

# ESG REPORT 2022



# A **BOLD** SOLUTION TO OUR GLOBAL ENERGY NEEDS

Inspired by nature, our patented technology is based on solar modules mounted on hydro-elastic membranes and offers cost and performance benefits not seen in any other floating PV system today.

With offices in Oslo, Singapore and Shanghai, Ocean Sun aims to become the world's leading technology provider of innovation in green energy by floating solar.

## OUR VALUES



### RESPONSIBLE

We develop sustainable solutions in harmony with nature



### INNOVATIVE

We are committed to continuous improvements in our solutions



### SIMPLICITY

We create value by working smart, following the highest quality standards



### SUPPORTIVE

We bring out the best in each other, as a team and among our partners

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# OCEAN SUN IN BRIEF

Ocean Sun is a technology provider, offering license agreements to developers and independent power producers worldwide. Our technology offers the lowest levelized cost of energy of any FPV solution available, thanks to the lean design and the cooling effect from the water which increases the power output from the solar modules.

Working towards a renewable energy future, we have installed seven demonstration systems on two continents. Since its foundation, Ocean Sun is working towards its vision to provide a **bold solution for our global energy needs.**

14

**EMPLOYEES**  
from 5  
different  
nationalities

3

**OFFICES**  
in Europe  
and Asia

7

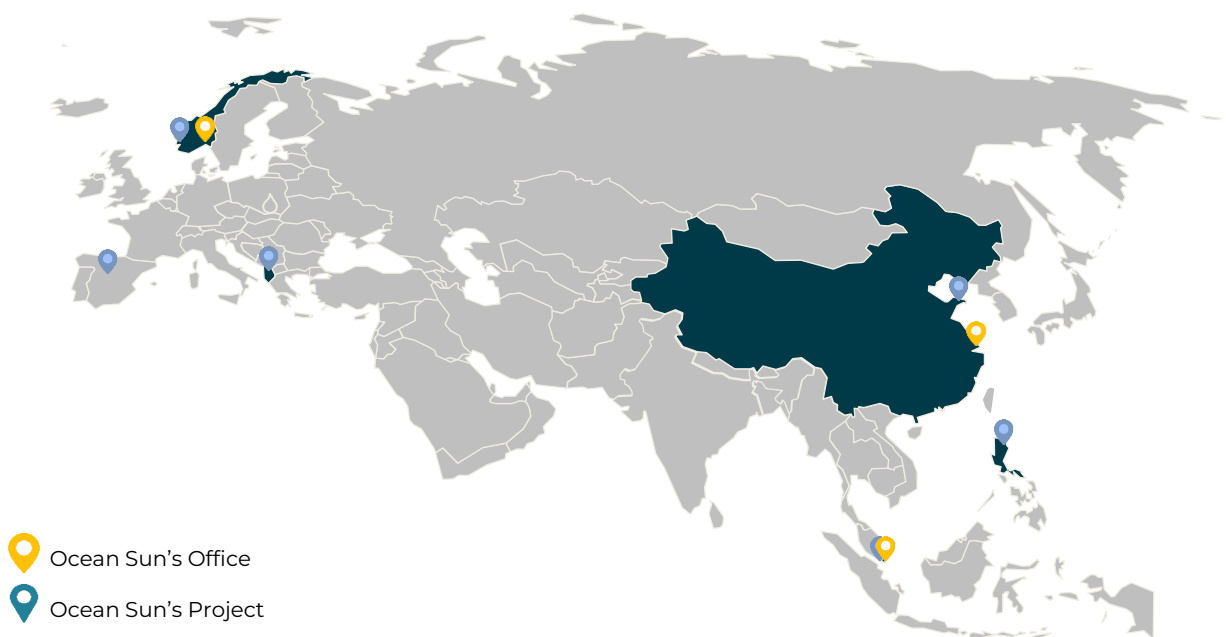
**PROJECTS**  
worldwide

5

**COUNTRIES**  
where our  
projects are  
installed

+2,8 MWp

Installed  
capacity



# HOW WE WORK

## GOVERNANCE POLICY

Our governance policy sets the framework for how we manage our company. The policy reflects all elements within ESG and helps us make sustainable and responsible choices throughout the value chain.

## GOVERNING SYSTEM

Ocean Sun has defined and documented the key process in our business. Although we are not formally certified, we comply with the central elements in an ISO certification having documented processes, fostering continuous development and allowing for reporting and follow-up routines on deviations, accidents and improvements.

## MANAGEMENT AND COLLABORATION

As highlighted by our values, work at Ocean Sun is characterized by supporting each other, both internally and with our partners.

We have close cooperation between management and employees, and between the management and our board of directors.



# ENABLING THE CHANGE

Ocean Sun was founded based on a vision to provide a **bold solution for our global energy needs** and has since inception in 2016 worked to be part of the change towards a better future across all dimensions of the ESG spectrum.

## GOVERNANCE



We set the highest standard for honesty, integrity and compliance

## HSE



We have zero-tolerance for injuries on humans and the environment

## ECORESPONSIBLE



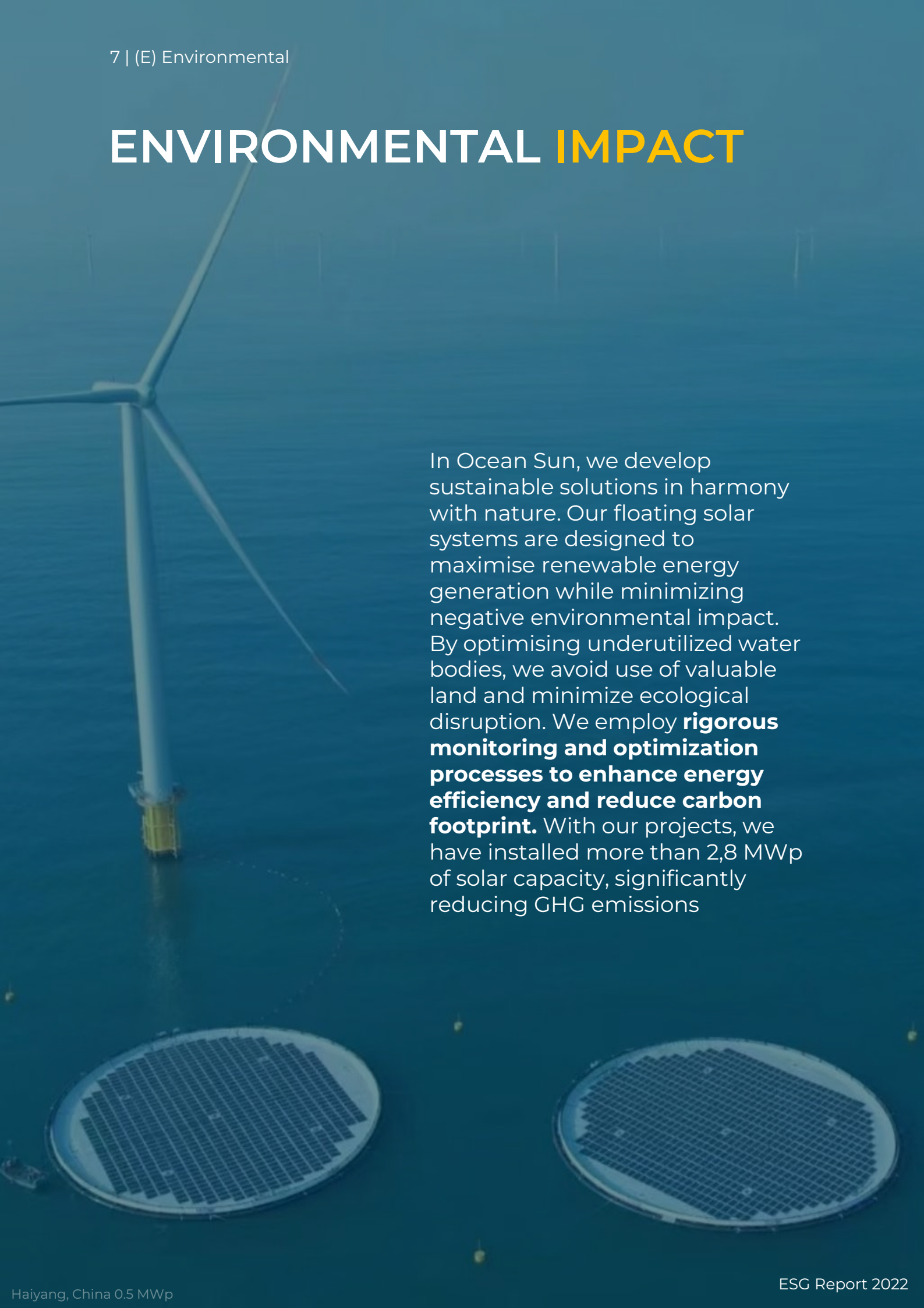
We develop sustainable solutions in harmony with nature

## HUMAN RIGHTS AND EQUALITY



We ensure that all employees are treated with respect and have proper working conditions

# ENVIRONMENTAL **IMPACT**

The background image shows a large offshore wind turbine on the left, with its three blades extending upwards. In the foreground, two circular floating solar panels are visible on the water's surface. The entire scene is set against a deep blue background, likely representing the ocean.

In Ocean Sun, we develop sustainable solutions in harmony with nature. Our floating solar systems are designed to maximise renewable energy generation while minimizing negative environmental impact. By optimising underutilized water bodies, we avoid use of valuable land and minimize ecological disruption. We employ **rigorous monitoring and optimization processes to enhance energy efficiency and reduce carbon footprint**. With our projects, we have installed more than 2,8 MWp of solar capacity, significantly reducing GHG emissions

# OUR CLIMATE BENEFITS

## RENEWABLE ENERGY

Ocean Sun offers a technology providing affordable renewable energy with minimal impact on the environment

## NO LAND USE

Not using land resources prevents deforestation and avoids conflicts with agriculture and urbanization, whilst reducing grid connection cost and power losses

## MORE POWER OUTPUT

Water cooling of the solar panels enable up to 10% more power production with the same materials

## WATER RESOURCE MANAGEMENT

The system reduces evaporation, underwater sunlight exposure and mitigates algae growth challenges

## LESS MATERIALS

Ocean Sun uses up to 65% less plastic, 90% less aluminum and 50% less copper compared to other FPV solutions

## LEAN TRANSPORTATION

Due to the system's material efficiency and that the membrane can be densely packed, logistical need is ~10x lower than for pontoon based FPV systems.

# EMISSIONS & PRIORITIES

As a technology provider, the major impact on climate emissions for Ocean Sun is to design climate effective solutions.

## Scope 1 & 2 emissions

Ocean Sun does not have any ownership in the power assets, nor in the production facilities delivering the materials. Our direct emissions are therefore neglectable. Our three offices are located in state of the art, rented, office buildings, where energy saving measures have been implemented. Due to the limited size and possibility to impact, Ocean Sun is currently not prioritizing further work to reduce scope 1 and 2 on emissions.

## Scope 3 emissions

For scope three emissions, Ocean Sun has defined travel, emissions from material use in the components of our technology and freight of goods as the largest sources for emissions that the Company will track and reduce going forward.

TYPE	EXPLANATION	GOAL 2024
Travel	<p>Business travels and daily commutes are regulated in our transportation policy.</p> <p>From an environmental point of view the best way to travel is to not travel at all. Ocean Sun employees shall always evaluate the possibility to use online meetings and If traveling is required, try to cluster meetings to avoid multiple travels.</p> <p>To minimize emissions from the daily commute, we encourage our employees to use public transport or to bike to work. Our office facilities are well suited for both alternatives.</p>	Start measuring the GHG emissions from business travels.
Design	<p>Ocean Sun's biggest potential for contribution towards reduction of GHG emissions is to continue to design climate effective solution for renewable energy. In this work, we always have the environmental impact of our technology in mind and strive for minimizing the amount of material used, minimize material with potential negative impact on the environment and to use recycled components or components that can be included in a circular lifecycle.</p>	<p>Investigate the use of recycled HDPE-pipes in our solution.</p> <p>Design improvements to reduce the amount of plastic and aluminium in our solution.</p>
Supply Chain	<p>While our customers/partners will be responsible for purchases of approved components for the projects, Ocean Sun presents these customers with a list of certified suppliers of essential components. In this work we aim to establish regional suppliers with established initiatives towards supporting the environment.</p>	Establish a minimum of 2 regional suppliers of components to our floater solution.

## SCOPE 3 EMISSIONS EST.

The table below aims at capturing the largest indirect sources of GHG emissions from our technology. The 2 MWp Banja project has been used as a reference to estimate the emissions from our design.

FPV COMPONENT	CALCULATION METHODOLOGY	EST. GHG EMISSIONS (tCO <sub>2</sub> )
PV MODULES	Considering available data on a generic type of solar panel we calculated the emission regarding 500 kW of capacity per floater and four floaters in Banja project	900 - 1100
PIPES AND BRACKETS	Emissions calculated considering total mass of HDPE pipe material and publicly available resources on emissions per ton	55 - 110
MEMBRANE	Based on the weight of the membranes and desktop research for GHG emissions for plastic materials	25 - 40
CONCRETE BLOCKS	Based on weight of mooring components and public available data on emissions	30-55

*Table: Estimation and analysis of GHG emissions of Banja project*

# OUR CLIMATE IMPACT

## ENVIRONMENTAL ASSESSMENT OF THE FPV COMPONENTS

In collaboration with material suppliers, Ocean Sun has conducted research on regarding the impact that the technologies components has on the surrounding environment. The findings are summarized in the table below.

- **Membrane:** Similar materials are commonly used for applications like tents, closed fish farming and roofs and certain versions of our membrane even come with drinking water certificate.
- **Buoyancy structure:** HDPE pipes are commonly used as water pipes around the world.
- **Solar Panels:** Research has shown a potential impact of the eventual effect of leaching of, for example, heavy metals from the solar panels. However, leaching of organic micropollutants was not detected. Further, the concentrations are several times lower than the internal standard for produced drinking water. It is therefore highly unlikely that leaching will cause any detectable increase of heavy metal concentrations in the water.

The table below includes further information about system's components and its environmental analysis.

SUBSYSTEM	DESCRIPTION	CERTIFICATIONS	ENV. IMPACT	CERTIFICATE
RING PIPE	HDPE PE100 Pipe	Certified for drinking water	None	Environmental Certificate
MEMBRANE	PVC or Polypropylen material	Certified for potable/drinking water	None	Drinking water test/ certificate
PV MODULES	Dual glass P-type Silicon	Environmentally-friendly content	None	Producer data sheets
PV CABLES	PEX insulated cables	Certified for marine applications	None	Certified for marine applications
CORRUGATE TUBE	PE tubes	Certified for marine applications	None	Certified for marine applications
MOORING	Chains, ropes, buoys	Certified for marine applications	None	Certified for marine applications

Table: Detailed environmental analysis of componentes of Ocean Sun's projects

# CLIMATE **IMPACT** POTENTIAL

A 100 MWp Ocean Sun FPV plant in Indonesia would:

**Save 157 000 tonnes  
of CO<sub>2</sub> per year**

That is equivalent to the emissions  
from the cars in a medium  
sized city for a whole year

**~ 34 000 cars**



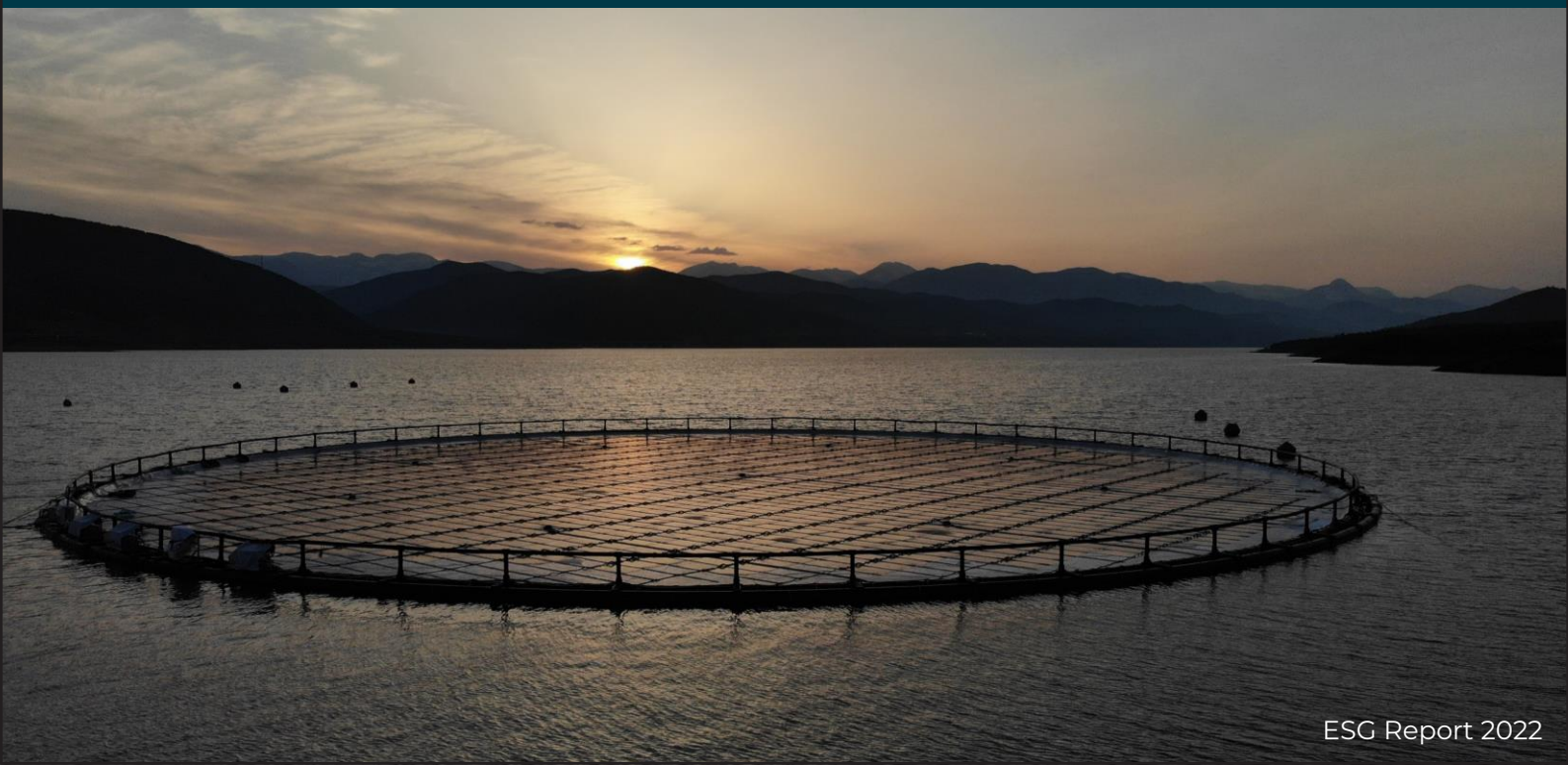
**Save 200 hectares of  
land**

No need to take up valuable  
land or contribute to  
deforestation

**~ 285 soccer fields**

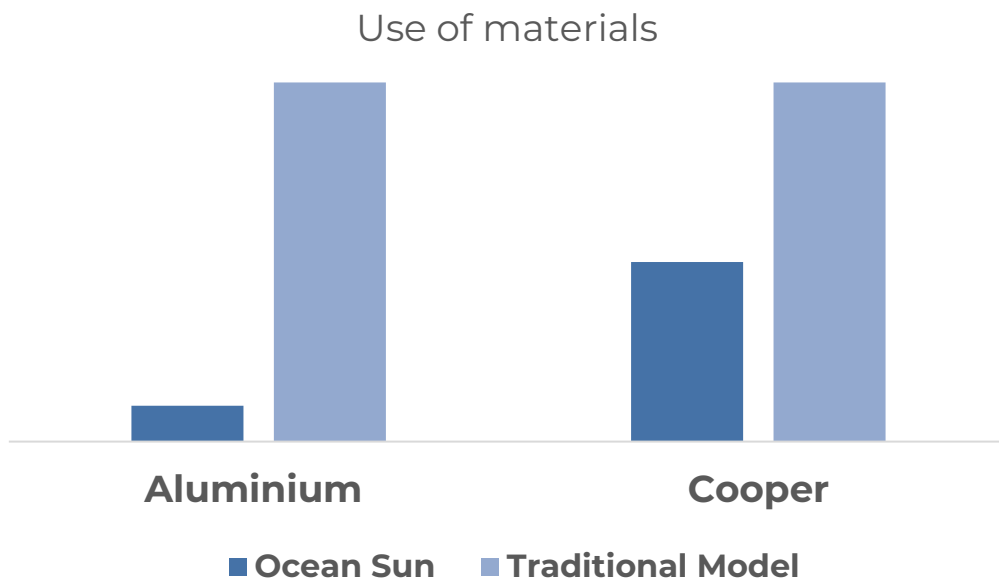


Source: <https://www.irena.org/Data/View-data-by-topic/Climate-Change/Avoided-Emissions-Calculator>



# MATERIAL ANALYSIS

Ocean Sun uses a slightly modified solar panel that **reduces the usage of aluminium and copper**. In fact, an Ocean Sun module only uses **10% of the aluminium** compared to a traditional solar panel. Furthermore, because of the short cables, Ocean Sun's design only uses **50% of copper** compared to a traditional solar plant.



# ACHIEVEMENTS



## **ENERGY GLOBE AWARD**

The most important Award for Sustainability worldwide (National level – Albania)



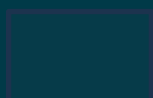
## **SOLAR IMPULSE FOUNDATION**

Approved Solution



## **EDP RENEWABLES' ENERGY STARTER**

Ocean Sun was one of 10 changemakers from 500+ companies to be invited to co-innovate the energy transition



# HSSE PLEDGE

In Ocean Sun we have a zero-tolerance policy, meaning that we strive for:

- Zero harm to people, assets and the environment
- Zero work related injuries or sickness
- No violation of human rights and our ethical guidelines
- No discrimination

**Health and safety is always priority one for Ocean Sun,** ensuring that our employees and stakeholders operate in a safe environment. We have established an HSSE policy and strive for a **good and respectful workplace**. We also actively engage in social activities, such as charity runs and company parties to promote employee well-being and teamwork.

We also have a Code of Conduct that is well established in the organisation, and the management is committed to human rights and equality. Despite being a small technology provider with little direct involvement in the purchase and construction of our systems, we have established clear processes to ensure good working conditions and equality, both up and downstream of the value chain.

To measure the effects of our actions and to foster improvement we take the following actions:

- Report on all deviations, accidents or near accidents and breach of ethical guidelines through a dedicated reporting system, available to all employees.
- Ensure that customers and suppliers comply with our Code of Conduct
- Internal revision on system and process level to discover breaches and foster for continuous improvements
- Track and accommodate relevant legislation
- Strive towards equal treatment and inclusion in our organisation and board of directors.

# GOVERNANCE

in OCEAN SUN, we strive to comply with expectations, laws and requirements and have established a strong governance structure to **ensure transparency, accountability, and ethical decision-making**. Our management and employees is under our own Code of Conduct which is our key governing document for matters concerning governance and good business conduct. We share this Code of Conduct with our suppliers and customers and require them to adhere to principles that are consistent with our own.

## CODE OF CONDUCT

The main take-aways from our Code of Conduct are:

- All employees have a personal responsibility to comply with our CoC
- Zero tolerance for corruption and bribery
- We comply with all laws and regulations in the regions we operate
- We respect internationally proclaimed human and labour rights and conventions
- We do not accept gifts or hospitality that could influence our business decisions
- We are committed to protect the privacy and personal data of all individuals
- We are committed to protect sensitive and confidential information
- We shall be transparent and correct in our financial reporting

## WHISTLEBLOWING

Ocean Sun has established a channel for whistleblowing so that employees and possibly external parties can report breaches of our ethical principles and concerns on how we operate that are difficult to raise through other channels within the company.

# Appendix

- HSSE policy
- Code of Conduct

## ***Ocean Sun shall ensure Safe, Reliable and Sustainable operations to achieve our goal:***

### ***Zero harm to people, assets and the environment***

#### **Commitment**

- We shall continuously strive for zero harm to personnel, environment and assets through collaboration with our valued customers and vendors
- We shall monitor weak signals and identify major accident hazards in our activities, deliverables and operations by focusing on process safety
- We shall ensure that security risks to personnel and assets are effectively managed
- We believe that incidents can be prevented by implementing barriers and shall conduct our operations through efficient use of materials and energy
- We shall design products and services to have no undue environmental impact, to be safe and to be efficient in consuming energy and natural resources
- We shall focus on our employee's personal health, safety and well-being and continuously improving the work environment
- We shall provide the right level of resources to ensure that this policy is implemented properly

#### **Behavior**

- We are personally committed to HSSE and take individual responsibility by focusing on our own behavior, caring for each other and intervening when required
- We apply a systematic and measurable approach to continuously improve HSSE culture and performance
- We facilitate for participation, listen to our workers and cooperate actively with the industry to continuously improve our processes and evolve throughout the value chain
- We bring with us our high HSSE standards wherever we do business and hold each other accountable
- We openly communicate HSSE issues and performance, and share and learn from industry best practices and lessons learned
- We include HSSE performance in the selection, appraisal and reward of our staff
- We integrate HSSE in all business processes

# Ocean Sun Code of Conduct

## Introduction

Integrity is core to our way of operating in Ocean Sun. It defines who we are and is foundational to our interactions with all stakeholders. Our integrity makes a difference, it means we can be trusted and that our results are based on true performance. Our main tool to ensure we all approach integrity in unison is our Code of Conduct. This code is our key governing document.

It is an individual responsibility to ensure that we are familiar with the Code of Conduct and its requirements. We shall ask questions and be open and transparent if we are in doubt. Any breach of the code shall be reported to the Board.

Everyone has a role to play in safeguarding high integrity standards and it is important that we do not allow any exceptions to these commitments.

## Scope

This Code of Conduct applies to all employees (including temporary personnel) and the board of directors in Ocean Sun. Ocean Sun encourages all business partners to adhere to principles that are consistent with this Code of Conduct. Suppliers, service-providers, subcontractors and other contracting parties of Ocean Sun, are expected to adhere to standards which are consistent with applicable laws and Ocean Sun's Code of Conduct. Ocean Sun shall do its best to ensure such adherence.

## Commitments and Responsibility

Ocean Sun shall conduct its business with integrity; respecting the laws, cultures, dignity and rights of individuals in all the countries where we operate. This Code of Conduct describes Ocean Sun's most important commitments and requirements regarding ethical business practices and personal conduct. It describes the behaviour Ocean Sun expects from anyone working on our behalf, and what our employees, business partners, investors and other stakeholders can expect from Ocean Sun.

The Code of Conduct has been approved by the Board of Ocean Sun AS which is also responsible for safeguarding, implementing and overseeing the management of this Code of Conduct. All deviations, if any, must be approved by the Board of Ocean Sun AS.

## Personal responsibility

Ocean Sun employees shall always strive to exercise good judgement, care and consideration in your service for Ocean Sun and its subsidiaries. In the event that there are differences between applicable laws and regulations and the standards set out in this Code of Conduct, the highest standard consistent with applicable laws shall be applied. Violation of this Code of Conduct or applicable laws may lead to internal disciplinary actions, dismissal or even criminal prosecution.

Employees are expected to familiarize yourself with, sign off on, and perform their duties in line with the principles set forth herein. Any evidence of violations of this Code or applicable laws should be reported. Reporting violations will never serve as a basis for disciplinary action.

## Managers responsibility

Managers are responsible for communicating the requirements in the Code of Conduct to all their direct reports. Managers are also responsible for promoting and monitoring compliance with the Code of Conduct within their respective area of responsibility.

## Conflict of Interest

A conflict of interest is a conflict, or the appearance of a conflict, between your obligations towards the company and your self-interest. A conflict of interest can occur when a person's familial or personal relationships, participation in external activities, or interest in another venture influence or could be perceived to influence this person's professional decisions as an employee.

Any interest or relationship that could improperly affect one's judgment and decision-making can be a conflict of interest. Business transactions must be entered solely for the best interests of Ocean Sun, and potential conflicts of interest shall be disclosed to the relevant manager.

## Corruption and Bribery

Ocean Sun has zero tolerance for any form of corruption. Our zero tolerance extends to bribery, trading in influence, facilitation payments, network corruption (nepotism) and any sort of illegal kick-back. Engaging in bribery or any other forms of corruption or turning a blind eye to your suspicions of corruption, can result in liability for Ocean Sun and for you personally. No employee or business partner will suffer any negative consequences for refusing to engage in corruption, even if this results in a loss of business. If a payment is demanded from you, to avert an immediate threat to the life or health of any person, such payments are not prohibited, but they must be immediately reported to the compliance responsible.

Ocean Sun expressly prohibits any provision, offering or accepting of bribes of any variety to any person, whether private or public, either directly or through any third party. Bribery occurs when any person for himself or others, directly or indirectly, offers, pays or promises an undue advantage to influence a business or governmental action, outcome or decision. Requesting or receiving such undue advantage also constitutes bribery. Offering and receiving undue advantages in connection with a person's position, office or assignment can be illegal under anti-bribery laws also where there is no intention to influence any action, outcome or decision. An undue or improper advantage refers to any benefit that a company or individual is not legally entitled to. The benefit can be anything of value, including but not limited to cash, donations, favours, payments for non-existing services, employment and employment benefits, and expensive or extravagant business courtesies, such as gifts, meals, entertainment and travel expenses. Ocean Sun may be liable for bribes paid by third parties on our behalf. It is therefore an important focus for Ocean Sun to ensure that third parties that may represent a risk are properly vetted, trained and monitored to ensure compliance with our zero tolerance for bribery.

## Gifts and Hospitality

Ocean Sun does not allow gifts and hospitality where giving or accepting them could influence business decisions or enforcement of regulations, or cause others to perceive such influence. As a company we do not expect gifts or hospitality from any of our business partners. Gifts and hospitality may be accepted or offered when this is expected as common business courtesies, however, only when aligned with the precautions and regulations described below.

All gifts and hospitality offered or received shall be transparent and within moderate levels.

## Money Laundering

Money laundering occurs when the criminal origin or nature of money or assets is hidden as legitimate business dealings or when legitimate funds are used to support criminal activities. Ocean Sun is committed to complying with all anti-money laundering and anti-terrorism laws. We will conduct business only with reputable customers and business partners involved in legitimate business activities, with funds derived from legitimate resources.

## Human Rights and Labour Rights

Ocean Sun respects internationally proclaimed human and labour rights and supports international human right conventions such as the UN Declaration and Convention on Human Rights, the ILO Declaration on Fundamental Principles and Rights at Work, and the OECD Guidelines for Multinational Enterprises.

Ocean Sun acknowledges all employees' right to form and join trade unions of their own choice and aim to include and involve employees and their unions in decision making. Ocean Sun does not tolerate harassment or degrading treatments in any form by or towards employees. Ocean Sun employees shall expect a workplace free from harassment and discrimination on the basis of age, gender, sexual orientation, disability, race, nationality, political opinions, religion or ethnic background, or any other basis prohibited by law.

Ocean Sun will not use child or forced labour, and will not tolerate working conditions or treatment that is in conflict with international laws and practices. Ocean Sun shall ensure that the company, through its operations, does not cause or become complicit in any infringement of human rights. Ocean Sun shall address and minimize risks of human rights infringements in the supply chain, in the projects where we contribute, and all other parts of our operations.

## Protecting the Environment

Ocean Sun shall act responsibly with an ambition to reduce direct and indirect negative impacts on the external environment, both from our operations and the products and services we provide. Ocean Sun shall adhere to relevant international and local laws and standards, seeking to minimize our environmental impact and support sustainability in the local communities where we are present.

## Protection and Processing of Personal Data

Ocean Sun processes a large amount of personal data, mainly about its employees, customers, business contacts and others, while conducting its day-to-day business.

Ocean Sun is committed to protect the privacy of all individuals and ensure that personal data is managed responsibly throughout the Ocean Sun group. All personal data shall be kept strictly confidential.

The term personal data include, but is not limited to, name, address, gender, SAP identification number, telephone number, e-mail address, salary information, computer user logs etc. Laws and regulations in many jurisdictions such as the US and the EU impose restrictions on the collection, use, sharing and transfer of personal data. The Ocean Sun framework and regulations provides a legal basis (Binding Corporate Rules) for the transfer of personal data from legal entities within the EEA to subsidiaries in third countries.

No one within Ocean Sun shall share personal data with third parties except for where sharing with service providers is necessary in order for them to provide their services to us. The service providers shall only receive the personal data they need to deliver their service

### Safeguarding of Property and Assets

Ocean Sun's property and assets must be safeguarded in an appropriate manner. Company assets are only to be used for legitimate business purposes and only by authorized employees or their designees. This applies to tangible assets, e.g. equipment, and intangible assets such as intellectual property and confidential information. Information produced and stored on Ocean Sun's IT systems is regarded as the property of the company. Information that may be considered illegal or inappropriate must under no circumstances be processed or downloaded. Limited personal use is permitted where such use is legal and does not affect business performance.

### Sensitive Information and Confidentiality

Ocean Sun is committed to protect sensitive or confidential information. We will not misuse information belonging to ourselves or any of our partners. All company employees have a duty of confidentiality, both by law and by way of written agreement. This duty also applies after the conclusion of employment or contractual relationship for as long as the information is considered sensitive or confidential in nature.

### Export Controls and Sanctions

Export controls and economic sanction laws impose restrictions regarding the sale, shipment, electronic transfer, provision, or disclosure of information, software, goods, assets, funds, and services across national borders or involving parties subject to economic sanctions. Exports also include electronic transfer, through discussions or visual inspections, and not only through traditional shipping methods.

Ocean Sun's policy is to exercise caution when dealing with sanctioned countries. Before engaging in business with any party, it is important to confirm that those parties are not subject to sanctions.

### Transparency and Financial Reporting

Ocean Sun will communicate relevant business information in full and on a timely basis to its employees and external stakeholders. All accounting and financial information, as well as other disclosure information, must be accurately registered and presented in accordance with law, regulations and relevant accounting standards.

### Declaration of Compliance

All employees (including temporary personnel) and/or directors in Ocean Sun will be requested on a regular basis to confirm that they have read and familiarized themselves with this Code of Conduct, and that they for the previous year have conducted their tasks and responsibilities in accordance with the requirements set forth in this Code of Conduct.

Suppliers, subcontractors, representatives and other contracting parties of Ocean Sun are expected to have ethical standards that are compatible with this Code of Conduct.

### Reporting/Declaration of Breach

If there are suspicions concerning any unprofessional conduct, said conduct shall immediately be reported to the line manager, HR department or another company manager. Any employee knowingly making a false report for the purposes of harming another individual will be subject to disciplinary action.

Any breach of Ocean Sun's Code of Conduct shall immediately be reported. Ocean Sun will ensure that there will be no retaliation, nor any career impacts, for reporting possible violations in good faith.



[www.oceansun.no](http://www.oceansun.no)