



Task Force 04

TRADE AND INVESTMENT FOR SUSTAINABLE AND INCLUSIVE GROWTH

From Crisis to Solutions: Impact Investing in Climate and Food Security

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Abstract

More than USD 7T is needed yearly to achieve the Sustainable Development Goals (SDGs); however, there is a significant financial gap of USD 2.5T that needs to be addressed in developing countries. In alignment with the G20's second priority, impact investing aims to support businesses promoting sustainable development, highlighting its strategic importance for human well-being.

Impact investing, particularly in the climate crisis, food security, and bioeconomy areas (with a market exceeding USD 7.7T), drives entrepreneurship by offering flexible capital, advisory, and networking. These investments seek financial returns but also to enhance life quality through impact lock-step businesses. While there are high-impact ventures in these sectors, they still face greater challenges compared to traditional enterprises in achieving internationalization and meet capital needs, which makes it more difficult for venture capital to invest in these verticals.

Initiatives such as Atta Impact Capital (AIC), Deep Science Ventures (DSV), and Kirchner Impact Foundation (KIF) have been launched to boost private capital in this space. Simultaneously, the InterAmerican Institute for Cooperation on Agriculture supports the creation of bioeconomy regulations to foster businesses in this field. Promoting privately funded initiatives directly contributes to sustainable development.

By facilitating the creation and scalability of new enterprises, private investment in bioeconomy-based businesses can be boosted. Thus, the following recommendations are proposed: 1) Create public policies promoting business skills from early stages and knowledge about private financing mechanisms (e.g., Venture capital); 2) Establish multilateral regulatory cooperation facilitating the internationalization of biologically

originated products; 3) Facilitate technical cooperation between countries to establish impact measurement mechanism for bioeconomy businesses; and 4) Establish robust public institutions supporting early stage impact ventures through financing, to turn them into future investment targets.

Keywords: SDGs, impact investing, bioeconomy, venture capital, international cooperation.



Diagnosis of the issue

The SDGs emerged to enhance human progress through systems that guarantee well-being. However, the latest UN report warns that the world faces a serious threat of failing to achieve these objectives. Global issues, such as the climate crisis, increasing armed conflicts, slow global economic growth, and the lasting effects of the COVID-19 pandemic, significantly hinder our progress towards achieving the SDGs. In fact, over half of the 140 established targets are at risk of remaining unmet (Naciones Unidas 2023).

Unemployment indicators, particularly among women and youth, along with the persistent hunger crisis, food insecurity, and notable effects of the climate crisis, demonstrate alarming growth. In 2022, the global number of unemployed surpassed 432 million. In addition, it was found that 9.2% of the world's population suffered from chronic hunger, and 29.6% faced moderate to severe food insecurity, showing an increase compared to 2019. Moreover, it is worth noting that the global temperature has already risen by 1.1°C above pre-industrial levels, and there is a considerable likelihood of surpassing the critical point of 1.5°C by 2035.

These statistics not only quantify our challenges but also underline the urgent need for innovative solutions for social, economic, and environmental transformations within our existing systems

In this context, the bioeconomy emerges as a promising conceptual framework for the formulation of public policies aimed at addressing challenges aligned with the 2030 agenda. By bridging natural resources with cutting-edge technologies to create sustainable and high-value-added products and services, the bioeconomy presents itself



as a viable alternative for decarbonizing the economy, with the potential to play a fundamental role in combating climate change and promoting food security, thus supporting economic, social, and environmental growth (G20 Brasil 2024; Rodríguez; Mondaini and Hitschfeld 2017; FAO 2017).

Bioeconomy-based ventures not only offer the inherent advantages of entrepreneurship, such as job creation and financial growth for the individuals and countries involved but also drive market innovation and a fundamental commitment to sustainable development, thus contributing to the achievement of the SDGs by ensuring that growth is sustainable without compromising the resources for future generations. (IICA 2024).

The vast market value of bioeconomy, exceeding USD 7.7T, becomes even more significant when considering the current financial gap of USD 2.5T in developing countries to achieve the SDGs.

This direct relationship with bio-based ventures and other innovations is further strengthened within the UN's strategic plan for achieving the SDGs, as there is a need to harness the potential of financial innovations, new technologies, and digitization to provide access to capital.

While governments are increasingly interested and committed to sustainable development, not all of them have the necessary budgetary resources, for this reason, impact investing is crucial to strengthen the creation of bio-based ventures from an early stage of development.

To attract the attention of investors, bio-based ventures need to stand out in the competitive market landscape. Firms like AIC, KIF, and DSV, who have made significant

efforts in bioeconomy investments, have pinpointed key hurdles. At the market level, these include obstacles to product internationalization and compliance with sanitary/regulatory requirements. Additionally, there's a noticeable gap in understanding financing options and a general shortfall in formal financial education within the sector. Moreover, the absence of clear metrics to measure the real-world impact of these companies hampers the ability to evaluate their success in tackling targeted challenges effectively.

To attract investor interest in bio-based ventures, countries must adopt targeted public policies. These should align with key areas like business public policy, regulatory collaboration, impact measurement in the bioeconomy, and the establishment of robust public institutions supporting this sector. Implementing such policies will not only bolster the G20's efforts toward sustainable development but also contribute to the growth of the G20 Initiative on Bioeconomy. Additionally, these actions resonate with the Sustainable Finance Working Group's objectives to enhance international access to climate and environmental funds and to foster the growth of small and medium-sized enterprises.

Recommendations

While the enactment of public policies remains a state responsibility, it is equally important for the government to streamline processes for the private sector, particularly when these contribute to sustainable development. Various policies can be adopted to create favorable conditions for bio-based companies to attract investment, such as: **integrating entrepreneurial education into school curricula**. An example of this is the Enterprise Agreement for the Department of Education in Australia, which teaches students to start businesses and develop interpersonal skills from an early age (Australian Government 2024). Over the past decade, the Australian small business sector has grown by 38%, driven by improved entrepreneurship skills and emerging technologies. Additionally, establishing **free trade zones to promote innovation and industrial transformation**, even in pilot phases as seen in China, allows attracting foreign investment and technology transfer, benefiting bio-based companies.

Another key recommendation is to consolidate the supply and demand within the ecosystem through **national incubators that financially support early-stage companies** with public capital, as well as facilitating access to national and foreign private capital through **government co-investments**, as demonstrated by the Technology Incubators Program and the Yozma Program of the ITP (Innovation and Technology Policy) in Israel. These programs addressed capital needs in the early stages through the governmental support, as well as triggered the creation of a consolidated venture capital ecosystem, which, in less than a year after the implementation of these programs, grew by over \$135 million.



The lack of coordination among national legislative frameworks has led to a disparity in standards and criteria for understanding new products or services created from emerging technologies, which have high added value and generate positive impact. Unfortunately, this situation is exacerbated by the lack of a clear classification between traditional inputs and bio-based products or services. This lack of differentiation not only complicates their proper registration but also hinders their access to other international markets due to the absence of defined evaluation criteria. The internationalization of these ventures can be crucial for their success or failure, as competitiveness requires their production to have regional or global scope.

For this reason, it is necessary to **establish multilateral regulatory cooperation facilitating the internationalization of biologically originated products.**

There is a need for international regulatory cooperation (IRC) aimed at promoting the interoperability of legal and regulatory frameworks. This would not only facilitate the internationalization of these ventures but also their proper classification. In this regard, international organizations play a fundamental role. For example, the "International Statement on Agricultural Applications of Precision Biotechnology" from the WTO (World Trade Organization) was developed with the intervention of the IICA, which brought together country delegations to prepare the basis of the statement presented to the WTO (WTO 2018). Furthermore, FAO (Food and Agriculture Organization) /WHO (World Health Organization) Conference on Food Standards led to the formation of a Codex Alimentarius Commission, resulting in the creation of a set of internationally adopted food standards. These standards aim to protect consumer health and facilitate international food trade (FAO 2016). In this context, the creation of a protocol or the



incorporation of new rules into existing protocols would be essential for the development of these bio-based ventures. Demonstrating that bioenterprises have international scope which makes them attractive to investors.

In this regard, there should be established a forum where representatives from G20 countries convene, sponsored by an international organization, facilitating the exchange of positions while respecting the specificities of each country. This implies not necessarily having identical regulations, but rather aligning on evaluation criteria for what constitutes a bio-input/service. This alignment would enable the regulation and facilitation of international trade.

One of the primary challenges in impact investing lies in the need for accurate data to properly assess ventures' impact. Without this information, making investment decisions becomes difficult. However, this issue also manifests in other critical areas, such as the lack of data to monitor progress toward the SDGs and the absence of annual global metrics to evaluate the impact of the bioeconomy in terms of job creation, and contribution to climate crisis mitigation.

Considering this situation, **triangular cooperation emerges as a concrete solution to address the measurement of the bioeconomy, facilitating more effective impact assessment for ventures in this realm.** The European Union has been collecting data quantifying the bioeconomy's impact since 2008, although this data collection was active until 2022.

This would enable an understanding of the impact of bioeconomy-based ventures in G20 countries, as well as their contribution to the SDGs. An international organization could facilitate cooperation between the EU and a G20 country. Ultimately, each country

can leverage this knowledge to provide annual tracking required to attract investors to bioeconomy ventures addressing humanity's major challenges.

Currently, there has been a proliferation of incubators or accelerators, especially of a private nature, aimed at supporting entrepreneurship development (Woolley and MacGregor 2021). Despite this, it is increasingly common to find that entrepreneurs, especially those related to the bioeconomy, lack business knowledge. This is particularly true for bio-based ventures that arise from research and apply emerging technologies in laboratory settings. As a result, when these ventures seek to enter the market, they often lack extensive knowledge on how to secure funding for prototyping or developing minimum viable products.

During these early stages, there are few VCs willing to invest regardless of the limited data on the product's market fit and its scalability to international trade. Therefore, **support from public institutions dedicated to entrepreneurship becomes crucial not only to advise these "unconventional" bio-based ventures but also to enable them to access seed capital to kick-start their projects.** Although Latin America may not be the primary destination for impact venture capital, only those countries in the region that have managed to combine these elements have reached agreements of over \$100 million: Brazil (42.8%), Mexico (23%), Chile (3.9%), Colombia (7.8%), and Argentina (7.1%) are among them (PitchBook 2023; World Bank Group 2022).



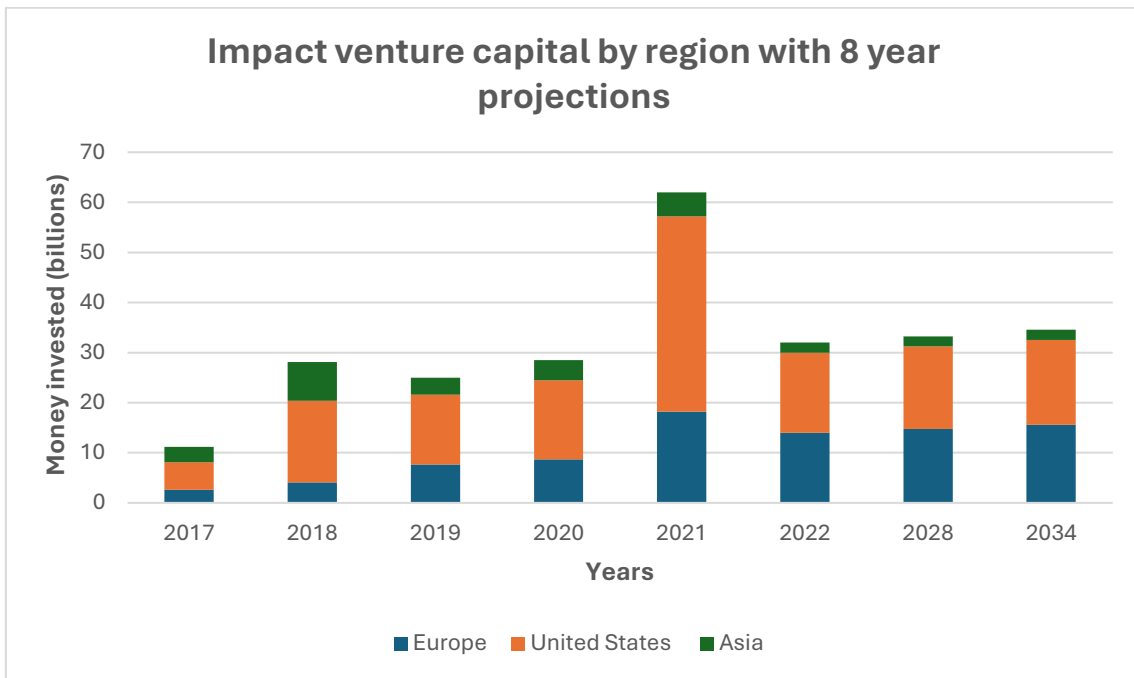
Scenario of outcomes¹

Given the current state of the SDGs, the UN (United Nations) has developed the People and Planet Rescue Plan. This study examines the cost of accelerating access to the goals of the 2030 Agenda for Sustainable Development by focusing efforts on six pathways of SDG transition. Cost estimates for these pathways vary, ranging from USD 5.4T to USD 6.4T per pathway annually from 2023 to 2030. This translates to between USD 1,179 and USD 1,383 per person each year.

Moreover, there is a highlighted need for different forms of financing to work in alignment and complement the usual business approach. Therefore, impact investment enables even the private sector to contribute to the achievement of the SDGs (Ibid). The impact of investments in Europe experienced a growth of 5.5x from 2017 to 2022, while in the United States, it was 3.0x, and in Asia 0.4x during the same period (Dealroom 2022).

In a traditional scenario, projecting this growth sustainably over the next 6 years, it is estimated that by 2028 Europe will reach USD 14T, the United States will remain at USD 16T, and Asia at USD 2T. In fact, by 2034, an increase of only USD 1T is expected from the United States and Europe. (As shown in the illustration below).

¹ Scenario modeling in this section is based on those countries and metrics for which data was available.



Source: Dealroom.co, 2022.

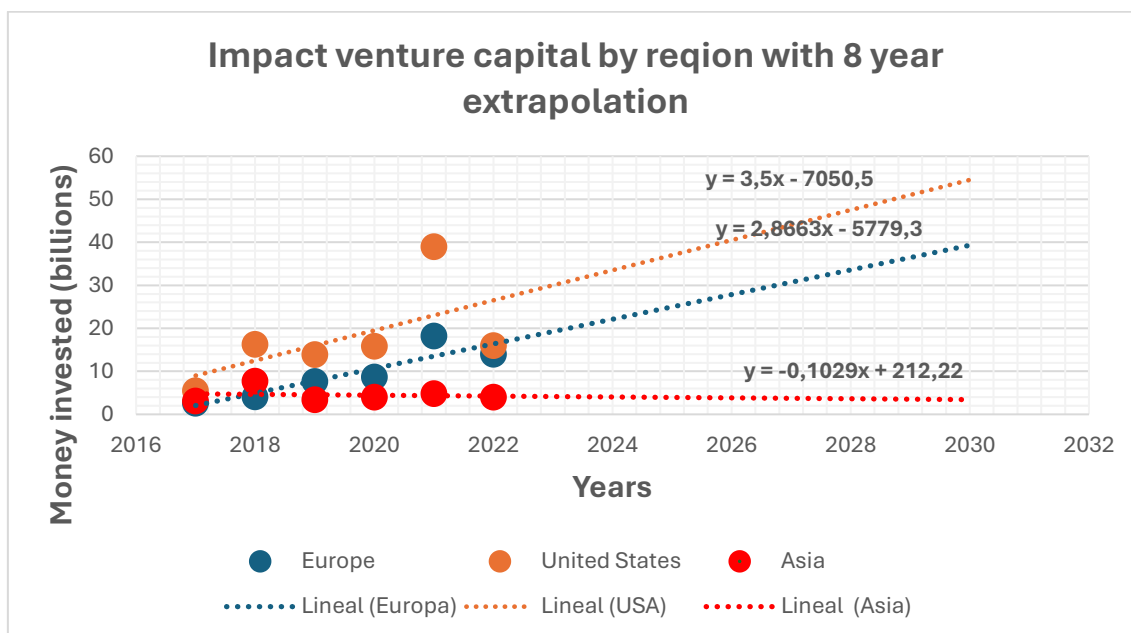
Note: This information is calculated by excel with information of Dealroom.co, 2022

However, in an optimistic scenario, following linear trends, where the recommendations are applied, entrepreneurial education facilitates knowledge in business and the ability to manage ventures.

Additionally, the existence of robust institutions supporting the initial development of bioenterprises (Plummer, Allison and Connelly 2015) along with the creation of conducive conditions to attract Foreign Direct Investment (FDI) in impact investments, will increase the number of early-stage bioventures that can be targeted for investment

Though, investors will not be able to allocate their capital to these bio-based ventures until the market allows for the unhindered commercialization of their products or services internationally (Hoekman and Inama 2017; Bach 2010). In the meantime, quantitative

tracking of the bioeconomy’s impact will enable impact investors to verify the effect of early-stage bioenterprises (Mason-D’Croz et al. 2019). In this regard, projecting impact investment capital in the region over 8 years until 2030, it is estimated that the amount of capital raised per region would be USD 55 trillion for the United States, USD 40 trillion for Europe, and USD 4 trillion for Asia. These sums could not only help fill the existing financing gap for the SDGs but also support the pathways proposed by the UN for their achievement.



Source: Dealroom.co, 2022.

Note: The information includes data from 2018 to 2022. The linear trend of 2024 to 2030 was calculated in Excel by extrapolation of 8 years.

Both graphs illustrate that even a linear growth would result in an increase of over 90% in impact investment for both the United States and Europe. Currently, impact investment

only represents 18% of total venture capital investments in Europe, 8% in the United States, and 4% in Asia. In this regard, adhering to the provided recommendations could enable traditional venture capital investors to transition into impact investors, as they would not only be involved in profitable ventures but also contribute to sustainable development. This would contribute to expanding the market size available for the bioeconomy.



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