

**LEVER FOR
CHANGE**



Bold Solutions Network

An initiative of Lever for Change, a John D. and Catherine T. MacArthur Foundation affiliate



Top Oceans Proposals

April 2020

About This Collection

[Lever for Change](#) is excited to present an opportunity to fund the top oceans proposals from the second round of *100&Change*, the John D. and Catherine T. MacArthur Foundation's \$100 million global competition. *100&Change* will fund a single proposal that will make measurable progress toward solving a significant problem. Each proposal was assessed using four criteria: impactful, evidence-based, feasible, and durable, and was rigorously evaluated, undergoing MacArthur's initial administrative review, a Peer-to-Peer review, an evaluation by an external panel of judges, and a technical review by specialists whose expertise was matched to the project. The organizations featured in this collection are among *100&Change*'s Top100 which are the highest-scoring proposals selected out of more than 750 vetted applications submitted from over 85 countries. Lever for Change's [Bold Solutions Network](#) currently showcases the Top100, and will be periodically updated to include other highly-rated, vetted proposals that emerge from Lever for Change competitions. This collection of top proposals provides donors with an innovative approach to finding and funding effective organizations working to protect and enhance the health of ocean ecosystems.

Navigating this Collection

Below is a summary of ways to engage with the selected proposals in this collection:



Top applicants submitted 2-page factsheets to summarize their projects and promote their work. Under each proposal listed on the Table of Contents, you can click on the page numbers to jump directly to the selected 2-page factsheet.



Additionally, organizations submitted 90-second videos to describe their projects. You can view each video by clicking on the "project video" link under each proposal, or you can watch a playlist of all the project videos by clicking the link at the top of the Table of Contents page.



To view a summary of information that was captured during the application process, you can visit the project's Bold Solutions Network online profile page, which is also linked under each project in the Table of Contents.

Next Steps

These organizations are ready to solve critical problems and are seeking resources to make it happen. Donors who are interested in providing significant financial support to Bold Solutions Network proposals should contact Dana Rice, Vice President of Philanthropy, at ddrice@leverforchange.macfound.org.

Learn More

If there is a particular project you are interested in learning more about, we'd be happy to provide supplemental information and analyses to allow you to dig deeper into the proposal. We can also create additional curated lists if you are interested in exploring top proposals in another issue area.

Connect with Bold Solutions Network Organizations

We are happy to help broker connections to the organizations featured in this collection or any of the organizations you see on the Bold Solutions Network.

Support Bold Solutions Network Proposals

If there is a particular proposal you are ready to fund, we can answer questions you may have about how to best support the project and/or organization.



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Oceans Proposals

To view a video playlist of the proposals in the order that they appear in this booklet, please [click here](#).

Please note, proposal order is alphabetical by organization; not reflective of ranking



Greening Australia Limited

Reef Aid- Securing the Future of the Great Barrier Reef

 [View factsheet on pages 3-4](#)



[Bold Solutions Network Online Profile Page](#)



[Project Video](#)



Medical Care Development, Inc.

Enhancing Coastal Community Value Chains with Marine Permaculture (CVC-MPs)

 [View factsheet on pages 5-6](#)



[Bold Solutions Network Online Profile Page](#)



[Project Video](#)



National Geographic Society

Pristine Seas: Safeguarding and Restoring the Ocean's Health and Productivity

 [View factsheet on pages 7-8](#)



[Bold Solutions Network Online Profile Page](#)



[Project Video](#)

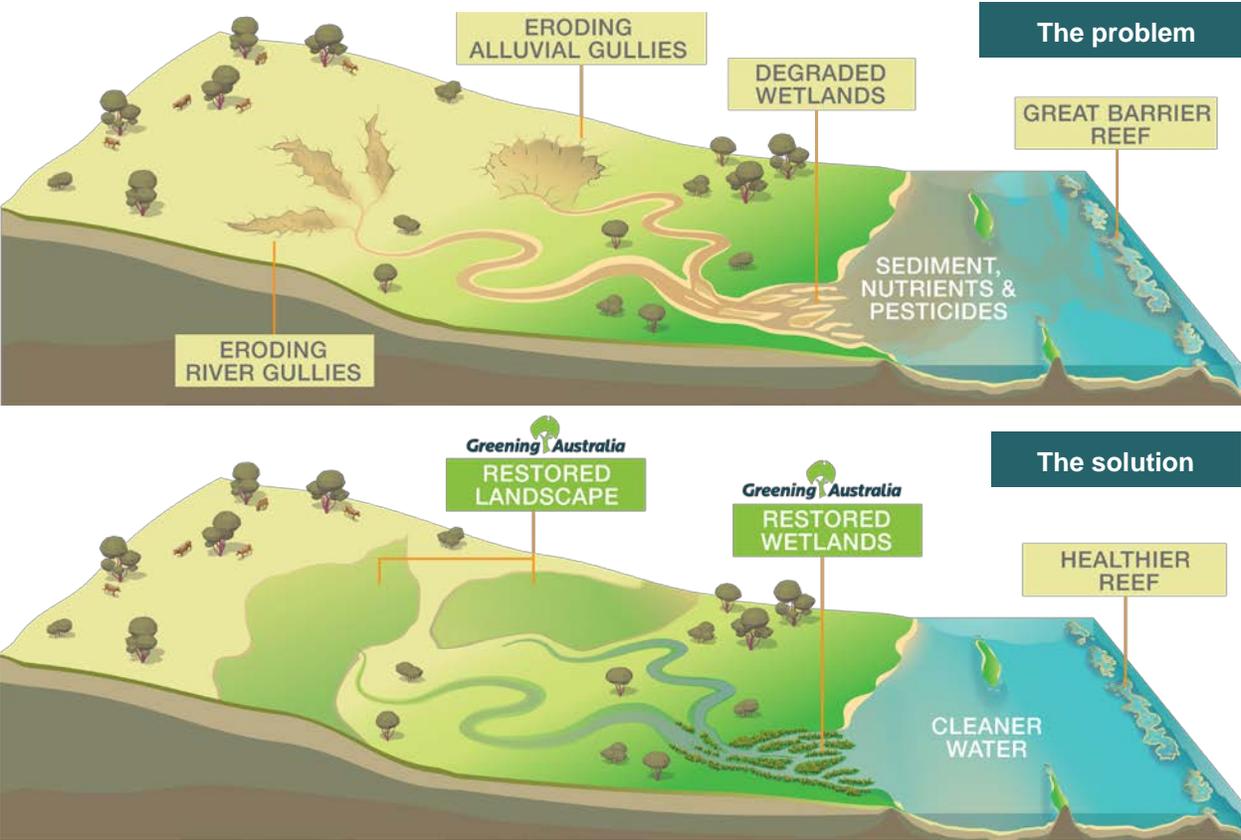
Reef Aid – Securing the future of the Great Barrier Reef

The Great Barrier Reef is the world’s largest living organism and is one of the most biodiverse places on earth. It possesses outstanding natural features, cultural significance and economic benefits. It’s also under threat.

Since 1985, the Great Barrier Reef has lost 50% of its coral cover due to climate change and poor water quality from land-based run-off. More than 10 million tonnes of sediment from eroded gullies flow onto the Reef every year, smothering corals and seagrass, creating algal blooms, degrading water quality, and weakening the Reef’s ability to recover. As 70% of this sediment comes from 20% of the Reef catchment targeted restoration has significant and immediate impact. Coastal wetlands act like kidneys, filtering out the sediment from agricultural, industrial and urban land use.

If we lose the Great Barrier Reef, it will impact the health, wellbeing and culture of 70 Aboriginal and Torres Strait Islander Traditional Owner groups who have been its custodians for over 60,000 years and who rely on their Sea Country to thrive. That’s why [Greening Australia](#) is taking bold action for bold change.

Together with our partners, [Mungalla Aboriginal Corporation for Business](#), [Great Barrier Reef Foundation](#), and [GreenCollar](#), Greening Australia and Traditional Owners will restore 2,000 hectares of eroded land and 10,000 hectares of wetlands at priority sites using a proven solution to prevent 400,000 tonnes of sediment from polluting the Reef each year, improving water quality, the Reef’s resilience to climate change and Indigenous livelihoods and wellbeing.



Reef Aid is a proven solution designed to scale and continually amplify impact.

Since 2015, Greening Australia has been working with Traditional Owners, leading scientists, landholders, and communities to improve water quality on the Great Barrier Reef. Using targeted restoration techniques on the highest sediment yielding eroded gullies and the most critical wetlands for cultural connections and biodiversity, we've restored over 600 hectares of gullies and wetlands and our large-scale pilot project has demonstrated a 97% improvement in water quality. Today, Reef Aid is the largest on-ground restoration program in the Great Barrier Reef catchment. It is an efficient and cost-effective solution with immediate results that is ready to be replicated across the broader Reef community.

Now its time to scale up. With economies of scale achievable through the support of 100&Change and Lever for Change, we can significantly reduce the cost of restoration and accelerate water quality outcomes. Targeted restoration increases the impact of each dollar invested. It will provide the foundational work to incentivise landholder action and establish environmental markets. This includes reef water quality, carbon and biodiversity credits that can generate sustained income beyond the initial investment.

Harnessing the desire, traditional knowledge and land management capacity of Traditional Owners through genuine co-governance partnerships, access to environmental markets, and establishment of Indigenous environmental enterprises will all be critical to ensure that the benefits for the communities that rely on a healthy Reef are sustained into the future.

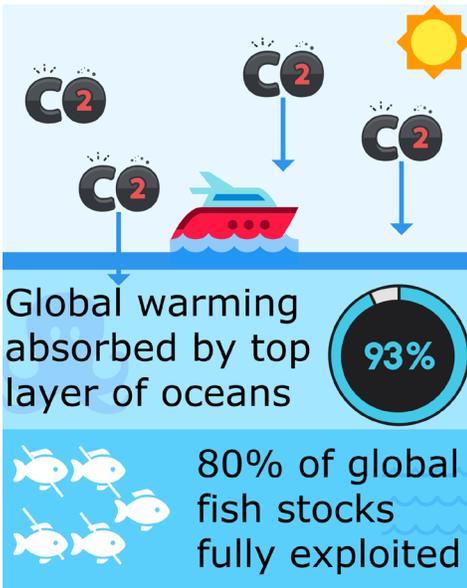
There is global scientific consensus that accelerated local action on improving water quality is most effective to safeguard the Reef with its fate sealed in the next decade.

We know saving the Great Barrier Reef, our Sea Country, is possible. All we need is you.

Impact to date			Impact of Investment				
			\$1M	\$5M	\$10M	\$100M	2030 Goal
	Number of hectares of restored land	200	5	25	50	500	2,000
	Number of hectares of wetlands restored	400	25	130	260	2,500	10,000
	Number of tonnes of sediment stopped entering the Great Barrier Reef (per annum)	10,000	1,000	5,200	10,150	100,000	400,000

For more information go to www.reefaid.org.au

Enhancing Coastal Community Value Chains with Marine Permaculture (CVC-MP)



PROBLEM

Developing countries are the most vulnerable to food insecurity, which will be intensified by climate change. More reliant on small-scale agri/aquaculture, their populations are disproportionately hit harder when climate disruption decimates marine life and crop yields, impoverishing millions.

This problem only intensifies as the global population grows, forcing producers to fish and farm at alarmingly unsustainable rates. Already, most of the world's global fish stocks teeter on overexploitation or depletion, and farmers can see their agricultural land decrease by almost half as a result of climate disruption.

One possible remedy for these problems is seaweed mariculture, already a multibillion dollar industry in South East Asia. However, climate change severely hinders the potential of this market. Consequences of climate change such as warming oceans and low nutrients leave the seaweed vulnerable to parasitism and disease.

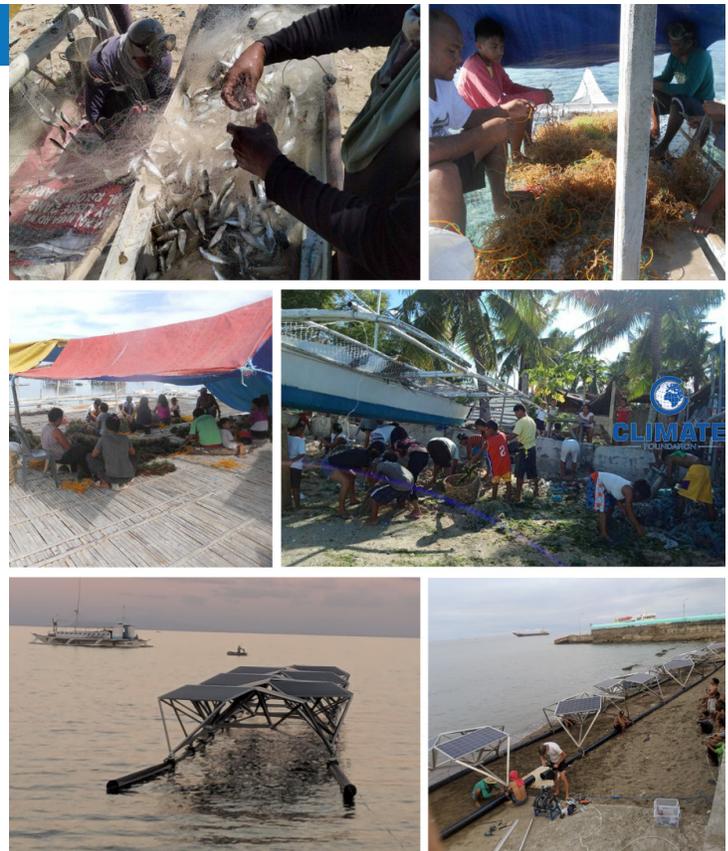
SOLUTION

The Climate Foundation (CF) has worked for over a decade to develop technologies to achieve global carbon balance. One of the most promising are Marine Permaculture arrays - floating platforms that use wave energy to provide irrigation of nutrient rich waters for seaweed growth. These arrays offer a myriad of benefits as the seaweed provides a habitat to highly diverse marine species, reduces CO₂ levels in the water and air, and its extract can be converted into nutrient-rich fertilizer for agricultural lands. In fact, a Marine Permaculture array (of 100 hectare) can offset as much CO₂ per year as 457 American households emit.

To address climate change-induced challenges to seaweed mariculture listed above, MCDI as well as the Climate Foundation plan to station these arrays farther out into the open ocean and encourage community-led management of the arrays.

This plan will provide food, fish, fertilizer and jobs - which will improve the economy, lower the crime rate, make the community safer; improve the quality of life, and reduce the negative effects of climate change. These benefits multiply as participating communities motivate neighboring villages and the model expands, improving market efficiency in meeting demand.

These arrays have been used successfully in other countries and even have support from local governments, including Madagascar. On the project, Minister of Agriculture Fanomezantsoa Lucien Ranarivelo said, "I was amazed by this project, which I see as a revolution in the sustainable development approach in Madagascar and a lever to fight against poverty."



To find out more about CVC-MPs and how you can help, visit climatefoundation.org.

February 2020

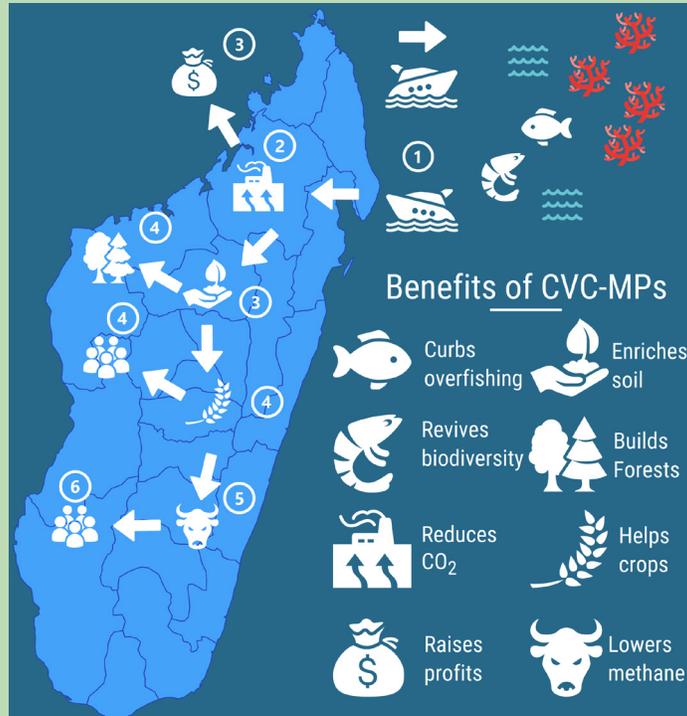
PROCESS

Phase I

We will test our systems in Madagascar and Tanzania. We then will educate relevant communities in those countries about the arrays (i.e., how to construct/manage the devices), what Coastal Community Value Chains with Marine Permaculture (CVC-MPs) are, and show them how to build the extract and composting processing facilities.

Phase II

Leveraging on these outcomes, we will scale up the system by encouraging already participating communities to work with neighboring communities to build and expand CVC-MP networks.



Phase III

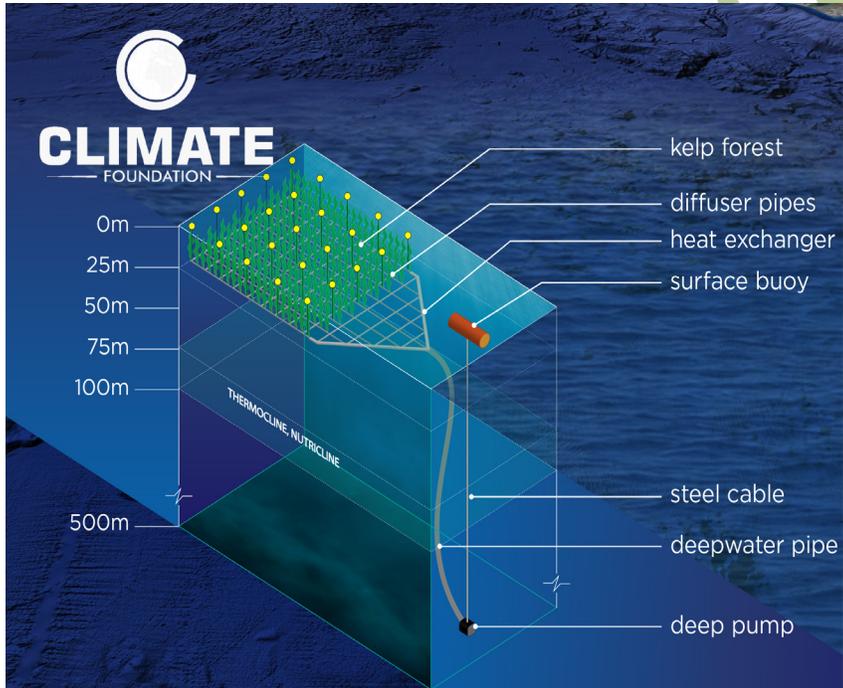
We will replicate our success in West Africa, starting with Equatorial Guinea, then expanding to other countries.

Outcome

Ultimately, our plan will be to construct networks of CVC-MPs to harvest seaweed using the Marine Permaculture arrays and return the extract to the mainland for processing. The sea kelp extract will then be sold to commercial buyers in offtake agreements and/or processed in-house into nutrient-rich fertilizer.

DONOR FUND IMPACT

MPs (see below) comprise of semi-submerged, flexible structures located in the open ocean, upon which seaweed grows. Solar energy and wave-driven pumps irrigate the seaweed through a pipe using cooler, deep ocean water from 100-500m. For 100-hectares, we can add >100,000 m3 of water per day, directly irrigating seaweeds.



With your help, we will be able to **raise seaweed farmer revenues by 150%, crop yields by more than 10%**, and much more!
Explore impact levels below:

\$1 M	<ul style="list-style-type: none"> • 4 communities reached • 45 families helped • 225 children helped • +45 jobs
\$5 M	<ul style="list-style-type: none"> • 15 communities reached • 610 families helped • 3,065 children helped • +150 jobs
\$10 M	<ul style="list-style-type: none"> • 30 communities reached • 6,150 families helped • 30,765 children helped • +500 jobs

The Team combines deep technical expertise, scientific rigor, on-the-ground implementation experience, and strong ties to the governments in Madagascar and across Africa. The Team includes: **MCDI** (lead partner), a global health organization with over 30 years of experience leading integrated, community-based programs throughout Africa and in Madagascar; including programs combining health and biodiversity; and, The **Climate Foundation**, world leaders in studying and developing carbon balance in soils and seas and mitigating climate disruption in critical ecosystems, and pioneers in developing Marine Permaculture to build value chains harnessing natural ecosystem regeneration, focused on food security, carbon balance, environmental health, and community well-being. Together, we share a commitment to reduce poverty, enhance livelihoods, improve health and nutrition, and support climate and economic resilience in Madagascar and around the world. MCDI, as the lead partner, offers experience leading large, complex initiatives, the largest being the Bioko Island Malaria Elimination Project valued at \$98 million over the past 15 years.

Pristine Seas: Safeguarding and Restoring the Ocean's Health and Productivity

THE PROBLEM

>55%

Over half of the ocean is targeted by industrial fishing

9/10

90% of the large fish in the ocean are gone

63%

Percentage of fish stocks experiencing overfishing

1996

Year when global fish catch peaked and started to decline



Decline in ocean biodiversity threatens livelihoods in coastal communities

OUR SOLUTION



Marine protected areas (MPAs) can restore ocean life and all the benefits it provides to people



Fully protected MPAs can replenish fish stocks in nearby areas due to spill-over, improving local food security and livelihoods

600%

Average increase of fish biomass in fully protected areas relative to fished areas nearby

3-5 YEARS

Time it takes to detect significant increases in marine life within fully protected MPAs



MPAs provide resilience to catastrophic events, and mitigation of climate change via ocean carbon storage

7%

Current ocean surface in areas designated or proposed as MPAs. Less than 3% is in fully protected MPAs

2x

OBJECTIVE

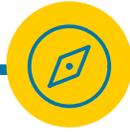
Double current ocean protection to help restore the health and productivity of the ocean, improve the livelihoods of coastal communities, and secure ocean carbon stocks

OUR PROJECT

National Geographic Pristine Seas will target 50 new locations for protection between 2021-2030 using a combination of:



Groundbreaking research to identify global ocean conservation priorities



50 Pristine Seas expeditions (5 per year)



Scientific and economic research to assess the current state of the environment, the needs for protection, and expected benefits



Production of media to engage local audiences and make the emotional case for protection



Educational programs for the leaders of tomorrow to empower local youth to manage their MPAs for the long term

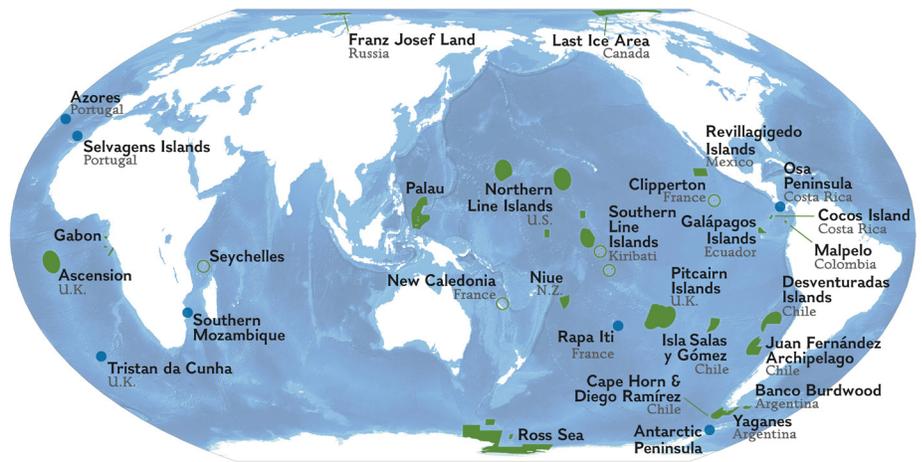
OUR SECRET SAUCE

National Geographic Pristine Seas will target 50 new locations for protection between 2021-2030 using a combination of in-house capabilities including exploration, cutting-edge technology, research, education, storytelling, and policy. This project will scale up our work from the last decade.

30 expeditions conducted in the last decade

Over 140 scientific publications in peer-reviewed journals, 28 documentary films, and many short-format videos, print articles and social media since 2008

Working with local partners and governments, National Geographic Pristine Seas has helped protect 22 areas covering 5.8 million km² (over half the size of the U.S.) since 2008



● Protected area

● Completed expedition

IMPACT OF YOUR PHILANTHROPIC INVESTMENT

\$5M

- Four places protected (including expeditions, research, films and policy work) or
- Local leadership education programs implemented in 15 locations

\$10M

- Eight places protected (including expeditions, research, films and policy work) or
- Local leadership education programs implemented in 25 locations

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NATIONAL GEOGRAPHIC
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