

# BREATH



## BREATH competency framework for Advisors in ecological transition



Co-funded by the  
Erasmus+ Programme  
of the European Union

'This project has been funded with the support of the European Commission. This publication (communication) is solely the responsibility of the author and the Commission is not responsible for any use that may be made of the information

**Project title:** BREATH

**Project Acronym:** Biomimicry Resilience Ecology Alliance Training Holistic

**Project Number:** 2021-1-FR01-KA220-VET-000033004

**Illustrations:** La Mari Muriel, Marjorie Maseglia

**Project website:** [www.breath-project.eu](http://www.breath-project.eu)

**Project partners:**



Co-funded by the  
Erasmus+ Programme  
of the European Union

'This project has been funded with the support of the European Commission. This publication (communication) is solely the responsibility of the author and the Commission is not responsible for any use that may be made of the information contained therein. '

# 1. Table of contents

1. Table of contents	3
2. Introduction	4
3. Glossary	5
4. Creating BREATH competency framework for advisors in ecological transition	7
5. Suggestions for reference trainings and useful resources	9
6. Professional qualification and competences through the EQF	16
7. BREATH competency framework for advisors in ecological transition	19
8. References	27



Co-funded by the  
Erasmus+ Programme  
of the European Union

'This project has been funded with the support of the European Commission. This publication (communication) is solely the responsibility of the author and the Commission is not responsible for any use that may be made of the information contained therein.'

## 2. Introduction

The BREATH project aims to multiply approaches inspired by nature in the field of agriculture, energy, building and spatial planning. It has for objective the adoption of new concepts and techniques to facilitate global approaches to ecological transition by improving the profession of advisor through vocational training. Through the competency framework, our goal is to assist individuals, institutions, and businesses in navigating the journey of ecological transition with a focus on ecological integration.

We believe that achieving ecological transition is only possible by reconnecting with nature and learning from it. To accomplish this, we must acquire transversal skills, competences, and knowledge. This conceptual framework aims to equip advisors with the key skills in ecological transition that they must successfully integrate nature-inspired approaches into their professional practices, promoting sustainable practices and holistic thinking.. This document is designed to be transferable and adaptable across a wide range of occupations for learning and teaching purposes.



Co-funded by the  
Erasmus+ Programme  
of the European Union

'This project has been funded with the support of the European Commission. This publication (communication) is solely the responsibility of the author and the Commission is not responsible for any use that may be made of the information contained therein. '

### 3. Glossary

**Biomimicry** - philosophy and interdisciplinary conceptual approaches taking nature as a model in order to meet the challenges of sustainable development (social, environmental and economic) (Ceebios, n.d.).

Biomimicry [from the Greek bios, life, and mimesis, imitation] or innovation inspired by nature, is based on three principles.

1. *Nature as model.* Biomimicry is a new science that studies nature's models and then imitates or takes inspiration from these designs and processes to solve human problems, e.g., a solar cell inspired by a leaf.
2. *Nature as measure.* Biomimicry uses an ecological standard to judge the "rightness" of our innovations. After 3.8 billion years of evolution, nature has learned: What works. What is appropriate. What lasts.
3. *Nature as mentor.* Biomimicry is a new way of viewing and valuing nature. It introduces an era based not on what we can *extract* from the natural world, but on what we can learn from it.

(Benyus, 1998)

**Circular economy** - is a system where materials never become waste and nature is regenerated. In a circular economy, products and materials are kept in circulation through processes like maintenance, reuse, refurbishment, remanufacture, recycling, and composting. The circular economy tackles climate change and other global challenges, like biodiversity loss, waste, and pollution, by decoupling economic activity from the consumption of finite resources (Ellen Macarthur Foundation, s.d.).

**Ecological and social transition** - The ecological and social transition is a process that leads to a change in modes of production, consumption and living towards a more equitable sharing of power and wealth. More broadly, the transition aims to transform the development model by building a more respectful, ecologically sustainable, socially equitable and economically viable society.

The transition must be carried out within the framework of a democratic and participatory dialogue to guarantee the cohesion of the territories.

**Eco-responsible ethics** - a set of moral principles and values that integrate notions of environmental justice, considering the interests and capacities of other species and ecosystems to support future developments. It integrates the needs of current and future generations, fostering a sense of belonging to a common and united humanity, where each being maintains an intrinsic relationship with other beings.



Eco-responsible ethics enable us to assess and question our personal needs in order to manage resources prudently with a view to achieving common objectives and interests in the longer term. Eco-responsible ethics is a priority value for becoming an agent of change.

**Happy sufficiency** - a concept which seeks to go beyond the negative, declinist aspect of sobriety, to offer an emancipatory vision of sobriety. Using the expression 'fewer goods, more connections', this concept seeks to go beyond the limiting vision of reducing consumption, to emphasize access to sources of pleasure rather than material goods (excluding vital needs), in particular human relationships, which would enable individuals to achieve real fulfillment (Rabhi, 2010).

**Systems thinking** - a discipline for seeing wholes and a framework for seeing interrelationships rather than things, for seeing patterns of change rather than static snapshots (Senge, 1990).

**Sustainable development** - is development that meets the needs of the present without compromising the ability of future generations to meet their own needs (WCED, 1987).

**Ecological resilience** - the ability of an ecosystem to maintain its normal patterns of nutrient cycling and biomass production after being subjected to damage caused by an ecological disturbance (Levin, 2024).



## 4. Creating the BREATH competency framework for advisors in ecological transition

### Identifying the need for systemic change

The current situation highlights that current systems are not sustainable, as evidenced by humanity's ecological footprint. That's why given the need for systemic change necessary for our society and the difficulties in changing practices and ways of thinking anchored for generations, we believe that the transmission of messages, skills, tools and a culture of transition within the framework of professional training can have a very beneficial long-term effect in environmental matters.

The profound crisis facing our civilization (climate emergency, loss of biodiversity, social inequalities, energy crisis, authoritarian regimes...) cannot be resolved without a profound change in our lifestyles. These changes in behavior will have an impact on our relationship with the land, with other human beings and with the rest of the living world.

Faced with the challenges of this necessary ecological and social transition, professional practices must evolve towards solutions for adapting and accompanying change. The objective is to jointly accelerate transitions towards sustainable systems and adopt new concepts and techniques to facilitate global approaches to ecological and social transition.

It is through individual change that we will be able to change society and make the ecological and social transition desirable.

The BREATH approach is global: it responds to operational, strategic and environmental issues in the broad sense. Advising thus becomes :

- an ethical commitment to the need to support change;
- a driving force for awareness of our need to relate to others and to the rest of the living world;
- a lever for individual and collective emancipation;
- a driver of individual and collective capacity for action, enabling us to become agents of change.

It's a global approach that seeks to lay the foundations for a new way of bringing projects to life. Projects that are the expression of a renewed society, a society and a system capable of responding to the need to improve living conditions and thus the well-being of humanity and all living things.



## What is BREATH competency framework for advisors in ecological transition?

This conceptual framework summarizes the key competences that ecological transition advisors need to acquire to integrate nature-inspired approaches into their professional practices, particularly related to systemic, cooperative and change management. It is designed to be transferable and adaptable to a wide range of professions for learning and teaching purposes.

### Building competency framework

To build this competency framework we have used the following sources:

1. Exploratory survey of targeted business skills.
2. ESCO (European Skills, Competences, Qualifications, and Occupations) framework.
3. Green skills gathered from interview case studies of use of methods inspired by nature
4. Field survey on trades in transition.
5. Studies on agriculture, pedagogical methods, spatial planning and building.
6. Pilot testing of the competency framework during BREATH training cycle.

### Challenges of the competency framework

We recognize that the BREATH competency framework is an evolving tool, and while it may not capture every aspect of ecological transition comprehensively, it offers a valuable foundation for ongoing discussion and development. While there are challenges in ensuring the framework's applicability across diverse contexts, it nevertheless serves as a starting point for further dialogue and refinement within the community of ecological transition practitioners.

### The competency framework is designed for:

Our primary target audience is people who want to accelerate change towards sustainable systems together.

#### Primary target audiences

- Advisors, Trainers, Designers, Supporters in the field of agriculture, energy and sustainable development, building and spatial planning
- Anyone interested in applying green competences and global approaches to ecological transition in their respective professions.

#### Secondary target audiences

- General public and professionals from other sectors
- Teachers





## 5. Suggestions for reference trainings and useful resources

In addition to the BREATH training cycle, which includes four training sessions of two days each, and the BREATH Guide – "Advising in ecological transition, why and how?", we present a selection of training programs and resources. These recommendations are designed to help you practice and enhance the skills, competences, and knowledge outlined in the BREATH competency framework.

### Energy

#### Vocational Education and Training

##### 1. Socio-technical support for housing self-rehabilitation actions

The certification aims to recognize the skills of technicians required to lead housing improvement projects where part of the work is carried out by the residents themselves. Those certified will be able to carry out work in an inclusive dynamic and in a popular education approach.

<https://www.francecompetences.fr/recherche/rs/6510/>

##### 2. Project manager in energy renovation and building intelligence

This project manager certification in energy renovation and building intelligence targets professions related to design, implementation and management functions. It aims to meet the skills needs of technical executives of construction finishing companies, in a context of energy and digital transformations.

<https://www.francecompetences.fr/recherche/rncp/38239/#ancre4>

##### 3. Eco-energetician

The Eco-Energetician carries out his activity in the design, construction and implementation of industrial, multi-source energy systems, mainly renewable energies as well as in the design of buildings, their heating and air conditioning installations; by aiming for energy efficiency, that is to say the reduction of energy consumption.

<https://www.francecompetences.fr/recherche/rncp/37626/#ancre4>

##### 4. Energy transition expert

The energy transition expert supports and leads the energy transition in local authorities via ambitious energy policies and concrete field projects. It designs and monitors the energy renovation of buildings to achieve a low consumption level through the optimization of the envelope and equipment, placing the energy service provided to the user at the center of the



renovation/construction act. Finally, it integrates renewable energies into the building, from the sketch to the training of end users.

<https://www.francecompetences.fr/recherche/rncp/37986/#ancre2>

## Higher Education

### 1. Professional license Energy Performance Climate Engineering

This professional license trains to become a research manager, capable of recommending and sizing solutions for energy saving and renewable energy production in buildings. It is offered on a work-study basis. Thanks to the professional license mentioning “Construction Professions: Energy and Environmental Performance of Buildings” course “Energy Performance, Climate Engineering” you will be trained to become a study manager, capable of recommending and sizing energy saving solutions and production of renewable energy in buildings.

<https://sciences-techniques.univ-nantes.fr/formations/licences-generales/licence-professionnelle-performance-energetique-genie-climatique-pegc>

### 2. Master’s degree in Earth and planetary sciences, environment: Eco-construction

The Master 2 Eco-construction course trains students in sustainable construction professions. The training is intended to train specialists in eco-construction, from the scale of individual construction (for residential, industrial or tertiary use), to that of the eco-district (residential zones, activity zones).

<https://www.cyu.fr/formation/trouver-sa-formation/catalogue-des-formations/mastersciences-de-la-terre-et-des-planetes-environnement-eco-construction#presentation>

## Non Formal Training

### 1. The FocusLab Biomimicry

The Biomimicry FocusLab is a 5-day action training course to reconcile biodiversity, innovation and economics, to move from sustainable development to the regenerative and symbiotic economy, and thus accelerate the ecological transition.

<https://communaute.futurs-souhaitables.org/page/la-focuslab-biomimetisme>



Co-funded by the  
Erasmus+ Programme  
of the European Union

'This project has been funded with the support of the European Commission. This publication (communication) is solely the responsibility of the author and the Commission is not responsible for any use that may be made of the information contained therein.'

## Spatial planning

### Non formal professional competences systems

#### 1. HQE sustainable development (HQE-AD)

HQE AD certification certifies that the development of a plot, district, town or area meets all the challenges of sustainable development.

HQE sustainable development combines objectives aimed at improving the social, economic and environmental performance of the development project, while taking into account the specific characteristics of the area.

<https://www.cstb.fr/nos-offres/toutes-nos-offres/formation-devenir-referent-certification-hqe-amenagement-durable>

#### 2. The environmental approach to urban planning (AEU2)

The Environmental Approach to Urban Planning (AEU2) is a methodology proposed by Ademe to help those involved in operational development and urban planning to integrate the principles and aims of sustainable development into their projects. The aim of this approach is to integrate sustainable development objectives into planning and operational development projects.

<https://outil2amenagement.cerema.fr/outils/lapproche-environnementale-lurbanisme-aeu2>

### Vocational Education and Training

#### 1. Co-constructing regional transition dynamics inspired by living strategies

This 5-day training course tackles the issue of planning through the questions of territorial anchoring, the scale of the power of action and the space of interrelation that enables the deployment of social and ecological strategies. The training course addresses aspects relating to postures, working methods and tools for setting up sustainable multi-stakeholder transition dynamics.

<https://communaute.futurs-souhaitables.org/page/la-focuslab-territoires>

#### 2. Resilient urbanism : a global approach to urban planning in transition

The Odéys organisation is offering a 2-day training course for project managers, contracting authorities and technicians, designed to help them make the transition to the city of tomorrow by rethinking the management of green spaces. The aim of the course is to learn how to integrate the concepts of biodiversity, carbon storage and food production into the management of public spaces.

[https://www.odeys.fr/sites/default/files/2021-11/FD\\_g%C3%A9n%C3%A9rique\\_URBANISME\\_RESILIENT.pdf](https://www.odeys.fr/sites/default/files/2021-11/FD_g%C3%A9n%C3%A9rique_URBANISME_RESILIENT.pdf)



## Higher Education

### 1. Master in geography and planning. Management and development of territories in transition

The Masters offers a framework for analyzing societal and environmental transitions. The master's program looks at the ways in which transitions are implemented at institutional level, the critical and interdisciplinary approach to new public policies and the development alternatives promoted by civil society (collectives, associations, local residents).

[https://formations.univ-poitiers.fr/plugins/odf-web/odf/\\_content/subprogram-parcours-transitions-sociales-et-environnementales-fr-fr-fr-fr-fr/Parcours%20Gestion%20et%20d%C3%A9veloppement%20des%20territoires%20en%20transition%20\(GESTT\).pdf](https://formations.univ-poitiers.fr/plugins/odf-web/odf/_content/subprogram-parcours-transitions-sociales-et-environnementales-fr-fr-fr-fr-fr/Parcours%20Gestion%20et%20d%C3%A9veloppement%20des%20territoires%20en%20transition%20(GESTT).pdf)

### 2. Master in geography and planning. Environmental Transitions in Territories

The aim of the two-year Master's degree in "Environmental Transitions in Territories" is to provide the knowledge and skills needed to understand the issues and support environmental transitions. The Master's program covers subjects such as water, environmental risks, biodiversity and landscapes, in order to meet the challenges of regional management, planning and development.

<https://www.univ-tlse2.fr/accueil/formation-insertion/master-transitions-environnementales-dans-les-territoires>

## Building

### Non formal professional competences systems

#### 1. ECVET Earth

Is an ECVET (European Credit for Vocational Education and Training system) tool box (competencies framework, assessment criteria, matrix of learning outcomes units for teaching, learning or even employment purposes, etc) for knowledge, skills and competences on the earth building sector, and a multi-level training standard (following EQF) focused on Vocational Education and Training levels, agreed on by the leading organisations in 9 European countries through their Memorandum of Understanding.

<https://ecvetearth.hypotheses.org/about-earth>

#### 2. STEP Strawbale Training for European Professionals

This initiative focused on setting the basis for mutual recognition of professional competences assessments in straw bale building in various European countries. Describe professional qualification modules included in a whole called Professional Straw bale builder. The Learning Outcomes are divided in theory in 8 modules and there is also a straw and clay building practice of at least 20 days. After completing all modules, trainees can take the written and oral examination



to become a “certified straw bale builder”. The units are not divided in levels because they are defined for an only qualification called “Professional straw bale builder”

<https://strawbale.training/en/welcome-at-buildstrawpro/>

## Higher Education

### 1. Master in Expert in habitat biology and bio-construction

This online master degree which includes two face to face students meeting and seminar, is focused on topics like Habitat biology, indoor environment conditions, Life cycle assessment, construction physics, geobiology, pollution, construction design, habitat psychology, bio-construction standards and furniture. Not present access requirements for studying this master.

<https://www.baubiologie.es/master-en-bioconstruccion-ieb/>

### 2. Master in Eco-architecture and applied Bio-construction

This online master degree provide tools and resources to architecture, engineering and construction professionals about: eco urbanism and bioclimatism; bio-habitability; bio-construction technologies; biomimicry and nature; optional apprenticeship in a company

<http://www.masterbioconstruccionudg.com/>

## Vocational Education and Training

### 1. Energy efficiency Passive systems in Buildings

This is a specialization VET course (level 2 of the EQF) for building workers of water and energy sectors, which learning mode is part face to face and online. It presents the main professional competencies of: collaborate in the making of execution proposals for the energy refurbishment of a building through passive systems, taking into account comfort values of users, the present construction material in the building, geography and climate factors.

[http://www.madrid.org/sfoc\\_web/2022/ENAC14.pdf](http://www.madrid.org/sfoc_web/2022/ENAC14.pdf)

### 2. Bio-construction

This is a face to face specialization VET course (level 2 of the EQF) for the main competencies: execute the construction works needed of a building project, construction solutions adapted to climate and geography and using local material. Bio-construction criteria, construction prevention risks, foundations, load bearing walls (ceramic, straw, earth, , carpentry, green roofs, coatings (earth, lime), heating physics (thermal mass stoves), continuous pavements (gypsum, lime, earth).

<https://sede.sepe.gob.es/es/portaltabajo/resources/pdf/especialidades/EOCB01.pdf>



## Agriculture

### Non Formal Trainings and competence systems

#### 1. RegAgri4Europe Course

The RegAgri4Europe curriculum integrates the latest advancements in the field of regenerative agriculture. The Virtual Learning Environment contains 6 lectures, which consists of 2-4 lessons each.

<https://regagri4europe.eu/>

#### 2. European Permaculture Network

Connects the different players in the wide field of Permaculture, from local to national association to projects to individuals.

<https://permaculture-network.eu/>

#### 3. A European Association For Agroecology

The goal of the Association is to support agroecological research, education, and training, share and disseminate agro ecological knowledge, and promote agroecology in the farming and food sectors and in society.

<https://www.agroecology-europe.org/>

#### 4. CIRCular Economy through Integrated LEarning in VET\_agriculture

Project and training has been developed to support trainers in vocational training, introduce the concepts of the circular economy to students in the tourism, transport and agricultural sectors. The module of agriculture explores four broad themes in relation to agriculture practices and the circular economy.

<https://circlelearning.eu/agriculture-training/>

#### 5. Soil food web school

Soil Food Web School was designed by Dr. Elaine Ingham and teaches the essential science of ecology and biology so one can learn how to steward resilient soil ecosystems. Participants will learn about soil ecology, biology, health, and how to build healthy soil.

<https://www.soilfoodweb.com/soil-food-web-essentials-courses-overview/>

### Vocational Education and Training

**1. Ecologic farmer** - This is a specialization VET course (level 5 of the EQF) for ecological farmers. It lasts 5 days and 25 pedagogical hours. They learn professional competences related to communicating with professional services and customers, developing entrepreneurial qualities, skills, and behaviors, implementing basic measures of organic farming, growing crops and



vegetables organically, cultivating grassland organically, and growing fruit plants and vines using organic methods.

<https://www.bc-naklo.si/izobrazevanje-odraslih-npk-tecaji-in-delavnice/tecaji-usposabljanja-delavnice/kmetijstvo-in-gozdarstvo/ekolosko-kmetovanje/>

## Useful resources

### 1. Biomimicry 3.8

Bio-inspired consultancy offering biological intelligence consulting, professional training, and inspirational speaking.

Link: <https://biomimicry.net/>

### 2. Green Competences

A hub that works for up and reskilling the European workforce towards the green transition.

Link: <https://green-comp.eu/>

### 3. Nature based solutions in agriculture

In agricultural landscapes, NbS can be applied for soil health, soil moisture, carbon mitigation (through soil and forestry), downstream water quality protections, biodiversity benefits as well as agricultural production and supply chains to achieve net-zero environmental impacts while achieving food and water security, and meet climate goals.

Link: <https://www.fao.org/3/cb3140en/cb3140en.pdf>



Co-funded by the  
Erasmus+ Programme  
of the European Union

'This project has been funded with the support of the European Commission. This publication (communication) is solely the responsibility of the author and the Commission is not responsible for any use that may be made of the information contained therein.'

## 6. Professional qualification and competences through the European qualification framework (EQF)

The European Qualification Framework defines a **professional qualification** as ‘the formal outcome of an **assessment** and **validation process** obtained when a competent body determines that an individual has achieved learning outcomes (**professional competences**) to given standards. Qualifications serve a variety of purposes. They signal to employers what their holders are expected to know, do and understand (**‘learning outcomes’**).

The professional competences are defined as a set of personal knowledge and skills which allow professionals to do the tasks or requirements in accordance to employment and production sectors and their professions/qualifications/job positions. Both, qualifications and their competencies, they may be needed to **access** certain professions. They help education and training authorities and providers to determine **the level and content** of learning acquired by an individual. Qualifications usually take the form of **certificates** and diplomas awarded following education, training, learning and (sometimes) work.

**Professional competences** is a set of personal knowledge, skills, and competences which allow professionals to do the tasks or requirements in accordance to employment and production sectors and their professions/qualifications/job positions.

**Professional Qualification**, the European Qualification Framework defines a qualification as ‘the formal outcome of an assessment and validation process obtained when a competent body determines that an individual has achieved learning outcomes (competences) to given standards’. Qualifications serve a variety of purposes. They signal to employers what their holders are expected to know, do and understand.

Qualifications usually take the form of certificates and diplomas awarded following education, training, learning and (sometimes) work. They may be needed to access certain professions. They help education and training authorities and providers to determine the level and content of learning acquired by an individual.

**Occupation** is a set of job positions an employee can do in a company.

**Job position**, is the basic unit of employment, is a function you as an employee serve at a company or organization. It includes the daily tasks and projects you complete. Every employee has a job position that includes specific duties and responsibilities that help the company reach its goals.





## What is European qualification framework?

The EQF is an 8-level learning outcomes-based framework for all types of qualifications that serves as a translation tool between different national qualifications frameworks. It covers all types and all levels of qualifications, and the use of learning outcomes makes it clear what a person knows, understands and is able to do (knowledge, skills and competences):

**Knowledge** – the body of facts, principles, theories and practices that is related to a field of work or study. Knowledge is described as **theoretical and/or factual**, acquired by expertise or study.

**Skills** – the ability to apply knowledge and use know-how **to complete tasks and solve problems**. Skills are described as **cognitive** (involving the use of logical, intuitive and creative thinking) or **practical** (involving manual dexterity and the use of methods, materials, tools and instruments).

**Competences** – understood as **responsibility and autonomy**, is the proven ability to use knowledge, implement skills and personal, social and/or methodological abilities, in work or study situations and in professional and personal development.

**Transversal or soft skills** - skills that are typically considered as not specifically related to a particular job, task, academic discipline or area of knowledge and that can be used in a wide variety of situations and work settings (for example, organizational skills).

## Level of qualification in the EQF

We have decided the level of qualification of the BREATH competency framework is between **4 or 5**. The following table is an extract from the EQF descriptors that highlight the level of qualification.



Level	Knowledge	Skills	Responsibility and Autonomy
1	Basic general knowledge	Basic skills required to carry out simple tasks	Work or study under direct supervision in a structured context
2	Basic factual knowledge of a field of work or study	Basic cognitive and practical skills required to use relevant information in order to carry out tasks and to solve routine problems using simple rules and tools	Work or study under supervision with some autonomy
3	Knowledge of facts, principles, processes and general concepts, in a field of work or study	A range of cognitive and practical skills required to accomplish tasks and solve problems by selecting and applying basic methods, tools, materials and information	Take responsibility for completion of tasks in work or study; adapt own behavior to circumstances in solving problems
4	Factual and theoretical knowledge in broad contexts within a field of work or study	A range of cognitive and practical skills required to generate solutions to specific problems in a field of work or study	Exercise self-management within the guidelines of work or study contexts that are usually predictable, but are subject to change; supervise the routine work of others, taking some responsibility for the evaluation and improvement of work or study activities
5	Comprehensive, specialized, factual and theoretical knowledge within a field of work or study and an awareness of the boundaries of that knowledge	A comprehensive range of cognitive and practical skills required to develop creative solutions to abstract problems	Exercise management and supervision in contexts of work or study activities where there is unpredictable change; review and develop performance of self and others
6	Exercise management and supervision in contexts of work or study activities where there is unpredictable change; review and develop performance of self and others	Advanced skills, demonstrating mastery and innovation, required to solve complex and unpredictable problems in a specialised field of work or study	Manage complex technical or professional activities or projects, taking responsibility for decision-making in unpredictable work or study contexts; take responsibility for managing professional development of individuals and groups
7	Highly specialized knowledge, some of which is at the forefront of knowledge in a field of work or study, as the basis for original thinking and/or research. Critical awareness of knowledge issues in a field and at the interface between different fields	Specialized problem-solving skills required in research and/or innovation in order to develop new knowledge and procedures and to integrate knowledge from different fields	Manage and transform work or study contexts that are complex, unpredictable and require new strategic approaches; take responsibility for contributing to professional knowledge and practice and/or for reviewing the strategic performance of teams
8	Knowledge at the most advanced frontier of a field of work or study and at the interface between fields	The most advanced and specialized skills and techniques, including synthesis and evaluation, required to solve critical problems in research and/or innovation and to extend and redefine existing knowledge or professional practice	Demonstrate substantial authority, innovation, autonomy, scholarly and professional integrity and sustained commitment to the development of new ideas or processes at the forefront of work or study contexts including research



## 7. BREATH competency framework for advisors in ecological transition

In the **BREATH competency framework for advisors in ecological transition**, we have identified and associated essential transversal skills, competences, and knowledge to support advisors in ecological transition.

The framework is divided into four main blocks of competences that together represent the BREATH systemic approach:

- 1. Observe and Understand the Natural Complexities of Systems:** This competence focuses on understanding the intricate and interconnected nature of ecosystems, promoting a holistic view of ecological transition.
- 2. Evolve within an “Eco-Responsible” Ethical Framework:** Advisors are encouraged to act within a set of moral principles that prioritize environmentally responsible behavior and decision-making, acknowledging the intrinsic value of all organisms within an ecosystem.
- 3. Put in practice Advice Inspired by Nature:** This involves offering equitable, fair, and empowering models to users, adapting advice to meet the needs of both humans and the natural world.
- 4. Lean on One’s Environment to Foster Changes:** Advisors are guided to rely on their environment and harness collective strengths, empowering individuals to be responsible and autonomous.

### Definition of Advice inspired by Nature

**Advice inspired by Nature** refers to principles derived from observing nature.

It is about asking which principles from nature can help us provide sensible advice for ecological transition. Before defining these principles, we agreed on a definition of nature. Depending on the context, nature may be:

- a place (in nature) – not opposed to an urbanised space for example;
- an element, which has its own personality in certain cultures (mother nature);
- a concept linked to identity, to genes (it’s your nature);
- a concept that shelters living things and natural resources (universal nature).
- a cosmovision of humankind existence into the Universe.



## The BREATH approach to nature

We have agreed on a vision of human beings within the environment. For us, human beings are an entity in and within nature. Human life is part of a collective life and all natural phenomena are present in its existence. A human being is by definition a living being and an organism. There is an indispensable continuity between nature, society and culture (Chuboda, 2015).

## Principles inspired by nature

We have identified five main principles that are easily adopted for this purpose:

**Circular Thinking, Closed-Loop Systems, Happy sufficiency (2)**—In nature, there is no such thing as overproduction or waste; everything that is produced has a purpose, and is then recycled and reused. A product for one organism is an input for another.

*(Example from Nature: When a tree dies, it becomes food for fungi, which then become food for organisms in the soil and for animals.)*

**Locally Sourced Materials and Knowledge** – This understanding of local specifics – materials and knowledge – ensures that solutions meet local needs and resources.

*(Example from Nature: When a beaver searches for materials to build a dam, it uses local materials. Animals also learn through observation, imitation and learning from one another, passing specific environmental knowledge to their offspring.)*

**Collective Intelligence or "Swarm Intelligence"** – The whole is greater than the sum of its parts (Aristote).

*(Example from Nature: An individual ant has limited capabilities, but within a colony, complex processes are developed, enabling targeted food searches and nest construction.)*

**Interdependent and Interconnected Solutions** – It is important that while searching for solutions we connect multiple local human and non-human actors, thus making them interdependent, which limits the impact on the environment and ensures resilience.

*(Example from Nature: The soil food web includes various organisms such as nematodes, bacteria, protozoa, and fungi that are interdependent and interconnected, providing minerals and nutrients for plants.)*

**Support Biodiversity** – When seeking advice, it is important to support social and ecological biodiversity, involving multiple stakeholders, cultures, and species.

*(Example from Nature: A diverse plot of land, unlike monocrops, features various species*

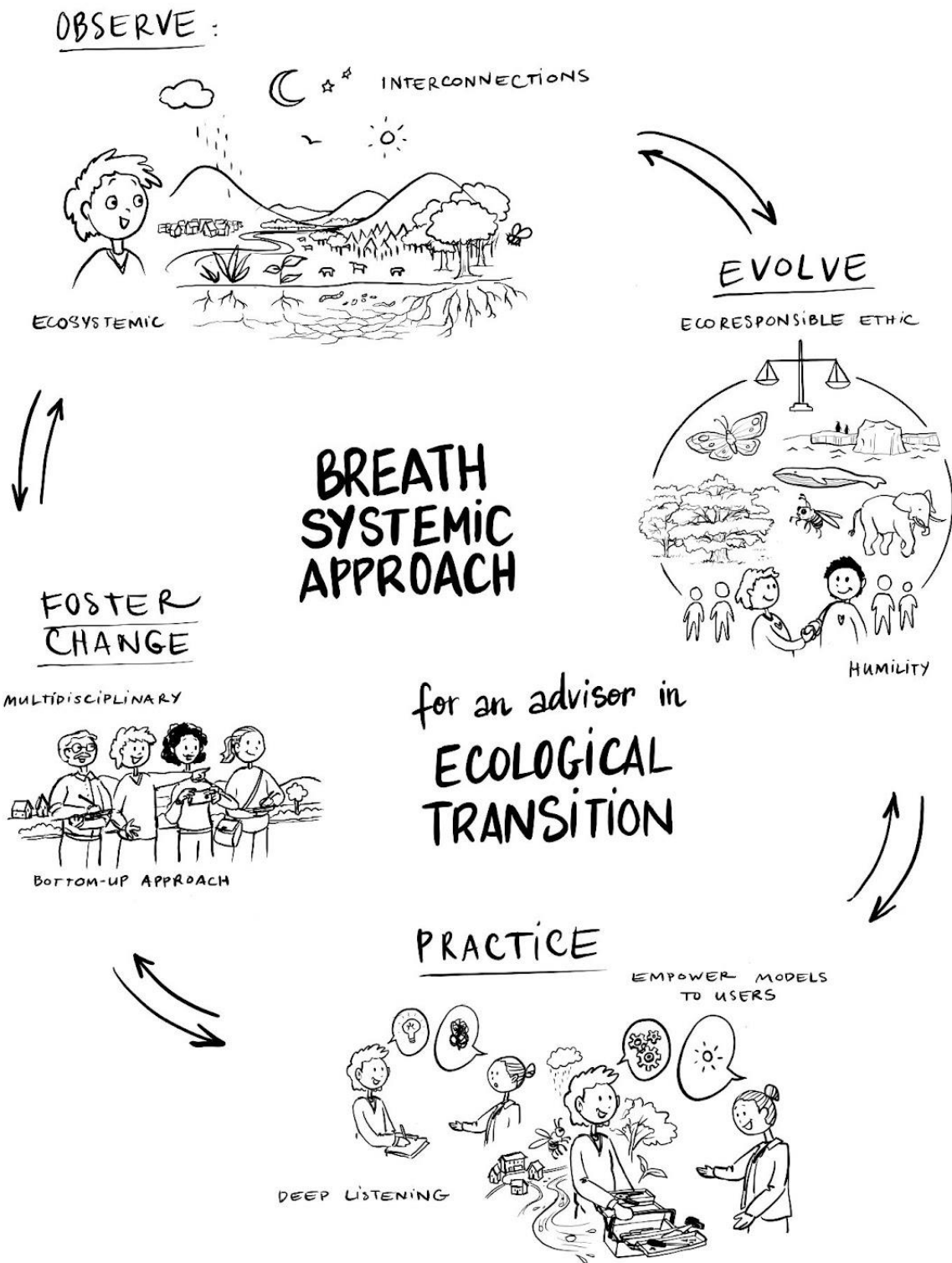


The definition of the profession of advisor as we understand it is made up of the abilities to:

- **Be expert in the respective topics or field of work.**
- **Analyze a context, an ecosystem, techniques, and technologies:** advisors are skilled in assessing various environmental and technological factors to understand the broader context of their work.
- **Advise, train, support, facilitate assimilation, empower, and give meaning to your work:** advisors not only provide advice but also support and empower others, facilitating learning and ensuring that their work is meaningful and impactful.
- **Change scale, catalyze, support emergence, facilitate cooperation, and work in a network:** advisors are adept at scaling their efforts, catalyzing change, supporting new initiatives, and fostering cooperation within networks.
- **Understand a culture, key issues, relationships, and interdependencies.**



# The BREATH systemic approach illustrated



# BREATH competency framework for advisors in ecological transition

Blocks of competences	Knowledge - The advisor in ecological transition knows and understands	Skills - The advisor in ecological transition is able to...	Competences in terms of responsibility and autonomy - The advisor in ecological transition is in a position to...
1. Observe and understand the natural complexities of systems	design based on the principles of <b>adaptability, moderation and sustainability</b> , integrating constraints related to future environmental risks.	consider nature as a <b>complex</b> and <b>interconnected living system</b> , full of <b>mutual connections</b> among diverse organisms and is able to act respectfully within this system.	observe <b>behaviors, patterns and processes</b> in nature, and anticipates their evolution.
	<b>the territorialist approach</b> to spatial planning (bio-region) as a tool for understanding the territory and local and global needs (multiscalar).	take into account the <b>unique requirements</b> of the local environment, give priority to the use of <b>indigenous species</b> and minimize maintenance requirements.	integrate <b>ecological principles</b> and <b>nature-inspired solutions</b> into design, contributing to the ecological transition.
	<b>ecology as a relational system</b> where each being has an <b>intrinsic relationship</b> with other beings. This <b>ecological awareness</b> is a priority value to encourage change.	measure the impact of a <b>strategic choice</b> and identify variables to manage the impact.	develop and use <b>holistic systems of thinking</b> .
	the concept of <b>nature's regenerative cycles</b> and their relation to <b>circular economy</b> and ways to implement it.	<b>observe</b> and <b>perceive</b> subtle changes in the environment and develop a forward-looking approach to change management.	interpret <b>natural signals</b> and adapt to changes in the natural environment.
	<b>the concepts of biology, ecology, and physics</b> essential for understanding natural systems.	analyze <b>complex systems</b> , and identify key factors.	use scientific methods to test, measure, reproduce and demonstrate his or her observations.
	<b>interconnections</b> and <b>interactions</b> among different elements in natural environments.		



Blocks of competences	Knowledge - The advisor in ecological transition knows and understands	Skills - The advisor in ecological transition is able to...	Competences in terms of responsibility and autonomy - The advisor in ecological transition is in position to...
2. Evolve within an "eco-responsible" ethical framework	the evaluation of <b>risks</b> in order to improve <b>resilience</b> .	adopt a <b>humble attitude</b> , with value given to relationships.	<b>consider, understand</b> and <b>respect</b> natural and societal limits and constraints.
	technical and <b>ethical criteria</b> essential for the successful implementation of ecological transition.	evaluate waste management plans, <b>reduce use of non-recyclable</b> materials and products.	apply <b>environmental ethics</b> and <b>ecosystem principles</b> in research activities.
	<b>environmental</b> and <b>public legislation</b> and <b>policy</b> .	promote moderation, cultivate <b>responsible consumption</b> and promote sustainable solutions within diverse contexts.	use ethical advising techniques <b>to build trust</b> and foster <b>positive relationships</b> .
	<b>social debates, environmental ethics</b> and principles of sustainable development.	make <b>ethically grounded decisions</b> in complex situations involving multiple perspectives and interests.	practice <b>decision-making skills</b> with an ethical and awareness of policies.
		lead and guide others in accordance with <b>ethical principles</b> , promoting ethical conduct and responsibility within the organization.	





Blocks of competences	Knowledge - The advisor in ecological transition knows and understands	Skills - The advisor in ecological transition is able to...	Competences in terms of responsibility and autonomy - The advisor in ecological transition is in position to...
<b>3. Put in practice advice inspired by nature</b>	the <b>principles of biomimicry</b> and how to draw <b>inspiration from nature</b> to inform innovative and sustainable solutions in design and problem-solving.	see nature as a <b>universe of ideas</b> and learn from it by observation and deep listening.	guide <b>projects</b> towards nature-inspired and sustainable outcomes, <b>adapting to the human and environmental context</b> .
	the application and promotion of <b>ecological principles</b> while offering a critical explanation of how these principles may vary among individuals.	offer <b>equitable, fair and empowering models</b> to users.	promote the <b>use of local and natural materials</b> and <b>short supply chain</b> with a focus on <b>moderation, simplicity</b> and <b>sustainability</b> .
	the <b>principles and concepts</b> of <b>sustainable construction</b> , including the importance of using <b>locally sourced, natural, and healthy materials</b> , as well as incorporating <b>low-tech solutions</b> and <b>minimizing environmental impact</b> .	create <b>visual representations to facilitate communication</b> and project pedagogy, utilizing drawings as effective tools to convey concepts, ideas, and project details.	have effective communication and collaboration with diverse stakeholders <b>through a simple, effective and entertaining means of communication</b> .
			<p>guide the public towards <b>nature-inspired choices</b> while adapting his/her advice according to the needs of the public.</p> <p>have <b>good team communication and a respectful, cooperative attitude</b> when using a pedagogical approach.</p>



Blocks of competences	Knowledge - The advisor in ecological transition knows and understands	Skills - The advisor in ecological transition is able to...	Competences in terms of responsibility and autonomy - The advisor in ecological transition is in position to...
<b>4. Lean on one's environment to foster change</b>	the importance of bringing together <b>multidisciplinary teams</b> and <b>stakeholders</b> in order to collaborate and address complex challenges.	adapt to challenges that appear while implementing <b>ecological transition</b> , relying on the environment for <b>support and solutions</b> .	empower individuals to be <b>responsible and autonomous</b> .
	experiences in <b>blended learning</b> approaches to connect both traditional and experimental educational methods to enhance the understanding and <b>application of ecological transition</b> .	promote <b>knowledge transfer</b> to citizens and local users.	maintain <b>relations</b> with local representatives.
	a " <b>bottom-up</b> " approach to consulting, associating public authorities with citizens' expertise.	mentor individuals on applying <b>critical thinking</b> when searching for solutions.	act and cooperate in a <b>social and cultural context</b> .
	<b>the analysis of local and current challenges</b> and opportunities for implementing sustainable practices.	develop a network of <b>interdisciplinary</b> professionals and people from various backgrounds.	<b>collaborate</b> with diverse stakeholders.
	<b>local ecosystems, cultures, and social dynamics</b> .	<b>have empathy and the ability to listen</b> to all those concerned, so as to be able to reach out to others and not to prioritise one's own point of view.	encourage <b>collaboration</b> and <b>teamwork</b> .



## 8. References

**Benyus, J.M.**, (1998). *Biomimicry: Innovation Inspired by Nature*. Published by arrangements with William Morrow, an imprint of Harpercollins Publishers, New York, USA. All rights reserved.

**Ceebios**, (s.d.). Biomimétisme. <https://ceebios.com/biomimetisme/>

**Chuboda E.**, (2015). Le naturalisme esthétique de John Dewey. Nouvelle revue d'esthétique, (n° 15), pages 23 to 31. <https://www.cairn.info/revue-nouvelle-revue-d-esthetique.htm>

**Ellen Macarthur Foundation**, (n.d.) Circular economy introduction. <https://www.ellenmacarthurfoundation.org/topics/circular-economy-introduction/overview>

**Levin S.** (2024). *Ecological resilience | Adaptation & Recovery Strategies | Britannica*. <https://www.britannica.com/science/ecological-resilience>

**Rabhi P.** (2010). Vers la sobriété heureuse, Actes Sud, 144 pages

**Senge, P. M.** (with Internet Archive). (1990). *The fifth discipline: The art and practice of the learning organization*. New York : Doubleday/Currency. <http://archive.org/details/fifthdisciplineasen00seng>

**WCED.** (1987). *Our Common Future*. Oxford: Oxford University Press.



Co-funded by the  
Erasmus+ Programme  
of the European Union

'This project has been funded with the support of the European Commission. This publication (communication) is solely the responsibility of the author and the Commission is not responsible for any use that may be made of the information



'This project has been funded with the support of the European Commission.

This publication (communication) is solely the responsibility of the author and the Commission is not responsible for any use that may be made of the information contained therein. '



Co-funded by the  
Erasmus+ Programme  
of the European Union

'This project has been funded with the support of the European Commission. This publication (communication) is solely the responsibility of the author and the Commission is not responsible for any use that may be made of the information contained therein. '