

World Heritage Sites

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KOMODO NATIONAL PARK INDONESIA

The Komodo Islands and neighbouring Flores are inhabited by a population of nearly 5,000 giant lizards, whose appearance and aggressive behaviour have led to their being named Komodo dragons. They exist nowhere else in the world and, isolated on Komodo, are of great interest to scientists studying the theory of evolution. The rugged hillsides of dry savannah with pockets of thorny green vegetation and patches of higher cloud forest contrast starkly with the mangrove swamps, white sandy beaches, and the blue waters of reefs which are degraded but remain diverse.

COUNTRY

Indonesia

NAME

Komodo National Park

NATURAL WORLD HERITAGE SERIAL SITE

1991: Inscribed on the World Heritage List under Natural Criteria vii and x.

STATEMENT OF OUTSTANDING UNIVERSAL VALUE [pending]

INTERNATIONAL DESIGNATION

1977: Designated a Biosphere Reserve under the UNESCO Man & Biosphere Programme (173,300ha).

IUCN MANAGEMENT CATEGORY

Komodo National Park:	II National Park
Wae Wuul & Mburak Nature Recreation Parks:	Ia Strict Nature Reserves
Mbeliling & Ngorang Protection Forests:	VI Resource Reserves

BIOGEOGRAPHICAL PROVINCE

Lesser Sunda Islands (4.23.13)

GEOGRAPHICAL LOCATION

Komodo Island in East Nusa Tenggara province in south-central Indonesia lies in the Sape Straits between the islands of Flores and Sumbawa between 8°24' to 8°50'S and 119°21' to 119°49'E.

DATES AND HISTORY OF ESTABLISHMENT

- 1915: The Komodo dragon first formally protected, four years after its discovery to science;
- 1938: The islands of Padar and part of Rinca were first established as Nature Reserves;
- 1965: Extended when Komodo Island Nature Reserve was gazetted under Ministerial Decree # 66;
- 1977: Komodo recognised as an MAB Biosphere Reserve;

- 1980: The islands of Komodo, Padar, Rinca and Gili Motong and the surrounding waters were declared a 75,000 ha National Park (MOF, 1990);
- 1984: Extended to 219,322 ha under Ministry of Forestry Decree 46/kpts/VI-Sek/ 1984 to include an expanded marine area Mbeliling / Ngorang Protection Forests (31,000 ha) and Wae Wuul / Mburak Recreation Parks on mainland Flores;
- 2005: Designated an ASEAN Heritage Park.

LAND TENURE

State. Administered by the Komodo National Park Authority under the Directorate-General of Forest Protection and Nature Conservation (PHKA) of the Ministry of Forestry.

AREA

Komodo Island World Heritage Site: 219,322 ha: Komodo National Park (173,300 ha, including Rinca and Padar Islands, Gili Motang and Gili Dasami islets and a marine area of 130,177 ha); also Mbeliling / Ngorang Protection Forests (31,000 ha) and Wae Wuul / Mburak Parks on Flores (3,000 ha).

ALTITUDE

Ranges from below sea-level to 735m (Gunung Satalibo on Komodo I.).

PHYSICAL FEATURES

Komodo is one of the long arc of islands running from Sumatra towards Irian Jaya along the line of a tectonic subduction between the Sunda shelf, a crustal extension of southeast Asia, and the Sahul shelf which extends northwest from Australia. It lies just east of this division and is the largest (34,000 ha) of a small archipelago between the larger islands of Sambawa and Flores. The topography is generally steep and rugged owing to its volcanic origin and is dominated by a range of rounded north-south oriented hills between 500-600m high. Relief is steepest to the north-east, notably in the peak of Gunung (Mount) Toda Klea which is precipitous and crowned by deep, rocky dry gullies. The coastline is irregular with little flat ground, numerous bays, beaches and inlets separated by headlands, often with sheer cliffs falling vertically into the sea. To the east, 7 km across the Lantah Strait, Padar is a small, narrow island which rises steeply from surrounding plains to 200-300m. Rinca, the second largest island in the Park (20,000 ha), lies to the southeast of Komodo, and is separated from Flores by a very narrow strait. Gili Motong, also within the site, is a much smaller island to its south-east.

The topography of the southern part of Rinca is dominated by the Doro Ora massif (667m); to the north the steep-sided peaks of Gunung Tumbuh and Doro Raja are 187m and 351m respectively. As with Komodo and Padar, the coastline is rugged and rocky although sandy beaches are found in sheltered semi-enclosed bays. The mainland sections of the Park, Mbeliling - Ngorang forest and Way Wuul Mburak Park, lie on the rugged coast of north-western Flores where surface fresh water is more abundant than on the other islands. The islands were probably formed by vulcanism in the Eocene era though the west side of Komodo preserves Jurassic rocks. Deposits are generally resistant volcanics, volcanic ash, conglomerates and coral formations raised by tectonic movement. There are frequent tremors though no active volcanoes. The soils are rocky and shallow (Sumardja, 1981; PHKA, 2004).

The seas around the islands have been among the most productive in the world due to upwelling and a high degree of oxygenation resulting from the strong tidal currents which flow through the Sape Straits to the west (Kvalvagnaes & Halim, 1979). Fringing and patch coral reefs were extensive and best developed in west- and north-facing areas, the most intact being on the north-east coast of Komodo and the south-west coasts of Rinca and Padar. The marine site has sea mounts, semi-enclosed bays and seagrass beds north of Rinca Island. However, recent disturbance by man has reduced this diverse reef to isolated patches.

CLIMATE

The Park lies within one of the driest regions of Indonesia with an annual rainfall of between 800mm and 1000mm. The heaviest rainfall, highest humidity, strongest winds (from the west) and lowest temperatures are recorded during the monsoon between November and March. This pattern is reversed during the long dry season from April to October, when mean daily temperatures can reach 40°C and dry winds come from the southeast. The average temperature range is between 17°C to 34°C (PHKA, 2004).

VEGETATION

Komodo lies just east of Wallace's line, a division originating in crustal activity, between the Oriental and Australian zoogeographic provinces, and on the western edge of Wallacea, a biotic transition zone extending to the New Guinean and Australian coasts. The predominant vegetation, covering some 70% of the Park, is dry open grass-woodland savannah, mainly of anthropogenic origin. Most of its species are xerophytic with water-retaining adaptations and many are fire-adapted. There are also patches of tropical rainforest, deciduous monsoon forest and mangrove. The dominant savannah tree is lontar palm *Borassus flabellifer*, which occurs individually or in scattered stands. Grasses include *Eulalia leschenaultiana*, *Setaria adhaerens*, *Chloris barbata*, *Heteropogon contortus* and, in the higher areas, *Themeda* spp. including *T. frondosa* and *T. triandra*. Tropical deciduous monsoon forest occurs along the bases of hills and on valley bottoms, characterised by trees such as *Sterculia foedita*, *Oroxylum indicum*, *Tamarindus indica*, *Zizyphus horsfeldii*, *Schleichera oleosa*, *Cassia javanica*, *Murraya paniculata*, *Diospyros javanica*, *Harrisonia brownii* and *Ptilostigma malabaricum*. The forest lacks the predominance of Australian-derived trees and flora found further to the east on Timor (Sumardja, 1981).

A quasi cloud-forest occurs above 500m on pinnacles and ridges. Although covering only small areas on Komodo Island, it harbours a relict flora of many endemic species (Auffenburg, 1980). It is characterised by moss-covered rocks, rattan, bamboo groves and many trees generally absent at lower elevations. These include *Terminalia zollingeri*, *Podocarpus neriifolius*, *Uvaria rufa*, *Ficus drupacea*, *Callophyllum spectabile*, *Mischocarpus sundaicus*, *Colona kostermansiana* and *Glycosmis pentaphylla*. The three main coastal marine vegetation types are mangroves, sea grasses and reef-building coralline algae. The mangrove forest occurs in sheltered bays on Komodo, Padar and Rinca. There are 19 species dominated by *Rhizophora stylosa*, *R. mangle* and *Bruguiera gymnorrhiza*, with *Avicennia marina* in large stands on the landward side (Sumardja, 1981; PHKA, 2004). Other coastal vegetation includes pioneering beach plants like *Ipomoea pes caprae*. Due to the dry climate, plant species diversity is relatively low, with only about 102 recorded species (PHKA, n.d.). Extensive sea grass beds of *Thalassia hemprichii* and *Zostera capensis* occur off the north end of Rinca Island (Kvalvagnaes & Halim, 1979)

FAUNA

The transitional nature of the biota has resulted in the presence of many mammals from Asia and several reptiles and birds from the Australasian bio-region. Compared with the rich marine life the terrestrial fauna is small. The Park is best known for the Komodo monitor *Varanus komodoensis* (VU), the world's largest lizard and venomous animal, which can grow to 3m long, an example of island gigantism. It is a relict Australasian species, isolated by post-glacial sea-level rise only discovered to science in 1910. An earlier 20th century estimate of the population was about 5,700. In 1995 an IUCN/SSC/ CBSG survey gave a best current estimate of 4,870 ("5,000"): 2,870 in the National Park: 1600 on Komodo, 1100 on Rinca, 70 on Gili Motang and 100 on western Flores (Wae Waul Reserve), totalling 2,870 with 2,000 more being scattered in non-protected areas mostly on Flores (ZSSD, 1998). On Padar island the species was last seen in 1975 (Kvalvagnaes & Halim, 1979). Its favoured habitats are tropical deciduous forest, then open savannah. It is carnivorous, eating occasional large meals when it eats all of its prey, and is well adapted to living without water (Auffenburg, 1981). The rest of the herpetofauna is rich, with 14 land snakes including *Naja naja sputatrix* in disturbed land and Russell's pit viper *Vipera russelli*, 9 species of skink Scincidae, including *Sphenomorphus schlegeli*, *S. striolatus* with *Emoia similis* on the savanna and 6 geckoes Gekkonidae. An amphibian of the cloud forest is the

frog *Oreophryne jeffersoniana*, and of the savanna, the brown bullfrog *Kaloula baleata*. Reptiles of the tropical deciduous forest include white-lipped tree viper *Cryptelytrops albolabris*, wolf snake *Lycodon capucinus*, *Dendrelaphis inornatus* and *Sphenomorphus florensis* (Auffenburg, 1980).

The mammalian fauna is characteristic of the Wallacean zoogeographic zone, with relatively few terrestrial species, including several bats, the endemic Komodo rat *Komodomys rintjanus* (VU), crab-eating macaque *Macaca fascicularis*, palm civet *Paradoxurus hermaphroditus lehmanni*, Introduced species, such as the Javan rusa deer *Rusa timorensis* (VU), the main prey of the lizard, and wild boar *Sus scrofa vittatus*, as well as feral domestic animals including horses and water buffalo *Bubalis bubalis* form important prey species for the Komodo monitor. Some 72 species of birds have been recorded, including yellow-crested cockatoo *Cacatua sulphurea* (CR) and four species found around Mbeilliling Protection Forest: Flores green pigeon *Treron floris* (VU), Flores hanging-parrot *Loriculus flosculus* (EN), Flores scops-owl *Otus alfredi* (EN), and Flores monarch flycatcher *Monarcha sacerdotum* (EN), Flores crow *Corvus florensis* (EN) on Rinca island; also helmeted friar bird *Philemon buceroides* and dusky and orange-footed scrub fowl *Megapodius freycinet* and *M. reinwardti*.

Indonesia is unique in that marine flora and fauna from both Indian and Pacific oceans intermingle through gaps in the island chain. In fact the local straits are on a migration route for whales. In the Park the marine zone covers 60% of the area and its biodiversity is very high. It has a wide variety of depths and bottom conditions and the upwelling of nutrient-rich water from deeper areas of the archipelago results in a rich reef ecosystem. The marine life includes foraminifera, cnidara, ascidians, worms, crustaceans, molluscs, cartilaginous and bony fishes, marine reptiles, and mammals including 16 species of cetaceans, ten species of dolphin, dugong *Dugong dugon* (VU), sharks, manta rays, and five species of turtle. These include blue whale *Balaenoptera musculus* (EN), fin whale *B. physalis* (EN), humpback whale *Megaptera novaeangliae*, sperm whale *Physeter catodon* (VU), whale shark *Rhincodon typus* (VU), silvertip and backtip reef sharks *Carcharhinus albimarginatus* and *C. melanopterus*; also saltwater crocodile *Crocodylus porosus*, leatherback turtle *Dermochelys coriacea* (CR), hawksbill turtle *Eretmochelys imbricata* (CR), olive ridley turtle *Lepidochelys olivacea* (VU) and green turtle *Chelonia mydas* (EN). Species of high commercial value are sea cucumbers, Holothuria, humphead wrasse *Cheilinus undulate* (EN), and groupers (Mous, 2002; PHKA, 2004).

The coral reefs were once rich, but only isolated patches of reef now remain owing to anthropogenic disturbance (Kvalvagnaes & Halim, 1979). In 1998 185 sites were sampled by TNC and the live reef coverage found was 19%. These habitats harbor more than 1,000 species of fish, 200 species of reef-building coral, and 70 species of sponge (Mous, 2002). The dominant corals on most reefs are species of *Acropora*, particularly the tabular coral *Acropora symmetrica*, *Millepora* and *Porites*. *Fungia* spp. are present on reef slopes. In areas of strong currents, the reef substrate consists of an avalanche of coral fragments, with only encrusting or low branching species, such as *Seriatopora caliendrum* and *Stylophora pistillata* being able to withstand the rapid water flow. More protected reef slopes, for example in Slawi Bay, are dominated by species of the genera *Heteropsammia* and *Heterocyathus*. Reefs off the north-east of Komodo have a high diversity of species including branching *Acropora*, *Hydnophora*, *Seriatopora* and *Caulastrea*, as well as massive *Porites*, plate-like *Echinophyllia*, *Merulina*, *Pachyseris* and numerous *Fungiidae*. The reefs off Gili Lawa Laut are variable, ranging from the sheltered southern bay with its large stands of *Pachyseris*, *Echinopora*, *Mycedium*, *Echinophyllia* and *Montipora*, interspersed with thickets of *Acropora*, to the more exposed northern reefs which have a spur and groove structure dominated by *Porites*, *Seriatopora* and *Acropora* (UNEP/IUCN, 1988). spawning aggregation sites; it also regularly conducts socio-economic studies (Tun *et al.*, 2004).

CONSERVATION VALUE

The Park is rich in terrestrial and marine biodiversity and is of great importance for the conservation of most of the world population of the Komodo monitor lizard. The location of the islands between two distinct zoogeographical zones, and the presence of a number of important cultural relicts, emphasises their scientific interest. The rich marine environment, particularly coral reefs, provides the basis for the local fishing industry and enhances the Park's potential for tourism. The Park lies within a Conservation International-designated Conservation Hotspot, a WWF Global 200 Marine Eco-region, a UNESCO

MAB Biosphere Reserve, a WWF/IUCN Centre of Plant Diversity, one of the world's Endemic Bird Areas and is an ASEAN Heritage Park.

CULTURAL HERITAGE

The evidence of early settlement is supported by the recent discovery of Neolithic graves, artefacts and megaliths on Komodo Island. The islands have long been settled due to their strategic importance and the existence of sheltered anchorages and supplies of fresh water on Komodo and Rinca. But the age of the present villages suggests that the inhabitants of Komodo village may have settled during the past 150 years, having been banished from Sumbawa by the Sultan of Bima (MOF, 1990). Other islanders followed and the original Ata Modo people, language and culture no longer exist without admixture from outside influences (PHKA, 2004).

LOCAL HUMAN POPULATION

In 1980, a population of approximately 600-700 people lived on the islands of Komodo and Rinca, half within the Park, in the villages of Kampung Komodo, Kampung Rinca, and Kerora (J.Thorsell, pers. comm.1991). By 2004, the population in the Park had grown to 3,267, with 16,816 people living in fishing villages surrounding it, a sixfold increase, mainly incomers from other islands (PHKA, 2004). Most are muslim. Several small seasonal fishing settlements lie on the east side of Rinca Island. Low rainfall has precluded much farming and the villagers subsisted almost entirely on fishing and the collection of marine resources such as molluscs and algae for agar production (Kvalvagnaes & Halim, 1979; MOF, 1990). The restrictions imposed on resource gathering by local people since 1980 have not been balanced by any alternative means of subsistence. The greatly increased tourism is now an important supplementary source of income, but the profits accrue mainly to outside interests (Borchers, 2002).

VISITORS AND VISITOR FACILITIES

Annual visitor numbers increased rapidly during the 1980s, rising from 100 in 1980 to 29,840 in 1997 (KNP, 2003; UNESCO, 1997; MOF, 1990). Of these, some 90% were foreign nationals who visit during the dry season between June and September (J. Thorsell, pers. comm., 1991), mainly attracted to dragons at the viewing stations at the Loho Liang visitor centre where they are baited twice a week. There are trails and shelters, accommodation at Loho Liang and equipment for diving and snorkelling the reef. Access to the Park is by boat from Labuan Bajo on the north-western tip of Flores Island or from Sape on the east coast of Sumbawa Island. There is an information centre with a research library at the Park headquarters in Labuan Bajo. Limited *losman* (guest house) accommodation is available at Labuan Bajo and at Sape on Sumbawa. The nearest hotel accommodation and airport facilities are located at Bima on Sumbawa.

SCIENTIFIC RESEARCH AND FACILITIES

Komodo is a natural laboratory for studying evolutionary history and is an ICRAN demonstration site (International Coral Reef Action Network). Auffenberg (1981) who carried out ecological research on the Komodo monitor cited numerous earlier studies which started after its discovery to the west in 1910. In addition, Robinson & Supriadi in 1981 and the San Diego Zoo team in 2000 also studied the Flores monitor population and in 1979 Kvalvagnaes and Halim conducted marine surveys (Robinson & Bari, 1982). The lizard population is regularly monitored at 78 plots. A field laboratory was completed in 1984 (J.Thorsell, pers. comm., 1991) but lacks equipment and technicians. The mangrove and coral reef ecosystems have also been monitored and restored. The potential of ecotourism has been studied. Monitoring of terrestrial wildlife has been done by the University of Udayana, San Diego Zoo, the University of California at Berkeley, Bogor Agricultural University and Gadjah Mada University. Every two years The Nature Conservancy monitors 185 sites for corals, fish and grouper and wrasse

MANAGEMENT

Komodo National Park (KNP) was set up as a Technical Implementation Unit of PHKA. Its purposes are to protect the Komodo dragon and its habitat, the terrestrial, coastal and marine ecosystems and their species, the exploited reef fish and invertebrates and surrounding fishing grounds; it exists also to

promote sustainable use of the natural resources for tourism, fisheries, education, and research. Key regulations for the management of KNP are the Act on Conservation of Biological Resources and their Ecosystems, the Fisheries Law, the Government Regulation concerning Natural Resources Tourism in the Use Zone of National Parks, Community Forest Parks and Natural Resources Parks, Government Regulation on Conservation Areas, and the Government of District Manggarai Regulation on Fishing Gear, plus the Ministry of Forestry Decree on Zoning.

A 25-year management plan was inaugurated in 2000, to be implemented in five-year segments. The Park is split into seven zones: Core, wilderness, tourism, traditional use, pelagic use, research and training, traditional settlement. The intensive use zones contain the development of the villages within enclaves and the tourist and administrative facilities; the wilderness zone provides for limited tourism such as trails and camps; and the core zone is strictly protected with access restricted to authorised PHKA and research personnel (FAO, 1977). The sanctuaries are on the southern half of Komodo and Rinca Islands and on Gili Montong Island. The Park headquarters are located at Labuan Bajo and there are six permanently staffed guard posts within the Park, though major decisions are taken in the Ministry of Forestry in Jakarta. Management activities have focused on enforcement and the provision of tourist facilities. Recommendations for the development of a buffer zone to provide resources for the village enclaves, the expansion of regional and local development and conservation awareness programs were made by Sumardja in 1981. Robinson & Bari recommended in 1982 that viewing the monitor from baiting stations be reduced and a more balanced programme of nature trails be developed. Robinson *et al.* (1982) recommended strategies to control deer poaching, including closing markets on Sumbawa and Flores by cooperating with the local government, as well as strengthening PHKA enforcement capability. It also recommended that the intensive use zone be extended seawards by 1,000m to allow passage and anchorage of boats. Within the extensive marine buffer zone Park authorities may regulate the type of fishing permitted and to some extent, the presence of outside fishermen, the most persistent poachers (J. Thorsell, pers. comm., 1991).

During designation of the Biosphere Reserve, local communities were involved in the decision-making. In 1996, The Nature Conservancy (TNC) established a local field office to implement a coastal and marine conservation program in partnership with the PHKA. This included enforcement, alternative livelihood development, community awareness, constituency building, monitoring and research, and the development of funding through eco-tourism. In 2000 the Government and PHKA endorsed a 25-Year Management Plan for the Park by TNC. This again proposed extension of the boundaries and buffer zone of the Park. Implementation of a legal ban on destructive fishing and of a weekly marine patrol program has resulted in an 80 percent decrease in blast fishing: reef monitoring has indicated that even heavily targeted reefs are now continuing to recover from this damage (Mous, 2002). For the dragon itself, the TNC in 1995 advised a return to conditions considered natural. The park management therefore banned the villagers' tradition of feeding the dragons, ended their deer hunts and banished village guard dogs.

Other successes include a rapid ecological assessment, a socio-economic assessment, and conservation planning. The Park boundaries could be extended to include for instance the diverse corals of Gili Banta island; the existing Park inhabitants could also be resettled, and the fisheries better policed to ensure their sustainability. Management is improving but there has been a lack of coordination between partnering NGOs and universities and the stakeholders such as hoteliers, security, tourist and diving companies, local people and the district administrations. There is a need for legal reform, for effective collaborative management to keep collected revenues within the Park, to improve the training and education of staff and to provide facilities for both terrestrial and marine research. A major step towards achieving these aims was taken in 2004 with the help of The Nature Conservancy by the Ministry's agreement to a joint venture tourism concession (the Nature Tourism Enterprise Licence) to benefit the Park's infrastructure, revenues and local communities. The Komodo Collaborative Management Initiative combines government agencies, local governments and communities, the joint venture company and private organisations with the aim of promoting effective long-term management (Tun *et al.*, 2004).

MANAGEMENT CONSTRAINTS

The principal management problem was formerly depletion of Komodo monitor prey stocks, such as Timor deer and wild boar, through predation by feral dogs, poaching and fires. Padar lost its lizards for this reason. Increased human population within and beyond the Park has now resulted in land ownership becoming a major issue. This has resulted in unsustainable overfishing especially of the demersal zone, and the destruction of reefs. Continued threats to the marine environment include destructive fishing of coral reefs by itinerant fishermen from surrounding islands using dynamite, cyanide and compressors, which kill off both fish and coral and severely threaten the Park's bottom-dwelling marine resources. In 1995, surveys showed that up to 50 percent of the reefs had been damaged. Local and immigrant fishermen have exploited grouper, wrasse, shark, lobster, and shellfish fisheries far beyond sustainable levels (Mous, 2002). Other threats are poaching, fires, illegal tree cutting and burning grassland which is the most serious on the rarely patrolled western side of Komodo (J.Thorsell, pers. comm., 1991). Pollution of coastal waters by sewage, chemicals and tourist wastes and litter, plus siltation by erosion of the fired grasslands are growing threats (PHKA, 2004). In 2009 10-15 dragons were removed from Wae Wuul Nature Reserve to Bali prior to gold exploration by a Chinese consortium in the site's buffer zone on Flores. Further development was halted because of alleged potential for damage to tourism and the surrounding seas (Collison, 2010).

Traditionally villagers scared dragons off during deer hunts and propitiated them by feeding them meat in the wild, but the continued baiting of Komodo monitors for viewing by tourists has been held to disrupt natural prey-predator relationships and result in their losing the fear of humans, with perhaps fatal consequences (Robinson & Bari, 1982). One result of the TNC-inspired policy of restoring ecological conditions considered natural by prohibiting deer-hunting and guard dogs, has been to embolden the dragons to enter villages to attack domestic stock and an occasional child. Villagers' objections are said to have been dismissed (Trofimov, 2009). Restrictions on the use by islanders of their local resources have been placed to protect the interests of tourism and tourist companies. These realise income from the site for outsider interests by excluding, penalising or criminalizing the local poor and has diminished local support for the Park (Borchers, 2002). The development of alternative livelihoods would address this problem. There is a lack of support and resources to deal with these problems.

STAFF

In 2003, a total of 106 included 73 rangers and 33 administrative staff. The Forestry service provides technicians and there are 4 patrol speedboats. Joint patrols involve the police, navy and army. The levels of personnel training and education could be better (KNP, 2003)

BUDGET

The government budget for 2002, through the Ministry of Forests, was Rp1,178,000,000 (US\$ 198,000) which is insufficient for the needs of management; visitors' entry fees are not returned to the management by the local government. In the 1990s, the WHF granted US\$79,500; in 2000 the UNF granted US\$2.5 million to six sites, Komodo being one, for conservation and sustainable tourism. TNC with the GEF provided US\$10 million to start up ecotourism over a 7-year period to enable the Park to become financially self-sustaining with an annual budget of US\$2 million (Tun *et al.*, 2004; KNP, 2003).

LOCAL ADDRESSES

Head, Komodo National Park Management Unit, Jl. Jenderal, Sudirman No.87, Labuan Bajo, West Flores, East Nusa Tenggara, Indonesia.

Director of Conservation Areas, Jl. Kasimo, Labuan Bajo, West Flores NTT 86554, Indonesia.

The Director, The Nature Conservancy - Coastal and Marine Program, Jl. Pengembak No.2, Sanur - Denpasar, Bali 80288, Indonesia

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