

**Chuuk State
Biodiversity Strategy and Action
Plan**

September 2004

Weno, Chuuk State
Federated States of Micronesia

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1.0 Acknowledgements

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2.0 Abbreviations

1. **ABS:** Areas of Biological Significance
2. **AG:** Attorney General
3. **CBO:** Community-based Organizations
4. **COM-FSM:** College of Micronesia- Federated States of Micronesia
5. **CSSS:** Chuuk State School System
6. **CVB:** Chuuk Visitors' Bureau
7. **DAF:** Department of Agriculture and Forestry
8. **DEA:** Department of Economic Affairs
9. **DMR:** Department of Marine Resources
10. **EPA:** Environmental Protection Agency
11. **ETS:** Educational Talent Search
12. **FY:** Fiscal Year
13. **HESA:** Health, Education, and Social Affairs
14. **HPO:** Historic Preservation Office
15. **MIC:** Micronesian In Conservation
16. **MCT:** Micronesia Conservation Trust
17. **NGO:** Non-governmental Organizations
18. **PCV:** Peace Corps Volunteer
19. **TNC:** The Nature Conservancy
20. **USDA-NRCS:** United States Department of Agriculture – Natural Resource Conservation Society

3.0 Definitions

1. **Alien species:** Introduced plants, animals, etc.
2. **Areas of Biological Significance:** Areas that are still intact and have a high variety of plants and animals within them
3. **Biodiversity:** The variety of living things on earth
4. **Conservation:** Planned management of a natural resource to prevent exploitation, destruction, or neglect.
5. **Lead Agency:** Agency responsible for verifying that an activity gets done rather than carrying out the particular activity
6. **Marine:** Of or relating to the sea
7. **Monitoring:** To keep track of usually for a special purpose
8. **Sustainable:** Using a resource so that the resource is not depleted or permanently damaged
9. **Technical assistance:** Any type of assistance but financial
10. **Terrestrial:** Living on or growing from land
11. **Resources user's fee for marine conservation:** A fee charged to those who use our biodiversity for any type of activity

4.0 Background

The state of Chuuk is the most populated state in the Federated States of Micronesia (FSM). The state is made up of 5 regions namely the Nomwunweito, Halls, Pattiw, Mortlocks and Chuuk Lagoon, has a land area of 49 square miles and a very high population density of 1,094 per square miles (Chuuk Census, 2002). In comparison to the other three states of Pohnpei, Kosrae and Yap, Chuuk makes up half of the whole FSM population.

Due to Chuuk's population, its environment is facing a lot of threats. These threats range from conversion and degradation of habitat and ecosystems, invasive organisms and pests, to over-exploitation and unsustainable harvesting of resources (FSM, 2002). In addition, there is very limited management and control of such activities. For example, despite the fact that Chuuk has one of the highest varieties of marine species, only the green and hawksbill turtle, trochus, and the black lip pearl are protected by Chuuk law. Interestingly, the green and hawksbill turtle only have a seasonal closure that coincides with their breeding season although they are in the Appendix I of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) which bans all commercial trading of plants and animals threatened with extinction. Although FSM is not a member of CITES, it would still be wise to take actions in the full protection of green and hawksbill turtle and all other marine and terrestrial species before they are extinct and forever lost. The Department of Marine Resources monitors the trochus species and declares whether the species is ready for harvesting or not. There was an incident in 2003 that involved a particular company buying trochus from the local people although Marine Resources did not declare an open season for harvesting. The company bought the trochus for 25 cents per pound although it is a known fact that trochus cost a lot more when exported to those in high demands. This is only one of the reasons why it should be required by law that prior to any activities affecting our biodiversity and prior to commercialising any natural resource, the appropriate agency (s) should be involved to explain how important it is to conserve our biodiversity and what long term benefits can be derived by doing so.

It has been known for the longest time that the Faichuk Greater White Eye, the Chuuk Monarch, and the Chuuk Poison Tree are a few of Chuuk's endemic species or species only found in Chuuk yet there has been no legislation created for their protection. Furthermore, the

protection of such species is related to the protection of their habitats which include forest areas out to the mangrove areas which are also important to people's livelihood. The marine environment, of course, is very important to people's livelihood as well and the fact that the forest and mangrove areas will be protected by protecting certain species also means that the marine areas and species are protected since all three environments are interrelated.

To reiterate it is important to protect our biodiversity for our long-term benefit and that of our environment. But it is not enough to put in legislation for such protection of the environment if people, who are the key to conservation successes, do not understand, accept, and participate in conservation activities. It is therefore important to create mechanisms that will focus on people, what conservation means to them, and ways to involve them in conservation. Such mechanisms can be placed in the communities and in the schools as a way to reach out to them in terms of conservation. For instance, many communities still practice traditional conservation methods and these methods should not be discouraged but utilized and made better by involving, not only those communities, but also the conservation related agencies and organizations that can help improve such methods in terms of patrolling and other activities. It is also important to work closely with the communities for the sake of working together to protect the Areas of Biological Significance (ABS) that have been identified within Chuuk.

In conclusion, conservation activities must start with the local people or local community then work its way out to the state, national, and international conservation levels. Once that relationship with the local communities is established, then conservation efforts should not be as difficult to establish within Chuuk State.

5.0 Action Plan Development

The Chuuk State BSAP or implementation plan was developed over a series of community consultations and expert meetings since 2001. This year 2004 results of those community consultations and expert meetings have been consolidated into an action plan outlining Chuuk state's vision, goal, priority based headings, objectives and activities. The action plan is based on the realities of Chuuk state and the most appropriate means of achieving the goal and objectives stated. Lastly, it has been agreed during the consultations that this action plan is biodiversity focused and will be part of Chuuk's overall environmental plan. Therefore waste management is not included in this particular plan since it falls under EPA and the Department of Public Works.

In terms of conservation and any other activities, it must be made clear that the land and the sea are basically owned by the people. It is, therefore, the people who are the key to the success of conservation because their consent and participation is needed before any conservation projects can be established, implemented, and continued. The Chuuk State BSAP priorities objectives and activities to reflect this fact so people-related is the first heading in the action plan, followed by assistance-related, management-related, and control-related. People-related is first because a good solid relationship needs to be established first. Once the people accept conservation as their responsibility, then assistance can be identified and accessed for conservation projects (Margoluis and Salafsky, 1998). After assistance has been accessed, then conservation activities in terms of management and control can then be implemented.

The heading '**people-related**' deals with setting up an environmental NGO, environmental clubs in the schools, a curriculum on biodiversity conservation, and working with the communities to identify marine and terrestrial areas to be protected. The heading '**assistance-related**' deals with increasing government funding for conservation programs to a 60/40 ratio, identifying outside and inside technical assistance, improving sources of funding, and establishing a system of resource user's fee. The heading '**management-related**' deals with demarcation and registration of at least 2 ABS, creating legislation to support traditional conservation practices plus protecting our island species and biodiversity, establishing marine and terrestrial protected areas, and updating an inventory of marine and terrestrial plants and animals present in Chuuk. The heading '**control-related**' deals with strict control of alien species and requirements prior to activities affecting our biodiversity.

6.0 Vision

The people of Chuuk will live in a clean and beautiful environment where biodiversity is resourceful and preserved, and where traditional knowledge and practices plus other modern knowledge and practices are utilized for the sake of sustainable development.

6.1 Goal

The Chuuk State BSAP strives for successful actions to conserve, protect, preserve, and sustain Chuuk State Biodiversity for the benefit of the people of Chuuk today and in the future.

6.2 Action Plan

6.2.1 People Related

Objective 1: By 2006 at least one environmental NGO (non governmental organization) will be established and operational.

Activity: Establish at least one operational environmental NGO

Why do this activity: Establishing at least one environmental NGO in Chuuk means that there is an organization that is eligible for environmental funding and assistance for the sake of conservation. The availability of such funding and assistance will help the organization to carry out conservation work.

How will this activity be carried out: The lead agency will meet with interested groups to hear their ideas about wishing to set up an environmental NGO. Once the interested groups are willing to take action then the role of the lead agency is to help them get appropriate documents and actions in place. Such activities that the lead agency will help with are help with setting up a Board, help with articles of incorporation and by-laws, help with developing the mission and project activities for the environmental NGO, and help with obtaining funding for the set up of the environmental NGO. Basically the interested groups will be responsible for developing documents and actions to set up the environmental NGO and the role of the lead agency is to provide technical assistance. This NGO will not have the power to dictate to other small NGO's that will be established afterwards.

Who will be responsible for this activity: EPA (Lead Agency), MCT, TNC, COM-FSM, Chuuk campus, DMR, DAF, HPO, ETS, PCV, CBO, Scouts, church leaders, traditional leaders, women's group, village leaders, NGO

Who will this activity target: Community members and related departments and agencies

Where will this activity take place: With the communities, agencies and departments responsible for establishing such an NGO

When will this activity be fully established: By the end of 2006

Rationale: The establishment of this particular environmental NGO may help increase people's awareness on biodiversity conservation, may increase people's level of commitment and participation on biodiversity conservation, and may improve level of conservation of biodiversity because it will be a recognized organization in Chuuk that will include community participation and commitment. The establishment of the environmental NGO may also help in increasing available funding for conservation activities into Chuuk State.

Objective 2: By 2006 at least two environmental clubs will be fully established in the schools to promote awareness on biodiversity issues and active participation in conservation activities.

Activity: Establish at least 2 environmental clubs in 2 elementary schools

Why do this activity: To provide practical ways for the schools to be involved in conservation activities outside the classroom setting and promote ways in which students can fully interact with their surrounding environment as a way to increase their understanding and appreciation of the environment leading to a possible willingness to protect the environment.

How will this activity be carried out: The lead agency and partners will work together on what activities to include in the environmental club and ways to establish such a club. Then the lead agency and partners will choose the schools where the environmental clubs will be established. Afterwards, they will work closely with the school children, teachers and the school administration to identify ways to include the club as an extracurricular activity in the schools. This club will involve students in some activities, to name but a few, such as tree planting, sharing information about the environment with communities, promoting an annual environmental week where schools will get together to take part in activities that promote environmental conservation, and starting school science fair activities in the schools. It is hoped that the successful creation and implementation of such clubs will lead to more clubs formed in other elementary schools in Chuuk State.

Who will be responsible for this activity: COM-FSM, Chuuk campus (Lead Agency), schools, ETS, CSSS, DMR, DAF, EPA, HPO, PCV, CBO, churches, women's group, traditional leaders, village leaders, resource owners, Scouts, NGO

Who will this activity target: School children, teachers and school administration

Where will this activity take place: In the schools

When will this activity be fully established: By the end of 2006

Rationale: The clubs will be a way for the students to learn about their surrounding environment and to apply what they already know about the environment to their classroom learning. Because most schools are not teaching about the environment, the clubs will be a good opportunity for the students to learn about the environment, and this may help improve their environmental science scores on the JHET test taken every year. The school children are likely to share with their families about what they have learned in the club thus helping promote awareness on environmental conservation and why it is important.

Objective 3: By 2007 (School year September 2006) a curriculum on biodiversity conservation will be produced and implemented in the private and public elementary schools.

Activity: Production and Implementation of a biodiversity conservation curriculum in the private and public elementary schools.

Why do this activity: It is important for teachers and students to learn about the importance of biodiversity conservation to ensure their active participation and commitment in conservation activities. In order to involve them, a curriculum on biodiversity conservation will be produced and implemented for teachers and students to use in the classroom.

How will this activity be carried out: The lead agency will work in collaboration with COM-FSM, Chuuk campus and other partners to produce the curriculum on biodiversity conservation. Once the curriculum is complete and have been reviewed for appropriateness, relevance, and effectiveness, it will be put in process for acceptance into the Chuuk State School System. Before the curriculum gets put into the system, a survey to test teacher/student knowledge on the environment needs to take place. A year after the curriculum has been put into place, the same survey will be given out to teachers and students to see whether the curriculum has affected their knowledge on the environment or not as a way to evaluate the effectiveness of the curriculum and whether there needs to be changes made for improvement. It will be required for teachers and students to use the curriculum on biodiversity conservation for classroom lessons.

Who will be responsible for this activity: CSSS, Division of Curriculum (Lead Agency), COM-FSM, Chuuk campus, schools, ETS, EPA, DMR, PCV, DAF, HPO, Youth, Scouts, HESA, Church leaders, traditional leaders, women's group, village leaders, CBO, NGO

Who will this activity target: Students, teachers and school administration

Where will this activity take place: in the schools

When will this activity be fully established: By the end of 2007

Rationale: Teachers and students will learn more about the environment as it will be a requirement to learn it in the classroom. This may also help students with the environmental section of the JHET test given out each year.

Objective 4: By 2007 at least 3 communities will each designate surrounding marine areas to be protected.

Activity: Designate 3 community marine areas to be protected

Why do this activity: The communities will designate surrounding marine areas to be protected in order to conserve the plants and animals that they depend on for food so they are not depleted. The protected marine areas will be breeding grounds for the marine animals and

plants present in the surrounding marine areas. The community will be allowed to harvest the plants and animals on a sustainable basis. This means that when a certain marine plant or animal is not as abundant as before, then the community will not allow anyone to harvest it within the protected areas.

How will this activity be carried out: The lead agency and partners will work closely with the community to learn about the importance of establishing the marine protected areas and then to determine which areas to protect. The ideal communities to work with are those where the Areas of Biological Significance (ABS) are located. Once the communities agree to protect the areas, the lead agency and partners will help with bringing in funding and assistance for the establishment of those protected areas.

Who will be responsible for this activity: DMR (Lead Agency), COM-FSM, Chuuk campus, EPA, DAF, HPO, CSSS, ETS, CBO, PCV, USDA-NRCS, Churches, traditional leaders, women's groups, resource owners, municipal government, NGO

Who will this activity target: Members of the community

Where will this activity take place: In the communities

When will this activity be fully established: By 2007

Rationale: Having the communities to be responsible for establishing their own marine protected areas allows them to be fully involved and committed to conservation work. It is hoped that they will see the benefit of protecting their own surrounding marine environment thus continue to play a key role in conservation work. This also builds community capacity and ensures that they will not depend solely on government agencies and departments to establish community projects for them.

Objective 5: By 2007 at least 2 communities will each designate surrounding terrestrial or land based areas to be protected.

Activity: Designate 2 community terrestrial or land based areas to be protected

Why do this activity: The communities will designate surrounding terrestrial or land based areas to be protected in order to conserve the plants and animals that they depend on for food so they are not depleted. The protected terrestrial or land based areas will be breeding grounds for the animals and plants present in the surrounding areas. The community will be allowed to harvest the plants and animals on a sustainable basis. This means that when a certain plant or animal is not as abundant as before, then the community will not allow anyone to harvest it within the protected areas.

How will this activity be carried out: The lead agency and partners will work closely with the community to learn about the importance of establishing the terrestrial or land based protected areas and then to determine which areas to protect. The ideal communities to work with

are those where the Areas of Biological Significance (ABS) are located. Once the communities agree to protect the areas, the lead agency and partners will help with bringing in funding and assistance for the establishment of those protected areas.

Who will be responsible for this activity: DAF (Lead Agency), COM-FSM, Chuuk campus, EPA, DMR, HPO, CSSS, ETS, CBO, PCV, USDA-NRCS, Churches, traditional leaders, women's group, resource owners, municipal government, NGO

Who will this activity target: Members of the community

Where will this activity take place: In the communities

When will this activity be fully established: By 2007

Rationale: Having the communities to be responsible for establishing their own terrestrial or land based protected areas allows them to be fully involved and committed to conservation work. It is hoped that they will see the benefit of protecting their own surrounding terrestrial or land based environment thus continue to play a key role in conservation work. This also builds community capacity and ensures that they will not depend solely on government agencies and departments to establish community projects for them.

6.2.2 Assistance Related

Objective 1: By FY 2006 government funding for conservation programs will be increased to cover operation on a 60/40 ratio.

Activity: Increase government funding for conservation programs to 60/40 ratio

Why do this activity: To ensure that biodiversity conservation work can be done because there is funding to run the activities.

How will this activity be carried out: The lead agency will work with appropriate departments and agencies for conservation to make sure that their budgets reflect a 60/40 ratio to cover operation.

Who will be responsible for this activity: EPA (Lead Agency), DMR, DAF, Budget Office, HPO, Legislature, municipal government

Who will this activity target: The appropriate departments and agencies for biodiversity conservation.

Where will this activity take place: At the appropriate departments and agencies for biodiversity conservation.

When will this activity be fully established: By FY 2006

Rationale: An increased funding for operations for appropriate departments and agencies for conservation programs is likely to increase the number of conservation activities that can be implemented. This will help the appropriate departments and agencies to fulfil their roles in conservation work.

Objective 2: By 2006 there will be available outside and inside technical assistance identified and accessible for the sake of biodiversity conservation activities.

Activity: Identify and access technical assistance for biodiversity conservation activities

Why do this activity: To ensure that there is assistance with technical needs in order for biodiversity conservation activities to be on-going or be able to continue since the lack of technical assistance has often been reasons that a few biodiversity conservation activities have not been successful in their implementation.

How will this activity be carried out: The Lead Agency for this particular activity will be responsible for identifying both local and outside technical assistance plus help identify what technical assistance is needed by certain communities, agencies, and departments in order to meet those needs.

Who will be responsible for this activity: EPA (Lead Agency), DMR, DAF, CBO, women's group, churches, municipal government, TNC, MCT, MIC, USDA-NRCS, NGO

Who will this activity target: The communities, agencies and departments in need of both local and outside technical assistance for their biodiversity conservation activities.

Where will this activity take place: With the appropriate communities, agencies and departments.

When will this activity be fully established: By 2006

Rationale: The availability of inside and outside technical assistance may increase success in establishing and implementing biodiversity conservation activities since most communities, agencies, and departments have the idea of starting up such activities but do not know the mechanisms of starting and successfully implementing such projects.

Objective 3: By 2006 ability to access sources of funding for conservation activities will be improved by at least 50 percent (using 2004 as baseline).

Activity: Improve sources of funding for conservation activities by at least 50 percent

Why do this activity: To ensure that there is increased funding for biodiversity conservation so conservation activities can be carried out.

How will this activity be carried out: Once the environmental NGO is established and fully operating, it will begin work on writing proposals to fund their conservation activities. This NGO will also help the communities with accessing funds for their community biodiversity conservation projects.

Who will be responsible for this activity: Chuuk MCT members (Lead Agency), COM-FSM, Chuuk campus, MIC, DEA, DMR, DAF, EPA, HPO, CBO, churches, women's group, municipal government, NGO

Who will this activity target: The appropriate agencies and departments

Where will this activity take place: With the appropriate agencies and departments

When will this activity be fully established: By 2006

Rationale: An improvement in accessing sources of funding by at least 50 percent ensures that biodiversity conservation activities can be fully established and implemented.

Objective 4: By 2007 a system of 'resource user's fee' for conservation of the marine environment will be established, managed, and used for the conservation and maintenance of our marine biodiversity only.

Activity: Establish a system of 'resource user's fee' for conservation of marine environment

Why do this activity: To ensure that there is available funding for the conservation and maintenance of our marine biodiversity.

How will this activity be carried out: The appropriate departments and agencies involved in the utilization of biodiversity must ensure that there is legislation passed supporting that a system of 'resource user's fee' for conservation of marine environment be established and used for the purpose of marine biodiversity conservation only. Divers' fees and penalty fees in regards to marine conservation will also part of this system of 'resource user's fee'.

Who will be responsible for this activity: DMR (Lead Agency), DAF, AG, EPA, HPO, CBO, CVB, municipal government, women's groups, NGO

Who will this activity target: The establishment of a 'resource user's fee' for the conservation of our marine environment will target people, agencies, and departments who use the marine environment for commercial, recreational, scientific, research, and other purposes. Owners and caretakers of particular community marine resources will not be charged the 'resource user's fee' but will charge those who utilize such resources.

Where will this activity take place: With the appropriate communities, agencies and departments

When will this activity be fully established: By 2007

Rationale: The establishment of a system of 'resource user's fee' may ensure the availability of funding for the conservation, maintenance, and management of our marine biodiversity. There must be a separate account for such a system for marine biodiversity to ensure that the fee goes specifically to marine conservation and no other purpose.

6.2.3 Management Related

Objective 1: By 2006 a complete demarcation and registration of at least 2 ABS (Areas of Biological Significance) will be completed.

Activity: Demarcation and registration of at least 2 ABS

Why do this activity: It is important to have updated information about the 2 ABS so it can be clear what type of biodiversity is present for conservation work.

How will this activity be carried out: Approval from the community needs to be granted prior to any work on the 2 ABS. Once this is granted then the appropriate agencies, departments and members of the communities can start work. The 2 ideal ABS are the Fefen Forest and the Epinup Mangrove Area since they are already in the process of establishing themselves as protected areas.

Who will be responsible for this activity: Land Commission (Lead Agency), EPA, DMR, DAF, HPO, CBO, COM-FSM, Chuuk campus, CSSS, PCV, traditional leaders, village leaders, women's group, municipal government, churches, NGO

Who will this activity target: The communities where the 2 ABS are located

Where will this activity take place: In the communities where the 2 ABS are located.

When will this activity be fully established: By 2006

Rationale: The demarcation and registration of the 2 target ABS is a way to get the boundaries and landowners cleared in order to continue conservation activities within them.

Objective 2: By 2006 there will be legislation for the protection of our endemic, endangered and rare species.

Activity: Create legislation for protection of our endemic, endangered, and rare species

Why do this activity: We need legislation to protect our endemic, endangered, and rare species from becoming extinct and to grant authorization to appropriate agencies and departments to prosecute offenders.

How will this activity be carried out: Appropriate agencies and departments will ensure that the piece of legislation is introduced to the legislature.

Who will be responsible for this activity: AG (Lead Agency), DAF, DMR, EPA, HPO, CBO, CSSS, ETS, COM-FSM, Chuuk campus, PCV, traditional leaders, village leaders, women's group, municipal government, NGO

Who will this activity target: The communities, agencies, and departments whose activities endanger the numbers of our species.

Where will this activity take place: With the appropriate departments and agencies

When will this activity be fully established: By 2006

Rationale: The conservation of our species may increase their numbers thus decreasing the chances of becoming extinct. Sources of income into the state may include money derived from activities where people watch birds, fish, corals, and other species unique to Chuuk State.

Objective 3: By 2007 there will be legislation that appropriate agencies and departments work with communities to patrol areas under the traditional land-based conservation practice of 'pwau'.

Activity: Create legislation for the patrol of areas under 'pwau'

Why do this activity: Communities already have the power to prosecute offenders to their 'pwau'. Now they need a legislation that actually makes it required that appropriate agencies and departments assist them in patrolling the areas that are under 'pwau'. Because 'pwau' is already a recognized by the communities as a traditional conservation practice, it is important for all appropriate agencies and departments to work closely with the community as a way to encourage more communities to continue with such a conservation practice that has worked for many years.

How will this activity be carried out: Communities with the help of appropriate agencies and departments will introduce the legislation to legislature for legal action. It is hoped that even before such legislation is put into action that the appropriate agencies and departments are already working closely with the communities to patrol the areas that are under 'pwau'.

Who will be responsible for this activity: AG (Lead Agency), DMR, DAF, HPO, EPA, AG, PCV, traditional leaders, village leaders, women's group, municipal government, churches, NGO

Who will this activity target: The communities that practice 'pwau', appropriate agencies and departments, and offenders to the 'pwau'.

Where will this activity take place: With the appropriate agencies, departments, and communities

When will this activity be fully established: By 2007

Rationale: Appropriate agencies and departments working closely with the community to patrol areas under 'pwau' may likely decrease the number of offenders who harvest plants and animals within the area. This type of collaboration may also encourage many communities to continue with the traditional practice because there is available assistance from appropriate agencies and departments.

Objective 4: By 2007 there will be legislation that appropriate agencies and departments work with communities to patrol areas under the traditional marine-based conservation practice of 'mechen'.

Activity: Create legislation for the patrol of areas under 'mechen'

Why do this activity: Communities already have the power to prosecute offenders to their 'mechen'. Now they need a legislation that actually makes it required that appropriate agencies and departments assist them in patrolling the areas that are under 'mechen'. Because 'mechen' is already a recognized by the communities as a traditional conservation practice, it is important for all appropriate agencies and departments to work closely with the community as a way to encourage more communities to continue with such a conservation practice that has worked for many years.

How will this activity be carried out: Communities with the help of appropriate agencies and departments will introduce the legislation to legislature for legal action. It is hoped that even before such legislation is put into action that the appropriate agencies and departments are already working closely with the communities to patrol the areas that are under 'mechen'.

Who will be responsible for this activity: AG (Lead Agency), DMR, DAF, HPO, EPA, AG, PCV, traditional leaders, village leaders, women's group, municipal government, churches, NGO

Who will this activity target: The communities that practice 'mechen', appropriate agencies and departments, and offenders to the 'mechen'.

Where will this activity take place: With the appropriate agencies, departments, and communities

When will this activity be fully established: By 2007

Rationale: Appropriate agencies and departments working closely with the community to patrol areas under 'pwau' may likely decrease the number of offenders who harvest plants and animals within the area. This type of collaboration may also encourage many communities to continue with the traditional practice because there is available assistance from appropriate agencies and departments.

Objective 5: By 2007 there will be legislation to regulate, monitor, and control the introduction of alien species and their effects on our biodiversity local gene pool.

Activity: Create legislation for the control of alien species

Why do this activity: To ensure that our biodiversity local gene pool is not affected by the introduction of alien species.

How will this activity be carried out: Appropriate agencies and departments will ensure that the piece of legislation is introduced to the legislature for action.

Who will be responsible for this activity: AG (Lead Agency), DMR, DAF, EPA, HPO, DEA, Customs, Quarantine, PCV, traditional leaders, village leaders, women's group, municipal government, NGO

Who will this activity target: People and imports that may carry alien species into the Chuuk islands.

Where will this activity take place: With the appropriate agencies and departments

When will this activity be fully established: By 2007

Rationale: Having such legislation may trigger local people's curiosity about why such legislation would target our biodiversity local gene pool. Such legislation may also aware the local people that it is important to protect such local gene pool.

Objective 6: By 2007 there will be legislation to regulate, monitor, and protect the use of our natural marine resources from being over-exploited by our local people and outside people.

Activity: Create legislation for the protection of our natural marine resources

Why do this activity: To ensure that our natural marine resources are not over-exploited by local people and outside people.

How will this activity be carried out: Appropriate agencies and departments will ensure that the piece of legislation is introduced to the legislature.

Who will be responsible for this activity: AG (lead Agency), DMR, DAF, EPA, HPO, PCV, traditional leaders, village leaders, women's group, municipal government, NGO

Who will this activity target: The people who exploit our natural marine resources without thought of the affects of such actions.

Where will this activity take place: With the appropriate agencies and departments

When will this activity be fully established: By 2007

Rationale: Having such legislation may trigger local people's curiosity about why such legislation would target natural marine resources. Such a legislation may also aware the local people that is its important to protect such natural marine resources from being over-exploited and that should the natural marine resources be utilized for whatever purpose there must be benefits shared.

Objective 7: By 2007 there will be legislation to regulate, monitor, and protect the use of our natural terrestrial resources from being over-exploited by our local people and outside people.

Activity: Create legislation for the protection of our natural terrestrial resources

Why do this activity: To ensure that our natural terrestrial resources are not over-exploited by local people and outside people.

How will this activity be carried out: Appropriate agencies and departments will ensure that the piece of legislation is introduced to the legislature.

Who will be responsible for this activity: AG (lead Agency), DMR, DAF, EPA, HPO, PCV, traditional leaders, village leaders, women's group, municipal government, NGO

Who will this activity target: The people who exploit our natural terrestrial resources without thought of the affects of such actions.

Where will this activity take place: With the appropriate agencies and departments

When will this activity be fully established: By 2007

Rationale: Having such legislation may trigger local people's curiosity about why such legislation would target natural terrestrial resources. Such a legislation may also aware the local people that is its important to protect such natural terrestrial resources from being over-exploited and that should the natural terrestrial resources be utilized for whatever purpose there must be benefits shared.

Objective 8: By 2008 there will be at least 3 fully established and protected marine areas some of which are listed under the ABS (Areas of Biological Significance).

Activity: Establish 3 fully protected marine areas

Why do this activity: To ensure that there is a level of protection for the ecosystems and species within the protected marine areas.

How will this activity be carried out: The appropriate agencies and communities will work together to establish the marine protected areas. They will also be responsible for educating the communities on the importance of establishing the marine protected areas.

Who will be responsible for this activity: DMR (Lead Agency), DAF, EPA, HPO, COM-FSM, Chuuk campus, CBO, NGO, TNC, MCT, MIC, PCV, traditional leaders, village leaders, women's group, municipal government

Who will this activity target: The communities and areas where the marine protected areas will be located.

Where will this activity take place: With the appropriate communities, agencies and departments.

When will this activity be fully established: By 2008

Rationale: Creating a marine protected area needs to include the surrounding community since there is a need for their acceptance, support and participation in establishing the protected area. The community will be the key group to establish the protected area and the appropriate agencies and departments will help with technical, financial, and other assistance.

Objective 9: By 2008 there will be at least 2 fully established and protected terrestrial or land based areas some of which are listed under the ABS (Areas of Biological Significance).

Activity: Establish 2 fully protected terrestrial or land based areas

Why do this activity: To ensure that there is a level of protection for the ecosystems and species within the protected terrestrial or land based areas.

How will this activity be carried out: The appropriate agencies and communities will work together to establish the protected terrestrial or land based areas. They will also be responsible for educating the communities on the importance of establishing the protected areas.

Who will be responsible for this activity: DAF (Lead Agency), DMR, EPA, HPO, COM-FSM, Chuuk campus, CBO, NGO, TNC, MCT, MIC, PCV, traditional leaders, village leaders, women's group, municipal government

Who will this activity target: The communities and areas where the protected terrestrial or land based areas will be located.

Where will this activity take place: With the appropriate communities, agencies and departments.

When will this activity be fully established: By 2008

Rationale: Creating a protected terrestrial or land based area needs to include the surrounding community since there is a need for their acceptance, support and participation in establishing the protected area. The community will be the key group to establish the protected area and the appropriate agencies and departments will help with technical, financial, and other assistance.

Objective 10: By 2008 there will be an updated inventory of the types of marine plants and animals present in Chuuk.

Activity: Update an inventory of marine plants and animals in Chuuk

Why do this activity: To have an updated list of the types of marine plants and animals present in Chuuk so we are aware of what we have and how we can protect them to ensure their continuity.

How will this activity be carried out: The lead agency and supporting agencies and departments will carry out the inventory.

Who will be responsible for this activity: DMR (Lead Agency), DAF, EPA, HPO, NGO, COM-FSM, Chuuk campus, TNC, MCT, MIC, CSSS, CBO, PCV, traditional leaders, village leaders, women's group, municipal government, schools

Who will this activity target: The areas with high levels of biodiversity in Chuuk

Where will this activity take place: Within the areas with high levels of biodiversity in Chuuk.

When will this activity be fully established: By 2008

Rationale: An updated inventory of types of marine plants and animals can inform us of which species is still present, which have gone extinct, and which is in need of protection.

Objective 11: By 2008 there will be an updated inventory of the types of terrestrial or land based plants and animals present in Chuuk.

Activity: Update an inventory of terrestrial or land based plants and animals in Chuuk

Why do this activity: To have an updated list of the types of terrestrial or land based plants and animals present in Chuuk so we are aware of what we have and how we can protect them to ensure their continuity.

How will this activity be carried out: The lead agency and supporting agencies and departments will carry out the survey.

Who will be responsible for this activity: DAF (Lead Agency), DMR, EPA, HPO, NGO, COM-FSM, Chuuk campus, TNC, MCT, MIC, CSSS, CBO, PCV, traditional leaders, village leaders, women's group, municipal government, schools

Who will this activity target: The areas with high levels of biodiversity in Chuuk

Where will this activity take place: Within the areas with high levels of biodiversity in Chuuk.

When will this activity be fully established: By 2008

Rationale: An updated inventory of types of terrestrial or land based plants and animals can inform us of which species is still present, which have become extinct, and which is in need of protection.

6.2.4 Control Related

Objective 1: By 2006 there will be improved strict control of alien species into the state that may be detrimental to our biodiversity.

Activity: Improve the control of alien species into Chuuk

Why do this activity: There is a need to control the number and types of alien species brought into our state since they can bring parasites and some forms of bacteria that can kill off our local species.

How will this activity be carried out: The staff at the Quarantine office must fully search packages that come into our ports by checking item by item. They will also work closely with DMR and DAF to identify alien species on land and within our waters and to eradicate them. They must be empowered by law to search for such alien species on private properties and rid of them before they do damage to the local biodiversity.

Who will be responsible for this activity: Quarantine (Lead Agency), EPA, HPO, DAF, DMR, DEA, municipal governments, CBO, CSSS, COM-FSM, Chuuk campus, NGO, PCV, traditional leaders, village leaders, women's group, municipal government

Who will this activity target: Travellers and imports that come into the islands in Chuuk.

Where will this activity take place: At the airport and sea ports

When will this activity be fully established: By 2006

Rationale: Quarantine officers and other appropriate agencies and departments need to have legal authority to also patrol areas in case there are alien species present and should have the right to obtain such alien species and rid of them for the safety of our biodiversity.

Objective 2: By 2006 it will be required that prior to granting a permit for activities affecting our marine biodiversity all agencies concerned must be involved in the approval process.

Activity: Require the involvement of all appropriate agencies in the granting permit process regarding marine biodiversity

Why do this activity: To ensure that all appropriate and involved agencies, departments, and communities are aware of any activities relating to our marine biodiversity and can be involved in the approval process.

How will this activity be carried out: The permit approving agency or department will make sure to inform appropriate and related agencies and departments about reasons for permit request and whether those agencies and departments have a role to play in any feasibility study before the granting of such a permit.

Who will be responsible for this activity: DMR (Lead Agency), DAF, HPO, EPA, NGO, CBO, AG, PCV, traditional leaders, village leaders, women's group, municipal government

Who will this activity target: Those requesting permits in regards to our marine biodiversity whether local or outside people.

Where will this activity take place: With the appropriate agencies and departments.

When will this activity be fully established: By 2006

Rationale: Including all appropriate agencies and departments in the approval process of granting a permit will show that there is collaboration between such agencies and departments. This will also help to quickly inform about such a permit request, purpose of such a request plus how the agencies and departments can help in the approval process of such a permit.

Objective 3: By 2006 it will be required that prior to granting a permit for activities affecting our terrestrial biodiversity all agencies concerned must be involved in the approval process.

Activity: Require the involvement of all appropriate agencies in the granting permit process regarding terrestrial biodiversity

Why do this activity: To ensure that all appropriate and involved agencies, departments, and communities are aware of any activities relating to our terrestrial biodiversity and can be involved in the approval process.

How will this activity be carried out: The permit approving agency or department will make sure to inform appropriate and related agencies and departments about reasons for permit request and whether those agencies and departments have a role to play in any feasibility study before the granting of such a permit.

Who will be responsible for this activity: DAF (Lead Agency), DMR, HPO, EPA, NGO,CBO, AG, PCV, traditional leaders, village leaders, women's group, municipal government

Who will this activity target: Those requesting permits in regards to our terrestrial biodiversity whether local or outside people.

Where will this activity take place: With the appropriate agencies and departments.

When will this activity be fully established: By 2006

Rationale: Including all appropriate agencies and departments in the approval process of granting a permit will show that there is collaboration between such agencies and departments. This will also help to quickly inform about such a permit request, purpose of such a request plus how the agencies and departments can help in the approval process of such a permit.

Objective 4: By 2006 it will be required by law that prior to commercialisation of any natural marine resource for exportation, approval must be granted by the appropriate agency (s).

Activity: Require approval by appropriate agency prior to commercial exportation of any natural marine resource

Why do this activity: There is concern that natural marine resources may have been over-exploited for commercial use with little or no thought about the impact on the environment. It is important that approval for commercialisation of natural marine resources by appropriate agency (s) be sought out to help in decreasing chances of the high risk of depletion of those natural marine resources.

How will this activity be carried out: It will be required that any community, agency, department wishing to commercialise any natural marine resource must seek advice first from appropriate agency (s). The role of this agency is to survey the natural marine resources to find out if the number present is able to reproduce rapidly or is on the verge

of collapse. If numbers of the natural marine resources are low then commercialisation will be discouraged. The lead agency will work closely with the Department of Marine Resources to carry out this activity.

Who will be responsible for this activity: AG (Lead Agency), DAF, EPA, HPO, DMR, NGO, PCV, traditional leaders, village leaders, women's group, municipal government

Who will this activity target: The communities, agencies and departments that harvest our natural marine resources for commercial purposes.

Where will this activity take place: With the appropriate communities, agencies and departments.

When will this activity be fully established: By 2006

Rationale: This action will enable all concerned communities, agencies and departments to work together on the appropriateness of commercialising any natural marine resource. Oftentimes local people have harvested natural marine resources to give to businesses without understanding the effects of their actions to the environment. It is hoped that this action will also act as a form of awareness to communities, agencies and departments involved in the commercialisation of our natural marine resources.

Objective 5: By 2006 it will be required by law that prior to commercialisation of any natural terrestrial resource for exportation, approval must be granted by the appropriate agency (s).

Activity: Require approval by appropriate agency prior to commercial exportation of any natural terrestrial resource

Why do this activity: There is concern that natural terrestrial resources may have been over-exploited for commercial use with little or no thought about the impact on the environment. It is important that approval for commercialisation of natural terrestrial resources by appropriate agency (s) be sought out to help in decreasing chances of the high risk of depletion of those natural terrestrial resources.

How will this activity be carried out: It will be required that any community, agency, department wishing to commercialise any natural terrestrial resource must seek advice first from appropriate agency (s). The role of this agency is to survey the natural terrestrial resources to find out if the number present is able to reproduce rapidly or is on the verge of collapse. If numbers of these natural terrestrial resources are low then commercialisation will be discouraged. The lead agency will work closely with the Department of Agriculture and Forestry to carry out this activity.

Who will be responsible for this activity: AG (Lead Agency), DAF, EPA, HPO, DMR, NGO, PCV, traditional leaders, village leaders, women's group, municipal government

Who will this activity target: The communities, agencies and departments that harvest our natural resources for commercial purposes.

Where will this activity take place: With the appropriate communities, agencies and departments.

When will this activity be fully established: By 2006

Rationale: This action will enable all concerned communities, agencies and departments to work together on the appropriateness of commercialising any natural resource. Oftentimes local people have harvested natural resources to give to businesses without understanding the effects of their actions to the environment. It is hoped that this action will also act as a form of awareness to communities, agencies and departments involved in the commercialisation of our natural resources.

Objective 6: By 2006 all government departments and agencies will include biodiversity conservation in their planned activities.

Activity: Require all government departments and agencies to include conservation in their planned activities.

Why do this activity: To ensure that biodiversity conservation will be the work of all agencies and departments and not just the appropriate ones. This will also ensure that there is available funding for biodiversity conservation every time a new budget is drawn up by any agency or department.

How will this activity be carried out: There should be a memorandum from Governor or appropriate agency or department reminding and requesting agencies and departments to include biodiversity conservation in their budget. The lead agency plays a key role in encouraging all government departments and agencies to include conservation in their budget.

Who will be responsible for this activity: EPA (Lead Agency), AG, DMR, DAF, HPO, NGO, Budget, CVB, CSSS, PCV, traditional leaders, village leaders, women's group, municipal government

Who will this activity target: The appropriate agencies and departments.

Where will this activity take place: With the appropriate agencies and departments.

When will this activity be fully established: By 2006

Rationale: This may ensure that there is collaboration between appropriate agencies and departments in implementing conservation work so not to repeat an activity that another has already done.

Objective 7: By 2006 exportation of reef fish and other reef products for commercial purposes will be fully banned.

Activity: Ban the commercial exportation of reef fish and other reef products

Why do this activity: There is concern that the commercialisation of reef fish for exportation may increase risk of depletion if no control is implemented. Higher demand for reef fish exportation could lead to higher levels of harvest of reef fish and this could be destructive to the environment as well as supply for food for the local people. The other sister states have banned the exportation of reef fish and products, as recommended during the 3rd Economic Summit, and Chuuk should now take the appropriate measures to do the same.

How will this activity be carried out: The appropriate agencies and departments must make sure activity is implemented to ensure that number of reef fish and products are kept at a level where they will not be depleted. It is most important that legislation is put in place to legalize this activity of banning the commercial exportation of reef fish and products.

Who will be responsible for this activity: DMR (Lead Agency), EPA, HPO, AG, NGO, PCV, traditional leaders, village leaders, women's group, municipal government

Who will this activity target: The communities, agencies and departments involved in exporting reef fish for commercial exportation.

Where will this activity take place: With the appropriate communities, agencies and departments.

When will this activity be fully established: By 2006

Rationale: There needs to be collaboration on banning the exportation of reef fish and products for commercial purposes to ensure numbers are not over-exploited, and also to give them a chance to reproduce to reach a sustainable number. The Chuuk local community highly depends on reef products for food so it is important to protect them and make sure they are not depleted. It is also possible that banning the exportation of reef fish and products for commercial use may decrease the number of fish dynamiting incidences.

7.0 Monitoring and Review

The lead agencies and partners will meet once the Chuuk BSAP has been approved. At this particular time the lead agencies will be familiar with what activities they are responsible for. During this initial meeting the lead agencies and partners will work together to complete a specific timeline showing a starting date by month and year and an ending date by month and year for accomplishing each of the activities within their target year.

Three months after the initial meeting, lead agencies and partners will meet up again to update each other of what activities have started, which haven't, and what type assistance is needed. Every three months lead agencies and partners will meet to update each other on results of their assigned activities. These meetings will be for the lead agencies and partners to monitor the results of the action plan.

The Chuuk BSAP is a 5 year plan and after 5 years the lead agencies and partners will have a meeting to review and discuss what activities have been successful or not, reasons why, how to improve such activities that have not been successful, and finally to continue work on those activities that have not been fully established.

8.0 General Timeline

2006

Date	Lead Agency	Activity	Monitoring Strategy
2006	EPA	Establish at least 1 operational environmental NGO	Compare number of established environmental NGO before and after 2006
2006	COM-FSM, Chk	Establish at least 2 environmental clubs in 2 elementary schools	Compare number of established environmental clubs before and after 2006
2006	CSSS	Production/ Implementation of curriculum on biodiversity in elementary schools	Compare number of produced & implemented curriculum on biodiversity in elementary schools before and after 2006
2006	EPA	60/40 ratio government funding for conservation programs	Compare level of government funding ratio for conservation programs before and after 2006
2006	EPA	Identify and access inside and outside technical assistance for biodiversity activities	Compare number of available inside & outside technical assistance for biodiversity activities before and after 2006
2006	Chk MCT	Improve sources of funding for conservation programs by at least 50 percent	Compare level of funding for conservation programs before and after 2006
2006	Land Commiss.	Complete demarcation and registration of at least 2 ABS	Compare number of demarked & registered ABS before and after 2006
2006	AG	Create legislation for protection of endemic, endangered and rare species	Compare number of legislation for protection of endemic, endangered and rare species before and after 2006
2006	Quarantine	Improve control of alien	Compare level of control of

		species	alien species before and after 2006
2006	DMR	Involve all in process of granting permit regarding marine biodiversity	Compare level of involvement of all in process of granting permit in regards to marine biodiversity before and after 2006
2006	DAF	Involve all in process of granting permit regarding terrestrial biodiversity	Compare level of involvement of all in process of granting permit in regards to terrestrial biodiversity before and after 2006
2006	AG	Required approval by law prior to commercial exportation of any natural marine resources	Compare level of involvement of appropriate agency (s) in granting approval prior to commercialisation of any natural marine resources
2006	AG	Required approval by law prior to commercial exportation of any natural terrestrial resources	Compare level of involvement of appropriate agency (s) in granting approval prior to commercialisation of any natural terrestrial resources
2006	EPA	Government departments/ agencies include conservation in planned activities	Compare number of government departments/agencies include conservation in planned activities before and after 2006
2006	DMR	Ban commercial exportation of reef fish and other reef products	Compare number of reef fish and other reef products exported for commercial purposes before and after 2006

2007

Date	Lead Agency	Activity	Monitoring Strategy
2007	DMR	Designate 3 community marine protected areas	Compare number of designated community marine protected areas before and after 2007
2007	DAF	Designate 2 community terrestrial protected areas	Compare number of designated community terrestrial protected areas before and after 2007
2007	DMR	Establish system of 'resource user's fee' for marine conservation	Compare number of established 'resource user's fee' for marine conservation before and after 2007
2007	AG	Create legislation for patrol of areas under 'pwau'	Compare number of legislation for the patrol of

			areas under 'pwau' before and after 2007
2007	AG	Create legislation for patrol of areas under 'mechen'	Compare number of legislation for the patrol of areas under 'mechen' before and after 2007
2007	AG	Create legislation for the control of alien species	Compare number of legislation for control of alien species before and after 2007
2007	AG	Create legislation for protection of natural marine resources	Compare number of legislation for protection of natural marine resources before and after 2007
2007	AG	Create legislation for protection of natural terrestrial resources	Compare number of legislation for protection of natural terrestrial resources before and after 2007

2008

Date	Lead Agency	Activity	Monitoring Strategy
2008	DMR	Establish 3 fully protected marine areas	Compare number of fully established protected marine areas before and after 2008
2008	DAF	Establish 2 fully protected terrestrial areas	Compare number of fully established protected terrestrial areas before and after 2008
2008	DMR	Update inventory of marine plants and animals	Compare number of updated inventory of marine plants and animals before and after 2008
2008	DAF	Update inventory of terrestrial plants and animals	Compare number of updated inventory of terrestrial plants and animals before and after 2008

9.0 Reference

Chuuk State Census Report (2002) *2000 FSM Census of Population and Housing*. Department of Economic Affairs, FSM.

Federated States of Micronesia (2002) *The Federated States of Micronesia National Biodiversity Strategy and Action Plan*. Economic Affairs, FSM.

Margoluis, R.A., and Salafsky, N.N. (1998) *Measures of Success: Designing, Managing, and Monitoring Conservation and Development Projects*. Island Press, United States of America.