



Sustainable and Green Finance Program

Ecole des Ponts ParisTech



Agenda

Introducing you to Ecole des Ponts

Innovative way of teaching

Financing the transition

Sustainable and green finance

Applying

A world-class institution

A public engineering school, founded in 1747, recognized for the excellence of its graduate studies



International outlook



Embedded in the industry ecosystem

2000 students

33% female,
45% international
students,
45 nationalities



2022 International QS Rankings
#245 worldwide
#1 France for international students



2022 THE (Times Higher Education)
#251-300 worldwide
#6 France / #1 univ < 5000 students

Leading to executive careers addressing the ecological and digital transitions



École des Ponts
ParisTech

International partnerships

71 partner universities

IN 35 countries

ON 4 continents

47 double-degree agreements with universities

IN 25 countries

1 European University



Europe:
39 partner universities
19 double-degrees
20 Erasmus exchange agreement



Imperial College London



TU Delft



POLITECNICO DI MILANO

Asia:
9 partner universities
8 double-degree
1 exchange agreement



Americas
16 partner universities
13 double-degree
3 exchange agreements



東京大学
(The University of Tokyo)



Africa / Middle-East :
9 partner universities
6 double-degrees
2 exchange agreements



4 Global Initiatives

- Programme de Formation d'Ingénieurs d'Excellence - PFIEV (Vietnam)
- Co-Innovation Center (Tongji, Shanghai)
- Joint Education and Research Center (UM6P, Maroc)
- Capacity Building Program funded by the WorldBank (INP-HB, Côte d'Ivoire)



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Close links with industries



Transportation,
environment,
urban services



Consulting



Energy



Construction



Industry



Finance

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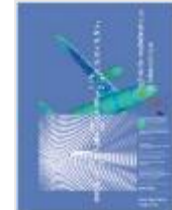
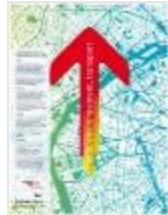
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Addressing the ecological transition



6 academic departments (master level) training high-level engineers with an excellent S&T background able to take responsible and ethical decisions in a complex world

Interdependences

Uncertainty

Irreversibility

Complexity

Mistrust

Research &
Analyze

Be creative

Observe, measure,
evaluate

Think for different
scales

Trade off between
efficiency and
robustness

Optimize towards
sobriety

Take into account all
stakeholders' point of
view

Model

Comprehensive pedagogy

High level scientific and technical education

Project based learning

Development of managerial and soft skills

Development of multilingual and multicultural skills

To support
the ecological
transition

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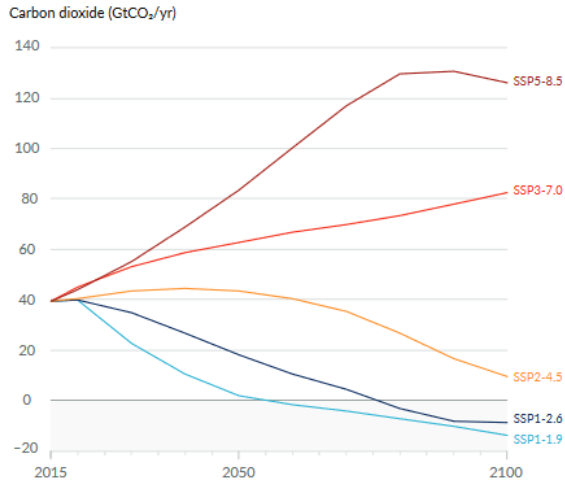
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Financing the transition



Source: IPCC AR6 (2021)

GREEN BOND MARKET

\$3bn
in 2011

\$163bn
in 2018

\$895bn
in 2018
including climate-aligned
bonds

Source: Climate Bonds Initiative (2018_{Q4})



GREEN BOND MARKET



of the \$100tn global bond market is invested in green bonds

Source: G20 Green Finance Study Group (2016_{Q4})

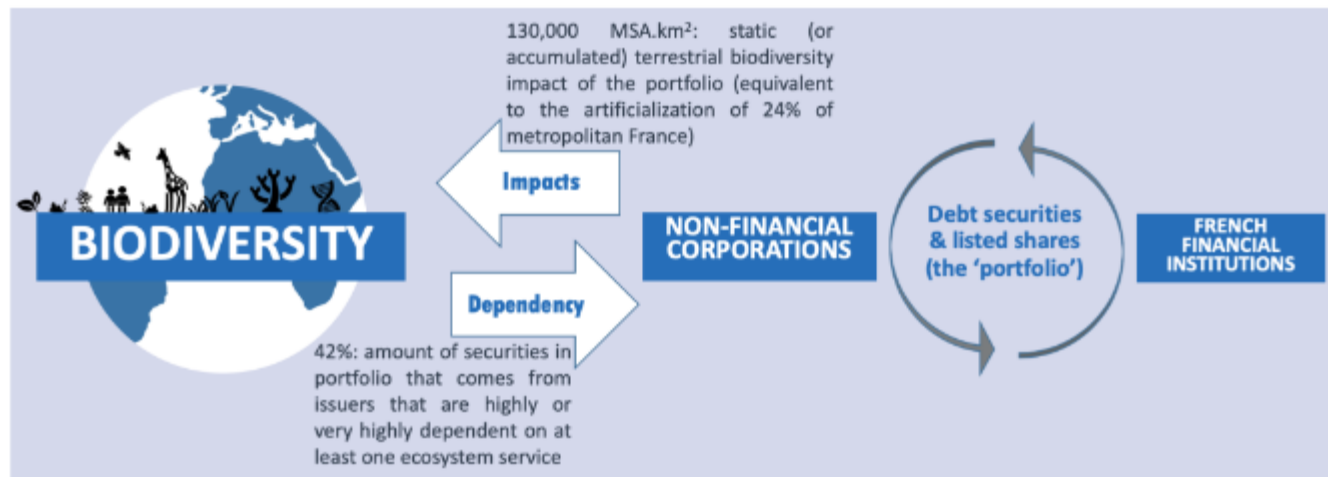


INFRASTRUCTURE INVESTMENT NEEDS

\$6.3tn is needed/year to 2030 to meet development goals

\$6.9tn to meet the Paris Agreement goals

Source: OECD (2017_{Q4})



Source: Banque de France (2021)

Financing the transition

This is a scientific issue At the top of the political agenda



Marc Carney

“Climate change is the
Tragedy of the Horizon”
2015



Christine Lagarde

“The ECB will act
within its mandate to
contribute to mitigating
and averting climate
change” 2021



Ursula von der Leyen

A green deal of 1tn
for the decade. 2020

That will change how firms operate and are being financed.

The issues to be addressed

- ① Defining a “green” project : what to measure, how to measure ?
- ② Beyond climate, biodiversity and dealing with environment as a whole. Beyond the environment, ESG issues
- ③ Defining and modelling scenarios
- ④ New financial risks that could become systemic : characterizing, measuring and modelling them
- ⑤ Designing and implementing new financial regulations

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Sustainable and Green Finance

Contribute to the ecological transitions within companies, financial institutions and international organizations

Understand the challenges of energy and ecological transitions, from the point of view of physical phenomena addressed by engineering sciences (climate, biodiversity, etc.) but also from an economic and financial point of view (carbon market, etc.).

Analyze the different technical, economic and financial dimensions associated with the implementation of sustainable projects (and in particular the measurement of positive spin-offs associated with them).

Measure and evaluate the risks associated with projects, at the project level and also at the macro-economic level.

Master the standard financial framework as well as the tools (green bonds, impact investing, ESG reporting, etc...) and the specific dimensions relating to sustainable and green finance.

Sustainable and Green Finance



ENGINEERING SCIENCES

ECTS

Climate Change Sciences

1,5

Climate Risk Assessment and Management

1,5

Life Cycle Assessment

2



ECONOMICS

Energy economics

3

Credit Risk

4



FINANCE

ESG Analysis

1,5

Financial regulation for Green Finance

1,5

Project Finance

3

Green Financing

1,5



CONFERENCE CYCLE

1



CAPSTONE PROJECT

5

Total: 25,5 ECTS to be completed by other classes in the school if required

The capstone project

Société Générale



Understanding the legislation of energy regulation for buildings and its impact on credit policy

BNP Parisbas



Develop a tool to assess the carbon impact of sovereign bonds

Banque de France



Measuring the imported deforestation in Europe and its impact on the financial system

Accuracy



Understanding what is behind ESG ratings and applications for firm management



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Facts & Figures

FACULTY PROFILE



1/3 Researchers
1/3 Private sector
1/3 Public sector

Paris as the leading financial center for green finance

1 semester :

Early
September -
End of
January

CAREERS OPPORTUNITIES



- Industry: Veolia, Gérard Bertrand (wine), EDF renewable energy, Suez
- Consulting: Carbone 4
- Banking sector: BNPP, Société Générale
- Financial Advisory and investment funds : Accuracy, Omnes capital, Green yellow
- International organizations : UN

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Welcoming you

Accommodation

In a students' residence near the campus
Studios booked by the School

Welcome Desk that gives precise and up-to-date information on:

Visa procedure (if any)

Health insurance

Other insurances : housing, civil liability ...

Housing allowance

Bank account

Local transportation

Orientation Week

More information on the School, visit of the campus

Possibility to be included in a Tandem Programme

Social activities offered by the Students' Union



SEE YOU SOON!

