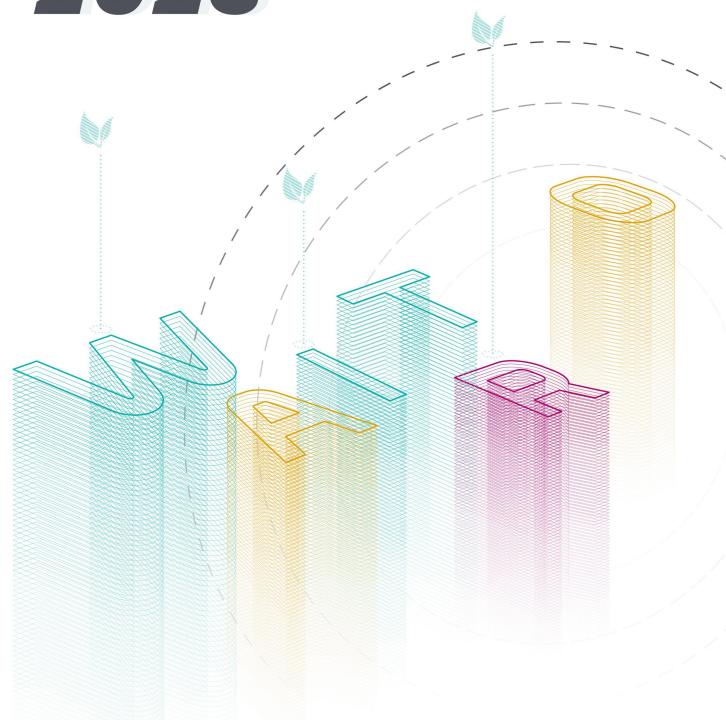


WAITRO ANNUAL REPORT 2023



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Executive Summary

Welcome to the WAITRO Annual Report 2023, the annual summary of the WAITRO Global Innovation Family assembled for you by the WAITRO Secretariat. The format remains largely unchanged from 2022, with input from the last year of the Secretariat Germany Office and the transition of the Secretariat to the Jiangsu Industrial Technology Research Institute (JITRI). There are also event summaries from WAITRO's Regional Focal Points, which function as parts of the Secretariat reaching into the WAITRO Regions. As usual, final production was done in Nanjing, China.

It is a lightweight Annual Report this year as we have been busy in transition to the new Secretariat. There were many events both online, in person, and hybrid, however, and you can find summaries of many of them on the WAITRO website news and events pages. There is no need to replicate those here, so we have decided to save some resources and present a slimmer volume than of late!

The report opens with letters from the WAITRO leadership, both the Secretary General and the President, followed by an updated "WAITRO at a Glance" section that highlights new members, the evolving geographical distribution of WAITRO, and the composition of the Executive Board and the two Secretariat Offices. There follows an update on the services offered by WAITRO, both the constantly developing SAIRA platform and the communications products that we offer for members.





Letter from Secretary General

May 2024

Dr. Paul E. Burrows Secretary General of WAITRO



Dear Members and Friends of WAITRO,

WAITRO Unlocking Local Innovations: A Global Perspective

The year 2023 was a transition year both for WAITRO and for me personally, as I adjusted to the unexpected late-career role of WAITRO Secretary General. This was further complicated by the loss of funding from the German Federal Ministry of Education and Research (Bundesministerium für Bildung und Forschung, BMBF), which effectively ended the partnership with Fraunhofer-Gesellschaft and made JITRI the sole host of the WAITRO Secretariat. We responded by hiring additional staff and consultants both at JITRI Headquarters in Nanjing and remotely in Beijing, as you can see later in the "About WAITRO" section. They have done an admirable job taking on the load. As just one example, the entire WAITRO website moved out from Fraunhofer onto an independent server, achieving the best possible outcome: almost no one noticed!

One event in particular highlighted a feature that emerges from WAITRO's structure as an Association of research organizations. Our members can offer uniquely deep insights into local problems of sustainable growth and solutions to those problems built around local innovation. We all know that many of the major problems facing humanity in the 21st century do not respect national borders. Examples include changing climate, viral pandemics, and aging societies. Solutions, however, are often first developed by RTOs in response to local challenges. I could fill pages with the local innovations that I have witnessed while visiting WAITRO members and just a few are featured on the website.

Taking the "local" concept in a new direction, however, the agriculture webinar that we held in August examined the impact of indigenous knowledge on the sustainability of that field. It turns out that indigenous wisdom developed over centuries offers insights into agricultural solutions that might impact sustainability and, just as importantly, resilience of food systems around the world. All around WAITRO, furthermore, members are using local resources to solve local problems that in some cases could be generalizable to a global scale.

The key to turning innovation into impact is connection to the market. There are many studies in the literature that show how the most common reason for startup companies to fail has nothing to do with their technology but everything to do with its failure to satisfy a market need. WAITRO's global network encompasses a broad range of different markets and we have already experimented with "market introduction" webinars to help members identify new partners for their innovations. Connecting the expertise of local innovation with the WAITRO global innovation network could generate significant value for the SDGs.

In the discourse surrounding development, a common assumption seems to be that developing countries will rely on advanced technology from industrialized nations to address their challenges. However, this perspective overlooks the inherent complexities faced by these countries in acquiring and implementing such technology. The financial burden associated with cutting-edge solutions often casts doubt on their viability as sustainable business cases rather than charitable endeavors.

Yet, hidden within the fabric of developing nations lies a wellspring of indigenous innovation. Communities, both rural and urban, have ingeniously crafted solutions to their unique local problems. These innovations, borne out of necessity, demonstrate remarkable efficacy in addressing pressing issues. From sustainable agriculture practices to decentralized energy solutions, these homegrown ideas hold immense promise.

Imagine a world where these local innovations are not only protected but also marketed globally. By doing so, we can simultaneously tackle global challenges while creating income streams for economically disadvantaged regions. This synergy between local expertise and a global network is precisely where WAITRO finds its purpose. As an organization, WAITRO stands at the crossroads of innovation, poised to make the traditional pipeline of innovation flow in both directions. Our mission? To amplify the impact of developing countries' ingenuity, propelling it outward to benefit the world at large.

Together, let us embrace the power of local solutions, recognizing that true progress lies in collaboration, inclusivity, and the celebration of diverse perspectives. Join us on this remarkable journey. The Global Innovation Family can turn ideas into action, and impact into legacy.

President's Message for WAITRO Annual Report

April 2024

Prof. Dr. Hasan MANDAL
President of WAITRO



Addressing global challenges for sustainable development requires widespread mobilization across research, development, and innovation actors for impact. As the President of The World Association of Industrial and Technological Research Organizations (WAITRO), I am truly humbled to be serving our "Global Innovation Family" in strengthening this essential mobilization. The 160 members of WAITRO from about 70 countries spanning research and technology organizations to companies, universities, and more continues to increase. Our guiding vision of pursuing opportunities for sustainable development through a collaborative approach of co-creation and succeeding together is enabling more synergies to take place.

Finding solutions to common problems today and in the future requires such a dedicated collaboration, including the needs and opportunities related to climate change, energy, water, and food. Our vibrant networking and regional sessions, workshops, and meetings have led to a shared and common understanding that complex interconnections among environmental, technological, and societal risks require a green and digital transition for a resilient society. In implementation, we have supported our Regional Focal Points encompassing Asia-Pacific, Africa, Latin America and the Caribbean, Middle East and North Africa, and Europe. These five regions are committed to bringing together institutions in co-creation based collaboration for sustainability solutions. We have also boosted regional awareness of the WAITRO Global Innovation Family to contribute towards impact for sustainable development and celebrated the success of our members. Moreover, we hosted the 92nd Executive Board Meeting and 26th Regional Focal Point Meeting at the Gebze Campus of the Scientific and Technological Research Council of Türkiye (TÜBİTAK), marking another milestone among our activities.

The process of matching the experiences of members is a key aspect in achieving many opportunities toward realizing the WAITRO vision. In a timeframe of a year, we accomplished many new initiatives within and beyond the Capacity Development Program, Matchmaking and Partnering Platform, Innovation Award, Horizon Europe Project Support, Working Groups, and Networking Events. This includes a new fellowship program that is launched for the first time for doctoral students and post-doctoral researchers. This Program mobilizes respective members of WAITRO and the TÜBİTAK Research Centers and Institutes for raising co-creation based human resources who will undertake research plans within the framework of the Sustainable Development Goals (SDGs). We will continue to identify new opportunities towards achieving a green and digital transition, and the means of strengthening collaboration

WAITRO's core mission of fostering innovation on a global scale and driving sustainable development by empowering member organizations across borders and boundaries is crucial. The WAITRO community is a vibrant representation of research, technology, and innovation activities across multiple areas that contribute to the SDGs, including industrial and agricultural research, environmental science, and materials. Utilizing these areas remains central to undertaking the responsibility of being an advocate and influencer of sustainable innovation through co-creation based collaboration. WAITRO is determined to support the rise of sustainable systems, addressing needs, and making an impact on sustainable development.

We have and will continue to emphasize the importance of succeeding as the WAITRO Global Innovation Family and focus our efforts on championing the approach of co-creation based collaboration regionally and globally. In addition, our accomplishments as a Global Innovation Hub allow us to look ahead to the WAITRO Summit to be hosted by the Jiangsu Industrial Technology Research Institute November 13-15, 2024. The focus "From Innovation to Impact" is a cross-cutting theme that we value highly for addressing global challenges. It will include an emphasis on the convergence of digital and green transformations, enabling local solutions and achieving global impact, and incubators, accelerators, and entrepreneurship.

Let us co-create together, succeed together, and collaborate for our commor

CHAPTER 1 INTRODUCTION TO WAITRO



Organizational Charter and Governance Structure

Members of the Executive Board and Regional Representatives 2023



President
Prof. Hasan Manda
TÜBİTAK (Türkiye)



First Vice-President
Hans-Erich Schulz
CARIRI (Trinidad and Tobago)



Second Vice-President
Dirk Saseta Krieg
LEITAT (Spain)



Regional Representative for Africa Prof. Paul Pinnock Bosu CSIR (Ghana)



Regional Representative for Europe
David Tveit
DTI(Denmark)



Regional Representative for Latin America and the Caribbean

Maria Eugenia Suárez (INTI, Argentina), (from August 2023) Jefferson de Oliveira Gomes (SENAI, Brazil), (January – August 2023)¹



Regional Representative for Middle East and North Africa
Abeer Arafat
RSS (Jordan)



Regional Representative for Asia and the Pacific Theresia Ningsi Astuti
BRIN (Indonesia)

Mission, Vision and Core Values

Mission

To foster innovation and drive sustainable development by empowering member organizations and facilitating collaboration across borders and boundaries.

Vision

A global innovation ecosystem, in which research and technology organizations (incl. universities) collaborate, share knowledge, develop, and disseminate innovative technologies in partnership with the private and public sector to deliver sustainable impact to societies and economies.

Core Values

· DIVERSITY & EQUALITY

To respect all people regardless of age, gender, ethnicity, religion, disability, sexual orientation or other status.

· INCLUSIVENESS

To champion inclusiveness, diverse strengths, voices, and backgrounds of all member organizations and individuals.

GOOD GOVERNANCE

To ensure transparency and accountability and work towards maximum efficiency and effectiveness by ensuring that resources are directed towards fulfilling WAITRO's mission.

WAITRO Secretariat-2023



Dr. Paul E. Burrows WAITRO Secretary General



Dr. Eckart Bierdümpel Chief of Staff



Dominik Reinertz Director



Ran Duan Director



Andrea Santos Communication



Lei Hou Communication



Julia Wiethüchter Program Manager



Yucheng Hang Program Support



Dr. Sira Engelbertz Project Manager



Yiwen Jiang Program Support



Jerome Harrison Strategy & Analysis



Jerin Saviour Program Support



Damalie Nabukalu Program Support



Dikshita Kalita IT Solutions



Nala Müller Administration

WAITRO Operations e.V.

We spent much of 2023 plotting a new sustainable future for WAITRO itself. The Association is often introduced as "founded in 1970 by UNIDO and registered as a non-profit company in Canada" but this is not strictly accurate. The 1970 constitution that created the Global Innovation Family defines the governance structure of WAITRO, including the Executive Board and the procedures that make WAITRO what it is, says nothing about geographical location. In fact, WAITRO Inc. came into existence about three years later when the first Secretariat (based in Canada) found it impossible to participate in funded programs without a physical location. A non-profit entity was therefore founded in Saskatchewan, also called WAITRO, where it remains to this day. The Secretariat, however, migrated away long ago and, as of today, WAITRO has no full member in Canada.

To create a new legal entity for WAITRO, therefore, the Executive Board in December 2023 approved a new Association, known under German law as an "eingetragener Verein (e.V.)" . This is a non-profit Association with membership comprised of the WAITRO Executive Board, the Secretary General and the Chief of Staff. To be known as WAITRO Operations e.V., the Association will be headquartered in Cologne or Bonn, Germany and should become a vehicle to build collaborative programs for WAITRO member organizations to advance the SDGs More information about WAITRO Operations e.V. will be communicated in 2024 as soon as it becomes operational.

The last year has challenged us here at the WAITRO Secretariat in many ways, but most importantly it has challenged us to transition WAITRO itself to a sustainable business model for the next decades. During 2024, we aim to put in place a structure that will accomplish this, along with a unique value proposition for WAITRO to move innovation to impact. We need your active involvement— both as organizational members and as passionate individuals— to amplify our impact. Together, let's forge cross-border partnerships that drive innovation, foster resilience, and pave the way for a more sustainable world.



Partnerships and Alliances

WAITRO Partners are organizations, associations, civil-society groups, projects and initiatives that operate at an international or regional scale and offer mutual benefits for both WAITRO members and the partner. We create synergies and foster collaborations between WAITRO members and our partners.

Clear objectives, clearly defined roles and duties, efficient governance structures, and systems for tracking and assessing progress are essential elements of alliance and collaborative project success. Partners may maximize the impact of their joint efforts, minimize risks, and coordinate their activities by laying a strong foundation based on these ideas.

Through the development of alliances based on mutual respect, trust, and common objectives, these initiatives have the capacity to bring about revolutionary change and leave a lasting impression on communities and societies all over the world.



CHAPTER 2 WAITRO ACTIVITIES IN 2023



WAITRO Session at G-STIC Rio Highlights the Importance of Global Partnerships for the SDGs





Date: Feb. 14, 2023

The 6th G-STIC Conference in Rio de Janeiro hosted a WAITRO Session on SDG 17: Global Partnerships for the Sustainable Development Goals. The main objective of the session was to introduce WAITRO as a tool to foster international partnerships and implement the Sustainable Development Goals (SDGs). The session began with a WAITRO presentation by Paul Burrows, Vice President of JITRI and Secretary General of WAITRO. This was followed by keynote speeches from Manuel Heitor from the University of Lisbon and Carlos Henrique de Brito Cruz from Elsevier, who each discussed the importance of knowledge, innovation, and private sector involvement in achieving the SDGs.

The session continued with an interactive roundtable discussion, featuring Sergio Ibáñez from LEITAT, Paul Burrows, Jaime Arboleda Palacio from CTA and Alessandro Pansanato Rizzato from SENAI. The panelists discussed the main obstacles in implementing SDG 17, the key trends in research collaboration for sustainable development, inspirational examples of international cooperation in the context of the SDGs, key recommendations to advance the 2030 Agenda through research partnerships, and the role of public-private partnerships in achieving the SDGs and how WAITRO can promote them

The WAITRO session on SDG 17 at the 6th G-STIC Conference was a successful event that highlighted the importance of international partnerships and cooperation for sustainable development. The session encouraged participants to develop international partnerships and initiatives that are aligned with the 17 SDGs.

The Asian Packaging Seminar: Zero Emission in Food & Packaging Industry

Date: June 14, 2023

TISTR and the Asian Packaging Federation (APF) have co-hosted the Asian Packaging Seminar: Zero Emission in Food & Packaging Industry in the area of ProPak Asia 2023 in BITEC, Bangkok. We have organized the posters presentation on WAITRO and SAIRA at ProPak 2023. The Asian Packaging Seminar gathered about 100 participants from RTOs, private organizations, and stakeholders of the packaging, logistic, and waste management industries. Besides, ProPak Asia is the regional premier processing and packaging technology exhibition for Asia. The posters of WAITRO attracted the interest of people from the universities and DHL.





Meeting between TISTR and SIRIM Berhad on the discussion of MSTQ

Date: June, 2023

During the visit of a TISTR delegation, headed by Governor Dr. Chutima Eam-chotchawalit, to Malaysia in June 2023, there was a meeting between SIRIM Berhad and TISTR. Both sides discussed their mutual interests, particularly in the fields of Metrology, Standards, Testing, and Quality (MSTQ) to support the competitiveness and capability of their customers e.g. SMEs, and industries. Potential topics of collaboration like halal cosmetics were raised as having potential and high demand in Asia and the Middle East. These could be topics for joint activity between the countries or across the regions.





Online WAITRO Workshop - Horizon Europe Tools & Tips

Date: June 21, 2023

LEITAT organized an online session led by Sergio Ibañez Perez on behalf of the WAITRO Regional Focal Point for Europe. The workshop, titled "Horizon Europe Tools & Tips," aimed to facilitate international cooperation under the Horizon Europe program. The session started by a welcome from the RFP of Europe Sergio Ibáñez followed by various colleagues from the International Projects Office of LEITAT who shared some tips and tools regarding the Horizon Europe program. Multiple presentations covered the entire funding process, from eligibility and how to use the funding and tenders portal to identify opportunities, through tips on how

to prepare a competitive proposal, to important considerations for preparing a grant agreement and how to budget within EU rules should the proposal be successful. A closing presentation was made by CTA in Colombia, the WAITRO Regional Focal Point for Latin America and the Caribbean. David Alonso Pineda Marulanda shared CTA's experience and highlighted the importance of WAITRO as a bridge in accessing European part-





ners and proposals. The workshop provided potential non-European partners with an overview of expectations from the European coordinator and consortium in Horizon Europe proposals. The budget for international cooperation topics had shown a steady increase in past Research Framework Programs by the European Commission. Understanding the tools and participation dynamics offered by the European Commission was

crucial for promoting the development of non-European members of WAITRO and bringing them closer to funding opportunities.

17/18

Online Introduction to China's International Science and Technology Cooperation Funding System

Date: June 28, 2023

Organized by the WAITRO Office, China from June 28, 2023, a series of webinars was offered by the WAITRO Secretariat China Office (JITRI). The webinars introduced China's international science and technology cooperation program, highlighting key cooperation areas, research directions, funding opportunities, and project management mechanisms relevant to major countries and regions.



One webinar covered China's funding programs with Cuba, Mexico, Brazil, South Africa, Uruguay, Egypt, as well as the BRICS countries (Brazil, Russia, India, China, and South Africa) and was open to all WAITRO members, with participation from research institutes and universities in China. The goal

was to explore additional funding opportunities for international collaborations. Each introduction lasted for one hour, followed by an opportunity for organizations to introduce themselves. Universities or institutes interested in presenting were invited to give a five-minute presentation to the audience. The objectives were to expand cooperation channels between international innovation resources and to assist WAITRO members in discovering new partnerships and funding sources.

The webinars provided important information on funding opportunities, project management techniques, and strategic areas of cooperation with different countries. Stronger ties between Chinese research institutes and WAITRO members are being established by these activities, which will ultimately lead to increased collaboration and knowledge sharing.



CTA Webinar - Buenas prácticas para la formulación de proyectos a Horizonte Europa

Date: June 28, 2023

On Wednesday 28th June, the WAITRO regional focal point at Centro de Ciencia y Tecnología de Antioquia (CTA) organized a webinar for WAITRO members in Latin America on Good practices for the formulation of Horizon Europe projects. During the session, LEITAT delivered a short training session on the methodology of proposal writing. The Participants included the representatives of various RTOs belonging to WAITRO from Latin American and Caribbean countries. CTA shared with the audience experience with Horizon Europe projects.

WAITRO Presentation to SESA Project African Stakeholders

Date: July 10, 2023

LEITAT hosted a visit from different African companies related to the Smart Energy Solutions for Africa European project. During the session a presentation of WAITRO was executed highlighting the value proposition of WAITRO, as well as sharing the contact of the RFP for Africa in order to discuss if any of the companies was interesting on learning more.



Online Webinar on New Ideas for Agriculture: The Impact of Indigenous and local products on the SDGs.

Date: August 29, 2023

A webinar was organized by the WAITRO Secretariat China Office (JITRI). It aimed to bring together researchers involved in developing various local products to share knowledge on enhancing their value and viability both globally and within the local ecosystem.

Indigenous knowledge encompasses the wisdom, the skills, the technologies and the innovations of communities. Farmers, hunters and gatherers use their indigenous knowledge systems to survive; and to become competitive in a given market segment through the production of innovative products and services. Indigenous products have long been recognized as valuable local resources, with traditional wisdom now gaining recognition from the scientific community. These products have the potential to enhance the resilience of local supply chains against impending climate changes, thereby contributing to SDG2, SDG3, and other goals.

Throughout the world, individual WAITRO members have been engaged in developing products based on natural and local resources, sometimes even commercializing them. The webinar sought to facilitate knowledge exchange among these members, exploring commonalities between products in agriculture, cosmetics, and health sectors. It also aimed to address whether WAITRO could support building capacity to retain the value of these products within local ecosystems, rather than losing it to large multinational corporations.

The webinar featured keynote speeches, project showcases, an example of commercializing indigenous products, and a panel discussion on the challenges and pathways of indigenous and local product research and development. Keynote speakers included Dr. Sechaba Bareetseng from CSIR South Africa and Dr. Nurul Izza Nordin from SIRIM Malaysia. Additionally, two teams of WAITRO Innovation Award winners shared their projects. The panel discussion was moderated by Dr. Jeffrey Robens, Editorial Development Manager at Springer Nature. The event aimed to foster new partnerships and capacity development efforts among WAITRO members to contribute to achieving the SDGs. A report can be found on www.waitro.org under publications and the webinar led to the planning of a major breakout session at the WAITRO Summit 2024 on the role of indigenous technologies in achieving sustainable development.

International Conference on Air Pollution, Perspective, Prediction, Prevention, and Control

Date: August 31,2023

TISTR organized the International Conference on Air Pollution, Perspective, Prediction, Prevention, and Control in a hybrid form, and opened for the people of WAITRO member organizations to participate in. There were the Session 1:



Country Perspectives on Policy, Strategy Option, Regulatory Mechanisms, and Good Practices to Tackle PM 2.5 Problem and Potential Collaboration, and Session 2: Technology and Innovation for the Prediction, Prevention, and Control of PM 2.5.

Beside the participation of WAITRO members, a speaker from BRIN of Indonesia also shared their perspectives.

The aims of the event were to discuss how to improve the availability of technical knowledge regarding innovative technologies, good practices, and better understanding of technology needs and gaps for air pollution control in cities.

Webinar on how to structure budgets for Horizon Europe projects

Date: September 7, 2023

A webinar was held to explore the essential components and key elements required to develop a robust budget for presenting Horizon Europe projects. It took place across various regions: 8:00 a.m. in Costa Rica and Guatemala, 9:00 a.m. in Colombia, Mexico, Peru, Ecuador, and Panama, 10:00 a.m. in the Dominican Republic, Bolivia, and Chile and 11:00 a.m. in Argentina, Uruguay, and Brazil.

MENA Regional Networking Event

Date: September 25-26, 2023

WAITRO's MENA Regional Forum took place on 25-26 September in Marmara Research Center at TÜBİTAK, introducing WAITRO to potential new regional members, examining how WAITRO can accelerate solutions to sustainability issues in the region, and gathering data on the unique research strengths that the region can offer to solve global problems.

During the event, RRs and RFPs from Europe presented WAITRO initiatives aimed to build bridges between the two regions, with particular emphasis on the WAITRO International Topics Coordinator Task Force, as well as a short overview of the R&D funding opportunities offered by the European Research Framework Program.





International Student Forum and Nanjing International Talent Matchmaking Conference

Date: Oct. 31, 2023



This was co-organized by the WAITRO Secretariat China Office (JITRI) and Nanjing Bureau of Science and Technology to introduce the many overseas students studying at Nanjing, China and nearby universities to the global WAITRO network and also the JITRI innovation ecosystem so that they may act as ambassadors for international cooperation between their home

countries and WAITRO. The Forum was held in an "online + offline" mode, and representatives from Nanjing University, Hohai University and other famous universities with more than 40 overseas students participated in the forum. It involved a tour of the JITRI Nanjing exhibition, short introductory lectures about JITRI and WAITRO, Incentive Polices on Overseas Talents and Foreigners and other policies which may benefit to foreign students in China and some networking. WAITRO members from MENA (Middle East and North Africa) and Africa(Sub-Saharan Africa) regions were invited to connect online. In addition, through this forum

WAITRO introduced the opportunity to hire a student intern to work with the Secretariat team. It was successfully held in JITRI Nanjing Headquarters and feedback from participants was very positive.



Empowering Innovation: Entrepreneurship in Research Organizations

Date: November, 2023

Entrepreneurship is the driving force behind transforming research into practical solutions that fuel economic growth and make a lasting impact. That's why WAITRO launched an exclusive event series dedicated to entrepreneurship within our WAITRO community. The objective was simple: to foster an interactive exchange among members, enabling them to gain valuable insights into the remarkable entrepreneurial activities of fellow WAITRO



members. From past successes to current breakthroughs and future endeavors, this event series provided a platform for sharing experiences and igniting new ideas.

A three-part webinar was held online to explore the dynamic realm of entrepreneurship within research organizations and its pivotal role in achieving the Sustainable Development Goals (SDGs). Whether attendees were researchers seeking to transform their ideas into businesses or managers aiming to foster innovation within their organizations, the series provided essential knowledge and practical tools. WAITRO's Entrepreneurship Event Series proved to be an enlightening and educational journey, with three dynamic sessions featuring renowned speakers and invaluable insights.

The three sessions included:

Session 1: Introduction to Entrepreneurship (Date: November 6, 2023)

• The first session of the event series unfolded with keynote speakers Allan Chou and Wesley Okeke, each bringing a wealth of experience and insights from the global entrepreneurship and technology development arena. The goal was to provide a solid introduction to entrepreneurship.

Session 2: From Lab to Launch – Lean Entrepreneurship for Researchers

• (Date: November 9, 2023)

The Lean Entrepreneurship for researchers workshop provided participants with a comprehensive overview methodologies tailored specifically for the research context. Led by Dirk, an experienced innovation advisor, the session addressed the challenges researchers face when transitioning from the lab to the business world and emphasized the application of lean principles in overcoming these hurdles.

Session 3: Entrepreneurship Support Systems (Date: November 16, 2023)

• In the third session of WAITRO's Entrepreneurship Event Series, participants were immersed in a comprehensive exploration of critical facets of entrepreneurship. The session delved into the intricacies of building a business, fostering entrepreneurial ecosystems, and navigating the multifaceted landscape of grants, startup weekends, and mentorship programs.

Cross-Border Markets for Innovation - Biopharmaceutical Regulations in Africa

Date: November 29, 2023

In order to promote greater cooperation between the domains of science and business, the Bio-Pharmaceutical Market Access Session aimed to assist bio-pharmaceutical associate members to navigate the intricate terrain of market access policies and regulatory frameworks in Africa.

The agenda covered:

- Opening Speech Dr. Paul Burrows
- Speech: An introduction to the bio-medicine market access policy and regulatory requirements in South Africa - Dr. Bathabile Ramalap
- QA and Speech: Opportunities for collaborative development of modern manufacturing technologies to support production of essential medicines in Africa - Dr. Jenny-Lee Panayides





- **QA and Speech:** The Challenges and Opportunities of Bio-Medical business and investment in Ethiopia & Briefing on the national policy of Bio-medical products and institutions regulation and registration Dr. Moloro, Adane Demeke
- **Project 1:** Aidea Pharma's background and cooperation demand Bill Du
- **Project 2:** Nanjing Sanhome Pharmaceutical's background and cooperation demand Menghan Liu
- **Project 3:** Suzhong pharmaceutical group 's background and cooperation demand Weniun Liu

While this particular webinar was inspired by the need of Chinese pharmaceutical companies to connect with overseas markets, it was hoped that the model would lead to a series on cross-border markets for innovation, focused on various geographical regions and various technology areas.

Webinar on WAITRO SDG2 Working Group - Harvesting Global Solutions: Uniting for Zero Hunger Research Collaborations and Funding Opportunities

Date: December 14, 2023

Organized by BRIN and WAITRO, the WAITRO SDG2 Working Group was initiated at the WAITRO Summit 2022 in Cape Town, South Africa. SDG2 aims to end hunger, achieve food security, improve nutrition, and promote sustainable agriculture by 2030. The working group brought together researchers from WAITRO member organizations to develop strategies, coordinate efforts, and implement initiatives contributing to SDG 2.

Following this, BRIN and WAITRO held a webinar on December 14th, 2023, to further develop the SDG2 WAITRO Working Group. Dr. Paul E. Burrows, Secretary General of WAITRO, introduced WAITRO and emphasized the importance of the SDG2 Working Group. BRIN presented funding schemes and research mobility programs to foster global collaboration and enable researchers from other countries to conduct research in Indonesia. Other speakers shared experiences on International Collaboration Strategies, assessing SDG Impact through the SciVal Platform, and enhancing research capacity in RTOs.

The Panel Discussion featured speakers from various regions, discussing opportunities and challenges in implementing SDG2, including resources, infrastructure, funding, technology status, government support, and industrial potential. SAIRA was introduced as a platform for finding suitable partners for collaboration.



CHAPTER 3 WAITRO PLATFORMS AND PRODUCTS



The WAITRO Benchmarking Project, 21st Century Update.

The unique structure of WAITRO as an Association of research organizations lends it the capacity to offer a uniform framework for assessing performance across various initiatives and sectors in a process known as "benchmarking.".

Benchmarking allows organizations to consistently track success by setting common measurements and procedures within and between industry sectors. As a result, partners are able to highlight techniques that work, identify areas of strength and weakness, and exchange lessons learned, all of which promote innovation and ongoing progress in the field of sustainable development.

WAITRO's mission is "to foster innovation and drive sustainable development by empowering member organizations and facilitating collaboration across borders and boundaries." One of the specific strategic activities identified for achieving WAITRO's goals is to improve the operational practices and business performance of WAITRO members and to enhance scientific research and technological capacities of their employees. RTOs need to work effectively with both private funding, government grants, and industry. This can be facilitated by adopting benchmarking and best practices.

The first WAITRO Benchmarking project was implemented from 1995 to 1998 during which over 200 RTOs from all continents were thoroughly surveyed (manually, by flying to each RTO and interviewing them) to derive best practices for organizational and business development and to provide a model for learning from each other, irrespective of size, sector or level of advancement. In 2021, the WAITRO Secretariat China Office, in conjunction with Danish Technological Institute and WAITRO Alumi, set out to update the benchmarking concept using an online platform.

Both the original Benchmarking project and its later update were highly valued by the participating RTOs, leading to a recommendation by the 25th General Assembly in 2020 to revive and expand the project and transform it into a regular service offering to existing and potential WAITRO members by developing it into an online tool. This recommendation also received strong endorsement from the WAITRO Alumni Network. In 2021, therefore, the WAITRO Secretariat China Office, in conjunction with Danish Technological Institute and WAITRO Alumni and funding from the Jiangsu Industrial Technology Research Institute (JITRI), set out to update the benchmarking concept using an online platform. The building of this platform and gathering of data was completed during 2023.

Project Purpose

- Update the existing benchmarking framework by drawing upon previous benchmarking studies and evaluating possible new elements.
- Digitalize the benchmarking process by developing an online tool (website) to facilitate benchmarking and learning processes among the RTOs.

Task Description

- Review existing benchmarking practices, update benchmarking framework, and test the framework with selected RTOs.
- Develop digital benchmarking tool and conduct trial run with selected RTOs.
- Organize regional webinars to introduce the tool and conduct benchmarking with the RTOs.
- Evaluate benchmarking project and tool through online surveys distributed to participating RTOs.

Project Participants

JITRI (WAITRO Secretariat, China Office), DTI (WAITRO Member, Denmark), David Grier (WAITRO Alumnus, Canada), WAITRO Member RTOs as needed.

During 2023, we executed the first phase of the project, with a total of 30 WAITRO Research and Technology Organizations (RTOs) and their institutes from all five active WAITRO regions completing the comprehensive online questionnaire. We extend our sincere appreciation to these RTOs, including UY1, CARIRI, JU, KIBU, Laboratorios Técnicos - MEM, BRIN, SIRIM, TISTR, CSIRO, RSS, SIRDC, DTI and JITRI, for their enthusiastic involvement and unwavering support. This phase is now complete.

Project Timeline

Review of System Use & Project **System System** Development **Earlier Work Result Analysis** Preparation Launch · Project workplan · Review previous • Design · Benchmarking · Reminder emails benchmarking Workshop @ benchmarking · Contracts Timely assistance studies system (website) WAITRO · Supplier sourcing · Result analysis & Summit 2022 Update Conduct feedback Invitation to benchmarking trial runs compilation framework full members Next steps Instructional webinars Nov 2022-Sep-Jun-**Dec 2021 May 2022** Jan 2023 Oct 2022 Oct 2023

The SAIRA platform

Matchmaking and Collaboration Platform Powered by WAITRO

SAIRA facilitates and accelerates collaboration among research organizations, academia, governments, and the private sector, transcending geographical and disciplinary boundaries. It provides an easy, accessible, and secure platform to share collaboration needs, innovative project ideas, or developed technologies, thus connecting users with potential partners.

Developed by Fraunhofer-Gesellschaft (host of the WAITRO Secretariat Germany Office from 2019-2023), as part of a project funded by the German Federal Ministry of Education and Research (BMBF), SAIRA primarily aims to connect researchers within WAITRO member organizations. Successful cases have demonstrated that the SAIRA platform effectively enables collaboration among various stakeholders.

Purpose of SAIRA

SAIRA caters to individuals with collaboration needs, innovative ideas, developed technologies, or those looking to form project teams and consortia in response to funding opportunities and calls for proposals. Whether your idea is at an embryonic stage or more advanced, whether your project involves implementation, production, or deployment of technological solutions, or whether you represent a research organization, NGO, company, or start-up looking to scale, SAIRA is designed to meet your needs. It helps you find the right partners across disciplines and national borders.

Outlook

Although Fraunhofer is no longer hosting the Secretariat (Germany Office), WAITRO will continue SAIRA operations until mid-2024 and hopes to enhance the service further in the future.

Facts and Figures (as of December 2023)

Users: 1,422 Organizations: 469 Countries: 113 Matches: 12



CHAPTER 4 WAITRO COMMUNICATIONS



Establishing successful public relations and communication strategies is essential for WAITRO to develop credibility, encourage trust, and increase its impact. This involves utilizing a range of communication channels, including newsletters, social media, announcements, and website updates, to distribute information and interact with a variety of audiences.



Media and Social Media Expansion

Expanding into media and social media provides WAITRO with significant opportunity to expand its reach, increase engagement, and increase its worldwide effect. WAITRO uses the power of conventional and digital media channels to increase awareness, spread important messages, and highlight activities that have an impact through strategic media partnerships.

Furthermore, by using social media platforms to their fullest, WAITRO has a dynamic way to engage with a variety of audiences, start discussions, and monitor activity in real time.



Social Media and marketing plan 2024

Value-creation for members requires engagement with individual researchers and staff in member institutions. Extending to these individual needs sharing information by influencers, e.g., institutions' official accounts, leadership, and staff with supportive roles. However, media "gatekeepers" in member institutions filter received information, and WAITRO newsletters and messages may end up in the mailbox of international affairs offices.



Strategies for outreach and branding are implemented:

"Snow-ball"

Social media and event interactions were mostly from active WAITRO members, suggesting identifying and using influencers for a broader reach.

Audience-centered content

Create content based on the targeted audiences: leadership of member institutions, or researchers and staff. Communication is treated as a service to members. WAITRO members are highly heterogenic, and hence an investigation and learning on media use, preferences, and the interests of members was conducted in October-November 2023.

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Sharing of stories relating to the audiences

Create content that can relate to the target audience (member and non-members), currently it is limited to projects but in future it can introduce personal stories about career development, research, or international innovation partnerships.

Marketing & branding

Intensive news reports on 1-2 key events per year can build a strong WAITRO presence. Regularly posting and consistently using core WAITRO brand tags on social media (e.g. #WAITRO, #GlobalInnovation-Family) and popular tags (e.g. #SDGs).



Communication Goals 2024

As social media was stopped for half of 2023, the main goal was to maintain the reach to followers on social media rather than increasing the number. However, as predicted from the current data, a 10% annual organic growth of followers can be reached.

The website visit relies on referrals from search engine Google and social media platforms, and email newsletters. Therefore, communication techniques will be implemented to increase the website traffic, like inserting URLs of WAITRO social media posts and promoting the brand at events. The website will maintain a page traffic of 1 million visits per year.

Email campaigns align with the events and activities planned for the year; with a 10% annual organic growth of subscribers, the newsletter subscribers would reach 800 by the end of the year.

Counting the influence of the biennial summit, a step increase in newsletter subscribers is expected from September through November, with an extra 20-30% increase in followers/subscribers on social media and email campaign platforms.



Social media

LinkedIn and Newsletter were kept updated and functioned as major online communication channels with members, while other social media platforms were on hold from April through October 2023.

The communication on whole spectrum social media platforms has returned since October 31, 2023, after a six-month stoppage of operations on Facebook, Instagram and Twitter. Highlight of the year were the promotion of three-session webinars on empowering researchers and research organizations on entrepreneurship and its pivotal role in achieving the Sustainable Development Goals (SDGs). there were over 200 registrations for this members-exclusive event series, with participants including researchers, entrepreneurs, and management representatives from over 60 member organizations located to 43 countries. Two more WAITRO webinars in Q4 focused on biomedicine market in Africa coordinated through WAITRO Secretariat in China ("Cross-Border Markets for Innovation – Biopharmaceutical Regulations in Africa"), and SDG2 workgroup webinar coordinated through BRIN ("WAITRO SDG2 Workgroup Webinar- Harvesting Global Solutions: Uniting for Zero Hunger Research Collaborations and Funding Opportunities"), both have reached 40-60 audiences within two weeks, with solid support on event promotion on social media before, during and after the event. The social media also served WAITRO members for event and funding information dissemination.

The special posts on UN International Days were maintained for current communication practice. Rather than merely raising awareness on the selected topics, these posts aim to introduce the expertise of WAITRO members in the area and engage with members through tagging and mentioning, for example, the post on December 5 (World Soil Day). A list of planned posts for selected UN International Days was created.

The "WAITRO member news round-up" theme was created and first launched in December 2023. It gives a weekly (and now bi-weekly) briefing with 10-12 latest achievements in science and technology, international partnership, and SDG innovation among WAITRO members. The first two testing posts contribute to a steeply increased WAITRO exposure to social media audiences, demonstrated by a monthly growth of 120% impressions on LinkedIn and doubled reach on Facebook and Instagram. The news roundup also built interactive engagement with members by tagging members and refer readers to visit member's website and social media pages.



Website

The news, publication/downloads, events and member information on new members are updated on time to website, in total nine events and 28 news posted on WAITRO.org. The number of visits largely depending on the referral channel: google search engine.



Email

The main functions of email marketing were WAITRO newsletter, event campaign, and member information sharing. Ten newsletters were issued, reaching 6,139 recipients. The 1,400 contacts in the Brevo database (an email marketing tool) were reviewed for subscription status. Inactive subscribers (i.e., setting hard bounce-back of WAITRO email campaigns) or unengaged contacts (i.e., not opening emails or unsubscribing) were identified. These contacts were removed from the mailing list.



Results



Impressions increase: 59.6% (from 20K to 33K)
Fans and followers increased 19.5% (from 2.4k to 2.9k)
Post reactions and likes increased 146% (1.5K reactions)



Website

Page traffic: over 1.1 million

Visitors: 2,908



Email

Email open rate 36.9% (2022: 33.7%) Email click rate 6.8% (2022: 7.9%)

Newsletter sign-ups: 118 new subscribers (2022: 123)



WAITRO Exhibition at Secretariat (JITRI HQ, Nanjing)

The exhibition of Jiangsu Province technology advancements highlights international cooperation. Of particular interest to WAITRO members is the special exhibition space to be dedicated to WAITRO. Here, members are able to showcase their capabilities, partnership needs and opportunities, as well as their contributions to technology development and international collaboration, with particular emphasis on the United Nations Sustainable Development Goals. The Secretariat also offers space for WAITRO members to establish a footprint in Jiangsu Province to explore both regional collaborations and the potential of the Chinese market. The JITRI Innovation Campus is a great channel for WAITRO members to find and develop more opportunities for international cooperation. Members are encouraged to contact the WAITRO Secretariat with proposals for using either office or exhibition space at the new JITRI Innovation Campus.

Why a WAITRO Exhibition in Nanjing? While it may feel distant for many members, JITRI Headquarters is a showpiece of the Jiangsu Provincial Government and regarded as one of the most successful industrial research institutes in China. As such, it is frequently on the itinerary of important overseas visitors, embassy and consulate representatives from around the world. A presence at the WAITRO exhibition means your organization gets recognition when diplomatic staff, senior politicians or research managers come to visit.













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Authors:

Dr. Paul E Burrows, Prof Dr. Hasan MANDAL, Dominik Reinertz, Lei Hou

Editors:

Dr. Eckart Bierdümpel, Dr. Paul E Burrows, Yiwen Jiang

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