

The Human to Human Project

Introducing the Hope Turtle

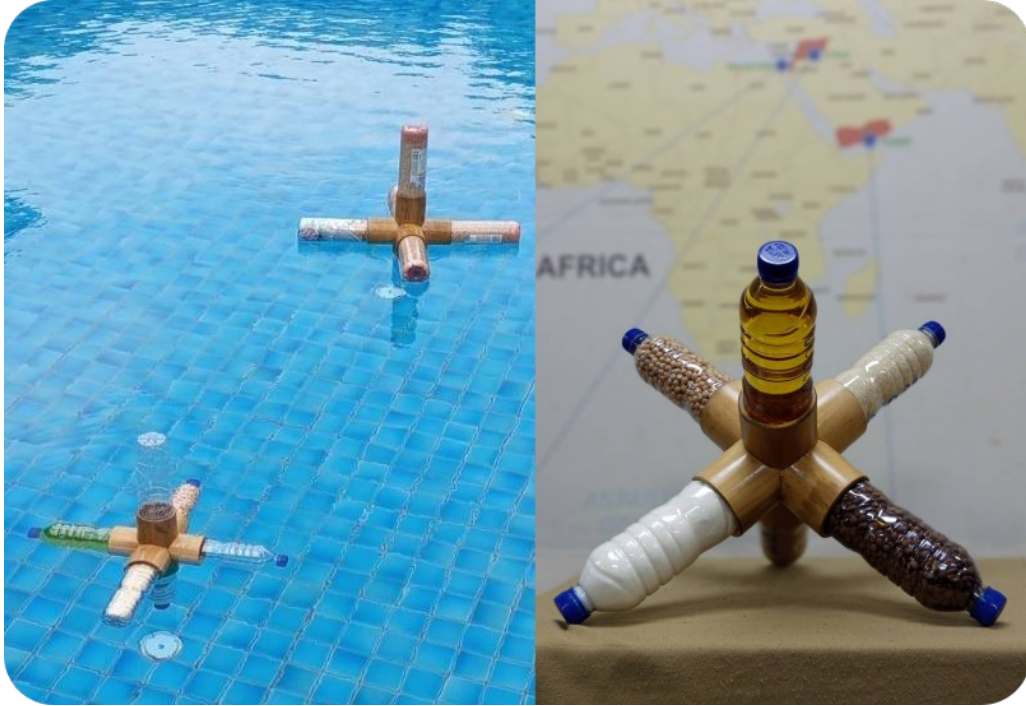
White Paper Version 1.0

Kuala Lumpur, Malaysia & Yogyakarta, Indonesia

first published: August 17th 2025

last revision: June 15th, 2026

hopeturtles.org



version 1.0 of the HopeTurtle

Gaza

As of the initial writing of this paper in August 2025, the situation in Gaza is catastrophic. After two years under siege, famine-like conditions now prevail. Aid and supplies are currently being delivered only by land, as Gazans remain blocked from accessing their farms. UNRWA and other major international NGOs have been outright prevented from delivering shipments. The limited aid that does arrive is being funneled through proxies of the Israeli government under conditions that have drawn widespread international condemnation.

Despite global outrage, condemnation, and deep concern for the plight of Gazans, delivering humanitarian assistance remains nearly impossible. Analysts note that there are no prospects for improvement in either the short or long term. With both the occupier's elected government and over 50% of the occupying electorate opposed to any form of relief or aid for Gaza, hope for effective intervention from the United Nations, international bodies, or NGOs remains bleak. The situation is further exacerbated by the political climate in Western and Arab countries that actively condemns protest and meaningful action to alleviate the suffering of the Gazan people.

Context for the Turtle

After decades of occupation, we observe that the violence, oppression and genocide of the people of Gaza has only been possible because of a spiraling dehumanization. The occupying-people, by so thoroughly segregating themselves from Palestinians, have been compelled to resort to ever greater levels of oppression to maintain the status quo. Because of the separation inherent to this dynamic, the oppressors have come to see their Palestinian neighbours no longer as neighbours. At every turn, separated by walls and fences, their no-longer-neighbours are viewed as lesser than those on their side of the walls. Precisely because of this dehumanization, the occupiers are able to rationalize the continuation of violent oppression: Palestinians, being seen as lesser and separate, can be made the recipients of unmitigated wrath and hateful disdain — even while, to any outside observer, the violence is clearly unjustifiable.

However, this works both ways.

Precisely because of the oppression and violence they receive, many Palestinians struggle to see the humanity in their oppressors. As the oppression wears on, few Palestinians are ever able to know their occupiers as anything other than soldiers and settlers. Likewise, for those people outside the region looking in at the atrocities being committed, it becomes difficult to see the humanity in the settlers and soldiers. As the wheel turns and the occupying state continues its inevitable economic and social disintegration, hateful disdain spreads toward those who will one day come into power. If unacknowledged and unaddressed, the cycle risks viciously continuing.

No activism or political action can truly shift this dynamic unless it embodies an understanding of this pedagogy of oppression and a fundamental shift in perspective.

This has direct ramifications for our hope turtle project. Without a fundamental shift in perspective, any new technology that can momentarily circumvent the occupation — as ours will — will have only a fleeting moment of “success” before the occupiers innovate an even more comprehensive and vicious response.

This is the path of arms-race escalation. In acknowledging this path, we also acknowledge its alternative.

We observe that the only way to break the cycle of oppressor becoming oppressed, and oppressed becoming oppressor: by imagining and embodying in our work a vision of the world in which the shackles of separation have entirely disappeared. In this way, the hope turtle is designed as a gift that transcends the social demarcations of neighbour and humanity itself.

Precisely for this reason, you will not see the word “drone” used in this paper. Our vehicle is not about getting from A to B as precisely and efficiently as possible. Nor is our vehicle about getting aid past group A to group B. The turtle is a fundamentally different technology, that imagines and embodies the world we all long to see. It is not for “Palestinians.” Nor is it against “Israelis.” Instead, our project is based on an entirely different view of the world — one that is fundamentally ecological and planetary.

From this Earthen perspective, we see that the various clusters of humans who live on the western Mediterranean coast are one species among many Earthlings in the tapestry of life of the region. Consequently, to be a true blast of love and light, the design of our turtle takes into consideration all the creatures of the region: a dolphin inspecting our device in the sea, a person playing beach volleyball in Tel Aviv who sees it arrive, a bird migrating high above, a person walking the road of Gaza who finds it, or a tree sending its roots into the sand and its leaves into the sky where our turtle has come to rest.

As such, in seeking to be a blessing to all, the Hope Turtle is offered not as a solution, not as aid, not as a provocation, and not merely as a delivery device. Rather, as an embodiment of hope and imagination that we can all do far better. Much as its namesake, our turtle shall be a humble Earthen gift — one that anyone, anywhere, can set upon the waters themselves: a gesture of love and light for every brother and sister of this wounded coast, human and more-than-human alike.

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Summary

The medium is the message.

- Marshall McClaughan

This white paper proposes the development of *open source, organic, marine vehicles* to deliver humanitarian aid directly to Gaza— by-passing the occupation's land, air and sea blockades. By leveraging the natural flow of Mediterranean currents and the open access of Gaza's beaches, these "turtles" can enable a decentralized, grassroots aid delivery system that anyone in the world can directly participate in. With low-cost and ease-of-assembly as core design parameters, "Hope Turtles" can arrive in swarms, overwhelming conventional naval surveillance with by their small scale and volume. These vessels—powered by sea currents, wind and sun—would provide a means for individuals and organizations to channel their desire to assist Gaza into real-world-action. In stark contrast to the lethal, polluting technologies being tested in the conflict zone, this project envisions a regenerative, subaltern, ecological approach to innovation and humanitarian action. The Hope Turtle will leverage the bamboo ecojoiner technology developed over the last three years by the Global Ecobrick Alliance for connecting bottles together into cubic matrices. As a 95% organic vehicle, when it comes to its end, rather than pollute and contaminate, it will gift food and nutrients to those (humans, fish, birds and plankton) who receive it.

Central to this initiative is Malaysia and Indonesia— nations whose political neutrality, widespread support for Palestine, and rich tradition of bamboo craftsmanship, makes it an ideal hub for the research and development of the delivery vessel. With its growing base of young, skilled, and politically conscious innovators, an Indonesian city can host an innovation lab dedicated to the vessels' development along open source, earthen and non-violent principles. By using the potent ancestral bamboo and Austronesian sailing technologies as a foundation for our engineering, we can leverage the immense power of AI tools to enable a focused community of innovators, engineers and craftsman. Guided by the principles and parameters laid out in this white paper, we will build on our existing hope turtle prototype to realize ever more effective designs.

We envision that humans from around the world can bottle and send food: either via post to a hub along the mediterranean or by directly launching a hope turtle themselves on the beach. Each turtle carries a serial number linked to its intended recipient, ensuring that aid is both meaningful and personal. Upon arrival on the beaches of Gaza, Egypt or Tel Aviv, human recipients can lookup the sender and post news of its receipt.

Though the individual payload is modest and the risks substantial, the symbolic and strategic value of such collective action has the potential to disrupt the siege, inspire global participation, and advance the cause of liberation through peaceful, regenerative means.

Context

Proven Access Opportunity

Currently, all aid to Gaza must pass through heavily controlled land crossings. The perimeter of Gaza is tightly secured, and the surrounding territory remains under full occupation. However, Gaza lies along the Mediterranean coast, with a 12-kilometer beachfront still accessible to its residents. While the occupying navy maintains strict surveillance and prevents any unauthorized boat departures or arrivals, the coastline remains a potential access point.

The length and complexity of Gaza's coastline—combined with the logistical difficulty of maintaining total maritime control—presents a unique opportunity to deliver aid through alternative means. Specifically, a strategy involving swarms of small, low-profile, and difficult-to-intercept capsules.

Already bottles that have been put at sea off the Egyptian Mediterranean coast have successfully bypassed the blockade and reached the Gaza beaches. We have confirmed this will on the ground United Nations food distribution staff. While the occupation has attempted to block beach access, logistically this is almost impossible.

Mediterranean Currents

From the Nile Delta, a steady Mediterranean coastal current flows eastward and then turns northward along the Egyptian coast, passing directly in front of Gaza's shoreline. This current, part of the larger Eastern Mediterranean circulation pattern, creates a natural conveyor belt along the coast. Its predictable flow can be leveraged to carry floating capsules from drop points on the Egyptian coast toward the beaches of Gaza or by being dropped by boats in the Mediterranean-- for example in coordination with the global flotilla movements. Given the direction and reliability of this current, it presents a strategic advantage for deploying low-powered or low-profile aid delivery systems that can ride the flow of the sea, reducing the need for propulsion, navigation, and GPS localization—all the while making detection and interception by significantly more difficult.

AI tools for engineering and software

The latest developments in artificial intelligence (AI) represent an unprecedented opportunity for grassroots research and development. Whether it's designing custom software, engineering innovative devices, or refining physical systems, AI tools now provide individuals and small teams with access to capabilities that were once limited to large institutions. These technologies dramatically lower the barriers to entry for experimentation, simulation, and prototyping—unlocking a level of creative and technical potential that was previously unimaginable.

The Global Ecobrick Movement

The core concept of an open-source, decentralized methodology for action in Gaza is inspired by the author's experience leading the spread of the regenerative ecobrick movement. By leveraging the principles of mandalic collaboration¹, the ecobrick movement has grown from the Philippines to Indonesia and beyond, empowering millions to turn their concern about plastic waste into tangible, localized action. Each small, individual effort—adapted to local contexts—gains deeper meaning and momentum by connecting to a global movement committed to transcending plastic pollution. In the same spirit, we envision channeling global concern for Gaza into practical, local initiatives through the development of open-source marine drone technology made from organic and widely available materials.



Figure 1: An ecobrick that has been serialized using the GoBrik app.

The Indonesian and Malaysian Context

Indonesia and Malaysia are predominantly Islamic nations that do not recognize the state of Israel—support and solidarity with the Palestinian people is widespread. Unlike many countries whose close ties to the United States inhibit meaningful action and suppress public protest, Malaysia and Indonesia's political, religious, and civil society leaders—including those from mosques, churches, and grassroots movements—have been outspoken in their condemnation of the occupation.

Indonesia and Malaysia are home to a young, increasingly educated, and politically aware population. This demographic is not only socially engaged but also highly creative and entrepreneurial. Indonesia in particular has a long-standing tradition of craftsmanship using bamboo and other natural materials, and these traditional skills are now converging with modern technologies. Across the archipelago, young innovators are blending organic materials with batteries, circuits, and digital components to create sophisticated products—from solar-powered devices to custom electronics—rooted in local culture yet aimed at global relevance. Malaysia likewise has a millennia old seafaring culture that has for centuries navigated and crisscrossed the islands of South East Asia using only the stars and wood boats.



Figure 1: An Austronesian outrigger canoe with a single stabilizer and single sail.

¹ See: *Mandalic Collaboration, The Ancient Future of Working Together* Russell Maier <https://russs.net/mandalas/>

Ancestral Austronesian Seafaring Technologies

The Indonesian and Malaysian islands—including Java, Sumatra, Borneo (Kalimantan), Sulawesi, Malaysia and the Philippines—are part of the Maritime Southeast Asia region, and the ancestral origin of Austronesian seafaring traditions. Ancestral Austronesian sailing boats, particularly the *outrigger canoes* and *double-hulled voyaging canoes*, remain incredible feats of maritime engineering even by modern standards. Developed by the Austronesian peoples thousands of years ago, these vessels were specifically engineered for long-distance ocean travel across the vast expanse of the Pacific and Indian Oceans. The outrigger—a secondary float attached by spars—provided stability in rough seas, allowing even narrow hulls to remain upright. Double-hulled canoes offered greater balance, cargo capacity, and room for people, making them ideal for exploration and migration. These boats were often powered by large crab-claw or triangular sails made of woven pandanus or coconut fiber, and were steered using paddles or steering oars. The Austronesians used their boats not just for travel, but for deliberate navigation across thousands of kilometers, colonizing remote islands from Madagascar to Easter Island.

These Austronesian traditions, made totally from organic materials (such as wood and bamboo) offer a tried and tested path forward for developing a regenerative seafaring turtle that embodies our human and ecological principles, for reaching Gaza.



Radical Transparency

From the outset, the project will be operated under the principles of non-violence and of radical transparency². The project will be open and out front and public facing with its mission and research and development. Names of project leaders will be made public as well as this white paper. In this way, the project, whether it achieves technical success and manages to land tens of thousands of bamboo aid packages on the beach of Gaza, will remain a potent and inspiring statement of global solidarity and humanitarian and ecological imagination that flies in the face of the fear that the occupation requires.

² These principles are inspired and in parallel to those of the 1000 Flotilla Initiative.
<https://mapim.org.my/2025/06/13/the-1000-flotilla-initiative-to-break-the-siege/>

The Hope Turtle

Subaltern Human Principles & Earthen Ecological Principles

Our development and designs will embody the following principles:

- Non-capital: very low cost, using as much as possible freely available materials
- Community powered: Accessible and applicable by the many many folks who are concerned about Gaza and wish to take action.
- Community developed: Open-source technology that will be open to real time adaption and improvement by the global community
- Regenerative: Using as much as possible organic, biodegradable materials
- Modular and reusable: Parts and components will be easy to swap, repair and reuse
- Spiral: The next lifecycle of every aspect of the hopeTurtle is anticipated in such a way that the next use is greener and more functional than before.

Version 1.0: Simple Version for Immediate launch

The initial hope turtle design is based on the work of the Global Ecobrick Alliance's development of ecojoiners over the last two years. Ecojoiners allow bottles to be firmly attached into Cubic matrices to build furniture and structures.

Ecojoiner are made from bamboo. The design leverages the hollow and circular nature of bamboo. The inside is sanded out to the precise diameter of the bottle. Packed bottles are thus held fast inside the ecojoiner. The only way to remove is by twisting the bottle out.

Instead of Ecobricks, for the hope turtle bottles are packed with food and aid items. The bottles are attached to each port face and the turtle is dropped into the sea. The aforementioned Mediterranean currents then take the turtle to the Gaza beach.

Flotation testing shows that it is very difficult for the aid bottle to fall out.

Advantages over a simple bottle

- Six times as much aid as a single bottle
- Better flotation-- stable structure to ride waves.
- Modular, if damaged or a bottle is ruptured, will still work

- The ecojoiners can then be used with the arrived bottles by locals to build furniture and structures (bottles can be filled with plastic when they arrive to make ecobricks).
- Easily enabled, advanced hope turtles that make use of one of the apertures for a bottle with GPS. Since this bottle is lighter it becomes the top bottle that will consistently stay above water.
- Serves as a stepping stone to more advanced smart hope turtles that incorporate guidance, tracking and propulsion.
- The ratio of plastic to biodegradable material is very small (PET bottle vs Bamboo and food).
- Can provide cover for more advanced, similar looking hope turtle designs.

Disadvantages over a bottle

- More costly and design intensive
- Requires more logistics for delivery and fabrication to distribution hubs

Version 2.0: Smart HopeTurtle Design

While developing and deploying the simple Hope Turtle design, we will begin work on increasing the chances by which the hope turtle can arrive. This will involve incorporating tracking, navigation, guidance and propulsion into the design.

Here we will have the foundation and the field experience of the simple hope turtle to build on. In addition, we'll have access to the commercially available drone technology and open-source circuit boards and sensor system-- such as the Raspberry Pi.



Figure 3: The Danish navy has developed autonomous "saildrone" that can remain months at sea.

Advantages over Version 1.0]

- Can be deployed anywhere in the Mediterranean
- Will be able to localize and self-navigate using GPS
- Will be able to navigate using the stars
- Will be able to home into specific coastal shore patterns
- Will be able to use all available navigation options to self-dead-recon to shore

- Will be able to report its location
- Will be able to serve as a node in a meshastic LoRa network. This can cast a network across the Mediterranean to serve both hope turtles and the flotilla
- Will contain other varieties of ecojoiners for local use upon arrival
- Will make use of its own propulsion mechanism (most likely sail)
- Will have its own solar energy source and storage

Disadvantages over Version 1.0

- More expensive
- Requires far more research and development
- Non-bio to biodegradable weight ratio decreases (will contain potentially contaminant materials in its circuits, batteries and sensors).

A Confluence of Opportunity

We propose that the unique convergence of Malaysia and Indonesia's youthful, politically conscious population and its safe environment for meaningful pro-Palestinian action presents an opportunity: the development of more advanced organic, autonomous delivery vehicles designed specifically to bring humanitarian aid to Gaza. These smart hope turtles would harness the favorable wind and ocean currents of the Mediterranean to reach Gaza's beaches— quietly, sustainably, and effectively.

Drawing inspiration from humanitarian and ecological values, rather than serving military aims, this initiative would be guided by open-source collaboration and sustainability. The goal: to create a low-cost, self-powered bamboo vessel that enables people around the world to take meaningful action in solidarity—helping to deliver humanitarian aid by any peaceful means available.

Though the payload of each hope turtle may be small, the symbolic and practical potential is immense. By making these turtles affordable and easy to commission, individuals globally could participate in this decentralized effort. Even the act of forcing the occupation to confront yet another breach in its blockade would be a meaningful contribution—both in raising global awareness and in helping hasten the liberation of Gaza.

Deployment within Distraction

It will be an immense technical challenge to deploy the hope turtles and have them reach the right places on the Gaza shore. However, failure, in itself can be success. Simply, distracting and deferring resources of the occupation is a service. So too is the physical and mass demonstration of global intent to alleviate the plight of the people of Gaza.

Furthermore, by deploying two classes of simple and smart hope turtles-- the simple turtles will provide cover for smarter (and more expensive) versions to reach the shore.

Human2Human Platform

A Decentralized 1-to-1 Delivery of Requested Items

Context: Problem to solve

In situations of disaster and crisis all too often those who wish to help those in need, assume the needs of those who they perceive to need their help. The author has observed this dynamic in his own work in Sri Lanka (post-tsunami) and in Nepal (post-Earthquake). Despite the best of intentions, aid is often delivered in ways that do not have the consent nor consultation of those receiving it. Furthermore, eager to deliver aid at all costs, little thought is given to the long-term consequences of the aid that arrives-- this can result in mounds of waste, plastic and packaging that cannot be processed locally.

Platform Proposal

To support the marine delivery system, we propose the development of the human2human platform that will allow Palestinians in Gaza to request specific items—small enough to fit within the autonomous vessels. These requests would form a publicly visible, continually updated list, enabling individuals around the world to directly respond by preparing and dispatching aid tailored to real needs.

Each bottle would carry a unique serial number linked to the original request in the app. Upon arrival in Gaza, this serial number can be used by local coordinators or community networks to identify the intended recipient and ensure the item is delivered appropriately.

This system would not only increase the relevance and efficiency of aid deliveries but also foster a deeper sense of global solidarity and connection— linking real people across borders through an act of mutual care.

Upon confirming an end request, senders will log a photo of themselves holding their serialized bottle. Upon receiving a bottle, Gazans will be able to log a photo of themselves holding their received bottle. These images will be imminently shareable on social media.

Platform Parameters

The deployment will occur over stages, focusing first on the release of a website/web app. The development and the final platform must embody the regenerative principles of the hope turtle project. Consequently, the code must use open-web protocols, be open source and the platform both human and earth friendly. Accessibility, carbon impact tracking and language translation must be built in from the get-go.

Given the complicity of many large corporations, the development must be independent of all corporate services (i.e. no Flutter, no Facebook connect, no third-party services). Only once the web app is fully independent and operational, Android and iOS options can be established. In this way, although we may use the largest corporate platforms, our own is not dependent upon them.

Using GoBrik as a model

The Global Ecobrick Alliance has developed a web app over the last seven years to serve the global plastic transition movement. This open source app, has already developed a rigorous mechanism and process for logging and serializing and storing ecobricks. This model can be used as a foundation as we move forward with development.

See: <https://gobrik.com>

Source: <https://github.com/gea-ecobricks/gobrik-3.1>

Proposed Framework

- MySQL database
- Ubuntu cloud server
- Human2Human developed a server deployable package to make migration and re-launching fast and easy.
- PHP or Python backend
- AuthO login or Buwana Login for credentials
- Website Carbon tracker
- OpenStreetMap for localization
- Light, Dark and high contrast modes
- Switch Language built-JavaScript web translation
- Optimized for very low file size and fast loading (optimized CSS layout)

Risks and Challenges

Retaliation & Sabotage

Above all this project will focus and emphasize its non-violent, regenerative and humanitarian goals. However, with the arrival of tens of thousands of bamboo vessels on the Gaza coast that directly undermine the occupation, the project will need to anticipate a forceful, cunning and malevolent retaliation. For this reason, the structure of the R&D enterprise will need to be will need to prioritize operational security with comprehensive data protection and private communication strategies.

Financial Overwhelm

The global, Malaysian and Indonesian concern for the plight of Gazans is overwhelming. Without a well-structured enterprise and operational plan to channel the help and funds, the project could easily be overwhelmed. A dedicated Indonesian Yayasan (non-profit) with experienced book keepers and financial management will be needed to channel funds towards the fluid needs of the research, development and deployment of the technology.

Challenge to Principles

Given the global and Indonesian anger at the plight of Gazans, it will be tempting for many to use the bamboo vessel technology for non-humanitarian purposes. This temptation may also sway those working on the project to break away with their own initiatives. While “forking” is a fundamental element of open-source development, it must be made clear from the outset that the guiding principles of the initiative will be non-violent, ecological and humanitarian.