



ARNAVON COMMUNITY MARINE CONSERVATION AREA
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SOLOMON ISLANDS

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Background



Figure 1 showing a juvenile hawksbill turtle swimming in the ocean. A map showing Solomon Islands and Arnavon islands in blue dot

The Solomon Islands' Arnavons site is remote with little infrastructure. Conducting research there is challenging. Hence, the site has been studied by only a few researchers in the past decade. A total area of 152sq Km and land area of 3 Sq Km consist of small group of islands known as Sikopo, Kerehikapa and Malevona (Small & Big).

A 1994 report titled *Community Resource Management at the Arnavons: a Participation Case Study* (Ed Mayer and Susan Brown) describes the sharp decline in marine resources in the Arnavon Islands during the late 1980s and early 1990s. It notes how the decline was accelerated by conflict among the three local communities over resource rights in the Arnavons.

Sango Mahanty's 1995 *Community Baseline Study for the Socio-Economic Monitoring Program* in the Arnavons used semi-structured household interviews to compile baseline information on the three Arnavon communities. In 1995, the communities all had a high dependence on cash income that came mainly from selling marine resources such as sea cucumber, trochus shells (used for making buttons), and hawksbill turtle shell. This was the primary source of income for 79 percent of households. (There are no actual income data in the baseline study.) The need for cash was driven by a dependence on imported staple foods (52 percent in Waghena, 44 percent in Kia, and 11 percent in Katupika). The average household had one primary source of cash income and three

secondary sources. For the community of Waghena, the study also provides several key development indicators. In 1995, Waghena had no piped water supply and electricity in only a few houses, but its education levels were on par with national averages.

Mahanty notes that in 1995 the Arnavon communities were at “an impasse between cash needs and sustainable resource management.” The quest for alternative sources of income among the Arnavon communities was high. An article in *Development Bulletin 58* titled “Building Bridges: Lessons from the Arnavon Management Committee, Solomon Islands” (Sango Mahanty, 2002), describes how in the late 1990s, there were efforts to expand deep-water fisheries production by the Arnavon communities as a way of increasing cash income. Under the guidance of the Arnavons Management Committee, an existing fish processing centre in Katupika was expanded and a new centre established in Waghena with financial assistance from international donors. The EU had earlier funded a fish processing facility in Kai. The three centres bought deep-water fish such as snapper from the fishers and sold them to export buyers in the capital. Initial results were promising, but transport problems and the low price of the fish made the centres unprofitable.

These previous studies provide context for the current study and help to show how far the communities have progressed in the last 10 years.

Biodiversity of Arnavon Islands

Below is the biodiversity of Arnavon Islands that have been studied in the past by researchers and partners.

Vegetation:

- Coastal strand forest
- Mangrove swamp forest
- Pandanus swamp forest
- Low land Rainforest (Sikopo)
- 104 species of plants

Terrestrial Fauna:

- 41 species of birds, 8 endemics, 8 restricted range
- Sea birds, waders, shore birds, migratory species, 4 species raptors
- 6 species flying foxes and bats
- 7 species reptile

Reef system:

- Outer reefs, lagoon reefs, submerged reef platforms
- Small areas-no surface exchange large tidal flats with surface exchange

Turtle:

- Hawksbill Turtle
- Green Turtle



Megapode:

- Nesting ground

Milkfish:

- In shallow enclosed pools on Kerehika

Conservation target Species (hawksbill turtle):

Hawksbill Turtle is the index species at Arnavon Community Marine Conservation Area (ACMCA). However, green turtle is also present in this conservation area with relatively same population as hawksbill turtle but the index species is more abundant in population wise according to data collected than the other species.

The largest rookery for hawksbill turtles in the oceanic South Pacific is the Arnavon Islands, which are located in the Manning Strait between Isabel and Choiseul Province, Solomon Islands. The history of this rookery is one of overexploitation, conflict and violence. Throughout the 1800s Roviana headhunters from New Georgia repeatedly raided the Manning Strait to collect hawksbill shell which they traded with European whalers.

By the 1970s the Arnavons hawksbill population was in severe decline and the national government intervened, declaring the Arnavons a sanctuary in 1976. But this government led initiative was short lived, with traditional owners burning down the government infrastructure and resuming intensive harvesting in 1982. In 1991 routine beach monitoring and turtle tagging commenced at the Arnavons along with extensive community consultations regarding the islands' future, and in 1995 the Arnavon Community Marine Conservation Area (ACMCA) was established. Around the same time national legislation banning the sale of all turtle products was passed.

This paper represents the first analysis of data from 4536 beach surveys and 845 individual turtle tagging histories obtained from the Arnavons between 1991-2012. Our results and the results of others, reveal that many of the hawksbill turtles that nest at the ACMCA forage in distant Australian waters, and that nesting on the Arnavons occurs throughout the year with peak nesting activity coinciding with the austral winter.

Our results also provide the first known evidence of recovery for a western pacific hawksbill rookery, with the number of nests laid at the ACMCA and the remigration rates of turtles doubling since the establishment of the ACMCA in 1995.

The Arnavons case study provides an example of how changes in policy, inclusive community-based management and long term commitment can turn the tide for one of the most charismatic and endangered species on our planet.

Committing to Conservation

The Conservancy worked to get all of the concerned communities on board with a conservation program that would both protect the Arnavons and provide new livelihood opportunities. **The result was the ACMCA.**

The ACMCA instituted new management guidelines that included zoning and monitoring protocols to protect and patrol the Arnavons. To ensure equity between the three communities, the ACMCA determined that the Arnavons should always have three conservation officers—one from each community—on-site, patrolling local waters and leading the sea turtle recovery program.

Meanwhile, the Conservancy worked to replace the income that would be lost from fishing, creating fishery centers, sustainable seaweed harvesting opportunities and an endowment to guarantee the ACMCA's long-term financial stability.

An International Success story

Since the ACMCA's foundation, **the Arnavons have experienced a remarkable recovery.** The number of hawksbill turtle nests that are laid annually at the Arnavons has doubled and biological surveys show that other species, such as giant clams and trochus, are also thriving.

The ACMCA has inspired similar action, both in the Solomon Islands and throughout the world. It helped convince the Lauru Land Conference of Tribal Community, a local organization of more than 100 chiefs, to work with the Conservancy on creating protected areas throughout the region. And in 2008, the ACMCA won the Equator Prize at the World Conservation Congress in Barcelona, earning recognition for its efforts to alleviate poverty through conservation.

In 2011, the Conservancy formally stepped aside to allow the ACMCA Management Committee Trust Board to lead conservation efforts in the Arnavons. The Conservancy will continue to advise the ACMCA and play a role in expanding its already-tremendous legacy of conservation success.

Species under management:

Megapode egg; the **megapodes**, also known as **incubator birds**, are stocky, medium-large chicken-like birds with small heads and large feet in the family **Megapodiidae**. Their name literally means "large foot", and is a reference to the heavy legs and feet typical of these terrestrial birds. All are browsers, and all but the mallee fowl occupy wooded habitats. Most are brown or black colored. Megapodes are super precocial, hatching from their eggs in the most mature condition of any birds. They hatch with open eyes, bodily coordination and strength, full wing feathers and downy body feathers, and are able to run, pursue prey, and, in some species, fly on the same day they hatch.

This is one of the species that is on seasonal (open/closure) management where from January to July is a closure session and August to December is open session. This was approved by the board after several years of research and data collection conducted by researchers and rangers. Hence, community members were allowed to harvest this particular resource during open session to meet their basic needs at home.

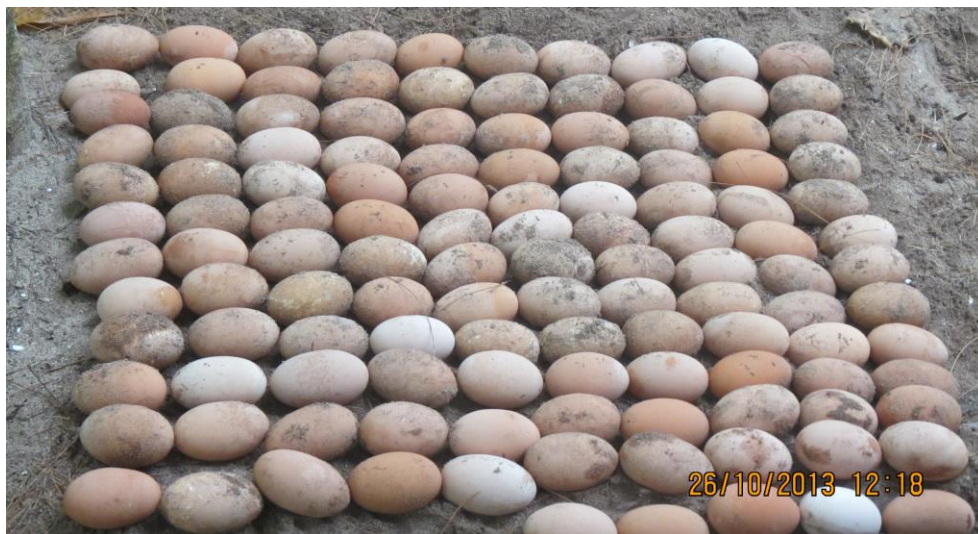


Figure 2 shows megapode eggs during open session harvesting at Arnavon Islands.

Conclusion

Arnavon Islands is a unique place that has a pristine wild life intact with more than two decades of active protection of the conservation area. And this report has clearly stated all the past research carried out by scientists and partners (NGO and National Government) who collectively put the work of the organisation to the international recognition. And this area of interest as a diverse marine and terrestrial species that are significant to international conservation commitment. Hence, it is clear that this conservation site is relevant to continue to uphold the good work that has been going on for the past years and with the support from relevant Legal Avenue the ACMCA wishes to register under the PA Act 2010 as first conservation site in the country.