IUCN Conservation Outlook Assessment 2014 **(archived)**
Finalised on 21 July 2014

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

East Rennell

SITE INFORMATION

Country:
Solomon Islands
Inscribed in: 1998
Criteria:
(ix)

Site description:
East Rennell makes up the southern third of Rennell Island, the southernmost island in the Solomon Island group in the western Pacific. Rennell, 86 km long x 15 km wide, is the largest raised coral atoll in the world. The site includes approximately 37,000 ha and a marine area extending 3 nautical miles to sea. A major feature of the island is Lake Tegano, which was the former lagoon on the atoll. The lake, the largest in the insular Pacific (15,500 ha), is brackish and contains many rugged limestone islands and endemic species. Rennell is mostly covered with dense forest, with a canopy averaging 20 m in height. Combined with the strong climatic effects of frequent cyclones, the site is a true natural laboratory for scientific study. The site is under customary land ownership and management. © UNESCO

SUMMARY

2014 Conservation Outlook

Critical

The remoteness of the property, near natural conditions and small local population on the island gave this site a good conservation outlook at time of inscription in 1998. Unfortunately, logging operations that commenced in 2008 on the part of the island that is not inscribed as World Heritage, the probable introduction of Black Rats, changes in sea level and water salinity, the wish of the local population to improve their living conditions (even if this includes engaging in unsustainable activities), and weak protection and management means that the conservation outlook for this property is critical.

Current state and trend of VALUES

High Concern
Trend: Deteriorating

The conditions for the property to remain “an outstanding example representing significant on-going ecological and biological processes in the evolution and development of terrestrial, fresh water, coastal and marine ecosystems and communities of plants and animals” may no longer be in place. The major issue is that the property requires integrated management of the entire island, not just the portion of the island inscribed, in order to maintain its World Heritage values. Some component parts of its ecosystem appear to be in decline, and more monitoring is needed to determine the overall trend.

Overall THREATS

Very High Threat

The start of logging operations in 2008 on Rennell Island (just 12 km from the inscribed eastern third of the property) has initiated a number of highly negative effects within the property, including the reduction and transformation of forest habitat necessary for the maintenance of the bird fauna within the property, and

the potential for the introduction of Black Rats (already confirmed on West Rennell) and other invasive alien species such as the Giant African Land Snail. Logging as well as sea level rise and increased salinity of the lake have also caused the local population to develop unsustainable practices. World Heritage inscription may have created unrealistic expectations for the local community.

Overall PROTECTION and MANAGEMENT

Serious Concern

East Rennell is owned by the local community under a customary tenure system and this community manages the island traditionally. However, with increasing global pressures, the community does not possess the necessary resources and capacity to protect and manage the property to World Heritage standards. The resident population in the property is steadily declining and experiencing significant demographic change. Today there are about 350 people residing in the property, a high proportion of which are women, older men and children. Approximately 800 others from the community, mostly young adults and working-age men, have moved away to Honiara and elsewhere for education and employment. Moreover, it is likely that the people of East Rennell will increasingly turn to commercial exploitation of their natural resources, which is unsustainable, unless alternatives can be found. Unless this trend can be reversed, the protection and management of the property is of high concern.

FULL ASSESSMENT

Description of values

Values

World Heritage values

▶ **Exceptional stepping-stone for on-going speciation processes (particularly avifauna) in the western Pacific**
Criterion:(ix)

One of the most natural, undisturbed oceanic islands in the Pacific region, the site is a true natural laboratory for scientific study where the impacts of humans, invasive predators and weeds on the native biodiversity have been relatively small. Of 43 breeding land and water bird species, four species and nine subspecies are endemic to Rennell Island, with a further seven subspecies endemic to Rennell and nearby Bellona (IUCN, 1998; SoOUV; 2012). Further research will probably revise these figures (Filardi et al., 2007).

▶ **Important site for the study of island biogeography**
Criterion:(ix)

The unmodified forest vegetation contains floral elements from the more impoverished Pacific Islands to the east and the much richer Melanesian flora to the west (IUCN, 1998; SoOUV, 2012).

Other important biodiversity values

▶ **Endemic plants**

At least ten species of endemic plants occur in the property including an orchid found on the island lakes, three species of Pandanus and an

undescribed palm (Nomination, 1997; IUCN, 1998; SoOUV, 2012).

► **Bats**

Eleven species of bats of which one is endemic (Nomination, 1997; IUCN, 1998; SoOUV, 2012).

► **Invertebrates**

Rich invertebrate fauna including approximately 730 insect species, many of which are endemic, and 27 species of land snail of which seven are endemic. Coconut Crabs are an important element (Nomination, 1997; IUCN, 1998; SoOUV, 2012).

► **Fauna and flora of Lake Tegano**

Lake Tegano, the largest lake in the insular Pacific, has 78 species of animals recorded including 12 species and one subspecies endemic to the lake. The endemic Sea Krait is the second record of a sea snake living in a brackish water lake. The flora of Lake Tegano is dominated by more than 300 species of diatoms and algae, some of which are endemic (Nomination, 1997; IUCN, 1998; SoOUV, 2012).

► **Marine fauna**

A marine survey was completed by the University of Queensland in December 2012, results awaited (SOC, 2012).

Assessment information

Threats

Current Threats

Very High Threat

The start of logging operations in 2008 on Rennell Island (just 12 km from the inscribed eastern third of the property) has initiated a number of highly negative effects within the property, including the reduction and transformation of forest habitat necessary for the maintenance of the bird fauna within the property, and the potential for the introduction of Black Rats (already confirmed on West Rennell) and other invasive alien species such as the Giant African Land Snail. Logging as well as sea level rise and increased salinity of the lake have also caused the local population to develop unsustainable practices. World Heritage inscription may have created unrealistic expectations for the local community.

▶ Logging/ Wood Harvesting

Very High Threat
Outside site

On its own, the East Rennell forest is insufficiently large to ensure the long-term survival of endemic birds (IUCN, 1998). Since 2008 logging commenced on West Rennell (and was proposed on East Rennell) which has directly and indirectly impacted the feeding and breeding habitat of animals (particularly birds). Physical disturbance to soils through erosion and water quality (both surface and ground water) has occurred. Marine areas as well as the lake are vulnerable to accelerated erosion and runoff. Logging has also brought invasive species and possibly increased the unsustainable use of native species, as well as had cultural ramifications (Mission Report, 2012).

▶ Fishing / Harvesting Aquatic Resources

High Threat
Inside site
Outside site

Previous sustainable use of the Coconut Crab (Birgus latro) and other aquatic resources appears to have become unsustainable, and logging activities appear to have increased poaching of endemic, rare and threatened species of biota (Mission Report, 2012).

▶ Invasive Non-Native/ Alien Species

Very High Threat

Inside site
Outside site

The absence of many invasive species supported the inscription of East Rennell under criterion (ix). Rats, probably Ship Rat (Rattus rattus), have been observed recently in the vicinity of log ponds and jetties and adjacent log storage areas, and are thought to have been introduced from logging vessels (Mission Report, 2012). Unless eradicated, this species will almost certainly cause irreparable damage to the OUV of the property.

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

Very High Threat
Inside site
Outside site

The development of a cash economy and the demand for modern conveniences are forcing residents to find sources of income, which in turn increases pressure on local resources (Mission Report, 2012).

Potential Threats

High Threat

The potential introduction of invasive alien species such as Giant African Land Snail would have very negative effects on the biodiversity aspects of the property. Any mining would have similar effects to the current logging operations underway outside of the property.

► Mining/ Quarrying

Low Threat
Inside site
Outside site

Prospecting for bauxite occurred in the early 1970’s although there are no mining plans under discussion (Wein, 2007). Mining either within the site or elsewhere on the island would have deleterious consequences for the property.

► Invasive Non-Native/ Alien Species

Data Deficient
Inside site

Outside site

There is potential for Giant African Land Snails that have been seen in Honiara to gain access to Rennell Island on shipments of food and other produce, and these aggressive invaders could have a destructive impact on crops and other vegetation and would compete with the 27 species of native land snails (Mission Report, 2012).

Protection and management

Assessing Protection and Management

► Relationships with local people

Some Concern

East Rennell was the first inscribed World Heritage site with customary ownership land tenure. Land is vested in the clan and all clan members have access to land through their lineages. East Rennell communities are patrilineal with land passing down through the male line. The Lake Tegano World Heritage Site Association (LTWHSA), consists of elected community members (which can be women), who act as the local management authority. There is a great need for capacity building and external funding to ensure that the property is managed at WH standard (Mission Report, 2012).

► Legal framework and enforcement

Some Concern

At the time of inscription there was no adequate national or provincial legislation for protecting the property. Today under the Protected Areas Act 2010 the property needs to be recognised (which is not yet the case) and the draft provincial Lake Tegano Heritage Park Ordinance 2009 should be approved and come into force as soon as possible. The provisions of both these legal instruments should be properly administered and fully implemented in respect of the World Heritage property by the Ministry of Environment and the provincial Premier’s Office. Legislation should also give legal effect to the property management plan, and customary owners should be given the opportunity to enter into a full and effective partnership with the provincial and national authorities. Other legislation such as the

Environment Act 1998 and the Wildlife Management and Protection Act 1998 have provisions relevant to the property, but these are often not effectively enforced at local level, and there is some uncertainty as to the relative powers of national and customary laws in respect of land and resources under customary ownership and traditional management (Mission Report, 2012).

► Integration into regional and national planning systems

Some Concern

Integration into regional and national planning systems is unclear.

► Management system

Serious Concern

The Lake Tegano World Heritage Site Association (LTWHSA) elects community members as the local management authority The community needs a full-time officer as a focal point within Rennell-Bellona Province to advocate on behalf of the people and the World Heritage requirements of the property, with strong links to a counterpart position in the Ministry of Environment and to the LTWHSA in the property (Mission Report, 2012).

► Management effectiveness

Serious Concern

Knowledge of the natural ecosystems, species and habitats is insufficient and needs further survey and assessment, especially in the marine areas. Cultural resources and values are also not well known and there is a need for systematic cataloguing and documentation of cultural values and traditional resource use and conservation practices (Mission Report, 2012).

► Implementation of Committee decisions and recommendations

Some Concern

Due to political unrest, a number of Committee requests for SOC reports from the SP were not fulfilled.

► Boundaries

Serious Concern

Boundaries of the property have never been sufficient as the forest in East Rennell is not sufficiently large (according to a study by J. Diamond) to ensure long-term survival of the endemic birds. However, inscription of the entire island was not proposed as local communities on West Rennell were not favourable to being included in the nomination (IUCN, 1998). There is no buffer zone in the property.

► Sustainable finance

Serious Concern

The community receives no financial support from the national budget of the Solomon Islands government, and only a small annual subvention from the province. Essentially, it relies for its funding on the World Heritage Fund and on other external sources, especially donor funding from government and non-government organisations. This funding is not sustainable, it is short-term only and comes in pulses, and it is tagged to specific programmes and projects. Long-term sustainable funding is required to assist the customary owners of East Rennell to manage the property to World Heritage standards. The local community also needs a source of cash income to purchase essential supplies and services, and could benefit from development of appropriate well-resourced and operated small business enterprises (Mission report, 2012).

► Staff training and development

Serious Concern

The process of twinning of the East Rennell and Wet Tropics properties begun in 2009 is still not completed. A twinning arrangement would provide an invaluable source of information, expert advice, technical competence and assistance for management capacity-building in East Rennell. It is important to finalise the terms of reference and get the twinning arrangement authorised and operative as soon as possible (Mission report, 2012).

► Sustainable use

Serious Concern

The management plan (Wein, 2007) includes the sustainable management of coastal and marine resources, suggesting establishment of marine protected

areas where a ban or restrictions on harvest are imposed; introduction of community-based monitoring and enforcement programs supervised by rangers; increased awareness of regulations and sustainable harvesting methods; use of by-laws to discourage destructive fishing methods; and survey and inventory of reef resources. While the plan is well-directed in principle, it has never been implemented and there is no evidence that resources will be provided for this to occur (Mission report, 2012).

► Education and interpretation programs

Serious Concern

None (Periodic report, 2011).

► Tourism and interpretation

Serious Concern

None (Periodic report, 2011).

► Monitoring

Serious Concern

None (Periodic report, 2011).

► Research

Some Concern

Important research expeditions have occurred on the island (Mission Report, 2012). The management plan (Wein, 2007) proposes the development of a research contract to guide research in East Rennell and to ensure that the results of all research are available to the management authority and communities.

Overall assessment of protection and management

Serious Concern

East Rennell is owned by the local community under a customary tenure system and this community manages the island traditionally. However, with increasing global pressures, the community does not possess the necessary resources and capacity to protect and manage the property to World Heritage

standards. The resident population in the property is steadily declining and experiencing significant demographic change. Today there are about 350 people residing in the property, a high proportion of which are women, older men and children. Approximately 800 others from the community, mostly young adults and working-age men, have moved away to Honiara and elsewhere for education and employment. Moreover, it is likely that the people of East Rennell will increasingly turn to commercial exploitation of their natural resources, which is unsustainable, unless alternatives can be found. Unless this trend can be reversed, the protection and management of the property is of high concern.

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

Serious Concern

The communities in West Rennell did not support the nomination thus two thirds of the island lies outside of the World Heritage property, but this area is essential for the conservation of the third that was inscribed. Issues with the protection and management of the entire island are creating an impact on the protection and management of the property.

▶ **Best practice examples**

East Rennell is notable as the very first World Heritage property to be inscribed where the resources of the land and sea are under customary ownership and managed using traditional practices. Experience will show if this is best practice and sustainable in the modern world.

State and trend of values

Assessing the current state and trend of values

World Heritage values

▶ **Exceptional stepping-stone for on-going speciation processes (particularly avifauna) in the western Pacific**

High Concern
Trend:Deteriorating

The recent threats caused by logging operations on the island outside of the inscribed area (e.g. loss of habitat, changes in soil erosion and run-off, introduction of Black Rats (Mission report, 2012) indicate that the conditions required for on-going speciation processes appear to be compromised. Monitoring, particularly of the avifauna within the property, is required.

► Important site for the study of island biogeography

Low Concern
Trend:Stable

Any banalisation of the native flora and fauna due to invasive species and unsustainable practices will reduce the importance of the property as an important site to study island biogeography. However, as this will require long-term change, the current trend for this value remains stable.

Other important biodiversity values

► Endemic plants

At least ten species of endemic plants occur in the property including an orchid found on the island lakes, three species of Pandanus and an undescribed palm (Nomination, 1997; IUCN, 1998; SoOUV, 2012).

► Bats

Eleven species of bats of which one is endemic (Nomination, 1997; IUCN, 1998; SoOUV, 2012).

► Invertebrates

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► Fauna and flora of Lake Tegano

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endemic Sea Krait is the second record of a sea snake living in a brackish water lake. The flora of Lake Tegano is dominated by more than 300 species of diatoms and algae, some of which are endemic (Nomination, 1997; IUCN, 1998; SoOUV, 2012).

► Marine fauna

A marine survey was completed by the University of Queensland in December 2012, results awaited (SOC, 2012).

Summary of the Values

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

High Concern

Trend: Deteriorating

The conditions for the property to remain “an outstanding example representing significant on-going ecological and biological processes in the evolution and development of terrestrial, fresh water, coastal and marine ecosystems and communities of plants and animals” may no longer be in place. The major issue is that the property requires integrated management of the entire island, not just the portion of the island inscribed, in order to maintain its World Heritage values. Some component parts of its ecosystem appear to be in decline, and more monitoring is needed to determine the overall trend.

► Assessment of the current state and trend of other important biodiversity values

Data Deficient

Trend: Deteriorating

Important biodiversity values which include birds, plants, bats, and aquatic fauna and flora require monitoring to determine trends.

Additional information

Key conservation issues

▶ Commercial logging

Local

Commercial logging has caused severe conservation issues throughout most of the Solomon Islands, but not (up to now) on Rennell Island. Logging is unsustainable, causes soil erosion and run-off, increases opportunities for invasions of alien species, and has social consequences.

▶ Invasive species

Local

East Rennell up to now suffers from relatively few alien invasive species, species, although due to logging operations Black Rats may have recently been introduced, and the potential for the introduction of Giant African Land Snails has been increased (Mission report, 2012). Both these species have the potential to cause major problems. Tilapia, an African invasive fish species, was introduced to Lake Tegano in 1957 and while an important food component for the local population, brought with it ecological change as its introduction coincided with the increased population of Great Cormorant Phalacrocorax carbo (which today is being blamed as one of the factors for the reduction of Tilapia in the lake). At the same time that the Tilapia was introduced, two otherwise widespread duck species became locally extinct from Rennell (Filardi et al., 2007).

▶ Sustainable use

Local

All villages harvest marine resources such as clams, trochus (sea snail) and reef fish. There is also some opportunistic hunting of turtles, sharks and dolphins. Beche-de-mer (sea cucumber) was a key resource for income generation from the marine areas of East Rennell until a national ban on its export was imposed in 2005. Pressure has since shifted to trochus, which is

also collected for cash generation. Coconut crabs, which are important for subsistence use and as a source of cash income, are harvested year-round. Harvesting of marine resources is essentially unregulated and traditional conservation measures have been supplanted by a more commercial approach (Mission report, 2012).

▶ **Local people aspirations**

Local

A small local community that is struggling to survive cannot maintain its environment and natural resources to the highest world standards, as required by the World Heritage Convention. Moreover, it is likely that the people of East Rennell will increasingly turn to commercial exploitation of their natural resources (Mission report, 2012).

Benefits

Understanding Benefits

▶ **Is the protected area valued for its nature conservation?**

The property conserves unique species and ecosystems of importance at a local, national and global level.

▶ **Fishing areas and conservation of fish stocks, Traditional agriculture**

Resources from the property including introduced tilapia, clams, trochus (sea snail), reef fish, coconut crabs, coconuts and yams which provide subsistence and some cash income to 4 small villages of approximately 350 people residing in the property, a high proportion of which are women, older men and children. Approximately 800 others from the community, mostly young adults and working-age men, have moved away to Honiara and elsewhere for education and employment (Mission report, 2012).

▶ **Outdoor recreation and tourism**

Very limited benefits from tourism have been realised given lack of infrastructure and management. However, benefits from tourism were expected once the property was inscribed as World Heritage, and the

potential is there.

▶ Soil stabilisation

Natural forest protects slopes and groundwater from erosion and sedimentation.

▶ Importance for research

Rennell Island has been the subject of eight international scientific expeditions, with numerous descriptions of new species and seminal work on island biogeography (e.g. Diamond, 1984).

Summary of benefits

East Rennell supplies the traditional owners subsistence and environmental services, and the global community for an exceptionally well preserved island ecosystem conserving unique, endemic species that has contributed to global scientific theory. While only a limited number of people have been able to benefit from visiting the area, the few who have got there are enthusiastic.

Projects

Compilation of active conservation projects

№	Organization/ individuals	Project duration	Brief description of Active Projects
1	Live and Learn Environmental Education (LLEE).		Livelihoods activities funded by the Australian Government, providing set up funding for alternative livelihoods activities.
2	World Heritage Fund International Assistance project / University of Queensland.		Survey of the Condition of the Marine Ecosystem within the East Rennell World Heritage Area.

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