New Plan for Creating Sustainable Fisheries in the Caribbean Netherlands

A 2019 policy brief was just released outlining the requirements for sustainably managing fisheries within the Caribbean Netherlands. Using five different studies, a four-phase roadmap was created to bring local stakeholders and government legislators together to secure the future of local fish stocks. Without action, a collapse of important fish species could be right around the corner.

Maintaining healthy coral reefs and fish populations is fundamental in sustaining both the traditional way of life and ever-increasing tourism throughout the Caribbean. Although fisheries within this region are better managed today than they were in previous decades, the Caribbean is still facing an overall decrease in fish stocks. Managing the remaining fish populations requires balancing local cultural traditions with the reality of today’s environmental conditions. Therefore, this must be a collaborative effort between local residents, local governments, NGOs and buyers.

To better define the challenges and needs of local fisheries five different studies were conducted. The goal was to provide insight into how these local fisheries can be improved and sustained for years to come. Although the final results of two of these studies are not yet available, preliminary results have been released to support the upcoming Sustainable Fisheries Plan from the Dutch Ministry of Agriculture, Nature and Food Quality (LNV). Mac & Field consultancy, in collaboration with WWF-NL, used these results to produce a policy brief to help in the creation of the Sustainable Fisheries Plan.

Study 1: Historical Fisheries

There is currently insufficient data available to set sustainable fish stock targets, leading to goals in fisheries policy targeting only processes, methods and economics. No targets exist in Caribbean Netherlands policy that describe a desired state of the fisheries sector, resulting in an inability to verify whether measures that are taken are indeed successful in making the fisheries sector a more sustainable and healthy one. Therefore a desired and measurable fish stock value should be identified, which is common practice for commercial species in the European part of The Netherlands.

This study aimed to investigate whether documented (pre-)historical declines in fish populations within the Caribbean Region (e.g. Curaçao, Jamaica) align with (pre-)historical fish stock health on the Caribbean Netherlands islands, thereby providing evidence of changes in fish stocks far beyond what has been documented with modern monitoring programmes.

It was found that prehistoric fish stocks have been fluctuating, mostly as a result of large scale natural events like tsunamis, hurricanes, etc. that wiped out coastal habitat and with it the fish stocks. However, over time, fish stocks tended to recover after such events. Alarmingly, the decline of local reef fish stocks has accelerated in recent years, which is likely related to a combination of decline in coral reef health and overexploitation. Historical evidence for the Caribbean Netherlands islands does not indicate that trends in fish stock health are significantly different from those found in better documented cases within the Caribbean, like Jamaica (Hardt, 2009) or Curaçao (Vermeij, 2018).

This suggests that baselines have shifted and therefore modern conservation policy should consider historical values when setting fisheries targets.

Study 2: Market Analysis

This study worked to better understand the entire seafood supply chain, starting with the fisherman’s daily catch up through the final transaction (restaurant, grocery store, private citizen). In total, 361 interviews were conducted on Bonaire, St Eustatius and Saba. It was determined that there is little information available concerning import, export or specific volumes and species of fish caught. It was also found that a large portion of the fish sold on Bonaire as ‘local fish’ is actually imported from the Venezuelan archipelago of Las Aves, which is often unknown to buyers. This makes it seem like there is more local Bonairean fish available than there actually is, suggesting that local fish stocks may actually be in worse shape than previously thought.

The study also showed strong support from local restaurants and grocery stores for an increase in sustainable fishing options, such as an “eco label” to promote species caught using sustainable fishing practices. Overall it was determined that there is a lack of transparency throughout the entire supply chain, leaving customers unaware of the origin, catch method or sustainability of fish purchased. This process should be improved through better regulation and monitoring. An implementation of a sustainability rating similar to the Good Fish Guide of European Netherlands could help promote more sustainable practices. Overall, educational outreach efforts should be made to increase public knowledge of issues within the local fish stocks and help residents make better, more sustainable choices when it comes to local fish. Lastly, the price limits for fish on Bonaire as set by local government should be reevaluated to reflect demand giving fishermen a more reasonable income, balancing market demand and avoiding overexploitation of local stocks.

Study 3: Communication and Awareness

The goal of this study was to determine the best way to communicate about sustainable fishing practices with local fishermen, both commercial and recreational. It was determined that the most effective way to communicate was to create an open channel where fishermen participate in the development and implementation of new regulations through co-management. This ensures the needs of all stakeholders are considered and increases the likelihood of individuals incorporating these best practices into their daily activities. Furthermore, communication campaigns should include both economical and social aspects so that the benefits of sustainable fishing practices are fully understood and desired.
Study 4: Social Mapping
Through in-depth interviews and action research, this study worked to determine what would be necessary to successfully implement sustainable fishing practices while being considerate of the needs of local fishermen. This study found three main issues: a skewed perception of urgency, unclear division of roles and responsibilities for management and insufficient management and government support. Although this is a very nuanced issue, it was determined that a well-guided co-management strategy between the fishermen and the government, would have the highest success rate when implemented. It is recommended that each island establish a fishery cooperative to provide fishermen a clear way to organize and articulate their needs to the government. Furthermore, all relevant stakeholders should be included as early as possible in all policy making decisions. It is also recommended that there be at least one fisheries policy officer and implementation officer located on each island to help balance the needs of the fishermen, government, marine park authorities and other stakeholders and properly implement new sustainable measures.

Study 5: Co-management Study
This study worked to determine what would be required to successfully develop a co-management strategy between local fishermen, government, marine park authorities and other stakeholders. Four key recommendations were given. First, clear legislation and management goals need to be defined. This includes setting boundaries and clear roles and responsibilities for all parties involved. Second, a fisheries officer should be appointed for each island to ensure clear communication between stakeholders. Third, a conflict management strategy should be implemented to ensure issues are resolved quickly and fairly, without hindering the process. Lastly, co-management workshops should be offered to ensure all stakeholders have a platform where their concerns and needs can be addressed.

Roadmap Forward
In parallel to the policy brief, a roadmap was also released aiming to provide a more practical avenue of implementing the recommendations laid out in the studies described above. This outlined a four-phase process for creating an effective fisheries management model tailored to the Caribbean Netherlands context as a basis to work towards truly sustainable fisheries.

Phase 1: Strengthen Stakeholders
This phase includes a multi-step process to fully engage and include all stakeholders. This phase will work to build trust and create a transparent process in which all stakeholders contribute to creating a sustainable future for local fisheries.

Phase 2: A Sustainable Fisheries Management Improvement Plan
The government must, and should, regulate and enforce sustainable fisheries practices to ensure local stocks do not deplete. This process must consider the needs of local stakeholders, such as fishermen, dive operators, consumers, management authorities and tourists. Working in a vacuum would create a hostile, ineffective environment. Therefore, it is recommended that a holistic Sustainable Fisheries Management Plan be created to take into consideration the variety of needs of all stakeholders. This also includes the creation of a fisheries management council and funding mechanisms to ensure these efforts are fully supported.

Phase 3: Pilot Implementation
Once the Sustainable Fisheries Management Plan has been drafted and implemented, a pilot period should allow a feedback loop to highlight strengths and weaknesses. This feedback should be considered in future versions and implementation plans to guarantee this management plan sufficiently meets the needs of all stakeholders.

Phase 4: Ensure Continuity
The design and implementation of a management plan of this magnitude will not happen overnight. Proper structure and support must be put into place to allow the management of these fish stocks to evolve and mature along with the needs of the stakeholders. Stakeholders will need to become flexible as business as usual will be questioned and changed. However, by working together, a modern management plan can balance the needs of local stakeholders with the physical limitations of the environment.
A common finding throughout each of these studies was that sustainable fishing practices are mostly lacking throughout the Caribbean Netherlands. This has led to an overexploitation or full exploitation of almost all commercial fish stocks. Although the Ministry of LNV is responsible for fisheries management, implementation and regulation is not possible without the support from all stakeholders, in particular the public entities on each island. This requires sufficient resources be dedicated to this process and open communication between stakeholders to provide a feedback loop to meet the evolving needs of each island. Emphasizing a co-management approach ensures the unique needs and desires of local stakeholders are considered in the design and implementation of a Sustainable Fisheries Management Plan. Fishermen must be included throughout each step of this process to maximize the likelihood that these regulations are understood, implemented and complied with. Furthermore, new and non-traditional fishing activities (such as foreign fishing operations) should be considered within the management plan as well.

If left unmanaged, a complete collapse of local fisheries is unavoidable as local and foreign demands continue to increase as fish stocks decrease. Through working together, a Sustainable Fisheries Management Plan can be created and implemented ensuring fish stocks are available to local fishermen for many years to come.

The full policy brief and road map are available in the Dutch Caribbean Biodiversity Database:


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