

WHY BOTHER WITH CONSERVATION?

Thinking about conservation area planning

What needs to be conserved in your state?

Palauan custom and tradition emphasize conservation. Palau's system of public lands essentially functioned as conservation areas. These lands were managed by chiefs to ensure that everyone had access to life's essential resources. Today people talk about "conservation areas" but this is really a modern term for a traditional Palauan concept.

Palau is beginning a process of land use planning. Everyone wants to make sure that conservation is a part of this planning. But many people are unsure about which resources need to be conserved. Soon, the Palau Conservation Society will publish a fact sheet about conservation planning. But because land use planning is starting now, this information circular provides some preliminary guidance to help people begin to think about what is important to conserve in their states. In general, there are ten main conservation targets:

TEN CONSERVATION TARGETS:

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| <i>Mangroves</i> | <i>River mouths (estuaries)</i> |
| <i>Upland forests</i> | <i>Steep areas</i> |
| <i>Freshwater swamp forests</i> | <i>Water supplies</i> |
| <i>Freshwater marshes</i> | <i>Cultural sites</i> |
| <i>River buffer zones</i> | <i>Marine areas</i> |

Why should we conserve these targets?

Mangroves – these are nursery areas and feeding grounds for fish and crabs. Mangroves protect the coastline, produce timber and thatch for summer houses, and act as a natural filter by trapping sediment from the land before it goes into the sea where it can kill the corals.





Upland Forests – these protect the soil from erosion, keep the rivers sparkling clean and the reefs healthy. Forests are home to hundreds of native Palauan plants, such as the *kelela charm* and the *bkau*, and native animals such as the fruit dove (*biib*) and the fruit bat (*olik*). Forests provide wood for building and medicinal plants for healing sickness.

Freshwater Swamp Forests – these dense swampy forests are found inland of mangroves and along rivers just upstream from the river mouth. They are home to many kinds of plants and animals. It is especially important to protect freshwater swamp forest because of the predicted sea level rise in the future. As the seas rise, outer mangroves will drown. If the natural swamp forests have been protected, the mangroves will gradually re-establish themselves inland – as long as there are no roads or other coastal developments stopping their movement.

Freshwater Marshes – these have been important to Palauans for a long time because they are often converted to taro patches. The few marshes still in a natural condition should be protected from development and farming because they are important for birds, fish and water quality, and can provide fresh water to people during droughts. As sea levels rise, there will be more and more taro patches destroyed by salt water. If the natural marshes on higher ground have been preserved, some can be converted to grow taro in the future.

River Buffer Zones – these are strips of natural forest on either side of rivers, marshes, swamp forests and mangroves that are left permanently in their natural state. Roads, develop-

ment and farms are kept back from rivers, mangroves, and freshwater swamps by about 60 feet. These strips of forest help stop soil, chemicals and other pollutants from washing into the water. Buffer zones are very important for keeping water in the rivers and the lagoon clean.

River mouths (or estuaries) – the area where freshwater and saltwater meet at the mouth of a river is very important ecologically – coral reefs depend on the nutrients they get from the river and many fish species migrate to the river mouth to spawn and mature.

Steep lands – these are the least suitable for development or farming because of the high risk of erosion and mud slides.

Water Sources – every state needs a good water supply. The area of land drained by a river, is called a “watershed”. It is important to protect the watersheds of all major rivers so there will always be plenty of safe, clean water for everyone.

Cultural sites – in all the states of Babeldaob there are reminders of ancient Palau. These stone paths, village platforms and terraced hillsides are both unique and irreplaceable. They will remind future generations of Palauans of their cultural heritage and earn revenues through tourism.

Marine Areas – Every state has special marine areas such as aggregation and spawning grounds that should be protected so that people will always be able to enjoy fresh fish and other foods from the sea.



“OK...but does this mean our whole state has to be conserved?”

.....“No it doesn’t!”

As long as you protect *enough* of each type of these places, you can still have a beautiful, healthy environment and also have sustainable development.

“But how much is enough?”

Palau Conservation Society can help you work this out.

You will need some tools – one tool is a detailed topographic map so you can see where all the rivers and the steep areas are located. You will also need a color copy of the vegetation map for your state – this will show mangroves, forests, swamp forests and marshes. Finally, you need a map showing the cultural sites in your state (available from Cultural Affairs).

With these, it will be relatively easy to decide what are the special features of your state and which are the MOST important areas to conserve. Sometimes, you will be able to protect a few different targets in just one conservation area – for instance, just one area can protect upland forests, steep lands, and your state’s water supply.

How do we decide what to protect?

Mangroves. All mangroves are important but for your mangrove conservation area, protect the largest area of mangroves in your state. Those around the mouth of rivers are especially important.

Upland Forest. The biggest areas of continuous forest without roads, farms or patches of grassland are the best for conservation. The vegetation survey shows the location of the thickest and tallest patches of forest. You can decide what proportion of your total forest you want to conserve – one third may be a reasonable target. Protecting forests will also protect your water supply.

Freshwater swamp forest. Some states don’t have much swamp forest. If your state is fortunate enough to have swamp forest, try to protect as much as possible, especially where swamp forest occurs next to mangroves.





Freshwater Marshes. Most of these have been turned into taro patches. If your state has freshwater marshes still in their natural state, try to protect all or most of these.

River buffer zones. Buffer zones should be established alongside all the rivers in your state. A buffer zone of about 60 feet along each side of the river should be enough to protect your river.

River mouth. Because this is such an important spawning and feeding area for marine life, protect *all* the mangroves, the swamp forests and marshes around the mouth of rivers.

Steep areas. You could decide to protect everything that is steeper than 50% slope, which is a very steep slope. You will probably find that the steepest areas also have good upland forest on it, so in one conservation area you can protect both soils and forests.

Water Supply. To have good quality water you need to protect the *whole* watershed upstream of the pumping station (including the river and the land it drains). Your state's water supply should be secure before you plan any other kind of development.

Cultural Sites. Historic sites registered by the Division of Cultural Affairs are protected by national law. You could declare a conservation area around the most important of your state's historic sites. These will help ensure that your children know their Palauan heritage. Cultural sites can also earn money for your state from tourism. Ask Cultural Affairs about how to best manage your state's cultural sites.

Marine Areas. Many states have established marine conservation areas to protect spawning and aggregation sites for important species of fish and other marine life. Resource managers from Kayangel (Ngeruangel Reserve), Ngarchelong (Ebiil Channel), Ngilwal (Ngemai Conservation Area, and Koror (Ngerukewid Islands, Ngkisaol Sardine Sanctuary, and Ngerumekaol Spawning Area) will be able to share their experiences in creating and managing marine conservation areas.

Good conservation areas are...

1. As big as possible
2. Connected to other areas (eg. Along "wildlife corridors")
3. Include a range of "habitats" (i.e. mangrove, swamp forest, upland forest, river's edge, marine areas)
4. Include the whole watershed (right up the top of the ridge) if possible.

