

**Before the Board of Inquiry of the
Environmental Protection Authority
Tamarind Taranaki Limited 2018 Applications for Marine Consent
and Marine Discharge Consent**

IN THE MATTER OF

**the Exclusive Economic Zone and
Continental Shelf (Environmental
Effects) Act 2012**

AND

**An application by Tamarind Taranaki
Limited for a marine consent for
development drilling activities in the
Tui Field, offshore Taranaki, including
the associated logistical and
environmental monitoring activities**

AND

**An application by Tamarind Taranaki
Limited for a marine discharge
consent to discharge harmful
substances from offshore processing
drainage from deck drains aboard a
drill rig**

Submission by Climate Justice Taranaki Incorporated

18 June, 2018

www.climatejusticetaranaki.info

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MIHI

- 1) Ko Rangi
ko Papa
ka puta ko Rongo
ko Tanemahuta
ko Tangaroa,
ko Tumatauenga
ko Haumiatiketike
ko Tawhirimatea.
Tokona ra ko te rangi ki runga
ko Papa ki raro
ka puta te ira tangata
ki te whai ao
ki te ao marama
Tihe, mauri ora!

- 2) He mihi tenei ki a ratou kua wehe atu ki te po, ki a ratou kua wheturangitia, ki nga kuia, nga koroheke i whawhai ai hei tiaki i te whenua, te moana me te mana motuhake! Haere, haere, haere atu ra. Ko te kupu a Te Whiti: Ko te po te kaihari i te ra, ko te mate te kaihari i te oranga. No reira, kei te tuku mihi te ropu nei ki a koutou, koutou o Te Mana Rauhi Taiao [EPA]. Ko Climate Justice Taranaki (CJT) te ingoa o te ropu nei, e tuhituhi ana. No Taranaki matou.
- 3) I nga tau kua hipa, i tae mai tenei kamupene – a, ko Tamarind – ki roto o Taranaki ki te keru hinu, mo te kapuni. Kahore matou i te tautoko tera momo mahi. No te mea, kahore he pai mo te moana, nga kararehe, me te ao katoa.
- 4) No reira, kahore matou e whakaae ki te mahi kino o te kamupene ra. Haere atu!
- 5) No reira, e te komiti, anei nga korero o tō mātou rōpu CJT. Tena koutou, tena koutou, tena koutou katoa.

INTRODUCTION

- 6) This submission is made by Climate Justice Taranaki Incorporated (CJT). Climate Justice Taranaki Inc. (CJT) is a community group dedicated to environmental sustainability and social justice. This includes issues of inter-generational equity, notably in relation to climate change, which will impact future generations' inalienable rights to safe water, food and shelter, crucial to sustaining livelihoods and quality of life. CJT became an incorporated society on 26 February 2015.

SUMMARY

- 7) CJT submits that the applications should be declined in full for the following reasons:
 - a) The proposed activities do not meet the purpose of the Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012 (EEZ) as they do not contribute to sustainable management as defined in EEZ s 10(2).
 - b) The impact assessment (IA) does not provide sufficient detail to enable the Environmental Protection Authority (EPA) and persons whose existing interests are or may be affected to understand the nature of the activities and their effects on the environment and existing interests, as required under the EEZ Act 2012 s 39(3)(b).
 - c) The information provided is uncertain and inadequate, the Minister must favour caution and environmental protection (EEZ s 34(2); 61(2)). We do not consider the information provided to be "best available information" available without unreasonable cost, effort, or time as defined in the EEZ Act s 34(4) and 61(5).
 - d) The cumulative impacts from this and other industrial activities in the South Taranaki Bight (STB) on marine species have not been properly assessed, as required under the EEZ Act s39(1)(d) and 59(2)(a)(i). The risks to endangered and critically endangered species are unacceptable. NZ has the obligation to protect and enhance the recovery of threatened and endangered species under the Convention on Biological Diversity 1992 (EEZ s 11(b)).
 - e) This application breaches Te Tiriti o Waitangi and fails to provide active protection of Maori interests and taonga as stipulated in EEZ s12, but also negates Kaitiakitanga by tangata whenua over the environment. The IA noted that no written approvals had been provided by existing interest with respect to the proposed activities. To our knowledge, Te Kahui o Taranaki iwi is opposed to the applications as of early June 2018.

- f) The stakeholder engagement process is inadequate. Specific existing interests outside the area of interest (AOI) that may be impacted by unplanned events, though “considered extremely unlikely”, have not been specifically identified (IA 1.3.3).
- g) Assessing related applications (notably the various discharge consents) separately lacks transparency and does not allow holistic assessment of cumulative impacts or integrated management of effects. EEZ s44 allows for joint processing and decision making on related applications.
- h) The IA does not provide any thorough assessment or assurance of the integrity of existing and new structures associated with the activity, considering the aging infrastructure and increasing extreme weather events caused by climate change.
- i) Further exploration, drilling and mining for fossil fuels is irresponsible culturally, socially, environmentally and economically. The impacts on iwi and hapu cultural values (IA section 9) were superficially addressed or ignored.
- j) The application will run contrary to New Zealand’s obligations under the various international conventions relating to the marine environment, including the United Nations Convention on the Law of the Sea 1982, the Convention on Biological Diversity 1992, the Noumea Convention 1986 and the London Convention on Dumping. These have not been properly considered in all previous assessments. Granting of the consents will contravene NZ’s international obligations under various international conventions (EEZ s 11).
- k) New Zealand has the obligation to deliver its commitment to the Paris Agreement under the UNFCCC. The EEZ Act must be amended to include considerations of climate change and be in line with the forthcoming Zero Carbon Act.

STATUTORY REGIME

International Law

- 8) The application neither continues nor enables the implementation of New Zealand's obligations under various international conventions relating to the marine environment, including the United Nations Convention on the Law of the Sea 1982, the Convention on Biological Diversity 1992, the Noumea Convention 1986, the London Convention on Dumping or the Paris Agreement on Climate Change 2015. This is not in accordance with New Zealand’s duty to protect and preserve the marine environment. It will not contribute to New Zealand meeting its climate change obligations.
- 9) A precautionary approach to this proposal is required to ensure the lasting health of the marine environment. New Zealand has repeatedly signed up to the precautionary approach in numerous international instruments and therefore has an obligation to apply it. Its widely accepted formulation is in Principle 15 of the Rio Declaration: *“In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.”*
- 10) The precautionary approach is an essential component and an obligation because of its ability to reduce environmental risk as it involves an anticipatory preventative action in response to uncertainty. We do not have a full understanding of the physical, chemical or biological components or processes, nor the ecosystem functions, nor the life that exists in the area, resident or transient, and how that life interrelates within the surrounding environment. What we do know is that STB is a global marine

mammal hotspot, hosting at least 36 species, six of which are globally Endangered and a further 18 of which are so poorly known as to be classified 'Data Deficient' by the International Union for the Conservation of Nature (IUCN). In 2018, it was confirmed that the blue whales in the South Taranaki Bight are genetically distinct. Thus the estimated minimum population of 718 represents an isolated New Zealand population^{1,2}.

- 11) This application is far from comprehensive. The applicant has not provided a robust application proving that their proposal is safe for the marine environment and poses no threat to future viability. Taking a precautionary approach to major projects of this nature is internationally recognized. The EPA must apply the precautionary approach to this application and apply the provisions of section 10 and section 59(2) EEZ/CS Act to ensure that the marine environment is protected in accordance with that Act, and our international obligations.

Law Change and Regulatory Capture

- 12) The EEZ Act 2012 has had numerous sections repealed or replaced by the Resource Legislation Amendment Act on 1 June 2017. Many of the changes concern the information principle, especially in relation to the discharge consent application, notably the revised EEZ s 39, 59, 61, 87D, 87E and 87F, largely to reduce the ability of the Act in protecting the environment.
- 13) Dr Geoff Bertram, Senior Associate of Victoria University of Wellington and former Councillor of the International Association for Energy Economics (IAEE), warned that given the experience of Think Big projects, *"policy makers need to tread carefully and the wider public needs to insure that the nation's policy making and regulatory institutions are not captured and distorted by industry rent-seeking,"* (Bertram, 2012)³.

THE PROPOSED ACTIVITIES DO NOT MEET THE PURPOSE OF THE EEZ ACT

- 14) The applications fail to satisfy the purpose or requirements of section 10. By allowing the proposed activities, the use, development, and protection of natural resources (fossil fuels in this case) cannot be managed in a way, or at a rate that enables people to provide for their economic well-being while—safeguarding the life-supporting capacity of the environment; and avoiding, remedying, or mitigating any adverse effects of activities on the environment (EEZ s 10(2)(b) and (c)).

EFFECTS ON EXISTING ENVIRONMENT AND INTERESTS

- 15) In the previous STOS marine consent application processes under the EEZ Act, we have explained in great detail our concerns over the effects from the disturbance, discharge and noise associated with further drilling and operation at the Maui field^{4,5}. Our concerns remain valid, and stronger, as the state of our ocean and environment at large has continued to deteriorate, with intensification of petroleum and other extractive industries, climate disruption and change in ocean chemistry – 'acidification'.

Cumulative effects

- 16) The Canadian Environment Assessment Agency⁶ describes cumulative effects assessment (CEA) as *"environment assessment as it should always have been: an Environmental Impacts Assessment (EIA) done well"*. The Agency further explains that CEAs are typically expected to:

- Assess effects over a larger (i.e., "regional") area that may cross jurisdictional boundaries;

- Assess effects during a longer period of time into the past and future;
- Consider effects on Valued Ecosystem Components (VECs) due to interactions with other actions, and not just the effects of the single action under review;
- Include other past, existing and future (e.g. reasonably foreseeable) actions; and
- Evaluate significance in consideration of other than just local, direct effects.

- 17) Our own EEZ Act section 6 includes “*any cumulative effect that arises over time or in combination with other effects*” as the meaning of effect.
- 18) The memorandum of counsel (5/5/2015)⁷ provided to the Decision-Making Committee (DMC) during the first STOS consent application hearing under the EEZ Act considered, “*that section 59(2)(a) requires the EPA to take into account all effects on the environment or existing interests of allowing the proposed activity, including the effects of consequential activities that are not regulated by section 20. This interpretation was applied by the EPA in its decision on the marine consent application by Chatham Rock Phosphate Limited.... the effects of ‘non-section 20 activities’ undertaken in the area covered by the application or in its vicinity must be taken into account by the EPA, under section 59(2)(b).*” This is a crucial consideration on the present applications, given all the other industrial activities that occur and ought to be assessed.
- 19) Tamarind’s assessment of cumulative effects in the IA is inadequate (IA s 10.1-10.6), limited almost entirely to the proposed activities and fails to assess the totality of effects including effects from existing activities and impacts on particular species notably threatened species. Human activities globally have caused rapid changes in sea temperatures and ocean chemistry with cascading effects on food webs. The oceanographic regime in the Tasman Sea and South Taranaki Bight is not static. Parts of the Tasman Sea have experienced extremely elevated sea temperatures⁸ over the past three summers. There is peer reviewed evidence that such temperatures disrupt food webs⁹. These are also cumulative effects that must be assessed. We do not agree that when cumulative effects are assessed comprehensively that they would all be either ‘negligible’ or ‘minor’.

Impacts on marine mammals

- 20) “*The drilling campaign is currently anticipated to commence in the summer and autumn season of 2018/2019. The duration required to drill a side-track well will depend on the length and technical requirements of each well. The drilling duration would typically vary between 40 to 50 days per well but could be longer if significant delays occur due to technical requirements or weather downtime. The campaign duration is expected to take between seven and nine months...*” (IA s 3.2.4).
- 21) In our 2015 submission on STOS, we pointed out that with the drilling duration taking 30-150 days per well or longer, drilling 22 side-track wells non-stop could take up to 6 years. The impacts from the additional 7-9 months of noise and disturbance resulting from Tamarind’s proposed activities, likely focussed in the summer-autumn months, need to be assessed together with the impacts from STOS’ approved activities, and also the anticipated drilling and discharge activities to be conducted by OMV¹⁰ across six petroleum licensed areas from the North to the South Taranaki Bight in the coming six years.
- 22) Notably the Tamarind license area lies in entirety within an Area of Ecological Importance¹¹ and is in close proximity to the West Coast Marine Mammal Sanctuary¹² designated largely for the Maui’s dolphin. We have emphasized the plight of the Maui’s dolphin in our previous submissions to the EPA, to no avail, and ask that EPA and the DMC consider it seriously in the current assessment process.

Our own 'genetically distinct' Blue whale population

23) Tamarind's assessment of cumulative effects from underwater noise, vibration and physical disturbance on marine mammals is inadequate and based on previous assessments by STOS (IA s 10.1 and 10.4).

24) Since the STOS 2017 application, the "*foraging population*" of blue whales that was "*thought to exist off the Taranaki coast*" (IA table 4.6) has been proved to be a genetically distinct population. "*This population was investigated through a multidisciplinary approach, including analysis of survey data, sighting records, acoustic data, identification photographs, and genetic samples. Blue whales were reported during every month of the year in the New Zealand Exclusive Economic Zone, with reports concentrated in the South Taranaki Bight (STB) region, where foraging behaviour was frequently observed. Five hydrophones in the STB recorded the New Zealand blue whale call type on 99.7% of recording days (January-December 2016). A total of 151 individuals were photo-identified between 2004 and 2007. Nine individuals were resighted across multiple years. No matches were made to individuals identified in Australian or Antarctic waters. Mitochondrial DNA haplotype frequencies differed significantly between New Zealand (n = 53 individuals) and all other Southern Hemisphere blue whale populations, and haplotype diversity was significantly lower than all other populations. These results suggest a high degree of isolation of this New Zealand population. Using a closed capture-recapture population model, our conservative abundance estimate of blue whales in New Zealand is 718 (SD = 433, 95% CI = 279-1926). Our results fill critical knowledge gaps to improve management of blue whale populations in New Zealand and surrounding regions*" (Barlow et al., pre-press). This information is not included in Tamarind's IA.

25) With further research the South Taranaki Bight Blue whale population could well be considered globally threatened following IUCN criteria¹³.

Dead Sperm Whales in South Taranaki

26) On Thursday 24th May 2018, eight dead sperm whales were discovered along the Kaipokonui Beach, South Taranaki, and reported to DOC. By the end of the weekend, a total of 12 dead whales were found near the same area. On 8th June, the 13th dead whale (a young male) was found further south, in a remote location along Waihi Beach¹⁴.

27) According to a media report¹⁵, DOC said it is "*extremely unlikely*" seismic surveying off the coast of Taranaki contributed to the death of the twelve sperm whales that washed ashore. DOC marine species and threats manager Ian Angus said, "*Due to the decomposed state of the whales it was not possible to do full necropsies... Standard samples were taken for scientific analysis but these are unlikely to reveal the cause of death... So, at this stage we don't know why the whales died and it is probable that we never will know for sure.*"

28) Notably, it was an unprecedented occurrence for Taranaki, considering the number of animals involved and the fact that they died at sea. Given that almost all of the dead whales found were males, there is a possibility that there is a feeding ground for sperm whales in the South Taranaki Bight yet to be documented, which would make the region more important again for marine mammals. Such an unusual mass mortality event in an area of intensive industrial activities raises serious questions, particularly in relation to cumulative effects.

29) While it may be "*extremely unlikely*" that seismic surveys have directly caused the death of the whales, as the Amazon Warrior seismic operations were reported to have ended on 30 March, seismic operations could have contributed to the weakening and eventual death of the animals, possibly through stress and/or displacement from feeding ground at a critical period. In February 2018, the Advertising Standard Authority¹⁶ upheld CJT's official complaint re PEPANZ's seismic survey website¹⁷ and PEPANZ revised the website to reflect our concern. Indeed, there could be other factors that might have caused

the demise of the 13 sperm whales, such as exceptional high sea temperatures¹⁸ and other yet undocumented human activities. It is time to seriously look at cumulative effects on our marine species and ecosystems.

The precautionary approach

- 30) *“Where there is a threat of significant reduction or loss of biological diversity, lack of full scientific certainty should not be used as a reason for postponing measures to avoid or minimize such a threat,”* as stated in the preamble of the Convention on Biological Diversity¹⁹.
- 31) In order to honour the government’s obligations to the Convention of Biological Diversity and the Rio Declaration on Environment and Development 1992, EPA needs to adopt the **precautionary approach** (CBD, 2012)²⁰ when assessing this application.
- 32) *“Of course, it is not only blue whales and Maui’s dolphins that should concern us. According to Kaschner et al. (2011)²¹, South Taranaki Bight and adjacent waters host the highest cetacean diversity on Earth. ... According to the IUCN, 6 are Endangered... Eighteen species are Data Deficient ... meaning there is not enough known about them by the leading specialists globally... to enable a robust assessment. Surely this is cause for concern,”* (DeVantier, 2017)²².
- 33) In addition to marine mammals, seabirds may also be impacted. For example, the Little blue penguin *Eudyptula minor*²³, classified as ‘At risk – declining’ by the NZ government, was previously thought to be an exclusive near-shore feeder. However, recent research has revealed that some of these penguins can rely on distant foraging areas (200 m deep) while incubating, with nesting birds travelling up to 214 km to feed (Poupart, et al. 2017)²⁴. Notably eight birds at the Motuara Island colony, Marlborough Region, were observed to have *“crossed the Cook Strait to forage 93-214 km away, as far as the Taranaki Bight...”* The authors further advised that *“These findings highlight the need to consider the little penguins’ large potential foraging ranges when managing threats and changes to the environment.”* Indeed, any disturbance at the distant foraging ground during the penguin’s breeding period could impact on the reproductive success and recovery potential of the species which is already ‘at risk’.
- 34) We respectfully ask that the EPA and Board of Inquiry seriously consider the implications of allowing the current applications, especially the cumulative impacts that would result from Tamarind’s activities on top of existing and anticipated impacts of fishing, seismic testing, exploratory drilling, contaminant discharges, seabed mining and shipping on endangered marine mammals and other species.

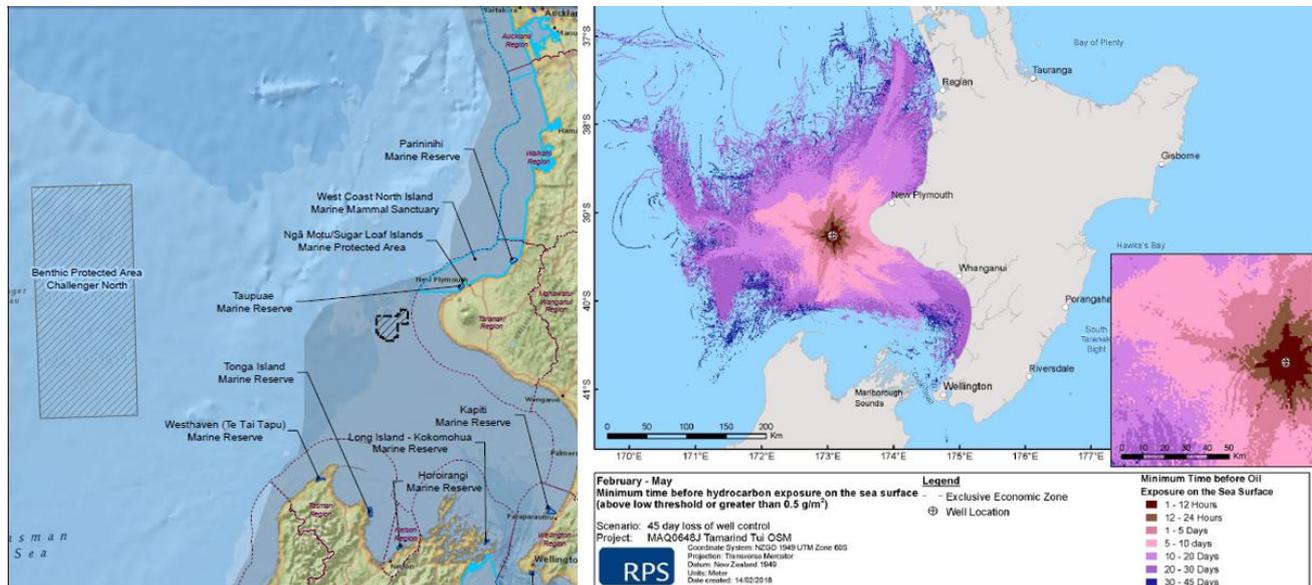
Disjointed processing of related applications prevents assessment of cumulative effects

- 35) *“Both water-based and synthetic based drilling muds (SBM) may be used for the campaign. Cuttings from sections drilled with water based muds (WBM) will be discharged on site, along with used water based drilling fluids. In the event that any ecotoxic substances are contained within the WBM, this discharge would be the subject of a separate non-notified Marine Discharge Consent application once the final chemical composition of the drilling muds is confirmed”* (IA s 3.2.5).
- 36) Notably Tamarind already holds a marine discharge consent (EEZ3000006) for the discharge of produced water at sea and has been discharging an increasing amount over time (IA s 1.2.5). The IA makes no assessment of the cumulative effects of the proposed new discharges on top of the already consented discharges such as produced water.

- 37) *“There is also potential that the drilling rig used for the side-track drilling may engage in exploration drilling within PMP 38158, which would be the subject of a separate marine consent application once details of that project have been defined”* (IA s 3.6). *“If undertaken, exploration drilling is anticipated to be undertaken using water based drilling muds only, with only a very limited number of products being potentially ecotoxic and triggering the definition of a harmful substance”* (IA s 3.6.2). It is clear that Tamarind will be seeking a marine discharge consent associated with the exploratory drilling.
- 38) According to EEZ s 6(1), effects include (c) any past, present, or future effects; and (d) any cumulative effect that arises over time or in combination with other effects. By submitting applications for different but related activities separately, there is no opportunity for comprehensive assessment of cumulative effects of all these activities to be conducted by the same operator in the same location or its close vicinity.
- 39) *“Cumulative risk assessment is a tool for organizing and analyzing information to evaluate the probability and seriousness of harmful effects caused by either simultaneous and/or sequential exposure to multiple environmental stressors... the emphasis is on examining three fundamental and interrelated questions that must be addressed as part of the process to assess cumulative risk: a) Which mixtures are most important from a public health perspective? And b) What is the nature (i.e. duration, frequency, timing) and magnitude (i.e. exposure concentration and dose) of relevant cumulative exposures for the population of interest? c) What is the mechanism (e.g. toxicokinetic or toxicodynamic) and consequence (e.g. additive, less than additive, more than additive) of the mixture’s interactive effects on exposed populations?”* Sexton and Hattix, 2007²⁵.
- 40) Because of concerns over the environmental and health impacts of contaminant discharges at sea, jurisdictions overseas have put in place tight regulations. Norway, for example, requires toxicity, biodegradation and bioaccumulation tests for all components in chemicals used offshore except those on “green” chemicals list²⁶. In Western Australia, legislation requires that all chemicals used down a well are approved, based on toxicity assessment, by the Department of Mines and Petroleum, and this information is made public²⁷.
- 41) Here however, the EEZ (Discharge and Dumping) Regulations 2015 states: *“The discharge of harmful substances described in regulation 4(a) and (b) from production water for the purpose of a test flow of an exploration well is classified as a non-notified activity under the Act”* (s 16(2)); *“The discharge of harmful substances described in regulation 4(a) and (b) from offshore processing drainage, displacement water, and production water from an existing structure is classified as a **non-notified** activity under the Act”* (s 16(3)) and *“The discharge of harmful substances contained in drilling fluids is classified as a **non-notified** activity under the Act”* (s 21).
- 42) The non-notification classification of consent applications required for such discharges prevents the public from being informed and participating. But it should not prevent the EPA and Board of Inquiry from processing and assessing their effects jointly, so that cumulative effects can be examined, with public input. The EEZ Act s 44 supports joint processing, hearing (if both are to be heard) and decision making on related applications. There appears to be a caveat in that s 44(a)(a) specifies if the EPA *“receives more than 1 application for a marine consent in relation to the same proposal (related applications)”*. In our view, EPA must have the authority to request operators to submit all related applications around the same time so that they can be jointly processed.
- 43) CJT strongly reiterates that classifying the discharge of harmful substances into the environment as non-notifiable violates the basic principles of democracy²⁸, ignores tangata whenua’s role as kaitiaki and is disrespectful of cultural values especially mauri of the sea and taonga species.

Hydrocarbon and chemical spills

- 44) In addition to the planned discharge of harmful substances, there are significant risks on the marine environment, biodiversity, ecosystems and threatened species from a major accident such as a well blow-out and/or hydrocarbon (condensate or vessel fuel) or hazardous or noxious substance spill.
- 45) Such risks are compounded by aging infrastructure, escalating climate disruptions, intensifying activities and New Zealand's inadequate capacity to deal with the consequences, and could severely impact our marine environment and threatened species.
- 46) The IA expressed that a major incident would be considered 'unlikely' or 'exceptionally unlikely' (IA section 7). However, modelling of a hypothetical 45-day subsea release of 356,780 bbl of Tui Crude at a variable rate following a loss of well control incident at the Amokura-2H well over February to May showed that *"both the South Taranaki shoreline and Marine Mammal Sanctuary had a 99% probability of being exposed to visible floating oil... South Taranaki regional shoreline had the highest probability of contact, for all thresholds. Shoreline accumulation of greater than 100 g/m² occurs within 65 hours for this section of coastline, eventually covering up to 94 km at this level. Some sections of the South Taranaki regional shoreline accumulated up to 2.885 kg/m², while New Plymouth had a peak value of 3.144 kg/m². Dissolved aromatics leeching away from the entrained oil while in the water column resulted in zones of potential low and moderate exposure in the top 30 m of the water column"* (IA Annex F)²⁹. *"For a worst feasible case spill shoreline contact above the moderate threshold was predicted to extend between 1 and 33 km outside the Taranaki Region, and was up to 94 km for the South Taranaki District, which was the most affected area. A larger area was potentially affected by oiling above the low threshold, which would potentially trigger clean up actions..."* (IA page 163).



- 47) There is no clear assurance that Tamarind has adequate insurance to cover the costs of clean up, compensations and habitat remediation following a major oil spill or other incident.
- 48) The IA indicated that a Well Control Contingency Plan and Oil Spill Contingency Plan will be approved by Tamarind Senior Management and Maritime New Zealand prior to any operations commencing (IA s 7.2.1). It therefore appears that these documents will not be provided to EPA or the public as part of the marine consent and marine discharge consent applications. Without such crucial information, how can the EPA and Board of Inquiry assess the risks and potential impacts on the marine environment,

threatened species and marine interest? We question, for example, how long it might take for an adequately equipped well control vessel to arrive in New Zealand to manage a well blow out? Would it have to come from Kuala Lumpur where Tamarind's headquarter is based?

RISKS FROM AGEING INFRASTRUCTURE & INTENSIFYING ACTIVITIES

- 49) In our submissions to EPA on STOS' applications in 2015³⁰ and 2017³¹, we expressed serious concern over the safety and integrity of the numerous aging STOS infrastructure at Maui, and the risks of drilling side-tracks from the old wells. We noted that the Impact Assessment (IA) did not provide any thorough assessment or assurance of the integrity of structures associated with the activity. We listed a number of incidents that had occurred at offshore and onshore petroleum installations and how the incidents were handled. We also questioned the integrity of aging infrastructure and the preparedness of offshore operations in coping with ever increasing extreme weather events (IPCC report, 2014)³², especially towards the end of production life with decreasing revenues.
- 50) We hold the same serious concern over the current application by Tamarind. Although the wells at the Tui field are not as old as most of those at Maui, climate scientists are warning even greater and more frequent extreme events^{33, 34, 35}. These extreme weather events could threaten the safety of the operations proposed and exacerbate the environmental impacts should a major incident occurred.
- 51) Moreover, the IA says *"normal operations at the FPSO Umuroa will continue throughout the programme, producing well fluids from other wells in the field while side-tracking is undertaken from a particular well..."* (IA s3.1). There appears to be no assessment on the risks and impacts of an unplanned event from the proposed activities on existing operations and vice versa.
- 52) The IA acknowledged that with continuous production and time, oil and gas production has steadily declined as produced water increases. *"As of 31 December 2017, average oil production was 2,200 barrels (bbls)/day, and average water production 110,000 bbls/day. All current producing wells now require gas lift to enable them to flow... The FPSO processes up to 120,000 bbls/day of combined liquids, including oil and produced water,"* (IA s 1.2.5). These figures suggest that the FPSO processing capacity is already close to its limits. There is no indication or assurance that the FPSO would be able to handle yet more combined liquids, most of which being produced water, following the drilling of additional side-track wells.
- 53) There is no acceptable economic argument, especially considering the environment cost of the ever-increasing amount of produced water containing harmful substances into our marine environment. We do not agree with the statements that *"A 'do nothing' option would mean that access to the newly identified remaining hydrocarbon reserves in the Tui Field would be unachievable. As a result that the investment to date and any impacts of the facilities are not fully offset against the socioeconomic benefits of the field, and would not maximise the sustainable development of the resource"* (IA s 1.5). Fossil fuel mining is not sustainable development of a resource.
- 54) Furthermore, following the government announcement in April 2018^{36, 37} that no new offshore exploration permits would be granted while existing permit holders would continue to operate, the amount of offshore petroleum activities is expected to increase significantly in the upcoming few years^{38, 39}.
- 55) With aging infrastructure, increasing climate disruptions, and the intensification of activities, including also seismic surveys, fishing, maritime transport, potential seabed mining and other industries in and

around the area, the likelihood of accidents and the resulting adverse effects on the environment and existing interest will escalate and increasingly become unmanageable. The IA does not give thorough analyses or clear indication of how Tamarind intends to ensure safety and protection of their structures on site, as the level of risk increases with intensification of use, and over time.

END-OF-LIFE AND DECOMMISSIONING

- 56) The Parliamentary Commissioner for the Environment said, *"The bigger challenge comes once a well has been abandoned. The likelihood of an abandoned well leaking increases with its age."* (PCE, 2014: Drilling for Oil and Gas, 2014)⁴⁰. It is critical that abandonment and decommissioning are conducted to high standards to reduce environmental and safety issues later on. Taranaki iwi are seriously concerned with the issues of dumping and the decommissioning process and their impacts.
- 57) The disposal of waste in New Zealand waters is managed under both domestic legislation and international law. Part 180 of the Maritime Rules brings obligations into New Zealand Law under the Protocol to the London Convention. In principle, this protocol requires that dumping at sea be avoided, except for materials on an approved list.
- 58) The London Convention incorporates the Polluter Pays principle and the precautionary principle (Article 3.1). There is an expectation in the New Zealand Guidelines that wellheads and platforms will be recovered (MNZ, 1999)⁴¹.
- 59) UNCLOS article 60(3) specifically provides for decommissioning, in particular the removal of offshore installations. Article 194 requires that signatory states conduct decommissioning operations in a manner that would not damage the marine environment.
- 60) The International Maritime Organization (IMO) Guidelines impose a principle on coastal states that all disused installations and structures, are required to be removed, and that removal should be performed as soon as is reasonably practical.
- 61) The section on 'end-of-life treatment of structures' in Tamarind's IA is overly simplified (IA s 3.7). We insist that a detailed Decommissioning Plan be provided for assessment before new consents are issued for the operator.
- 62) Decommissioning is an expensive activity which needs to take place at the end of the economic life of an extractive venture like fossil fuel mining. Tamarind gives no assurance in terms of its commitment or financial ability to implement decommissioning at the end of the production life of Tui.
- 63) CJT raised the decommissioning issue during the EPA hearing re STOS' application in 2015. At that time, the General Manager of STOS Mr Rob Jager gave this evidence: *"...I don't think Shell will walk away from its obligations, either in 5 years or in 35 years... Clearly we look for as much certainty in what is otherwise an extremely uncertain environment in terms of price, in terms of demand, in terms of economically recoverable reserves that we can get to make our investment decisions,"* (EPA Hearing transcript Day 01, 2015)⁴². Within a few months, Shell announced that it planned to review its NZ assets⁴³. By April 2017, Shell has begun sale of its assets, initially relinquishing its half stake in the onshore Kapuni field to Todd Energy and acquiring all of the Maui asset, thereby *"simplifying the structure for any possible changes to the remaining (production) assets"* (Energy Stream, April 2017)⁴⁴. In March this year, Shell announced that it had reached an agreement to sell its NZ assets to OMV for USD 578 million⁴⁵.

64) CJT submits that a condition requiring a bond from Tamarind to ensure that there is adequate finance to formulate a decommissioning plan and its implementation in an environmentally and culturally acceptable manner. EEZ s 11, 63 and 65 provide for this.

CLIMATE CHANGE OUR NUCLEAR-FREE MOMENT

65) Climate change is an existential risk of global significance that requires local as well as global responses and solutions. Numerous international summits on the subject have been held, notably through the United Nations. In 2015, the NZ government signed onto the UNFCCC COP21⁴⁶ Paris Agreement, committing itself to reducing greenhouse gas emissions, along with almost 200 other nations. To deliver its commitments, the effects on climate change must be considered when assessing any activities.

66) In August last year during her election campaign, Jacinda Arden called climate change her generation's nuclear-free moment⁴⁷. In April this year, the central government made a historic announcement^{48,49} of no new offshore oil and gas exploration permits. However existing exploration and mining licenses are being 'honoured' and new exploratory permits may still be issued in onshore Taranaki over the next three years after which a review will be conducted. While the government has signalled an end to further exploration, the allowance of existing exploration and mining to take place seriously delays the urgent need to transition away from fossil fuels.

67) It is also irrational and irresponsible of the NZ government, through the EEZ Act, to preclude EPA from considering the effects of discharging greenhouse gases on climate change when reviewing applications for marine consents and submissions (See also DeVantier, 2012)⁵⁰. We can only hope that the forthcoming Zero Carbon Act⁵¹ would create some breakthrough in putting climate change and low emissions economy⁵² at the centre of government decisions.

DECISION SOUGHT

68) CJT urges you to **DECLINE** both the marine and marine discharge consent applications.

69) If the Board of Inquiry decides, contrary to all the above cogent reasons, to grant the consents, we ask that a condition be imposed to require a bond to ensure the formulation and implementation of an environmentally and culturally acceptable decommissioning plan (EEZ Act s 11, 64 and 65).

70) CJT requests the right to be heard in support of its submission. We may call expert evidence and also address the Board of Inquiry in te reo Maori (at times) during the hearing.

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