

An underwater photograph of a diver in a blue wetsuit and yellow fins, holding a piece of coral. The diver is positioned in the upper center of the frame. Below the diver is a large, healthy coral reef with many small, blue fish swimming around it. The water is clear and blue.

ANNUAL REPORT | REEFOLUTION |

2023





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MARCK FELLER
CHAIRMAN OF THE BOARD



2023 IN A NUTSHELL

**WITH PRIDE, WE PRESENT
THE ANNUAL REPORT OF THE
REEFOLUTION FOUNDATION
FOR THE YEAR 2023.**

This report highlights a year of significant growth, during which we have not only continued our mission to protect coral reefs in collaboration with local communities, but also taken important steps towards further professionalisation of the organisation and increasing our impact.

In the report you will find the numerous notable milestones we achieved this year. These accomplishments include the successful transplantation of a significant number of corals, substantial contributions to enhancing the self-sufficiency of the local community through the training of Kenyan REEF Rangers, and the continuation of several scientific studies that led to the publication of articles in well-known academic journals.

All these activities require a solid organisational framework and multi-year plans to further scale up and prepare the organisation for our ambitions to expand our activities along the East African coast. Now the foundation for this ambition has been laid.

When I first encountered REEFolution in the summer of 2023, I was deeply impressed by the enthusiasm and dedication of everyone involved. As time passed, I gained a deeper understanding of where that passion comes from. The comprehensive approach of REEFolution is so compelling and multifaceted that its potential and impact are evident to all. The feeling of contributing to sustainable change and impact turns REEFolution from a typical NGO into a powerful global movement.

WARMING SEA TEMPERATURES

At the time of writing there is a concern in Kenya. And that is the high-water temperature, caused by the weather phenomenon El Niño, combined with climate change. Prolonged high-water temperatures can damage a significant portion of the corals, including those we have newly planted. In 2023, our scientific team from Wageningen University also selected corals that may be more resilient to higher temperatures. Hopefully, we will soon see the first positive results.

On behalf of the board and the team of REEFolution, I would like to express our sincere gratitude to everyone who has contributed to our work and successes, and who has supported us in our mission. We look forward to continuing our journey and making even more impact in the years ahead.

CHRIS DE JONG
MANAGING DIRECTOR

WHY REEFOLUTION EXISTS

2023 was the warmest year on record for the global average. In 2023, the global mean sea level reached a record high in the satellite record (since 1993), reflecting continued ocean warming. The planet is likely to warm up by two degrees Celsius by 2050, even under a low-emission scenario. Scientists predict that without intervention, most coral reefs will be gone by 2050. Tragic, since a quarter of all marine life depends on corals for their survival. Summing this up, this would mean that if we do not intervene, we will lose 25% of our ocean’s biodiversity by 2050.

And that is precisely why REEFolution exists: to prevent all that. REEFolution strives to work towards a world where humans and coral reefs live in harmony, promoting biodiversity and supporting the local livelihoods of those who need it most.”



TINKA MURK
CO-FOUNDER AND
SCIENTIFIC ADVISOR

As one of the founders, witnessing this growth firsthand fills me with immense pride. But our work is far from over. It is with great enthusiasm that I continue to support REEFolution as a scientific advisor, championing science-based strategies and innovations to navigate the ever-changing landscape of conservation.

Together, we have the power to make a difference. Our collective efforts, fuelled by passion and guided by science, hold the key to safeguarding these invaluable ecosystems for generations to come. Let this annual report serve as a testament to our achievements, a reminder of the challenges ahead, and a call to action for all who share our vision of a thriving, resilient marine environment.

Thank you for your continued support and dedication to the cause.




JOSHUA WAMBUGU
TRUSTEE KENYA



In May 2022, REEFolution Trust was established to strengthen the implementation of coral reef restoration in Shimoni, southern Kenya. Over the last two years, our long-term aim to protect and restore coral reefs with local communities has progressed steadily. Despite challenges, we have achieved significant successes, including an increase in restored areas and enhanced capacity with new reef rangers. We also secured important funding aimed at advancing local marine stewardship. As we look forward to 2024, we seek to strengthen our strategic partnerships and continue our impactful work. “Join REEFolution on our journey.”

2. | BACKGROUND |



A photograph of a person in a small boat on a body of water, with mangroves in the background. The person is sitting in the boat, and the water is a deep blue. The mangroves are dark and silty, with some green foliage visible in the distance. The sky is clear and blue.

REEFolution's journey began with a shared passion for the underwater world and a deep concern for the deteriorating coral reefs, particularly evident in the Wasini Channel of southern Kenya. Co-founders Eric Stokman and Tinka Murk, both avid divers, were moved by the devastation caused by a 1998 heatwave, which decimated nearly half of the coral reefs in the area. Recognising the urgency of action, they went on a mission to restore coral reefs in South-East Kenya.

In 2015, the REEFolution project took root on the Lutjeboer family land in southern Kenya. Guided by Professor Murk and supported by Ewout Knoester from Wageningen University, the initiative began implementing innovative techniques to revive the coral reefs. With initial funding from the University Fund Wageningen, the project steadily grew.

Despite successes, REEFolution recognised the importance of local community involvement. The COVID-19 crisis in 2020 served as a catalyst for a key shift towards greater community engagement, leading to the launch of the REEF Ranger program. This program empowers local communities through training and active participation in coral restoration efforts, with dozens of community members now holding paid positions within the project.

As the project developed, so did its organisational structure. From a small board of four members and a few ecologists in 2015, REEFolution expanded to include an average of more than 40 dedicated team members by 2023. This growth in personnel and expertise has enabled REEFolution to manage larger, more complex projects and extend its impact across operational regions.

NOW, READY FOR A SCALE-UP PHASE, REEFOLUTION STANDS STRONG TO TACKLE THE PRESSING CHALLENGES FACING WORLDWIDE CORAL REEFS. WITH TESTED METHODS AND A GROWING SENSE OF URGENCY, REEFOLUTION IS COMMITTED TO DO WHATEVER IS POSSIBLE TO PROTECT THESE PRECIOUS ECOSYSTEMS FOR FUTURE GENERATIONS.



3.

| OUR VISION |



REEFOLUTION ENVISIONS A WORLD WHERE CORAL REEFS AND PEOPLE LIVE IN HARMONY, FOSTERING BIODIVERSITY AND SUPPORTING LOCAL LIVELIHOODS.

By protecting and restoring these vital ecosystems, we aim to create a future where coral reefs and human communities coexist in harmony, securing the health of our oceans and the well-being of coastal populations.

Biodiversity: Coral reefs are the world's most **biodiverse** ecosystems, with 25% of all marine life depending on reefs, making them more diverse than the Amazon rainforest. Coral reefs are the most biodiverse and economically valuable ecosystems on Earth. An estimated 25 percent of all marine life depend on coral reefs. This includes over 4,000 species of fish, and iconic creatures like turtles, rays and reef sharks.

Livelihoods and Coastal Protection: Coral reefs provide food and resources for over 500 million people worldwide. They support fisheries that are essential for the livelihoods and food security of many coastal communities. Coral reefs serve as natural wave breakers, reducing wave energy by up to 97% and protecting coastal areas from storms and erosion. The loss of coral reefs would result in dramatic increases in flood risks and associated damages. A study published in Nature Communications estimates that the global annual expected damages from flooding would double to \$11.9 billion if coral reefs were lost. Without living coral reefs, annual expected damages from flooding would increase by \$4 billion, and costs from frequent storms would triple. Coupled with sea level rise, flooding could quadruple. For significant 100-year storms, flood damages could increase by 91% to \$272 billion (UNSC, 2018).

REEFolution is committed to ensuring the survival and restoration of coral reefs. By protecting these critical ecosystems, we can preserve their extraordinary biodiversity, support millions of livelihoods, and protect coastal areas from the increasing threats posed by climate change. Our vision is to create a sustainable future where coral reefs and communities flourish together.

Nature Communications Study on Flood Damage: Beck, Michael W., Iñigo Losada, Pilar Menéndez, Brendan G. Reguero, Pedro Díaz-Simal, and Fernando Fernández. "The Global Flood Protection Savings Provided by Coral Reefs." Nature Communications 9, no. 1 (2018): 2186. <https://doi.org/10.1038/s41467-018-04568-z>.

United Nations Special Commission (UNSC) Report: United Nations Special Commission. *The Economic Value of Coral Reefs and the Consequences of their Loss*. New York: United Nations, 2018.



4.

| APPROACH |

THE REEFOLUTION

BLUEPRINT



THE REEFOLUTION BLUEPRINT

REEFolution applies a blueprint of four pillars that interact with one another.

1. REEF RANGERS:

Local enthusiasts and recent graduates from Kenyan universities undergo a three-month training course to become marine conservationists at our project, with the opportunity for paid positions as reef restoration practitioners upon completion.

REEF
RANGERS

CORAL
RESTORATION

2. CORAL RESTORATION:

REEF rangers use various science-based methods like coral gardening, artificial reef placement, and the outplanting of coral fragments onto artificial reefs.

SCIENCE

EDUCATION

3. SCIENTIFIC RESEARCH:

We monitor restoration techniques, assess cost-effectiveness, and study coral species' health resilience to enhance worldwide restoration and conservation efforts.

4. EDUCATION AND OUTREACH:

We develop programs to raise awareness about the need to protect the underwater world and improve international support for its conservation.

5. | 2023 HIGHLIGHTS |



CORAL RESTORATION PROGRAMS

A TOTAL OF 10,500 CORAL FRAGMENTS WERE OUTPLANTED. THAT'S A GROWTH OF 30% IN A YEAR.

	2023	SINCE 2016
TOTAL NUMBER OF ARTIFICIAL REEFS PLACED	1.565	4.751
NUMBER OF CORAL FRAGMENTS OUTPLANTED ONTO (ARTIFICIAL) REEFS	10.506	44.799
AREA (M2) RESTORED	1.376	5.617

REEF RANGERS AND OTHER ALTERNATIVE LIVELIHOOD PROGRAMS

REEF RANGERS

5

NEW MEMBERS

joined the REEF Ranger team of whom two were fully trained in 2023, **BRINGING THE TOTAL TO 23.**

LIVELIHOODS

1ST

**INVOLVEMENT IN
SEAWEED AND MANGROVE
RESTORATION PROJECTS.**

An underwater photograph of a coral reef. A diver is visible in the upper left, looking down at the coral. A yellow measuring tape is laid out across the foreground coral. The water is clear and blue.

2023 HIGHLIGHTS SCIENTIFIC

SCIENTIFIC
RESEARCH

We continued our study on

9 RESEARCH
TOPICS

SCIENTIFIC
PUBLICATIONS

4 SCIENTIFIC
PAPERS

were published in well-respected journals.

2023 HIGHLIGHTS

AWARENESS

EDUCATION

Our marine education and outreach programs reached:

2,000
INDIVIDUALS

in Kwale, Kenya.

GLOBAL AWARENESS

A media spotlight year reaching:

MILLIONS
OF PEOPLE

with features on NTV Kenya, NOS News, BBC, Voice of America amongst others.

NEW WEBSITE

We launched our

NEW
BRAND IDENTITY

including a new logo and website.

6.

| OUR PROGRAMS | IN 2023



6.1 RESTORATION AND CONSERVATION PROGRAMS

CORAL REEF RESTORATION STATISTICS

The Mkwiro Restoration Project is located in a community-managed marine area. Most of the restoration work and patrolling is managed by the BMU of Mkwiro Village. REEFolution has so far trained several community members of Mkwiro village.

	2023	2022	SINCE 2016
TOTAL NUMBER OF ARTIFICIAL REEFS PLACED	1.565	806	4.751
NUMBER OF CORAL FRAGMENTS	10.506	10.118	44.799
AREA (M2) RESTORED	1.376	1.265	5.617

NURSERY STATISTICS

During 2023, our coral restoration efforts increased the nurturing of coral fragments by adding more nursery trees, reaching a total of 289 coral nursery trees, compared to 245 nursery trees in 2022. Hereby, the growth capacity of the nursery has increased from 14,700 to 17,340 coral fragments per year.

	2023	2022
NURSERY ANNUAL GROWTH CAPACITY (NO. OF CORAL FRAGMENTS)	17,340	14,700
NUMBER OF NURSERY TREES	289	245

CORAL RESTORATION PARTNERSHIPS

MARSS' REEF STARS

REEF Ranger Omar Farouk visited The Ocean Trust in Lamu Archipelago where he both shared and acquired coral restoration techniques. Omar was introduced to the Mars Assisted Reef Restoration System (MARRS), a holistic approach using hexagonal, steel reef stars, which he later implemented in Shimoni, resulting in the deployment of 105 reef stars and 950 coral fragments.

MOSES REEF STRUCTURE PROJECT

In collaboration with the ReefSystems Foundation, we went on using the MOSES (modular sealife system) for coral restoration. Throughout the year, 820 MOSES structures were built and deployed, greatly enhancing our coral outplanting efforts. This partnership also led to the establishment of a local workshop facility aimed at upscaling our restoration projects through the mass production of MOSES structures.





| 6.1 RESTORATION AND CONSERVATION PROGRAMS

MARINE PROTECTED AREAS

In 2023, REEFolution started a new collaboration through the Blue Parks Small Grants, a significant partnership with the Kenya Wildlife Service aimed at advancing marine conservation in the Kisite-Mpunguti National Marine Park and Reserve. This area, recognised as a blue park—the gold standard for marine protected areas—spans 39 square kilometres and is a critical habitat for diverse marine species.

By engaging in activities such as community sensitisation on park boundaries, marine pollution education, and sustainable fishing practices, the initiative aims to boost local support for conservation efforts. Additionally, routine patrols and a code of conduct for dolphin watching are being implemented to ensure sustainable interaction with marine life.

This grant aims to elevate the positive perception of the marine protected area among local communities to at least 80% by 2025, a significant increase from the 54% recorded in 2021, thereby fostering a stronger, mutually beneficial relationship between the community and the marine ecosystem.

OCTOPUS CLOSURES PROGRAM

In 2023, REEFolution Trust started a strategic collaboration with Blue Ventures. This partnership initiated a community-led project focused on sustainable fisheries management in the Shimoni seascape. Funded by Blue Ventures, the project spans two years (2023–2025) and is designed to enhance local fishing practices and promote the conservation of marine resources.

The project includes implementing seasonal closures for octopus fishing—a key measure to allow for the regeneration of octopus populations, thus supporting ecological and economic sustainability. Additionally, it involves extensive capacity building within the local community, particularly through conservation education and sustainable fisheries management training. By empowering local fishers and stakeholders with knowledge and skills, the project aims to foster a sustainable relationship with marine ecosystems, ensuring long-term benefits for both the community and the biodiversity of the region. This initiative reflects REEFolution's commitment to integrating community needs with conservation goals, aligning with the overarching mission of preserving marine life while enhancing local livelihoods.

6.2 ALTERNATIVE LIVELIHOOD PROGRAMS

REEFolution's alternative livelihood programs aim to reduce the ecological footprint of local communities by providing sustainable economic alternatives. These programs include initiatives like mangrove restoration, seaweed farming, and the comprehensive REEF Ranger training program, which are designed to promote ecological health while supporting local economies.

ALTERNATIVE LIVELIHOODS: SEAWEED FARMING AND MANGROVE RESTORATION

This past year, significant progress has been made in these areas, notably with the completion of the Mkwiro seaweed drying racks, which have helped streamline the seaweed processing workflow, thereby boosting local income while preserving the marine ecosystem. The REEF Ranger program has also seen substantial growth, with increased recruitment and training of local community members. These rangers are now pivotal in ongoing conservation efforts, combining their newly acquired scientific knowledge with traditional practices to manage and protect their marine resources effectively.



| 6.2 ALTERNATIVE LIVELIHOOD PROGRAMS

REEF RANGERS PROGRAM

The REEF Ranger Program empowers local Kenyan communities through comprehensive training in marine conservation. Participants gain practical skills in coral restoration and ecological monitoring, turning them into stewards of their marine environment and securing paid positions to contribute meaningfully to both their livelihoods and the health of coral ecosystems.

During 2023, two new REEF Rangers, Ayuub and Said, from the Mkwiro BMU were recruited and underwent comprehensive training. This included fish and benthic identification, PADI open water diving, and coral restoration speciality courses, leading to certification.



REEF RANGER **AYUUB RASHID** NEW REEF RANGER

"My name is Ayuub Rashid, and I hail from the small fishing community of Mkwiro on Wasini Island. At 23 years old, my journey with REEFolution as a REEF Ranger has been nothing short of transformative. Before joining, I had never considered diving as a career path, yet now I find myself immersed in the ocean's depths regularly. The position not only offers me a steady income, which helps support my family, but it also allows me to contribute significantly to the health of our marine ecosystems. What excites me most about working at REEFolution is the blend of conservation work and community development. It's empowering to be part of an initiative that not only safeguards our natural heritage but also strengthens the community that depends on it."



REEF RANGER

SAID VUYAA ALI

"I am Said Vuyaa Ali, from Mkwiro, Wasini Island. At 23, my passion for marine conservation led me to become a REEF Ranger, a role I embrace with pride. Growing up, I watched the marine life around our island diminish, which sparked a desire in me to protect and restore our marine environment. REEFolution has given me a platform to make meaningful change, not just in the reefs we rebuild but also in educating my community about the importance of marine conservation. This work gives me a sense of purpose and sustenance, turning my daily tasks into a fulfilling mission. I am proud to be part of an organisation that not only focuses on ecological restoration but also invests in the well-being and growth of our local communities."



REEF RANGER

MWANAISHA MUSA

Meet Mwanaisha from Shimoni, who transformed from a high school volunteer with a fear of water into a certified diver and skilled REEF Ranger. Through REEFolution's training, she mastered swimming and gained expertise in underwater life. Now she's gearing up for further studies in marine conservation, continuing to inspire as a dedicated member of our team.

REEF RANGER

JUDY NDUTA

Judy is a very passionate marine conservationist. Holding a bachelor's in marine science, Judy was very motivated to join the amazing project at REEFolution Foundation and became a REEF Ranger. She loves the ocean, and as a qualified diver she was able to be part of the active ecological research on coral restoration and awareness creation in the education program. Her dream is to gain more knowledge and be able to pass that to everyone else for the benefit of both the ocean and the environment.



6.3 SCIENTIFIC PROGRAMS

The backbone of REEFolution's efforts lies in our robust science programs, which seamlessly blend rigorous academic research with practical field applications. Our partnerships with prestigious institutions, like Wageningen University, facilitate a flow of cutting-edge research into our conservation strategies, ensuring they are both effective and scientifically validated.

In 2023, we continued to study **one social and eight ecological research topics** through the collaboration between Wageningen University and REEFolution. In addition, several new research topics and collaborations were established. A large share of this work was carried out by six Reef Rangers, who collaborated with 11 visiting master's students from Wageningen University and two from Pwani University. The fruits of earlier work were also harvested, as this year **four scientific papers were published** in well-respected journals. A short update for each research topic is provided below.

THE SPECIFIC STUDIES THAT OUR TEAM ENGAGED IN DURING 2023 ARE LISTED BELOW:

1. HEAT RESILIENCE:

Judy Nduta and Sara Sottoriva continued evaluating intertidal corals for reef restoration. They confirmed that these corals grew and survived well, comparable to subtidal species. Further validation of their heat resilience is needed, especially under the expected global marine heatwave in 2024. Budget constraints postponed advanced monitoring technology purchases until 2024.

2. MINERAL ACCRETION:

Bulisa Masiga and students found no growth or survival benefits from the mineral accretion technique for any tested coral species. Two scientific papers are in preparation that share our results.

3. CORAL SPAWNING:

Monitoring by Dzivula Gube and students highlighted varied spawning times across species from October to March. This requires more intensive sampling to precisely determine spawning periods for effective reef restoration.

4. CORAL GENETICS:

A new collaboration with Pwani University genetics lab supported by REEFolution focused on coral species identification, genotyping, and microbiome mapping. This aims to enhance local capacity for coral genetic analysis in Kenya.

5. DEPTH GRADIENT:

Added six new species to the depth gradient study to test deeper water as a refuge during heatwaves. Monitoring will continue in 2024, with innovative light sensors aiding the study on the impact of heat and light on corals.

6. RESTORATION ECOLOGY:

Ongoing monitoring of coral nurseries and reefs showed that specific fish species, like surgeonfish, significantly impact coral health. A large-scale study on artificial reef size was completed, with ongoing analysis aimed at enhancing coral reef recovery.

7. RESTORATION SNORKELLING:

Omar Farouk tested new coral nursery designs suitable for snorkelers, aiming to reduce diving costs and simplify coral transplantation. Results will be evaluated for efficiency and published.

8. PRODUCTIVITY:

The deployment of MOSES artificial reefs continued, focusing on both restoration and tourism. Baseline surveys are scheduled for 2024 to assess the reefs' effectiveness.

| 6.3 SCIENTIFIC PROGRAMS

OTHER SCIENTIFIC PARTNERSHIPS

In 2023, REEFolution co-authored three other significant manuscripts:

1. REEFolution and CORDIO collaborated to develop a framework for evaluating the health of Kenya's coral ecosystems to inform conservation strategies. The research revealed that particular intertidal coral species recover quickly from bleaching but have lower overall survival rates. Additionally, the studies found that concrete does not negatively impact coral health.
2. Collaborations with Accenture introduced advanced 3D imaging and AI to streamline benthic surveys.
3. A pilot study with WUR used hydrophone technology to explore soundscapes of restored and natural reefs, aiming to enhance restoration efforts through acoustic ecology.

6.4 AWARENESS PROGRAMS

EDUCATION AND OUTREACH

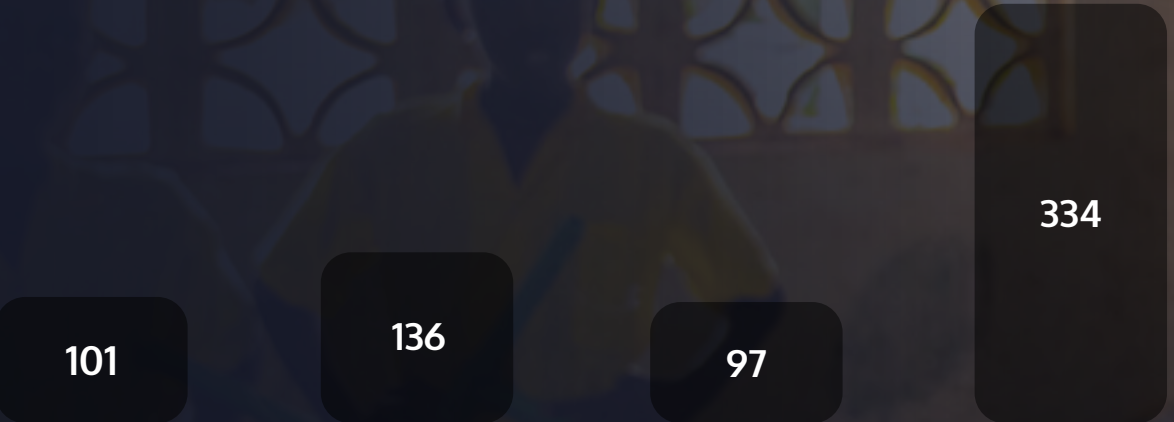
Through our conservation education and outreach programme, REEFolution continues to be a champion in creating awareness and instilling conservation knowledge about marine environments, key habitats and their marine life, as well as the importance of conserving and protecting them. In 2023, we continued this crucial effort, particularly contributing to long-term sustainability in conservation.

Over the past year, our outreach has expanded significantly, with our educational programs reaching over 2,000 individuals across various communities in Kwale. We employed innovative tools like virtual reality (VR) to bring the underwater world into classrooms, providing an immersive learning experience that underscores the beauty and fragility of marine ecosystems.

THE VR EXPERIENCE IN CLASSROOMS

NUMBER OF CHILDREN:

LOCAL MARINE EDUCATION OUTREACH AT PRIMARY SCHOOLS:



Virtual Reality for Marine Conservation Education: The local marine education outreach is complemented by use of virtual reality devices as an education tool to simplify and offer a reality of the underwater world of marine environment closer in a classroom setting.



| 6.4 AWARENESS PROGRAMS

LOCAL AND GLOBAL AWARENESS

Awareness and education are pillars of REEFolution’s strategy to build a global commitment to marine conservation. These efforts are aimed to reach individuals both locally and internationally, raising awareness about the importance of marine ecosystems and the ongoing threats they face. These efforts are important in building a knowledgeable and motivated base of support for marine conservation initiatives.



A) MATUMBAWE DOCUMENTARY:
This is a [short film](#) produced in partnership with Tony Wild showcasing the importance of community engagement in marine conservation, particularly coral reefs. The film offers a story about Khadija, the daughter of one of the REEF Rangers and was featured during the [Rotterdam Film Festival 2023](#).



B) NATION TELEVISION (NTV):
Through NTV—a Kenyan-based television with over 6 million followers on social media platforms—our marine restoration efforts and engagement with the local communities in the larger Shimoni–Vanga seascape were featured on [NTV Wild Talk](#). The documentary was produced for World Oceans Day 2023 which is celebrated on 8th of June every year and won the 2024 Annual Journalism Excellence Awards in Kenya.

| 6.4 AWARENESS PROGRAMS

LOCAL AND GLOBAL AWARENESS



C) VOICE OF AMERICA (VOA):
Through VOA, Cindy Chorongo (former Reef Ranger) was featured in a VOA News documentary with a theme “Eco-warrior of Africa”. The [short documentary](#) (0:00 – 04:53) highlighted our coral reef restoration, how we integrate science in the marine restoration, and how REEFolution engages with local communities in the Shimoni seascape to broaden their better understanding of the value and need to conserve, preserve, and protect the coral reef ecosystem.



D) DUTCH NOS:
In April, together with Reef Systems, REEFolution hosted the [Dutch News Television \(NOS\)](#) which featured the coral restoration method using the MOSES reef structures.

| 6.4 AWARENESS PROGRAMS

LOCAL AND GLOBAL AWARENESS



E) MEDIA FOR NATURE:

The implementation of the Rufford-funded Reef Stewardship Project involved local media coverage to communicate and amplify project outcomes and impacts. The media outputs include published articles on digital platforms and podcasts. Below is a list of published articles via Media for Nature and MESHA (Media for Environment, Science, Health and Agriculture) magazine:

- Article on MESHA: [Communities use modern technologies in restoring coral reefs](#)
- Article on Media for Nature: [Safeguarding coral reefs through responsible tourism practices](#)
- Podcasts (in Swahili): [Juhudi za Kulinda miamba ya Matumbawe kupitia Utalii wenye uwajibikaji](#)



F) WIOMSA NEWS BRIEF:

In the WIOMSA news brief, there was a [brief summary](#) of a published paper co-authored by Knoester et.al 2023 with title [Community-managed coral reef restoration in southern Kenya initiates reef recovery using various artificial reef designs](#).



G) CONFERENCES AND COLLABORATIONS:

REEFolution participated in several international conferences (5th Asia-Pacific Coral Reef Symposium (APCRS) at the National University of Singapore, Sea Conference in Amsterdam, Our Ocean 2023 in Panama, and Africa Climate Summit 2023), and established new collaborations, including a task force for coral reef monitoring in the Western Indian Ocean and a survey on international collaboration dynamics in coral reef science.



7. PARTNERSHIPS



This year, we were supported by amazing partners who supported REEFolution’s mission to protect coral reefs together with local communities.

7.1 NEW FUNDING PARTNERS 2023



BLACK WINCH is the company that provides exclusive As-A-Service solutions. Their enthusiastic team will support REEFolution’s coral reef restoration projects through the 1% for the Planet platform.



Funded by **BLUE VENTURES**, we shall be running the Octopus Close Program, positively contributing to sustainable fisheries management and increased catch.



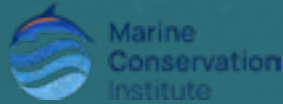
CLUB KAKATUA is a non-profit organisation that aims to build a greener and healthier planet. Supported by Club Kakatua, we shall further grow our coral nursery capacity and further scale our coral reef restoration efforts.



Supported by **GOOGLE GRANTS**, we received an annual pro-bono advertising budget to promote our mission on Google.



KITE FOR KENYA is an inspiring campaign organised by five inspiring individuals who kitesurf along the Kenyan coast to raise awareness for ocean conservation. The proceeds are being donated to REEFolution.



In 2023, REEFolution partnered with the **MARINE CONSERVATION INSTITUTE** to enhance community engagement in the Kisite-Mpunguti MPA, fostering stronger local support for marine conservation.



THE PADI AWARE FOUNDATION supports the training of five new REEF Rangers in the Diani-Chale area, where a new coral reef restoration project is being initiated.



The Reef Stewardship project was launched with funding from the **RUFFORD FOUNDATION** to enhance coral restoration awareness and sustainable tourism among local boat operators and guides.



Funded by the **WERELD NATUUR FONDS (WWF-NL)**, new, potentially innovative artificial reef structures, are tested and placed in Diani.

7.2 EXISTING PARTNERSHIPS

Thanks to our network of dedicated partners, REEFolution has been able to grow exponentially. Our partners are aware of the huge ambitions of our organisation, and without them we would not be able to prepare ourselves so well. Therefore, we would like to give a special thanks to the partners who have supported us in the past year, and have pledged to continue doing so in the future.

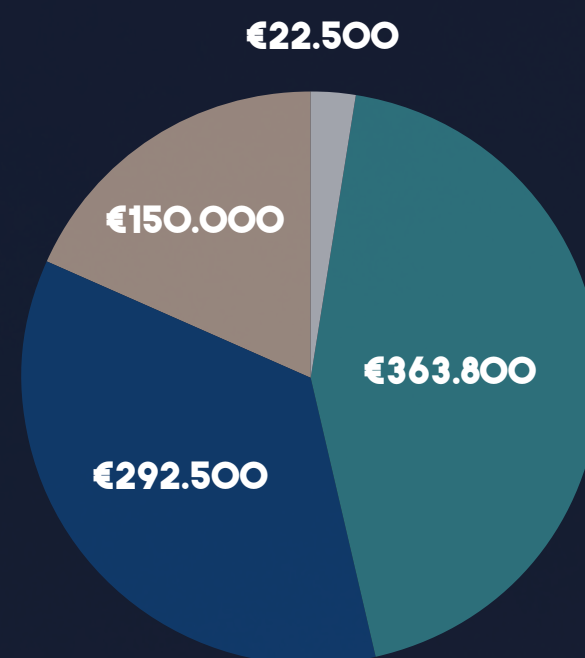
Accenture
Discovery Divers
Stichting Flexiplan
Linklaters
Stichting Neven en Nichten van Zadelhoff
Stichting Sub3
University Fund Wageningen (UFW)
Stichting Virtutis Opus
Whello

As a result of the ongoing support and our expanding network, our income has increased significantly over the last few years.

On the right, you find the consolidated income of REEFolution Foundation and REEFolution Trust.

- Income from non-profits
- Private donors

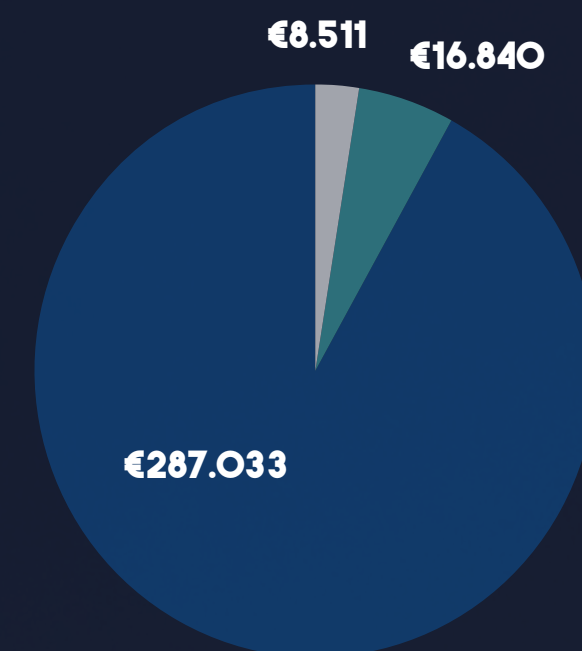
2024 FORECASTED INCOME



Total (forecasted) income 2024:
828.800 EUR

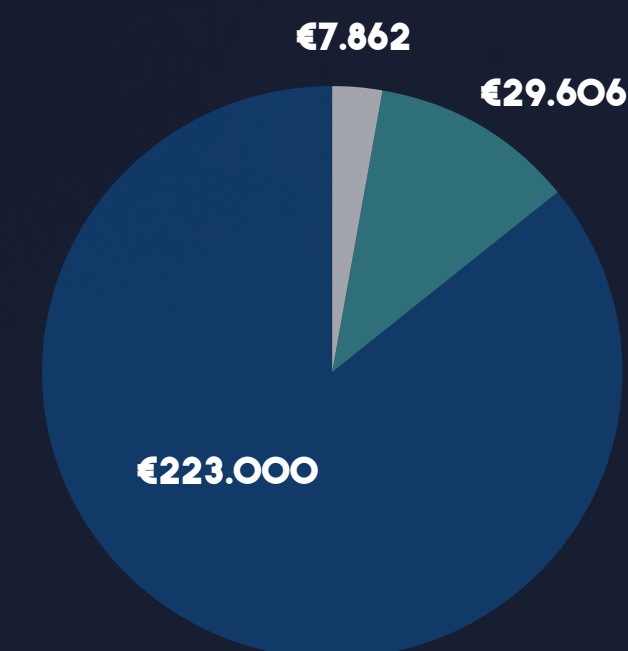
- Income from companies
- Fundraising target 2024

2023 INCOME



Total income 2023:
312.384 EUR

2022 INCOME



Total income 2022:
260.468 EUR

8.

REEFOLUTION ORGANISATION



| 8.1 GENERAL INFORMATION

During 2023, around 50 individuals were involved in the REEFolution Team. Together, they accounted for about 29 FTEs, of which 21 FTEs were paid and 8 were unpaid FTEs. This primarily consisted of the operational team in Kenya, the operational team in the Netherlands, thesis students, and interns.

Stichting REEFolution (hereafter: REEFolution Foundation) is a non-profit organisation founded under the Chamber of Commerce (KvK) number of 64978168. REEFolution Foundation currently holds no physical office in the Netherlands.

REEFolution Foundation is structured around a Board of Directors, an Advisory Board, and an Operational Team. REEFolution foundation collaborates closely with local partners for the implementation of its programs.

The Board of Directors consisted of Marck Feller (chairman), Karin Alfenaar (secretary), Eric Stokman (co-founder) and Ariëns Kruijt (treasurer). One member, Annelies de Jong stepped down, and two new members were welcomed.

The Board of Directors oversees the Operational Team's activities, led by Managing Director Chris de Jong, who manages day-to-day operations. The Advisory Board, consisting of Tinka Murk and Ronald Osinga, provides support and guidance to both the Board of Directors and the Managing Director in fulfilling their responsibilities.

In alignment with ethical governance standards, the board members maintain no financial or personal interests that could conflict with the foundation's objectives. In 2023, the Foundation also established internal regulations in compliance with the Legal Entities Governance and Supervision Act, further solidifying its commitment to good governance.

As per 2016, REEFolution Foundation was designated by the Dutch Tax Authority as an 'Algemeen Nut Beogende Instelling' (ANBI)—a public benefit organisation. As of this date, all donations are deductible from the taxable income of the donors if the Foundation maintains its ANBI status.

REEFolution is not liable for corporate tax, nor for value-added tax except on its income and related costs from the sale of products and services.

| 8.2 FINANCIAL POLICY

The financial management of the REEFolution Foundation is operationally managed by the managing director and the treasurer. The Foundation provides support to local implementation partners in their financial management through advice and operational involvement. Information flows (both financial and progress-related) ensure that the REEFolution Foundation can effectively monitor that funds are spent as intended. Furthermore, the REEFolution Foundation always adheres to the "four eyes principle," which ensures that multiple approvals are based on pre-established financial approval processes. This is stipulated in the Internal Regulations ("het Huishoudelijk Reglement") of the REEFolution Foundation.

| 8.3 RISK MANAGEMENT AND GOVERNANCE

REEFolution Foundation is committed to systematically identifying and addressing potential risks and opportunities. Through analytical methods, such as SWOT analyses, we pinpoint risks during our Board Meetings and strategic sessions. In 2023, we dedicated substantial effort during these sessions to ensure all risks were comprehensively assessed. By consistently aligning our strategies with identified risks and opportunities, we maintain our commitment to proactive management and strategic agility, ensuring the sustainability and effectiveness of our initiatives. This approach empowers us to anticipate challenges and adapt swiftly, reinforcing our dedication to our mission and stakeholders.



8.4 THE TEAM

SUPERVISORY BOARD



MARCK FELLER
Chairman



KARIN ALFENAAR
Secretary



ARIENS KRUIJT
Treasurer



ERIC STOKMAN
Board Member
and Co-founder

ADVISORY BOARD



TINKA MURK
Scientific Advisor
and Co-founder



RONALD OSINGA
Scientific Advisor

REEFOLUTION TRUST: OPERATIONAL MANAGEMENT



**JOSHUA
WAMBUGU**
Operational
Trustee Shimoni



**YVONNE LYNDA
MUYIA**
Project Manager
Mkwiro Restoration



PETER LEPOSO
Trustee

| 8.4 THE TEAM

REEFOLUTION FOUNDATION:
OPERATIONAL MANAGEMENT



CHRIS DE JONG
Managing director



SAMIRA BOGAARD
Awareness



DENNIS KARPES
Funding



DUCK DE BONT
Partnership and
Awareness



**JAVIER DINTEN
FERNANDEZ**
Awareness



CARLETTE NIELAND
Partnership and
Awareness



INDY KOSTER
Operations Officer



EWOUT KNOESTER
Lead Scientist

| 8.4 THE TEAM

REEFOLUTION FOUNDATION:
REEF RANGERS



MWANAISHA MUSA



DOSA MSHENGA



MWALIMU ATHUMANI
SHEBWANA



DZIVULA GUBE



OMAR FAROUK



IDRISSA HARUN SAIF



IDRISSA ALI



SADAAM HAMISI
OMARI



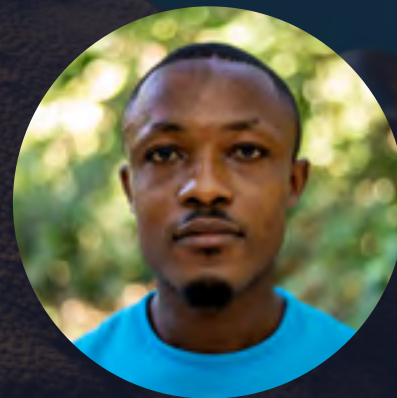
SAID VUYAA



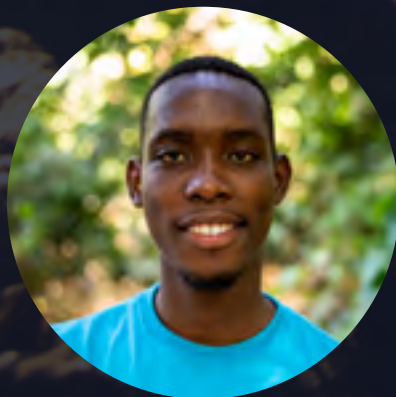
AYUB RASHID



BULISA MASIGA



HAMISI FAHRAN



PETER MUSILA



CINDY SARU
CHORONGO



MERCY ZAWADI



JUDY NDUTA

| 8.4 THE TEAM

PARTNER SUPPORT

George Steltman
(2023 strategic consultancy)

Tim Hengeveld
(2023 strategic consultancy)

Peter Vodegel
(fundraising and Diani Project management)

Guido Paap
(fundraising and Diani project management)

Harm and Selina Lutjeboer
(operational support Pili Pipa)

Yatin Patel
(PADI dive instructor Pili Pipa)

Peter Ruysenaar
(financial advice REEFolution Trust)

THESIS STUDENTS AND INTERNS

Gian Lu Dado
Luc Visser
Anniek Vos
Vera Hartman
Sara Sottoriva
Anyá Berestova
Anniek Leinenga
Paula Casado
Danielle Geschiere
Jelte van der Leij
Sietske van der Heyde

9.

FINANCIAL PERFORMANCE





FINANCIAL OVERVIEW

In this chapter, we provide a consolidated financial overview of REEFolution Foundation (NL) and REEFolution Trust (Kenya). It is essential to present and discuss the revenues and expenses of both entities together due to their integral connection.

INCOME (CONSOLIDATED)

The total combined income for 2023 was €312,384, approximately 20% higher than in 2022, which totalled €260,468. Of the 2023 revenue, €277,844 was received through REEFolution Foundation, and about €34,500 came through our local trust in Kenya. While we are pleased with this income, it did not meet our anticipated target of €400,000. This shortfall is largely due to less time allocated to fundraising than planned, as a significant focus was placed on reorganization and internal policy management. Additionally, considerable time was invested in securing potential major funding commitments, which required more time to finalize.

EXPENDITURES (CONSOLIDATED)

The total combined expenditures for 2023 were €304,850, marking a 57.5% increase from €193,580 in 2022. Of this amount, €39,160 (12.8%) was allocated to non-objective related spending, including general management, fundraising, and communications. The remaining 87.2% of our expenditures were dedicated to objectives.

Until 2022, the Mkwiro coral restoration project was primarily funded by a major funder through the University Fund Wageningen (UFW). In 2022, REEFolution Foundation covered only 71% of all costs, whereas, in 2023, this figure increased significantly to 97.7%.

GENERAL REMARKS

It is important to note that the financial accounting of expenditures in Chapter 9 may show deviations from the figures discussed here in Chapter 8. This discrepancy arises because our collective financial reporting includes project funding sources that do not pass through our standard financial channels. For instance, in 2022, the University Fund Wageningen (UFW) was a co-funder that covered direct REEFolution project costs directly. Therefore, there is a variance between the costs recorded in the financial statements of REEFolution Foundation (chapter 9) and the actual costs of the projects.



10.

| 2024 AND BEYOND |

| 10 2024 AND BEYOND

As we look toward 2024 and beyond, REEFolution is ready for expansion, growth and strategic advancements in our mission to restore and protect coral reefs. Our initiatives across the Netherlands and Kenya are expanding. We have specific goals to further improve our ‘Good Governance’ through CBF certification and the completion of our Strategy Plan 2030. These developments are complemented by the expansion of our board, improving our governance and strategic oversight.

In the coming year, we are set to intensify our efforts with targeted media campaigns aimed at improving our funding and partnership networks, crucial for meeting our ambitious objectives for 2024 and 2025.

On the ground in Kenya, our operational growth will include establishing a robust financial structure and acquiring a plot of land to solidify our presence and placement of the coral lab. These steps will support the ambitious goal of planting over 12,500 coral fragments, increasing our nursery’s capacity, and expanding restoration efforts into new geographical areas like Shimoni-Vanga.

Moreover,ourcommitmenttoeducationandawareness will see improvements in digital engagement and local community involvement through strategic campaigns and filling additional management positions. The REEF Ranger Program is set to expand, with an aim for all of the current candidates to be trained by the end of 2024, increasing our capacity.

BUDGET 2024

Category	Budget RF 2024
Income from individuals	15,000
Income from companies	100,000
Income from non-profit organizations	413,800
Total revenue	528,800
Spent on objectives	
Education and awareness	40,000
Coral restoration projects	200,000
Scientific projects	200,000
Local project management	50,000
Total spent on objectives	490,000
Costs of Fundraising	40,000
Costs of Management and Administration	
Communication costs	20,000
General administration	20,000
Total Management and Admin Costs	40,000
Financial income and expenses	0
Balance of income and expenses	35,000

Important: Please note that this document provides an unconsolidated financial summary and exclusively details the income and expenditures of the REEFolution Foundation, not including any financial activities of our Kenyan REEFolution Trust. Thereby, this overview presents a partial snapshot, representing approximately 65% of the total budget for REEFolution. The revenues of 528,800 excludes the projected income of 300,000 EUR that will be directly donated to our Trust by local Kenyan sponsors for 2024. These amounts are designated exclusively for local objectives.

11.

FINANCIAL STATEMENTS (FLYNTH)





Financial statements

BALANCE SHEET AS AT DECEMBER 31, 2023

(after appropriation of results)

	December 31, 2023		December 31, 2022	
Assets				
Current assets				
Receivables	17.628		-	
Cash	140.220		176.419	
Total		157.848		176.419
Equity and liabilities				
Reserves and funds				
Other reserves	121.406		141.297	
Current liabilities	36.442		35.122	
Total		157.848		176.419

STATEMENT OF INCOME AND EXPENSES 2023

	Realised 2023 €	Budget 2023 €	Realised 2022 €
Income	277.884	302.400	201.042
Expenses			
Spent on objectives	258.699	308.307	111.111
Costs of fundraising	22.602	25.460	12.200
Costs management and administration			
Costs management and administration	16.558	24.740	14.693
Result before financial income and expense	-19.975	-56.107	63.038
Financial income and expenses	84	-	-245
Result	-19.891	-56.107	62.793
Appropriation of result			
Other reserves	-19.891	-56.107	62.793



PRINCIPLES FOR VALUATION AND RESULT DETERMINATIONS

GENERAL Activities

The activities of Stichting REEFolution mainly consist of performing activities and raising funds for the restoration and creation of coral reefs to enhance and conserve biodiversity with local people, thereby contributing to awareness of natural resources and livelihood improvement opportunities.

Registered office, legal form and registration number at the chamber of commerce
Stichting REEFolution is located in Gemeente Renkum (registerd office) and is registered at the chamber of commerce under number 64978168.

ANBI

As per 5 January 2016, Stichting REEFolution was designated by the Dutch Tax Authority as an 'Algemeen Nut Beogende Instelling' (ANBI) - a Public Benefit Organisation. The foundation's RSIN number is 855931383. Stichting REEFolution is not liable for corporate income tax, nor for value added tax.

Estimates

In applying the principles and policies for drawing up the financial statements, the directors of Stichting REEFolution make different estimates and judgments that may be essential to the amounts disclosed in the financial statements. If it is necessary in order to provide transparency, the nature of these estimates and judgments, including supporting assumptions, is disclosed in the notes to the relevant financial statement item.

General accounting principles for the preparation of the annual accounts

The annual accounts have been prepared in accordance with Rjk C2 for small fundraising organisations of the Dutch Accounting Standars, as published by the Dutch Accounting Standards Board ('Raad voor de Jaarverslaggeving').
Valuation of liabilities and determination of the result take place under the historical cost convention, unless presented otherwise. Liabilities and any losses originating before the end of the financial year are taken into account if they have become known before the preparation of the financial staements.

PRINCIPLES OF VALUATION OF ASSETS AND LIABILITIES

Receivables

Receivables are valued at amortised cost price. This is usually equal to the nominal value. Provisionsdeemed necessary for possible bad debt losses are deducted. These provisions are determined by individual assessment of the receivables.

Cash

Cash and cash equivalents are valued at face value.

Current liabilities

On initial recognition current liabilities are recognised at fair value. After initial recognition current liabilities are recognised at the amortised cost price, being the amount received taking into account premiums or discounts and minus transaction costs. This is usually the nominal value.

ACCOUNTING PRINCIPLES FOR THE DETERMINATION OF THE RESULT

General

The result (balance) is determined as the difference between the total income and the total expenses. Receipts and expenditures are allocated to the period to which they relate in the statement of income and expenses. A consistent method is followed in the allocation. This means that account is taken of the amounts attributable to a period that are or will be received or paid in another period.

Income

Unconditional donations and gifts are included in the statement of income and expenses when they are received.

Spent on objectives

Expenses on the objectives are recognised in the year in which they are committed or, to the extent that this is not the case upon commitment, in the year in which the amount of the commitment can be reliably determined. Contingent liabilities are recognised in the year in which it is established that the conditions will be met.

Costs of fundraising

All costs of activities aimed at persuading private individuals, companies, lottery organisations, governments and other (fundraising) organisations to donate money for one or more of the objectives are classified as fundraising costs.

Costs management and administration

Management and administration costs are those costs incurred by the foundation in the context of (internal) management and administration that are not allocated to the objectives or the acquisition of income.

Financial income and expenses

Interest income and costs charged to the fundraising organisation, such as bank charges, are accounted for under financial income and expenses.

NOTES TO THE BALANCE SHEET AS AT DECEMBER 31, 2023

Current assets	12/31/2023	12/31/2022
Receivables		
Debtors	1.500	-
Pre-instalments REEFolution Trust (Kenya)	9.924	-
Prepaid expenses	6.204	-
Total	17.628	-
Cash		
SNS Bank	140.220	176.419
Equity		
Other reserves		
Balance as at January 1	141.297	78.504
Proposed appropriation of result	-19.891	62.793
Balance as at December 31	121.406	141.297
Current liabilities		
Creditors	17.974	22.955
Other liabilities and accrued liabilities	18.468	12.167
Total	36.442	35.122



NOTES TO THE STATEMENT OF INCOME AND EXPENSES 2023

	Realised 2023 €	Budget 2023 €	Realised 2022 €
Income			
Consumer donations	8.511	2.400	7.862
Income from companies	16.840	50.000	8.930
Income from non-profit organizations	252.533	250.000	184.250
	277.884	302.400	201.042
Spent on objectives			
Education and awareness	10.739	23.553	29.951
Coral restoration	100.652	128.288	58.430
Scientific projects	110.210	118.770	11.666
Local project management	37.098	37.696	11.064
	258.699	308.307	111.111
Costs of fundraising			
Costs of fundraising	22.602	25.460	12.200
Emoluments of directors and supervisory directors			
The foundation's titular director received € 23,725 (2022: €9,000) in 2023. The foundation's statutory board is unpaid.			
Staff			
During the 2023 financial year the foundation had no employees.			
Costs management and administration			
Communication costs	4.907	11.776	9.491
General administration	11.651	12.964	5.202
	16.558	24.740	14.693

Signing of the financial statements: Gemeente Renkum, June 3, 2024

M.P.M. Feller (Chairman)

E.H. Stokman (Secretary)

A.L. Kruijt

K. Alfenaar



ANNUAL REPORT 2023

JOIN THE REEFOLUTION

REEFOLUTION ENVISIONS A WORLD WHERE CORAL REEFS AND PEOPLE LIVE IN HARMONY, FOSTERING BIODIVERSITY AND SUPPORTING LOCAL LIVELIHOODS.

[GO TO OUR WEBSITE](#)