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DATE

Naval Facilities Engineering Command, Pacific

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Online: www.CNMIJointMilitaryTraining EIS.com

**Re: CNMI Joint Military Training Draft Environmental Impact Statement/Overseas Environmental Impact Statement**

Dear CNMI Joint Military Training Project Manager,

Please accept these comments concerning the proposed CNMI Joint Military Training Draft Environmental Impact Statement/Overseas Environmental Impact Statement (“CNMI Joint Military Training DEIS”). These comments are submitted on behalf of the Center for Biological Diversity (“the Center”), a nonprofit conservation organization whose mission is to protect and restore endangered species and wild places through science, policy, education, advocacy, and environmental law. The Center has over 800,000 members and online activists, some of whom reside and/or recreate in the Northern Mariana Islands.

The U.S. Marine Corps and U.S. Navy (hereinafter referred to collectively as “Marine Corps”) propose to establish a series of live-fire military ranges and training and maneuver areas on Tinian and Pagan Islands within the Commonwealth of the Northern Mariana Islands (CNMI), including but not limited to “High Hazard Impact Areas;” a “Tank/Fighting Vehicle Multi-Purpose Range Complex;” “Amphibious Assault Vehicle” and Amphibious Training areas; a “Convoy Course;” a “Field Artillery Indirect Fire Range;” aircraft “Drop Zones;” “Landing Zones;” airfields; “Full Spectrum Weapons Employment;” and “mobility corridors” that provide sufficient space for integrated ground, air, and sea training for live-fire, amphibious maneuvering, naval surface fire support, and air-delivered munitions. The proposed action and activities would significantly expand the U.S. military activities that are already occurring and causing significant, irreversible impacts to the natural environment of the Northern Mariana Islands, including impacts to a number of imperiled terrestrial and marine species.

The Marine Corps has a mandatory duty under the National Environmental Policy Act (NEPA) to evaluate the direct, indirect, and cumulative impacts of the proposed action and determine whether there will be unavoidable significant impacts. The Marine Corps has failed to meet NEPA’s requirements because it improperly limited the scope of the DEIS; unreasonably narrowed the purpose and need, and range of alternatives that were considered; failed to meaningfully address a number of issues involving climate change and the impacts of climate change on the proposed action area; and failed to adequately assess and disclose the adverse environmental impacts of the proposed activities along with other past, present, and reasonably foreseeable actions within the same region.

The Center is also concerned about the potentially severe impacts of this proposal on threatened and endangered species, including sea turtles, coral, and marine mammals, and whether this proposal will comply with the Endangered Species Act (ESA) and Marine Mammal Protection Act (MMPA). We request to receive copies of all ESA and MMPA related documents concerning the proposed action, and all correspondence between the Marine Corps and the U.S. Fish and Wildlife Service (FWS) and National Marine Fisheries Service (NMFS) concerning this proposal.

1. **The Marine Corps Improperly Limited the Scope of the CNMI Joint Military Training DEIS**

The Council on Environmental Quality (“CEQ”) has promulgated regulations to implement NEPA, found at 40 C.F.R. Part 1500. The CEQ NEPA regulations are binding on all federal agencies. 40 C.F.R. § 1507.1. NEPA requires agencies to use the criteria for “scope” that is set forth in the CEQ regulations in order to determine which proposals must be the subject of a particular EIS. 40 C.F.R. § 1502.4(a). Proposals or parts of proposals which are related to each other closely enough to be, in effect, a single course of action, must be evaluated together in a single EIS. *Id*.

The CEQ NEPA regulations further define the proper and required scope of EISs, and mandate that connected, cumulative, and similar actions be assessed together in a single EIS. 40 C.F.R. § 1508.25. Actions are connected if they automatically trigger other actions which may require EISs, they cannot or will not proceed unless other actions are taken previously or simultaneously, or they are interdependent parts of a larger action and depend on the larger action for their justification. 40 C.F.R. § 1508.25(a)(1). Actions are cumulative if they will have cumulatively significant impacts. 40 C.F.R. § 1508.25(a)(2). And actions are similar if they have similarities that provide a basis for evaluating their environmental consequences together, such as common timing or geography. 40 C.F.R. § 1508.25(a)(3).

The Marine Corps and Navy are currently moving forward with two related proposals, which are being evaluated in two separate EISs, which NEPA requires to be analyzed together in a single EIS. The CNMI Joint Military Training DEIS and the Mariana Islands Training and Testing (MITT) DEIS are both assessing U.S. military training and testing activities that would occur in the same region at the same time. The purpose of the CNMI Joint Military Training proposal is to establish live-fire ranges, training courses, and maneuver areas within the CNMI, with the proposed action focused on the islands of Tinian, Pagan, and surrounding areas. Similarly, the analysis area for the MITT EIS is the “Mariana Islands Training and Testing Study Area,” which includes Guam, the CNMI, the “Mariana Islands Range Complex” (MIRC), additional areas on the high seas, and a transit corridor between the MIRC and the Hawaii Range Complex.

The CNMI Joint Military Training and MITT proposals are interdependent parts of the U.S. military training and testing activities in the Mariana Islands region, and are therefore connected actions that must be analyzed together in a single EIS. 40 C.F.R. § 1508.25(a)(1); *see Thomas v. Peterson*, 753 F.2d 754, 759 (9th Cir. 1985).

Additionally, these two related proposals, which are being proposed and considered at the same time, will undoubtedly result in cumulatively significant impacts on numerous resources in the region, including terrestrial and marine wildlife and habitat, again requiring that the two proposals be analyzed together in a single EIS. 40 C.F.R. § 1508.25(a)(2); *Thomas v. Peterson*, 753 F.2d at 759 (NEPA requires that “cumulative actions” be “considered together in a single EIS”); *City of Tenakee Springs v. Clough*, 915 F.2d 1308, 1312 (9th Cir. 1990) (where “foreseeable similar projects in a geographic region have a cumulative impact, they should be evaluated in a single EIS”).

Furthermore, there is no question that both of these proposed actions share common timing and geography, again requiring that they be analyzed together in a single EIS. 40 C.F.R. § 1508.25(a)(3).

The decision of the Marine Corps to separate and segment these two closely related proposals into two separate EISs violates NEPA. 40 C.F.R. § 1508.25(a). The Marine Corps must issue a revised DEIS, for additional public and agency comments, in order to properly consider both of the related proposals in a single EIS, including the two proposals’ collective impact on the environment.

1. **The Marine Corps Improperly Narrowed the Purpose and Need, and Alternatives Considered, in the CNMI Joint Military Training DEIS**

NEPA requires agencies to “[r]igorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated.” 40 C.F.R. § 1502.14(a). The alternatives section is the “heart” of an EIS. 40 C.F.R. § 1502.14. As explained by the Ninth Circuit:

The agency must look at every reasonable alternative within the range dictated by the nature and scope of the proposal. The existence of reasonable but unexamined alternatives renders an EIS inadequate.

*‘Ilio‘ulaokalani Coalition v. Rumsfeld*, 464 F.3d 1083, 1095 (9th Cir. 2006), *quoting Friends of Southeast’s Future v. Morrison*, 153 F.3d 1059, 1065 (9th Cir. 1998).

For the CNMI Joint Military Training DEIS, the Marine Corps unreasonably limits the alternatives that are considered through narrowly defining the “purpose and need.” *See* 40 C.F.R. § 1502.13. The alternatives in an EIS are derived from the “underlying purpose and need,” and the agency cannot define its purpose and need “in unreasonably narrow terms.” *City of Carmel-By-The-Sea v. U.S. Dept. of Transp.,* 123 F.3d 1142, 1155 (9th Cir. 1997). The Marine Corps states in the DEIS that the “purpose and need” of the proposed action “is to establish a series of live-fire ranges, training courses, and maneuver areas within the [CNMI] to reduce existing joint service training deficiencies and meet the [U.S.] Pacific Command Service Components’ unfilled unit level and combined level training requirements in the Western Pacific.” DEIS at ES-1. The Marine Corps fails to adequately explain or justify in the DEIS, however, why the CNMI must be the location of the training that has been determined to be necessary to meet the military’s increased needs in the Pacific.

The Marine Corps cites to a number of “studies, reports, and assessments” to support its narrow purpose and need. DEIS at ES-4. All of these studies, reports, and assessments, however, were prepared outside of the NEPA process, without public involvement, and without consideration of the environmental consequences. *Id*. The Marine Corps is not allowed to circumvent the purposes of NEPA by tiering its required analysis to non-NEPA documents. *Kern v. U.S. Bureau of Land Management*, 284 F.3d 1062, 1073 (9th Cir. 2002) (“tiering to a document that has not itself been subject to NEPA review is not permitted, for it circumvents the purpose of NEPA”).

The Marine Corps further narrows the choice of reasonable alternatives within the CNMI to only Tinian and Pagan. DEIS at ES-6 (identifying “Tinian and Pagan as the only suitable locations for development of [Range and Training Areas] for unit level and combined level training, respectively”). The Marine Corps, however, again improperly tiered to and relied on a non-NEPA document for this further limitation of the alternatives that it considered. *Id.* (stating that the “operational siting criteria” were developed as part of the “CNMI Joint Military Training Requirements and Siting Study);

*Kern v. U.S. Bureau of Land Management*, 284 F.3d at 1073.

By making the most important decisions for its proposed action outside of NEPA, prior to commencing the NEPA process, the Marine Corps is thwarting the meaningful public participation and involvement that is required by NEPA. *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989) (NEPA “ensures that the agency, in reaching its decision, will have available, and will carefully consider, detailed information concerning significant environmental impacts; it also guarantees that the relevant information will be made available to the larger audience that may also play a role in both the decisionmaking process and the implementation of that decision”); 40 C.F.R. § 1500.1(b) (“NEPA procedures must insure that environmental information is available to public officials and citizens before decisions are made and before actions are taken”).

In *‘Ilio‘ulaokalani Coalition*, the Army “made the decision to commit resources to a particular site – the transformation of the 2nd Bridade in Hawaii,” prior to the EIS at issue. *‘Ilio‘ulaokalani Coalition v. Rumsfeld*, 464 F.3d at 1096. By the time the EIS was issued, “there was no longer a question of whether the 2nd Bridade would transform in Hawaii, only a matter of how.” *Id*. The same is true for the islands of Tinian and Pagan within the CNMI Joint Military Training DEIS. As in *Ilio‘ulaokalani Coalition*, “[w]hat is missing is the consideration of alternative ways to accomplish [the Marine Corps’] stated mission.” *Id*. at 1098. The Marine Corps violated NEPA by not considering alternatives that were “outside” of the CNMI, and even within the CNMI, that were “outside” of Tinian and Pagan. *Id*.

1. **The CNMI Joint Military Training DEIS Failed to Provide Sufficient Information Concerning the Baseline Conditions of the Affected Environment, Including the Anticipated Impacts of Climate Change on the Affected Region**

Accurate scientific analysis, expert agency comments, and public scrutiny are essential to implementing NEPA. 40 C.F.R. § 1500.1(b). A primary purpose of NEPA is to “guarantee that the relevant information will be made available to the larger audience that may also play a role in both the decision-making process and implementation of that decision.” *Robertson v. Methow Valley Citizens*, 490 U.S. 332, 349 (1989). “[T]he broad dissemination of information mandated by NEPA permits the public and other government agencies to react to the effects of a proposed action at a meaningful time.” *Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 371 (1989).

A DEIS must fulfill and satisfy to the fullest extent possible all of the requirements established for a final EIS. 40 C.F.R. § 1502.9(a). This includes a description of the area that would be affected by the alternatives under consideration. 40 C.F.R. § 1502.15.

If a DEIS is so inadequate as to preclude meaningful analysis, the agency must prepare and circulate a revised draft of the appropriate portion. 40 C.F.R. § 1502.9(a).

It is “no longer in doubt” that NEPA requires federal agencies to consider climate change in EISs, including the impacts of climate change on the agency’s proposed action. *Aug. 20, 2014 Congressional Research Service Report, “Climate Change and Existing Law: A Survey of Legal Issues Past, Present, and Future.*”[[1]](#footnote-1) CEQ recently issued updated guidance to provide federal agencies direction on how to consider climate change in NEPA documents. *December 18, 2014 CEQ Guidance.*[[2]](#footnote-2) As recognized by CEQ, “Climate change is a fundamental environmental issue, and the relation of Federal actions to it falls squarely within NEPA’s focus.” *Id*. at 2.

In preparing NEPA analyses, agencies must consider not only the effects of the proposed action on climate change, but also the implications of climate change for the environmental effects of a proposed action. *Id*. at 3. Agencies must therefore describe in an EIS the “reasonably foreseeable affected environment,” taking into account “climate change information, including observations, interpretative assessments, predictive modeling, scenerios, and other empirical evidence.” *Id*. at 21.

As further explained by CEQ:

The analysis of impacts of the affected environment should focus on those aspects of the human environment that are impacted by both the proposed action and climate change. Climate change can affect the environment of a proposed action in a variety of ways. Climate change can increase the vulnerability of a resource, ecosystem, human community, or structure, which would then be more susceptible to climate change and other effects and result in a proposed action’s effects being more environmentally damaging . . .. Such considerations are squarely within the realm of NEPA, informing decisions on whether to proceed with and how to design the proposed action so as to minimize impacts on the environment, as well as information possible adaptation measures to address these impacts, ultimately enabling the selection of smarter, more resilient actions.

*Id*. at 22.

More specifically, “Climate change effects should be considered in the analysis of projects that are located in areas that are considered vulnerable to specific effects of climate change, such as increasing sea level or other ecological change, within the project’s anticipated useful life.” *Id*. at 23-24. “For example, an agency considering a proposed action involving long-term development of transportation infrastructure on a coastal barrier island will want to take into account climate change to avoid the environmental and, as applicable, economic consequences of rebuilding should potential climate change impacts such as sea level rise and more intense storms shorten the projected life of the project.” *Id*. at 24.

It is “well established” that the significant increase in greenhouse gas concentrations in the atmosphere is “significantly affecting the Earth’s climate,” and there are available studies that project the effects of climate change on sea level rise, ocean acidity, and ecosystems. *Id*. at 6-7. “Broadly stated, the effects of climate change observed to date and projected to occur in the future include more frequent and intense heat waves, more severe wildfires, degraded air quality, more heavy downpours and flooding, increased drought, greater sea-level rise, more intense storms, harm to water resources, harm to agriculture, and harm to wildlife and ecosystems.” *Id*. at 7-8.

As recognized by the Department of Defense, the Marine Corps is further required by Executive Orders to consider climate change implications in its decision-making process. *See Department of Defense 2014 Climate Change Adaption Roadmap at 3, citing Executive Order 13514 (requiring federal departments and agencies to evaluate climate change risks and vulnerabilities) and Executive Order 13653 (requiring agencies to develop comprehensive plans that integrate consideration of climate change into agency operations and objectives).*[[3]](#footnote-3) As stated in the Department of Defense Climate Change Adaptation Roadmap, “[c]limate change will affect the Department of Defense’s ability to defend the Nation and poses immediate risks to U.S. national security.” *Id*. at 1. The Department acknowledges that due to climate change, weather events have become more intense, sea levels are rising and oceans are becoming more acidic, and that “[t]hese climate-related effects are already being observed at installations throughout the U.S. and overseas and affect many of the Department’s activities and decisions related to future operations environments, military readiness, stationing, environmental compliance and stewardship, and infrastructure planning and maintenance.” *Id*. at 2. Thus, the Department recognizes that it must assess the effects of climate change on built and natural infrastructure, including water and utility services and stormwater management systems. *Id*. at 7.

Despite the significant impacts from climate change that are already occurring and projected to increase into the future, and the obligation of agencies to consider these impacts in environmental reviews under NEPA and Executive Orders, the CNMI Joint Military Training DEIS ignores climate change in its description of the affected environmental and for the analysis of project’s impacts on resources such as marine and terrestrial wildlife, and their habitats including coral reefs.

The Marine Corps’ failure to disclose and address climate change throughout the vast majority of the DEIS is particularly egregious for the CNMI Joint Military Training proposal because small islands in the Pacific, such as Tinian and Pagan, have been identified as especially vulnerable to the adverse impacts of climate change.  *See e.g., IPCC, 2014: Climate Change 2014 Synthesis Report, Contributions of Working Groups I, II and III to the Fifth Assessment Report of Intergovernmental Panel on Climate Change.*[[4]](#footnote-4)

Indeed, the Pacific Islands region is already experiencing climate change, including rising sea-levels, changing ocean chemistry and increasing ocean acidity, and changing habitats and species distributions. *2012 Report for the Pacific Islands Regional Climate Assessment, “Climate Change and Pacific Islands: Indicators and Impacts.”* [[5]](#footnote-5) According to this 2012 Regional Climate Assessment, “[l]ow islands, coral reefs, nearshore and coastal areas on high islands, and high elevation ecosystems are most vulnerable to climate changes.” *Id*. at ix. Moreover, rising sea levels “will increase the likelihood of coastal flooding and erosion,” thereby damaging coastal infrastructure, reducing habitat for endangered species, and threatening shallow reef systems. *Id*. at x. And higher sea-surface temperatures will increase coral bleaching, leading to coral disease, coral death, and habitat loss. *Id*. Native Pacific Island plant and animal populations will be stressed, particularly in high-elevation ecosystems, “with extinctions a likely result.” *Id*. at xi.

The U.S. Environmental Protection Agency (EPA) agrees that Pacific islands, including the Northern Mariana Islands, are likely to be affected in a number of ways from climate change, including higher sea levels, more powerful tropical storms, and more acidic coastal waters. *http://www.epa.gov/climatechange/impacts-adaptation/islands.html.* As stated by EPA, “[r]ising sea levels are likely to increase the frequency and severity of floods during storms, as well as to erode and inundate coastlines.” *Id*. Additionally, climate change may “have far-reaching effects on island infrastructure.” *Id*. “Inundation, flooding, and shoreline erosion could affect critical infrastructure, such as airports, roads, ports, and hospitals.” *Id*.

Much of the CNMI Joint Military Training proposal includes activities and long-term infrastructure that will be impacted by current and future climate change, including the construction of roads and road improvements, a military training trail network, fencing, utilities (including an electric power distribution system and a wastewater treatment plant), base camps (including permanent barracks, a warehouse, and a weapons armory), training facilities, storage areas, an airport and related facilities, and port improvements. DEIS at ES-13 - ES-44. Moreover, the DEIS acknowledges that the proposed Joint Military Training will result in significant impacts to numerous resources that are already also being adversely impacted by climate change, including beaches and parks, vegetation, native wildlife, special-status species, and marine habitat and corals (including special-status corals). DEIS at ES-50 – ES-60.

The Marine Corps’ failure to consider and disclose the ongoing and reasonably foreseeable impacts of climate change on the areas and resources that will be affected by the proposed action within the CNMI Joint Military Training DEIS violates NEPA.

1. **The CNMI Joint Military Training DEIS Fails to Adequately Consider and Disclose the Cumulative Impacts of Past, Present, and Reasonably Foreseeable Projects**

In accord with NEPA, federal agencies must "consider" cumulative impacts.  40 C.F.R. § 1508.25(c); *Neighbors of Cuddy Mountain v. U.S. Forest Service*, 137 F.3d 1372, 1379 (9th Cir. 1998).  “Cumulative impact” is defined as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions.” 40 C.F.R. § 1508.7. “Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.” *Id*.

“To ‘consider’ cumulative effects, some quantified or detailed information is required.”  *Neighbors of Cuddy Mountain*, 137 F.3d at 1379.  “Without such information, neither the courts nor the public, in reviewing the [agency’s] decisions, can be assured that the [agency] provided the hard look that it is required to provide.”  *Id*.   “General statements about ‘possible’ effects and ‘some risk’ do not constitute a ‘hard look’ absent a justification regarding why more definitive information could not be provided.”  *Id*. at 1380.  “Nor is it appropriate to defer consideration of cumulative impacts to a future date,” *id*., as NEPA requires consideration of the potential impact of an action *before* the action takes place.  40 C.F.R. § 1500.1(b).

There are a number of other projects in the region that will contribute to the cumulative and significant impacts of the CNMI Joint Military Training proposal, including the “Mariana Islands Training and Testing” (MITT) proposal, which similarly expands the military’s training and testing activities in the same region, including Tinian Island. DEIS at 5-4. The Air Force also proposes airport improvement projects in the region, again including Tinian Island. *Id*. Moreover, the military recently finalized plans to expand the danger zones, warning areas, and restricted airspace in the region. *Id.* at 5-5. Additional projects include Tinian airport improvements, residential development, resort construction and other tourist related projects, and public works projects. *Id.* at 5-8 to 5-11.

The CNMI Joint Military Training DEIS acknowledges that the proposed training activities and other past, present, and reasonably foreseeable projects will result in cumulative and significant impacts on a number of resources, including wildlife and marine biology. DEIS at 5-15 to 5-16; *id*. at 5-46 (“there would be cumulative impacts to terrestrial biological resources”); *id.* at 5-53 (“there could be cumulative impacts to marine biological resources”). The DEIS, however, provides only a brief, very general, and non-quantified discussion of cumulative impacts, of the very same type that the Ninth Circuit has found insufficient under NEPA. *See e.g*., *Neighbors of Cuddy Mountain*, 137 F.3d at 1379-80. For instance, for terrestrial biology, the DEIS generally concludes:

There would be potential cumulative impacts to terrestrial biological resources associated with the proposed action. The present and reasonably foreseeable actions could impact special-status species that would be additive to the proposed action. Although terrestrial biological surveys are not available for all of the present and reasonably foreseeable actions, the impact is assumed because of the large areas of ground disturbance required. The health of the terrestrial biological resources is generally stable in the study area; however, there are some species that are listed under the Endangered Species Act or protected by other regulation that are more susceptible to stress and would be impacted by the proposed action and present and reasonably foreseeable actions.

DEIS at 5-45 to 5-46.

Similarly, for marine biology, the DEIS summarily concludes:

The proposed action and present and reasonably foreseeable actions could impact marine biological resources. The Mariana Island Training and Testing EIS/OEIS covers a much broader area than the proposed action, but there is potential for a cumulative impact to marine mammals and sea turtles due to in-water training, noise, and vessel traffic because the same populations would be affected by both projects . . . . The health of the marine biological resources is generally stable in the study area; however, there are some species that are listed under the Endangered Species Act or protected by other regulation that are more susceptible to stress and would be impacted by the proposed action and present and reasonably foreseeable actions.

DEIS at 5-53.

The brief, general, non-quantified conclusions provided in the cumulative impacts sections of the CNMI Joint Military Training DEIS fail to constitute the hard look required by NEPA, and the Marine Corps failed to provide in the DEIS an adequate justification as to why more definitive information could not be provided. *Neighbors of Cuddy Mountain*, 137 F.3d at 1379-80.

1. **The CNMI Joint Military Training DEIS Analysis of Impacts to Threatened and Endangered Species Fails to Comply with NEPA, and Fails to Insure that the Proposed Project Will Comply with the ESA**

The ESA is “the most comprehensive legislation for the preservation of endangered species ever enacted by any nation.” *Tennessee Valley Authority v. Hill*, 437 U.S. 153, 180 (1978). “The plain intent of Congress in enacting this statue was to halt and reverse the trend towards species extinction, whatever the cost.” *Id.* at 194. In enacting the ESA, Congress spoke “in the plainest words, making it abundantly clear that the balance has been struck in affording endangered species the highest of priorities, thereby adopting a policy which it described as ‘institutionalized caution.’” *Id.* at 194.

“One would be hard pressed to find a statutory provision whose terms were any plainer than those in [Section] 7 of the Endangered Species Act.” *Id.* at 173. “Its very words affirmatively command all federal agencies ‘to *insure* that actions *authorized*, *funded*, or *carried out* by them do not *jeopardize* the continued existence’ of an endangered species or *result* in the destruction or modification of habitat of such species . . . This language admits of no exception.” *Id*.

Pursuant to Section 7 of the ESA, each federal agency must consult with the United States Fish and Wildlife Service (FWS) and/or National Marine Fisheries Service (NMFS) to insure that its proposed activities are not likely to jeopardize the continued existence of any threatened or endangered species, or result in the destruction or adverse modification of critical habitat. 16 U.S.C. § 1536(a)(2).

Section 9 of the ESA prohibits any person from “taking” a threatened or endangered species. 16 U.S.C. § 1538(a)(1)(B); 50 C.F.R. § 17.31(a). The term “take” is defined broadly to include “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” 16 U.S.C. § 1532(19).

1. **Terrestrial Species**

There are threatened and endangered terrestrial species within the study area that will be adversely affected by the proposed military training activities, including the Mariana common moorhen, Micronesian magapode, and Mariana fruit bat. DEIS at 3-124; DEIS at 3-140.

The Mariana common moorhen is found only in Guam and the Northern Mariana Islands. Its preferred habitat includes freshwater lakes, marshes, and swamps. Surveys indicate that the population is extremely low. For example, “the 2012-2014 surveys indicated that approximately four moorhens used the Mahalang ephemeral ponds and approximately four adult and four juvenile moorhens used each of the Bateha wetlands each year during this period.” DEIS at 3-128. For Pagan Island, the DEIS concludes that moorhen “are presumed to no longer exist on Pagan” and thus impacts to the moorhen “are not discussed further.” DEIS at 3-140.

The Micronesian megapode has been extirpated on Guam, but remains in the Northern Mariana Islands. DEIS at 3-142. Within Tinian Island, all megapode detections have been in the Mount Lasso area, the Maga area, and a small area of native forest in the southern portion of the Tinian Military Retention Land for Wildlife Conservation. DEIS at 3-128. According to the DEIS, there were an estimated 147 megapodes on Pagan Island in 2010. *Id*. at 3-140.

There are no permanent Mariana fruit bat colonies that remain on Tinian Island, although bats may fly between islands in the southern Marianas. DEIS at 3-128. “Within the Military Lease Area, fruit bats have been observed associated with the native limestone forest in the cliff-line forest in the Maga region north of Mount Lasso and at other locations in western Tinian.” *Id*. at 3-129. On Pagan Island, two colonies of the Mariana fruit bat remain in the southeast, and one remains in northern Pagan. *Id*. at 3-140, 3-142.

The DEIS acknowledges that the proposed military activities may adversely affect the Mariana common moorhen, the Micronesian megapode, and the Mariana fruit bat, thereby triggering the need for formal consultation with the U.S. Fish and Wildlife Service under the ESA. 16 U.S.C. § 1536(a)(2). DEIS at 4-204 (noise associated with construction activities “may cause moorhens to avoid the Mahalang sites”); *id*. at 4-213 to 4-214 (noise from large-caliber weapons “may cause periodic startle responses or flushing of moorhens,” and effects “may include altered foraging or breeding behaviors”); *id*. at 4-252 (the effects of noise levels on Mariana fruit bats “may include disruption of roosting and foraging behaviors, decreased ability to regulate their body temperature, increased stress, . . . and abandonment and mortality of offspring”); id. (“proposed large-caliber weapons firing would result in significant direct impacts to Mariana fruit bats”); *id*. at 4-253 (impacts to Mariana fruit bat “would be significant and unavoidable and unmitigable”); *id*. (“[n]oise from large-caliber weapons and aircraft overflights may cause impacts to megapodes”).

The DEIS improperly discounts the anticipated impacts of the proposed action to endangered species based on the rarity of the species. *See e.g*., DEIS at 4-213 (“given the rarity of occurrence of fruit bats, . . . exposure to these stressors would be discountable or insignificant”); *id*. at 4-215 (given “extremely rare occurrences” of megapodes, the training activities are “expected to result in less than significant direct and indirect impacts”). The argument that a species in a particular region is not significant because it is rare is contrary to the purposes of the ESA. *Defenders of Wildlife v. Norton*, 239 F.Supp. 2d 9, 19 (D.D.C. 2002). “The Service's reasoning ‘would allow the *most* fragile, at-risk species to receive the *least* protection under the law,’ which ‘flies in the fact of the plain language of the ESA and its purpose.’” *Id*. at 19-20.

Last, the DEIS fails to provide sufficient analysis and fails to insure sufficient protection for the Tinian monarch, which used to be formally listed as endangered under the ESA, and due to declining numbers again warrants ESA protection. *See 2013 Center for Biological Diversity’s Petition to List the Tinian Monarch as Endangered or Threatened Under the Endangered Species Act*.[[6]](#footnote-6) The Tinian monarch lives only in the forests of Tinian Island, where only 1,355 acres (five percent of the island) of native limestone forest remain. “The species experienced a rangewide decline of 39 percent from 1996-2008 and its very limited habitat faces multiple threats.” *Id*. at 1.; *see also* DEIS at 3-119 (acknowledging a 40% decline in its population between 1996 and 2008).

According to the DEIS, “[t]he Military Lease Area comprises roughly 66% of the Tinian monarch habitat on the island and supports approximately 52% of the total monarch population.” DEIS at 3-119. The proposed construction activities would remove nearly 2000 acres of native limestone, tangantangan, and mixed introduced forest important to native birds on Tinian for nesting, foraging, and resting activities, which could result in severe impacts to the Tinan monarch population. *Id*. at 4-198, 222. The amount of habitat that would be lost as a result of these activities is an order of magnitude higher than the amount which prompted the Center for Biological Diversity’s petition in 2013. [[7]](#footnote-7)

Indeed, the DEIS predicts that an alarming 7,230 Tinian monarchs could be “permanently displaced by loss of habitat through construction.” DEIS at 4-222. “[B]ecause of the amount of habitat removed and the number of birds potentially impacted, significant direct impact to the Tinian monarch would occur” under the proposed action. *Id*. at 4-221. The removal of 1,883 acres of forested and herbaceous scrub habitats “would result in significant, unavoidable direct impacts to the populations of [the] Tinian monarch.” *Id*. Moreover, “there is no indication that there are other large areas of available but unoccupied habitat on Tinian, particularly for forest and shrub breeding bird species.” *Id*. at 4-222. Thus, the loss of 1,883 acres of habitat “would be significant, even with forest enhancement efforts.” *Id*.

The fact that the DEIS outright claims significant impact to the monarch shows a lack of ability to mitigate those impacts due to the absence of otherwise unoccupied suitable habitat. *Id.* at 4-201. Combined with the other threats the Tinian monarch faces, such as the impending invasion of the brown tree snake[[8]](#footnote-8), loss of habitat in the southern third of the island due to other infrastructure accommodations[[9]](#footnote-9), and climate change[[10]](#footnote-10), this endemic island species is at high risk of extinction.

Due to the significant and likely severe impacts of the proposed military activities on the sole Tinian monarch population, and the pending ESA listing petition for the species, the Tinian monarch should be included in the required ESA consultation for the proposed action. In preparing the Final EIS, the Marine Corps must also request and consider the expert opinion of the U.S. Fish and Wildlife Service in addressing the potential environmental impacts and the necessary and appropriate mitigation measures for the Tinian monarch population.

1. **Sea Turtles**

The threatened green sea turtle and the endangered hawksbill sea turtle will be adversely impacted by the proposed military training activities both on land and sea, and thus the Navy must consult with both the U.S. Fish and Wildlife Service and National Marine Fisheries Service under Section 7 of the ESA. 16 U.S.C. § 1536(a)(2).

“Both the green and the hawksbill sea turtles are known to nest on Tinian.” DEIS at 3-129. Of the 13 beaches on Tinian that support nesting of green sea turtles, ten are within the Military Lease Area. *Id*. Moreover, surveys indicate that “nesting activity occurs during all months of the year.” *Id*. While hawksbill sea turtles are rare on Tinian beaches, one nest was found at Unai Dankulo in 2010. DEIS at 3-130. No sea turtle nesting was observed on Pagan Island during the June 2010 surveys, although one green sea turtle was observed on Red Beach. *Id*. at 3-142.

On Tinian, 3 acres of beach would be impacted by construction of the Tactical Amphibious Landing Beach at Unai Chulu. DEIS at 4-205. “[I]t is assumed that construction at Unai Chulu would result in the loss of one turtle nesting season on this beach, as turtles would likely avoid the construction equipment and human activity.” *Id*. In addition, “[m]odification of the beach slope and dunes adjacent to these areas could impact turtle nesting habitat.” *Id*. And annual operations may cause further impacts, as noise from large-caliber weapons training “may cause adult turtles to avoid nesting beaches or to abandon nesting attempts during periods of training.” *Id*. at 4-215. “Effects of these responses include altered nesting behavior that may reduce reproductive success.” *Id*. Activities associated with amphibious landings on Tinian may further disturb sea turtle nesting habitat on Tinian. *Id*.

The proposed action may result in additional impacts to green and hawksbill sea turtles, along with leatherback sea turtles, within the marine environment near both Tinian and Pagan Islands. *See* DEIS at 3-168 to 3-169; 3-192 to 3-193. The DEIS acknowledges the following impacts concerning construction of the amphibious landing area on Tinian:

In-water construction of the amphibious landing area at Unai Chulu would cause temporary and permanent effects to sea turtle foraging and nesting habitat within the 10.3 acre (4.1 hectare) construction footprint, and possibly a small area of degraded habitat adjacent to the construction footprint. Sea turtles would be displaced from these waters for the duration of construction activities.

DEIS at 4-281. Additionally, the construction would permanently remove coral habitat that sea turtles depend on for food and shelter. *Id*. The sea turtles in this area would be further impacted by the construction noise, likely causing them to relocate. *Id*. Sea turtles could also be struck by construction equipment, “which would cause mortality or injury.” *Id*.

Annual operation impacts would cause further harm to sea turtles in the marine environment near Tinian Island.

Training activities could cause sea turtles to avoid habitat or cause habitat to be unavailable since turtles may be temporarily displaced for the duration of training activities during operational activities. This would directly impact the local sea turtle population, as they depend on algae, sponges, and hiding locations on the reef for survival. In-water habitat disturbance during operations would be caused by Amphibious Assault Vehicles (at Unai Chulu) and Landing Craft Air Cushion vessels, which may contact the reef or otherwise alter the nearshore habitat.

DEIS at 4-295. Vessel noise during training operations may also disturb sea turtles. *Id*. And, “there would be a risk of vessel strikes for turtles within the approach zones. *Id*. at 4-296. Some mortality to sea turtles from vessel strikes is anticipated. *Id*.

Similarly, on Pagan Island, the in-water operation of Amphibious Assault Vehicles, Landing Craft Air Cushion vehicles, and small craft vehicles “could cause sea turtles to avoid habitat or cause habitat to be unavailable since turtles may be temporarily displaced for the duration of training activities.” DEIS at 4-322. In addition, impacts from noise “would likely result in a temporary fleeing response from turtles.” *Id*. The physical striking and disturbance to sea turtles may also occur from training operations on Pagan, which “could cause death or injury.” *Id*. Physical disturbance could also “negatively affect foraging, resting, and mating behavior as a result of the proposed action.” *Id*. Indeed, the DEIS assumes that the entire Approach Zone at Green Beach on Pagan “presents a potential threat for vessel strikes” to sea turtles. *Id*. at 4-323.

1. **Coral**

“The oldest and most developed coral reefs of the CNMI are located in the nearshore waters of the southern Islands, including Tinian.” DEIS at 3-155. “The island of Tinian is virtually surrounded by shore-attached fringing reef,” and there are “seven well-developed reef flats on Tinian.” *Id*. “The reef area at Unai Chulu is physically complex, with very deep, irregularly spaced spurs and grooves in the fore reef that transition rapidly to deep fore reef, with broken rock fragments in the grooves.” *Id*. at 3-156. Pagan, meanwhile, is surrounded by heterogeneous habitat types including shore-attached fringing reefs and uncolonized primary coral framework which is unique to Pagan. *Id*. at 3-178.

According to the DEIS there are 22 coral species that are listed as threatened or endangered under the ESA, with four of the species likely to occur in the CNMI: *Acropora globiceps*, *Acropora retusa*, *Pavona diffluens*, and *Seriatopora aculeata*. DEIS at 3-166. So far, *Acropora globiceps* is the only endangered coral species that has been found in Tinian Island nearshore waters. *Id*. *Acropora globiceps* was recorded at Unai Chulu, Unai Babui, Unai Lam, and Unai Masalok.” *Id*. Similarly, of the ESA listed corals, only *Acropora globiceps* is confirmed to occur in Pagan’s nearshore waters, and has been recorded at Green Beach, Red Beach, Blue Beach, North Beach, Gold Beach, and South Beach. *Id*. at 3-191 to 3-192.

The DEIS fails to disclose that corals are under severe threat all over the world from climate change and other causes. Corals are slow to adapt to habitat changes and have a limited ability to reproduce over large distances. 73 Fed. Reg. 6895, 6897 (Feb. 6, 2008). Oceans are already experiencing a drop in pH, and this decreases the calcification of corals. Calcification rates of reef-building corals are expected to decrease 30-40% with a doubling of atmospheric carbon dioxide*. Kleypas, J.A., et al. 2006. Impacts of Ocean Acidification on Coral Reefs and Other Marine Calcifiers*[[11]](#footnote-11)*; Hoegh-Guldberg, et al. 2007. Coral Reefs Under Rapid Climate Change and Ocean Acidification, Science 318:1737-1742*[[12]](#footnote-12)*; Guinotte, J.M., Fabry, V.J. 2008. Ocean acidification and its potential effects on marine ecosystems. Ann. N.Y. Acad. Sci. 1134: 320–342.*[[13]](#footnote-13) Scientists predict that ocean acidification coupled with increasing ocean temperatures will destroy the world’s reefs by mid-century. *Hoegh-Guldberg, et al. 2007. Coral Reefs Under Rapid Climate Change and Ocean Acidification, Science 318:1737-1742.* The proposed action would increase the number of vessels and activities in and near areas where threatened corals occur. The DEIS must consider and disclose the combination of the grave threats to corals associated with global climate change and the adverse impacts of the Marine Corps’ proposed activities on corals in the region.

The DEIS acknowledges significant impacts to endangered coral from in-water construction at Unai Chulu:

Due to the number of colonies that will be removed in relation to the rarity of the species, the destruction of the established colonies of *Acropora globiceps* within the construction footprint, . . . construction activities would result in significant impacts to special-status coral species.

DEIS at 4-280. Additional impacts to *Acropora globiceps* would occur during annual operation activities on Tinian, at Unai Chulu, Unai Babui, Unai Masalok, and Unai Lam Lam. *Id*. at 4-294. Vessels can impact coral species by disturbing the water column, as wash from vessel movement and water displaced from vessel hulls can impact eggs and pelagic larvae of coral. *Id*. Landing activities that contact the seafloor during operations could further harm coral, especially Amphibious Assault Vehicles because of their “increased potential to reduce large corals and reef substrate to smaller pieces of mobile rubble.” *Id*. at 4-295. Additional significant impacts to endangered *Acropora globiceps* are anticipated from similar operational activities at Pagain. *Id*. at 4-320 to 4-322.

1. **Marine Mammals**

There are also endangered marine mammals in the region that would be adversely harmed by the proposed action, including the sperm whale and humpback whale. DEIS at 3-173 to 3-174; 3-194; *see* Section V, below.

In sum, the Marine Corps must formally consult with the U.S. Fish and Wildlife Service and National Marine Fisheries Service concerning the potential direct, indirect, and cumulative impacts of its proposed military training activities on all threatened, endangered, and candidate species in the region. 16 U.S.C. § 1536(a)(2). The Marine Corps must also not issue its decision concerning the proposed action until after the completion of the Section 7 consultation, and must incorporate into the proposed action all of the reasonable and prudent measures, and terms and conditions, that are set forth in the applicable biological opinions. 16 U.S.C. § 1536. The Marine Corps must also describe in the Final EIS the programs it is carrying out for the conservation of threatened and endangered species within the Northern Mariana Islands. 16 U.S.C. § 1536(a)(1).

1. **The CNMI Joint Military Training DEIS Analysis of Impacts to Marine Mammals Fails to Comply with NEPA, and Fails to Insure that the Proposed Project Will Comply with the MMPA**

According to the DEIS, “[s]everal marine mammals have been detected or observed in the nearshore environment within 3.0 nautical miles (5.6 kilometers) of Tinian.” DEIS at 3-171. This includes two species of whales that are designated as endangered under the ESA and depleted under the Marine Mammal Protection Act (MMPA): humpback whale and sperm whale. *Id*. at 3-173 to 3-174. The nearshore waters of Tinian and Saipan “may represent important wintering/breeding habitats” for humpback whales. *Id*. at 3-172. In addition, five marine mammals have been identified in the nearshore waters of Pagan, including endangered and depleted sperm whales. DEIS at 3-193 to 3-194. While the acoustic detection of sperm whales indicates its presence, the survey methods were unable to estimate the locations of the vocalizing animals. *Id*. at 3-195.

The MMPA was enacted to address concern that “certain species and population stocks of marine mammals are, or may be, in danger of extinction or depletion as a result of man’s activities.” 16 U.S.C. § 1361(1). Congress noted that "such species and population stocks should not be permitted to diminish beyond the point at which they cease to be a significant functioning element in the ecosystem of which they are a part, and, consistent with this major objective, they should not be permitted to diminish below their optimum sustainable population." 16 U.S.C. § 1361(2).

The MMPA generally prohibits any individual from "taking" a marine mammal, which is broadly defined as harassing, hunting, capturing, or killing it. 16 U.S.C. §§ 1362(13), 1372(a). One exception to the take prohibition permits citizens who engage in a specified activity within a specified geographical region to take "small numbers of marine mammals of a species or population stock" during "periods of not more than five consecutive years each" if the Secretaryfinds that "the total of such taking during each five-year (or less) period concerned will have a negligible impact on such species or stock and will not have an unmitigable adverse impact on the availability of such species or stock for taking for subsistence uses." 16 U.S.C. § 1371(a)(5)(A)(i).

Congress amended the MMPA to exempt military readiness activities from the "specified geographical region" and "small numbers" requirements in 16 U.S.C. § 1371(a)(5)(A)(i); 16 U.S.C. § 1371(a)(5)(F). As a result, the take of marine mammals incidental to military readiness activities may be permitted if the taking will have a "negligible impact" on an affected species or stock and will not have "an unmitigable adverse impact on the availability of such species or stock for taking for subsistence uses." 16 U.S.C. § 1371(a)(5)(A)(i).

If those two findings are made, the Secretary must prescribe regulations setting forth "permissible methods of taking" and "other means of effecting the least practicable adverse impact on such species or stock and its habitat." 16 U.S.C. § 1371(a)(5)(A)(i)(II)(aa). In determining the "least practicable adverse impact" with respect to a military readiness activity, the Secretary is required to consider "personnel safety, practicality of implementation, and impact on the effectiveness of the military readiness activity." 16 U.S.C. § 1371(a)(5)(A)(ii).

According to the DEIS, the Department of Defense will apply for an “Incidental Harassment Authorization” from NMFS due to “underwater noise from pile driving” during construction activities. DEIS at 4-267.

The CNMI Joint Military Training DEIS largely discounts and underestimates the potential impacts of the proposed action on marine mammals. Even though construction of the amphibious landing ramp at Unai Chulu on Tinian Island would cause “considerable noise and human activity,” the DEIS summarily concludes that “it is unlikely that a marine mammal would closely approach this area during construction.” DEIS at 4-282. Annual operations on Tinian would include amphibious beach landings for up to 20 weeks per year, including amphibious assault vehicle landings at Unai Chulu, landing craft air cushion vessel landings at three beaches, and additional small boat landings. DEIS at 4-283. However, while acknowledging that vessel noise may disturb marine mammals and “elicit an alerting, avoidance, or other behavioral reaction,” the Marine Corps concludes in the DEIS that such disturbance by vessels “would be less than significant.” *Id*. at 4-296. The Marine Corps also summarily concludes that “no more than momentary reactions would be anticipated.” *Id*. at 4-297.

On Pagan Island, no in-water construction activities would occur at the proposed amphibious beach landings. DEIS at 4-302. However, proposed training operations include amphibious assault vehicle landings on three beaches, landing craft air cushion vessel landings at four beaches, and small boat landings and swimmer insertions on six beaches. *Id*. Additionally, “[v]essel-to-shore firing would occur in Pagan waters during live-fire amphibious training.” *Id*. at 4-303.

The Marine Corps again recognizes in the DEIS that vessel noise may cause disturbance to marine mammals. DEIS at 4-323. The Marine Corps further acknowledges that “vessel-to-shore” firing during live-fire amphibious training may “have an initial startle response.” *Id*. The Marine Corps again summarily concludes, however, that these activities “would not be expected to have long-term consequences for individuals or populations.” *Id*. at 4-324. It is similarly assumed that the noise from training vessels would not be anticipated to result in “long-term consequences” to individuals or populations. *Id*. Last, even though the military training activities may indirectly impact marine mammals through habitat degradation or impacting prey availability, the DEIS simply concludes there would be “no lasting impact.” *Id*. The Marine Corps thus concludes that, overall, the impacts of the military training activities on marine mammals “would be less than significant.” *Id*.

The DEIS fails to demonstrate that the proposed project will comply with the mandatory requirements of the MMPA. The DEIS repeatedly concludes that various activities will result in “less than significant” impacts to marine mammals (DEIS at 4-282, 4-296, 4-297, 4-303, 4-324), which exceeds the “negligible impact” finding required by the MMPA. *Conservation Council for Hawaii v. National Marine Fisheries Service*, 2015 U.S. Dist. LEXIS 42226, \*21 (D. Hawaii, March 31, 2015); 16 U.S.C. § 1371(a)(5)(A)(i); 50 C.F.R. § 216.103. The “less than significant” findings in the DEIS are also “insufficiently supported as to be arbitrary and capricious.” *Conservation Council for Hawaii*, 2015 U.S. Dist. LEXIS 42226 at \*21. The DEIS also fails to consider the impacts of the proposed activities on the affected stocks of marine mammals, and not just the overall species. *Id*. at \*26-35; 16 U.S.C. § 1371(a)(5)(A)(i). Moreover, the Marine Corps fails in the DEIS to use the best scientific evidence available in making its findings on marine mammals, as required by MMPA. *Id*. at 35; 50 C.F.R. § 216.102(a).

In repeatedly making conclusory statements that are not supported by factual or scientific evidence, the DEIS analysis of impacts to marine mammals also violates NEPA. Scientific analysis is essential to implementing NEPA. 40 C.F.R. § 1500.1(b). Thus, agencies must “insure the professional integrity, including scientific integrity, of the discussions and analysis” in an EIS. 40 C.F.R. § 1502.24. Agencies “must identify any methodologies used and shall make explicit reference by footnote to the scientific and other sources relied upon for conclusions” in the EIS. *Id*. “General statements” about “possible effects” and “some risk,” such as within the DEIS analysis for impacts to marine mammals, fail to comply with the hard look required by NEPA. *Te-Moak Tribe of Western Shoshone of Nevada v. U.S. Dept. of Interior*, 608 F.3d 592, 603 (9th Cir. 2010). “Conclusory” and “vague” analysis is insufficient under NEPA. *Id*. at 604.

The DEIS also fails to insure the scientific integrity of the DEIS, and consider relevant factors, by failing to consider recent science concerning marine mammals. *See Idaho Sporting Congress v. Thomas*, 137 F.3d 1146, 1149 (9th Cir. 1998) (agency’s decision is arbitrary and capricious if failed to consider relevant factors). The DEIS needs to be updated to take into account new information concerning impacts to marine mammals, including but not limited to the EIS for the U.S. Navy Training and Testing Activities in the Hawaii-Southern California Training and Testing (HSTT) Study Area, and the 2013 scientific report, *“Blue whales respond to simulated mid-frequency military sonar,”* *Goldbogen, J.A., Southall, B.L., DeRuiter, S.L., Calambokidis, J., Friedlaender, A.S., Hazen, E.L., Falcone, E.A., Schorr, G.S., Douglas, A., Moretti, D.J., Kyburg, C., McKenna, M.F., Tyack, P.L. Tyack, P. L. 2013. Proc. Roy. Soc. B. 280(1765), 20130657. doi:10.1098/rspb.2013.0657 (Goldbogen 2013).*[[14]](#footnote-14)  
  
The DEIS also understates the severity of behavioral responses on long term health. While behavioral responses may be temporary, the long term consequences are not well understood. *See* 40 C.F.R. § 1502.22 (setting forth the NEPA requirements for when information concerning the potential environmental impacts of a proposed action is incomplete or unavailable). Similarly, the DEIS underestimates the impacts of stress, which is a key component of marine mammal health. A study of North Atlantic right whales indicated that chronic stress in whales may be associated with exposures to even low-frequency ship noise. *R. M. Rolland, S. E. Parks, K. E. Hunt, M. Castellote, P. J. Corkeron, D. P. Nowacek, S. K. Wasser, and S. D. Krauss. 2012. “Evidence That Ship Noise Increases Stress in Right Whales.” Proceedings of the Royal Society of Biology. 10. 1098/rspb.2011.2429.[[15]](#footnote-15)* Stress from ocean noise combined with other factors may weaken a cetacean’s immune system, making it more vulnerable to parasite and diseases that normally would not be fatal. It is also reasonable to consider the possibility that marine species may exhibit the same physiological effects as terrestrial species that have been exposed to moderate levels of noise. In those studies, chronic noise has interfered with brain development, increased the risk of myocardial infarctions, depressed reproductive rates, and caused malformations in young. *See, e.g., E.F. Chang and M.M. Merzenich, Environmental Noise Retards Auditory Cortical Development, 300 Science 498 (2003) (rats); S.N. Willich, K. Wegscheider, M. Stallmann, and T. Keil, Noise Burden and the Risk of Myocardial Infarction, European Heart Journal (2005) (Nov. 24, 2005) (humans); F.H. Harrington and A.M. Veitch, Calving Success of Woodland Caribou Exposed to Low-Level Jet Fighter Overflights, 45 Arctic vol. 213 (1992) (caribou).* Other indirect effects may arise from mother-calf separation leading to a decrease in survivability.

Significantly, the DEIS also fails to consider the cumulative impacts of the proposed action on marine mammals along with other past, present, and reasonably foreseeable actions. This includes the MITT proposed action, which is being considered and analyzed at the same time, in the same region. The MITT proposal involves numerous activities that would contribute towards cumulative impacts, including weapons firing, vessel noise, aircraft noise, and impulses from swimmer defense airguns. *See* MITT DEIS at 3.4-213. The failure of the Marine Corps to take a detailed, quantified look at the overall cumulative impacts of the past, present and reasonably foreseeable activities in this region on marine mammals violates NEPA. 40 C.F.R. §§ 1508.7, 1508.25 *; Te-Moak Tribe of Western Shoshone of Nevada v. U.S. Dept. of Interior*, 608 F.3d 592, 602-04 (9th Cir. 2010).

1. **Conclusion**

The DEIS fails to consider the proper scope of the proposed action, unreasonably narrows the purpose and need and range of alternatives, and fails to adequately analyze and disclose the potential direct, indirect and cumulative environmental impacts of the proposal, in violation of NEPA. The DEIS also fails to demonstrate and insure compliance of the proposed activities with the ESA and MMPA. If the Marine Corps continues to move forward with this proposal, the Center requests that a supplemental DEIS be prepared to address the deficiencies identified herein, with an additional opportunity for public comment.

Thank you for taking our comments into consideration, and please add me to the mailing list for this proposed action.

Sincerely,

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1. http://fas.org/sgp/crs/misc/R42613.pdf. [↑](#footnote-ref-1)
2. https://www.whitehouse.gov/sites/default/files/docs/nepa\_revised\_draft\_ghg\_guidance.pdf. [↑](#footnote-ref-2)
3. http://www.acq.osd.mil/ie/download/CCARprint\_wForeword\_c.pdf [↑](#footnote-ref-3)
4. https://www.ipcc.ch/pdf/assessment-report/ar5/syr/SYR\_AR5\_FINAL\_full.pdf [↑](#footnote-ref-4)
5. http://www.cakex.org/sites/default/files/documents/NCA-PIRCA-FINAL-int-print-1.13-web.form\_.pdf. [↑](#footnote-ref-5)
6. http://www.biologicaldiversity.org/species/birds/Tinian\_monarch/pdfs/Tinian\_Monarch\_Petition.pdf [↑](#footnote-ref-6)
7. http://www.guambuildupeis.us/documents/final/volume\_3/Vol\_03\_Ch10\_Terrestrial\_Biological\_Resources.pdf, Table 10.2-1. [↑](#footnote-ref-7)
8. *Id*. at 20 [↑](#footnote-ref-8)
9. *Id*. at 15-17 [↑](#footnote-ref-9)
10. *Id*. at 22-23 [↑](#footnote-ref-10)
11. http://www.ucar.edu/communications/Final\_acidification.pdf. [↑](#footnote-ref-11)
12. http://www.sciencemag.org/content/318/5857/1737.abstract. [↑](#footnote-ref-12)
13. http://www.ncbi.nlm.nih.gov/pubmed/18566099. [↑](#footnote-ref-13)
14. http://rspb.royalsocietypublishing.org/content/280/1765/20130657. [↑](#footnote-ref-14)
15. http://rspb.royalsocietypublishing.org/content/279/1737/2363. [↑](#footnote-ref-15)