



Master of Advanced Studies ***“Transitions and innovations in European territories: environment and post-anthropocene landscapes”***

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“No solution that truly supports the Anthropocene scenario can eliminate the question from the subject, by depoliticizing and naturalizing the question, by making a mere technological exercise devoid of political relevance. Economic and social inequalities and differences in living standards cannot be ignored in favor of an undifferentiated vision of responsibilities, just as cannot be ignored the weight of promoting a vision of progress and well-being linked to level of consumption in relation to attempts to find a common understanding of these pressing issues. ”

Professor Mario Neve, University of Bologna - President of Ravenna Campus

Climate change, the explosion of inequalities, the vertiginous drop in biodiversity, the accumulation of fragilities linked to technological sophistication, consumerist recklessness: so many symptoms of the impasse in which the world has entered. "The 'day after' will not be a return to the 'days before'.
The urgent need for a change of frame of reference, for thought and for public action, concerns all levels: local, regional, national, European and global. It requires the training of officials, capable of leading the processes of profound innovation in the management of "commons" and of designing the landscapes of the "post-anthropocene" "

Jean-Luc Delpeuch, President of the community of communes of Clunisois

Conceived jointly with the University of Bologna (Ravenna campus), the Master of Advanced Studies (MAS) "Transitions and innovations in territories in Europe: environment and post-anthropocene landscapes" is a unique course. It offers its listeners the acquisition of skills and knowledge necessary for the conduct of territorial innovation projects in Europe, focusing on the "commons" and landscapes, in the context of the "anthropocene".

This course is intended for auditors originating from countries of the European Union and the neighborhood of the Union, with initial training at master's level or equivalent professional experience, coming from various academic backgrounds (law, geography, town planning, architecture, engineering, digital sciences, management, public management, human and social sciences, political sciences, European affairs, educational sciences, languages, etc.).

The Master of Advanced Studies cycle comprises modules combining formal teaching and operational applications, as well as tutored personal work for a total value of 60 ECTS.

At the end of the diploma course, holders of the Master of Advanced Studies from the European College of Cluny are able to exercise professional responsibilities or an elective mandate in charge of territorial innovation project manager or to lead a research-action project on the innovative care of "commons" and landscapes in Europe, as well as the conduct of societal transformations.

1. Key concepts

Anthropocene: the impact of human activities on ecosystems is such that it modifies the surface layers of the earth, the atmosphere, the climate, the biosphere, to the point of leaving lasting traces. This term was popularized by Nobel laureate in chemistry Paul Joseph Crutzen and biologist Eugene Stoermer, to denote a new geological era. This upheaval is so radical that it forces to rethink the conceptual toolbox to forge new "post-anthropocene" instruments.

Commons: goods useful for life in society that cannot be appropriated privately, such as grazed areas, water resources, ecosystems, which are managed collectively; by extension, the term "commons" can cover heritage elements not necessarily managed in common, such as landscapes, climate, know-how, non-renewable natural resources, etc. Elinor Ostrom's work on the "commons" won her the Nobel Prize in economics in 2009.

Landscape: physical heritage and living environment, resulting from the interaction of natural and human factors, and in particular planning policies.

Territory: space that is used, developed and managed, whose representation by the actors is based on spatial, temporal and organisational dimensions and gives rise to a feeling of belonging and collective responsibility for its management, preservation and development, all of which evolve over time.

Innovation: nourished by collective deliberations and research work, innovation consists in designing, experimenting, implementing and evaluating new forms of economic, social and environmental organization, to meet the changing basic needs of inhabitants in the face of the transformations of the Anthropocene.

Transformation: rapid changes in living conditions, linked to climate change, the rise of digital uses, demographic and economic changes, health and environmental conditions.

Europe: the courses of the European College bring together academic and institutional partners from different countries of the European Union; they are based on case studies from several European regions; the diversity of the cultural backgrounds of listeners is an important objective.

2. Diploma course program

*The diploma course includes the following 21 modules: **the first 6 modules take place in Ravenna, the next 15 modules in Cluny. The modules of the course are bilingual (English and French): the teachers are able to switch from one language to the other (e.g. oral in English and documents in French, or vice versa, answering a question in the language chosen by the auditor); conversely, each auditor must have a good command of one of the two languages and acquire a minimum knowledge of the other language. The dates indicated below are to be confirmed.***

1. **Thinking together about the anthropocene** (general introduction) - 2-30 Nov. 2023, in Ravenna, with Mario NEVE, University of Bologna, Ravenna campus

This interdisciplinary course mobilizes the natural sciences, the humanities, philosophy, geography, history and economics, to present the transformation by human activity of the surface layers of the earth and the atmosphere and its challenges. It analyses the players' games and highlights the need for public policies that take into account the rapid changes necessary to try to restore satisfactory living conditions for future generations and prevent the various phenomena of collapse. It introduces a bibliography that each listener will have to study.

Skills to be acquired: ability to analyze the challenges of a public action project in the general context of ecological transition (carbon impact, biodiversity, impact on the water cycle, impact on pollution and risks).

2. **Read the landscapes** - 2-30 Nov. 2023, in Ravenna, with Mario NEVE, University of Bologna, Ravenna campus

This course defines the notion of "landscape" as an expression of the relationships between humans and the environment, as a reflection of the evolution of these relationships over time, as a common heritage to be cared for, enhanced and made to bear fruit. Drawing on concrete examples, the course provides the tools for understanding and analysing the landscape, as well as examples of collective action around this heritage. It highlights the link between the choices made in terms of public policies (planning, energy, mobility, water, agriculture, etc.) and changes in the landscape.

Skills to be acquired: ability to analyze a landscape, to detect its characteristics and past evolution, to foresee and guide its evolutions, in the context of the necessary ecological transition.

3. **Access to water, a common good** - 2-30 Nov. 2023, in Ravenna, with Roberto PASINI, University of Bologna, Ravenna campus

Since the generalization of water supply to every home, the importance of water as a potentially limiting factor in economic and demographic development has been lost sight of. With climate change, water is once again becoming a precious commodity whose resources are threatened, both in quantity and quality. The aim of the course is to define the issues related to water and, on the basis of case studies, to initiate the various public water policies at the local level: analysis of resources, water supply for its various uses, management of watercourses and aquatic areas, wastewater treatment.

Skills to be acquired: ability to analyze the challenges of a public action project in terms of impact on the water cycle (water resources, quality of water discharged into the environment, management of waterways, etc...)

4. **Manage energy and climate** - 2-30 Nov. 2023, in Ravenna, with Roberto PASINI, University of Bologna, Ravenna campus

The economic development of the last two centuries has been based on the intensive use of fossil sources of energy: coal, oil, nuclear. Climate change requires a drastic reduction in greenhouse gas emissions. Renewable energies (wind, solar, geothermal, wood, hydraulic, bio methane, etc.) present potentialities and constraints, both technically and economically and in terms of their acceptability. The priority in this area is the combination of sobriety, energy efficiency and the production of renewable energy. The course will introduce the mechanisms of climate change and the temporalities corresponding to the different scenarios for the evolution of greenhouse gas emissions, to allow an understanding of "climate-energy" issues. It will include the analysis of projects of local authorities engaged in initiatives of positive energy territories.

Skills to be acquired: ability to analyze and manage the energy issues of a public action project: sobriety, efficiency, energy mix, production of renewable energy, issues of energy policies on global warming, energy poverty, landscapes, economic competitiveness; ability to supervise the realization of a territorial carbon inventory and a territorial carbon footprint.

5. **Welcoming and including** - 2-30 Nov. 2023, in Ravenna, with Annalisa FURIA, University of Bologna, Ravenna campus

Climate change is fuelling tensions in many parts of the world and causing migratory movements to increase. Faced with the arrival of people seeking a future, local authorities, in relation with non-governmental organisations and associations of the social and solidarity economy, must think about the reception and integration of the people concerned.

Skills to be acquired: understanding of migration mechanisms, knowledge of European and international humanitarian action, ability to analyse the legal situations of people arriving on European territory, ability to organise orientation, care and inclusion systems, particularly with regard to unaccompanied minors.

6. **Common goods management** - 2-30 Nov. 2023, in Ravenna, with Annalisa FURIA, University of Bologna, Ravenna campus

This teaching is based on the work of Elinor Ostrom and Riccardo Petrella to define the "commons". It shows that the Anthropocene period reinforces the importance and value of these commons, as well as the need to manage them vigilantly. The course illustrates the management methods of these commons at different scales and in different places. The course also gives an introduction to public finances, which are part of the "commons" necessary for the good management of other "commons", as well as the financing of projects, with a particular focus on European funding.

Skills to be acquired: knowledge of the notion of "commons" and the issues relating to the management mode of these commons; ability to lead public action programs to raise awareness of the commons and establish management methods adapted to their proper consideration.

7. **Public service in Europe** - 2-30 Nov. 2023, in Ravenna or Visio, with Mario NEVE, University of Bologna, Ravenna campus and Jean-Luc DELPEUCH, Director of training at the European College of Cluny, President of the Communauté de Communes du Clunisois, former University President

The way public service is organized in Europe varies from country to country, depending on historical data, political and cultural traditions, but also on economic and legal factors. The course will provide an overview of the variety of traditions and practices, and put the developments in perspective, in the context of the transformations of the Anthropocene. He will discuss the influences of the evolution of European law on national practices in this area.

Skills to be acquired: knowledge of the organizational practices of public services according to the different traditions in European countries; ability to grasp the issues in this area in the context of Post-Anthropocene transformations and in relation to European construction

8. **Languages applied to landscapes** (English and French) – 4-8 Dec. 2023 in Cluny, with Nathalie THIERS, trainer at the European College of Cluny, responsible for the Landscape Plan at the Communauté de Communes du Clunisois

The modules of the course are bilingual (English and French): teachers are able to switch from one language to another (for example oral in English and documents in French, or the reverse, answer to a question in the language chosen by the listener); reciprocally, each listener must have a good command of one of the two languages and acquire a minimum background allowing him or her to understand the other language. To this end, two weeks at the beginning of the course will be devoted to a discovery of the landscapes of Clunisois with acquisition of vocabulary and turns of phrase allowing discussion in English and French on these landscapes and the actors of their evolution.

Skills to be acquired: ability to actively follow a bilingual teaching (English – French), knowledge of vocabulary and expressions useful to the program modules, ability to speak, didactic presentation and animation of case studies in either of the two languages; cooperative language skills (comprehension support for a person with difficulties).

9. **Design of public policies** - 12-14 Dec. 2023 in Cluny, with Romain THÉVENET, Designer at Détéa, cofounder of La 27e Région

Public action must bring people closer to those responsible. Among the resources useful for this reconciliation, design plays a particular role. This course will provide listeners with an introduction to design and will impart the ability to use this discipline to facilitate dialogue and the common representation of stakeholders in relation to transformation projects.

Skills to be acquired: basic knowledge of project design methods; ability to mobilize them for the collaborative design of operational local public policy projects; capacity to evaluate projects after their prototyping phase

10. Acting as a local, regional, national, European and global citizen – 19-21 dec. 2023
*in Cluny, with Jean-Luc DELPEUCH, Director of training at the European College of Cluny,
President of the Communauté de Communes du Clunisois, former University President*

Faced with climate change and the collapse of biodiversity, the innovations necessary for the profound transformations of public policies cannot be done in a "top-down" direction, from international and national bodies to local levels, but must be nourished by experiments and have recourse to strong interactions between the different scales of public action. Active citizenship and a legitimate and vibrant democratic organization are necessary conditions for the ability to innovate and experiment. It is also a factor of good articulation between the decisions of the different levels. In this context, the course will introduce the notion of citizenship through authors like Tocqueville and Dewey. He will present the different models of institutional construction: unitary, decentralized, federalist. It will present the specificities of the process of European construction. It will draw on concrete examples of innovative practices in terms of citizen participation and cooperation between the different levels of public action, in particular between grassroots democracy and the functioning of national and European institutions.

Skills to be acquired: knowledge of multi-level institutional mechanisms, in particular federal, ability to analyze the responsibilities of entities according to their skills, knowledge of European institutions and general principles of European law

11. Creating a system for/through the valorisation of territorial data – 9-11 January 2024
in Cluny, with Grégoire FEYT, Professor at Grenoble Alpes University, Institute of Urban Planning and Alpine Geography & PACTE Laboratory

The intelligence of the territory imposes to consider but also to cross domains and problems more and more diverse and interdependent. To these fields are associated sources and types of data more and more numerous, varied and coming from diversified actors. Taking advantage of these resources in a collective and sustainable manner on a territorial scale requires the implementation and management of a Territorial Information System (TIS). This system mobilises three main areas of knowledge and action: technical, through tools and methods for processing and representing geographic data (geographic information system, geovisualisation, etc.); functional and organisational, through the development of transversality and partnerships (Open data, collaborative platform, etc.); and political and legal, with the issues of information governance and data regulation. The training will aim to provide the bases and keys for understanding and articulating these different registers of action.

Skills to be acquired: knowledge on the digital geographical information (nature, structure, treatments), to apprehend the diversity of the "business approaches", functional and organizational principles of a TIS, to integrate the ins and outs of the opening of data, to take into account the political and legal dimensions of the sharing of the territorial data

12. Introduction to coding – 16-18 Jan. 2024
in Cluny, with Sylvie TISSOT, trainer at the European College of Cluny, IT engineer, Director of the company Anabole - Lecturer at the Ecole Nationale Supérieure de Création Industrielle (ENSCI les Ateliers, Paris)

The culture and practice of coding is too often confined to a community of experts. It is important that territorial actors and managers have a minimum of skills and capacity for cooperation in this area, in order to develop their own applications or to contribute to the adaptation of existing open tools. The teaching provides the basics of coding and allows the most motivated people to continue their initiation. Its objectives are as follows:

- ✓ learn the basics of programming
- ✓ discover the development tools
- ✓ create a program and a visualization
- ✓ allow the future territorial actor to communicate and collaborate with a developer
- ✓ acquire a self-taught posture,
- ✓ understand the challenges of programming.

Skills to be acquired: basic knowledge of computer programming, ability to design public policies for awareness and training in computer programming



13. Mobilizing the intelligence of a territory – 23-24 Jan. 2024 in Cluny, with *Alexandre MOINE, Professor of geography at the University of Franche Comté, ThéMA laboratory*

The ability of a community to manage the challenges of transformation depends on the ability to mobilise the skills of the actors present around a territorial project. The course will give the theoretical keys to approach the understanding of a territory in a systemic way and to accompany the development projects. It will particularly train to the realization of a diagnosis and to the mobilization of the actors around the collective conception of the shared glance, with the help of powerful graphic tools in order to feed a territorial strategy. The course will be based on concrete examples of local projects and on a concrete situation through workshops with restitution to the actors in the field.

Skills to be acquired: ability to mobilize data concerning a territory, to analyze it, to coordinate consultation between stakeholders to design a territory project including the consideration of transitions

14. (Re)housing the existing? – 30 Jan. – 1 Feb. 2024 in Cluny, with *Anne D'ORAZIO, Professor of Architecture and President of the Board of Directors of the Ecole d'Architecture de Paris-la-Villette and Angèle LAUNAY, Doctoral student at the Ecole d'Architecture de Paris-la-Villette and head of the housing department at the Communauté de communes du Clunisois*

Faced with socio-demographic changes and the new ecological, technical and health challenges of the 21st century, we will need to consider the new development of housing production and improvement. The triptych 'sobriety, efficiency, renewable energy' seems to be gradually infusing urban planning policies.

What do sobriety and efficiency mean for housing policies, then? What are their effects on the production and management of housing habitat stock? As sobriety becomes a priority, for soil protection and biodiversity as well as energy saving and material resources, therefore most of the stakeholders are considering necessary to work with what already exists. This posture aims to combine the socio-economic and intimate needs of households with the existing built environment. It seems to be the guarantee of sustainable territorial development. Consequently, urban, and rural design practices are transformed, thus questioning our ability to take care of what is already there (fight against vacancy, rehabilitation measures, regeneration of wastelands, etc.). After having presented the stakes of such a paradigm shift and the frameworks of the public policies related to it, the course will be based on examples of local actions to consider their transformations.

Skills to be acquired: knowledge of housing and urban design policies, ability to coordinate these policies and settlement strategies.

15. Eat local – 6-7 Feb. 2024 in Cluny, with *Charlotte DUFOUR, Trainer at the European College of Cluny - Consultant on food systems and nutrition for humanitarian NGOs and the United Nations (notably the FAO)*

Food is a crucial issue, both in terms of public health, the type of economic and agricultural development, greenhouse gas emissions and geopolitics. The course will introduce these issues and present territorial approaches aimed an improvement in local food supply, at relocating food production as well as quality research linked to agricultural practices and a better distribution of added value through the creation of local processing tools. agro-food and short marketing channels.

Skills to be acquired: ability to coordinate a territorial food project approach; knowledge of the different levers of a local food policy (land, agricultural practices, consumption...); ability to lead a policy of encouraging the installation of new farmers and the transfer of farms; ability to analyze the impact of agricultural and food trajectories on resources and landscapes

16. Entrepreneurship in the circular economy – 13-14 Feb. 2024 in Cluny, with *Louis DENAUD, Research professor, Arts et Métiers Cluny campus, Wood Laboratory*

In the context of the need to break with the depletion of fossil resources and the limitation of emissions linked to the transport of goods, the course will introduce the concepts of the circular economy: life cycle analysis, ecodesign, industrial ecology, relocation. In the field of wood materials, he will discuss the conditions for the development of this new model of endogenous economic development. It will provide case studies of local development based on the valorization of local resources.

Skills to be acquired: ability to analyze the development potential of the circular economy in a territory, competence to lead a territorial pole of economic cooperation, to coordinate the bringing together of local economic actors around the development of local resources.

17. Getting around "low carbon" – 20-22 Feb. 2024 in Cluny, with Valerie FACCHINETTI-MANNONE, Lecturer in Geography at the University of Burgundy

Globalization has been built on freedom of movement, the intensive use of petroleum fuels and the development of air transport. It has resulted in phenomena of high specialization in production and increased interdependence between regions of the world. The increase in the cost of fuel and the reduction in the quantities available could have the effect of severely handicapping regions with low population density, where distances are greater and where the organization of collective mobility is more complex. At the same time, the reduction in the mobility of goods and services gives rise to new economic opportunities in proximity approaches. Electromobility has a number of advantages, but requires the development of electricity production and networks. The course will introduce these issues and present innovative mobility practices: public transport, soft mobility, multi-modality, etc.

Skills to be acquired: ability to analyze the mobility practices of a territory, to stimulate a local mobility scheme, to design and implement innovative services in terms of collective mobility and soft travel

18. Connecting without excluding – 5-8 March 2024 in Cluny, with Stéphane CROZAT, Teacher-researcher in computer science at the Technological University of Compiègne (Costech laboratory). Member of Framasoft, a popular digital education association - Trainer at the European College of Cluny

The rapid development of digital exchanges and artificial intelligence open up considerable opportunities, but are accompanied by situations of marginalization and exclusion, for people who do not have access to it, who only partially access it, or in degraded conditions. The course will present an overview of the digital revolution, will explain the main economic and social consequences of this movement, will analyse the foreseeable evolutions in the short and medium term. It will address the issues of e-government, digital illiteracy and provide access to examples of public policies to overcome the main risks of exclusion that accompany the digital revolution.

Skills to be acquired: knowledge of the major challenges of digital development in terms of economic, social and environmental consequences, in terms of open software and open data; ability to coordinate local policies to fight digital exclusion, share digital commons, promote digital sobriety

19. To be protected and to protect, to be included and to include – 12-14 March 2024 in Cluny, with Boris CHEVROT, Coordinator of the Economic and Social Unit at the Communauté de Communes du Clunisois - Lecturer at the University of Lyon 2 - Trainer at the European College of Cluny

The profound changes in lifestyle necessary to fight climate change are likely to destabilize the social fabric and worsen the divides between generations, between rural and urban people, between included people and people in vulnerable situations. The desperation of young people in the face of the deteriorating climate situation is a major difficulty. In this unprecedented context, social and solidarity policies, particularly in the fight against exclusion, must evolve. The peculiarity of the situation can be measured in the light of several recent crises: the cleavages between supporters and opponents of vaccination, situations of distress and isolation caused by rising energy prices, throughout Europe, conspiracy and xenophobic movements, etc. The course will provide elements of social policy analysis, current developments and offer case studies of innovative local public policies to face the most recent risks.

Skills to be acquired: ability to coordinate local integration and solidarity policy projects, in particular for people excluded from employment, isolated, with disabilities; ability to analyze the issues of old age and coordinate action projects in this area; competence in analyzing the social issues of ecological transition.



20. Living with the living – 19-20 March 2024 in Cluny, with Elodie TONNOT and Alain-Marie TROCHARD, trainer at the European College of Cluny - Botanist

The collapse of biodiversity and the mass extinction of species is one of the characteristic phenomena of the Anthropocene. The course will explain this phenomenon, document its extent and analyse its determinants. It will present the various public policies and international, European and national programs intended to tackle it, as well as the profound changes to be made to local public planning policies, in particular in the fight against the artificialization of soils. Particular emphasis will be placed on initiatives by local authorities in this area.

Skills to be acquired: knowledge of the challenges of the collapse of biodiversity and of the major European and international programs in this area, ability to integrate this dimension into public policies, ability to lead public action projects in favor of maintaining biodiversity

21. Project Work – 1st April to 12th July 2024 (12 ECTS)

As part of a mission in a professional context (which can be done either in the form of an internship for auditors directly from education, or in their professional practice, on a mission corresponding to a territorial innovation project for auditors already active), the auditor will use the skills acquired in the courses and will conduct a critical analysis of the project entrusted to him or her: link to the transformations of the Anthropocene, multidisciplinary aspects, stakeholder games. The critical analysis will take the form of a report written and presented to a final jury. Project work will be tutored. In terms of time, the innovative mission and the analytical work must represent at least the equivalent of a professional half-time over a period of three months.

Skills to be acquired: ability to lead a collaborative territorial innovation project; ability to analyze the drivers, success factors and brakes; ability to relate the project to other local innovation projects; ability to control the budgetary dimension; ability to analyze the impact of the innovative project, particularly with regard to major post-anthropocene issues (carbon footprint, landscape, impact on water resources, etc.)

