deficient

No recent Committee Decisions

▶ Management effectiveness

Some Concern

Various monitoring programs have been implemented over recent years, focusing not only on vulnerable species and ecosystems (including coral reefs), but also on resource use by humans (Mous, Halim, Wiadnya and Subijanto, 2004). Increasing levels of tourism and matters related specifically to the komodo lizard are the major management issues that have been focused on to date. A broadening of the management focus to address issues within the marine area of the park along with other terrestrial species is

required to ensure the long-term effective conservation of the property (SoOUV, 2013).

▶ Management system

Some Concern

Komodo National Park is managed through the Directorate General of Forest Protection and Natural Conservation of the Ministry of Forestry. The park is governed through the 2000-2025 Management Plan and a 2010-2014 Strategic Plan, which will require revision and updating (SoOUV, 2013).

▶ Integration into regional and national planning systems

Mostly Effective

There is a long-term (25 Years) and midterm (5 years) Master Plan for Management of Komodo National Park. The area is also part of Coral Triangle Initiative program.

▶ Legal framework and enforcement

Some Concern

The following government laws and regulations apply to natural resources management of Komodo National Park:
- National Law No.5, 1990 on biodiversity conservation.
- National Law No. 9, 1985 on Fisheries.
- Decree of Directorate General of Forest Protection and Nature Conservation No. 65/Kpts/DJ-V/2001 on zoning system in Komodo National Park.
- District Regulation (PERDA) No. 11, 2001 on Fishery Regulation in Komodo National Park
- National Law No. 41, 1999 on Forestry
More effective enforcement is however needed to prevent illegal resource use and destructive fishing.

▶ Relationships with local people

Mostly Effective

There are a variety of community awareness and outreach activities, ranging from environmental lectures at local high schools to village information meetings to a campaign that builds local pride of the Park. Other

programmes include facilitation of community-based management of fishing grounds in the surrounding waters of Komodo National Park; community consultative council. There are 76 local stakeholder components and local community organizations in the process of Komodo Collaborative Management Initiative (Mous, Halim, Wiadnya and Subijanto, 2004).

Overall assessment of protection and management

Some Concern

The Komodo National Park was formally established in 1980 and was inscribed on the World Heritage list in 1991. The management of the park is guided by the 2000-2025 Management Plan and 2000-2014 Strategic Plan which will now require revision. While management efforts have so far been focused on increasing levels of visitation and issues related to conservation of the Komodo dragon, broadening of the management focus to address issues within the marine area is required to ensure effective long-term protection of the site.

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

Data Deficient

Data deficient

State and trend of values

Assessing the current state and trend of values

World Heritage values

► Komodo dragon

Low Concern
Trend:Stable

Komodo National Park contains the majority of the world’s areas in which wild populations of the Komodo dragon lizard (Varanus komodoensis status: vulnerable based on IUCN red list of threatened species (www.iucnredlist.org) still exist. The population, estimated at around 5,700 individuals is

distributed across the islands of Komodo, Rinca, Gili Motong and some coastal regions of western and northern Flores (Unesco World Heritage Center, 2014).

▶ Exceptional landscape beauty

Good
Trend:Stable

The outstanding landscape and seascape beauty of the site has been well-preserved.

▶ Coral reefs and marine biodiversity

High Concern
Trend:Deteriorating

The rich coral reefs of Komodo host a great diversity of species, and the strong currents of the sea attract the presence of sea turtles, whales, dolphins and dugongs (Unesco World Heritage Center, 2014). Illegal fishing, boat anchoring and pollution all represent high threats to the site's marine values and more management efforts need to be focused on the issues within the marine area (SoOUV, 2013).

Summary of the Values

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

Low Concern

Trend: Stable

The exceptional land- and seascape beauty of the site remains well-preserved and largely intact. The site contains the majority of the world's areas in which wild populations of the Komodo dragon lizard still exist with population estimated at around 5,700 individuals. The marine area of the site is, however, being impacted by a number of threats and additional management efforts are required to address those.

Additional information

Key conservation issues

▶ Collaborative Management

Local

Sustainability of resources use, participatory management decision making process and harmonization between park management and local development scheme are needed.

▶ Coastal Clean Up and a sustainable Waste Management System

Local

A waste management system needs to be developed within and surrounding the park using 3R principle (Reduce, Reuse, Recycle), includingcapacity building and awareness raising for local communities.

▶ Regular resources use monitoring and controlling system

Local

Capacity building and development of a reliable resource monitoring system which would provide input into the management decision making process.

▶ Law enforcement

Local

Capacity building for park rangers and development of a reliable enforcement system to particularly ensure the compliance with the park zoning system is needed to ensure the sustainability of resources use.

Benefits

Understanding Benefits

► Outdoor recreation and tourism

Komodo dragon and beautiful reefs scenery have attracted people to visit the area. The Park serves as a place for sustainable development of nature and dive tourism.

► Fishing areas and conservation of fish stocks

Pelagic fisheries, seaweed culture and grouper mariculture are three profitable alternative livelihood programs that are being introduced to residents in and around the Park.

► Is the protected area valued for its nature conservation?

Komodo National Park contains the majority of the world’s areas in which wild populations of the Komodo dragon lizard still exist. The Park also covers 132,000 ha of waters and is home for 385 species of hard corals, more than 1,000 reef fish and plays an important role for cetacean and sea turtle migration route.

Projects

Compilation of active conservation projects

№	Organization/ individuals	Project duration	Brief description of Active Projects
1	Yayasan Komodo Kita		Community Development
2	Yayasan Baku Peduli		Organic farming, Community Development and Awareness
3	Burung Indonesia		BirdLife Partner
4	Plasticman Institute		Coastal Clean-up and its sustainability waste management system
5	Komodo Survival Program		Komodo Survival Program

Compilation of potential site needs

№	Site need title	Brief description of potential site needs	Support needed for following years
1	N.A.	Capacity building on alternative livelihood methods and management for local community to disengage them from direct extraction of the park resources and provide better income.	
2	N.A.	Development of education and awareness raising programmes	
3	N.A.	Capacity building and development of a reliable resource monitoring system which would provide input into the management decision making process.	

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