The FUTURE of the PLANET
in the French HIGHER EDUCATION system
Preparing French people to face climate change challenges

Project overview

Preparing the economy for a changing world requires people to be well informed and educated about the challenges posed by climate change challenges. Based on this statement, ***The Shift Project*** **aims to provide an overview of how climate change related topics are dealt with in the different higher education areas,** and to analyse how the current generation is prepared for the challenges it will have to face.

Context

The 2015 Paris Agreement has been a milestone in international negotiations about climate change: All signatory states acknowledged the effects of greenhouse gases (GHG) emissions on the earth's climate. Each state sets out specific commitments to reduce its own GHG emissions, within the 2015-2030 timeframe. The main concerns have shifted first to energy transition scenarios for a carbon-free economy, then to the best ways of adapting to climate change already played, given past GHG emissions. It is clear that Europe, and France especially, are better positioned than others continents or countries to achieve their goals. But we must recognise the significant challenge to face to reach out a zero net GHG emissions economy. It is a matter of redefining the economy in a radical way, by aiming to incorporate and enquire on its physical foundations, which is essentially, today the use of fossil fuels, as well as many other finite natural resources.

All fields of knowledge are concerned by this transition: natural sciences, industrial and technological sciences but also, humanities (geography, history, economics, sociology, politics, arts…). A country cannot drive such a transition without ensuring the mandatory human resources. It is therefore essential for Universities to make sure that all educational programs are in line with this major national and global project. **Otherwise, France could miss an opportunity to get the skills it needs.**

Legal framework

Article 55 of the Grenelle 1 Law (2009) states that higher education institutions (HEIs) must establish a "Green Plan" (i.e. a sustainable development strategy). At the end of 2015, the Sustainable Development & Social Responsibility (SD & RS) label was launched. It aims at recognizing the sustainable development and social responsibility initiatives set out by the HEIs. This label, portrayed as a reference system, is based on five major directions: education and training, research, social policy and territorial anchorage, environmental management of campuses, and, strategy and governance.

The law of the 22th of July 2013 related to higher education and research planed the elaboration of a strategy for higher education (StraNES) at the national level[1]. This strategy will then be revised on a five years basis.
The objectives of the StraNES are as follows:

[1] Stratégie Nationale de l'Enseignement Supérieur (StraNES) :
https://cache.media.enseignementsup-recherche.gouv.fr/file/STRANES/12/2/STRANES_entier_bd_461122.pdf

- To define medium and long term expectations for the French nation with regards to its higher education;
- To define the national objectives to be reached within the next ten years, and to detail the means to achieve them;
- To define and plan the major orientations and evolutions to achieve these objectives;
- To provide some understanding of the public action at a time when it is more important than ever to articulate strategic choices and priorities and to ensure their implementation.

The report dealing with the StraNES was submitted in September 2015. The fifth proposal of this report *"Make universities the laboratories of tomorrow's society and a leverage for the construction of the social ties"* proposes to *"support and develop the social responsibility of institutions (provided by the ESR law) as a mission fully tied to the training and research missions so that a dynamic interaction between the universities and the other sectors of the society can be systematically promoted"*.

The French Law on the Energy Transition for Green Growth explains in its second article that *"National and local policies, economic, research and innovation, education and initial and continuous training contribute to this new development mode [deployment of low-emission processes for greenhouse gases emissions and air pollutants, control of energy and material consumption, information on the environmental impact of goods or services, as well as circular economy, in all sectors of the economy] by the regulatory, financial and fiscal, incentive and contractual mechanisms set in place by the state and local authorities."*[2]

Situational analysis

1/ Within the higher education institution

There are **courses related to sustainable development and / or climate in some curriculum**. However, **specialized curriculums remain the most common practice**. Therefore, people who are willing to acquire knowledge about this topic must choose such a curriculum. In 2013, the French Network of Students for Sustainable Development (REFEDD) conducted a survey on the main curriculum available in France, by region, related to sustainable development. This survey enumerates **a little more than 250 specialized curriculums related to the environmental, ethical and responsibility issues**.[3]

In 2014, two professors from Kedge Business School, Aurélien Decamps and Jean-Christophe Carteron, created the "**Sustainable Literacy Test**" or "**Sulitest**" which goal is **to assess students' knowledge of sustainable development topics**. In total, more than 650 universities in more than 60 countries used this testing instrument. The test is executed at the beginning and at the end of the course so that one can evaluate the progress made by the students during their training courses.[4]

2/ Outside the University framework

In 2005, the Virtual University for the Environment and Sustainable Development (UVED) was created. It is one of seven Thematic Digital Universities (UNT) supported by the Ministry of Higher Education and Research. However, despite its name, a Digital Thematic University is not a university in itself because it does not issue a degree or does not enroll students. Their mission is to *"develop, produce, disseminate, and make scientifically validated digital teaching resources widely available to students and teachers"*.[5] The UVED thus makes available numerous Massive Open Online Courses (MOOCs), on topics ranging from the causes and challenges of climate change to renewable energy and biodiversity.[6]

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[2] LOI n° 2015-992 du 17 août 2015 relative à la transition énergétique pour la croissance verte https://www.legifrance.gouv.fr/affichTexte.do?cidTexte=JORFTEXT000031044385&categorieLien=id

[3] B&L Evolution, Benchmark des formations RSE : http://www.strategie.gouv.fr/sites/strategie.gouv.fr/files/atoms/files/benchmark_des_formations_rse_.pdf

[4] « Sulitest », le TOEFL du développement durable : http://www.lemonde.fr/campus/article/2017/11/01/sulitest-le-toefl-du-developpement-durable_5208723_4401467.html

[5] https://www.uved.fr/a-propos/les-missions-duved/

[6] Les MOOCs UVED en quelques chiffres : https://www.uved.fr/fileadmin/user_upload/Documents/pdf/Fiche_UVED_MOOCs.pdf

Training Courses are also **offered by associations**. For example, through its project ACademy, the association "Avenir Climatique" provides a one-year training "*free and recreational, that gives its participants the keys to understand climate issues and to take action around themselves*".[7] The REFEDD offers a training on sustainable development issues on campuses, while the CliMates association trains to climate negotiations with the "COP in my City" training, which is a simulation of "Conference of Parties". The same organisation also offers a training on climate challenges, looking at the adaptation to heat waves, which is called "Heat wave in my City".[8]

3/ Consequences

There are then many specialised curriculums while there are only few other curriculums that offering one or several courses related to sustainable development or climate. Being trained outside university is possible, however, it is key for all students to be made fully aware of the climate change issue in order to be able to tackle it.

In its "Manifest for Sustainable Higher Education", the REFEDD thus believes that "*higher education must provide all students with the means to understand the issues of sustainable development and to acquire the skills for adaptation, analysis, and creativity, to be able to contribute to a fair society, because students are the decision-makers of tomorrow* ".[9]

In its report "Education for the environment and sustainable development throughout life, for the ecological transition", the Economic, Social and Environmental Council (EESC), is on the same track as the REFEDD: "*All high education graduates must have a minimum of generic skills about the issues of sustainable development and ecological transition, especially in terms of development path. Given the evolution of the jobs and responsibilities made inevitable by the ecological transition, they also need the knowledge enabling them to adapt in the future to a professional environment that is expected to undergo profound changes. [...] Any higher education graduates must then have the required background to act as an informed and responsible agent, at his own level, in the pursuit of a sustainable development* ".[10]

Proposals and objectives

It seems that an **increasing awareness of sustainable development issues in the broad sense is emerging, although the specific issues of climate and physical limits are not addressed as an integral part of it.** There are still a few students trained, mainly because these topics are not integrated into the higher education curriculums. In addition, specialised curriculums remain the prerogative of a few students that are already interested and aware of sustainable development, CSR or climate.

1/ The ascertainment shared by several stakeholders

As mentioned above, **the EESC recommends that all students are trained about environmental and sustainable development issues**, it is a prerequisite for accompanying transitions. However, it believes that this training must be done by integrating these issues in all the academic disciplines. [11]

REFEDD also goes in this direction, and believes that all curriculums must be reconsidered "*according to their contribution to a sustainable development process [...] The challenge is to provide the necessary transvers skills related to sustainable development along with skills specific to each job, so that today's job specifications evolve toward sustainability*".

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[7] http://avenirclimatique.org/lacademy/
[8] http://www.studentclimates.org/heatwave-in-mycity/
[9] REseau Français des Étudiants pour le Développement Durable, Manifeste pour un enseignement supérieur durable : http://refedd.org/wp-content/uploads/2016/03/Manifeste-%C3%A9tudiant-REFEDD.pdf
[10] Rapport du CESE, L'éducation à l'environnement et au développement durable tout au long de la vie, pour la transition écologique : http://www.lecese.fr/travaux-publies/leducation-lenvironnement-et-au-developpement-durable-tout-au-long-de-la-vie-pour-la-transition-ecologique
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On the business side, the findings meet this objective. According to a **MEDEF** study published in January 2017, *"81% of VSEs and SMEs rely on training for successful digital, green and international transitions"*[12]: young people must be prepared for these new challenges.

This means that the training content must be adjusted to the features of each sector. It would make the above-mentioned issues more concrete for students. Anyhow, it seems mandatory to look at the training needs for the transition, sector by sector, to provide France with the adequate human resources, ready to cope with – and to build - a changing world.

2/ The Shift Project approach and objectives

The Shift Project wants to make a situational analysis of how these topics are addressed in the higher education system.

The purpose of this work is first to map the various higher education paths, together with the number of students in each of them. Then, to identify the current training initiatives related to climate change in higher education, and eventually to identify the overall needs by consulting some specialists and professionals from different disciplines.

This compilation work aims to establish a foundation that will enable higher education stakeholders to catch the issue and propose relevant answers. It is important to facilitate the way students will have to address the larger issues they will face as citizens or throughout their professional lives. Then, they will both better be prepared for the world in which they will have to evolve but also able to build a low carbon and resilient world.

3/ Scope of the study

This working group has chosen to focus **on climate change and on the issues most directly related to it**. The cross-cutting nature of the subject nevertheless requires to pay attention to many issues of "sustainable development". Accordingly, it involves other issues such as energy, biodiversity, agriculture, urbanism, inequalities... And relate more or less directly to all higher education disciplines. Besides, the IPCC provides quality and consensual information. Therefore, we will not deal with the many other environmental issues, for which the consensus has not been clearly established.

This study focuses on France, even if some comparative elements with other countries can be brought up. It is limited to higher education, because it is a sector that, on the one hand, responds to its own dynamic, and on the other hand, has a special role in the people personal and professional training. If these choices are voluntarily restricted, it is certain that the excluded fields would benefit from being explored too in the context of specific works.

Objectives of the Study

1 / Propose an inventory on how climate issues are taken into account in the higher education system.

2/ Link this inventory with general issues faced in the society at a present time and in the future, both in terms of training, and therefore employment, and with France ability to meet its general targets.

3 / Provide the higher education system stakeholders with some elements to fuel a general discussion on this topic.

Working Methodology

1. Compile current literature and information
2. Consult specialists through individual interviews
3. Aggregate the information obtained in order to extract testimonials and recommendations

[12] Formation professionnelle : des services pour accompagner les dirigeants des TPE-PME, http://www.medef.com/fr/communique-de-presse/article/formation-professionnelle-des-services-pour-accompagner-les-dirigeants-des-tpe-pme

4. Present the project to public authorities and to education professionals of the sector
5. Communicate about this report and its conclusions

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