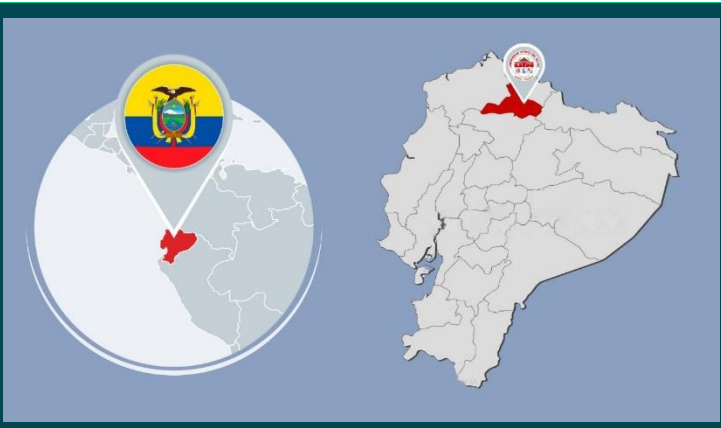


# IUC 2026 proposal with UTN – Ecuador

Institutional University Cooperation (IUC) – Stage 2 Concept Note development / Consortium-building

14 March 2025

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| University    | Universidad Técnica del Norte (UTN)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |
| Country       | Ecuador                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                     |
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| Title         | EMPOWER2LIV@UTN: Empowering Marginalized Urban and Rural Communities in Imbabura to enhance Well-Being and Quality of Life through Living Labs with Universidad Técnica del Norte"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                     |
| Main topic(s) | Inclusive <b>education</b> , integrated <b>healthcare</b> , <b>environmental sustainability</b> , <b>circular economy</b> , improved <b>nutrition</b> , preservation and revitalization of <b>ancestral knowledge</b> , development of <b>MSc and (pre-) doctoral programs and schools</b> , <b>Academic English</b> , co-creation within <b>Living Labs</b> and <b>technology transfer</b> initiatives                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                     |
| Summary       | <p><b>Universidad Técnica del Norte</b> is located in <b>Ibarra</b>, the capital of <b>Imbabura province</b> (population 469,879; 47.7% rural), a region known for its <b>rich ethnic diversity</b> – 64.9% mestizos, 28% Indigenous and 5.8% Afro-descendant populations – each preserving their '<b>saberes ancestrales</b>' (ancestral knowledge). Universidad Técnica del Norte is one of two public universities. It serves 14,000 students (58% female, 42% male) from <b>diverse ethnic backgrounds</b>. Over its 38-year history, UTN has focused on training socially responsible graduates through programs tailored to the needs of Northern Ecuador's Zone 1, encompassing the provinces of Imbabura, Carchi, Esmeraldas and Sucumbíos.</p> <p>Despite its <b>strong educational quality</b>, <b>effective management</b>, and <b>deep-rooted regional connections</b>, UTN faces <b>challenges</b> in expanding its research capabilities. The university contends with a <b>low percentage of PhD-qualified staff</b>, the <b>absence of doctoral programs</b> and schools, <b>limited research expertise</b>, <b>inadequate infrastructure</b> and a <b>constrained capacity for</b> implementing <b>societal outreach and technology transfer initiatives</b>. Additionally, UTN's international exposure is hampered due to the <b>lack of English proficiency</b> among its staff. While UTN has a significant regional impact, it seeks additional resources and expertise to overcome these capacity constraints and better fulfil its role as driver of change in Imbabura's diverse and dynamic community.</p> |                                                                                     |

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|                     | <p>The VLIR-UOS IUC project aims to enhance the <b>well-being</b> and <b>quality of life</b> for <b>marginalized urban and rural communities</b> (MUR) in <b>Imbabura</b>, with particular attention to Indigenous and Afro-descendant populations, by investing in integrated <b>healthcare</b>, inclusive <b>education</b>, <b>environmental sustainability</b>, <b>circular economy</b>, and improved <b>nutrition</b>. The project seeks to foster an inclusive and diverse society, with the implementation of the "<b>Kawsay</b>" <b>living lab</b> at UTN (<i>Kawsay</i> means "life" in the Kichwa language), where innovative solutions are co-created, tested, and refined through active MUR participation in a holistic and interconnected multi-stakeholder approach with respect for the preservation and revitalization of <b>ancestral knowledge</b>, driving sustainable development and social inclusion in the region.</p> |                                                                              |
| Partner Coordinator | Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | MSc. María José Romero                                                       |
|                     | E-mail                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <a href="mailto:mjromero@utn.edu.ec">mjromero@utn.edu.ec</a>                 |
|                     | Position at university                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Director of Research                                                         |
| Flemish Coordinator | Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Prof. Dr. Annemie Spooren                                                    |
|                     | E-mail                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <a href="mailto:annemie.spooren@uhasselt.be">annemie.spooren@uhasselt.be</a> |
|                     | Position at university                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Professor                                                                    |
| ICOS                | Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Mrs. Liesbeth Oeyen                                                          |
|                     | E-mail                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <a href="mailto:liesbeth.oeyen@uhasselt.be">liesbeth.oeyen@uhasselt.be</a>   |
|                     | Position at university                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | ICOS                                                                         |

## Identified Sub-themes

The ultimate goal of the IUC is to enhance the well-being of marginalized urban and rural communities (MUR) in Imbabura while revitalizing and valuing 'saberes ancestrales' (ancestral knowledge). The project seeks to foster an inclusive and diverse society, with evidence-based living labs at UTN where innovative solutions are co-created, tested, and refined through active MUR participation in a holistic and interconnected multi-stakeholder approach.

Following a needs analysis with UTN, five academic and two transversal sub-themes were identified aligned with UTN's mission and Imbabura's development goals.

### Inclusive Education

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| Main focus | <p><i>Provide culturally responsive education by integrating local languages, traditions and ancestral knowledge using innovative methodologies.</i></p> <p>UTN will consolidate its educational model by training university faculty and the MUR academics with intercultural and interdisciplinary competences. This initiative will promote the integration of ancestral knowledge and indigenous languages through the creation of a multimodal continuous training centre at the postgraduate level, functioning as a techno-pedagogical living lab based on technological and environmental needs.</p> <p>The project's implementation will involve training professionals to integrate Ethnoeducation and Ethnoscience within their areas of expertise. Research will focus on the interaction between educational anthropology, linguistic revitalization as a cultural identity marker in the MUR, and the impact of culturally responsive education. Additionally, educational research methodologies will aim to foster innovation and develop practical solutions.</p> |
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| Expertise required             | Universal Design for Learning, culturally sensitive teaching and innovative educational practices<br>Inclusive and intercultural education, cultural receptive education, community based education, technological innovation, curriculum and instructional design, educational content creation, positive psychology, art and cultural expression, architectural component in education.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Integrated Healthcare</b>   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Main focus                     | <p><i>Combine traditional and evidence-based medical practices to ensure accessible, holistic healthcare</i></p> <p>UTN will strengthen its intercultural educational and research model by training faculty members, laboratory technicians from the Faculty of Health Sciences, midwives, traditional healers, and community leaders from the MUR in traditional medicine and evidence-based medicine. The training and research will focus on the main health problems in the study area such as: non-communicable diseases (such as diabetes and hypertension), mental health issues related to violence, and reproductive health conditions (sexually transmitted infections and adolescent pregnancy).</p> <p>This initiative will be carried out through inclusive research on the role of women in transmitting traditional health knowledge and managing community well-being, through developing research to detect risk-factors, develop and research health promotion and implement disease prevention strategies. A continuous training and research centre will be established, offering telehealth programs in Kichwa, English, and Spanish, along with a living lab for midwives, recognizing them as the thread of life within the communities of Imbabura province. The results of this initiative will contribute to the development of policies that promote both ancestral and evidence-based health practices.</p> |
| Expertise required             | Interdisciplinary, person-centered care, evidence based practices and participatory research<br>Public health and interculturality, health technology development, traditional medicine, community development specialists, biomedical researchers, evidence-based medicine for chronic diseases, mental health and reproductive health, cocreation in health promotion and intervention development.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Sustainable Environment</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Main focus                     | <p><i>Blend ancestral land conservation with modern strategies to protect natural resources (such as clean water, air, soil and biodiversity) fostering sustainability through citizen science.</i></p> <p>UTN will strengthen its sustainable educational and research model in ecological assessment and natural resource management through the Faculty of Agricultural and Environmental Sciences Engineering and the Faculty of Applied Sciences.</p> <p>Research on the ecosystem services of the páramo as ancestral Andean lands of the MUR, as well as issues related to the pollution of its lakes and rivers, soil erosion, and the loss of Andean agrobiodiversity, requires capacity-building in limnology, soil science, environmental chemistry, hydrology, environmental modeling, molecular biology, bioinformatics, environmental DNA, and nature-based solutions.</p> <p>The establishment of the Environmental Monitoring and Solutions Laboratory will contribute to UTN's objectives of developing research-based education. Citizen science will play a key role in sustainability through living labs, which will serve as the central axis for the participation of the MUR and local stakeholders in research and monitoring. This approach will help collect data, generate knowledge, promote behavioral change, and drive research-based policy development.</p>                                            |
| Expertise required             | Environmental monitoring, local researcher training, citizen science<br>Training of local researchers, nature-based solutions, Biostatistics, agrobiodiversity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Circular Economy</b>        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

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| Main focus                                   | <p><i>Empower women to create economic opportunities from local resources, promoting entrepreneurship and economic independence.</i></p> <p>The families of the MUR have low-income levels due to limited diversification of their productive activities and difficulties in accessing markets. The Circular Economy Laboratory will promote an entrepreneurial culture with gender equity at UTN through sustainable productive initiatives based on local resources.</p> <p>The knowledge acquired will strengthen the capacities of faculty members in the fields of economic and administrative sciences, environmental sciences, and applied sciences. Through living labs, they will study the impact of ancestral circular solutions adopted by the women of the MUR, enabling the development of policies for sustainable best practices at the community level.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Expertise required                           | <p>Circular economy in community settings</p> <p>Knowledge of traditional agricultural crops, startup and spinoff management, microenterprises, production processes with recovered materials, product positioning and market expansion</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Child Nutrition and Healthy Lifestyle</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Main focus                                   | <p><i>Promote the development and innovation of highly nutritious food products using ancestral foods, which help prevent chronic child malnutrition and encourage healthy lifestyles in the MUR, through nutritional education.</i></p> <p>Reintroduce nutrient-rich ancestral foods to <b>combat malnutrition</b> and <b>promote healthy lifestyles</b> among children and women.</p> <p>UTN will strengthen its research, development, and innovation processes in nutritious food products aimed at preventing or combating chronic child malnutrition in the MUR. To achieve this, UTN will establish a Research and Nutritional Education Centre, which will focus on conducting chemical analyses of ancestral and native foods with high nutritional potential. This initiative will lead to the revalorization and reintroduction of locally cultivated products that are at risk of disappearing.</p> <p>The design and production of nutritious foods will be adapted to the culture, traditions, and dietary patterns of the MUR. This initiative will enable research on the effects of improved nutrition on children's development. These efforts will be complemented by nutritional education programs and the promotion of healthy lifestyles, strengthening collaboration between UTN, community leaders, and the broader MUR population.</p> |
| Expertise required                           | <p>Nutrition and health promotion, especially in community-driven initiatives</p> <p>Nutrition and dietetics, research and innovation of food, food engineering, agroindustry, nutritional education, research on child development, design and development of educational materials</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Ancestral Knowledge</b>                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Main focus                                   | <p><i>Preserve and integrate ancestral knowledge into evidence-based practices, ensuring its vitality within Ecuadorian society.</i></p> <p>Ancestral knowledge will serve as a transversal axis for applied research, integrating both qualitative-ethnographic and quantitative approaches to strengthen the "Yachay Waurmi Cuna" Community Center (Kichwa for: "Women of Knowledge"). This space will foster co-creation, empowerment, and autonomy for rural women by developing continuous education programs based on research findings in key areas such as sustainable environments, child nutrition, circular economy, health, and inclusive education.</p> <p>The initiative will highlight the importance of water and the role of Indigenous and Afro-Ecuadorian women in advocating for water and agricultural land rights in the MUR's family farming systems. As</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

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|                                        | <p>knowledge exchange facilitators, these women will promote oral traditions, community rituals, and sustainable agricultural practices.</p> <p>A key component of this initiative will be the establishment of an ancestral garden, integrating “Minga” (collaborative work) and “Chakra” (ancestral agricultural system of Kichwa indigenous peoples in the Ecuadorian Andean region) practices as a living lab for university-community learning and application, ensuring food security and community nutrition. This effort will also support the promotion of ancestral agrotourism as a municipal policy and contribute to strengthening water governance policies at the community level.</p> <p>To ensure the effectiveness and sustainability of this initiative, evidence-based research will be a cornerstone of its development and implementation. Rigorous qualitative and quantitative methodologies will be employed to assess the impact of ancestral knowledge integration on community well-being, economic resilience, and environmental sustainability. Data-driven insights will guide the design of continuous education programs, measure improvements in child nutrition and food security, and evaluate the role of Indigenous and Afro-Ecuadorian women in water governance and agricultural land advocacy.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Expertise required                     | Translating traditional knowledge into contemporary contexts and evidence-based practices<br>Agrobiodiversity, qualitative and quantitative research, agronomists, environmental legislation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Institutional Capacity Building</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Main focus                             | <p><i>Strengthen UTN through the promotion of continuous training, high-level education, and the construction of sustainable innovation and entrepreneurship ecosystems based on technology and focused on a circular economy.</i></p> <p>Strengthening UTN's capacities through the creation of the "Kawsay" Science Park for R&amp;D&amp;I, envisioned as an integrative living lab, will foster an innovation ecosystem, continuous training, and social entrepreneurship. This initiative will focus on circular economy approaches, transforming the way UTN's academic staff and local actors from the MUR—particularly women leaders—work and create value.</p> <p>This project aims to establish coworking spaces and creativity landscapes, aligned with UTN's transformation goals. It will also promote the development and preservation of ancestral knowledge within Indigenous and Afro-Ecuadorian MUR communities in the northern Andean region of Ecuador, empowering women to create economic opportunities from local resources, fostering community entrepreneurship and financial independence through on-site and off-site coworking spaces.</p> <p>To strengthen institutional capacities at UTN, the initiative will encourage the creation of master's and (pre)doctoral programs focused on MUR well-being, emphasizing Ethnoscience. These programs will explore the interaction between ancestral knowledge, worldview, and culture with various fields such as biodiversity, environment, ecology, agriculture, medicine, linguistics, geography, physics, astronomy, economy, and technology, ensuring a transdisciplinary approach across all areas of application.</p> <p>Additionally, strategies will be implemented to enhance academic English proficiency and strengthen UTN's internationalization and research capacities. The initiative will also support technology transfer efforts through pre-incubation, incubation, and acceleration of startups and spin-offs, fostering connections between academia, the social and productive sectors, and government to address community needs, by helping to technify their processes in real environments within the territory, using an iterative, user-centred approach based on a circular economy, aligned with the SDGs. Co-design and open innovation methodologies will be applied to generate a change engine within these communities. This will strengthen established regulations and help build new transformational public policies for inclusion and gender in the MUR.</p> |
| Expertise required                     | Institutional and research management, research and entrepreneurship skills, living lab methodology<br>Project management, specialist in social innovation and living labs, bioeconomy, experts in community entrepreneurship, expert in sustainable business models and ancestral knowledge, expert in                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

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|  | technological surveillance and innovation methods in the field, bio-entrepreneurship, geopolitics, psychologist, anthropologist, sociologist, pedagogue, academic English. |
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