Il presente assegno di ricerca è finanziato sui progetti europei CHEMATSUSTAIN (Implementing innovative methods for safety and sustainability assessments of chemicals and materials particularly at nano level in the european union) e EUROPELAND (Social science for land-use strategies in the context of climate change and biodiversity challenges) e del programma Horizon Europe.

In entrambi i progetti, l’assegnista si occuperà di:

* Supportare le attività di gestione dei progetti, attraverso partecipazione a meeting, scrittura di deliverable e report
* Attuare le attività inerenti i task su cui UNIBO partecipa come coordinatore o contributing partner, riguardanti la progettazione e validazione di modelli di business, l’organizzazione di focus group, interview, survey, la costruzione di sistemi di accountability e percorsi di formazione
* Organizzare attività di knowledge tranfer e dissemination, sia in forma di eventi e webinar, sia in forma di conference e journal paper

Di seguito i dettagli sui task in cui UNIBO è coordinatore o contributor.

**PROGETTO CHEMATSUSTAIN**

* **Task 5.4** Implementation of new models

This task will develop a computational tool (such as an on-line platform) to host the in silico methods developed in this WP to ensure that they can be accessed by the community and exploited by WP7. This computational platform will allow the stakeholders to apply the aforementioned computational models to predict properties of molecules and materials directly from the structure. The platform will be developed using the Django framework and python scripts in backend and will be designed to be user-friendly to be accessible to end users without a specific knowledge

* **Task 6.4** Elaboration of the footprint scorecard

This task will develop an innovative multidimensional performance measurement tool (the footprint scorecard) that balances the economic, social, and environmental key performance indicators of chemicals and advanced materials within the manufacturing processes. The footprint scorecard will be based on the results of the impact assessment studies of the applications performed in Task 6.3. The results will be used in sharing information with companies that will be involved in verifying the sustainability of the processes that favour the large-scale production of innovative applications using the new materials and processes. Throughout WP6 there will be an iterative data exchange with WP7

* **Task 7.2** Preparation of a database for the collection and exploitation of research results

Considering the requirements identified in Task 7.1, a database will be prepared using SQL software for the collection and exploitation of in-project research outputs, namely results collected from testing activities completed in WP2-5. As encouraged by the European Commission, the research data will be collected in a way that aligns with the FAIR principles (findable, accessible, interoperable, and reusable) to maximise its overall impact with no compromise on integrity, the database will also be designed to be user-friendly, secure, and exchangeable with seamless dissemination. CheMatSustain will ensure guidelines from EU funding body are met and research data is authentic, accurate, secure and in totality. In cases where personal data is collected, acknowledgement of General Data Protection Regulation (GDPR) and local regulations will be included. CheMatSustain partners will work with a common data management plan (DMP) amongst all WPs. Existing databases such as CBiT and standardised structures such as CHADA can be the starting point, where further improvement would be explored. The database will also build upon and be informed by existing databases that have been developed in previous EU-funded projects such as GRACIOUS, NanoReg/nanoreg2, NANOSOLUTIONS, calibrate, RiskGone, etc. The database will be made available to project partners in WP2-5, in order to collect data from testing activities. EKE will facilitate the management of the Data repository, checking that any uploaded data complies with the guidelines defined in the DMP. Once populated with data, the information contained within the database will be utilised in-project to inform the LCSA, Footprint scorecard and CMF (WP6+8). The database will also be made ready so that it can be released via Task 8.1 and made publicly available via open platforms.

* **Task 7.4** Reflecting on current and future EU strategy, policy, and regulation

This task will consider the implications of current EU strategies, policies, and regulations such as the (proposed) Eco-design for Sustainable Products Regulation, the EU Ecolabel, REACH and CLP, Green Deal etc. with respect to the (safe and sustainable) synthesis and utilisation of CNMs. With a specific focus given to the four sets of CNMs investigated within this project: metallic nanoparticles, polymeric nanoparticles, micro/nanomaterials (as pairs of materials with the same materials chemistry but with different form), and chemical substances used for nanoparticles synthesis/stabilisation. A series of stakeholder engagement events (e.g., workshops, roundtables, focus groups, interviews etc.) will be used to develop key recommendations for future EU strategy, policy, and regulation, where outputs and findings from the wider project will be used to inform collaborative discussion.

* **Task 8.1** The “CheMat Facility” as a knowledge transfer hub

The “CheMat Facility” (CMF) will be set up to harmonise and exploit the projects outcomes as well as transfer information and services with industry and the general public. This unique infra-structure, with a well-structured governance system, will support the technological transfer from research to industry. All the partners will be part of the CMF and will provide knowledge for industrial upscaling and replication. The CMF will work as a onestop-shop for all stakeholders. Its main goal is to optimise communication between the various stakeholders within the project, with external ones. For example, the CMF hub will facilitate the access of the stakeholders to an online platform with the models developed in Task 5.4. Scientific results will be presented in an easy-to-understand way, to bridge the gap between academic and economic language and consider the various mindsets. In order to do that, a first co-creation workshop will be used to gather inputs from various stakeholders. Second, a review workshop will follow to share and exchange with stakeholders on the final version of the CMF. Last, a launching webinar will be held to share information on how the functioning of the CMF.

* **Task 8.2**: Collaborating with other relevant projects and initiatives to enhance synergies between EU projects and the industry

This task will aim in understanding the existing collaborations, relevant projects, and initiatives of the EU on safety and sustainability of chemicals and materials and to try to create the aims for innovative collaboration. In particular, co-operation and synergies with the EU-funded projects resulting from the topic HORIZION-CL4- 2023-RESILIENCE-01-22 will be addressed, as well as with European, national, or regional clusters/platforms and initiatives such as the Malta initiative and under Industry Commons. Initially, UNIBO will lead desk-based research to map out existing collaborations and the most important actors in the industry. These findings will be analysed to identify possible bridges for collaborations and analyse a strategy on how to enhance collaboration between different actors. Two workshops will be organised in order to discuss the projects objectives, aiming in creating a better recognition with existing projects and other stakeholders.

* **Task 8.3**: Design of the Exploitation and Business Plan (EBP) for replication and upscaling

This task will demonstrate the cost-benefits of the adoption of chemicals and new materials business models. It will build on the footprint scorecard (Task 6.4) and will propose an EPB that will contain an integrated framework based on economic (potential volumes of demand, expected quality, sales prices, deliveries and other marketing support services, expected levels of investments, financial structures), as well as environmental and social indicators including market-driven solutions to overcome current barriers and to replicate, upscale and make the transition towards the chemicals and new materials applications. A set of real cases from several organisations will be used to analyse the benefits of the new materials

**PROGETTO EUROPELAND:**

* **Task 3.1**. Assessment of policy incentives and instruments related to land-use decisions

In this task policy instruments influencing land-use decisions in partner’s countries will be identified and analysed, including the national transposition of the CAP. Literature sources and available national and regional policy documents (strategies and action plans) regarding climate change mitigation and adaptation as well as biodiversity protection will be reviewed, and the identified instruments will be categorised (e.g., legal, economic, educational, etc.). The task will provide a cross-national analysis of main land-use regulatory instruments and their effectiveness in land-use decisions, in particular their contribution to address the climate change and biodiversity challenges. The assessment methodology (including the most appropriate assessment criteria) of policy incentives and other tools in relation with land use decisions will be developed. It will include assessment criteria that consider the climate change and biodiversity challenges. A comparative analysis of instruments will be also conducted in order to explore their relative importance and usefulness. The task will be based also on the results obtained in WP2 in terms of uptake rates of the agro-environmental schemes based on IACS data. Moreover, the task will explore: a) how EU CAP policies aimed at improving environmental conditions and combating climate change have been transposed in different member states, b) to which purposes (biodiversity, environment, climate) the national policies have been targeted, and c), how this impacts farm-level behaviour as identified in WP2. A standard procedure will be developed for obtaining and analysing policy documents from national authorities. The procedure will be distributed to all EU member states through the consortium network with the objective of acquiring EU-wide information on transposition priorities.

* **Task 3.2.** A Living Lab Framework for understanding the awareness of climate change and biodiversity challenges

This task is focused on using a living lab approach to interact with the stakeholders in order to determine their perceptions on the use of land resources under current and future climatic conditions, their interest to adopt different management practices to address climate change and biodiversity challenges as well as their needs and requirements in terms of tailored instruments, tools and future scenarios. The target group of the project is represented by the land users, managers, local authorities and regulatory agencies with a national-driven orientation, which will be identified by each partner through a detailed search of various professional networks. In this respect, a national, regional and local database of the stakeholders will be prepared for each country involved in the project, and a well-defined methodological framework to approach different categories of the stakeholders will be developed in this task. The results of the living lab approach will be used by the partners to adapt their research methods and simulation tools to properly address the real-life challenges experienced by the involved actors in terms of adopting sustainable land use management in the context of climate change. Moreover, the multiple laboratory contexts provided by the pilot cases developed in the project will be used to test and validate the EUROPE-LAND Toolbox developed in WP6. A detailed methodological framework and guidelines on how to assess multiple-level stakeholders’ perception and awareness of climate change biodiversity challenges is going to be developed, that will be tested during the interactions planned in T3.3 and T3.4. The main outcome of this task is to provide a pan-European methodological framework that explores the awareness of key actors at various scales about climate change and biodiversity challenges, and identify the problems, gaps, expectations, barriers to change in land-use management and/or to adopt conservation practices, and local characteristics of land uses, environmental attitude, the willingness to adopt different alternatives to overcome climate change and biodiversity challenges. The task results will provide the basis for the in-depth interviews and focus groups performed in T3.2 with the representatives of key actors, to guide the living lab approach with the local stakeholders in T3.5 and orient the activities within WP4, 5 and 6.

* **Task 4.4** Development of indicators of the transformation of land use towards sustainable transition

For the purpose of future monitoring if the desirable trajectories are followed, a set of standardised indicators of LU/LC transition will be defined. Data source and methods to calculate these indicators will be stated, and the indicators will be published and offered to the EU authorities for the monitoring of land-use change and evaluation of its sustainability

* **Task 6.4** Improving professional skills and expertise in land-use management

This task pursues the objective of improving the professional skills and expertise of those working in and training for work in construction through the execution of a set of training activities: 1) a Massive Open Online Course (MOOC) and 2) a Summer School (SS). The MOOC is characterised by an interdisciplinary character based on research results, which will be formed with the aim to enhance professional profiles that drive the governance and management of the organisations that will deal with shared urban mobility services. This MOOC will be organised by UNIBO in M30 and available free of charge to government agencies, cities, research organisations, NGOs, companies and other stakeholders involved in European land use and land management. It is expected that about 5.000 people from across Europe will use the open-access learning environment, which will be made available in Year 3, hence concretely contributing to capacity-building in this key area. It will be maintained for at least 5 years after project completion. The SS will be an open call summer school in Tartu (Estonia) organised by EMU and UNIBO in M40 for earlystage researchers and praxis representatives, where all the tools developed in the project could be tested in a controlled way, and school participants could explore LU issues in Estonia, meet stakeholders, and discuss their research experience with the tools’ developers (live feedback on the efficacy of the communication to this audience).