



Vetting Report

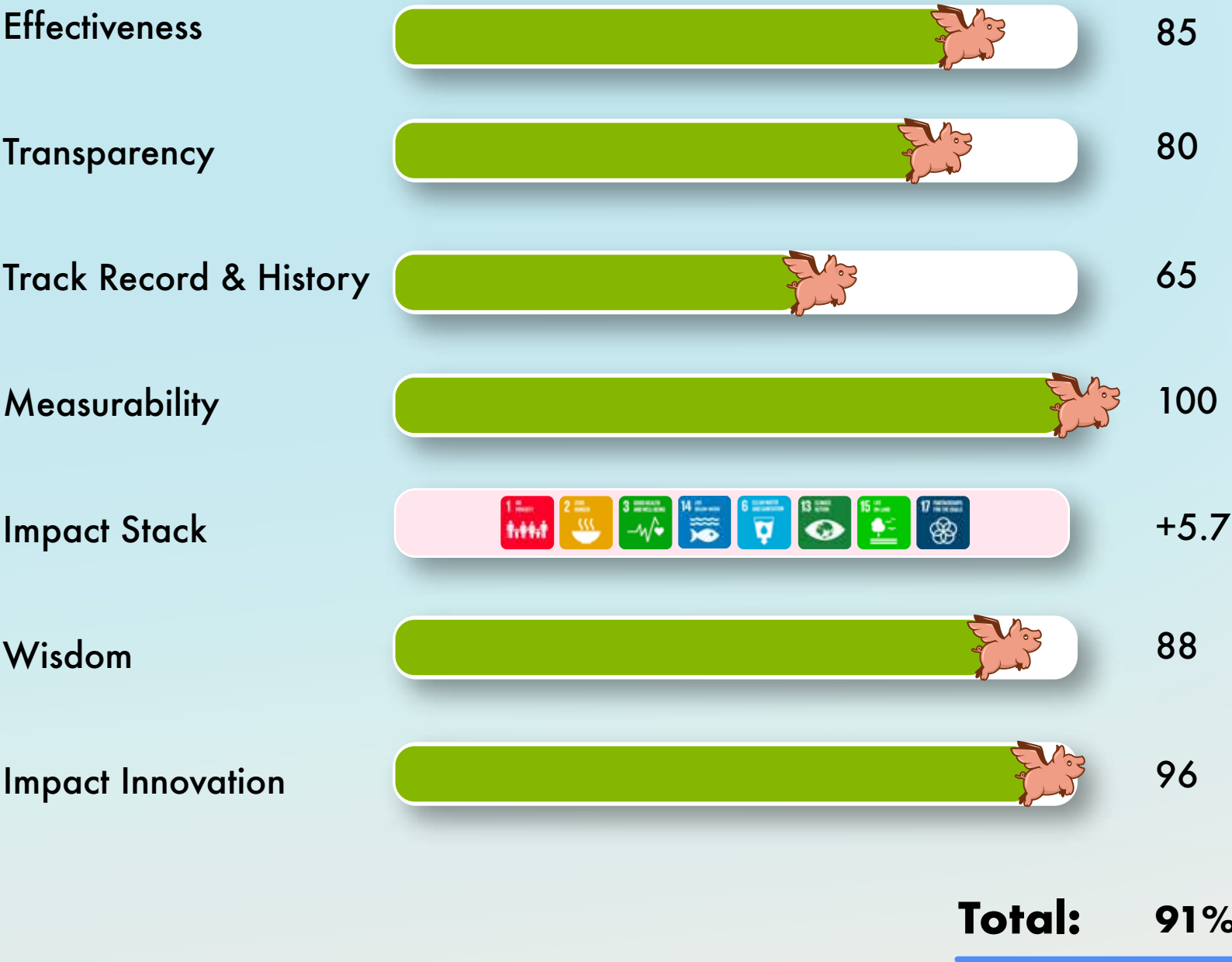


91%

DOLLAR DONATION CLUB

Overview

Score overview*



Highlights

Mission: “Pull ocean-bound plastics from the most polluting rivers to save the ocean.”

Big Goal: “Clean the most polluted rivers in the world”

Location of Impact: Asia

Location of HQ: Cologne, Germany

- Major achievements to date:**
- Prevented over 100 Tons of plastic from exiting rivers into the oceans to date.
 - Designed the first open-sourced walkable river trash boom system.
 - Expanded river “trashbooms” into multiple countries throughout Asia.

Return on Donation

\$1 = 2.2 lbs of Ocean-bound plastic removed

(equivalent to +50 water bottles!)

- DDC’s favorites:**
- 3L approach: Locally sourced, low-tech & low-cost! This means more dollars going to removing plastic.
 - Plastic Fischer open-sources their river plastic solutions.
 - Rivers account for an estimated 80% of ocean plastic!
 - Plastic Fischer processes every kg of plastic removed to ensure it never returns to a river/the ocean ever again!

The 3 BIG Questions:

1. How is the donation used?

Each dollar removes 1 kilogram or 2.2 lbs of ocean bound plastic from highly polluting rivers (primarily Asia) and ensures proper processing so that it never returns to the water or to landfills again.

2. Will it actually make a difference?

Plastic Fischer is focused in a region that feeds plastic into one of the top 10 most polluting rivers in the world (Ganges River, India), and is employing a proven and measurable solution. It is estimated that 80% of ocean plastic waste enters the oceans via less than 2,000 rivers and coastlines ([Our World Direct](#)).

Each donation goes to the manufacturing and maintenance of river barrier systems that help develop waste management in local regions, and prevent ocean-bound plastic from reaching the ocean. In a word, **yes!**

How will I know it created an impact?

All plastic removed is data-verified by 3rd party partner, [CleanHub](#). That data is made visible to donors along with monthly progress updates in the form of photos, videos, and audio updates–directly to your donation tracker!

* See addendum to learn how we calculate the Integrated Impact Score

About the Integrated Impact Score

We're levelin' up philanthropy!

The Dollar Donation Club **Integrated Impact Score** was designed to ensure that the world's most powerful and holistic solutions are presented to our members. The goal is to identify *acupuncture points of change*—solutions that create maximum positive benefit using minimal resources, while triggering a large cascade of additional benefits.

More importantly, the Integrated Impact Score embodies our approach of *smart-philanthropy*.

It's not enough for us to give with *only* our heart. We must also give intelligently—identifying solutions that address root causes, generate outsized measurable outcomes, integrate holistically into existing communities, consider long term impacts, reduce the risk of unintended consequences and lead to self-reliant capabilities rather than co-dependencies.

It's time for us to focus less on things like “overhead ratios” and more on the total, holistic positive result per dollar. Oh yeah, and it should be fun!

We believe that the best solutions...

- Solve root-causes rather than symptoms.
- Consider their impact 100 years into the future.
- Produce massive impact efficiently.
- Care for people and planet holistically.
- Leverage nature's and humanity's best technologies.
- Are radically transparent—financially and operationally.
- Are resilient against threats of reversal.
- Result in self-reliance, rather than dependence.
- Clearly understand total costs to achieve outcomes.

This vetting methodology was designed with careful care to identify these solutions.



Plastic Fischer Vetted By



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Board Chair @ The Buckminster
Fuller Institute



Scarlett Arana

Global Ambassador, United Nations
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Christopher Verlinden, PhD

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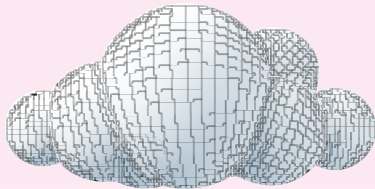
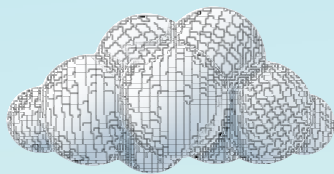
Brooke Darshana

Expedition Coordinator, Scientific
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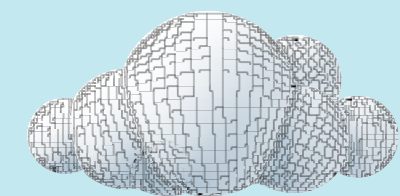


Chad Frischmann

Vice President & Research Director,
Project Drawdown



Integrated Impact Scoring Results



Effectiveness

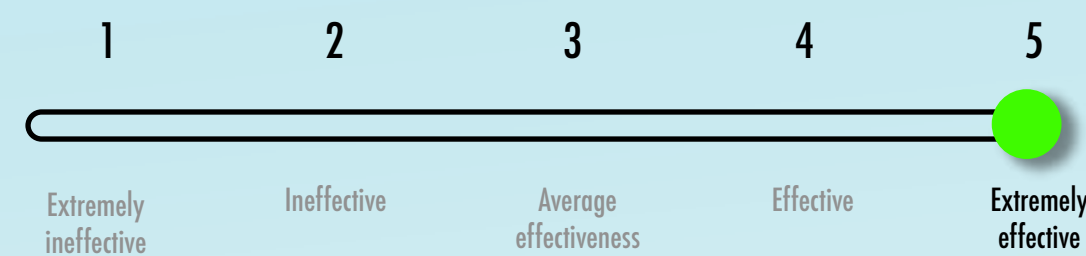
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Does it work?

Per dollar, how effective is this organization at creating measurable impact?

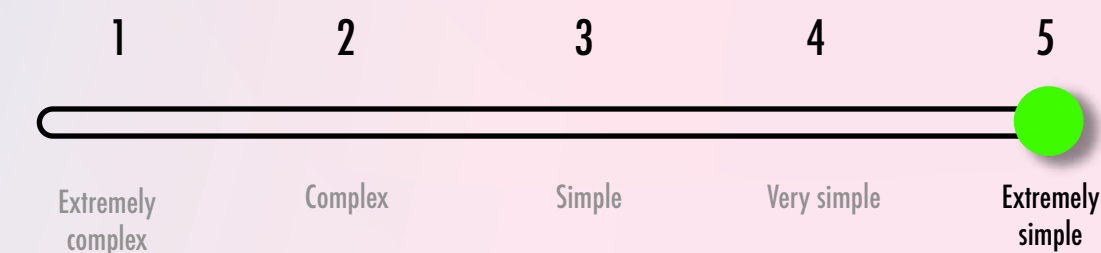
How impressive is the organization's measurable social impact compared to the cost to create this impact?



\$1 removes 2.2 lbs of ocean-bound plastic. That is the equivalent of stopping 50 ocean-bound water bottles!

How simple/elegant is the solution?

Has this solution devised an approach that has minimal "extra fat" or excessive complexity in it's strategy for solving the issue?



Plastic Fischer focuses on simplicity and efficiency by avoiding moving parts and using the power of the river whenever possible. The solutions have no frills, but get the job done. The 3L approach uses local, low-cost and low-tech solutions to tackle the problem quickly at scale and involve the local communities which is necessary for long term success.

Removing plastics up-stream is significantly easier and cheaper before it hits the ocean.

Is the organization's team credible and effective?

How well has the leadership team demonstrated competence, experience and effectiveness in the organization's area of impact?

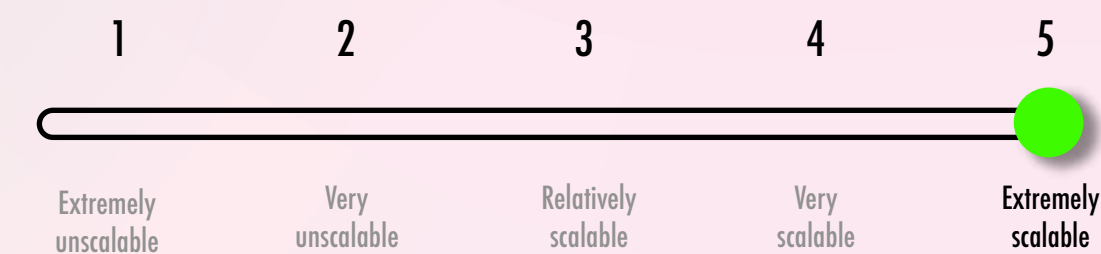


Plastic Fischer has a passionate, dedicated team of professionals with backgrounds in marine engineering, law and experienced field techs with local knowledge. Read their inspiring stories [here](#).

While there is amazing promise with the team, Plastic Fischer is also a newer organization and has not yet been tested over the long term.

How scalable is the solution-set beyond its use-case geography?

Is the solution capable of being applied effectively in other geographic regions that have similar issues to solve?



Their technology is built within local urban areas from off-the-shelf materials. By avoiding shipping parts from overseas they have high scalability, which ensures quick repair and no unnecessary carbon emissions.

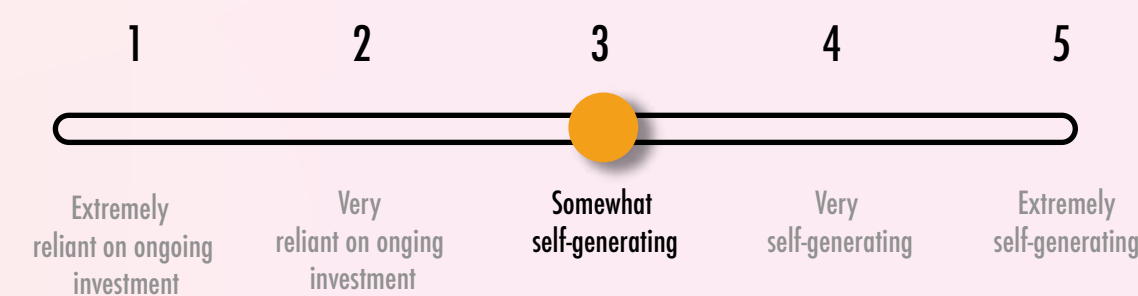
These materials are easily accessible globally which allows this solution to scale along a majority of polluting rivers around the world.

Does the organization have a clearly defined mission, vision and values?



"Our mission is to develop cost-efficient and effective low-tech solutions for any given river condition around the world. Our vision is to clean rivers to save oceans. We believe in collaboration, trustworthy partnerships and long-lasting impact through end-to-end solutions (pickup to disposal/recycling)."

How well does the solution create self-generating capabilities rather than rely on ongoing investment?

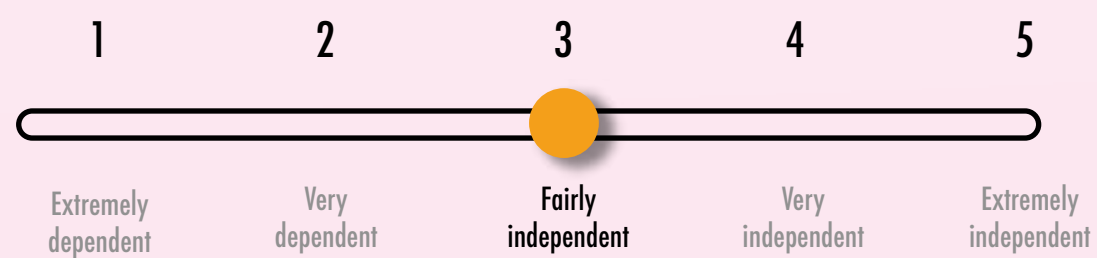


A few recyclables are able to be sold in the local markets. Most of this is PET, glass or aluminum which averages around 3-5% of the ocean-bound waste. The main revenue stream is coming from "Plastic Fischer Credits." Companies buy PFCs by paying Plastic Fischer per ton collected and processed to compensate for the plastic that they can't reduce within their supply chain. Plastic Fischer barriers do require ongoing maintenance to remove and process the plastic, which is a condition currently present with all similar technologies.

Effectiveness (continued)

How efficient is the process of achieving a self-sustaining solution?

Is the amount of time and resources invested in getting the solution to a point of self-sufficiency excessive or optimally lean and effective?



The Plastic Fischer Credit (PFC) market is evolving at this time. The break-even point depends on the volumes of plastic that are being stopped. If enough companies pre-finance their expenses at a very polluted river, the site can become self-sustaining. Currently the system needs ongoing financing from companies and organizations to remove and process the plastic.

How much risk is there that the impact will be reversed for any reason?

How likely / unlikely is the potential for social, political, ecological or economic threats that could reverse achievements made through this solution?



“Reversal” in this case could be defined as plastic being removed, only to end up in a river again, or a river barrier system breaking.

Plastics collected are verified and processed in the most safe manner possible so it will not end up back in the waterways. Plastic Fischer has partnered with Geocycle to create cement that is normally powered by coal-fired power plants, creating a solution that guarantees the plastic cannot physically re-enter waste streams.

With local knowledge of weather and by learning from complications of other boom systems during peak rain events, Plastic Fischer has designed emergency opening mechanisms that can release pressure created during heavy flow of rivers. They are able to open parts of the system itself, so that large volumes of water can pass and the equipment will not break and be washed

Transparency

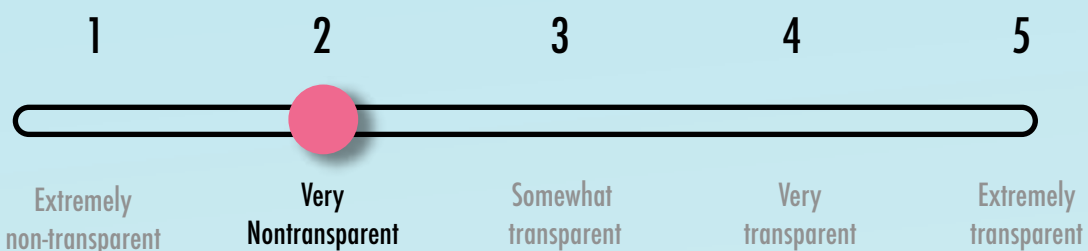
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Are they honest?

How transparent is the organization financially?

How easy does the organization make available all financial records?

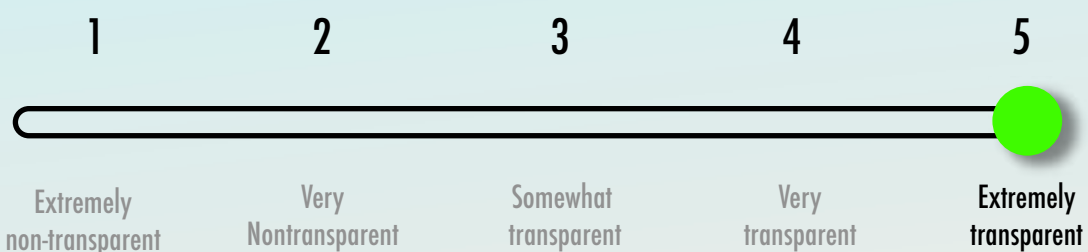


Plastic Fischer has not disclosed public financial information, which is often standard practice for for-profit enterprises.

See Plastic Fischer’s example budget and cost breakdown [here](#).

How transparent is the organization operationally?

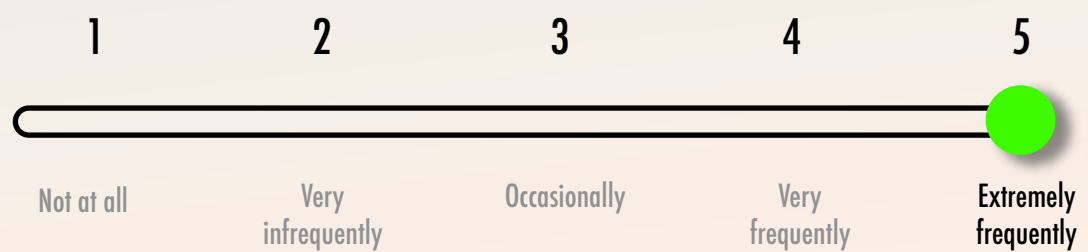
How readily available is information about current operations, and how the organization is executing their plans?



Plastic Fischer records and verifies all steps from collection to disposal with photos by working with [Cleanhub](#), a platform for tracking and verifying waste collection of ocean bound plastics. Photos, videos and monthly updates of their progress are provided to all donors.

Plastic Fischer has also open-sourced all of their river barrier designs! You can find their designs on how to build a trash boom [here](#).

Are regular updates on progress made readily available to donors?



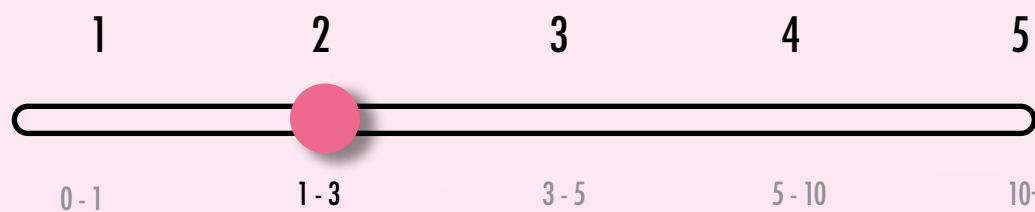
Monthly data reports with the weight of collected plastic from each site (via CleanHub) and photos will be provided. There will also be videos, stories and interviews occasionally!

Track record & history



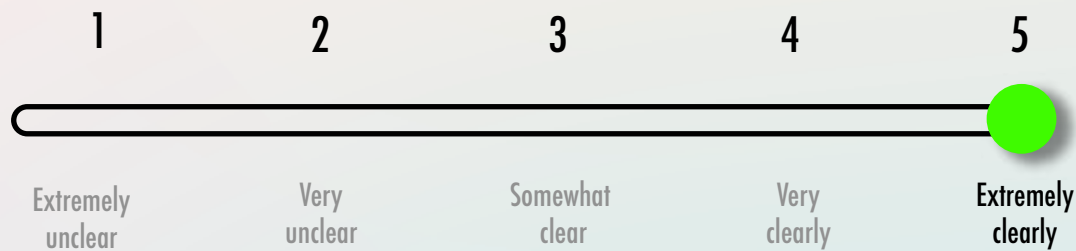
Are they proven?

How many years has the organization been in operation?



Plastic Fischer was founded in April 2019 and began operations in Indonesia in June 2019. They were operational until PF team had to leave the country due to Covid in March 2020. Since January 2021, PF hired 32 full time employees and have deployed 14 systems in India and Indonesia.

How clearly does the organization embody the values it purports to have?



Plastic Fischer “key performance indicators” are 1) tons of plastic collected, 2) people employed full-time.

Plastic Fischer’s goal is to protect marine habitats and biodiversity while motivating people to decrease the consumption of plastic products.

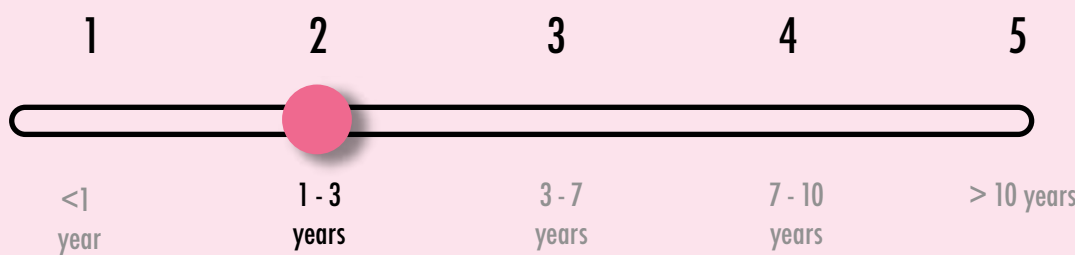
“We make sure that everyone we hire is joining the company with similar motivation. We hire similarly motivated people dedicated to honest impact with a primary focus for stopping plastic waste in rivers.”

How much positive impact has the organization created in the past in it's category?



An estimated 100 tons of plastic have been stopped from entering the oceans from all current Plastic Fischer operations. The Trashboom in the Citarum River, Indonesia captures 1 ton of plastic per week.

How long has the solution-set been demonstrated to be effective?



The Citarum Trashboom has been in the water since September 2019 and does not show any signs of failure so far, and has been highly effective at its intended purpose.

The Varuna River trashboom in Varanasi India has been in the water since November, 2019 and has effectively helped capture over 11 tons of plastic in Varanasi at the time of publishing this report.

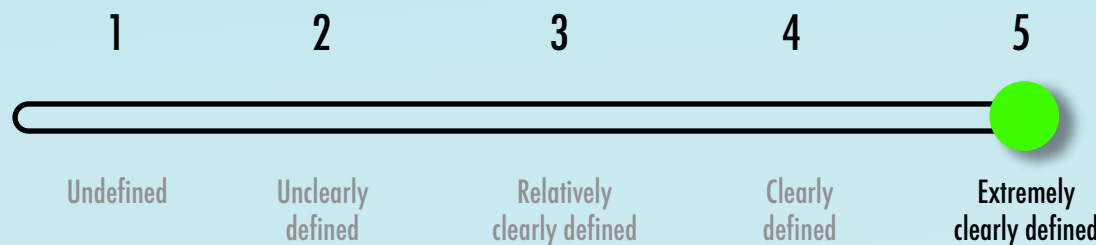
Measurability

100



Is it measurable?

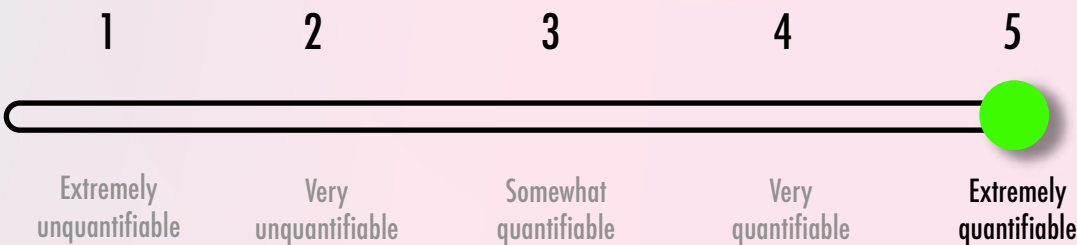
Does the organization have a clearly defined "big goal" that is measurable?



The big goal is to clean the most polluted rivers and be one of the largest providers for plastic credits worldwide within the next three years. Plastic Fischer aims to collect and process thousands of tons from rivers around the world. This is measured, tracked and verified.

Initially Dollar Donation Club is partnering with Plastic Fischer to protect a section of the Ganges river in Varanasi, India. The goal is to deploy 12 solutions at tributary rivers to effectively protect the main river.

Is the positive outcome quantifiable?



Yes, \$100,000 = 100,000 kg of ocean-bound plastics collected, sorted, recycled or processed in the safest manner possible.

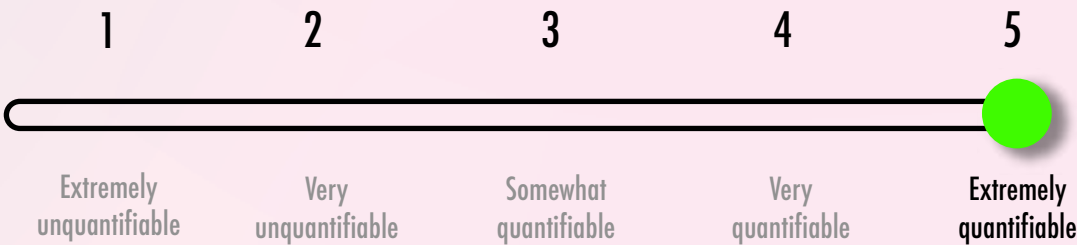
Does the organization have a clear understanding of the total projected cost to achieve the "big goal"?



The project costs are estimated to be \$100,000, including at least 6 river systems, staff, a Material Recovery Facility (MRF), logistics and disposal/processing.

This will fund the operations for 12 months in Varanasi, and remove 100 tons of ocean-bound plastic

How well does the organization monitor and verify their ongoing progress?



Plastic Fischer collects data daily and measures the performance of each system to track the plastic that we stop from entering the oceans. [Cleanhub](#) is the verification partner, who collects 59 data points for every 1 ton of plastic removed—including weight, transportation data and even the subtraction of moisture content from removed plastics.

Does the organization have a clear understanding of what \$1 can accomplish?



\$1 = 1 kg plastic collected and processed (2.2 lbs).

Impact Stack

One solution can't solve everything. But **great** solutions solve many problems at once.

The Sustainable Development Goals are a collection of 17 global goals designed to be a "blueprint to achieve a better and more sustainable future for all."

Organization will receive 1 additional point for every 10 points calculated below.



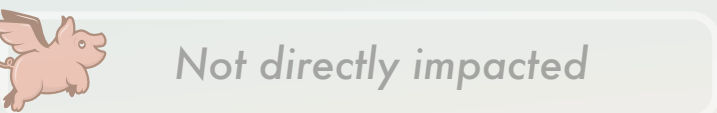
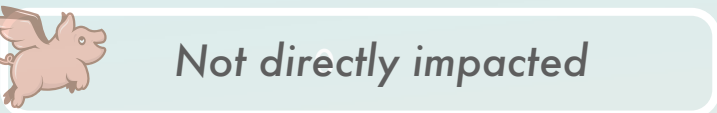
+4



+2



+4



+9



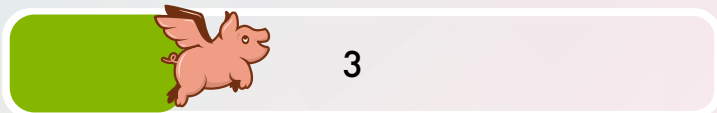
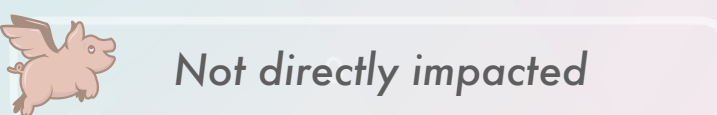
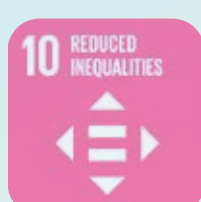
+5



+3



+4



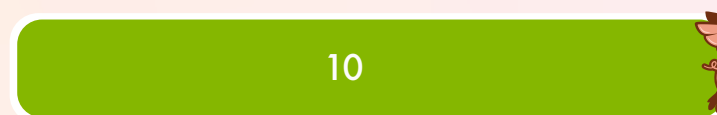
+3



+4



+4



+10



+5



Wisdom

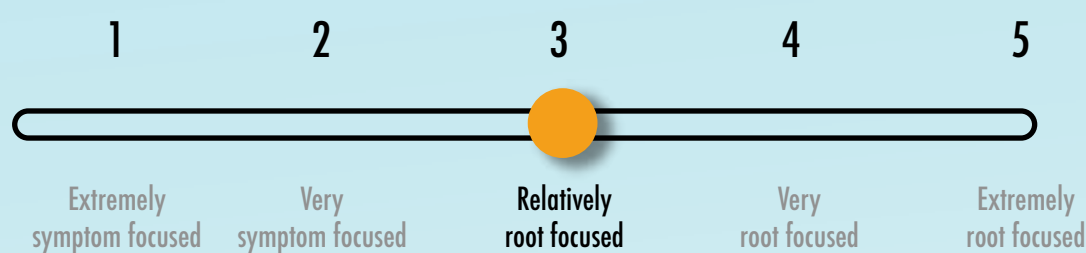
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Is it holistic?

Does the solution address a root cause, or a symptom?

Is this solution focused on addressing symptoms of what may be a deeper cause? Or does this solution seek to address a root cause capable of solving many salient symptoms?

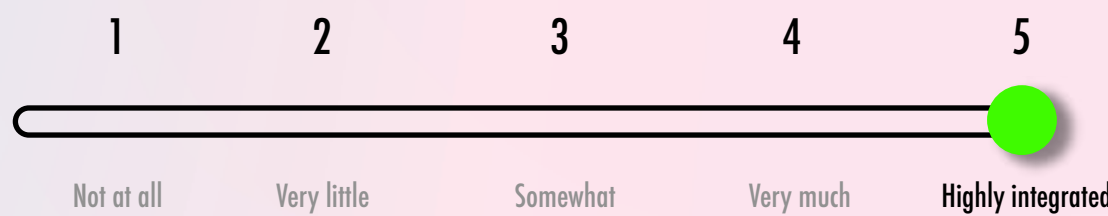


Plastic pollution is a symptom of poor design in packaging and poor waste management. Plastics are not designed for a circular economy and it is estimated that 70-80% of ocean plastics from the land, usually end up being washed into the ocean from rivers. ([WData](#)).

Plastic pollution has become such a ubiquitous problem that it has been deemed as dangerous as climate change ([BBC](#)).

Plastic Fischer is not solving the root of the plastic pollution problem, but they are solving close to the root by focusing on rivers—which have been identified as a major contributor of ocean plastic.

Does the solution integrate into local populations as part of the solution?



Plastic Fischer uses the 3L Approach:

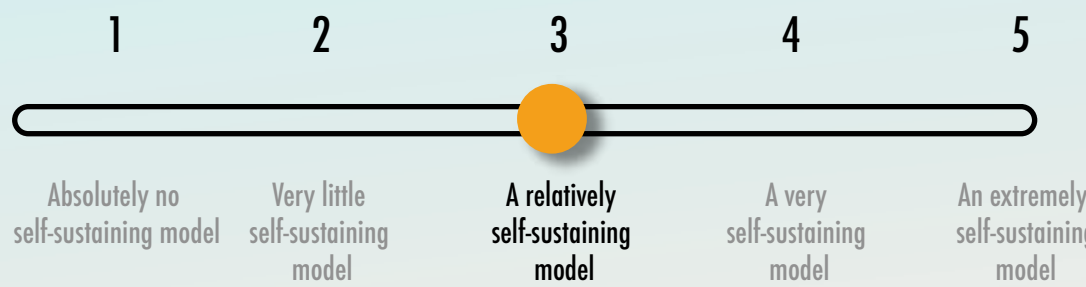
Local: Manufacture and operate locally.

Low Tech: Simple, efficient design with no heavy engineering.

Low Cost: Local and low-tech lead to low-cost.

They create everything and operate locally. Plastic Fischer hires local engineers and pickup/sorting staff. They believe that working closely with the community is crucial to creating a lasting impact.

Does the solution have an economic model that is self-sustaining?

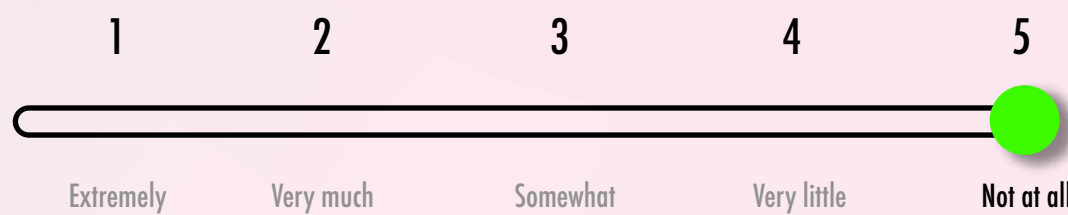


Currently, recycling and processing of plastics do not allow for a self-sustaining economic model.

The main revenue stream is coming from “Plastic Fischer Credits.” Companies contribute to the environment by paying Plastic Fischer per ton collected and processed to compensate for the plastic that they can’t reduce within their supply chain.

This is self-sustaining when companies are engaged in purchasing plastic credits.

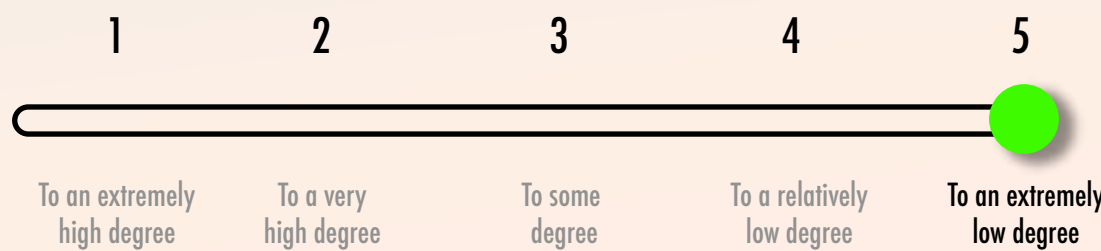
Does this solution produce any negative impact on indigenous populations?



Our vetting has uncovered no negative influences on indigenous populations.

To what degree does the solution prevent other potentially beneficial solutions from emerging?

How confident are we that this solution is not utilizing resources (e.g. financial or ecological) in such a way that may prevent new and better solutions from being applied later?).

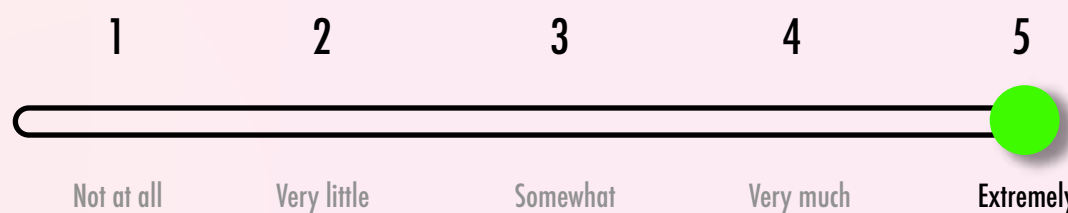


Plastic Fischer systems are modular, easy to deploy and retrieve. They build them with the idea that they can be improved or re-deployed elsewhere at any time.

River barriers are not permanent installments, so if better solutions emerge over time, the barriers can be decommissioned.

Does the solution consider it's impact at least 7-generations into the future (>100 years)?

Has the solution thought through the impact it will have on future generations in conceiving of their strategy and execution?



Plastic Fischer’s river barriers are designed in such a way that they can be packed up and redeployed to new regions if a river is no longer polluting (that’s the goal!)

The river barriers are also made from common materials that themselves can be recycled or repurposed in the future if needed.

Wisdom

(continued)

What is the risk of unintended negative consequences?



So far during their operations, the only unintended negative consequences have been related to regular maintenance and how systems deal with flooding/heavy rainfall.

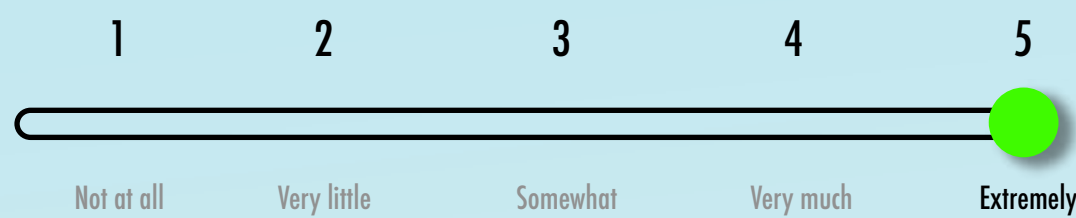
Plastic Fischer builds the systems to withstand heavy river flow and if there is a break, each boom is attached in a way that it can be recovered and repaired, reducing the possibility of losing parts of the boom into the environment.

In the worst case event that massive flooding destroys the system and it is lost, Dollar Donation Club still maintains that the net positive benefit of many months of preventing ocean-bound plastic from reaching the ocean is a net-positive impact.

Impact Innovation

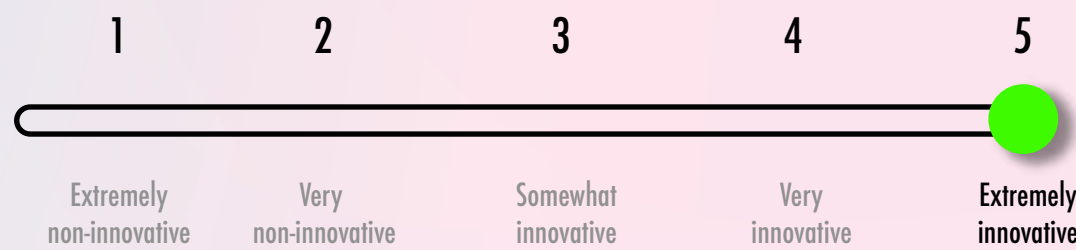
Is it audacious?

How audacious is the "big goal"?



Cleaning the most polluting rivers on the planet, removing plastics and processing them in the most environmentally responsible way possible is a big vision that is critical to the wellbeing of life on earth.

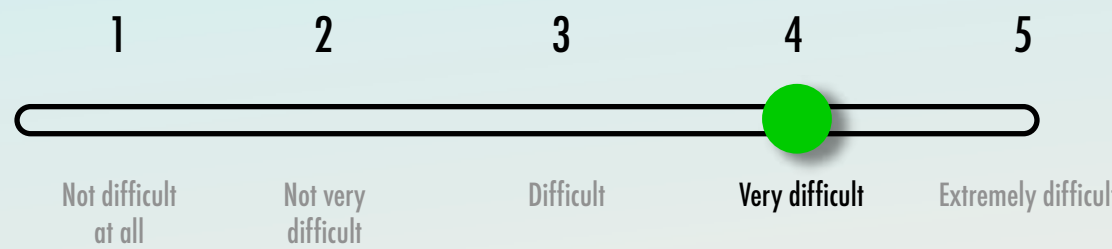
How much has the organization demonstrated an ability to innovate around novel problems?



Plastic Fischer has become a major leader in river plastic removal initiatives. In our vetting, we have identified many additional organizations who are using part or all of the Plastic Fischer open-source designs for their river barriers. Deploying a static structure into a moving river is not as easy as it may initially seem, and Plastic Fischer’s system is proven to work.

Additionally, Plastic Fischer has developed 3 discrete river solutions that can address small tributaries and larger ones.

How difficult is this challenge to solve (weighing this against how many other organizations have found effective solutions)?



Despite rivers being identified as a major choke point for ocean plastic pollution, there have only been a handful of successful river barrier systems to date, due to a number of challenges inherent to the problem.

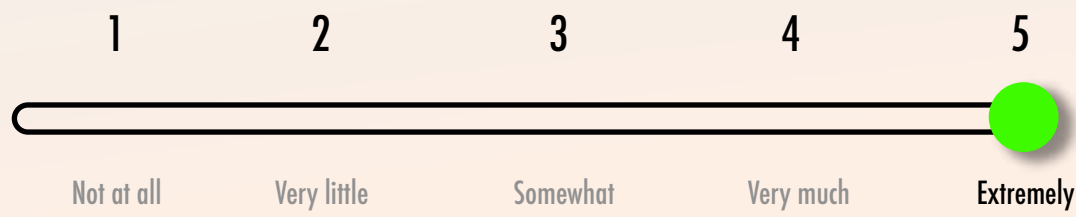
The flow of water in rivers—especially during peak rain events—can create challenging conditions for recovering plastics with barriers. Marine traffic, fish migrations and equipment wear and tear in water environments, create challenging conditions.

How urgent is this challenge to solve?



In a WWF paper on plastics and climate change they state, “In our oceans, which provide the largest natural carbon sink for greenhouse gases, plastic leaves a deadly legacy. It directly chokes and smothers a host of marine animals and habitats and can take hundreds of years to break down. As it does, sunlight and heat cause the plastic to release powerful greenhouse gases, leading to an alarming feedback loop. As our climate changes, the planet gets hotter, the plastic breaks down into more methane and ethylene, increasing the rate of climate change, and so perpetuating the cycle” ([WWF](#)).

How effectively does this solution leverage natural processes?



Trashbooms use the natural flow of water to consolidate plastic waste and channel it into one point.

Plastic Fischer’s barriers are careful not to interfere with nature, and allow marine life to swim underneath.

By cleaning rivers from ocean bound plastics and microplastics (and even invasive plants like the Water Hyacinth) rivers and oceans can be revived.

Individual questions

It's not *all* about the numbers 😊

1. In 3 sentences or less, please describe your vision of the future when the challenges you seek to solve are solved:

"The beauty of the sea is slowly returning and marine life can be restored. We are living a sustainable lifestyle, consuming less and producing less plastic. Replace plastic with bio-materials and reusable, bio-benign packaging. This creates a world where toxic plastics are no longer manufactured, creating an environment for all life to thrive. And we are no longer needed."

2. What makes you different from other organizations working in this area of social impact?

"We truly do what we say we will do. We are a learning company and question ourselves regularly. We are not shy to admit mistakes and change our approach. We do not want to be famous, and we are not looking to get a lot of followers on social media. We just want to clean up the rivers in the most effective way"

Plastic Fischer uses local low-tech systems locally that can be easily maintained, monitored and create local job opportunities to have the greatest impact on plastic diverted from oceans and landfills.

3. How did Plastic Fischer begin?

We travelled to Vietnam and saw the plastic pollution through the Mekong Delta. We realised that no one was taking care of rivers at this time and we decided to be the first company to focus on this. Fortunately, we now see a lot of companies going a similar way ([Our Story](#)).

See the team biographies in their words [here](#).

4. What are the booms made of? Share a description and link to a photo or diagram.

Plastic Fischer uses locally sourced galvanised steel frames and mesh + PVC pipes as floaters. All parts are low tech and are maintained and recycled when necessary.

Check out their design [here](#)!

5. What happens when the booms break or need replacing? Describe the end of boom-life plan.

"The trash booms are attached in a way that the system will open under heavy strain and no element will be released into the environment. We can also replace a single element quite easily by detaching it from the others and inserting a new one.

One system has been in the water since September 2019 and does not show any signs of failure. When a system is removed, all usable parts are recycled."

6. What kind of relationship-building is needed to do your work?

Plastic Fischer must receive permission from local authorities to implement any technologies. They must build trust and relationships with the governing bodies as well as local community members and local recyclers and waste processors to optimize collective impact. Relationship building is paramount to the continuing success of local impact solutions.

Individual questions (continued)

It's not *all* about the numbers 😊

7. How are the local populations affected by plastics? (health, economics, social, environmental, etc)

People often fish and swim in the polluted rivers. The plastic bioaccumulates in the food chain causing disease within the ecosystem and the humans that are in contact with it. Not only are there dire implications for the health of ecosystems, the seafood and fresh marine food species as well as human health, but the Ganges is regarded as a sacred river to the people of India. Protecting, preserving and regenerating these waters is profoundly culturally and socially significant.

Links to articles and papers on plastics as they affect the environment, economics, river and ocean health and human health can be found [here](#).

8. Did DDC Find any negative press about Plastic Fischer?

None.

9. Do animals ever get caught in the systems?

Every few days in Varanasi, Plastic Fischer reports that a cow, and other land-based animals are found in the river, caught by the trashboom. These are dead animals that have been swept into the river. When this happens, "our team calls employees that are being paid by the city to take care of situations like this. They bring the animal to a specific ground in the city. If the guy is late to show up, our staff pulls the cow aside behind the system."

Plastic Fischer has not caught any dead marine animals in their systems to date!

10. What is the impact (positive and negative) on biodiversity in the river?

After a literature review and discussions with experts, we have not found reports of any negative impacts on biodiversity. All evidence we've found indicates that the benefits to river ecosystems would far outweigh any costs (source). However, we will keep monitoring in case any new information arises. The barrier only goes X feet deep into the river, so fish can easily swim under. One unintentional positive benefit of plastic barriers is that they help remove Water Hyacinth, a fast-growing invasive plant that causes massive problems in river ecosystems.

11. Have there been any work related injuries connected to the trashbooms?

None reported so far.

12. How often are the trashbooms cleaned?

"Once a year we get the systems out and clean them. We have had no major algae growth problems on the systems."

13. How deep do the trashbooms submerge?

Fabric trashboom - 0.25m deep
Regular trashboom - 0.45m deep
Walkable trashboom - 0.5m deep

Impact Stack (details)

1 NO POVERTY



Oceans and aquaculture provide employment for nearly 60 million people, provide a key source of protein for nearly 3 billion people and contribute 1.5 trillion dollars to the global economy, yearly. ([WWF](#)).

Communities globally are dependent on healthy oceans for their livelihoods. Plastic clean-ups are a crucial part of global economic security. Plastic Fischer's work directly prevents ocean-bound plastic, protecting the ocean and humanity's ability to generate economic stability from the ocean.

Furthermore, Plastic Fischer employs only local individuals to build, maintain and repair the river barriers, and hires local waste pickers to remove and process the plastic.

+4

6 CLEAN WATER AND SANITATION



Plastic Fischer decreases the pollution in rivers before it ends up in the ocean. Specifically by focusing on rivers, Plastic Fischer is focusing on a major choke point in the global plastic pollution crisis. Plastics collected are recycled or used to create energy, ensuring that this is not entering landfills which can leach into groundwater creating a toxic environment.

+9

2 ZERO HUNGER



Approximately 3 billion people in the world rely on seafood as a primary source of protein. Marine plastics are adversely affecting the marine life that humans depend on for sustenance. Without healthy fisheries and ecosystems, there is an increase in disease, poverty, starvation and displaced peoples. ([WWF](#))

Plastic Fischer's prevention of high volumes of ocean-bound plastic directly mitigate the negative effects of plastic on global aquaculture.

+2

7 AFFORDABLE AND CLEAN ENERGY



Plastic Fischer has partnered with [Geocycle](#) to create cement that is normally powered by coal-fired power plants, creating a solution that guarantees the plastic cannot physically re-enter waste streams. Plastic-being a fossil fuel that has already been extracted from the environment-can be used for energy production, which prevents additional resource extraction and leads to a net carbon offset.

+5

3 GOOD HEALTH AND WELL-BEING



By collecting plastic from the rivers and ensuring safe processing, Plastic Fischer ensures that less plastic ends up in the food chain or is burned openly, causing toxic emissions.

+4

8 DECENT WORK AND ECONOMIC GROWTH



Plastic Fischer employs only local individuals to build, maintain and repair the river barriers, and hires local waste pickers to remove and process the plastic.

+3

Impact Stack (details)

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



Plastic Fischer's approach introduces basic waste management practices to regions that have little to no waste management. By working with local communities, their solutions help nurture local regions to take on long term approaches to waste management, solving the problem beyond their intervention.

+4

11 SUSTAINABLE CITIES AND COMMUNITIES



River barriers help prevent the proliferation of plastic waste into more dispersed environments (rivers, oceans), and help nurture local waste management infrastructure.

+3

12 RESPONSIBLE CONSUMPTION AND PRODUCTION



Plastic Fischer's projects raise awareness about the effect of single-use plastics on global ecosystems, and encourage better waste management practices in the regions that they work in.

+4

13 CLIMATE ACTION



Healthy and well-functioning rivers and oceans are critical to climate and atmospheric regulation. The removal of plastics assists the restoration of the ocean and its functions, which is an integral part of climate stability. See additional resources linked below:

[Yale: plastics & climate change paper](#)
[Marine Plastics & Climate.](#)
[Plastics and Climate Change](#)

+4

14 LIFE BELOW WATER



Plastic Fischer deploys systems that are careful to allow safe passage of wildlife. By collecting hazardous waste they stop ocean-bound plastic before it reaches the ocean. Furthermore, they prevent the creation of future microplastics which is a great cause of harm not only to marine and aquatic life, but to mammals, birds and humans (["Not just sea life"](#))

+10

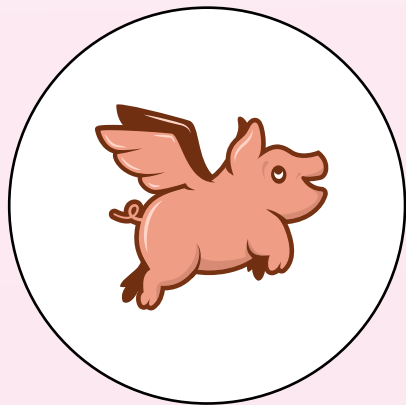
15 LIFE ON LAND



Plastic Fischer's trash booms reduce the degradation of natural habitats, halting and reversing biodiversity loss and land degradation, allowing natural systems to regenerate, creating cascading positive benefits for life on land ([River plastic pollution](#)).

+5

The DDC Integrated Impact Score crafted by



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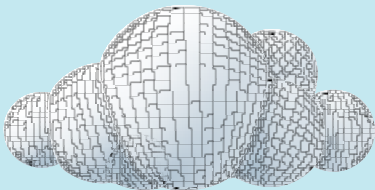
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How we calculate the Integrated Impact Score

Individual Dimension Score

The scores for each individual dimension (E.g. Transparency, Measurability) are calculated by adding up the total points (1-5) per section and dividing by the total number of questions per section.

Impact Stack

The amount of points awarded for the Impact Stack section is based on an assessment of how *directly* or *indirectly* and *effectively* or *ineffectively* the solution addresses a particular sustainable development goal, using the SDG indicators as a guide. Impact Stack is treated like a bonus of points by adding up the total Impact Stack score and dividing by 10 (i.e. every 10 points gives a bonus of +1 to the final IIS score).

Overall Integrated Impact Score

The overall integrated impact score is calculated by adding up the total points (all) and dividing by the total number of possible points + bonus points awarded by the Integrated Impact Stack. Overall scores are rounded up to the nearest integer at 0.5 (e.g. if a score of 94.5 is calculated, the final score will be 95, if a score of 94.4 is calculated, the final score will be 94).



About Ocean Plastics

We have a plastic pandemic.

Plastic makes life super convenient for humans, and super inconvenient for everyone else in the ecosystems of planet earth.

At least 8 million tons of plastic enters the oceans annually. Marine animals ingest or are entangled by plastics (1), which causes severe injuries and deaths. Over 650,000 marine animals are killed annually by entanglement.

The issue of Ocean Plastics can be looked at in 5 large categories:

1. Manufacturing & consumption (the root issue)
2. River pollution (feeding into oceans)
3. Coastal pollution
4. Ocean Macroplastics (big stuff)
5. Ocean Microplastics (small stuff)
6. Recycling & Reuse

Manufacturing & consumption

Humanity has generated over 8.3 billion tons of plastic over the last 6 decades, and it's estimated the 91% of that isn't recycled (2). At the same time, it takes over 400 years for those plastics to break down.

To get to the root of the issue, manufacturers, companies and consumers must confront the reality that a paradigm shift is needed at the root.

River pollution (feeding into oceans)

"Rivers collectively dump anywhere from 0.47 million to 2.75 million metric tons of plastic into the seas every year." It's also well documented that 80% of ocean plastic comes from less than 2,000 rivers and coasts around the world. As such, rivers are a major distribution channel for ocean plastics (3).

Coastal Pollution

A less significant portion of ocean plastics drift from waste sites toward coastlines and ultimately end up in the ocean.

Ocean Macroplastics

The big stuff in the ocean is primarily abandoned fishing gear (up to 70% of all surface plastics are fishing gear) (4). These "Ghost Nets" roam the ocean killing over 650,000 marine animals annually, destroy reefs and transmit diseases between reefs (5).

Ocean Microplastics

Mid-ocean microplastics are easily the most challenging and difficult aspect of this challenge to tackle. These are plastic particles less than 5mm in length, and include microfibers from clothing, microbeads and plastic pellets (6). Macroplastics (like Ghost Nets) also eventually break down into microplastics over time.

Additional Data & References

[NOAA: Impacts of ghost nets on coral reefs](#)

[Synthetic Polymers & the Environment](#)

[Plastics and Plankton and CO2](#)

[Nat'l Geo Article on how much Plastic is NOT recycled](#)

[What really happens when you throw away a plastic bottle \(4 min.TedEd Video\)](#)

[Google Earth Hero Video](#)

[Link to Ocean Plastics & N Pacific Gyre Facts](#)

[How Plastics are Made Video: Nat Geo](#)

[Plastic Soup's article on Ghost Nets](#)

[Plastics in Oceans affecting Human Health: SERC](#)

[Greenbiz: What it will cost to clean up the oceans](#)

[Article on Fish stocks and its effects on Indigenous](#)

[Blastic paper on the toxicity of plastics](#)

[Blastic's paper on the affects of plastic toxicity & marine life](#)

[Blastic: Fate of Marine Litter](#)

[Plastics and Bird Populations](#)