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INTERNATIONAL
CORAL REEF INITIATIVE



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A review of the experiences of selected coral reef countries in addressing Aichi Biodiversity Target 10

Appendix 1: Experiences of identified coral reef countries and other stakeholders

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Overview of stakeholder consultations contributing to the report

National stakeholder contributions Included so far from:	Australia Philippines France Maldives UK Micronesia Egypt
Regional perspectives provided by:	South Pacific (SPREP) East Africa (CORDIO) North East Atlantic (OSPAR)
Other perspectives provided by:	UN Environment TNC WWF
Missing contact with/ information from the following national stakeholders:	Indonesia PNG Fiji Saudi Arabia Marshall Islands India Solomon Islands Vanuatu

The following aspects of the experiences relating to Aichi Target 10 have been captured:

- The CBD analysis of the contribution of national targets and progress made at the national level;
- Context
- Interpretation of AT10
- Reflections on AT10
- Reflections on the Priority Actions
- Measuring progress
- Challenges with respect to AT10
- Thoughts on what would be useful for supporting work on coral reefs and associated ecosystems beyond 2020

The experiences of the different countries did not necessarily reflect all of these aspects and so some sections do not contain information.

Any associated lessons learned or recommendations for consideration of the post 2020 framework have been synthesized and integrated into the main text of the report.

Australia

The CBD Secretariat has prepared an overview of targets established by Parties towards achieving the Aichi Targets in preparation for COP14. The analysis is on the basis of 5th National reports and revised NBSAPs received by 21 September 2018. The analysis considers how aligned the National targets are to the Aichi Targets and also progress in addressing target. The information for Aichi Target 10 is presented below. The criteria descriptions are those used in the CBD report (Source: <https://www.cbd.int/doc/nr/assessment-table-2018-09-21-en.pdf>)

	National targets	National progress
Australia	No target, * NBSAP received but not yet reviewed	On track to achieve the target

Overview of consultation input: Input was received from the CBD focal point to the CBD and also GBRMPA as the ICRI focal point. It is noted that preparations for the up coming COP restricted the possibility for further input.

Context

Parks Australia is responsible for the management of marine parks located within the Australian Commonwealth waters. This includes development of management for Australian Marine Parks and commitment to monitor the condition of habitats and their vulnerability to climate change. Funding is also provided for monitoring surveys of reefs in the Coral Sea Marine Park.

The Australian experience is set in the context of 40 years of management and an established system. Using a range of mechanisms and working with government, industry, Indigenous Australians and the community, programs to monitor reef health, manage threats, increase public awareness, promote responsible use and better understand this unique ecosystem are being implemented.

The focus of the remaining contribution is on the experience from the perspective of the Great Barrier Reef Marine Park Authority (GBRMPA).

Interpretation:

GBRMPA has taken a broad perspective in the interpretation of this Target in terms of the relevant ecosystems. For the Great Barrier Reef this means the broader coral reef ecosystem including seagrass, mangrove, island systems and related species. The management perspective considers the coastal fringes and the catchment area, connecting the landscape to the seascape. This is consistent with the management approach for the Great Barrier Reef Marine Park.

Target 10 can be seen in two measures:

- The first part – referring to anthropogenic pressures indicates need for consideration of cumulative effects assessment and management.¹
- The second – maintaining integrity and functionality presupposes that there is existing integrity and function, however this is not always the case. It would perhaps be more appropriate to say maintain or “improve” integrity and function.

Reflections on AT10

¹ [Managing cumulative impacts and achieving no net loss and net benefit outcomes for the Great Barrier Reef: A review of current understanding and application for management](#) informed development of three Reef 2050 policy documents –

- [Good Practice Management for the Great Barrier Reef](#)
- [Cumulative Impact Management Policy](#) and
- [Net Benefit Policy](#)

From the GBRMPA perspective, T10 is more about reinforcing the policies and actions that are already underway. The Great Barrier Marine Park has been established for more than 40 years.

Initially there was a lot of effort to reduce pressures in the Marine Park area itself, including a mining ban, control of tourism expansion and fishing. Now many of the localized pressures have been independently assessed to be well managed². The focus has now turned to other anthropogenic pressures that are out of the direct control of GBRMPA such as: climate change, land-based run-off impacting water quality, coastal development, and some aspects of direct use (particularly fishing). Crown-of-thorns starfish and marine debris are also impacting the Reef. ³.

In 2007 a climate change vulnerability assessment⁴ was undertaken to identify what it was that could be done at the regional level in Queensland and at the national level. The major activities relating to climate change concentrate on awareness raising about the impact of climate change on the Great Barrier Reef and influencing positive change.

The value of AT10 is with respect to cross boundary pressures. The challenge is that it is not SMART. It is recognised that this could be a result of intense international negotiation, which makes it difficult to be specific. It helps, with any target, to have a baseline and know where you want to get to.

Use of the Priority Actions for Target 10

The Priority Actions are perceived to have been useful. Because AT10 is at such a high level it can be difficult to identify what exactly can be achieved. The Priority Actions give more guidance on the steps that can be taken. The Priority Actions also help in understanding how/ where there needs to be changes in other sectors.

Measuring progress

Challenges

Challenges tend to be cross jurisdictional and require bringing together partnerships. **The Reef 2050 plan**⁵ is an example of partnership – bringing together regional government (Queensland), National government, industry, science and traditional knowledge. A governance structure has been established along with advisory bodies⁶ and a mechanism for integrating data and monitoring programs⁷ NOTE: Reef 2050 plan was not a response to AT10 or the Priority Actions, but it happens to fit well. Development of the Reef 2050 Plan was driven by the World Heritage Committee⁸ and was informed by a strategic assessment of the Great Barrier Reef World Heritage area⁹.

Reflections Beyond 2020

When considering what should happen beyond 2020 there should be a clear cross reference/ link to the IPCC / UNFCCC Climate Change Agreement and the need to achieve climate change goals. If these goals are not met then we will still lose coral reefs.

Having a coral reef target heightens and keeps awareness – this is seen as important.

² Refer:

- [Great Barrier Reef Outlook Report 2009](#) and
- [Great Barrier Reef Outlook Report 2014](#) and the associated
- [Independent Review of Management Effectiveness for 2009](#) and
- [Independent Review of Management Effectiveness for 2014](#).

³ <http://www.gbrmpa.gov.au/our-work/threats-to-the-reef>

⁴ [Climate Change and the GBR: a vulnerability assessment 2007](#)

⁵ <http://www.gbrmpa.gov.au/our-work/reef-strategies/reef-2050>

⁶ <https://www.environment.gov.au/marine/gbr/reef2050/advisory-bodies>

⁷ <http://www.gbrmpa.gov.au/our-work/reef-strategies/reef-integrated-monitoring-and-reporting-program>

⁸ <https://www.environment.gov.au/heritage/places/world/gbr/more-information>

⁹ <http://www.gbrmpa.gov.au/our-work/reef-strategies/strategic-assessment>

It is also necessary to understand what the true value of coral reefs are - it is recognized that there is significant value, but it is not sufficiently clear that they are the engine rooms of the oceans. This is particularly important where countries are dependent on coral reefs¹⁰. These are often the countries least able to put protection in place, and are most at risk.

There is a need for fast, urgent action. Impacts are already being seen at 1 degree of warming. Reducing other anthropogenic pressures is necessary to give reefs a chance of surviving by supporting their health and resilience. This is the approach taken by Australia. In 2017 a reef summit¹¹ was held - a response to two subsequent years of bleaching, which was unprecedented. The Summit brought together managers, traditional owners, industry, UN Environment, ICRI, Government and Science. The result was a blue print¹² with 10 actions and what is needed to be done. Some interventions take time to implement and/or to see results in the ecosystem. There is a need to look at existing and new tools to build resilience that are able to be implemented quickly and deliver benefits to the ecosystem as soon as possible.

One potential new area to consider for inclusion in a new target is that protection and reduction of pressures must be the baseline before restoration. It is more economical to protect existing coral reef ecosystems, than to restore. Governance structures should be established to ensure scarce funds are directed to the most appropriate and effective activities. Australia is Looking to ICRI to update the 2005 Resolution on coral reef restoration. An ad hoc committee will progress this and look at the role of restoration in the context of a broader approach to protection and management. There is a lot of scope for new techniques and technologies to address restoration challenges, but it is necessary that these efforts are appropriate to the situation and a risk based assessment is applied¹³.

Live coral cover is a common measurement assessment, but there is a risk of including this in the target as it does not reflect diversity¹⁴. Coral reef diversity is critical to function. Changes in the community composition and diversity at species and genetic levels will have implications for function (increasing coral cover does not mean a functioning/ restored reef).

¹⁰ * Note for me: cross link to David Obura's comment on needing to think less about coral reef area, but more about societal / economic dependence on reefs as a driver of focus)

¹¹ <http://elibrary.gbrmpa.gov.au/jspui/handle/11017/3204> and <http://elibrary.gbrmpa.gov.au/jspui/handle/11017/3203>

¹² <http://www.gbrmpa.gov.au/our-work/reef-strategies/managing-for-a-resilient-reef>

¹³ GBRMPA is developing guidelines and supporting information on interventions to improve resilience of coral reef habitat in the Marine Park – refer drafts released for public comment-

- <http://elibrary.gbrmpa.gov.au/jspui/handle/11017/3341> and
- <http://elibrary.gbrmpa.gov.au/jspui/handle/11017/3342>

¹⁴ The GBR World Heritage Area is recognised for its diversity of species and habitats - <http://www.gbrmpa.gov.au/the-reef/biodiversity>

The Philippines

The CBD Secretariat has prepared an overview of targets established by Parties towards achieving the Aichi Targets in preparation for COP14. The analysis is on the basis of 5th National reports and revised NBSAPs received by 21 September 2018. The analysis considers how aligned the National targets are to the Aichi Targets and also progress in addressing target. The information for Aichi Target 10 is presented below. The criteria descriptions are those used in the CBD report (Source: <https://www.cbd.int/doc/nr/assessment-table-2018-09-21-en.pdf>)

	National targets	National progress
Philippines	National target is significantly lower than the Aichi Target	Progress towards the target but at an insufficient rate

Consultation input provided by the Biodiversity Management Bureau of the Department of Environment and Natural Resources and ICRI focal point

Context

The Philippine Government, through the Biodiversity Management Bureau of the Department of Environment and Natural Resources, has been implementing the **Coastal and Marine Ecosystems Management Program (CMEMP)**. CMEMP or “DENR Agos” is a 12-year flagship project of the Department which aims to comprehensively manage address, and effectively reduce the drivers and threats of degradation of the coastal and marine ecosystems in order to achieve and promote sustainability of ecosystem services, food security, and climate change resiliency for the benefit of the present and future generations.

Strengthening Marine Protected Areas System to Conserve Marine Key Biodiversity Areas in the Philippines or the **SMARTSeas PH**, under UNDP and DENR-BMB, was developed to accelerate the establishment of Marine Protected Areas (MPA) and MPA Networks to include more Marine Key Biodiversity Areas (MKBA) in order to reduce and arrest the rapid generation of marine and coastal habitats

Interpretation:

The Philippine Biodiversity Strategy and Action Plan (PBSAP) is the country’s roadmap to conserve its biodiversity and achieve its vision - “By 2028, biodiversity is restored and rehabilitated, valued, effectively managed and secured, maintaining ecosystem services to sustain healthy, resilient Filipino communities and delivering benefits to all.”

Based on the PBSAP, it can be said that the dominant implementation tasks include the following:

- i. Policy formulation (national policy, proposed legislation, developing guidelines)
- ii. Sectoral planning /area planning and reconciling the same with other competing sectors
- iii. Mainstreaming plans in the bigger socioeconomic development plans
- iv. Law enforcement and conflict resolution
- v. Recognition of and support to management and utilization rights and intellectual property rights of stakeholders
- vi. Provision of support services under limited resources (extension, research and documentation)
- vii. Human resources and institutional capacity building, CEPA and knowledge management
- viii. Constituency building among non-state actors (NGO networks, business networks)

Reflections on AT10

Measuring progress

Use of the Priority Actions for Target 10

Challenges

Fragmented Site Implementation

CMEMP's implementation sites are nationwide but limited only to 33 Marine Protected Areas (MPAs) under the National Integrated Protected Areas System (NIPAS). Locally-managed MPAs are under the jurisdiction of the Local Government Units and may implement other activities than CMEMP.

Institutional

The Coastal and Marine Division of the Department has only been established on 2015.

Sectoral Approach and Weak Convergence among Sectors

Though the Department has been addressing these through the Integrated Coastal Management, biodiversity conservation still needs to be mainstreamed across National Government Agencies and Local Government Units, for effective implementation of programs. There is also need for convergence for agencies whose focus is conservation and the other, production. For instance, the Bureau has been collaborating with the Bureau of Fisheries and Aquatic Resources of the Department of Agriculture in order to meet the fish supply of the country without sacrificing the integrity of the coastal and marine ecosystems.

Programs are too Target-based

Most environment programs are planned and formulated in main offices and distributed to field offices, for implementation. There is a need to consider that there are specific issues that needs to be addressed by a specific activity for efficient implementation and there may be activities not applicable to some areas. To address the problems in the grassroots level, there is a need consider bottom-up approach in planning of programs.

Lack of Sustainability and Ownership

Intensive Information, Education and Communication (IEC) campaigns are necessary to create community's ownership to the program thus, sustainability of the activities even its implementation has ended. Anthropogenic threats are still an issue towards healthy coastal and marine ecosystems therefore; there is a need to empower communities to be citizen scientists. Though the program just started, CMEMP has been implementing activities to increase public awareness and engage communities in ocean conservation.

Beyond 2020

- CMEMP will continue its implementation until 2028.
- PBSAP's tasks are divided into short term (2015-2016); medium term (2017-2020) and long term (2021-2028).

France

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	National targets	National progress
France	The national target has little relevance to the Aichi Target	Progress towards the target but at an insufficient rate

Consultation input provided by the ICRI focal point in consultation with the CBD focal point.

Context

In the last few years, coral reefs have moved at the top of the biodiversity agenda both at the international and National level. Since 2014, several important national commitments* have strengthened actions in favour of coral reef conservation.

* the Biodiversity Law (2016) asks the government to implement a plan of actions seeking the protection of 75% of the French coral reefs by 2021.

Interpretation:

Most French actions seeking coral reef protection are conducted under the French Coral Reef Initiative (IFRECOR) which has programmes of actions targeting some but not all of the sources of pressures acting on coral reefs, which is why the IFRECOR Plans of Action are a key element of the 2015 reporting.

Marine Protected Areas are also part of the French reporting in relation to this Target since they can be considered as an integrative tools where management measures on different kind of pressures can be adopted.

Finally, monitoring of coral reefs is also mentioned as it is the way to evaluate whether the state of coral reefs is getting better or not.

Reflections on AT10

The target is very large and vague. There are many ways in which to interpret it and report on it.

Measuring progress

Use of the Priority Actions for Target 10

Challenges

At the global level the challenge is the implementation of the Paris agreement. At the local level it is to bring stakeholders engaged in land based activities to take into consideration the direct and indirect impacts of their activities on the marine environment, and on coral reefs in particular.

Beyond 2020

Maldives

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	National targets	National progress
Maldives	National target is similar to the Aichi Target but at a lower level/does not cover all elements	Moving away from the target

Consultation input provided by CBD focal points

Context:

Key pressures relevant to the Maldives include:

Infrastructure development;

Waste management (including electronic waste, hazardous waste, chemical waste as well as sewage)

Destructive fishing (lower than in other countries due to existing regulation being implemented but still significant)

Interpretation:

AT10 is interpreted as a climate change target. In addition to coral reefs, the Maldives has defined vulnerable ecosystems to include: wetlands, mangroves, seagrass and swamps.

Targets established for 2025.

Reflections on AT10

Maldives have established national targets in line with the Aichi Targets, including relating to AT10. The deadline for the target is 2025 given that the revised NBSAP incorporating Aichi Targets was published in 2016 and 4 years was not considered a realistic timeframe.

Many of the pressures of relevance to this target are not localized and not national and so cannot be addressed by actions taken at the national scale, for example reduction in greenhouse gas emissions.

Use of the Priority Actions for Target 10

The Priority actions have been of some use but did not add much in terms of new information and were not used as the main basis for actions developed in the Maldives.

Measuring progress

Challenges:

The Maldives does not have a baseline on all of the identified vulnerable ecosystems are no baselines available for the identified vulnerable ecosystems. There are projects on going to develop a national inventory/ account of the state of vulnerable ecosystems and of the anthropogenic pressures acting on them.

Reflections post 2020

Any input must be made within the context of the on going CBD process to develop and debate the post 2020 framework; It will also be important that the post-2020 framework can take account of the fact that some countries have national targets that are beyond 2020. Any major shift in direction could affect the possibility of being able to measure the progress resulting from actions being taken (lag time of response).

It is necessary to reflect on other regional and global commitments, such as the SDGs and look to complement and strengthen.

United Kingdom

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	National targets	National progress
UK	No target, * NBSAP received but not yet reviewed	Progress towards the target but at an insufficient rate

Result of consultation process including input from Defra, JNCC, Cefas

Context

Not all UK Overseas Territories (OTs) & Crown Dependencies (CDs) have had the Convention on Biological Diversity (CBD) extended to them. The UK Post-2010 Biodiversity Framework applies to those UK OTs and CDs which were included in the UK's ratification of the CBD in 1994 or have had it extended to them subsequently (namely British Virgin Islands, Cayman Islands, Falkland Islands, Gibraltar, Isle of Man, Jersey, South Georgia and the South Sandwich Islands, and St Helena, Ascension Island and Tristan da Cunha). UK reporting to the CBD is based on input from relevant OTs and the four countries comprising the UK.¹⁵

Her Majesty's Government's 25 Year Environment Plan ambition is to champion and support coral reef conservation of biodiversity in UK and OTs' waters as well as around the world. The UK will be increasing its engagement with ICRI and will work with OTs on coral reef conservation and management. UK efforts to protect coral reefs over the last few years has consisted of a mixture of individual action by some OTs and, at a domestic level, protecting cold water coral reefs through designation of MPAs around the UK.

Interpretation:

The UK has considered AT10 in largely a non-coral context. OTs have significant areas of warm water coral reefs, but many of the OTs do not have the UK ratification to CBD extended to them, indeed many of the largest coral reef areas are not included in the UK reporting to CBD (e.g. British Indian Ocean Territories)¹⁶. This isn't to say that protection of coral reefs is not taking place, simply that it is not included in the UK's reporting to CBD. For example, coral reefs are protected by being included in the MPA that surrounds the British Indian Ocean Territories (BIOT).

Previously reporting has been against cold-water corals and other marine and terrestrial temperate vulnerable ecosystems, including woodlands and heathlands. There is recognition on the need to extend reporting to warm water coral reefs.

Reflections on AT10

The target is not clearly articulated and contains several complex elements with a result that it is vague, difficult to understand and open to interpretation. It is not a SMART target and it is difficult for countries to take action, measure progress or know if they have achieved success.

The timeline of the target was unhelpful as it was not feasible. Targets need to be ambitious, but balanced with realism.

When considered all together the Aichi Targets are not seen to function as a coherent set.

¹⁵ UK Clearing House Mechanism <http://uk.chm-cbd.net/default.aspx?page=7809>

¹⁶ According to the list of UK OTs to whom the UK ratification of CBD has been extended <http://uk.chm-cbd.net/default.aspx?page=7809>

Her Majesty's Government's newly published 25 Year Environment Plan (January 2018 REF), identifies ocean acidification and damage of coral reefs as major threats. But while there is an awareness of Aichi targets, the development of protection/management programmes (that include corals) were not a response to this target.

Examples of actions that contribute to the delivery of AT 10 are available and will be reported to the CBD as part of the 6th National Reporting process.

Measuring progress

The UK has been involved in indicator development and has developed a set of UK biodiversity indicators¹⁷ and looked to align these to the indicators agreed under the CBD process.

Use of the Priority Actions for Target 10

There have been some conversations about how the priority actions could be used to hang UK actions on and to think through how to try and prioritize actions that then trigger additional beneficial system wide effects. However they have not had much impact on the established processes and approaches within the UK.

Challenges

There are challenges to support liaison and coordination of responses across the OTs (predominantly challenges of access to funding) as well as in providing appropriate support for capacity building, data management and data flows across the relevant countries, OTs and CDs that constitute the UK as a Party to the CBD. Research data is often not consistently made available by research activities.

UK OTs that have the UK ratification of the CBD extended to them do not always qualify for the funding streams to support CBD related work.

Beyond 2020

The UK Government's 25 Year Environment Plan sets the UK's Coral Reef/Environmental policy objectives going forward. These objectives will inform the UK's position under the CBD, which will seek to build upon the current targets which expire in 2020. This process begins, at COP14 in November 2018 and will build up to adoption of new targets at COP14 in 2020.

It is helpful to distinguish between targets for terrestrial and marine environments due to different ownerships and interactions, although without having a focus on one particular ecosystem, such as coral reefs, over other vulnerable ecosystems. Other targets tend to be more general. It could also be helpful to have SMARTer targets beyond 2020.

The concept of applying the voluntary contributions concept could be interesting to consider for a post 2020 framework. This could comprise of a more general headline target and then Parties/ Observer organizations/ industry/ cities/ civil society would be able to make a commitment to help achieve the target. The risks of a voluntary contribution scenario include countries trying to do as little as possible/ re-label business as usual; that it would be hard to aggregate reporting and bring it all together to see if/ how progress is being made. The opportunities include that it would allow for different approaches to be taken in different regions, it would avoid the "one size fits all approach" and could trigger countries trying to outcompete each other (race to the top);

Some elements of the UN Sustainable Development Goals (SDGs) (esp. related to biodiversity) expire in 2020. It is possible to envisage a parallel process for revision of these SDGs and the CBD biodiversity framework with a view that in 2030 these processes are combined/ aligned, with CBD contributing biodiversity elements to a broader agenda. This may help to get more ownership.

¹⁷ UK Biodiversity Indicators, 2018 see <http://jncc.defra.gov.uk/page-4229>

Micronesia (Federated States of)

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	National targets	National progress
Micronesia	No revised or updated NBSAP received	No significant change

Overview of consultation: input from University of Guam

Context

Within the region the Micronesian Challenge has been a strong instigator of change. The Micronesian Challenge is an international conservation strategy initiated by the political leaders of 6 nations in 2006 aiming to effectively conserve at least 30% of near shore marine resources by 2020. The initiative was driven by a strong political will to preserve the local environment at the regional scale (Houk et al., 2015) The nations are FSM, Marshall Islands, Palau, Guam, CNMI. Funding and activities are coordinated under the auspices of the Micronesian Challenge.

The network and regional framework associated with the MC has been of great benefit, including for example invigorating science in the region.

Fishing pressure and pollution have been identified as predictors of ecosystem decline (Houk et al., 2015) and the anthropogenic pressures that if managed could help maintain coral reef ecosystem function in the face of climate change.

Population increase and expansion of cash based economies are identified as drivers of change and erosion of traditional forms of management (Houk et al., 2015)

Interpretation:

Reflections on AT10

The Aichi Targets have been unveiled at a high level meetings and have not been relayed to the operational level.

Within the region, the Micronesian Challenge feels to have been a bigger instigator of action / change than the Aichi Targets. It is possible that the Leaders in Micronesia made the association that the Aichi Targets will align with the Micronesian challenge, but it is the MC that is the daily language and not the Aichi Targets.

Measuring progress

Use of the Priority Actions for Target 10

Challenges

Small island nations have little control over green house gas emissions, but can manage local resources (Houk et al., 2015)

Beyond 2020

Egypt

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	National targets	National progress
Egypt	The national target has little relevance to the Aichi Target	No significant change

Consultation input provided by one of the ICRI focal points

Context

Some activities, such as pollution, waste-water management and desalination have already addressed in Egypt through long standing environmental laws (since the 1980s). The most important pressure on coral reefs requiring management is tourist impact.

Interpretation:

The target has been interpreted as an environmental management target

Reflections on AT10

Whilst Egypt is conducting a number of activities to address this pressure, they have not been identified as responding directly to AT10. Some activities are being carried out as a response to IYOR.

Use of the Priority Actions for Target 10

No information was available on the use of the Priority Actions.

Challenges

Measuring progress

Reflections post 2020

Regional Experiences

South Pacific Islands

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	National targets	National progress
Papua New Guinea	No revised or updated NBSAP received	Progress towards the target but at an insufficient rate
Fiji	No revised or updated NBSAP received	Progress towards the target but at an insufficient rate
Marshall Islands	No revised or updated NBSAP received	No information, * - National report received but not yet reviewed
Solomon Islands	The national target has little relevance to the Aichi Target	No significant change
Micronesia (Federated States of)	No revised or updated NBSAP received	No significant change
Vanuatu	No target, * NBSAP received but not yet reviewed	No significant change

Consultation input provided by SPREP

Context

Six of the 15 countries with the largest coral reef area are in the South Pacific Region. Three more, the UK, France and Australia are also considered to be associated with this region but are considered separately in this report. An individual summary has also been provided for Micronesia.

The reflections presented here are from the regional perspective provided by SPREP;

Pacific Island countries and territories have a high dependence on coral reefs and climate change is a high concern for the region. In general the status of reefs is stable/ with some decline. However change is being seen in the composition of reefs, moving to a reefscape with more Porites species. Both global pressures, such as climate change and ocean acidification, and localized pressures are impacting the reefs, although the types of anthropogenic pressures and their significance vary between countries and territories. Donor projects supporting infrastructure development are also results in degradation to natural resources (e.g. harbor development, road development, airport extensions). There is an inventory of pressures documented through "State of the Environment" reports and Environmental Impact Assessment" reports. These are published on line on the SPREP Virtual Library Catalogue.

In the region meeting face to face is important to build personal relationships and trust.

Interpretation:

Reflections on AT10

The Aichi targets are mentioned during the high level meetings and reporting and were viewed as yet another reporting requirement and a heavy burden for countries. Coral reefs are essential in the region for livelihoods - with or without targets. On the other hand, targets can also help to give SPREP leverage to work on these

issues. Of the Aichi Targets the MPA target 11 was identified as being the most helpful and easily recognizable to instigate activity as there is a clear objective and measures of progress for achieving the target. The pressure to meet this target has also raised questions on effectiveness of MPAs and what constitutes an MPA, allowing standards to be established.

SPREP has not undertaken any specific work to assess achievement of AT 10, at the regional scale and indicated they were not aware of any other organisation in the region having done so. Neither AT10 nor the Priority actions are mentioned in daily activities

SPREP has provided information on a regional activities that would help countries address AT 10 although not identified as a response to this Target. For example the MACBIO project (Marine and Coastal Biodiversity Management in Pacific Island Countries) that involved 5 countries with GIZ and IUCN and had a major focus on marine spatial planning and ecosystem services valuation. The project was designed to support countries in meeting the targets set out in their NBSAPs and the 2011-2020 Strategic Plan of the CBD, in particular Aichi Targets 2, 11, 14 and 15. More information about the project is found here: <http://macbio-pacific.info/>. Fiji, Solomon Islands, Vanuatu were three of the countries involved in this project. Some of the outputs that could have relevance to AT10 included:

- Bring together marine data into a marine data atlas;
- Valuation of marine ecosystems;
- Developing an app to support reporting of marine data.

The Pacific Round Table for Conservation members (TNC, CI, WWF, WCS) have been implementing activities relevant to AT10 in the region.

Examples were also provided of regional activities that are expected to deliver impact in line with AT10, but after 2020, including on blue carbon ecosystems (funded by German IKI); coastal and marine ecosystem resilience (funded by GCF); healthy oceans (funded by GEF);

Measuring progress

Even though there are many organisations working in the region to conserve coral reefs by collecting data and implementing on the ground work, it is very hard to get an overall view on the status of coral reef health and there is a need to improve collaboration. Much of the current assessment is based on old data collected several years ago. There is also a bias in monitoring effort. Much of the effort focuses on a few well-established monitoring sites but with gaps when it comes to reefs of the more remote islands. There is an under-sampling of coral reefs for long term monitoring. The Pacific Island Region has over 27,000 islands, however the GCRMN dataset only found data for 75 islands. Some States have been more successful in securing funding for coral monitoring than others. American Samoa and Palau are better resourced; where as other states have very little data at all.

There are spatial and temporal gaps in monitoring. The GCRMN network has been working towards the initial steps of being re-invigorated with the latest GCRMN report, but there has been a gap in coordination of many years (5-10). Continuity of the former network has been lost, the effort and resource that had been invested previously has lost momentum.

There are new technologies around that can improve imagery and information relating to coral reef monitoring, however if these technologies are to be embedded to support long term monitoring there must also be country capacity development to support their use, such as integration of the tech into education programmes. This training and capacity development is critical alongside introduction of new tech, including ensuring the appropriate infrastructure is in place. Countries need to be able to make use of the tools, run the processes and make use of the outcomes. There are some basic infrastructure challenges – e.g. instable internet. Anything that requires bandwidth is very limited. Unstable electricity is also an issue. Ocean literacy, particularly for tropical ecosystems should be taught in primary schools.

There has been progress in data sharing through the SPREP's "Inform project" a web based data and information portal that enables countries in the region s to improve availability of and access to data. Data agreements are in place to enable SPREP to store the data. The countries have ownership and regulate who has access <https://www.sprep.org/sites/default/files/documents/publications/status-coral-reefs-pacific.pdf>

Use of the Priority Actions for Target 10

The priority actions have not been widely used.

Challenges

Challenges for the region include insufficient capacity development. Resources (money and people) are also a big challenge. Many national delegates have multiple roles to fill and in some cases there are not enough full time positions available. There are well-educated nationals who may find better opportunities abroad. Having full time paid positions at the regional and national levels for coral reef conservation and management efforts that are not divided between so many competing responsibilities would be helpful. This would provide the necessary consistency and momentum to bring about change. This lack of capacity and multiple responsibilities makes it difficult for Island States to keep engaged in the different international processes and can lead to neglect of that issue or de-prioritization. Travel is expensive and time consuming even though it is important to meet face to face, however to achieve expected outcomes meetings need to be planned well in advance and with measurable indicators. . Another consequence of the resource challenge is that it can take some time to get an initiative going.

Other challenges were identified related to the sharing of data and information within and between countries (see also the section on measuring progress) and that there are many organizations operating in the region but not working together. It is hard to get an overall understanding of the state of coral reefs across the region as information is so fragmented.

Beyond 2020

A focused agenda for coral reef conservation in the region would be helpful – including a work plan and a legacy plan. If there is another target, it needs to take account of how the countries in the South Pacific Region can work with it, and how it can support their needs. Needs to ensure there are suitable mechanisms within the countries in order to succeed. Any target must be supported with resources to enable ministries/ agencies to respond.

Due to the extensive time and dedication required in order to gain traction and momentum it would be helpful if the targets continued or built off the existing suite. Alignment with SDG would be helpful instead of creating something completely new. Streamlining reporting and the inclusion of a mechanism to help re-invigorate and sustain monitoring would also be helpful as part of any new target.

East Africa/ Western Indian Ocean

Consultation input provided by CORDIO

The identification of countries by the area of coral reef area means that there is a geographical imbalance of the countries included in the assessment. The following points relate to the East African context and are relevant to any consideration of a post 2020 target that relates to coral reefs. These reflections have been provided by the CORDIO Director.

The countries in the region are not climate contributors. There is however a rapid increase in population size and an accelerating growth in the middle classes. This acceleration is faster in Africa than in other regions and will worsen in the next 30 years in a context of poor governance. This has implications for the dynamics of multiple stressors/ anthropogenic pressures that are the focus of Aichi Target 10, such as:

- Mining for oil and gas
- Port development
- Transport corridors
- Consumption patterns
- Waste management

North East Atlantic

Consultation input provided by the OSPAR Secretariat

The North East Atlantic has an active Regional Seas Convention, to which two of the countries identified in this review (France, UK) are Party. These reflections have been compiled on the basis of responses from the OSPAR Secretariat. Under the Convention, the OSPAR Commission has

- taken actions relating to the protection of cold water coral reefs and a number of other habitats that are vulnerable to climate change or ocean acidification.
- a programme of work addressing human activities that impact the marine environment;
- been developing indicators and monitoring for ocean acidification

Whilst there is an awareness of the Aichi Biodiversity Targets and connections are made to other Aichi Targets (e.g. AT11 relating to the work within OSPAR on marine protected areas), no explicit association of these actions with Aichi Target 10. There are however efforts to ensure more visible alignment with the SDGs.

UN Environment

Context

Reflections provided by the UN Environment Coral Reef Unit

Interpretation:

Reflections on AT10

Target 10 gives special recognition to a special system. There are challenges with singling out a particular ecosystem but there is value in doing this to ensure it is high enough on the agenda to trigger action. Targets around one flagship system can be useful as an entry point to focus effort and coordinate policy action around that and resulting in actions that also have wider benefits. However, this is not how most countries have used AT10.

AT10 was successful in recognizing that there are different pressures in different places and there is space for these differences within the Target. It was also good in that it focused on other issues/ anthropogenic pressures within a context of climate change.

Prior to the SDGS, Target 10 helped UN Environment put these issues high on the agenda. Examples of policy cross referencing : UNEA Coral Reefs resolution 2/12 in 2016 – peer to peer (Member State to Member State) encouragement of the application of Priority actions (<http://web.unep.org/environmentassembly/resolutions-and-decisions-unea-2>). This set coral work in the context of AT10, setting up for consistent engagement.

Measuring progress

GCRMN is in the process of developing a 2020 status of coral reefs. The Last global report was 2008 with more recent regional reports.

The most up to date data layer for coral is UNEP-WCMC, but this is now very out of date with low resolution and some of the data more than 2 decades old. UN Environment Live produced a composite data layer of coral spatial extent using UNEP-WCMC hosted data, NOAA data and other.

A new development is the production of The Allen Coral Atlas this will not be static layer, an will enable not only (a) a much more frequent periodic update, but also enable the detection of impact events such as bleaching, extent of health as it happens. It is anticipated that this will deliver a big improvement in coral data and has could support coral monitoring.

Use of the Priority Actions for Target 10

The Priority Actions were an evolution of the CBD Priority plan of work on coral bleaching. They are referred to and used within the process. Some initiatives/ activities can be traced back to some of the Priority Actions, but they are not all covered.

Challenges

There is a challenge that there are a range of marine environmental targets, policies, goals with various processes that are not really coherent or streamlined and a bit messy.

The current target is not measureable, it is not SMART but non-specific (e.g. “other pressures”) and open to interpretation.

The delay in identification of indicators for the Aichi targets came in 2016, after the deadline for AT10 (2015). There are also challenges with the metrics available to express when a system is functioning sufficiently. It is possible to show where there is coral that is alive and dead, however measuring the condition of a reef is

difficult. It is important to consider what it means to have healthy reef – why is it important, how can this be expressed in terms of what it's footprint in GDP is, what % of jobs relate to these ecosystems? Our understanding needs to go beyond economic services – not just a total economic value, but also the role of coral reefs and vulnerable ecosystems in the economy and society. How can a business case be built? What does it mean if the ecosystem is functioning well and what does it mean if it is lost? How could the situation be changed?

Beyond 2020

A continued focused attention on coral reefs is still needed in the future. UNEnvironment is aware there is a post 2020 framework being developed and will be working with partners on this. It is seen as a 3 pronged approach with 3 main result areas (1) Policy commitment; (2) finance (3) Information, awareness and outreach – seen as 3 corners to a triangle and all connected with interdependencies between each corner if they are to succeed.

UN Environment Assembly Resolution 2/12¹⁸ provides direction for coral reef policy and management in the context of Agenda 2030. There are global and regional policy instruments and commitments related to coral reefs. UNEnvironment is supporting work around the Post-Aichi framework, but do not have an explicit position with regards to a coral reef target.

The UNEA 3 in 2019 will consider an analysis of global and regional policy instruments and governance mechanisms related to the protection and sustainable management of coral reefs (UNEA Res 2/12). This will be useful to consider in the light of a post 2020 framework.

¹⁸ <https://www.icriforum.org/news/2016/10/resolution-212-sustainable-coral-reefs-management-unea-2>

The Nature Conservancy (TNC)

Context

Interpretation:

Reflections on AT10

At Aichi, a coral reef target was necessary, there was an awareness of the crisis facing coral reefs and a need to address this, however the resulting target was different in nature to the other Aichi targets. It did not have a numerical metric and it was not very clear how countries would be able to address it. It was felt that the absence of indicators until late in the process was also a hindrance to the progress made against this target.

This target was not able to change behaviours and countries did not seem to talk about it very much.

Targets do however have a role. In the cases of small Island States, for example in the Pacific where there were already national or regional mechanisms in place that set ambitious targets (e.g. Micronesian Challenge) the global targets have enabled these countries or regions to make visible their contributions at a global scale. So whilst AT10 may not have instigated actions, it may have helped to elevate regional/ national actions. Targets have also helped to instigate funding mechanisms through influencing funding streams. In the Caribbean ATs are used as justification for setting of GEF priority projects and catalyzing the Caribbean regional action plan for coral reefs. As a whole Aichi Targets have driven funding streams and has been critical for driving biodiversity funding, especially in Europe.

Measuring progress

Indicator development is improving. It would be interesting to look at whether the indicators for AT10 are functional and sufficient to the task – are they able to provide a policy feedback loop. The success/ failure of how useful a target can be (not in how successful a target is in reaching the target) lies in whether there is a functioning feedback loop to show if there is a response to an action two examples where this feedback loop exists are the financial commitments target and Protected Areas (AT11). Advice: look to the Biodiversity Indicator Partnership to see if there is an evaluation on indicator performance.

Use of the Priority Actions for Target 10

There was no awareness of the Priority Actions being mentioned in discussions with countries, and TNC have not used them directly. It was also noted that the priority actions were only available midway through the 2011-2020 Strategic Action Plan for Biodiversity implementation process in 2014 and only one year before the AT 10 2015 deadline.

Challenges

The main challenges of AT 10 is that it is less specific and less tractable and not wholly within the prevue of those that manage environmental issues. Many of the actions required to address the anthropogenic pressures alluded to in the text of AT10 are not within the power of environment ministries with respect to enforcement or influence. This holds true for other targets as well.

Beyond 2020

TNC are developing a response to the CBD regarding views on the post 2020 framework. There are different approaches being considered. One approach could be to have an all encompassing marine target that is holistic in its approach, which could then enable attention to be given to other marine ecosystems, including coral reefs.

Corals are part of a wider ecosystem and warrant being singled out – but within the broader marine context. The point was emphasized that **a holistic view of coral reefs within their ecosystems needed to be stronger in the next generation of targets**, including needing to

- Draw the correlation with other work areas/ conventions where there needs to be an alignment of effort (e.g. Cartagena Convention – land based sources)
- Ensure a holistic management view – such as the Ridge to Reef management approach
- Move away from sector based/ siloed management

It was considered that targets that were more successful were specific in what it was they were asking for and how that could be tackled. However there was a discussion around the tensions between being “specific and measurable” vs taking a “system management” perspective. Whilst it is clear that the CBD takes an ecosystem approach, from an environmental governance perspective it is important to have an enforceable and clear target with clear indicators that link together. It was suggested that it may be better to be specific in the text, rather than too broad and general resulting in text that is not easily implemented or measured. As an example, if there was a general headline target, it would then need to have clear elements within it.

Technology and innovation

A number of innovations were identified with respect to coral reef monitoring and management:

- Drone technology is starting to be used for mapping and is effective at covering large areas. There is however a challenge in maintaining drones in tropical climates – there is also a challenge with capacity for maintaining them and for their effective use.
- Work on-going to improve use of remote sensing for mapping coral reefs – there are big improvements taking place although previous challenges of reflectivity, classification and cloud cover in tropical coastal areas still exist. Also there is a need for regular flights. Big challenge though is in ensuring the usefulness of any products that are delivered. Capacity must be built with the intended user community. Dialogue with local stakeholders is needed from planning through to implementation to ensure engagement and local relevance so the product can actually be useful in a management context.
- There is an area of innovation relating to the technology for improving the efficiency of growing corals (e.g. fragmentation techniques) and research regarding **super coral for the future** work that was being led by Ruth Gates. <http://gatescorallab.com>
- **Active intervention** – Natural Institute of Sciences (?) Resilience in corals
- Working alongside engineers to look at insurance of reefs for coastal protection, modeling risk reduction capacity with the view to develop financial products/ financial mechanisms to support coral reef conservation - critical in building the financial case for coral reef conservation.

CORDIO Director /IUCN SSC Coral Specialist Group Chair

Context

Interpretation:

Reflections on AT10

According to assessments, including the GBO4, T10 is the worst in terms of implementation and progress. The difficulty is that it is about multiple stressors and the need to reduce these multiple stressors, which is a huge challenge for countries as they relate to Population size, economic growth (Both increasing) as well as climate change – there is too much reliance on understanding cause and effect.

The target does not directly address climate change, recognizing that there is a Convention on that - so climate change is not the focus but ecosystem state is. It is important, but difficult to achieve. The primary target (that coral reefs and other ecosystems vulnerable to climate change and ocean acidification continue to function) cannot be addressed unless these multiple stressors are reduced.

Whilst there are many activities that are being done that address aspects of T10, it is not apparent that countries are using T10 to instigate action. This could be because as a target it is difficult to work with, and it is not easy to show improvement in response to reducing stressors or increasing resilience against T10 within the deadlines set.

If one is trying to do a risk assessment on which target to focus on and where to focus effort given limited resources, then AT10 is the worst target to tackle as progress towards the target requires change in other things that are out of control that still affect outcomes.

Measuring progress

Current indicator suit relating to AT10 needs more work. It is important to note that the indicators relating to the target came late in the process (Agreed in the CBD decision XIII/28 in 2016).

There is an on going initiative to re-organise the GCRMN system as a mechanism to support regional/ global reporting against coral related targets. The aim is to increase access to data providers and data users through online systems and increase provision of data by enabling online data calls.

There is also a proposal to bring in the essential biodiversity/ ocean variables concept being applied through GOOS and GEOBON would be able to support reporting to multiple targets

- Proposal for EOVS on live coral cover, fleshy algae, fish biomass and abundance.
- Also supporting SDG 14 (14.5/14.2)

In addition there is a 2020 red listing process also going on for coral species and coral reef ecosystems.

Together these initiatives would result in a common framework for reporting and a global database process. The technology now exists to support these aspirations – but it is a matter of coordination and organisation

Use of the Priority Actions for Target 10

Challenges

Beyond 2020

Coral reefs have a flagship role in people's awareness. If a target is too general then it loses its impact/ focus. The plight of coral reefs and projected continued and rapid decline or disappearance by the mid/ end of the century features in several major assessments (e.g. the interim IPCC 1.5 report);

A coral reef target could be useful in a post 2020 framework to provide focus, a wake up call. This wake up call would be less effective if the target it is too general.

A post 2020 target should be SMART, it should apply the DIPSR approach to be able to detect change in pressures and change in status. Indicators need to be disaggregated and track trends.

There are better ways to trigger change to achieve the aspirations of this target. Some ideas include:

- Red list of species
- Red list of ecosystems
- Coral reef essential biodiversity/ ocean variables (EBV/EOV)

There is definitely a need to explore the role of new technologies/ capacities to help with (a) supporting monitoring and assessment (b) awareness and communication in the context of a post 2020 framework. There are exciting developments in technology/ image capture however with some caution. It is important to ensure that the data or information captured is useful or usable to support countries in responding to their national needs and international commitments. It is also important that technologies should complement and not replace MPA managers, or on the ground knowledge and expertise; It is important that the people that know the site and are actually looking in the water regularly are empowered. Consistency of an onsite MPA manager is important for ensuring success, there is a risk of losing this to temporary external teams, who do not have a long-term understanding of the area in question. It needs to be "both and" with technology solutions to support/ be combined with expert monitoring.

WWF

Context

Interpretation:

Reflections on AT10

There was experience of a country level reality that AT10 drifted past its 2015 deadline with out being noticed. Although AT10 was important, it was not very tangible and so the focus was instead on other targets – e.g. AT6 and AT11 which were seen to be more directly relevant to food security. Even in this case the dominant focus has been on AT11, and less on the connection with AT6, although AT11 cannot be achieved without progress with AT6.

It was noted that coral reefs cannot be addressed in isolation, but must be considered with closely associate ecosystems, another reason why perhaps AT11 was seen as a more holistic approach. None of the Aichi Targets were meant to be dealt with alone and in isolation, but rather together as linked targets, or considered more as a suite. Driver targets and the “goal C” targets need to be looked at together.

Despite the fact that AT10 is not tangible, and the aim to “minimize anthropogenic pressure” not quantifiable, AT10 has been of value in advocacy work to build understanding in the importance of understanding cumulative effects as well as the role of tools such as Strategic impact assessment and EIA.

The delay in the development of associated guidance to support AT10 could have hindered progress in implementation. The Priority Actions were only available in 2014, and then in 2016 came the Voluntary specific work plan on biodiversity in cold water areas within the jurisdictional scope of the Convention (Decision XIII/11 <https://www.cbd.int/doc/decisions/cop-13/cop-13-dec-11-en.pdf>) - starts to be relevant to ecosystems that are >200m deep.

The Voluntary specific work plan (XIII/11) encourages Parties to undertake actions, such as the identification of refugia sites, which is also relevant to shallow, warm water coral reefs, although needs more scientific work to identify these sites. There is also a link to the EBSA process as a process to identify sites of particular significance.

Measuring progress

Use of the Priority Actions for Target 10

Challenges

Beyond 2020

It is hoped that the next generation of targets will make clear links to tools such as EBSAs, EIAs, SEA (including with the application of the CBD Revised Voluntary Guidelines for the consideration of Biodiversity in Environmental Impact Assessments and Strategic Environmental Assessments in Marine and Coastal Areas (UNEP/CBD/COP/11/23), adopted by COP 11 in 2012 (CBD Decision XI/18).

There is a larger narrative that needs to take place, beyond just looking target by target to see what must happen next. A shift or transformation is needed to address the impact of multiple stressors and drivers. A shift that will require, amongst other things, sustainable financing mechanisms, creation of appropriate incentives, a broader strategy within a more cohesive framework.

The question is how to make sure the different mechanisms, processes and commitments that are almost parallel, almost complementary can start coming together and become more mainstream – this is the thinking behind the WWF Global Deal for Nature.

- the new targets need to be connected to the Paris Agreement – the targets will need to be climate smart. Coral reefs are already being affected –1.5 degree of warming will have a severe impact on coral reefs, a more realist view of 2degrees of warming is likely where coral reef cover will be significantly reduced and the benefits we derive from them will not be sustained.
- need to also align to SDGs (but not just SDG 14 – also important to relate to a broader context of sustainable development, SDG 1, 2 and 3 are as critical as SDG 14 and the inclusion of this broader agenda could help engage countries to protecting their coral reefs. As an example, there is a macronutrient crisis in the Asia-Pacific, which is affecting development of children in the region. This is a huge issue for many coral reef countries, where there is a high dependence on fish protein from the reefs. Solutions to address the challenge faced by coral reefs will need to be out of water solutions concerning reduction of human pressure on the reefs

A large proportion of coral reef ecosystems (80%) are in developing countries where there are urgent food security issues and limited capacity/ resources. How can the new post 2020 framework help communities and governments adapt and to work in partnership across public and private sector, help them achieve the steps to adapt and avoid running duplicate processes. The new generation of targets will need to have appropriate resourcing, incentives or innovative financing mechanisms to support implementation. Synergy between different instruments could also help to achieve mainstreaming of reporting mechanisms.

There is also a question about how to improve compliance of international commitments and improved mechanisms within the CBD for improved reporting and ensuring implementation. This could be the role of the Subsidiary Body on Implementation.

A “comprehensive framework” for reporting and implementation will need more synergy and it will need to go beyond climate change to include addressing other anthropogenic pressures from multiple sectors. There is a need for an integrated oceans management perspective.

A shift to a more holistic seascape<<>> landscape perspective will require significant changes at the government level. It would require increased stakeholder engagement, industry engagement, partnership. It would require transformational processes.

Oceans are still under-represented in the current suite of Aichi targets.

Coral reefs play a critical role, and it warrants special attention through having a dedicated target. There is a need to be more prescriptive about which coral reefs should be protected. Given the current loss that has been experienced, and the predicted mass bleaching episode expected in 2019, existing tools (e.g. EBSAs) could be used to identify where there are coral reefs that have particular functions as refugia, sinks, sources and that these should be protected as a priority. Given the urgency it will be necessary to be clear where to focus effort in the next decade.

This would also have an important awareness-raising role. However it is also important to note that a stand-alone target will not address all the necessary associated issues. There is a level of contradiction in the need to take a holistic, comprehensive ecosystem approach, but also, due to the compelling and urgent status of coral reefs there is a need to be selective, clear, prescriptive. One way to rationalize this could be to envisage a concrete, prescriptive target within a comprehensive framework.