



Australian Academy of Science

# RESPONSE TO THE DRAFT REEF 2050 LONG-TERM SUSTAINABILITY PLAN

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# Australian Academy of Science response to the draft Reef 2050 Long-term Sustainability Plan

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The Australian Academy of Science welcomes the opportunity to comment on the draft *Reef 2050 Long-term Sustainability Plan*. The Academy promotes scientific excellence, disseminates scientific knowledge, and provides independent scientific advice for the benefit of Australia and the world. The Academy is made up of 476 of Australia's leading scientists, each elected for their outstanding contribution to science. The Academy has drawn widely on the expertise of its distinguished Fellows with expertise in coral reef science, ecology, physiology, earth sciences, climate change, environmental policy, and conservation planning to prepare this submission.

These experts would be pleased to provide further information or explanation of this submission to the Australian and Queensland governments, and to contribute to prioritising and more clearly articulating the relationships between outcomes, objectives, targets and actions.

The Academy certainly agrees that the Great Barrier Reef is “...not only one of the natural wonders of the world, it is a significant part of Australia's national identity”<sup>1</sup>. The reef is under ever increasing pressure, arguably made worse by recent policy and legislative changes such as Australia currently having no market-based mechanism in place to reduce carbon emissions; funding cuts to the Great Barrier Reef Marine Park Authority (GBRMPA), CSIRO, the Australian Research Council and other science agencies; and the relaxation of land clearing laws in Queensland. UNESCO has expressed its concern over the decline of the Great Barrier Reef World Heritage Area's Outstanding Universal Value due to increasing anthropogenic pressures, particularly the rapid industrialisation of the Queensland coastline, and the World Heritage Committee is threatening to place the reef on the World Heritage “In Danger” list<sup>2</sup>.

## Summary

While the draft Reef 2050 Long-Term Sustainability Plan contains many positive elements, based on overwhelming scientific evidence the Academy concludes that, in its present state, the draft plan is inadequate to achieve the goal of restoring or even maintaining the diminished Outstanding Universal Value of the reef. While the draft plan acknowledges the greatest risks to the reef are “climate change, poor water quality from land-based run off, impacts from coastal development and some fishing activities”<sup>3</sup>, it fails to effectively address any of these pressures. Rather, the draft 2050 plan represents business-as-usual in terms of how escalating pressures on the reef are adequately regulated (or not), when much bolder action is required to restore the values of the reef and prevent further degradation.

- The draft plan proposes to “maintain” the values for the reef, when it should instead provide a pathway for restoring OUV

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<sup>1</sup> Australian Government & Queensland Government (2014) *Reef 2050 Long-Term Sustainability Plan*. Draft document, p.5. Available at: <http://www.environment.gov.au/system/files/consultations/8b8f5023-3cfb-4310-bc51-1136aa5d875a/files/reef-2050-long-term-sustainability-plan.pdf>

<sup>2</sup> World Heritage Committee (2014). *Committee Decision 38 COM 7B.63*, Paragraph 10, UNESCO. Available at: <http://whc.unesco.org/en/decisions/6049%206049>

<sup>3</sup> Australian Government & Queensland Government (2014), *op cit*, p.5

- The draft plan advocates for targets that are specific, measurable, achievable, realistic, and time-bound (SMART), but many important targets are not quantified, nor are they connected to any mechanisms through which they can be achieved
- The draft plan does not resolve the issue of cumulative impacts, rather it permits new impacts that will be superimposed on those already causing loss of OUV
- In its current form, the mechanisms and level of funding for implementation of the draft plan are inadequate for achieving its goals: the draft plan is missing targets for key attributes of the reef, and mechanisms to avoid real and perceived conflicts of interest are not yet in place.
- There is no adequate recognition in the draft plan of the importance of preventing damaging climate change for the future trajectory of the reef.

## The 'Vision'

The draft *Reef 2050 Long-Term Sustainability Plan* provides a framework aimed at protecting and managing the reef from 2015 to 2050. The stated vision of the plan is that *"By 2050 the Great Barrier Reef continues to demonstrate the Outstanding Universal Value (OUV) for which it was listed as a World Heritage Area and supports a wide range of sustainable economic, social, cultural and traditional activities"*. The Academy identifies three main limitations of this vision:

Firstly, the present tense of the verb 'continue' (as well as 'maintain', 'sustain' and 'retain') used here and throughout the draft plan infers that the reef's OUV is unchanged from the time of its inscription as a World Heritage site in 1981. It is incorrect to claim, as the draft plan actually does, that *"The Great Barrier Reef continues to demonstrate Outstanding Universal Value"*<sup>4</sup> or *"...the system as a whole retains the qualities contributing to its Outstanding Universal Value"*<sup>5</sup> Indeed, the draft plan appears to contradict itself regarding the status of OUV; in contrast to the assertions on p3 and p9, Appendix B provides a more reasonable assessment of the current diminished condition and declining trend of OUV.

Based on many scientific assessments, the assessment of OUV in Appendix B demonstrates a clear need to *restore* many of the values for which the area was inscribed on the World Heritage list. The Appendix shows that 24 out of 41 values that collectively comprise OUV (or 58.5% of the total attributes) have been assessed by the Australian Government as deteriorating. Of these 24 deteriorating attributes, 10 are currently assessed as 'poor' rather than 'good' or 'very good'. Hence, if the Reef 2050 Long-Term Sustainability Plan is to become realistic and effective, its vision must change to repairing and restoring the OUV of the reef. Based on the compelling scientific evidence summarised in the reef outlook reports<sup>6 7</sup>, it is already far too late to 'maintain' OUV. A more credible and pressing vision or goal would be to rebuild the Reef's OUV from 'poor' to the 'very good' levels measured at the time of inscription as a World Heritage site.

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<sup>4</sup> *Ibid.*, p.9

<sup>5</sup> *Ibid.*, p.3

<sup>6</sup> Great Barrier Reef Marine Park Authority (2014) *Great Barrier Reef Outlook Report 2014*. Available at: <http://hdl.handle.net/11017/2855>

<sup>7</sup> Great Barrier Reef Marine Park Authority (2009) *Great Barrier Reef Outlook Report 2009*. Available at: <http://www.gbrmpa.gov.au/managing-the-reef/great-barrier-reef-outlook-report/outlook-report-2009>

Statements throughout the draft plan (other than Appendix B) implying that to date OUV has been ‘retained’ or ‘maintained’ stand in contrast to the conclusions in the Australian Government’s 2009 and 2014 *Great Barrier Reef Outlook Reports*, which show that the condition of the reef is poor, and rapidly declining<sup>8 9</sup>. The conclusion of the Executive Summary of the 2014 outlook report states:

*“Even with the recent management initiatives to reduce threats and improve resilience, the overall outlook for the Great Barrier Reef is poor, has worsened since 2009 and is expected to further deteriorate in the future. Greater reductions of all threats at all levels, Reef-wide, regional and local, are required to prevent the projected declines in the Great Barrier Reef and to improve its capacity to recover”<sup>10</sup>*

These two comprehensive outlook reports correctly identify climate change as the major longer-term challenge facing the reef. The 2014 outlook Report states *“Notwithstanding positive actions since 2009, the greatest risks to the Great Barrier Reef have not changed. Climate change, poor water quality from land-based run-off, impacts from coastal development, and some remaining impacts of fishing remain the major threats to the future vitality of the Great Barrier Reef”<sup>11</sup>* The draft reef plan for action out to 2050 virtually ignores climate change.

Secondly, the stated vision and draft plan emphasise ‘multiple use’ of the reef and its catchment, including the creation of the world’s largest coal and coal seam gas export industry, which the Reef Trust Investment Strategy states will necessarily result in *“residual significant impacts on the Great Barrier Reef from development activities”<sup>12</sup>*. This vision for the draft plan is not consistent with the intent of the *Great Barrier Reef Marine Park Act 1975*<sup>13</sup>, which explicitly prioritises protection of the reef over use: The Act establishes a hierarchy of objectives, with protection and conservation as the over-riding purpose, which since 1975 has been the fundamental tenet of the reef’s governance. The vision of the draft plan raises the profile of OUV to be a more *“clearly defined and central element within the protection and management system of the property”<sup>14</sup>*. However, it fails to meet the clear legislative mandate of the *Great Barrier Reef Marine Park Act 1975* that requires the protection of the values of the Marine Park (which comprises 99% of the World Heritage Area). The ongoing decline of the integrity of the reef (see below) is of paramount interest to the World Heritage Committee.

Thirdly, the vision of the draft 2050 plan places much emphasis on the OUV critical to World Heritage Listing, while overlooking other key values in the reef that are also declining (including Indigenous, historic and social values). Again, this omission is contrary to the legislative objective of the GBRMP Act (1975), which clearly requires the *“long term protection and conservation of the*

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<sup>8</sup> Great Barrier Reef Marine Park Authority (2014) *op cit*

<sup>9</sup> Great Barrier Reef Marine Park Authority (2009) *op cit*

<sup>10</sup> Great Barrier Reef Marine Park Authority (2014) *op cit*, Executive Summary, p. vi.

<sup>11</sup> *ibid* Executive Summary, p. v.

<sup>12</sup> Commonwealth of Australia (2014) Reef Trust – Investment Strategy Initiative Design and Phase 1 Investment 2014-15, p. 9. Available at: <http://www.environment.gov.au/system/files/pages/e40fbc03-3d32-4116-b7bf-fcad4702b2b4/files/reef-trust-investment-strategy.pdf>

<sup>13</sup> Great Barrier Reef Marine Park Act (1975) Available at: <http://www.comlaw.gov.au/Series/C2004A01395>

<sup>14</sup> Australian Government & Queensland Government, *op cit*, p.18

*environment, biodiversity and heritage values of the Great Barrier Reef Region*<sup>15</sup>. In this instance, 'heritage values' are defined in the 2014 outlook report as:

- Indigenous heritage values
- historic heritage values
- national heritage values
- Commonwealth heritage values
- World Heritage values
- other heritage values (scientific, social, aesthetic, etc)<sup>16</sup>.

Similarly, the *Environment Protection and Biodiversity Conservation (EPBC) Act 1999*<sup>17</sup> requires all Matters of National Environmental Significance (including threatened species, migratory species etc.) to be considered when assessing a planning application for approval under that Act, not just World Heritage values. However, the process for assessing planning applications is silent on the mechanism for dealing with multiple matters of National Environmental Significance at one site, which invariably arise if development occurs in or adjacent to a World Heritage Area.

OUV is mentioned in the draft plan some 75 times. Thus, the vision of the draft plan would appear to be overly focused on the short-term task of addressing UNESCO's concerns, rather than the longer-term challenges of restoring the values of the reef or of addressing Matters of National Environmental Significance.

## Outcomes framework based on targets

The draft 2050 plan aspires to present a "a management framework focused on clear outcomes for the future of the Reef's values and driven by specific measurable targets" and with "cumulative impact guidelines and regional standards..."<sup>18</sup>. The draft plan states that additional targets will be 'subject to scientific review'<sup>19</sup>, but given the time-frame there is a risk that it will not be possible to undertake such a review in a thorough and transparent way.

The draft plan is disappointingly short-sighted in its objectives, targets and actions, given its aspiration to provide an overarching framework for the next 35 years, particularly in the light of likely changes affecting the reef over this time-frame, including:

- social and economic changes such as population growth, decarbonising the economy
- political and governance change
- environmental shifts, including responses to a warming climate.

For example, by 2050, the population of the reef catchment could grow by two million people, which would challenge the stated target of restoring depleted stocks of reef fish as recreational fishing continues to grow. On the other hand, new surveillance technologies that eliminate widespread poaching could make achieving such a target more realistic.

<sup>15</sup> Great Barrier Reef Marine Park Act (1975), *op cit*, Part I, Section 2A, Paragraph 1

<sup>16</sup> Great Barrier Reef Marine Park Authority (2014) *op cit*, p. 79.

<sup>17</sup> Environment Protection and Biodiversity Conservation Act (1999) Available at: <http://www.comlaw.gov.au/Details/C2014C00506>

<sup>18</sup> Australian Government & Queensland Government, *op cit*, p.14

<sup>19</sup> *Ibid*, p.17

The draft plan states *“to ensure that the Plan is effective, the Targets will be Specific, Measureable, Achievable, Realistic, and Time-Bound (SMART)”*<sup>20</sup>. Unfortunately most of the targets for 2015 to 2020 in the draft plan are NOT measurable, realistic nor time-bound as stipulated—and they would only be achievable by 2020 if both state and federal governments provide more targeted resourcing for management activities.

The use and nature of targets is inconsistent. Some targets are drivers of ecological change (water quality metrics) and others are ecological responses (number of coral trout) to other drivers such as fishing pressure. A demonstrated understanding of the link between drivers and responses is missing. Hence, it is unclear to what extent an improvement in water quality metrics would translate into ecosystem responses such as re-growth of sea grass beds, improved recruitment of corals on coastal reefs or outbreaks of starfish. Equally, it is unclear what magnitude of reduction in fishing pressure would be required to deliver the targeted response in fish numbers. For example, to achieve the targeted recovery of coral trout (target BT3 in the draft plan)<sup>21</sup> might require Commonwealth legislation to establish more green zones, the introduction of Queensland recreational fishing licenses, and/or restrictions on commercial fishing. The draft plan is silent on how such a target is achievable.

Regretfully, there are no targets in the draft 2050 plan for most elements of the World Heritage Area’s OUV. Although the draft plan states that *“the outcomes, objectives and targets maintain a clear line of sight between on-ground actions and the attributes that contribute to the Outstanding Universal Value of the Reef”*<sup>22</sup>, few such connections are made. For example, there are no targets for coral cover (one of the key reasons for the World Heritage listing, and a key OUV element that is currently under unprecedented pressure). The draft plan states *“there has been a serious decline in hard coral cover and deterioration of coral reef habitats in the southern two-thirds of the Region”*<sup>23</sup>, yet there are only two places in the draft plan that specifically mention corals:

- Objective EHO2 states *“Trends in the condition of key ecosystems including coral reefs, shoals and inter-reefal areas are improved over each successive decade”*<sup>24</sup>. However, there is no action or target to ensure this will be addressed or achieved.
- Action WQA9 calls for developing a dredging program that *“avoid[s] coral spawning...”*<sup>25</sup>. Similarly, the draft plan provides no measurable target.

Another key OUV attribute of the reef is its *“superlative natural beauty”*, which is mentioned some 14 times in the draft plan. However, only one objective in the draft plan addresses natural beauty (CBO2): *“Community benefits provided by the Reef, including its exceptional natural beauty, are maintained for current and future generations”*<sup>26</sup>. There is no related action to indicate what *“smart target”* is required to rebuild or maintain natural beauty, or to ensure this objective is achieved.

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<sup>20</sup> *Ibid*, p.16

<sup>21</sup> *Ibid*, p.29

<sup>22</sup> *Ibid*, p.16

<sup>23</sup> *Ibid*, p.63

<sup>24</sup> *Ibid*, p.25

<sup>25</sup> *Ibid*, p.23

<sup>26</sup> *Ibid*, p.33

Two further examples of key attributes of OUV which are missing from the draft plan, which therefore have no targets, are geomorphological features and ecological processes. These are both fundamental aspects in the Statement of Outstanding Universal Value, yet there are no objectives or actions pertaining to either of these attributes in the draft plan. Recent research indicates that reef calcification and growth of massive corals are already being compromised by climate change<sup>27</sup>. Similarly, the two reef outlook reports document the clear evidence for widespread regional-scale declines in ecological processes such as recruitment, herbivory and predation. The draft plan, despite its stated purpose and scope, does not address these critical issues.

## Cumulative impacts

The fundamental issue of cumulative impacts is mentioned repeatedly in the draft 2050 plan, which states that it will “fully address direct, indirect and cumulative impacts on the Great Barrier Reef”<sup>28</sup>. However, the aspiration to address cumulative impacts is inadequately addressed in the draft plan. The draft plan does not provide specific commitments, such as measurable actions, priorities or any funding assurances, or provide a useful framework to protect and manage the reef from cumulative impacts now or in the future. Instead, the draft 2050 plan will ensure growth in new impacts (such as more dredging, coastal development and fossil fuel extraction) that will be superimposed on current pressures.

The outlook reports<sup>29 30</sup> and the 2007 Great Barrier Reef climate change action plan<sup>31</sup> conclude that current pressures on the reef are already unsustainable and need to be reduced. Reducing runoff is a laudable goal of the draft plan, but it will not be sufficient to reverse the reef’s ongoing degradation. The targeted reduction in runoff of sediment, nutrients and pesticides in the draft plan are insufficient to ensure the waters of the Great Barrier Reef World Heritage Area meet the current marine water quality guidelines or to ensure that runoff has “no detrimental impact on the health and resilience of the Great Barrier Reef”<sup>32</sup> as required in the draft plan. Indeed the reduction targets in the draft plan are also likely to be swamped by increased sediment, nutrient and pesticide loads from dredging and new agricultural expansion in the reef catchment. Newer contaminants that so far have been little studied—such as industrial chemicals, pharmaceuticals, personal care products, nanomaterials and new anti-foulant chemicals<sup>33</sup> and their cumulative impacts—are not considered in the draft plan.

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<sup>27</sup> De’ath G, Lough JM, and Fabricius KE (2009). Declining Coral Calcification on the Great Barrier Reef, *SCIENCE* 322: 116-119.

<sup>28</sup> Australian Government & Queensland Government, *op cit*, p.76

<sup>29</sup> Great Barrier Reef Marine Park Authority (2014) *op cit*

<sup>30</sup> Great Barrier Reef Marine Park Authority (2009) *op cit*

<sup>31</sup> Great Barrier Reef Marine Park Authority (2007) Great Barrier Reef Climate Change Action Plan 2007-2012. GBRMPA, Townsville. Available at: [http://www.gbrmpa.gov.au/\\_data/assets/pdf\\_file/0020/4493/climate-change-action-plan-2007-2012.pdf](http://www.gbrmpa.gov.au/_data/assets/pdf_file/0020/4493/climate-change-action-plan-2007-2012.pdf)

<sup>32</sup> Australian Government & Queensland Government, *op cit*, p.72

<sup>33</sup> Berry KLE, O'Brien D, Burns KA and Brodie, J (2013). Unrecognised Pollutant Risks to the Great Barrier Reef. Centre for Tropical Water & Aquatic Ecosystem Research (TropWATER) Report No. 13/23, James Cook University, Townsville, 36pp. Available at: [https://research.jcu.edu.au/research/tropwater/publications/copy\\_of\\_1323UnrecognisedPollutantRiskstotheGreatBarrierReef.pdf](https://research.jcu.edu.au/research/tropwater/publications/copy_of_1323UnrecognisedPollutantRiskstotheGreatBarrierReef.pdf)



The draft 2050 plan makes no mention of climate change mitigation or targets for reducing the impacts of climate change, identified as the greatest threat to the reef in both the 2009 and 2014 Great Barrier Reef outlook reports. The scientific knowledge underpinning these two reports has not resulted in any proposed action on climate change under the interlinked Reef Trust<sup>34</sup> and reef 2050 plan mechanism. Hence, the stated aspiration that the Reef Trust and the reef 2050 plan should facilitate adaptive or responsive management for long-term sustainability of the reef is largely unfulfilled.

## UNESCO, integrity and offsets

The summary Statement of Outstanding Universal Value provided in Appendix A (pp. 55-56) of the draft 2050 plan is only part of the approved Statement of Outstanding Universal Value that was adopted by the World Heritage Committee in 2012. Appendix A is missing some fundamentally important components of OUV concerning Integrity as well as the Protection and Management section and Synthesis (some of which are mentioned in the draft plan in the box at the bottom of p. 7). Integrity is a fundamental issue for the reef and its World Heritage status. Integrity is both part of the approved Statement of Outstanding Universal Value, and is also a key element of the current Great Barrier Reef Zoning Plan: four of the eight zone objectives refer to the protection of “...*the natural integrity and values of areas of the Marine Park.*”<sup>35</sup>

Integrity refers to the wholeness or intactness of a World Heritage property. A property may be inscribed on the World Heritage List if it meets the conditions of integrity and has an adequate protection and management system. Importantly, the integrity of the Great Barrier Reef World Heritage Area is declining, and the reef’s current system of governance is failing to maintain its OUV, prompting UNESCO’s concern. For example, the serious depletion of most species of megafauna (turtles and dugongs), loss of half the corals, an 80% decline of reproductive coral trout in blue compared to green zones, and the disparity between the northern third and central and southern two-thirds of the reef (e.g. in coral cover and the status of most megafauna) all point to diminished integrity. Consequently, statements in the draft 2050 plan that integrity is “*fully intact*” today are incorrect.

The Academy supports sentiments in the draft plan that resorting to environmental offsets should be avoided wherever possible. Unfortunately, this is not currently the case, and the draft plan (which mentions “*net benefits*” more than 20 times) does not offer assurances of a more rigorous governance system in the future. Offsets are incompatible with maintaining or rebuilding integrity, because by definition they allow damage at one or more locations. Even if it were possible to create a so-called net benefit elsewhere, integrity of the Great Barrier Reef region will be compromised by the growing practice of offsetting environmental damage rather than prevention or mitigation.

<sup>34</sup> Commonwealth of Australia (2014) *op cit* p. 2.

<sup>35</sup> Great Barrier Reef Marine Park Authority (2004). *Great Barrier Reef Marine Park Zoning Plan 2003*, GBRMPA, Townsville, pages 23, 25, 27 & 29. Available at: [http://www.gbrmpa.gov.au/\\_data/assets/pdf\\_file/0015/3390/GBRMPA-zoning-plan-2003.pdf](http://www.gbrmpa.gov.au/_data/assets/pdf_file/0015/3390/GBRMPA-zoning-plan-2003.pdf)



## Reef Trust

The Reef Trust is intended to be a key mechanism for funding the reef 2050 plan. It will focus on attempts to improve coastal habitat, elements of water quality, and on specific actions that may improve protection of threatened megafauna.

The Academy concludes that The Reef Trust is the wrong structure and inadequate as a funding mechanism to protect the reef, and it appears to mostly consist of very modest amounts of re-packaged ongoing funding. It is neither efficient nor transparent, and the \$40 million contribution from the Australian Government is too small to have any significant outcome. According to the Department of the Environment, priorities for funding “*have already been drawn from election commitment[s]...<sup>36</sup>* rather than from a science-based analysis. Key problems confronting the reef, most notably climate change, dredging, poaching and bycatch, are not being addressed by the Reef Trust (and the draft 2050 plan) framework, despite the stated aim of a “*strategic approach ... based on the latest peer-reviewed scientific information...<sup>37</sup>*”.

A new funding element of the Reef Trust from environmental offsets is potentially compromised by conflict of interest (see below), and is likely to further erode the integrity of the reef if offsets permit environmental damage (e.g. from unprecedented amounts of dredging, or coal dust) to take place within or adjoining the Great Barrier Reef World Heritage Area. It is unclear how the green army, invoked in the Minister’s foreword in the Reef Trust investment Strategy<sup>38</sup>, could turn around the 50% decline in coral cover, known in the scientific literature since 2003<sup>39</sup>, and reported in the Great Barrier Reef Outlook Report 2014<sup>40</sup>. To do so will require a much more substantial and long-term allocation of government funding.

The draft plan also refers to “*...consistent management measures that are sufficiently robust, effectively governed and adequately financed.<sup>41</sup>*” Given the recent funding cuts to the GBRMPA and to relevant Queensland agencies, it is clear that the current management measures are not adequately financed to restore OUV. Consequently for such an iconic area, and one that generates over \$5 billion per annum for the Australian economy, it would be prudent for the draft plan to provide a more adequate commitment to forward funding.

## Conflicts of interest

Currently governance of the reef is compromised by many conflicts of interest, and the draft plan does not begin to address them.

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<sup>36</sup> Department of the Environment (2014) *Reef Trust Discussion Paper*, p.3. Available at: <http://www.environment.gov.au/system/files/pages/e40fbc03-3d32-4116-b7bf-fcad4702b2b4/files/reef-trust-discussion-paper.pdf>

<sup>37</sup> Commonwealth of Australia (2014) *op cit*, p. 2. Available at: <http://www.environment.gov.au/system/files/pages/e40fbc03-3d32-4116-b7bf-fcad4702b2b4/files/reef-trust-investment-strategy.pdf>

<sup>38</sup> Commonwealth of Australia (2014) *op cit*

<sup>39</sup> Bellwood DR, Hughes TP, Folke C & Nystro M (2004) Confronting the coral reef crisis, *NATURE*, VOL 429: 827-33.

<sup>40</sup> Great Barrier Reef Marine Park Authority (2009) *op cit*

<sup>41</sup> Australian Government & Queensland Government, *op cit*, p.18

Firstly and principally there is a conflict of interest over the responsibilities of the Australian and Queensland governments for stewardship of the reef (including protection against climate change), versus the income they receive in royalties and taxes from fossil fuel extraction.

In 2007, the *Great Barrier Reef Climate Change Action Plan*, launched by the then Minister for the Environment, the Honourable Malcolm Turnbull, stated that “*As climate change is driven by global greenhouse gas emissions, this issue must be addressed....The high sensitivity of coral reef ecosystems to climate change creates opportunities for linking emission reduction strategies to improvements in the long-term health of the Great Barrier Reef*”<sup>42</sup>. In contrast, the draft 2050 plan only mentions adapting to the growing impacts of climate change, and makes no mention of controlling emissions as a mechanism for reducing stress on the reef. Given the time-line of the draft plan, out to 2050, it is disappointing that a target-based transition away from fossil fuels is not an integral part of protecting the reef.

A second conflict of interest may arise from non-independence of reporting on the performance of governments in maintaining or improving the condition and OUV of the reef. For example, The Great Barrier Reef Outlook Report 2014 states that “*The work being undertaken by the Australian and Queensland governments....implementing Reef Plan, water quality plans and other programs is to be commended*”<sup>43</sup>. However, allowing the overflow of highly toxic waste from a refinery or coalmine to enter the Great Barrier Reef lagoon, as mentioned in the 2014 outlook report<sup>44</sup>, is hardly world’s best practice. Furthermore, the Academy is concerned by reports that both Queensland and Australian Government agencies with oversight of such discharges have been sharply downsized in the past one to two years, potentially affecting their ability to adequately discharge their regulatory oversight responsibilities.

A third conflict arises when regulators are also among the proponents and co-investors of activities such as port development. The recent independent review of governance at the Port of Gladstone<sup>45</sup> initiated by the Australian Government made clear findings of failure of governance. The review found inadequate oversight of compliance activities such as monitoring by the Australian Government and poor coordination between the Queensland and Australian governments’ roles. In this instance the Queensland Government, which owns the Port of Gladstone, was both the proponent and one of the regulators.

Other major conflicts of interest may arise if offset monies are transferred to regulators or government agencies, including research agencies, thereby creating a dynamic where parties become dependent on streams of income arising from greater damage to the reef.

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<sup>42</sup> Great Barrier Reef Marine Park Authority (2007) *op cit.*, p. 9

<sup>43</sup> Great Barrier Reef Marine Park Authority (2009) *op cit.*, p.210

<sup>44</sup> Great Barrier Reef Marine Park Authority (2014) *op cit.*, p 173

<sup>45</sup> Johnson, A., Tinney, A., Cresswell, I (2014). Independent review of the bund wall at the Port of Gladstone: Report on Findings, April, 2014. Commonwealth of Australia. Available at: <http://www.environment.gov.au/system/files/resources/82279d41-cb4d-4bae-bcc4-c068577d0d31/files/report-findings.pdf>

## Recommendations

- The Academy supports the establishment of ‘Priority Port Development Areas’ (PPDAs) to limit port expansion to key locations, provided that:
  - a) they do not extend outside of the current port exclusion areas that are currently excluded from the Great Barrier Reef Marine Park
  - b) any further land reclamation should not occur within the waters that are currently part of the Great Barrier Reef World Heritage Area.
- The Academy also considers that any impacts within the PPDAs need to be minimised using ‘world’s best practice’ to ensure they do not compromise the values of the Great Barrier Reef World Heritage Area.
- The Academy supports the plan to prohibit dredging outside of PPDA’s, but recommends that the ten year time-line should be extended for at least the life of the 2050 plan. Furthermore the spatial extent of the PPDA’s must be clarified. In Townsville for example, the existing port limits under Queensland legislation encompass green and yellow zones on Magnetic Island and throughout all of Cleveland Bay, areas that have been included within the Great Barrier Reef Marine Park because of their high conservation and recreational value.
- The Academy also supports complementary federal and state legislation to permanently ban sea dumping of any dredge spoil within and adjoining the Great Barrier Reef World Heritage Area, as proposed by the Queensland Government for avoiding sea dumping at Abbot Point.
- The Academy questions the need for four mega-ports adjoining the Great Barrier Reef: Townsville is unsuited to becoming a new coal port due to its location close to areas of high conservation significance (including coastal reefs and major habitats for megafauna), and the proven health risks of coal dust to an established urban population<sup>46</sup>. The draft plan provides no explanation on whether four major port expansions are necessary or environmentally sound, despite its proposed “prevent-mitigate-offset” hierarchy.
- The Academy considers the environmental impact assessment processes under relevant federal and state legislation should be reformulated to ensure that all options to avoid impacts are comprehensively and transparently evaluated and independently assessed, and that offsets are used only as a last resort<sup>47</sup>.
- The Academy believes there is a need to re-empower and adequately resource the Great Barrier Reef Marine Park Authority and suggests the following measures for consideration:
  - Separate the position of the CEO of the agency and the Chair of the Board
  - Form a new skills-based board of the Great Barrier Reef Marine Park Authority with an independent Chair and an additional member appointed for their scientific expertise
  - Appoint an appropriate mix of strategic and technical advisory committees to provide advice on critical issues to the Chair of the Board, the CEO and the Minister.

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<sup>46</sup> Lockwood AH, Welker-Hood K, Rauch M and Gottlieb B (2009). *Coal’s Assault on Human Health*. A Report from Physicians for Social Responsibility. Available at: [www.psr.org/coalreport](http://www.psr.org/coalreport)

<sup>47</sup> Bos M, Pressey RL and Stoeckl N (2014) Effective marine offsets for the Great Barrier Reef World Heritage Area. *Environmental Science & Policy*, 41: 1-15

- The Academy considers that the Great Barrier Reef Marine Park Authority should be identified in the draft 2050 plan as being the agency responsible for coordinating and monitoring implementation of the plan.
- The Academy suggests the following actions to improve governance of the Great Barrier Reef and to assist in delivery of the 2050 plan:
  - Expand the Great Barrier Reef Marine Park to include ports, as a new type of zone, thereby providing more effective and integrated management over areas currently adjoining the marine park and fulfilling the mandate of the *Great Barrier Reef Marine Park Act 1975* for sustainable management of the 'Great Barrier Reef Region'.
  - Improve the ability to ensure compliance with all permit/approval conditions.
  - Strengthen the legislative protection of all environmental, biodiversity and heritage values in the Great Barrier Reef Marine Park (in accordance with the object of the Act).
  - Undertake regulatory reform to address known deficiencies such as explicitly incorporating OUV into the Great Barrier Reef Marine Park Authority's programs, plans and policies).
- The Academy suggests there is an urgent need to develop and resource a 50-year plan for use of the reef catchment (analogous to the Murray-Darling Basin Plan) rather than the narrow coastal strip considered by Queensland in its recent strategic assessment.