Postdoctoral researcher in economics in coastal risk areas

The University of Bordeaux is a dynamic and responsible university that cares about the well-being of its staff. Joining us means working in a privileged environment within a particularly diverse and open professional community, benefiting from welcome and inclusion schemes, training and internal mobility. It means participating in an academic, scientific and human adventure.

Join the Bordeaux School of Economics of the University of Bordeaux (BxSE)!
Bordeaux School of Economics is a joint research unit of the University of Bordeaux, CNRS and INRAE. This laboratory constitutes one of the main French research centers in Economics and aims to contribute significantly to major contemporary societal issues. BxSE aims to increase its visibility vis-à-vis the societal sphere, to strengthen its attractiveness for external researchers and PhD students and to create a high-level interdisciplinary research dynamic.

As part of the IRICOT project included in the Risk Priority Research Program and Equipment (PEPR), we are recruiting a **Post-Doctoral Researcher W/M** whose work will focus **on insurance and land arrangements in residential areas at risk, to induce adaptation**.
This project focuses on the effects of climate change in coastal areas and aims to improve knowledge about hazards, support risk management and promote the development of adaptation strategies.

Main activities:
Context*:* The coastline is exposed to significant and increasing risks of erosion and flooding (IPCC). Yet it remains very attractive for many populations, leading to upward pressure on land and real estate markets; social and environmental inequalities are growing. The growing vulnerability of these territories to risks requires the implementation of adaptation strategies at the territorial level. The national integrated coastal management strategy (NICMS) is being revised for the period 2025 – 2030 (currently in consultation). The evolution of climate is accompanied by an increase in insurance claims in these territories. The French natural disaster surcharge has increased on January 1, 2025 (from 12% to 20%) to correct the imbalance of the natural disaster compensation scheme in the short term, but its resilience to climate change in the medium term requires working on other levers [1].

It is thus advisable to *encourage the adoption of individual protective behaviours*, which the CatNat mechanism is struggling to induce (when CatNat is applicable).

This study adopts this perspective, and more particularly targets incentives to change individual behaviors.

Objectives*:* We propose to address this issue and to *design, and test* with the inhabitants of coastal areas, *prototypes of incentive schemes*. The possibility of a new insurance contract alone does not seem sufficient, but it could be studied as part of a more complex scheme combining financial incentives via insurance with non-monetary incentives.

From a theoretical point of view, the problems faced by policy makers are exacerbated by i) wealth disparities and emotional attachment, which create non-linear incentives to move and to deploy prevention efforts (and make sorting difficult in terms of contract theory), ii) housing market responses that do not contribute to limiting localization in risky places and can increase and displace inequalities, and iii) complex interactions between public solidarity (Catnat), private financial insurance, individual precautionary efforts, public precautionary efforts and housing market constraints.

This project will study how certain original arrangements combining insurance (public and private) and other types of attributes could limit the residential location in risk areas, by encouraging new residents not to settle there and current residents to move away.

The *originality of this project* lies first in the *articulation of theoretical and empirical approaches*, by proposing to explore preferences in a first step and to infer a theoretical tool in a second step. The originality also lies in the design of original incentive schemes, *multi-attribute*, intended to improve the financial and/or land capacity of agents, depending on their situation, in order to allow mobility.

Details of the post-doctoral position: The postdoctoral research may address the following tasks, with due selection of those that will be addressed as a priority:

1. Modeling of individual housing decisions

This task aims to obtain a better understanding of the interaction between housing markets and inequalities, depending on the type of insurance and prevention/protection efforts available.

- For current inhabitants of coastal areas, study their propensity to relocate (and choose another dwelling) according to different incentive attributes such as insurance or equipment (reserved land);
- For potential future inhabitants, model the choices made by individuals, based on their wealth, when they are offered the possibility of buying a property by the sea or in second line, as well as the possibility of taking out private financial insurance. This could be done under different scenarios concerning national solidarity (Catnat).

This analysis may give rise to predictions concerning the impact of insurance on the housing market.

2. Design of a hybrid incentive between public solidarity and private financial insurance

A hybrid incentive contract must allow for the modulation of coverage and premiums based on declared income, residential or seasonal use of the main or secondary residence, date of acquisition of the property, availability of adequate relocation, etc.

This analysis should be carried out in the framework of simplified versions of the individual decision models developed in point 1. The regulation should help to solve sorting problems that make the standard design of insurance contracts unlikely to be efficient. Equity issues, observability costs and fraud risks must also be considered. Last, some regulations may also not be legal under French laws.

In order to determine the desired outcome from a societal perspective, different scenarios for the current frequency and cost of disasters and their predictions, and the effectiveness and cost of preventive measures need to be considered. These scenarios must be based on existing data and expert forecasts.

The specific study topics may evolve according to the skills of the post-doctoral student and to developments of research already underway. They are expected to include the following elements:

- Risk preferences [Economics of Risk and Uncertainty, Experimental Economics]
- Moral hazard (the risk associated with the implementation of a public collective insurance (CatNat) does not encourage avoiding risky localization) [Theory of Incentives]
- Residential location choices and real estate/land market [Urban economy]

[1] Langreney, T., Le Cozannet, G. and Merad, M. (2023) Adapting the French insurance system to the evolution of climate risks.

Your skills:

Holder of a PhD in in Economics, you have proven knowledge of theoretical modelling, incentive theory and decision theory under uncertainty, moral hazard and anti-selection as well as empirical studies, preference evaluation, choice experiments (DCE), discrete choice simulations.

- You are autonomous in organizing your work
- You are familiar with some of the tools for conducting this type of study and are interested in training on new techniques
- You have an interest for interdisciplinary contexts

More information:

By joining this project, you will work within a group of 14 partners specialized in coastal dynamics in environmental sciences (physics, geology, fluid mechanics) and in human and social sciences (history, economics, geography). You will work under the supervision of Mrs. Cécile AUBERT, Professor in Economics, Univ. Bordeaux – BxSE, and Mrs. Jeanne DACHARY BERNARD Researcher in Environmental economics, microeconomics and land economics, INRAe – UR ETTIS.

Based in Pessac, Gironde, FRANCE – access from Bordeaux by tramway line B (stop « Montaigne Montesquieu ») buses, bike.
The laboratory is near the city-centre of Bordeaux and about 60 Km of the Atlantic coasts.

15-month fixed-term contract (possibly prolongated), beginning around September 1st, 2026.
Gross monthly salary: from 2750€ to 3000€ according to the official University salary grid

This position is located in an area covered by the protection of scientific and technical potential (PPST) and therefore requires, in accordance with the regulations, that your arrival be authorized by the competent authority of the Ministry.

What we offer:
A training course adapted to support your job taking-up and your professional development
Up to 50 days of annual leave from the first year (in proportion to the arrival date)
Remote work possible depending on the organization of the service
Participation in complementary social protection and access to social action mechanisms
75% coverage of the public transport subscription in Gironde
Sustainable mobility package for home trips–work
Access to a staff parking
Leisure, sport and culture offers for all staff

Recruitment process: Applications are reviewed as they arrive.
Candidates selected for an interview will be contacted by the Recruitment Officer for a first pre-qualification phone conversation. An interview with the supervisor will then be organized by videoconference.
Interested applicants should send a **CV**, brief statement of qualifications and basis for interest in the position, **listing** of your relevant **publications, and the email addresses of 2 appropriate references**.

Link to job offer: https://www.u-bordeaux.fr/universite/travailler-a-l-universite/offres-demploi/postdoctoral-researcher-economics-coastal-risk-areas **OR** https://euraxess.ec.europa.eu/jobs/393631
Please note that to be admissible, you must apply to the job offer **or** send e-mail with your documents at: job-ref-qmqx71hn5v@emploi.beetween.com