Policy on research career development

National Research and Development Institute for Industrial Ecology – ECOIND

NATIONAL RESEARCH AND DEVELOPMENT INSTITUTE FOR INDUSTRIAL ECOLOGY

ECOIND

EXCELLENCE IN RESEARCH AND ENVIRONMENTAL SERVICES

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Introduction

National Research and Development Institute for Industrial Ecology – ECOIND (INCD ECOIND) is committed to promote excellence in environmental research, providing support for the professional development of researchers at different stages of their careers. The research career development policy at INCD ECOIND aims to create an organizational environment conducive to career development, recognition of scientific merit and increased visibility nationally and internationally.

The research career development policy is aligned with the European Charter for Researchers and aims to provide structured support, training and professional development to researchers to improve their skills, employability and mobility.

The policy is based on the fact that the experience, skills, knowledge, and training of researchers represent the main resource in achieving the mission of INCD ECOIND and that the performance growth and development of the institute are based on the positive evolution of researchers' careers. Consequently, the policy aims to ensure the necessary well-trained and highly qualified human resources in research.

Therefore, the career development policy dedicated to researchers represents an essential tool in achieving the strategic objectives of INCD ECOIND, through:

- Adopting the best practices dedicated to human resource development;
- Unitary approach to human resource management;
- Continuous evaluation, ensuring continuity and consistency;
- Avoiding risks in the field of human resources.

Research career development focuses on promoting a supportive environment, ensuring equitable employment, and providing professional development to enhance the researcher's potential. Key principles include taking responsibility for one's own career path, engaging in continuous professional development, building networks, and promoting a transparent and inclusive culture that values diverse careers within and beyond academia.

Principles

Ownership and Proactivity: Researchers must take proactive ownership of their career planning and development.

Continuous Professional Development: Dedicated time (e.g., a minimum of 10 days pro-rata per year) should be committed to professional development, including skill-building in leadership, public engagement, and communication.

Inclusive Environment and Culture: Institutions must foster a supportive, inclusive, and transparent environment that values diverse research careers and provides equitable opportunities, regardless of contract type.

Mentorship and Networking: Active engagement with mentors and peers is crucial for guidance, networking, and developing a research identity.

Structured Development Planning: Use tools like a Researcher Development Plan to identify goals, skill gaps, and necessary development actions.

Career Adaptability and Mobility: Research careers are no longer strictly linear; development should focus on building transferable skills for careers within and beyond academia, including the private sector.

Responsible Research and Leadership: Developing leadership skills, managing staff effectively, and managing research projects responsibly are essential for career progression.

Regular Performance Review: Engaging in regular, constructive career development reviews with managers is vital to align personal goals with institutional opportunities.

Ownership and Proactivity

Ownership and proactivity in research career development mean shifting from a passive, supervisor-driven approach to one where the researcher actively drives their own professional trajectory. This involves self-initiated, future-oriented actions designed to improve skills, increase employability, and achieve long-term career goals within or beyond academia.

Developing a "Driver" Mind-set (Ownership)

- Take Control: Actively manage your career rather than waiting for opportunities to materialize. The researcher, not the institution or supervisor, is responsible for their professional journey.
- Self-Reflection: Continuously assess your own strengths, weaknesses, values, and research interests to align your work with your long-term goals.
- Psychological Ownership: Cultivate a sense of "owning" your job role, which improves motivation and professional identity.

Proactive Career Planning (Action)

- Create a Development Plan: Use tools like a Researcher Development Plan or Individual Development Plan to set specific, measurable, and actionable career goals.
- Identify Skill Gaps: Actively look for skills needed for your next career step and seek training to fill those gaps.
- Monitor Progress: Frequently review and update your career plans, especially if your research interests or objectives change.

Proactive Behavioural Strategies

- Networking and Visibility: Take initiative to meet senior colleagues, connect with peers, and make your research known to improve career successes.
- Seek Feedback: Actively request feedback from mentors, supervisors, and peers to refine your research and professional skills.
- Advocate for Self: Proactively articulate your ambitions, volunteer for challenging projects, and share your achievements.
- Wise Proactivity: Ensure that your initiative is strategic and considered, taking into account your own strengths and the context, rather than just doing more work.

Continuous Development and Adaptability

- Utilize Dedicated Training Time: Utilize allocated time (e.g., 10 days pro-rata per year) for professional development, such as leadership training, public engagement, or technical skills.
- Build Transferable Skills: Focus on developing skills beyond research, including project management, leadership, and communication, which are valuable in industry and other sectors.

Continuous Professional Development

Continuous Professional Development (CPD) for researchers is a structured, ongoing process of learning and skill enhancement that ensures competence, supports career progression, and keeps knowledge current beyond formal training. It involves self-directed, reflective activities—such as workshops, mentoring, and networking—crucial for adapting to evolving research landscapes, often with a recommended 10 days of dedicated time per year.

Key Aspects of continuous professional development (CPD) for researchers:

- Structured Approach: CPD involves a cycle of identifying skill gaps, planning development, acting, recording, and reflecting on learning.
- Diverse Activities: Activities include attending conferences, volunteering, mentoring, reading, and taking online courses.
- Skill Development: Focuses on enhancing both research-specific skills and transferable skills like leadership, communication, and project management.
- Purpose: Enables researchers to keep knowledge up-to-date, ensure competence, and advance their careers.
- Institutional Support: Institutions should provide accessible training, including Virtual Learning Environments and portable training records, to support researchers' development.

Components of an effective continuous professional development (CPD) cycle:

- Identify: Recognize knowledge gaps, strengths, and weaknesses.
- Plan: Set specific, actionable goals for improvement.
- Act: Engage in learning activities (e.g., workshops, courses).
- Record: Document activities and achievements.
- Reflect: Assess the impact of the learning.
- Evaluate: Measure the effectiveness of the CPD.
- Apply and Share: Implement new knowledge and share with peers.

Benefits of continuous professional development (CPD):

- Networking: Builds professional relationships with peers and industry experts.
- Career Adaptability: Increases adaptability for roles both within and outside academia.
- Enhanced Competence: Ensures ethical and safe research practices.
- Motivation: Increases commitment to work, with many engaging in CPD for improved performance.

Inclusive Environment and Culture

Principles on research career development and the creation of an inclusive environment and culture are designed to foster a sustainable, equitable, and supportive research community. These principles ensure researchers can flourish and achieve their potential, focusing on proactive career management, fair employment practices, and a culture that values diversity.

Environment and Culture

- Excellent research requires a supportive and inclusive culture that values diverse career paths and personal wellbeing.
- Proactive and Collaborative Approach: Institutions, funders, and researchers must work together to create positive environments.
- Equality, Diversity, and Inclusion: Institutional policies must be transparent, equitable, and actively mitigate biases in recruitment, funding, and promotion.
- Safety and Well-being: Fostering an emotionally safe and inclusive culture, including proactive measures against bullying, harassment, and discrimination, is crucial.
- Valuing Diversity: Recognizing diverse research contributions, including public engagement and mentoring, and embracing different cultural backgrounds.
- Responsible Research Assessment: Using fairer, broader criteria for success rather than relying solely on metrics.

Employment/Recruitment

- Researchers should be recruited in ways that recognize their value and foster job security.
- Fair and Transparent Recruitment: Using open, merit-based processes to attract diverse talent.
- Job Security and Stability: Institutions should strive to reduce reliance on short-term contracts and improve stability for researchers.
- Professional Recognition: Treating researchers as professionals, with career progression pathways that accommodate personal circumstances.
- Effective Management Training: Ensuring managers of researchers receive training in leadership and performance management.

Professional and career development

- Professional development is integral to equipping researchers for a wide range of careers within and beyond academia.
- Ownership and Proactivity: Researchers are responsible for their own career development, using tools like Career Development Plans.
- Dedicated Development Time: Researchers should be allocated a minimum of 10 days pro rata per year for professional development.
- Mentorship and Networking: Active engagement with mentors and peers is encouraged for career guidance.
- Adaptability and Mobility: Supporting researchers in gaining experience across different sectors and roles.
- Leadership Development: Providing opportunities for researchers to develop leadership and management skills, even in early career stages.

Mentorship and Networking

Mentorship and networking are interdependent tools for career growth. While networking focuses on building a broad circle of professional contacts to discover opportunities, mentorship provides deep, personalized guidance from an experienced individual to help you navigate your specific career path.

Strategic framework

- The Rule of 33%: Spend 33% of your time with mentors (who challenge you), 33% with peers (who support you), and 33% with those you can mentor (giving back).
- The 4 Pillars of Mentoring (4Cs): Connection, Clarity, Compassion, and Commitment.
- The 3 C's of Networking: Clarity, Connection, and Collaboration.

Practical strategies for success

- Build a "Mentoring Network": Instead of one mentor, seek a diverse group including technical mentors, peer mentors, and sponsors who can advocate for you.
- Apply Reciprocity: Networking and mentorship are "two-way streets." Offer value, such as fresh perspectives or assistance with projects, rather than just asking for help.
- Use "Career Conversations": Reach out for informational interviews to learn about a field without the pressure of a job request.
- Be Intentional: Clarify your goals before reaching out so potential contacts understand exactly how they can support you.

Structured Development Planning

Structured development planning is a framework used to organize growth, whether for individuals (careers), organizations (software/strategy), or physical spaces (urban planning). Depending on your focus, it provides a roadmap to move from a current state to a desired future goal through clear, manageable steps.

Individual/Professional Development Plan: A roadmap for career growth that identifies skill gaps and sets actionable goals to reach them.

A typical structured plan follows these five phases:

- Preliminary Analysis: Evaluate your current position, strengths, and weaknesses.
- Goal Setting: Define clear, measurable objectives (e.g., SMART goals).
- Strategy & Resource Identification: Determine the actions, tools, or training needed to succeed.
- Implementation/Action: Execute the plan through specific tasks and timelines.
- Review & Evaluation: Regularly check progress and adjust the plan as needs evolve.

Career Adaptability and Mobility

Career adaptability and professional mobility are essential skills for navigating a job market marked by rapid technological change and economic uncertainty. While adaptability refers to the psychological resources to cope with transitions and new tasks, mobility is the actual ability to change roles, industries, or geographic locations.

The 4 Dimensions of Adaptability

According to career construction theory, adaptability is composed of four key psychosocial resources, known as the "4 Cs":

- Concern: The ability to look ahead and plan for one's professional future.
- Control: Taking responsibility for one's own development and making informed decisions.
- Curiosity: Exploring new possibilities, roles, and learning opportunities.
- Confidence: Belief in one's own ability to overcome obstacles and implement choices made.

Professional mobility as a mechanism for success

Mobility is not just about changing jobs, but is an active adaptation mechanism that allows:

- Income growth: Moving to better paid roles or sectors.
- Development of new skills: Transitioning to emerging fields such as IT, biotechnology or nanomaterials.
- Personal satisfaction: Finding a better balance between personal values and the work environment.

Responsible Research and Leadership

The concept of Responsible Research and Leadership refers to how knowledge and power are used to generate positive, ethical and sustainable social impact.

Responsible Research and Innovation (RRI)

- It is not just about discovering new things, but about how and why we do it.
- Anticipation: Analysing the impact that a technology or discovery may have on society in the long term.
- Inclusion: Involving the public and various interest groups in the research process.
- Ethics: Respecting standards of integrity, data protection and academic honesty.
- Open Access: Sharing results so that the whole world can benefit from them (Open Science).

Responsible Leadership

It redefines success beyond immediate profit or individual performance indicators.

- Stakeholder Theory: A responsible leader is not only accountable to shareholders, but also to employees, customers, the community, and the environment.
- Sustainability: Making decisions that do not compromise the resources of future generations.
- Integrity and Values: Aligning actions with a solid set of moral principles, even under pressure.
- Empathy and “Humble” Leadership: The ability to listen and put the collective good above personal ego.

Regular Performance Review

A periodic performance review is a formal process by which managers and employees review performance over a given period, set new goals, and discuss professional development. While these reviews traditionally took place once a year, the modern trend is toward continuous feedback through quarterly, monthly, or even weekly check-ins, to avoid year-end "surprises."

Main objectives of evaluation

- Accountability: Analysing performance against previously established goals.
- Recognition: Identifying and rewarding achievements and strengths.
- Improvement: Identifying skill gaps and providing constructive feedback.
- Alignment: Correlating individual goals with the company’s mission and strategy.
- Career Planning: Discussing promotions, compensation, and training needs.

Structure of an effective evaluation

- For the process to bring value, it should include:
- Self-assessment: The employee reflects on their own successes and challenges.
- 360° feedback (optional): Gathering perspectives from colleagues, subordinates, and other collaborators.
- Objective analysis (KPIs): Measuring progress using objective data.
- SMART goal setting: Defining Specific, Measurable, Attainable, Relevant, and Time-bound targets for the upcoming period.

Strategic objectives regarding the evolution of the researcher's career

In accordance with the institute's policy for the development of human resources for research and development, strategic objectives have been established regarding the evolution of the researcher's career through access to training and continuous professional development in the field of research for RDI staff:

- Promoting a culture of career diversification for better personal and professional development;
- Supporting researchers in developing an individual career plan to identify the training and research activities needed for personal and professional development;
- Ensuring researchers' access to career guidance and assistance services that provide information, guidance and support for career development;
- Organizing professional development and specialization courses, supported by our own specialists;
- Promoting entrepreneurial skills among researchers, with the aim of allowing those following an entrepreneurial path to correlate their knowledge production capacities, so as to stimulate innovation and progress;
- Ensuring the necessary funds for the participation of researchers from the institute in specialization/training courses organized outside the institute, both nationally and internationally;
- Supporting employees in completing their university/postgraduate studies, by providing flexible work schedules;
- Supporting young researchers attending doctoral/post-doctoral schools, by paying annual fees and facilitating the performance of experiments and the preparation of their own papers by ensuring unlimited access to the institute's equipment and material base;
- Designating a person (mentor) or a group of people (mentors) to whom novice researchers (R1) and recognized researchers (R2) can address issues related to the fulfilment of professional tasks and who should inform researchers accordingly;
- Stimulating researchers with experience and outstanding results in R&D activity;
- Hiring young researchers, especially those holding a doctorate/doctoral degree, to complete the staff in certain departments/laboratories of the institute, where the existing number of staff is insufficient to carry out all the activities specific to that job in optimal and efficient conditions;
- Involving young researchers, especially doctoral students, in national/international projects carried out at the institute, as well as in developing new project proposals within European/bilateral/structural programs, etc.;
- Increasing the number of certified researchers, by organizing promotion exams to obtain the professional degrees of CSI (Principal Researcher, R4), CSII (Consecrated Researcher, R3), CSIII (Recognized Researcher, R2), CS (Scientific Researcher, R1) and ACS (Research Assistant);
- Ensuring the necessary funds for the participation of researchers from the institute in scientific events organized outside the institute, both at national and international level.
- Ensuring the funds for the payment of the necessary fees for the publication of books and scientific articles and for patent applications.

Research staff development and specialization activities

Mainly, the professional development of researchers in INCD ECOIND is carried out through:

- University and postgraduate courses (master's, doctorate, post-doctorate);
- Training courses conducted within national and European programs;
- Specialized courses in professional fields;
- National and international training internships/mobility opportunities;
- Elaboration and development of individual career plans;
- Training organized at the institute level, according to the annual training program, specific to their own fields of activity.

For the purpose of permanent training, in the institute, all researchers have free access to the internet, to the technical archive as well as to the ECOLIB library and the scientific databases made available through the Annelis Plus platform or other scientific platforms and not only, to which the institute has access.

Undergraduate and postgraduate courses

The Institute supports the training of young people who specialize through master's programs in various basic disciplines, in accordance with the development directions of the Institute and ensures the necessary material basis for the development of master's theses.

The Institute also supports young researchers who attend doctoral / post-doctoral schools, if the topics addressed in the doctoral studies are generally similar to the topics developed by them in various research projects within the Institute. Unlimited access to the Institute's equipment and material and IT base is ensured for conducting experiments and developing their own papers, as well as, where appropriate, through financial support for the payment of annual fees.

Involving young researchers in projects and in the development of new project proposals

The project directors/responsibles include young researchers in the research project work teams with responsibilities in solving some activities or topics in the project, so that they can get used to the research activity and gain experience.

Young researchers (and not only), can develop a research paper – literature study and/or preliminary experimental studies – on new research directions/sub-directions. These “in-house” projets supported by the institute’s own funds represent an efficient mechanism for identifying new research topics. Many of them address both topics from the research directions planned to be developed in the institute, as well as new topics in accordance with research developed at European level. These wprks form the basis for the development of new project proposals within national or European research programs.

Participation in scientific events

The Institute provides the necessary funds for the participation of researchers from the Institute in prestigious national and international scientific events, as well as in important exhibition events, in the field of activity of the Institute.

To support the dissemination of research results, the Institute organizes the International Symposium The Environment and the Industry (SIMI) annually. The presented papers are published in volume and online in both abstract form. Full paper papers are evaluated by review for publication in the Romanian Journal of Ecology & Environmental Chemistry (RJEEC). The papers are indexed in the following databases: CrossRef, Google Scholar, Scilit, Scipers, OpenDOAR, WorldCat, ECOLIB, CABI, ROAR, Open DOAR and Chemical Abstract.

Publishing and patenting research results

The Institute supports the publication of research results, in the form of a book/book chapter or scientific articles in specialized journals, respectively their exploitation through patenting, by paying the necessary publication and patenting fees.

In order to support researchers in publishing research results, INCD ECOIND publishes the scientific journal Romanian Journal of Ecology & Environmental Chemistry (RJEEC) biannually.

Scientific degree promotion competitions

In order to increase the number of certified researchers, the institute organizes certification competitions for positions and professional degrees of R&D.

The organization and conduct of these exams is presented in the Regulation on the organization of the promotion exam for obtaining the professional degree by the RDI staff within INCD ECOIND.