THE SKIMMER ON MARINE ECOSYSTEMS AND MANAGEMENT

Published on *Marine Ecosystems and Management (MEAM)* (https://meam.openchannels.org)

Improving ocean management by addressing population and human health concerns: Insights from Madagascar and the Philippines

Ecosystem-based management leads practitioners to consider whole ecosystems (their structure, function, dynamics) rather than single species or issues. Humans are considered part of the ecosystem. As such, economic factors — particularly how various groups use the ocean, and how different management options could impact these groups economically — are typically included in marine EBM approaches.

However, people are more than just economic factors. Other human considerations — like health, food security, population growth, and more — can impact marine management, too. Just as an overfished ecosystem can lead to insecurity and hardships for local populations, the reverse can also hold true: coastal communities struggling to feed their growing families are apt to place increasing pressure on marine ecosystems.

In recognition of the links between ecosystem and human health, a small number of broad-based initiatives have been established in biodiversity hotspots in developing nations. Called population, health, and environment (PHE) programs, these are generally small-scale, community-based projects. They address concerns about public health and unmet family planning needs while also working to improve ecosystem health and biodiversity conservation. (As part of these PHE programs, the subjects of sustainable livelihoods, food security, poverty alleviation, women's empowerment, water and sanitation, and/or climate change concerns may be addressed as well, depending on the local context and needs.)

This holistic approach — aiming to support effective coastal resource management and build more resilient communities — offers a variety of benefits. It can increase community buy-in for marine conservation through comprehensive attention to priority local needs. Increased access to reproductive health services allows couples to achieve their desired family size, thereby reducing anthropogenic pressure on marine and coastal resources. These services can also enable greater participation by women in economic and resource management activities.

Despite these potential benefits, there are relatively few such integrated programs in practice. In this issue of MEAM, we speak with PHE experts to find out why so few integrated programs exist and the potential for expanding them.

A. Integrating voluntary family planning services with coastal resource management in Madagascar: Interview with Alasdair Harris

[Editor's note: Alasdair Harris is founder and executive director of Blue Ventures, an NGO that works with some of the poorest tropical coastal communities to develop approaches for sustainable, locally led marine conservation. Blue Ventures works in places, including Madagascar, where the ocean is vital to local people and economies, and where there is a fundamental need to support human development.]

MEAM: Please tell us about Blue Ventures' work in Madagascar.

Alasdair Harris: Blue Ventures has been based in Madagascar for over a decade, supporting traditional fishing communities in the development of locally managed marine areas (LMMAs) – large areas of coast and ocean managed by villages and groups of villages working together to improve the sustainability of fisheries. We have recognized that improving fisheries management alone is not enough to tackle the numerous and interrelated drivers of marine environmental degradation. For this reason, we take an integrated approach to supporting communities within these LMMAs. Alongside our "conventional" conservation efforts, our work encompasses building locally-owned aquaculture businesses (sea cucumber and red seaweed), and providing educational scholarships and community-based health services.

In Madagascar, we work with some of the world's poorest and most isolated communities whose access to health services is severely limited. The unmet health needs of the country's semi-nomadic Vezo fishing communities are particularly acute, with clinics located up to 50 km away from some villages. In coastal western Madagascar, the fertility rate is nearly 7 births per woman. Fewer than 10% of Vezo women have access to contraceptives, despite up to 90% wanting to be able to plan their pregnancies. With the population doubling every 10-15 years, Vezo communities are finding it increasingly difficult to provide for their growing families. And overfishing and destructive fishing practices pose significant threats to the marine ecosystems upon which their livelihoods depend.

Our community health program, called Safidy (http://goto.blueventures.org/health), meaning "the freedom to choose" in Malagasy, has been operational since 2007. Safidy was established in direct response to the unmet family planning needs of Vezo communities. It upholds reproductive rights by offering couples the information and contraceptive options they need to freely choose the number and spacing of their births. Results from this program have been published in both conservation (http://bit.ly/Safidy1) and public health journals (http://bit.ly/Safidy2).

Integrating these services with our conservation efforts addresses the interconnected challenges of poor health, unmet family planning needs, environmental degradation, and food insecurity in a comprehensive way. This enables coastal communities to manage their fisheries and marine ecosystems more sustainably, both now and for the future.

MEAM: What results have you seen?

Harris: We now provide community-based health services to around 20,000 people and are scaling up across two additional LMMA zones. Within the 40 communities that we serve in and around the Velondriake LMMA in southwest Madagascar, the Safidy program has led to an increase in the proportion of women using contraception from under 10% to 55% in just six years. This has averted over 800 unintended pregnancies, leading to a decrease in the region's general fertility rate by 40%. We know that

addressing unmet reproductive health needs within this kind of context can also reduce maternal and child mortality by up to 30%.

We're witnessing how combining reproductive health services with conservation activities can enable communities to live more healthily and sustainably alongside their marine ecosystems. Integrated educational messages broaden community engagement: for example, by informing men about reproductive health and involving women in coastal resource management. This approach is proven to produce greater impacts than if either issue were tackled in isolation, and maximizes cost efficiency through the coordination of activities and staff between projects.

MEAM: Can this work be expanded to other areas?

Harris: The combined challenges of unmet family planning needs, unsustainable fishing, and marine environmental degradation are by no means unique to the communities we serve in southwest Madagascar. Coastal population growth in many parts of the developing world — often driven in large part by a severe lack of access to basic reproductive health services — continues to contribute to unsustainable exploitation of marine resources. Over one billion people live in coastal tropical regions. This population is expected to grow by 45% to 1.95 billion by 2050.

The rationale for taking a more integrated approach to marine conservation and addressing unmet family planning needs should be self-evident. Our PHE model could be readily replicated in numerous remote, highly biodiverse areas, including tropical coastal regions. With so many conservation organizations working in such zones, the addition of reproductive health services can and should become a fundamental part of how we engage with under-served communities. This doesn't require developing the capacity of conservation organizations to provide such services themselves; it can easily be achieved through partnerships with health agencies such as Marie Stopes (http://mariestopes.org), as demonstrated by our work in Madagascar.

Yet despite the critical need for expansion of integrated programming throughout many priority marine conservation regions in the tropical developing world, our sector is all too often blind to the wider reality in which our programs operate. Although there are of course exceptions, our general failure to take meaningful steps to consider demographic and social issues (including lack of access to reproductive health services) has meant that even in some of the world's poorest and most biodiverse coastal regions, marine conservation efforts rarely stray beyond the realms of protected areas. Surely in such contexts it can no longer be acceptable for us, as conservationists, to face the ocean with our backs to these communities. Yes, protected areas are of course part of the solution, but we cannot assume that they will ever be viable alone if the underlying needs — and basic human rights — of communities are not met.

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B. Increased biodiversity and income where population and conservation are integrated: Interview with Heather D'Agnes

[Editor's note: Heather D'Agnes is an environment foreign service officer with the US Agency for International Development (USAID) and former Population, Health, Environment Technical Advisor for USAID's Office of Population and Reproductive Health.

MEAM: Why should population and health be considered in tandem with environmental issues and conservation?

Heather D'Agnes: In certain circumstances, population growth is a long-term threat to marine and coastal ecosystems. The circumstances I'm speaking of are in countries such as in Africa and a few areas in Asia that are experiencing rapid population growth coupled with poor access to good healthcare. This occurs particularly in remote coastal areas and when it comes to health services like family planning and reproductive health care. These countries tend to have coastal communities that are very naturally resource dependent, and large family size and rapid population growth in coastal communities can lead to food security challenges and reductions in livelihoods in the short as well as longer term.

PHE programs integrate population and health activities into marine conservation activities in communities that struggle with these multiple development challenges. Just working with these communities to protect their coastal environments, reduce fishing pressure, and improve fish catch will not result in long-term gains unless the underlying causes of environmental degradation, such as population growth and poverty, are addressed. In addition, there are benefits from integrating these activities: communities prioritize access to basic health services over conservation, so health can serve as an entry point to working with these communities and gaining their trust and commitment.

There are good examples of this. I'm thinking in particular of a WWF project in Northern Kenya where an MPA was established with very little community buy-in. Communities were opposed to its existence and did not abide by its rules and regulations. When the PHE project was initiated [by WWF], communities realized that WWF was just as interested in their health and well-being as it was with the MPA, and after several years, communities became willing partners for conservation.

MEAM: What results have you seen coastal-marine PHE programs have?

D'Agnes: One of the best-studied and -documented PHE projects, the IPOPCORM Project in the Philippines (www.pfpi.org/ipopcorm.html), demonstrated improved family planning acceptance and use as well as biophysical improvements for coral and fish densities in project MPAs. It also showed an increase in income levels at sites where population and coastal conservation were integrated. They hypothesize that this is because of the combined benefit of improved fish catch as well as improved community health.

As I mentioned previously with the Kenya example, there are benefits in the form of increased community commitment because PHE projects address communities' most basic needs for good health services. There is also a benefit of engaging more women in coastal and marine conservation activities. PHE projects target both women and men; women because they are usually the targets for health services (especially family planning) and men because they are traditionally involved in natural resource management activities in coastal communities. By reaching out to both men and women with an integrated package of services, PHE projects ensure that men are more engaged and interested in the health and well-being of their families, while women are more involved in decisions that impact the resources they depend upon.

MEAM: Why do you think there aren't more of these types of programs?

D'Agnes: One reason there are not more of these types of programs is that it takes two very different areas of expertise — in health and marine conservation — to implement PHE programs in an integrated fashion. It is difficult to find one organization with this diverse set of technical expertise, and it is difficult to encounter conservation and health organizations that actively want to work together on these types of programs. Also, health organizations tend not to focus on the remote coastal areas that marine conservation organizations target. In the instances where these programs are successful, it is usually because a conservation organization has realized the importance of integrating health and population and they have reached out and sought out partnerships with willing health organizations.

Another reason there aren't more PHE programs is because of the funding. It is hard to find donors who are willing to fund two distinct issues in one place. Successful PHE programs have often brought together two different funding streams: one focused on health and the other focused on marine conservation.

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BOX: More sources on integrated PHE programs

- Population, Health, and Environment Toolkit, produced by Knowledge for Health project of USAID.www.k4health.org/toolkits/phe
- "Lessons From the First Generation of Integrated Population, Health, and Environment Projects", by John Pielemeier (2011). www.wilsoncenter.org/sites/default/files/Focus_12.pdf
- Environment, Population, and Health research programs, East-West Center.www.eastwestcenter.org/research/research-program-overview/environment-population-and-health