



**CORAL TRIANGLE
INITIATIVE**
ON CORAL REEFS, FISHERIES AND FOOD SECURITY



Marine Zoning Recommendations For The Nino Konis Santana National Park Timor-Leste

*Rekomendasaun Ba Zonamentu Tasi Nian Iha
Parque Nacional Nino Konis Santana*

June 2013

This publication was prepared for Timor-Leste's National Coordinating Committee with funding from the United States Agency for International Development's Coral Triangle Support Partnership (CTSP)

Junhu 2013

Publikasaun ida ne'e prepara husi Komite Kordenasaun Nasional Timor-Leste ho fundus husi Agência dos Estados Unidos para o Desenvolvimento Internacional (USAID) nia projetu Coral Triangle Support Partnership (CTSP)





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Rekomendasaun Ba Zonamentu Tasi Nian Iha Parque Nacional Nino Konis Santana

May 2013

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USAID Project Number: GCP LWA Award # LAG-A-00-99-00048-00

Prepared by: Conservation International for the Timor-Leste National Coordinating Committee

Printed in: Jakarta, Indonesia 2013

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This is a publication of the Coral Triangle Initiative on Coral Reefs, Fisheries and Food Security (CTI-CFF). Funding for the preparation of this document was provided by the USAID-funded Coral Triangle Support Partnership (CTSP). CTSP is a consortium led by the World Wildlife Fund, The Nature Conservancy and Conservation International with funding support from the United States Agency for International Development in Timor-Leste.

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Front cover photo: © Matthew Abbott / CTSP

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Projetu USAID Numeru: GCP LWA Award # LAG-A-00-99-00048-00

Prepara husi: Conservation International ba Komite Kordenasaun Nasional Timor-Leste

Imprime iha: Jakarta, Indonesia 2013

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Publikasaun ida ne'e husi Coral Triangle Initiative on Coral Reefs, Fisheries and Food Security (CTI-CFF). Fundus hodi halo dokumentu ida ne'e hetan husi projetu USAID - Coral Triangle Support Partnership (CTSP). CTSP hanesan parseria entre World Wildlife Fund, The Nature Conservancy and Conservation International ho fundus husi United States Agency for International Development iha Timor-Leste.

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In 2007 Timor-Leste declared its first National Park – the Nino Konis Santana National Park (NKSNP). Located in the country’s eastern extremity, NKSNP includes a 55,600 hectare marine component. While the decision to declare the National Park was a welcome move towards improved protection of Timor-Leste’s important and valuable marine environments, there remain significant challenges to its successful implementation.

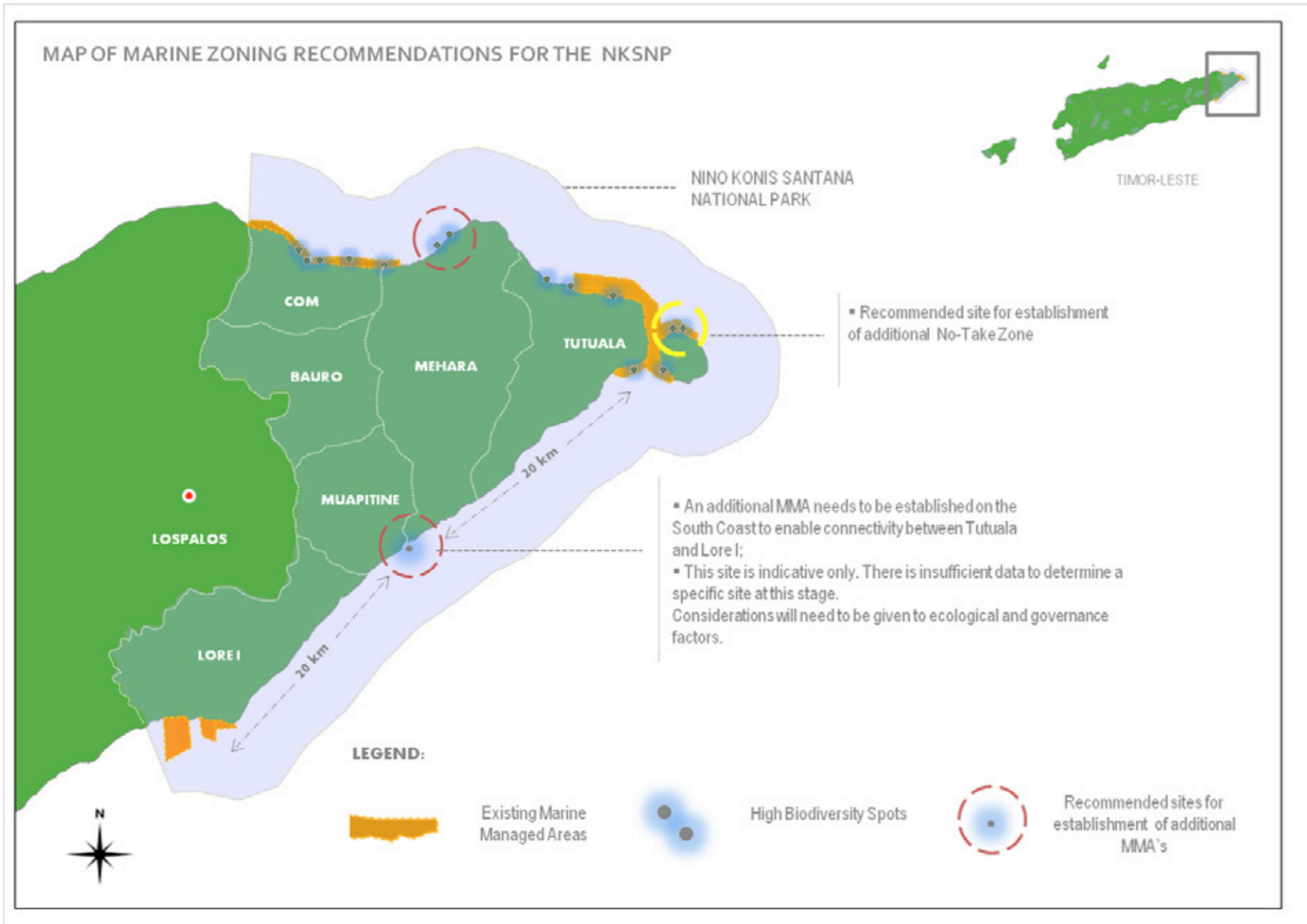
A key challenge for the NKSNP management is the current lack of zoning. NKSNP was established as an IUCN Category V Protected Area, meaning that people continue to live within, rely on, and actively use the resources of the Park. Multiple-use zoning is a process by which certain parts of a protected area are afforded different levels of protection according to the state of the resources and ecosystems found there, the level of threat those resources and ecosystems face, and the productive potential for these ecosystems if well-managed. Multiple-use zoning is required to establish the ‘rules’ within the National Park, to afford the best possible protection for the natural environment without undermining the needs of the people who live there. **These ‘rules’ can then inform how the park is managed.**

Under the Coral Triangle Initiative (CTI), the National Government requested assistance from USAID’s Coral Triangle Support Partnership (CTSP) to explore the possibilities for cost effective management solutions with strong community participation. CTSP has, in turn, co-facilitated a process whereby fishing communities in the National Park have completed multiple-use zoning of their local marine area. This zoning of **marine managed areas** is accompanied by community-based management plans and covers 22,360 hectares of the 55,600m hectare marine park.

Iha 2007 Timor-Leste deklarania ninia Parque Nacional – PN Nino Konis Santana (PNNKS) ba dala-uluk. Parque ne’e lokaliza iha rai ulun iha parte Lorosa’e no inklui 55,600 hektares husi parte tasi. DesiZaun ida ne’e hanesan pasu importante tebes atu proteje no fo valor ba Timor-Leste nia ambiente mariñu, maibe sei presiza hakat desafiu balun atu hetan susesu implementasaun.

Desafiu ida ne’ebe mak hanesan abut ba jestaun PNNKS mak seidak iha prosesu zonamentu. Parque ida ne’e hari’i nudar Katgoria V Area protejida IUCN nian, no buat ne’e signifika katak ema moris nafatin iha ne’eba, uza no depende maka’as ba parque nia rekursus. Zonamentu multi-uzus hanesan prosesu ida ne’ebe mak fatin sira iha parque nia laran hetan nivel protesau oin-oin, hare fali ba estadu rekurus no ekosistemas ne’ebe mak iha, nivel ameasa nebe’e mak rekurus no ekosistemas ne’e sei hasoru, no potensial produtivu mak ekosistema sira bele iha bainhira hetan jetau didiak. Zonamentu multi-uzus tenki iha duni hodi estabelese ‘regras’ iha Parque Nacional, atu ambiente natural hetan protesau ne’ebe diak liu tan no labele kompromete ema sira ne’ebe mak hela iha ne’eba. **‘Regra’ sira ne’e mak sai mata-dalan ba jestaun parque nian.**

Liu husi Coral Triangle Initiative (CTI), Governu Nasional husu asistensia husi ba programa USAID - Coral Triangle Support Partnership (CTSP) hodi bele buka- tuir possibilidade ne’ebe mak rentavel ba jestaun ne’e ho partisipasaun maka’as husi komunidadade sira. CTSP rasik mak fasilita prosesu hamutuk ho komunidadade sira iha Parque Nacional hodi halo duni zonamentu multi-uzus ba area mariña lokal. Zonamentu ba **area jestaun mariña** hamutuk ho ninia planu jestaun mak bazeia ba komunidadade no konsegue kaer 22,360 hektares husi parque marinhua ho area tomak 55,600m hektares.



The existing **marine managed areas** within Com, Tutuala and Lore I include a combination of no-take fisheries replenishment zones, buffer zones, and special regulation zones with a mix of gear restrictions, temporal closures and species specific take limits. The management plans for each of the **marine managed areas** include regulations to prohibit destructive activities and to limit use of overly efficient or destructive gear types and practices.

Building on these existing marine managed areas, the enclosed map provides recommendations of next steps towards completing multiple-use zoning for the marine component of the National Park.

Scientific Principles for Multiple-Use Zoning

In order to ensure that protected areas are resilient to climate change, and capable of providing sustained ecosystem services, a number of scientific principles need to inform the decision-making process for multiple-use zoning.

The map opposite provides recommendations for how the multiple-use zoning for the marine component of the National Park could be completed. These recommendations have been made from a purely scientific perspective. In seeking to implement these recommendations, there will need to be further consideration given to local socio-economic needs and practices.

As a starting point for the recommendations, the scientific principles below were applied. These principles are aimed at improving the productivity and sustainability of fisheries and coastal resources through safeguarding ecosystem health.

Scientific Principles

1. Create Large multiple use areas.
2. Establish no take areas which are large enough to protect target species.
3. Establish no take areas which include each type of habitat critical for spawning, nursery and feeding of the target species.
4. Ensure 20 to 40% of each habitat within the area you are managing is included in the no-take zone (**representativeness**).
5. Ensure that no take areas are established no further than 20km apart, to enable **connectivity** between key ecosystems.
6. Ensure at least three examples of each habitat type is protected in three different No Take Zones across the larger multiple use area (**replication**), so that if one habitat is destroyed or degraded there are others from which the ecosystem can replenish.
7. Ensure sufficient, accessible space is still provided for fishermen to fish for their livelihoods and food security.



These principles were then considered within the context of data which was collected through the Marine Rapid Assessment (MRAP) Survey in Timor-Leste in August 2012. The survey assessed the biodiversity, community/assemblage structure, and current condition of coral reefs and related ecosystems along the north-east coast of Timor-Leste, with a focus on the National Park. The information was used to verify the zoning decisions to date, and provides data to inform zoning of the remaining 33,240 hectares. Through the MRAP, the team was able to identify sites with **extremely high biodiversity**, and which therefore present priorities for increased protection to maintain - and improve - the productivity of the ecosystems.



The principle of connectivity suggests that marine managed areas (and the no take zones within them) should be no further than 20km apart. Based on this, sites have been marked on the map as **recommended sites for establishment of additional marine managed areas**. For the north coast, the MRAP data has been used to identify a proposed new site in the Suco of Mehara. For the south coast, an additional MMA needs to be established to enable connectivity between Tutuala and Lore I, however due to lack of data it is not currently possible to identify a specific site. Consideration will need to be given to ecological and governance factors to choose a suitable site.



Area Jestaun Mariña agora dadaun iha Com, Tutuala no Lore I inklui kombinasan husi zona bandu reposizaun ikan, zona buffer, no zona regulaun espesial ho restrisaun balun ba sasan halo peskas, bandu temporariu no limites peska ba espesies espesifiku.

Planu jestaun ba **area jestaun mariña** sira inklui regulaun balun atu bandu atividades ne'ebe mak bele estraga no tau limite ba uzu no tipu arte no pratika mak bele halo a'at.

Tuir area jestaun mariña ne'ebe iha tiha ona, mapa tuir mai fo rekomendasaun saida mak sei presiza halo atu kompleta tan zonamentu multi-uzus ba parte tasi husi Parque Nacional Nino Konis Santana.

Prinsipiu Sientifiku sira iha Zonamentu Multi-Uzus

Atu bele garantia katak areas protejidas sai resiliente ba alterasaun klimatika, no bele fo sevisus ekosistemikus ne'ebe sustentavel, iha prinsipius sientifikus oin-oin ne'ebe mak ita presiza tuir hodi foti desizaun kona ba prosesus zonamentu multi-uzus.

Mapa tuir mai fo rekomendasaun oinsa mak zonamentu multi-uzus ba parte tasi husi Parque Nacional Nino Konis Santana bele kompletu liu tan. Rekomendasaun hirak ne'e tuir perspektiva sientifiku deit. Atu implementa rekomendasaun sira ne'e sei presiza mos tau konsiderasaun ba fator lokal hanesan pratika no nesiedade sosio-ekonomiku.

Nudar pasu dauluk atu halo rekomendasaun hirak ne'e ita aplika prinsipiu sientifiku tuir mai. Prinsipiu sira ne'e nia objetivu mak hadia produtividade no sustentabilidade peskas no rekursus kosteirus nian liu husi tau matan ba ekosistema sira nia kondisaun.

Prinsipiu sientifiku sira

1. Estabelese areas multi-uzus ne'ebe luan.
2. Estabelese zona bandu luan ne'ebe bele fo proteasaun ba espesies alvu.
3. Estabelese zona bandu mak inklui kada tipu habitat importante ba fatin tau tolun, reproduasaun no alimentasaun espesies alvu nian.
4. Garante katak 20% to'o 40% husi habitat ida-idak mak tama iha area ne'ebe ita halo jestaun hela, inklui hela iha zona bandu (**representatividade**).
5. Garante katak zona bandu la liu malu 20 km dok atu garante **connectivity** entre ekosistemas importante.
6. Garante katak minimu liu iha ezemplu habitat tolu ne'ebe mak hetan proteasaun tamba tama iha Zona Bandu hamutuk tolu iha area multi-uzus nebe'e luan liu (**replikasaun**), atu prevene deit se karik iha habitat ida mak hetan estraga sei iha tan sira seluk ne'ebe mak ekosistema bele foti hodi tau fali.
7. Garante katak peskador sira sei iha asesu ba fatin ne'ebe sufisiente hodi hala'o peskas ba sira nia moris lor-loro nian no seguransa ai-han.



Prinsipiu hirak ne'e mos inklui iha kontestu foti dadus liu husi Peskisa no Avaliasaun Mariña Rapida (MRAP) iha Timor-Leste iha Agosto 2012.

Peskiza ida ne'e halo avaliasaun ba biodiversidade, estrutura comunidade biologjika sira, kondisaun ahu-ruin no sira nia ekosistemas iha kosta nortdeste Timor-Leste nian, liu liu iha area Parque Nasional. Informasaun sira ne'e uza duni iha verifikasaun zonamentu to'o agora, no mos sai hanesan dadus ne'ebe mak ita sei bele uza ba area 33,240 hektares ne'ebe mak sei resin. Liu husi MRAP, ekipa CTSP bele identifika fatin sira ho **Biodiversidade maka'as**, no tan ne'e sai area prioritariu atu rai no proteje - no hadia - produtividade ekosistemas nian.



Prinsipiu konektividade hatete katak area jestaun mariña (no zona bandu sira mak tama iha laran) lebele dok malu liu 20 km. Bazeia ba ida ne'e, ita tau area sira ne'e iha mapa nudar **Area rekomendadu atu halo tan Area Jestaun Mariña**. Iha kosta norte, dadus MRAP hatudu katak iha tan proposta ba area foun iha Suco Mehara. Iha kosta sul, presiza halo tan Area Jestaun Marina iha kosta sul atu permite konektividade entre Tutuala no Lore I, maibe tamba dadus balun seidauk iha dadus atu hatene lolos fatin area espesifiku. Atu hili fatin lolos sei presiza tuir fator ekolojiku no administrativu sira.

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