

BLUE GENERATION STUDENTS' PROFILE

GUIDING DOCUMENT



OCEANO AZUL
foundation

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This document brings together elements that guide the adoption of a student profile – the Blue Generation Students – who in the future will benefit from a school curriculum in which ocean literacy is a central component. The objective is to integrate the ocean into formal education, highlighting what it means to humankind and the critical importance it has for our survival. This is done through the design, development, and integration into the school curriculum of the so-called New Blue Curriculum, similar to the one presented by IOC-UNESCO, as a means of promoting and encouraging the widespread integration of ocean literacy into the school curricula of Member States.

This document defines the principles and vision that will shape the Blue Generation Students as they graduate from the compulsory education system and, outlines the values and skills that should be acquired through the curriculum. We hope these values foster specific character traits, which will in turn lead to new behaviours and attitudes. We hope the acquired skills influence and inform future behaviours, and that these are based on a strong humanistic and scientific culture. These behaviours will be informed, consistent, and able to change the social and environmental reality, thus generating concrete impact.

This document outlines the framework of this initiative and its principles, and vision, along with the values and competences that together will define the profile of the students, new citizens, and future decision-makers, the Blue Generation Students.

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FRAMEWORK

1.1 THE IMPORTANCE OF THE OCEAN FOR THE PLANET

It is often rightly said that planet Earth should be called planet Ocean. Indeed, most of its surface is submersed and the ocean is the basis for life on Earth. It was in the ocean that life began on the planet, where the first unicellular living forms appeared, about four thousand million years ago. The ocean is also the largest life-support system on the planet. The fact that we do not call it planet Ocean, but Earth, reflects the anthropocentric prism from which we see the world and, as terrestrial animals, the way we value what happens on land and devalue the role of the ocean. One way to correct this error of perspective is to spread ocean literacy widely across our education systems.

The ocean is also the largest life-support system on the planet.

We have populated almost the entire surface of the planet with our demographic explosion. The human species now accounts for about 36% of the biomass of all mammals combined. However, although we now know the cryosphere and the poles, we are far from having the same kind and depth of knowledge regarding our ocean. Indeed, the ocean remains an unknown frontier. We know

less about the ocean than about the Moon or even other planets. The truth is that, despite all scientific explorations and technological innovations, the ocean remains a vast unknown territory populated by species many of which yet to be identified. For example, a new species of whale was recently discovered in the Gulf of Mexico. It is not a small invertebrate or a new bacteria, but a large cetacean. This reveals how little we know about life on the ocean, the ocean's role as a system, how it works, and how all life on Earth depends somehow on it.

Perhaps our ignorance is the reason we think the ocean is indestructible, and that we can dump all our waste and rubbish, even the most toxic, into it, while continuing to take all the resources we can capture. Perhaps ignorance is also why governments today advocate for and seek to start new environmentally damaging extractive activities, such as seabed mining.

Nevertheless, we currently have enough science to inform us of the critical point we have reached in the deterioration of the climate and oceanic system. We have scientific information about the accelerated rise in sea temperature. More than 90 percent of the excess heat generated by greenhouse gases causing global warming is absorbed by the ocean. If this were not the case, the atmospheric temperature would already be so high that our economies and societies would no longer be viable. We are aware of the changes in the ocean's chemical composition – its acidification, generated by excess carbon dioxide, or on the decrease of the oxygen available in the ocean, resulting from organic

pollution. We have information on the inexorable reduction of biomass, the widespread plastic pollution in the ocean, and the threat of extinction of countless species, including top predators such as sharks. These trends are happening simultaneously to a phenomenon of biodiversity that will lead to the mass extinction of thousands of marine species.

With this information, we can no longer argue that we do not know the consequences of what we do and that we can continue to squander natural resources, eradicate marine ecosystems, and jeopardise the entire system. Incredibly, however, despite this scientific knowledge, the reality is that society remains largely ignorant of the problems our development model caused. **How can we change this paradoxical situation?**

We now have enough science to know not only how we influence the ocean but also, and just as importantly, how it influences us, how we depend on it. Until recently, we did not know how much we depended on the ocean, beyond the fishing that generates part of our food supply. **Today, thanks to science, we know that climate, water, the fight against climate change, and even oxygen, all depend on the ocean.**

It is therefore in the face of what we know from science, but which paradoxically most of us continue to ignore, that it is necessary to generalise and root ocean literacy in formal education.

Education is the best tool for spreading the word about what a few know – the scientists – but is vital for all to know. Educating our communities, generation after generation, is key for us all to understand the importance of the ocean.

In the case of the ocean, the problem of this ignorance is as profound as it is difficult to overcome. It is impossible to solve without the massification of ocean literacy because there is a generalised misperception about the environmental state of the ocean, which makes us think that it is doing better than it really is. This misperception spans generations and leads us to repeat actions and decisions that worsen the state of the ocean.

Since the 1970s, scientists have known about the negative impacts of our actions on the marine environment and have sought to warn us about this reality. This can be seen in the United Nations Law of the Sea Convention, negotiated in the 1970s, where scientific knowledge was already well discerned and clear. Fifty years later, or two generations, we are inexplicably still ignoring these warnings. In other words,

we are all still ignoring science. Decision-makers themselves, particularly political and economic ones, are still not making the decisions that need to be made. Without such decisions, we fail to produce the solutions that the increasingly serious problems of the ocean demand. Unfortunately, we continue to worsen the situation, deepening the crisis of the ocean to levels from which there will be no return. An emblematic example of this trend is the disappearance of coral reefs,

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which may already have reached irreversible levels. This will have strong impacts on the oceanic system. Indeed, corals, while occupying only a tiny percentage of marine space, are responsible for harbouring almost 30% of all coastal marine life.

It is not only because of the need to massively publicise science that we need ocean literacy. **Above all, this literacy is fundamental for cultural reasons.** Because if we wonder why we continue, generation after generation, to ignore what scientists know, or why we do not change our attitudes and decisions regarding nature conservation and respect, ocean protection and sustainability, the ultimate reason is that our main civilisational institutions, those from which the culture that shapes us emanates, still do not value nature as it deserves to be valued.

This is the case in the field of law, where nature is merely *res nullius*, as it was over two thousand years ago when the law was structured as a system within the Roman Empire. This phenomenon also happens in the economy, where nature, instead of being valued as the natural capital it is, remains inert, without market value, before it is transformed into raw material. Human impacts on nature are considered externalities of economic activity, rather than a cost for those who use nature. A living tree is still not worth what the wood of a dead tree is worth. But a living tree produces ecosystem services that are essential to our society and our economy, on which we depend, and to which it is, therefore, urgent to value. As a result, nature should increasingly become an integral part of our economy, due to its growing scarcity.

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The field of ethics has also largely been limited to bilateral relationships between people. There are no common ethics of nature, which would make us manage our lives, choices, decisions, and actions with the respect that nature and living beings deserve. Even monotheistic religions devalue nature by valuing human beings and centering their thesis on the relationship between the divine and the human, mostly ignoring nature and other species.

If the law does not value nature, **if the economy does not account for it, if ethics does not consider it, and if religion diminishes it, how can we understand its value?** Within this context, how should we know how to listen to scientists? How can we change this? How can we become aware of this limitation in our understanding of the world and make our main civilisational institutions evolve?

There is no easy answer, but one way forward, with a strong chance of success, is to mainstream education about the ocean, starting with young children. Just imagine what it could be, from an educational standpoint, to achieve ocean literacy education and learning that goes beyond the scientific level and reaches the cultural level of our most structured mental frameworks. In fact, ocean literacy can foster student's critical thinking and stimulate their creativity.

For all the reasons explained above, it makes sense to introduce ocean literacy into school curricula. That is why UNESCO and the European Union have been advocating for this educational development. In the case of the European Commission, the Mission Starfish 2030 Report on how to Restore our Ocean and Waters advocates for ocean literacy inclusion in the curricula of all Member States by 2030.

1.2 THE STRATEGIC IMPORTANCE FOR PORTUGAL

For Portugal, the inclusion of ocean literacy into the school curriculum is truly strategic and should therefore play a structuring role in national education programmes. In other words, the ocean is of strategic importance to Portugal, as is widely understood today, and for that reason, ocean literacy is also strategic.

There are several reasons why the ocean has a high strategic value for Portugal. First, because of the geographical circumstances of the country. Portugal is a maritime giant of the European Union. It is one of the largest oceanic countries in the world and the largest EU country in terms of maritime jurisdiction.

In addition to its size, Portugal is geographically central, which can have a major positive geopolitical and even geo-economic impact. It is at the centre of Europe's maritime traffic routes, at the heart of the logistical flows of the Western Hemisphere. The port of Sines is closer to the Panama Canal than any other European port and is located at the crossroads of three continents: Europe, Africa, and America. In addition, the Azores archipelago occupies a central position in the Atlantic, halfway between North America and Europe.

Equally relevant is the destiny of the 21st century – where it is headed and what its path will be – which will inevitably be marked by decarbonisation, resulting from the fight against greenhouse gas emissions. To achieve this desired decarbonisation, the ocean will be of strategic importance for Portugal, for Europe, and for the entire planet. We can benefit from decarbonisation through the ocean on several fronts: through offshore wind, for the production of clean decarbonised energy; with the development of maritime transport and port logistics, which are more energy efficient than other means of transport and therefore more conducive to decarbonisation; by investing in innovative algae and bivalve aquaculture that will contribute to the decarbonisation of the ocean, using the food sector, thus also contributing to food security in a world with a growing population; and by valuing marine ecosystems in the global carbon market as sources of carbon sequestration in the ocean, whether in salt marshes, seagrass beds, and algae, in deep sea sediments or in the biomass recovered in the water column, resulting from the implementation of effective marine protected areas.

All these are clear factors that favour the development of a truly sustainable and inclusive blue economy in Portugal, for which the country urgently needs to be prepared. In this context, ocean literacy will be a decisive instrument to make Portuguese society agree on the need for the country to use the ocean as its passport to the 21st century.

Finally, the growing value and importance of natural capital, including ecosystem services that sustain our economy and society, is another key argument for the strategic importance of the ocean for Portugal, and therefore for the need for ocean literacy. **Our country is indeed rich in natural capital, starting with blue or marine natural capital.**

For this reason, it is in Portugal's strategic interest to preserve, protect, enhance and grow this natural capital. It is therefore decisive to promote a culture of awareness and convey values leading to ocean action and its protection. Only by integrating ocean literacy into the national formal education system will we be able to achieve this result.

The following are two examples of the importance blue natural capital can have for Portugal:

First, the great biological diversity of the Portuguese ocean can allow for the creation of an innovative blue biotechnology sector. This could happen through the integration of biotechnological components of marine origin in products and services of the main exporting industries. Such a sector, rooted in science and with highly qualified employment, would play a key structuring role in the Portuguese economy and bring about a great increase in productivity and competitiveness.

Second, the development of scientific knowledge on the amount of blue carbon stored in the sediments of the vast Portuguese seabed, as well as in coastal and estuarine environments or in the biomass of marine species, will be fundamental. There is no doubt that carbon will be one of the new currencies of the 21st century, given the current crucial importance of decarbonisation. Portugal has a wealth of natural resources linked to the ocean that the country must not fail to capitalise on.

In addition, there is one more objective, which is based on all the above, and which should mark the high degree of ambition that a focus on ocean literacy can promote. Portugal will benefit if its citizens become the most enlightened and aware Europeans on ocean sustainability. This alone will allow Portugal to differentiate itself and bring prestige, credibility, and recognition to the country.

In this regard, human resources are Portugal's greatest strategic resource. It is therefore essential to invest in high levels of qualification. Once again, integrating ocean literacy into formal education is the fastest and most structuring way to build a highly qualified society.

There are many reasons why the ocean is strategic for Portugal, and why it can generate a virtuous economic development model that will enable society to build the prosperity and quality of life that we all aspire to achieve.

In conclusion, all the reasons that explain how the ocean is the most relevant factor to Portugal's role and development in the 21st century are also the reasons that support the arguments pushing the country to make a systemic commitment to far-reaching ocean literacy through school curricula, starting from the first cycle of primary education.

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BLUE GENERATION STUDENTS' PROFILE

2.1 INTRODUCTION

With this framework, we should move on to defining the profile of students who will have had the opportunity to acquire knowledge and learn with a focus on the ocean. This learning should always be framed by curricular flexibility and done in a way that connects different disciplines and subjects through the common thread of ocean literacy.

This Blue Generation Students' Profile should be in line with the Profile of Students Leaving Compulsory Education, defined in 2017 (approved by Order No. 6478/2017, of 26 July) that states that "it is important to create conditions of balance between knowledge, understanding, creativity and critical sense. It is a question of training autonomous and responsible people and active citizens". Ocean literacy is a subject par excellence where those four skills can be developed. Knowledge is acquired from science, understanding can be maximised through direct contact with nature and the ocean, the critical sense is needed to question our civilisational institutions – law, economics, and ethics – and the development of creativity will be fostered through the inspiration brought by the ocean. Critical thinking and creativity are necessary skills for the development of any society. Ocean literacy can be a tool for developing these qualities, essential to a vibrant society.

Beyond these skills and the balance between them, ocean literacy can contribute to promote a planetary identity, fundamental to understanding global issues. Equally important is to find a humanist-based profile, which is based on respect for humans, nature, the environment, and the planet, of which we are an integral part. The Blue Generation Students' Profile should therefore complement the Profile of Students Leaving Compulsory Education, in the sense that the development of an ethics of respect for humanity is complemented by an ethics of respect for nature. This ethics is missing in most of the post-industrial societies we live in, apart from indigenous communities scattered in small clusters in various parts of the world.

Finally, the Blue Generation Students' Profile is aligned with the Profile of Students Leaving Compulsory Education in that it encourages thinking on both sustainability and the complex challenges of the 21st century. Indeed, it is impossible, in a maritime country like Portugal, to address the topic of sustainability without addressing ocean management and our relationship with the ocean. Regarding the complex challenges of our century, we know that no challenge is more complex than confronting the climate crisis

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in which we have plunged the planet and that the continuity of the human species may hinge on a solution to this crisis. Everything explained above applies here to the most pressing need our society faces today, the need to decarbonise our economies – where the ocean will play a key role– and thus seek to control this existential climate crisis.

It is therefore in this context that school must be reconfigured. It must focus on education for sustainable development. Ocean literacy is essential to this new focus.

2.2 PRINCIPLES AND VISION

PRINCIPLES

In line with the Profile of Students Leaving Compulsory Education, it is essential to define a set of principles that can guide, justify, and give meaning to the Blue Generation Students' Profile.

Thus, the following **principles** should be considered:

- A | A broad humanist basis** – a humanist and personal basis, in which the school is centred on the person, its autonomy, and its aspirations, making the uncompromising defence of the dignity of the human person and human rights. This foundation, which must be based on ethical values, must also integrate respect and admiration for nature. Above all, it should transmit an understanding that people are neither above nor outside the natural world, but an integral part of it. Combining the humanistic values of promoting the common good and social cooperation, we should also emphasize the importance of preserving the planet. This is not only to contribute to the social common good but also to conserve the planet for the sake of all living beings that inhabit it and depend on it.
- B | A scientific basis** – scientific knowledge, which should be central in education, is essential in the context of ocean literacy. The available science is crucial to our understanding of this fluid and distant aquatic environment and of the interdependencies between biological, ecological, physical, and cultural systems.
- C | A cultural innovation basis** – the philosophical and intellectual openness to questioning the dominant culture of the human species, which still heavily relies on an absolute belief in science and technology originating from the late 18th century as the solution to all problems, should be balanced with the pursuit of reconfiguring our key civilisational institutions. This reconfiguration aims to emphasise and promote nature, encompassing areas such as law, economy, ethics, and even the cultural understanding of the impact of religions. These dated institutions are not adequately equipped to meet the complex challenges of the present and future that we must confront as a species in this turbulent century.
- D | Learning in the field** – hands-on learning in nature, allowing for emotional connections and facilitating the development of the capacity to learn and reinforcing positive attitudes. Learning in the ocean and coastal areas is also a way to inspire connections to the marine environment.

- E | Blue environmental sustainability** – schools in Portugal should contribute to educating students on the need to protect nature. They should also focus on the sustainability of the ocean and its uses, given its strategic importance for the country. This principle is aligned with the Profile of Students Leaving Compulsory Education, as it is based on the recognition that environmental sustainability is critical to the continuity of human civilisation on the planet.
- F | Curricular flexibility** – conceiving ocean literacy, not as a new subject or subject area, but as a horizontal educational and learning action, which fits into citizenship and development, but also permeates all other existing subjects in the school curriculum, starting with Portuguese and Mathematics, but also Physics and Life Sciences and even Philosophy and History, Arts, and Sports (the “Educating for a Blue Generation” programme, created by the Oceano Azul Foundation, is an example of flexibility to consider).
- G | Stability** – it is essential that the insertion of ocean literacy in the school curriculum is done with time and persistence, two essential ingredients for the success of this initiative, which is intended to have a generational impact.
- H | Adaptability and audacity** – in a world that is constantly evolving, it is vital to educate individuals to navigate uncertainty and cultivate the capacity to anticipate and adapt to new contexts. Additionally, fostering disruptive thinking and encouraging innovation are essential to the development of new solutions.

VISION

It is expected that, with these principles, we will be able to draw a vision of what Blue Generation Students will be like at the end of their schooling, in which they have been subjected to ocean literacy learning. We intend Blue Generation Students to be:

- | Qualified and responsible citizens, aware of how our behaviour and choices influence the ocean and how the ocean influences our daily lives.
- | Citizens who combine a global world view with the prisms of their local, regional, or national realities and recognise themselves as planetary citizens, where their responsibility towards the ocean is concrete, clear, and direct.
- | Citizens who value scientific information and have a critical spirit. Citizens able to question the reason, origin, and timeliness of our mental frameworks, as well as their ability to condition our thoughts, reasoning, and actions.
- | Citizens capable of dealing with change and uncertainty in a world affected by the planetary climate crisis, global warming, species extinction and biodiversity loss, the ocean crisis, and the crisis of the depletion of the planet’s natural resources.

| Citizens who humbly see their place in a larger framework, comprising nature and the natural systems of the planet, including the ocean, rather than considering the human species as a superior species, capable of being autonomous from nature, almost deified.

| Active citizens able to argue and mobilise others to act for the protection and valuing of the ocean.

2.3. VALUES AND COMPETENCES

VALUES

The importance of a value system for a balanced, developed, prosperous, and solidary society is self-evident. The Blue Generation Students' Profile should therefore include a set of values at its core. Science, bookish knowledge, and learning alone are insufficient if they are not framed by a set of values that guides what we study, learn, and understand. These values will give us character, which will lead us to act sustainably and develop new, sustainable behaviours.

Thus, building a value system, especially during early childhood education, is essential for the sound ethical and social development of students. Those who acquire values and understand the need to protect the ocean will also be able to influence their families, friends, and teachers to make sustainable and informed choices, as consumers and citizens making political choices in a democracy. Through a set of values, we create citizens who can act to safeguard the ocean and nature, who adopt good practices, and who influence others with their attitudes and knowledge.

Such values include:

A | Sensitivity to the value of nature and the ocean – which takes on a deserved importance in the eyes of Blue Generation Students and predisposes them to behave in different ways, including ways that require sacrifice and change.

B | Responsibility and co-accountability – taking responsibility for our conduct and behaviour is decisive for Blue Generation Students. In complex and diffuse issues such as environmental responsibility, it is essential that all internalise a degree of co-accountability. In the absence of this sense of shared responsibility, we may be driven to think that alone we cannot foster change, and thus continue with the wrong behaviours.

C | Environmental ethics – which requires Blue Generation Students to respect themselves and respect nature and all living beings. It involves knowing how to act ethically.

D | Environmental and participatory citizenship – which allows Blue Generation Students to express their positions, develop opinions, be proactive, and participate in the negotiation of solutions to conflicts, to defend ocean sustainability.

E | Altruism and freedom – respecting human rights, others, natural values, and the global and shared environment.

Finally, we come to competences that, as complex combinations of knowledge and skills outlined in the Profile of Students Leaving Compulsory Education, should also be a central component of the Blue Generation Students' Profile. Without these competences, there can be no sustainable, coherent attitudes based on the knowledge acquired.

Younger students are at the beginning of their developmental processes for multiple skills (cognitive and socio-emotional), and therefore, a blue curriculum must be competence-driven. This will enable students to reflect on their actions, progress, and act for collective well-being, promoting actions for the ocean and the planet's sustainability, and respecting others and nature. With this progress, they become literate in ocean-related topics, enabling them to engage in discussions, develop critical thinking, and act in defense of ocean sustainability for the common good.

COMPETENCES

These competences are not limited to a specific curricular learning area but cut across all of them. More than anything, they are foundations for learning and acting.

In the specific context of the Blue Generation Students' Profile, the following competences are considered:

A | Scientific and technological knowledge – both of which are indispensable for comprehending the ocean. Promoting a scientific culture and understanding the ocean's processes, functioning, study methods, and the significance of scientific knowledge and technology are crucial in making informed decisions and taking appropriate actions.

B | Critical thinking – the ability to question established norms, practices, and opinions that are harmful to the ocean, to reflect on one's own values and actions, to assess the impact of actions and decisions in advance, and to be able to make informed decisions that protect the ocean and promote a sustainable relationship with it.

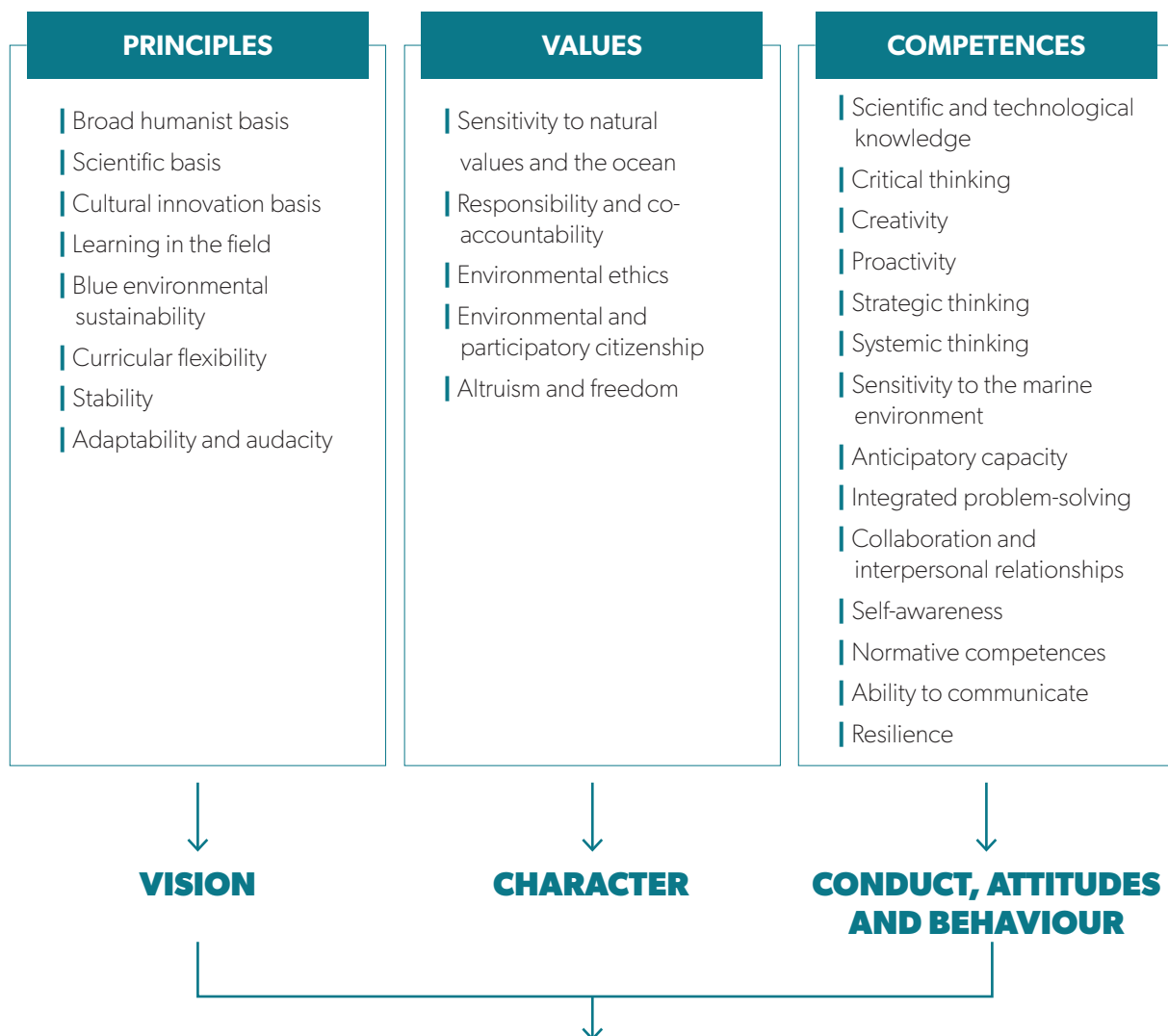
C | Creativity – it is important to encourage the capacity to generate new ideas and develop innovative sustainable solutions that promote ocean protection and a sustainable blue economy.

D | Proactivity – the ability and willingness to act individually, actively participate and influence, mobilising and challenging cultural and societal orientations, in favor of ocean sustainability.

E | Strategic thinking – understanding the long-term strategic importance of the ocean for Portugal is crucial for individual and collective decision-making. It enables the development and implementation of actions that foster ocean sustainability, both locally and globally.

- F | Systemic thinking** – the ocean is a complex system that must be understood as such. It requires the ability to deal with uncertainty, complex systems and understanding interrelationships, processes, as well as analysing and finding integrated solutions at the ecosystem level, across different domains and scales.
- G | Sensitivity to the marine environment** – early contact with the ocean, whether through enjoyment, water sports, or active learning in nature, awakens senses and feelings that promote an understanding of our connection to the marine environment. This sensitivity promotes positive attitudes towards its valorization and protection.
- H | Anticipatory capacity** – the ability to deal with uncertainty in a world of accelerating change is key to fostering resilient citizens. This includes developing the ability to anticipate, understand and assess future scenarios, for example by applying the precautionary principle, dealing with risks and changes, anticipating the consequences of actions and creating independent visions for the future.
- I | Integrated problem-solving** – given the complexity of the ocean system and the need to understand its nexus with climate and its importance to the planet on a global scale, it is essential to develop the ability to research, integrate different disciplines and approaches, interpret information, and make decisions to solve complex problems. This also includes acquiring the capacity to be flexible and develop inclusive and equitable solutions that promote a sustainable relationship with the ocean.
- J | Collaboration and interpersonal relationships** – changing established behaviours and attitudes can be complex and generate conflict. It is essential to have the ability to work as a team and empathise, to be tolerant, and able to understand and respect the needs, perspectives, and actions of others. It is also important that students can accept other points of view and learn from others. These skills are fundamental to be able to deal with conflicts in a group and solve problems in a collaborative and participatory way.
- K | Self-awareness** – recognising our environmental and social responsibility for the sustainability of the planet means being able to reflect on our individual role locally and globally.
- L | Normative competences** – the ability to understand, reflect on and negotiate sustainability norms, values, principles, and goals in the context of conflicts of interest and negotiation processes, uncertainty in knowledge and contradictions.
- M | Ability to communicate** – the ability to communicate is key to defending ideas, arguing, taking action, influencing and mobilising others.
- N | Resilience** – is a skill that allows one to face current challenges in a changing world, and that assumes particular importance in new educational approaches.

THE BLUE GENERATION STUDENTS' PROFILE



- | Who is more qualified, responsible and conscious of its influence on the ocean and vice versa.
- | With a vision of the world based on its self-awareness as a global citizen who appreciates and uses scientific information to question the institutionalised mindsets that influence thought, reasoning and actions.
- | Capable of coping with change and the uncertainty of a world affected by environmental crises.
- | Who takes a modest view of how it fits into the bigger picture – the picture of nature.
- | Active and capable of convincing and mobilising others to act, protect and value the ocean.

CONCLUSION

The above framework presents multiple reasons why generalised ocean literacy can be of singular importance to the education system, for the creation of blue generations acutely aware of the strategic importance of the ocean for their country, their life, and their planet.

Based on the principles defined above, a vision is proposed for the Blue Generation Students' Profile. This vision includes a set of values conducive to the adoption of new attitudes, that can improve the relationship of students with the education system, with the country, and with the world, in a time of drastic change and paradigm shift. We have moved from the era of the industrial revolution, where our economies and societies are still rooted, to the era of environmental sustainability of the planet, a shift that will mark the rest of the 21st century.

In line with UNESCO's guidelines for Education for Sustainable Development, ocean education should promote autonomous and active learning by students, preparing them for disruptive thinking. It should also be action oriented. Students should be able to think critically and participate in shaping a more sustainable future.

The competences identified above promote empowerment and mobilize young people for greater participation as agents of change for a more sustainable planet. In addition, education policies should consider ocean education in a cross-cutting way. They should also consider the need to transform learning environments, promote contact with the ocean and encourage local action through the greater integration of schools into communities.

All of this, we have no doubt, can be fully achieved if we have the ambition and determination to embed ocean literacy in our country's education programme.

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