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NEWSLETTER

SEAWARDS' STATES OF THE MATTER



SEAWARDS

AT THE SOURCE !



Lack of water...

'What 's responsible ? The climat ?

Global warming?

Are the cataclysmic carbon emissions observed by all the experts generated by our lifestyles? Yes, we know that global warming is induced by human activity, but water resources have remained untouched for millennia. It still covers 72% of the globe with its 1400 million km³. It is made up of inland seas, oceans, and groundwater for 97.2%, to which we add the 2.1% of freshwater from eternal snows and glaciers.

The available balance?

0,7 % ! Practically nothing!

And 62% of this resource, which has become "gold", is found in our groundwater and 38% in surface water...

Freshwater is a resource whose renewal cycle is well known: evaporation / condensation / precipitation / infiltration and runoff...

No new resources are created through this unchanging circulation, nor will they ever be.

In recent years, however, water has become increasingly scarce as a result of atmospheric warming.

Today, water stress has become an edifying reality. 2.2 billion people suffer from it, and there will be more than 3 billion by 2030...

Water stress is defined as water availability of less than 1700m³ per capita per year. Today, more and more countries are historically affected, and few regions in the world are spared.

So the equation is simple...

While the quantity of fresh water has remained unchanged for millennia, access per person is becoming more limited. In 1950, 17,000m³ of water were available per capita per year; by 2025, this stock will have shrunk to 5,100m³! In 75 years, water resources have been divided by more than 3... The global demographic explosion has multiplied the surface area of irrigated land by 5 over the last century, and agriculture has increased its water consumption by 60% in 50 years. And what can we say about the ever-increasing consumption of water by industry?

In 19 regions of the world, in the United States, India or the Arabian Peninsula, the situation is such that, according to NASA satellite observations, it would take more than 2,000 years of rainfall to refill them!

This state of affairs is a reality, and we can cry all day long, but our tears won't be enough to replenish our lakes and rivers... **Water, essential to life, must become a protected resource. We need to save it and respect it.**

Innovation is a priority, and must be coherent. This is why SEAWARDS is mobilizing its energy and teams to develop its disruptive "Cryo-Separation" technology.

Change is on the way, and we're going to be part of it!

Hubert Montcoudiol
Co-Founder



BUSINESS TRIPS

ANSWERING THE CALL

The echo of SEAWARDS technology goes beyond borders. In preparation for international partnerships, Elie Zeenny, who heads up the Group's Strategic Alliances Plan, has embarked on the first trips to the Mediterranean region, notably to Egypt and Morocco.

The stakes of seawater desalination are so high that several countries have made it a priority to respond to water shortage problems.

This is particularly the case in **Egypt** and **Morocco**, which are undertaking very large-scale projects over several years, with ambitious targets for water production by desalination.

During these recent trips, we were able to meet with major industrial players with whom we plan to join forces to deploy SEAWARDS technology more effectively. This combination of skills will enable us to locate the first demonstrators in these regions in the second half of 2024, to demonstrate the technology's efficiency and reliability. It's also an opportunity to lay the foundations for commercial traction.

In the coming weeks, Senegal, the Caribbean, California and Uruguay are on the agenda, with the aim of initiating a strong dynamic of partnerships with major regional players.

WELCOME!

Julien Poniatowski joins the SEAWARDS Groupe Seanergy management team as Chief Operating Officer.

Julien will be responsible for managing our major projects, particularly on an international scale. An engineer, he has worked for a number of major groups and has a multi-continental background.

"I'm delighted to be joining SEAWARDS and its innovative seawater Cryo-separation technology. During my assignments in different parts of the world, I've seen the consequences of ever-increasing demographics and urbanization.

For me, getting involved with SEAWARDS means continuing to provide concrete, affordable answers to the essential right of access to drinking water for as many people as possible.

It also means taking part in a high-impact collective adventure, supported by a team of experts in each of their fields. Finally, it means being able to say to future generations that we are developing and doing everything we can today to live together more harmoniously with nature tomorrow."



R&D

Led by our CTO, Pascal Malesinski, our R&D team has achieved promising results in recent months.

Both in terms of the quality of the fresh water produced, which meets our ambition of 250ppm, and in terms of the development of our test equipment, which has been considerably strengthened.

Our specifications and provisional timetable have been respected, and we have achieved our ambitions with encouraging results, ratios, percentages of mineral salts and consumption in kWh/m³. We are also in positive discussions with the management of the Grand Port Maritime de Marseille, with a view to installation and production start-up in 2024.



The BPI is good to us

After raising funds in 2022, SEAWARDS has seen its equity doubled by a BPI loan for 2 envelopes, 800,000 euros paid in 2023 and 400,000 euros expected in 2024. A validation of the value of its technology and the need to address the global water emergency.

The opportunity to contribute to the deployment of SEAWARDS and consolidate the structuring of the engineering team based in Pertuis at the Pépinière des Entreprises Innovantes.

"This loan secures our business by giving our engineers the capacity to set up the first demonstrator, which will be installed during 2024. From day one, all our resources have been allocated to our R&D work. This has enabled us to strengthen our testing resources," says Hubert Montcoudiol.



YES! DESALINATION MUST BE CLEAN

Desalination technology is growing fast, with 5 times as many plants in 20 years. They will reach 21,000 units this year, producing 110 million m³ per day to supply 300 million people. The world's largest plant, at Jebel Ali in Saudi Arabia, produces one million m³/day. In Europe, the podium goes to El Prat in Catalonia with 170,000m³/day.

But with the 27 tonnes of oil needed to produce 1,000m³ of water, equivalent to 120 million tonnes of CO₂ emissions every year, to which we can add the 53 billion m³ of brine containing chemicals released into the ocean every year, killing all marine life, the technology is highly questionable. Hence the urgency and relevance of finding alternative technological solutions such as Cryo-separation, whose environmental impact is neutral. Our aim is to democratize desalination by making it accessible to as many people as possible, with total respect for the environment: no brine discharge and low energy consumption.



Renaud Muselier, Président Conseil Régional Région Sud

THE BLUE GOLD OF THE SOUTH

The blue gold of the South of France Region
"The water war will not happen!"
With a specific plan to preserve water!

The Southern Region, which coordinates water policy in a spirit of consultation, partnership and regulation, alongside the State and the Water Agency, has set up an offensive action program. It has been allocated 630 million euros.

In a geographical environment that is particularly sensitive to drought, and which has always been short of water in living memory, action is essential. The program is based on a number of principles: the adoption of sobriety, the choice of solidarity between upstream and downstream between users, and the use of innovation. "It's important to develop new processes, such as reusing wastewater and introducing drip irrigation, and to focus on innovation," say the representatives of the Southern Region of France.

"In this region, where SEAWARDS has its roots, we are committed to contributing to this ambition and to flying the flag for our new technology," adds co-founder Hervé de Lanversin.



courtesy of Yaron Gertner, IOLR

- A - Arrow indicates brine discharge location
- B - Visualization of brine dispersion
- C - Visual appearance without brine
- D - Brine-contaminated seawater



TRIBUNE

WATER AND THE SACRED...

A CONVERSATION WITH OUR CO-FOUNDER HERVÉ DE LANVERVIN, INSPIRED BY THE WORK OF SOUTH AFRICAN ARTIST DINEO SESHEE BOPAPE. SHE INVITES US TO REFLECT ON OUR RELATIONSHIP WITH WATER AND THE PHYSICAL AND SPIRITUAL ENVIRONMENT.

Is this notion of the sacred inherent in the work you do?

Sacredness is the link between man and the environment. Each of us contributes to our environment and integrates it into the harmony of life... The link between water, and in particular the access to it for all, which is the focus of our commitment, is an obvious one. Without water, there is no life, and life is sacred...

Do you see responsibility as a collective responsibility?

We are all responsible. We can't wait for governments to decide for us. It's up to each and every one of us to link man and the environment. The modern world, with its open borders and social and cultural mix, has become so complex that decision-making is becoming difficult. The solution must come from the individual initiative of each person, who must act according to his or her convictions and mobilize.



How to act?

The principle that man is superior to other species has become unacceptable.

It's not just a matter of having a clear conscience - that's counter-productive.

On the contrary, it's important to take a global view in order to change things.

Our *raison d'être*, that of SEAWARDS, is in line with this. And we need to get away from the idea of omnipotence and see reality. The urgency of climate change does not prevent us from taking the right path and analyzing the root causes of dysfunction. Industrial and collective awareness is needed to build an organized solution.

Can Art bring about change?

Some artists are showing the way! I'm thinking of South African-born artist Dineo Seshee Bopape, who works on memory and identity. Through installations that often combine video with everyday objects, the artist questions both geopolitical situations and more intimate facts. Dineo Seshee Bopape's works are sensitive and social spaces, before being objects: sounds, smells, the way the visitor's body is mobilized, are all points of entry for historical and political reflections. The artist not only appeals to the senses and reason, but also awakens us to a certain form of spirituality. Dineo Seshee Bopape exhibited her work at the Palais de Tokyo and in the Pinault Collection for "Avant l'orage"... ***Sacredness is organized!***

