

CSTD



*COMMISSION ON SCIENCE AND TECHNOLOGY FOR
DEVELOPMENT ACADEMIC GUIDE*

MUNUR XVI

Universidad del Rosario



MUNUR

XVI

UNIVERSIDAD DEL ROSARIO MODEL OF UNITED NATIONS

The Model of United Nations of Universidad del Rosario, MUNUR, is the first of its kind in Colombia. It is constituted as a space led by and for students to develop abilities such as debate, oratory, teamwork, and leadership. MUNUR is a space that allows students to explore the universe of the international system, taking an interest and learning from the different current, historical, and future problems.

MUNUR was born as a project of students from the Colegio Mayor de Nuestra Señora del Rosario in 2009. Following global trends, they decided to venture into these types of academic exercises that promote competition and debate. Additionally, MUNUR is a space of cultural diversity, where people around the country and the world gather to create bonds of friendship and inclusion in a society that so badly needs to strengthen fraternal ties.

For the 16th edition, we decided to bet on innovation and differentiation, without leaving behind our traditions and legacy that characterizes MUNUR. For this reason, we have created a wide range of committees for different passions and interests, with dynamics that challenge delegates so they can demonstrate their abilities and academic excellence.

This document contains the necessary information for delegates interested in this committee. It is important to remind everyone that the academic guide is only a recommended route of investigation proposed by the Honorable Dais. Nonetheless, it is the responsibility and duty of all the delegates to prepare properly for the days of the debate. Finally, we remind all of our attendees that the procedure rules can be found in the Handbook of this edition. We highly recommend that everyone interested in participating in this conference read this document carefully.

See you in MUNUR XVI!



UNIVERSIDAD DEL ROSARIO MODEL OF UNITED NATIONS

Commission on Science and Technology for Development

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WELCOME LETTER



SECRETARY GENERAL
LAURA PEÑALOZA



Hello, everyone! Welcome to one of the best experiences you are about to have in your entire life. Yes, I'm talking about MUNUR XVI!

My name is Laura Peñaloza, and I have the great honor to present myself as the Secretary General for this edition. When I went to my first UN model, the only thing that crossed my mind was to win an award. And even though I got the diploma, that very same day, I realized that the reason I stayed and kept going to these events was because I discovered that the true purpose of them is for you to become a better version of yourself. Models of United Nations allow us to evolve into well-prepared professionals, masters of negotiation and oratory, but they also turn us into better people. As years passed by, I also realized that I not only wanted to be part of this growth, but I also wanted to help and lead projects that helped people become better.

That's how I ended up here, in MUNUR. With a dream of creating an event that will allow all its attendees to learn, to grow into better versions of themselves, and, most importantly, a place in which everyone could feel they are worthy and are appreciated. I want everyone to feel the magic of MUNUR, from its majestic history and spaces, through the nerves we all feel during the first session, and until the closing ceremony where we all hope to raise a hammer in our hands. Our mission is to make you feel welcomed and comfortable in every single space of the event, in order for you to live your participation to its maximum.

I invite you to challenge yourselves in this conference and demonstrate what you are capable of. Academic excellence comes with exhaustive preparation, expertise, and skills mastery, but it also comes with the values you share as a person. If you are capable of balancing and demonstrating all of this during the debate, I assure you will become an excellent delegate and an inspiration for many. I hope that MUNUR is the place where you face your fears and finally achieve all the goals that you've been working on constantly.

Lastly, I hope that this committee will be to your liking, that all the academic proposal gives you the satisfaction of a prestigious event with the proper preparation. And, above all else, I hope that you will find a safe place where your ideas are listened to and your solutions are highly valued. I will work hard for it, I promise. Can't wait to see you soon!

With love,
Laura Peñaloza

WELCOME LETTER



SUB-SECRETARY GENERAL
SANTIAGO RIASCOS



When I look back and see the whole journey of this road, I'm amazed at how I never imagined everything that would happen. For six years, I have been dreaming of this moment, thinking about representing my university three years ago, meeting the person who would bring me to MUNUR two years ago, and finally assuring that this journey was almost over last year.

It is the paradox of life. The work, the effort, the falls, but above all, getting up again and an unexpected turn of events bring me here today as Santiago Riascos Beltrán, Sub-Secretary General for MUNUR XVI. I am an eighth-semester student at the Universidad del Rosario. Many of the things that have happened during these eight semesters have shaped my path to this point and make sense at this moment, as we near the peak and end of this already long journey.

Six years ago, I started at UN with the sole purpose of learning, teaching, and learning through teaching. My first experience showed me that I wanted to make my path in Rosario, starting as a guy who was afraid to speak, whose hands and voice trembled constantly. But, that later, with hard work, dedication, and perseverance, those weak hands strengthened and turned the guy into someone who seeks academic and human excellence. I turned into a guy who taught people to come even better than me, so that the next leaders of Colombia and the world were formed from the core of this country. Here, in Rosario.

For me, it is a pleasure to receive you in what I call my home to live 4 days of intense debates, negotiations, and challenges that will always be present in MUNUR. A place where you will see reflected not only a dream but a bet for something different and innovative, and an event that I'm sure you will treasure as one of the best experiences and memories in your lives. In MUNUR, not only will you be able to learn, but also through your actions you will be an example for many, regardless of the position in which you find yourselves, because I hope you will handle it as a premise not to stop learning from those who were, are, and will be.

Without further ado, I wish you all, delegates, dais, sponsors, and spectators, to enjoy MUNUR XVI to the fullest, and welcome to my home.

With much love and affection,
Santiago Riascos Beltrán

WELCOME LETTER



GENERAL DIRECTOR
SOFIA PRADA



It is an honor for me, as General Director, to extend to you the most sincere welcome to the 16th edition of the Universidad del Rosario Model of United Nations, MUNUR XVI.

Since I was a girl, I have always dreamed of participating in models of UN. Throughout the years, I have had the privilege to live this experience as a delegate, as dais, as a member of the logistics staff, and today as General Director. Taking this role has been one of the greatest adventures in my life, full of challenges and good memories. But, counting on your participation is surely one of the best memories, which fills me with deep honor and gratitude.

For this edition, we are committed to carrying on the legacy and the tradition that have characterized MUNUR throughout the years. But also focusing on innovation, not only in academics, but in logistics too. We have worked pretty hard on every little detail, surprise, and experience for you to enjoy this year's conference. The team is completely sure that MUNUR will leave a mark on you for the rest of your life, and will let you build your future after this edition.

We are well aware that you have assumed the challenge of participating with the purpose of contributing to new ideas and solutions that will help to enrich the discussions over the current global challenges and problems. Your participation represents a precious contribution to the build-up of a more ethical, empathetic, critical, and compromised society with the world and with our people.

During the 4 days of MUNUR, you will find in each committee not only a place for negotiation, analysis, and debate, but also you will find an opportunity to grow personally and professionally. I hope that this experience inspires all of you to keep evolving into leaders who change lives as well.

Wishing you the best of luck in this journey. And, lastly, I invite you to live this edition with passion, respect, and always be open to learn new things.

With love and admiration,
Sofia Prada Pachón.

WELCOME LETTER



GENERAL SUB-DIRECTOR
ISABELLA CUARTAS



Dear delegates,

Welcome to MUNUR XVI, a place where you will have the opportunity to challenge yourselves and discover the strength that each of your voices has. Here, every intervention counts, every argument transforms, and each one of you is essential to make this edition as unique and marvellous as ever.

As General Sub-director, for me it is a privilege to have you in this 16th edition that we have prepared carefully and full of love. I firmly believe that we learn the most when we get out of our comfort zones, when we debate with respect, and when we listen before answering. MUNUR is not about perfection; it is rather a safe place where you can feel free to make mistakes, rethink your ideas, and grow into a better version of yourself.

We want every single detail to speak for itself, and for every committee to come to life. Each decision we have taken, from logistics to academics, reflects our wish for all our attendees to feel motivated, supported, and valued. Because MUNUR will not be anything without each one of you, it is your ideas and your passion that give sense to this project. You are not here only to represent a delegation or a university; you are here to leave a mark, to inspire, and to be inspired. I hope that after these 4 days, you will remember your experience, for your performance, and for the new things you discover about yourselves.

Thanks for being here, for believing in us, and for being part of MUNUR XVI.

I wish you the best of luck and hope that you will enjoy every part of this model that was made with love, curiosity, and with our whole hearts.

With love,
Isabella Cuartas Gómez

WELCOME LETTER

USG FOR UNITED NATIONS

HANNY JAIME ROMERO



Dear Delegates,

It is a great honour to welcome you to MUNUR XVI. First of all, my name is Hanny Jaime Romero, and I currently have the privilege of being the Under Secretary General of the United Nations Committees in MUNUR.. I study Anthropology at the Universidad del Rosario, and this career has personally allowed me to explore how our similarities and differences create the richness of our humanity.

My adventure in the Models of United Nations began two years ago out of a pinch of curiosity. Then, in a short time, my curiosity became a passion that has not only nurtured my personal and academic growth, but has given me the gift of a family of which you are now a part. This year, as part of this great event, I want to extend to you the same warmth and trust that I once received. My commitment will be to guide you into passionate and collaborative discussions that enrich our perspectives.

With this in mind, I invite you to consider this model not just as a space for competition but as a transformative journey where our differences will be the basis for building common ground. I expect from each delegation the utmost respect and professionalism, but also a share of creativity and openness. Here, we will face global challenges from a microcosm where cooperation is essential. Let us dream of a better world and work to realise it during these days of discussions.

Lastly, I thank you for your enthusiasm and dedication. Remember that I am at your service for any questions or needs you may have. You are the protagonists of this story, and together we will write a memorable chapter.

With warm regards and best wishes for your success,
Hanny Jaime Romero

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A woman with long brown hair, smiling, is seated in a red leather chair. She is wearing a dark grey jacket over a red sweater and a white collared shirt. Her hands are clasped in her lap. The background features wood-paneled walls, a large window with red curtains, and a framed portrait on the wall to the left. A small portion of a red flag with a crest is visible on the far left.

WELCOME LETTER

USG FOR UNITED NATIONS

SILVIA ESCUDERO



Dear delegates,

I am honored to extend you the warmest welcome to this edition of MUNUR XVI. My name is Silvia Escudero, and I am privileged to accompany you as USG of the United Nations. I am currently a Law student at Universidad del Rosario, with a deep interest in Public International Law and Commercial Law. Beyond the academic world, I am passionate about Formula 1, romantic comedies, and literature. I also find refuge in the kitchen, where I enjoy preparing delicious desserts.

For me, MUNUR is a vast adventure. We face a challenge that may seem overwhelming at first, but we do so with courage and, above all, with a passion for Models of United Nations. In essence, MUNUR challenges us both academically and personally, and that is precisely the magic that makes it a unique experience.

Two years ago, I had my first experience in this model, precisely in this USG, as a delegate in a duo with the person who is now my incredible co-USG, Hanny. At that moment, neither of us imagined that two years later, we would be back in the same USG that brought us together, discovering that we were not only a great duo but also great friends.

This USG represents the commitment and passion I have not only for the United Nations committees but also for the topics discussed in them. Many may think that in these spaces, we simply “pretend” to save the world, but in reality, this is where we prepare to become the world’s future leaders.

Throughout my journey in this MUN world, I have learned from every committee I’ve been part of, and I hope that you too will make the most of this experience. During these four days, I hope you enjoy each academic discussion, fully explore the potential of your assignments, and understand the profound relevance of these committees. An unforgettable experience awaits us. See you in November!

Best wishes and regards,
Silvia Escudero

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WELCOME LETTER

Dais
Danna Calvo



Hello, everyone! My name is Danna Calvo, I'm 18 years old, I'm currently in my third semester of law at the Universidad de Los Andes, and I'm very excited to be your Dais for the Commission on Science and Technology for Development in this edition of MUNUR XVI.

CSTD is a committee that guides the biggest and most discussed topic nowadays, the global policies in science, technology, and innovation. It promotes international cooperation and ensures the safe, fair, and effective development of the subjects, which will be the center of debate, fair technology transfer, protection of intellectual property, and regulation of emerging technologies, among others.

A balance between innovation, ethics, and accessibility for global progress is imperative; this is why restoring this balance will be your main goal, ensuring that technological advances serve humanity equitably, responsibly, and sustainably. As science and technology continue to evolve at a rapid pace, solutions and responses that will act at the same pace as they evolve are very much needed.

I expect delegates to debate with character and confidence, for them to be able to have clear ideas and a stable position which no one can take away from them, delegates who completely own their roles, always having in mind respectfulness and professionalism. Also, as a reminder, the ideas you present shall be completely yours; remember, you are the ones to seek a change for the world in the future.

Best regards, and welcome to MUNUR XVI!

Danna Calvo
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WELCOME LETTER

Dais
Sara Velilla



Hello, delegates. My name is Sara Velilla, I am twenty years old and I'm a student from Universidad del Rosario majoring in International Relations. I have participated in MUNs for three years now, so I am eager to assist you in any way needed. Nonetheless, I am also excited to learn from all of you and my fellow Dais.

In a changing world, we have to live with unexpected and rapid developments such as that of science and technology. It is only fair that countries, companies and individuals come together to debate the future of our species as affected by these inventions– as many societies around the globe are highly reliant on them. That is why the Commission on Science and Technology for Development (CSTD) is a key space for present and future deliberations in the international community.

CSTD is a committee that demands both scientific and socio-cultural knowledge. It is important to keep such a premise in mind because the problems we evaluate are complex and multi-dimensional. On top of that, it is impossible to analyze the impact of science without observing the human variable as well: what are the needs of communities and their response to available technologies?

To sum it up, I expect a very academic debate supported by facts that fuel innovation and critical thinking. However, another aspect of great importance is to remain diplomatic. That is, to respect and honor the humanity of others while also fulfilling your own objectives. At the end of the day, we are all here to improve our abilities and train for the future.

Without further ado, I am always willing to help you out with any inquiry. Good luck!

Sara Velilla
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WELCOME LETTER

Dais
Alejandra Lecaros



Dear delegates,

It is with deep pride and renewed excitement that I welcome you to the Commission on Science and Technology for Development (CSTD) at MUNUR XVI. My name is Alejandra Lecaros Talavera. I am a Peruvian law student pursuing a double degree in business, and this will be my second time at the Universidad del Rosario—a place that continues to feel like a second intellectual home.

This committee and this topic are not for the faint of heart. But you didn't sign up for ordinary. As members of the CSTD, your responsibility goes far beyond the drafting of resolutions. You are being called to interrogate the technological, economic, and legal frameworks that shape today's global problems. We are not merely asking **what** happens; we are asking **how, why, and at what cost**.

This committee is, by nature, technical. But do not confuse technicality with rigidity. Here, research is power, but creativity is currency. You will be invited to explore how science and technology can become either instruments of control or tools for accountability. As Kofi Annan once said, The world is not ours to keep, but to steward. That stewardship, in today's geopolitical landscape, involves bold thinking, uncomfortable truths, and interdisciplinary solutions. This is where you come in.

MUNUR is not just a conference; it's a laboratory of ideas, and this committee is one of its most intellectually demanding—and rewarding—spaces. I encourage you to approach it not only with diplomatic poise but with scientific curiosity and ethical clarity. I cannot wait to see how you challenge each other, collaborate across ideologies, and elevate the debate to the standard this committee deserves. I'll be right there with you—guiding, listening, learning, and, undoubtedly, being amazed.

So welcome, once again, to the CSTD. Welcome to MUNUR. Let's make this not just an unforgettable committee, but a truly transformative experience.

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The protection of intellectual property in technology transfer is crucial for achieving the Sustainable Development Goals (SDGs) worldwide. It is rather obvious that intellectual property law cannot be breached; however, in a rapidly growing world, it is urgent to find mechanisms that enable technology transfer in areas where it is needed and in times when it is most urgent. This guide explores the context in which these new proposals must take place: taking into account globalization, legal aspects, and the changing needs of communities.

On the other hand, gene editing technologies are growing in popularity among the scientific community. Lacking a binding treaty that regulates the matter internationally. It is up to each country to produce domestic laws regarding germline and somatic gene editing. The current debate reviews the role of international organizations and the possibility of international legislation to counter the negative implications of gene editing technologies, especially at a socio-cultural level.

Key words: intellectual property, technology transfer, gene editing, legislation



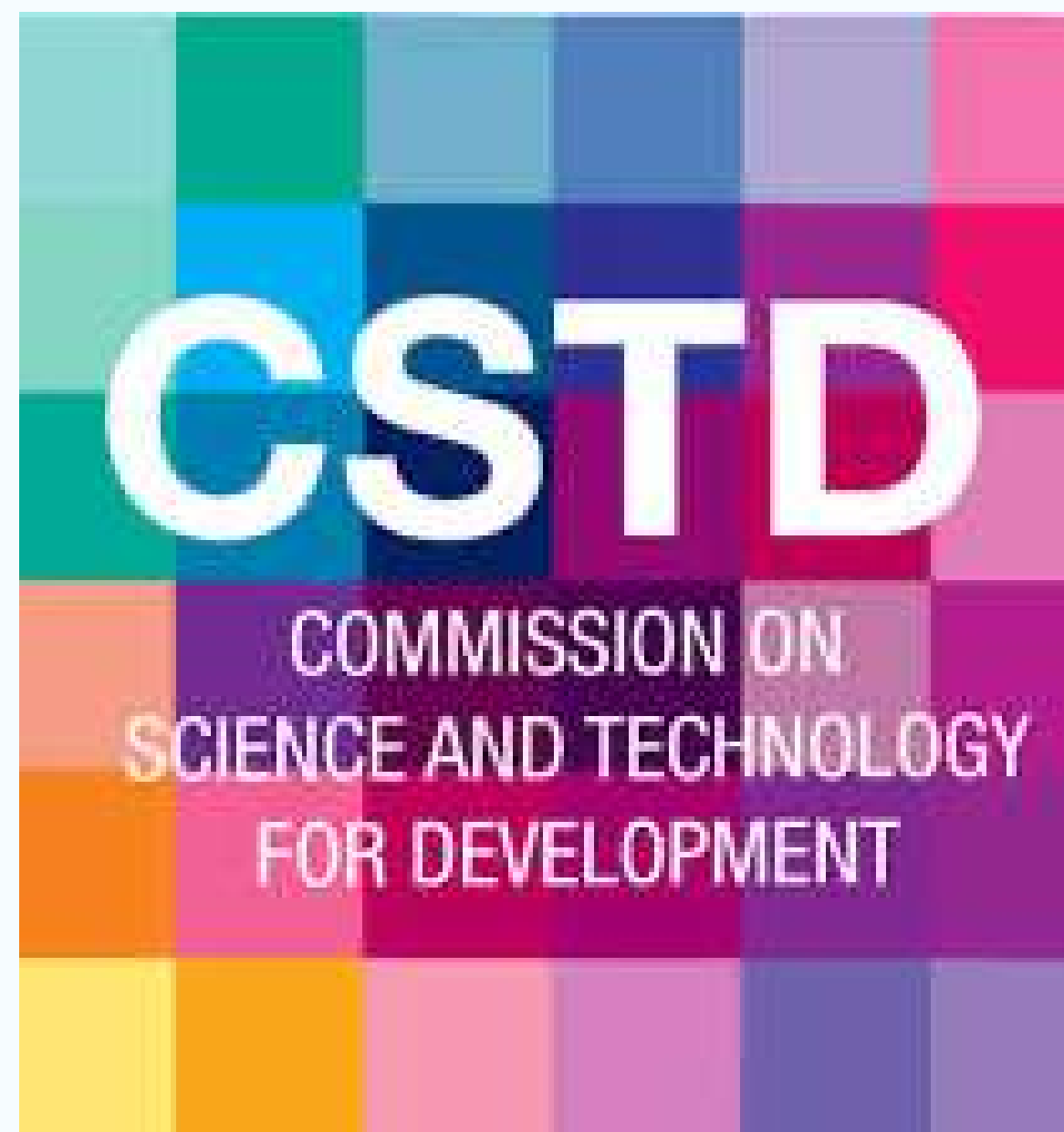
ABOUT THE COMMITTEE

The United Nations Commission on Science and Technology for Development (CSTD), is a subsidiary body of the United Nations Economic and Social Council (ECOSOC), which in turn is one of the main organs of the United Nations General Assembly (UNGA). The CSTD was established in 1992 with the purpose of providing high level advice on issues concerning evolving technologies and science. Currently the CSTD focuses primarily on providing assistance towards sustainability goals in the 2030 Agenda to UNGA and its subsidiary bodies.

INTRODUCTION TO THE COMMITTEE

The commission and its 43 members meet in annual regular periods in substantive sessions; it also holds meetings to address specific issues related to science and technology. Every four years, ECOSOC chooses the fee for members with the following criteria:

- 11 African States.
- 9 Asian States.
- 8 Latin and Central American States.
- 5 Eastern European States.
- 10 States from other regions of the world.



taken from: GIP Platform

The secretariat of the UNCSTD is handled by the United Nations Conference on Trade and Development (UNCTAD). The Secretariat is the maximum figure of the CSTD, in charge of:

- Organizing the CSTD annual meetings and other sessions.
- Manage international cooperation and communication between member states.
- Provide analysis and reports.
- Prepare annual technical reports and recommendations for ECOSOC.



In conclusion, the CSTD is the highest-level advisory committee for ECOSOC. The committee only has advisory power, however, its guidelines and reports are used by the General Assembly and all adjacent organs and committees in the process of creating global initiatives, for example, in the 2030 Agenda of Sustainable Goals, in which the CSTD played a major role in developing.

COMMITTEE HISTORY

The Commission on Science and Technology for Development (CSTD) was established in 1992 by the United Nations Economic and Social Council (ECOSOC). The purpose of its foundation was to provide high-level advice on science, technology, and innovation (STI) policies, particularly in relation to economic and social development. The commission was devised in response to the growing recognition that technological advancements were key drivers of global progress, but their benefits were not equally distributed among nations.



taken from: Pinterest

Since its creation, the CSTD has played a critical role in shaping international policies on technology transfer, intellectual property rights, digital inclusion, and sustainable development. It has been essential in monitoring and supporting the implementation of the World Summit on the Information Society (WSIS) outcomes, particularly regarding internet governance and access to information and communication technologies.

Over the years, the CSTD has expanded its focus to include emerging technologies such as artificial intelligence, biotechnology, and gene editing. It continues to serve as a platform for global dialogue, bringing together policymakers, scientists, and industry leaders to ensure that technological progress aligns with ethical, economic, and social goals.



COMMITTEE COMPETENCE

Resolution 34/218 (1981) and resolution 46/235 (1992) of the General Assembly established the legal and thematic mandate for CSTD. The principles of the mandate have been adapted through the years, but the nature of the Commission remains the same: **an investigative and advisory subsidiary organ** that reports to the Economic and Social Council (ECOSOC) and the General Assembly.

The core mandates are, therefore:

“The examination of science and technology questions and their implications for development, as well as the advancement of understanding of science and technology policies, particularly in respect of developing countries.”(UNCTAD, n.d.)

The formulation of recommendations and guidelines on science and technology matters within the United Nations system” (UNCTAD, n.d.).

“Forge links between itself and national science and technology bodies in each country, to promote networking, share national experiences, facilitate information flows and increase the impact of the commission’s work” (ECOSOC, 2004).

Regarding the thematic mandate, CSTD reviews topics such as, but not limited to:

- **Inclusive social and economic development:** This includes the debate around the obstacles that developing countries face when accessing new technologies. For example, the digital divide entails closing the gap in access to Information and Communication Technologies (ICTs).
- **Frontier technologies:** The primary debates center on the use, adoption, and adaptation of groundbreaking technologies. For example, implementing efforts towards using AI as an accelerator of inclusive SDGs progress, with the challenges it poses, and evaluating its impact in development programs (DiploFoundation, n.d.).



As previously mentioned, CSTD is merely investigative and advisory and does not hold decision-making power. This means that the resolutions emitted by CSTD are not binding, they are instead considered guidelines and recommendations for other organs.

CSTD comes together in an annual meeting that includes Member States, observer states, civil society, and private sector actors, among others. For each annual meeting, two priority themes are chosen for discussion. The outcome of the debate shall be: two resolutions– one for each topic– and a general report of the deliberations that took place. According to the rules of procedure, only the 43 chosen Member states for CSTD have a vote in the passing of the resolutions, while the other already mentioned participating stakeholders only have a voice. The final documents of the annual meetings of CSTD are prone to being submitted as draft resolutions in future ECOSOC sessions.

CSTD holds intersessional panel meetings as well. They gather technical experts and policymakers to discuss the chosen topics for the annual session in advance. The objective is to gather a technical and research-focused overview, rather than public feedback. No resolutions are expected as an outcome of these panels– just recommendations and data reports that will be deliberated upon during the annual CSTD session. In other words, the panels provide the academic foundation of CSTD decisions.

Open consultations are another space of debate facilitated by CSTD. The objective is to gather public input, as all stakeholders can participate: from Member states, to UN bodies, and civil society. The themes to be discussed do not have to be related to the two topics chosen for the annual session, they can involve broader questions within technology and science trends. Open consultations take place just before the CSTD annual session.



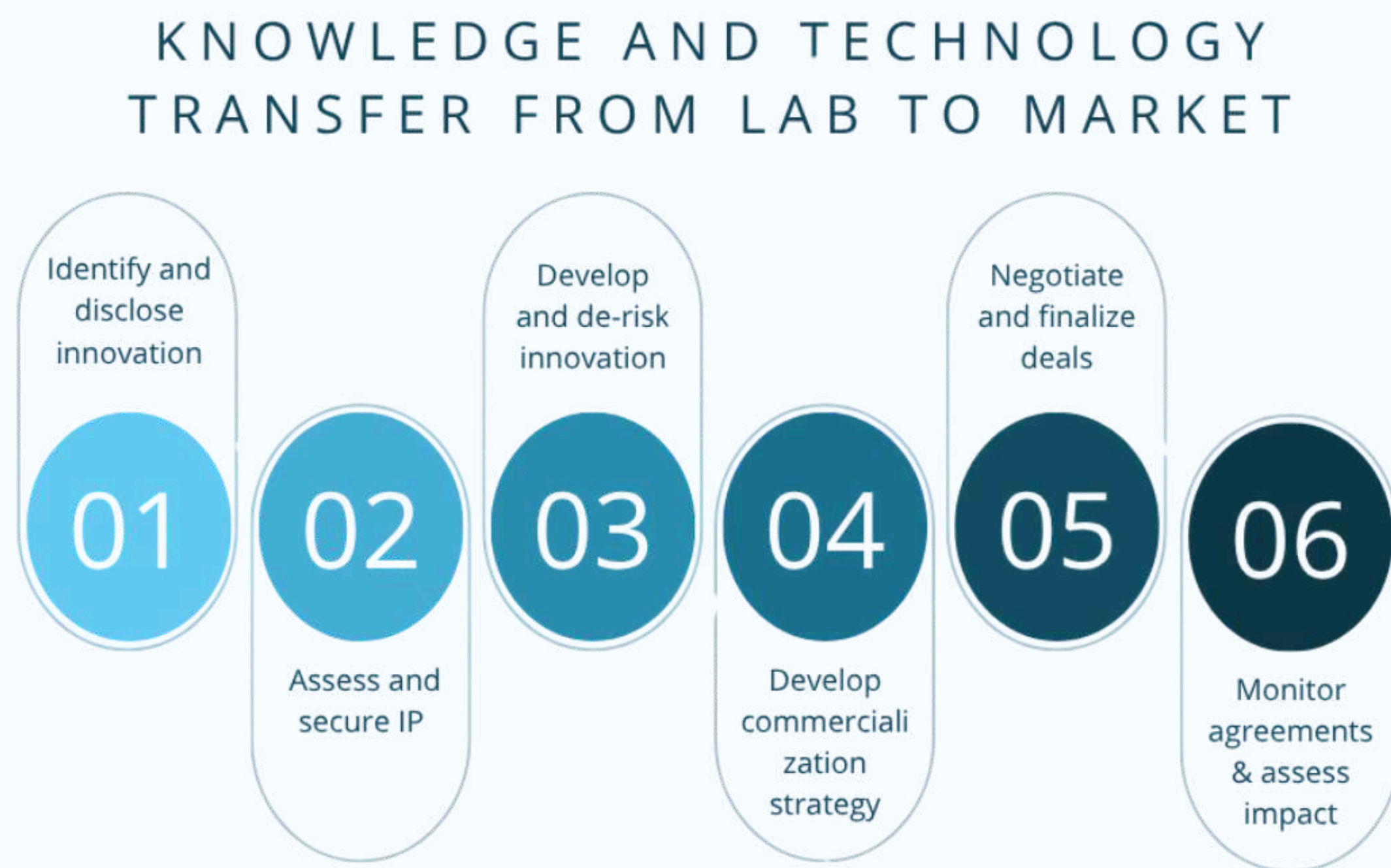
TOPICA

*Protection of
Intellectual
Property in
technology
transfer*

INTRODUCTION TO THE TOPIC

Before diving into the topic, it is important to understand the two main concepts involved. Intellectual Property (IP) refers to “**creations of the mind that can be legally owned and protected**” (University of Melbourne, 2023). In the context of CSTD, this translates to scientific discoveries, technological inventions, databases, and manuals, among other things. **Knowledge and Technology Transfer (K + TT) allows private and public users to buy or license the property rights and abilities to emulate or copy creations of the mind.**

For UNIDO (United Nations Industrial Development Organization), the transfer of technology and knowledge is a key for development, as it allows Least Developed Countries (LDCs) to get and use better equipment and techniques. According to the WIPO, there are specific steps that should be followed to achieve an effective K + TT:



Steps according to the World Intellectual
Property Organization (WIPO)

Own creation. Data taken from WIPO

Least developed countries (LDCs) with early stages of industrialization sometimes lack the innovation or production capabilities to foster technological growth (Kim, 2003). That is why K+TT, many times foreign technology, is a major solution to fill in the local gap.

There is a growing international concern because, according to UNCTAD, the technological gap between nations in the world is growing and threatens to leave entire populations behind in terms of access to technology. To sum it up, K + TT is vital, but it must be done respecting the intellectual property rights of the inventions and tools being transferred. Similarly, K + TT involves a financial retribution to creators. That is why protecting intellectual property rights is key in this process, as it encourages organizations, institutions, laboratories, and universities to keep investing in research.



How prepared are countries for frontier technologies?

A ranking of 166 countries' readiness to use frontier technologies



taken from: UNCTAD (2023)

This index shows how much a country is prepared for frontier technologies (the most advanced technology that can help humans to solve global problems). It creates a ranking of 166 countries based on five criteria: ICT deployment, skills, research and development (R&D) activity, industry activity, and access to finance.

As you can see, most developing countries are lower in the ranking, demonstrating the difficult access and capabilities to use or implement this type of technology by themselves.

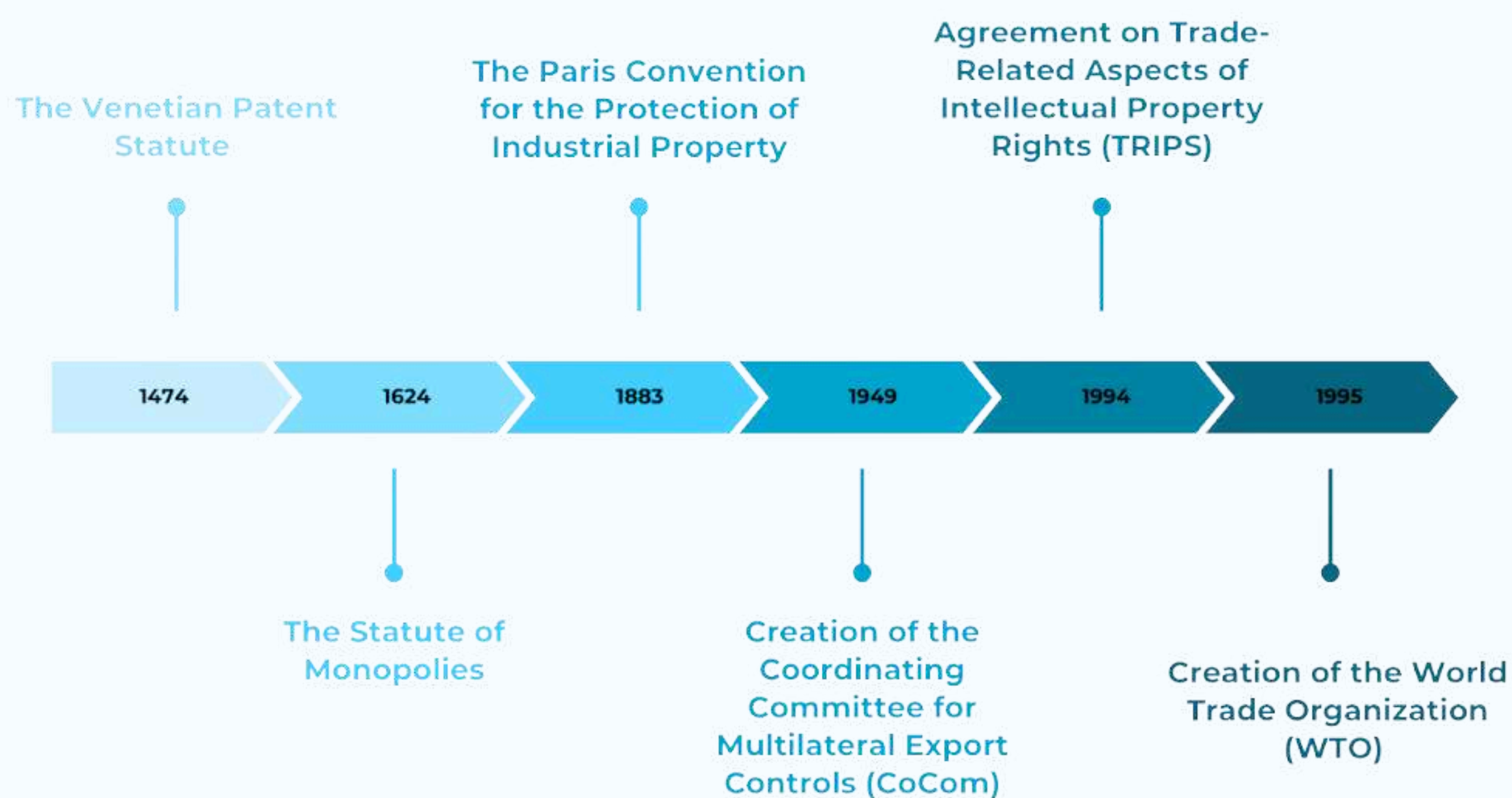
There are several challenges that the CSTD must approach. First, regarding the so-called 'tech monopolies', which occur when a single company holds the property rights of a certain product (Monash Business School, n.d.). This is opposed to open-source models, which allow public access to technology. In the second place, CSTD must evaluate the implications of the technology gap in different regions of the world, address its causes, and devise multilateral solutions. Finally, and perhaps most importantly, countries all around the world must have minimum conditions to protect intellectual property rights. Legal agreements, such as those of the Trade-Related Aspects of Intellectual Property Rights (TRIPS), attempt to regulate these minimum conditions, but still face several challenges

regarding efficiency in their enforcement. At the same time, flexibilities in the TRIPS Agreement have also been proposed to facilitate access to frontier technologies. The task is to find a balance between the protection of IP and equitable technology transfer.

HISTORICAL CONTEXT

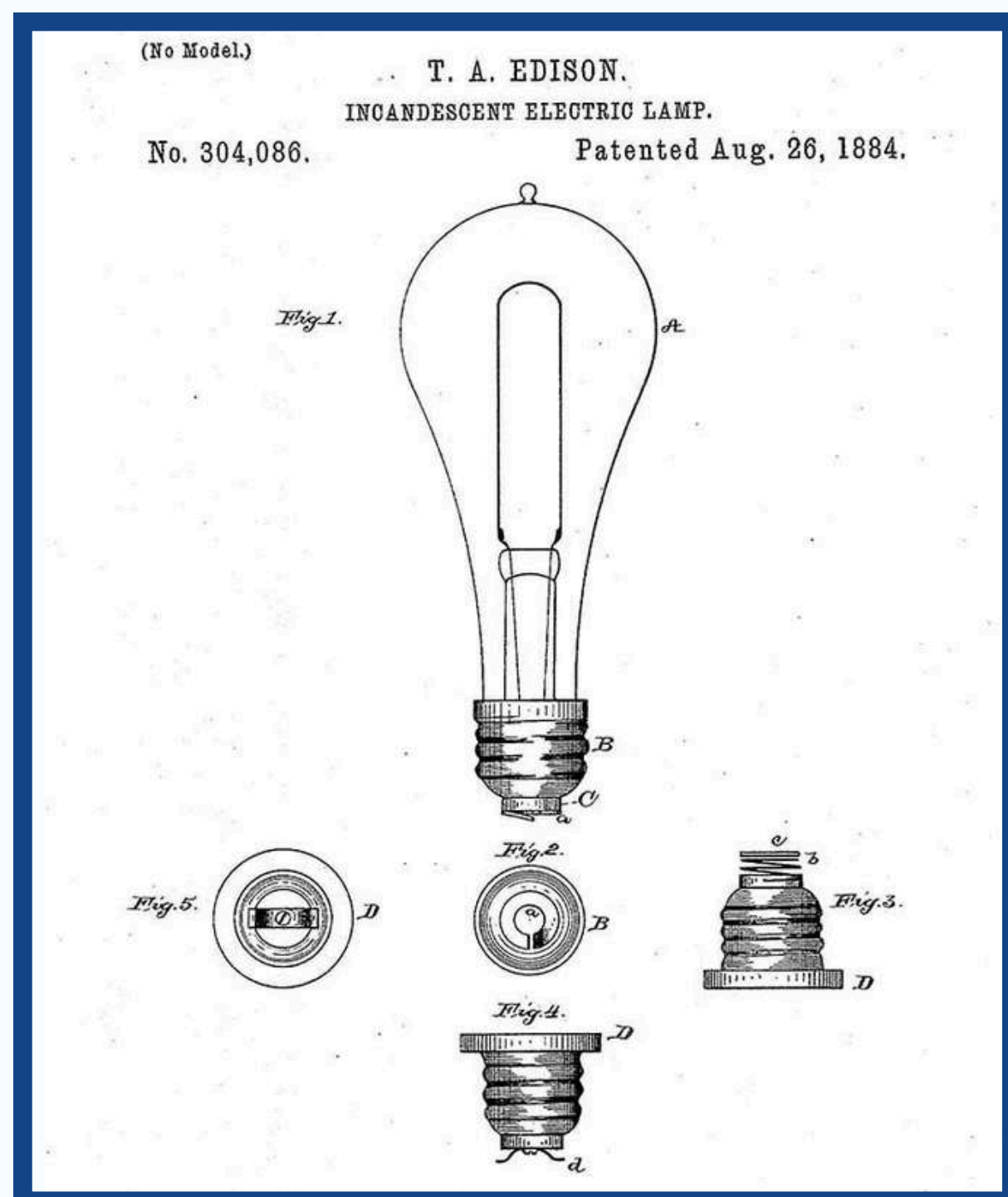
Intellectual property (IP) protection in technology transfer has evolved in response to historical, political, economic, legal, and social developments. Additionally, intellectual property rights (IPRs) play a crucial role in innovation and economic growth, but also pose challenges for equitable access to technology, particularly for developing nations. This section provides an overview of the historical context of IP protection in technology transfer, highlighting key milestones and geopolitical shifts that have influenced international policies.

Early Intellectual Property Frameworks and Industrialization



Own creation.

The concept of intellectual property dates back to ancient civilizations, where artisans and inventors sought recognition and rewards for their creations. The Venetian Patent Statute (1474) is considered one of the first formal laws granting exclusive rights to inventors. The Statute of Monopolies (1624) in England further refined the legal foundation for patents.



During the Industrial Revolution (18th-19th centuries), technological advancements, such as mechanized production and steam power, intensified global competition. Countries like Britain, France, and Germany sought to protect their innovations through national patent laws, while the United States and Germany engaged in technology appropriation to accelerate their industrialization. The Paris Convention for the Protection of Industrial Property (1883) was a landmark treaty that enabled inventors to seek patent protection in multiple countries, laying the groundwork for modern international intellectual property (IP) law.

20th Century: National Interests and the Cold War

Technology transfer became highly politicized, particularly in the context of the Cold War (1947-1991). The United States and its allies implemented export control policies, such as the Coordinating Committee for Multilateral Export Controls (CoCom), to prevent the transfer of strategic technologies to the Soviet Union and its allies. Meanwhile, developing countries pushed for more equitable access to technology to foster economic growth and reduce dependency on Western innovations.

During the post-war economic boom, multinational corporations (MNCs) expanded their global operations, leading to increased debates over the role of IP protection in technology transfer. The emergence of newly industrialized economies, such as Japan and South Korea, highlighted the potential for strategic technology acquisition and adaptation to drive national development.

Globalization and the TRIPS Agreement

With the rise of globalization and the establishment of the World Trade Organization (WTO) in 1995, IP protection became a central issue in international trade. The Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), adopted in 1994, set the



minimum standards for IP protection across member states, strengthening patent laws and enforcement mechanisms. This agreement is also a legal recognition of the significance of links between intellectual property and trade (WTO, n.d.)

While TRIPS aimed to promote innovation and foreign investment, it also faced criticism for limiting technology access in developing countries. Nations such as India, Brazil, and South Africa advocated for more flexible interpretations of IP laws to support local industries and public health initiatives, such as the production of generic medicines.

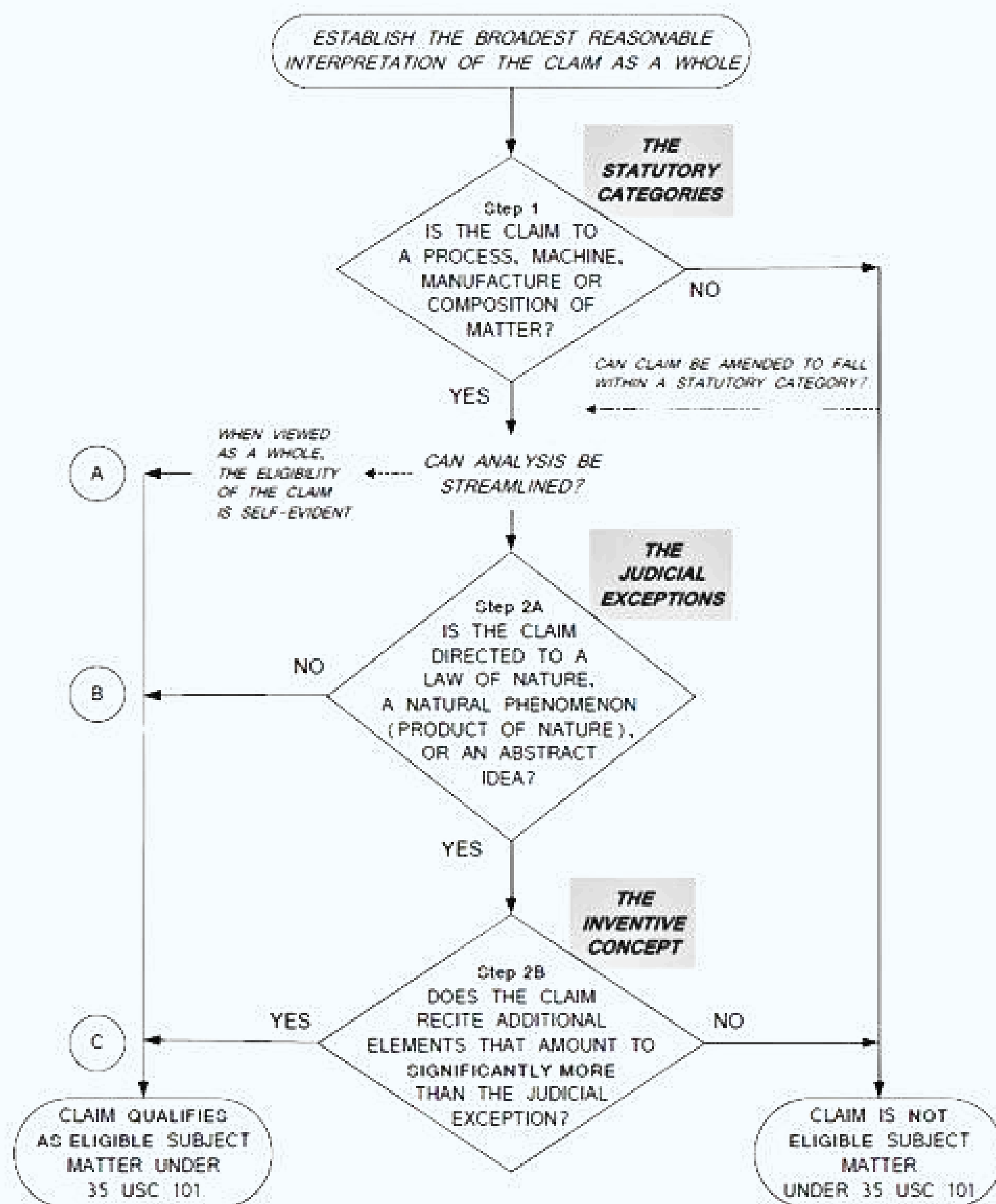
In conclusion, the historical evolution of intellectual property protection in technology transfer reflects a complex interplay of economic, political, and legal factors. While IP laws have promoted technological innovation and investment, they have also sparked controversies over equity, access, and national sovereignty. As emerging technologies continue to shape global dynamics, the debate over IP protection in technology transfer remains a critical issue in international relations, requiring a balance between innovation incentives and global development goals.

CURRENT SITUATION

The 21st century has witnessed increasing geopolitical tensions surrounding IP protection in technology transfer. The quick rise of China as a technological powerhouse has led to accusations of forced technology transfers, cyber espionage, and patent disputes. The U.S.-China trade war (2018-present) has intensified restrictions on technology exports, particularly in semiconductors, artificial intelligence, and telecommunications. A major step for China occurred with its WTO accession in 2001, leading to extensive revisions of its IP laws. This progress continued with the opening of China's first specialized IP court in 2014 and the release of the 14th Five-Year Plan in 2021, which made robust IP protection a national priority with ambitious goals. Most recently, the 2025 Promotion Plan for Intellectual Property Powerhouse Construction clearly defines specific tasks for strengthening IP protection.

Conversely, the United States, traditionally the "gold standard" for IP protections, has seen a steady erosion of its IP system over the last two decades. This erosion is attributed to key changes such as the Supreme Court decision in 2006 in *eBay v. MercExchange*, which weakened patent owners' ability to obtain injunctions. The Leahy-Smith America Invents

Act (AIA), passed in 2011, created the Patent Trial and Appeal Board (PTAB) with a lower standard for invalidating patents, which critics argue is exploited to harass start-ups. Furthermore, a series of Supreme Court decisions between 2010 and 2014 greatly decreased the scope of patent-eligible subject matter through the Alice/Mayo test. These changes inject significant uncertainty into the U.S. patent system, which critics argue hampers start-ups, reduces investment, and ultimately undermines innovation and international competitiveness. Subject matter considered patent-eligible in other jurisdictions like Europe and China, may not be in the U.S. due to Alice/Mayo. The sources conclude that poor policies and legal decisions in the United States are putting its key IP asset at risk. (Borges, 2024).



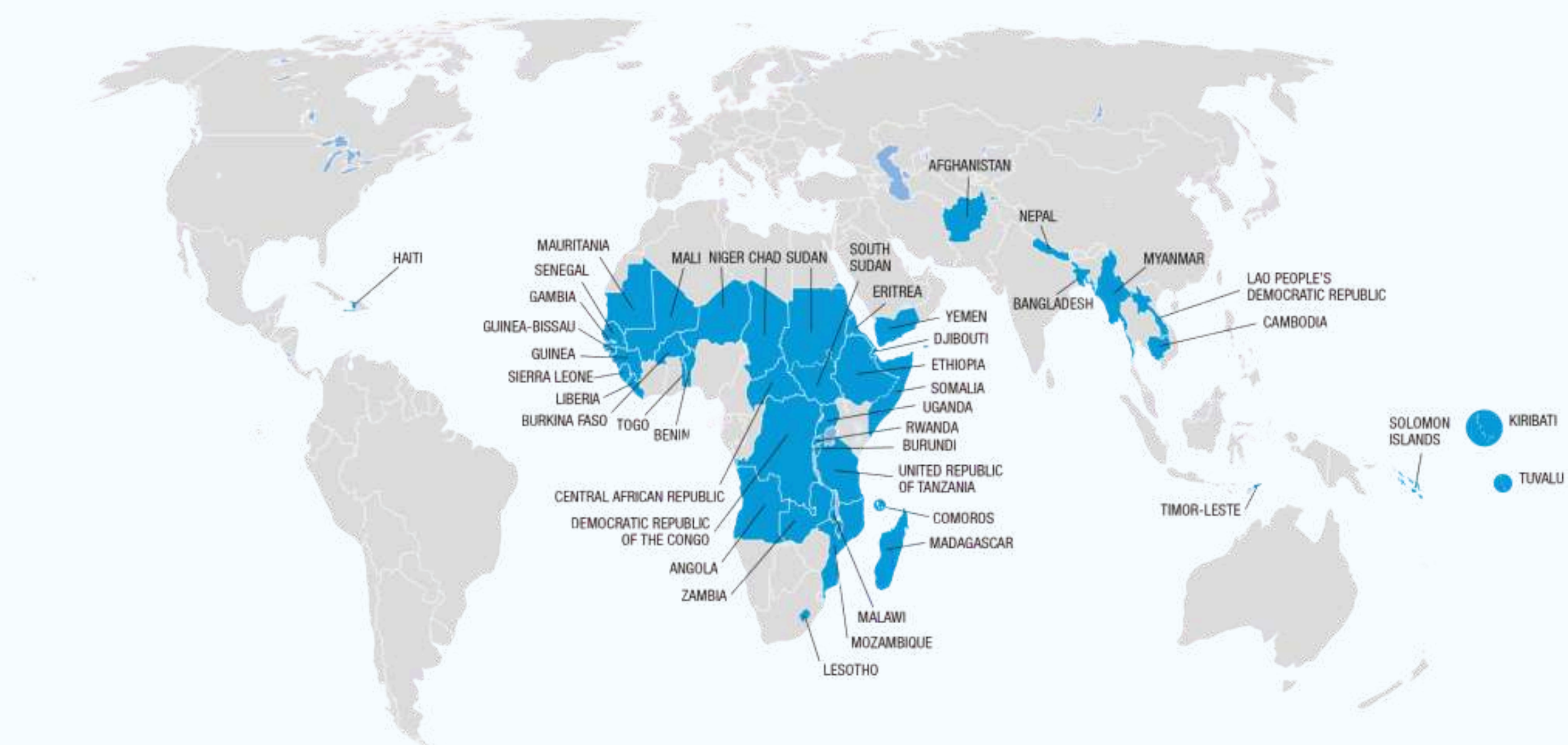
Taken from: Foley

Furthermore, global crises like the COVID-19 pandemic have reignited debates over patent waivers for life-saving technologies, particularly vaccines and medical treatments. The World Health Organization (WHO) and certain developing nations have called for temporary suspensions of IP protections to ensure global access to essential medicines. In contrast, pharmaceutical companies and some developed nations have resisted these measures.

The rise of open-source movements and alternative innovation models also challenges traditional IP frameworks. Many advocates argue for greater knowledge-sharing mechanisms, particularly in addressing climate change, global health, and artificial intelligence.

RELEVANT ACTORS

1. Least-developed countries



taken from: UNCTAD (2024)

As mentioned above, these countries are at a disadvantage in terms of technological innovation due to the resources needed for it. Still, they need different technologies for the welfare of their population. Therefore, agreements such as TRIPS take into account the differing positions in economic status, administrative capabilities, and technological base.

However, these countries still face problems in order to achieve the agreements, primarily because implementing TRIPS standards can incur significant costs, diverting scarce resources, and resulting in increased payments to developed world rights-holders, effectively a transfer of wealth. Ultimately, the agreement's structure is seen by some as stemming from a Western corporate-driven interpretation of IP, potentially tilting the balance too far toward private gain at the expense of the public good, and working more as a rent extraction device for large corporations rather than a balanced tool for global development. In short, in order to achieve the TRIPS standards to the required level, these countries take away scarce resources from other sectors.

2. Developed countries

They usually possess suitable levels of IPR protection. Furthermore, they get the most benefit from the TRIPS. As a consequence, these countries create a tech monopoly. Therefore, those who belong to these countries tend to have a higher quality of life due to the benefits they have. It is necessary to remember that the importance of IPs is reflected in key aspects of life, such as medicines and the provision of health care.

3. Companies

Although this actor is not normally included in the debate, it is necessary to remember its importance in the research, production, and distribution of knowledge, goods, and services that are later debated. A key point to keep in mind is the way in which intellectual property rights allow companies to recover the costs invested in the production of a given technology.



taken from: The Conversation

IMPORTANCE OF THE TOPIC

Access to technology is vital for the completion of the 2030 Sustainable Development Goals, as IP and K + TT are key actors in sectors such as communications, global health, climate change, among others. For example, according to SDG Knowledge Hub, in 2023 half of the world's population still had problems accessing the Internet. This is a tremendous obstacle for development, considering it creates a big gap regarding accessibility of knowledge, which creates a disadvantage towards the development of skills, access to education of quality and being included in society matters.

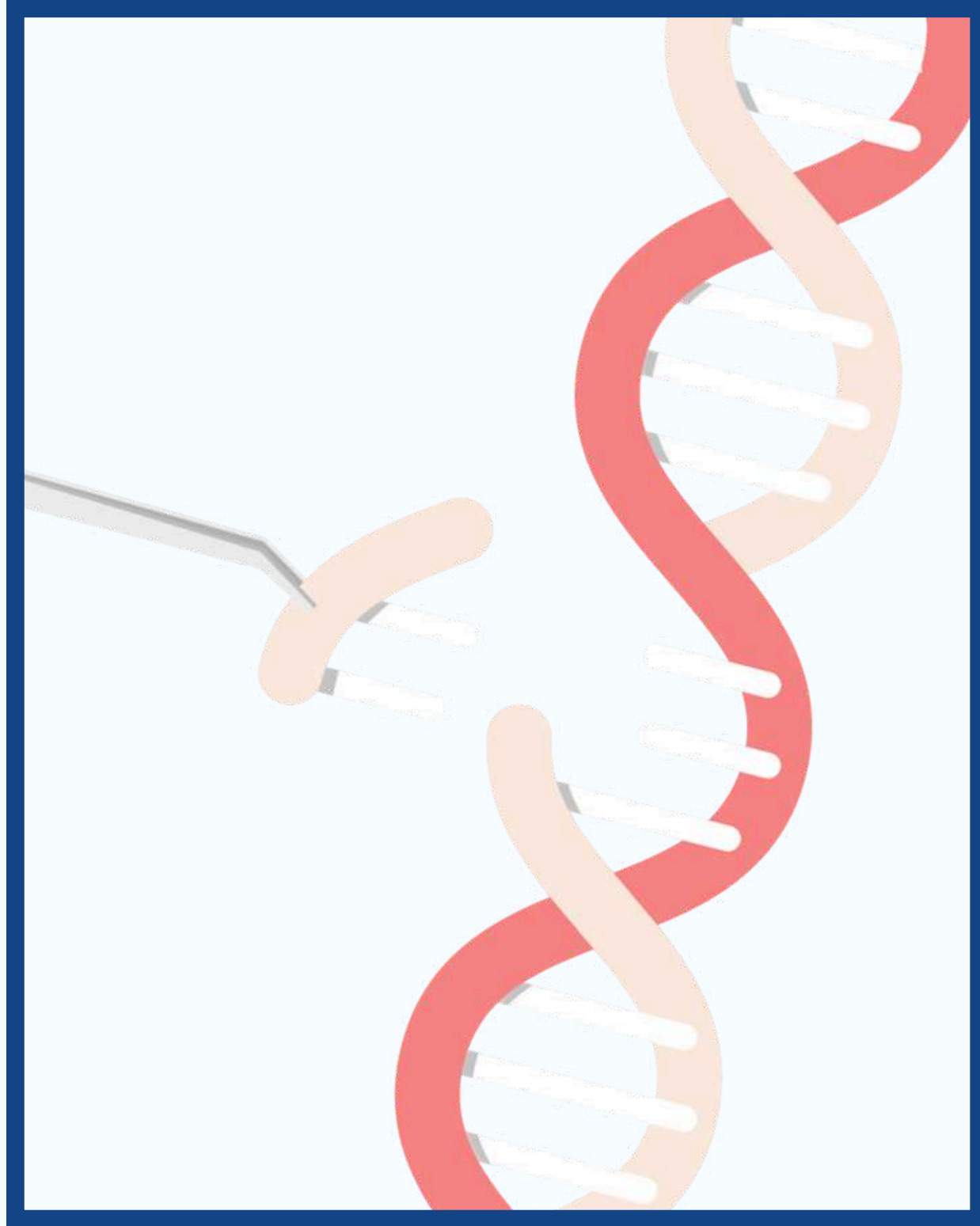
On top of that, an appropriate management of K + TT brings several advantages to all stakeholders in the process. If diffusion of a technology increases, improvements will be suggested and implemented quicker because more experts are working with said creation. This also “enables the disclosure of secrets to speed up and enhance innovation” (Mages, 2014). To sum it up, innovation with K + TT is vital for the functioning of many societies around the globe.

TOPIC B

regulation on gene editing technologies



INTRODUCTION TO THE TOPIC



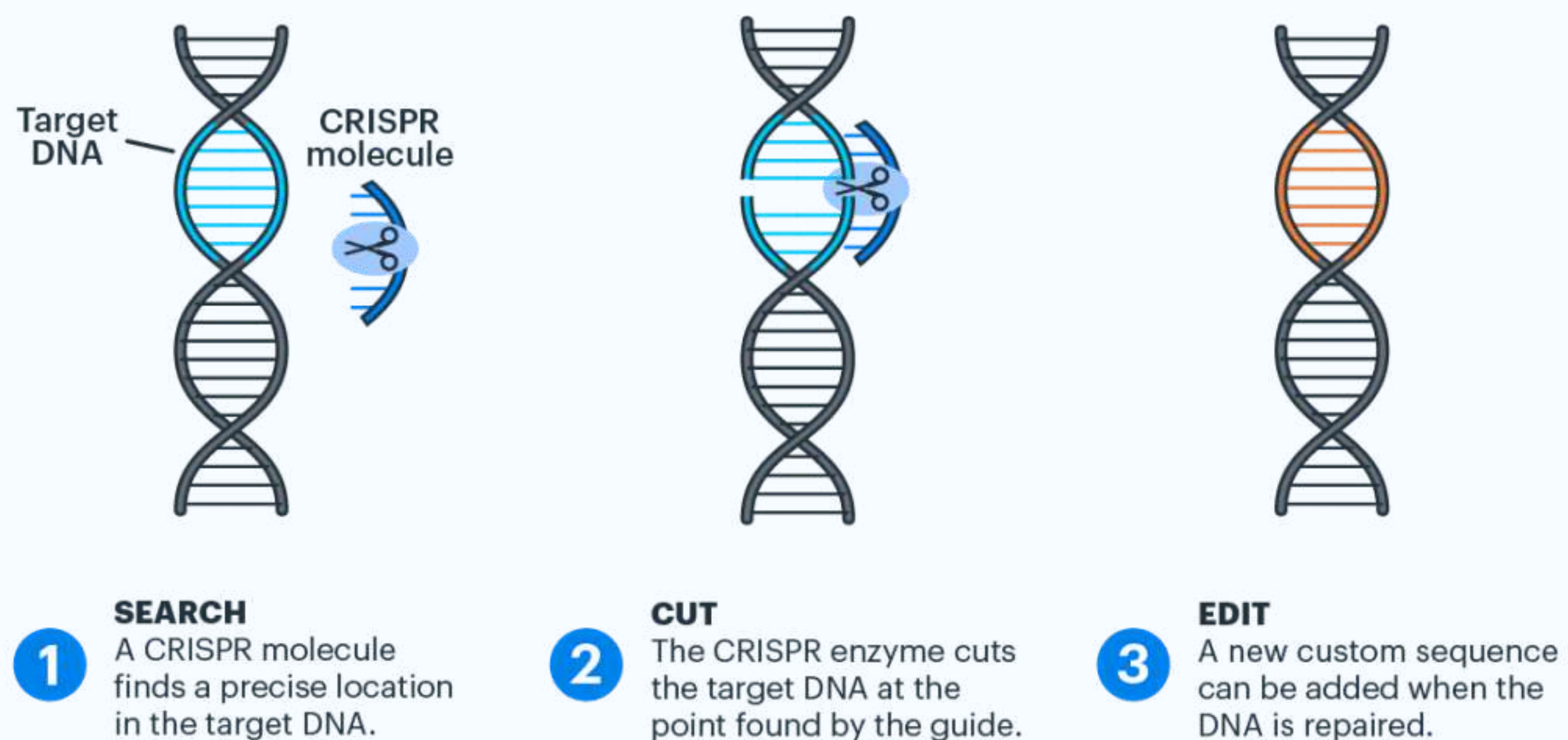
taken from: University of California San Francisco

Gene editing or genome editing is “used to correct, introduce or delete almost any DNA sequence in many different types of cells and organisms” (Gene Editing – Digital Media Kit, 2019). It is important to remember that in the case of humans, DNA sequences are coded in the chromosomes and mitochondrial DNA, or MtDNA found within each cell (Genome, n.d.). This entirety of genetic material is called the genome. Therefore, the genome contains all the instructions for vital functions of the body and hereditary traits, determining at the same time the absence or appearance of genetic disorders.

Gene editing allowed scientists to modify detailedly what had always been unmodifiable, but with great power comes great responsibility. These gene editing technologies can prevent or cure genetic disorders, among other things, but without strict regulations, they can cause great damage to the natural balance that governs genetic processes. For example, among the debated uses of gene editing technologies involves modifying embryos without full knowledge of the consequences this can entail for future generations (Rogers, 2023).

As of 2025, there is no meaningful or binding international treaty or convention that regulates this issue. The allowed and prohibited uses of gene editing vary according to each country’s legislation and the type of editing. Germline gene editing regarding modifying sperm, eggs or embryos. In most of the world, this technique is banned for clinical purposes, but it remains unclear if the prohibition applies for research as well (Genetic Literacy Project, n.d.). On the contrary, somatic editing focuses on modifying non-reproductive cells and affects only the treated individual. This type of editing is highly regulated in most of the world as well, but more permissive: as there are somatic therapies available and ongoing clinical trials that use them.

As of now, the most popular gene editing technology is the CRISPR/Cas9. In short, CRISPR/Cas9 imitates a natural mechanism by which DNA can be cut and genes can be removed or introduced (Fliesler, 2022). Nonetheless, it is pertinent to address the risks this type of technology can entail. Among them, errors in DNA coding that can lead to mutations in the long term and future generations if done through germline editing.



taken from: Innovative Genomics Institute

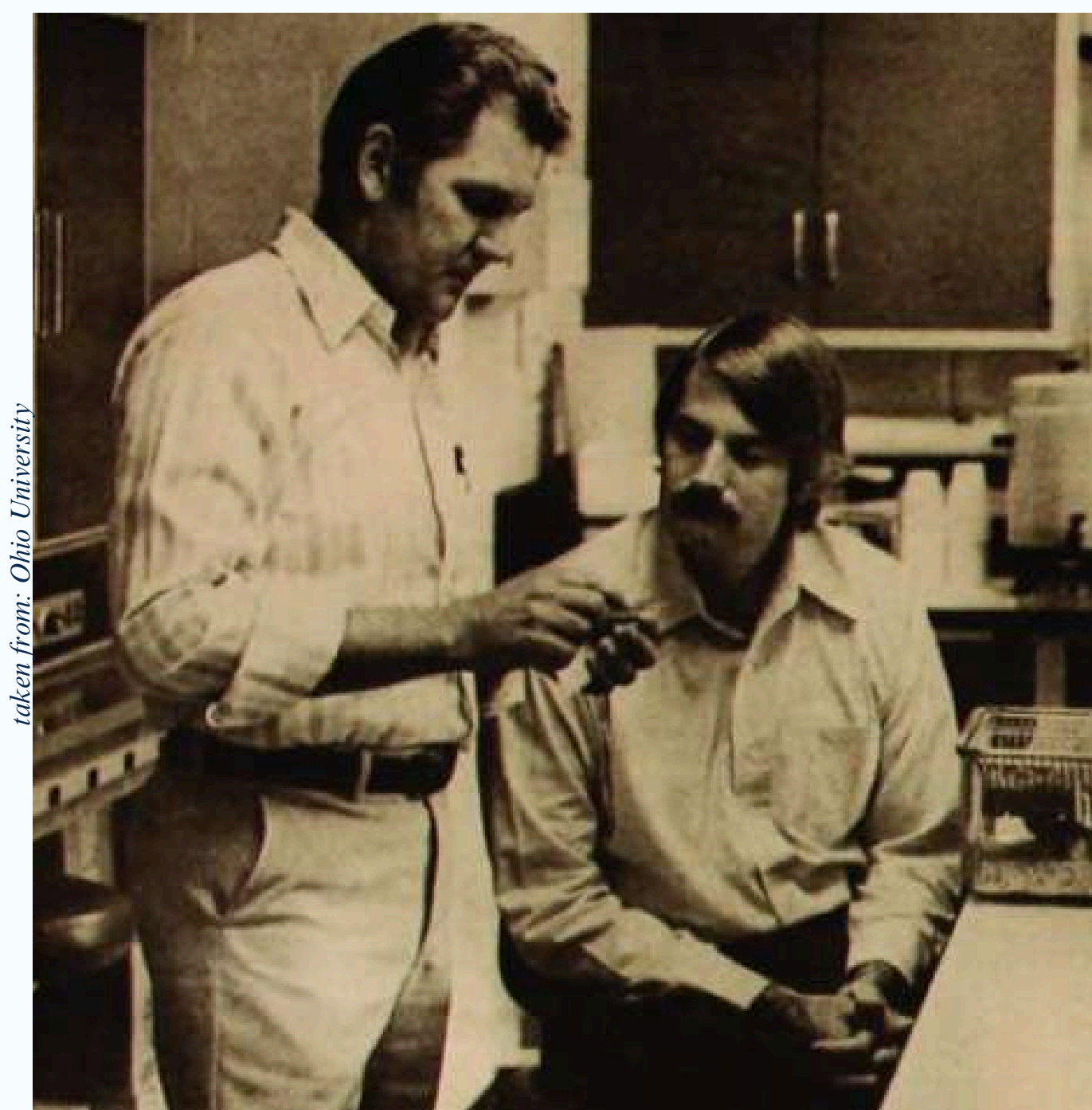
HISTORICAL CONTEXT

The political regulation of gene editing has been shaped by the dual imperatives of promoting scientific innovation and safeguarding public interests. Many governments have faced pressure to position themselves as global leaders in biotechnology while managing public concern and ethical risks. International political debates, especially within the United Nations and the World Health Organization, have emphasized the need for inclusive governance frameworks that reflect both scientific capacity and ethical responsibility. The CSTD has served as a platform for dialogue on the developmental and regulatory challenges posed by new technologies, with developing countries frequently advocating for policies that ensure equitable access and prevent technological domination by wealthier nations. In this sense, we will briefly explain the road of genetic engineering and how it has affected our world today.

Evolution of Gene Editing Technologies

Following the discovery of the double helix of DNA by Rosalind Franklin, James Watson, and Francis Crick in the 1950s, the development of genetic engineering accelerated and gained widespread adoption within the scientific community. First, during the 1960s, scientists started to discover multiple important elements and processes, such as DNA ligases, restriction enzymes, and identify target genes that would eventually lead to the development of the CRISPR technology.

In 1971, the scientist Paul Berg succeeded in creating recombinant DNA (rDNA) from more than one species (synthego, n.d.), where he cut the DNA from two types of viruses, then linked them together by incubation. Paul's work allowed scientists to finally create rDNA that could work and reproduce naturally in any organism, in spite of it being created and introduced artificially. This generated a huge wave of new experiments regarding genetic engineering, but it also caused new moral debates among the scientific community, which recognized the implications of being able to genetically modify organisms, including the possibility of humans.



In 1981, the first transgenic mammal was developed at Ohio University. A group led by Thomas Wagner (Ohio University, 2016) managed to transfer a rabbit gene into a mouse's genome. The process of DNA microinjection was crucial for future experiments that contributed to medical research. This led to the creation of a genetically engineered human drug the next year: synthetic insulin. Thanks to the previous discoveries regarding rDNA and DNA microinjection, it was possible to produce human insulin genes through bacteria to supply this important hormone

for patients with diabetes. The discovery, plus the legal distribution of the product, revolutionized the whole pharmaceutical market.



taken from: National Museums Scotland

Cloning technologies were also a big achievement in the field. Dolly, a sheep that was cloned in 1996 in the Roslin Institute, demonstrated the big advantages that this new technology possesses, such as the cloning of endangered species. But, also represented an ethical problem when the idea of cloning humans was on the table. With the end of the century, genetic engineering was also used in crops such as corn or tomatoes as a trial to approve them for commercial consumption. Until today, there are still various crops that have been genetically modified to improve their nutrients or resistance to pesticides, but they also come with side effects that are being studied to determine if they can be counterproductive for humans or not.

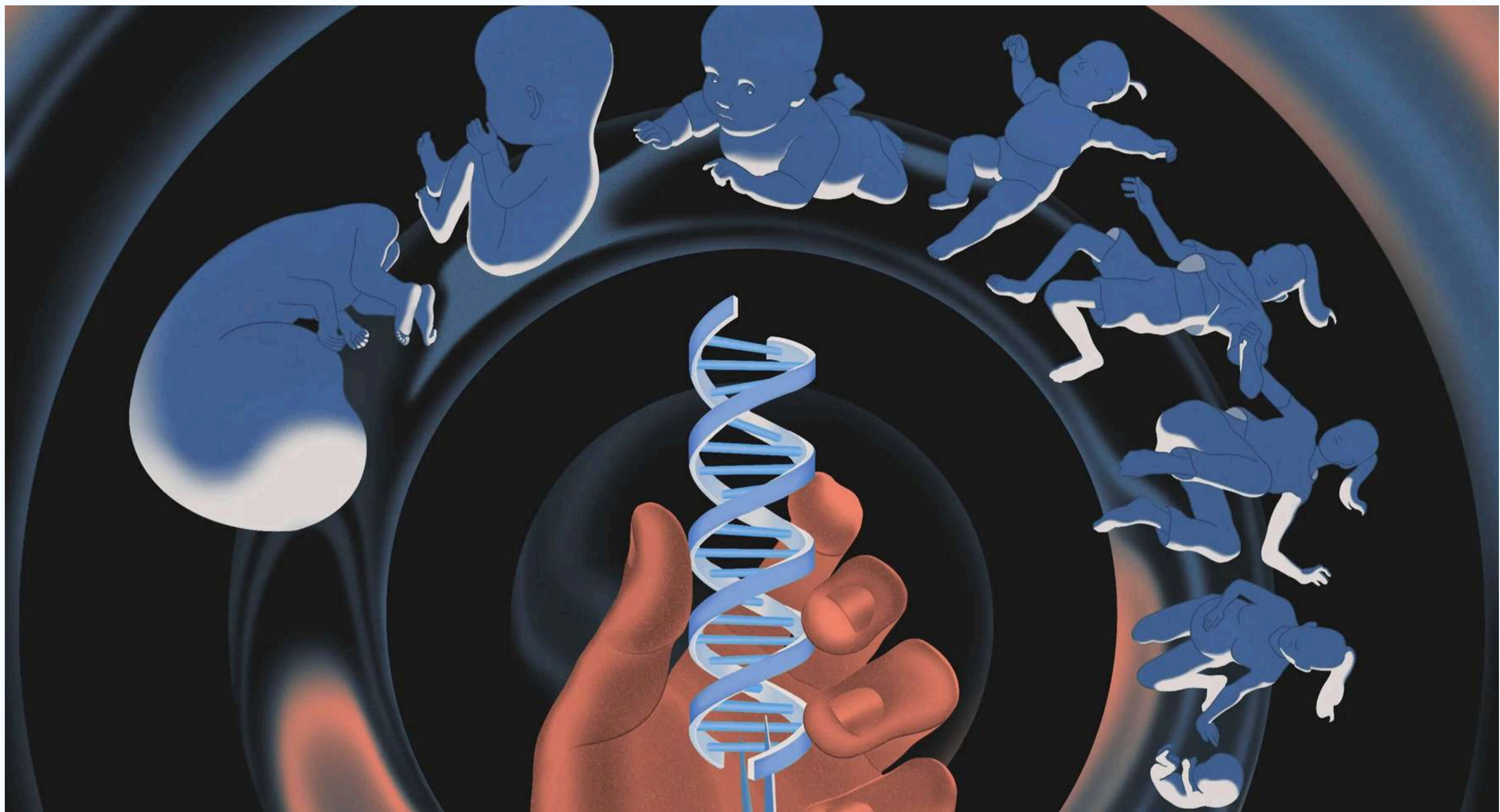
In 2012, the CRISPR technology was ultimately developed. Demonstrating that gene editing of precise targets of DNA could be really helpful for different aspects of life. Jennifer Doudna and Emmanuelle Charpentier found that bacteria's immune system develops an adaptive mechanism that recognizes pieces of DNA coming from external organisms that can cause damage (e.g., viruses) and snips them off with an enzyme: Cas9. They use this and RNA to edit specific genes of an organism to control certain traits of it (Niiler, 2018). Until today, different trials and experiments have been made proving how CRISPR technology may help in areas such as medicine, hereditary disease control, and agriculture. Now, the debate is not if it is possible to create this technology or not; the debate now centers on whether we should use it or not, impose new regulations, or let it be developed freely.

The Global Bioeconomy and Access Gaps

Gene editing technologies are part of a growing bioeconomy with global investments pouring into genetic engineering applications in medicine, agriculture, and industry. However, the economic benefits are unequally distributed, as countries with limited infrastructure often depend on foreign innovation and patented technologies. Legal systems that protect intellectual property rights can sometimes create barriers to access in the global

south, reinforcing global inequities. This disparity has raised calls for reforms in licensing, open science initiatives, and technology transfer mechanisms to ensure that economic gains from gene editing contribute to inclusive development.

Public Perception and Ethical Values

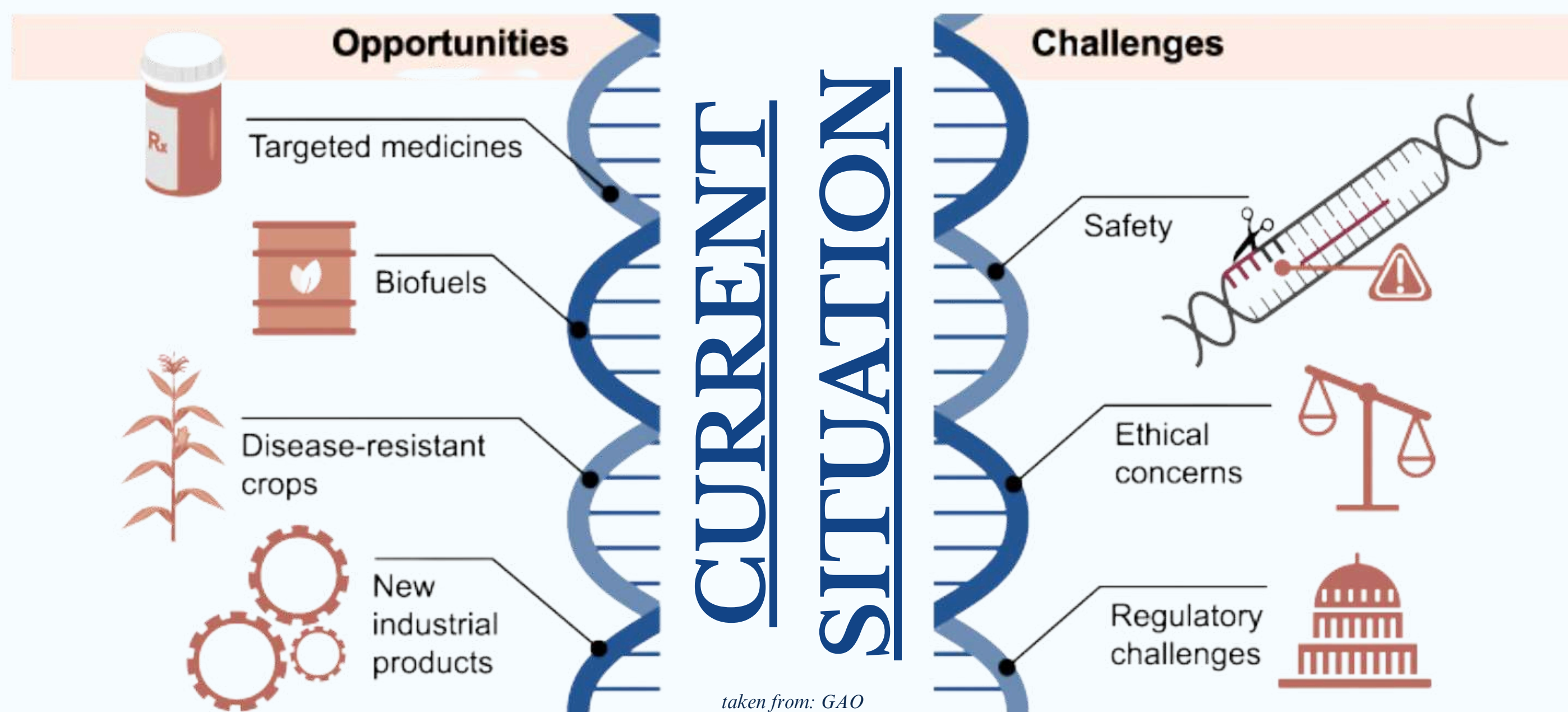


taken from: The New Yorker

Gene editing provokes complex social responses, often shaped by public trust, awareness, and perceived risks. Societal concerns revolve around safety, access, and justice, particularly the fear that gene therapies could be limited to privileged populations, exacerbating existing health and social inequalities. The 2018 case in which Chinese scientist He Jiankui announced the birth of gene-edited babies triggered global backlash and intensified public demand for stronger oversight. Despite the explanation of Jiankui regarding the reason to enact this procedure, where he tried to spare the new babies from HIV, the Chinese Court and the scientific community expressed their concern about doing this type of procedure prematurely without considering the possible side effects for the gene-edited organisms. In many countries, public opinion has influenced the pace and content of national legislation, with calls for participatory regulatory models that include civil society, patient advocacy groups, and affected communities.

National Regulations and International Gaps

The legal landscape for gene editing is highly fragmented and still in constant development. At the international level, the UNESCO Universal Declaration on the Human Genome and Human Rights (1997) and the Council of Europe’s Oviedo Convention (1997) represent early attempts to articulate normative boundaries, particularly regarding human germline modification. While over 30 countries have ratified the Oviedo Convention, others like the U.S. and China have opted for national regulations instead. At a national level, legal approaches range from permissive (e.g., research allowed under ethical oversight in the U.K.) to restrictive (e.g., criminal bans in Germany or France), depending on the country. Legal frameworks often reflect national socio-cultural values and ethical standards, but the lack of harmonization presents risks of “regulatory tourism,” where researchers seek jurisdictions with weaker oversight. This legal patchwork underscores the urgent need for internationally coordinated guidelines to regulate gene editing following human rights, bioethics, and cultural diversity.



As of 2025, gene editing remains governed by a highly fragmented legal landscape. Some countries have made significant progress in updating national regulations, while others operate in legal gray zones. For instance, the United Kingdom continues to allow gene editing in embryos for research under strict regulatory oversight, while Germany, France, and Austria uphold prohibitions on germline modification under criminal law. In China, following the international backlash against the 2018 gene-edited babies, the government



introduced stricter laws in 2021 criminalizing unauthorized human gene editing, yet enforcement and transparency remain a concern.

At the international level, despite calls for a binding global treaty or convention, most efforts have resulted in non-binding declarations or soft-law guidelines. The WHO released its Global Governance Framework for Human Genome Editing in 2021, promoting transparency, equitable access, and a registry of clinical trials, but adherence is voluntary. Meanwhile, discussions continue in the United Nations and forums like the CSTD regarding the need for enforceable mechanisms to prevent unethical experimentation.

Public perception of gene editing continues to vary widely across cultures and regions:

In many Western countries, public acceptance is growing for somatic gene therapies aimed at treating diseases such as sickle cell anemia or certain types of cancer.

In countries with strong religious or communal values, such as parts of Latin America, Africa, and the Middle East, gene editing is approached more cautiously and often rejected on ethical or spiritual grounds.

In the West, concerns persist over “designer babies,” genetic enhancement, and the social consequences of potentially creating genetically privileged classes. While in Latin America, Africa, and the Middle East, various civil society groups and indigenous communities express their concerns about the use of gene editing in agriculture. Particularly where these procedures may alter ecosystems or infringe on traditional ways of life. These cultural differences influence national policies, leading to stronger restrictions or more freedom on human applications.

The CSTD and other UN bodies are increasingly emphasizing the importance of capacity-building, South-South cooperation, and inclusive governance. Efforts are underway to ensure that regulatory models are not only technically sound but also culturally appropriate and socially just, promoting the responsible development of gene editing in alignment with the Sustainable Development Goals (SDGs).

RELEVANT ACTORS

1. States and Blocs

At the moment, as it has been previously reaffirmed, states are the leading decision-makers of regulations regarding gene editing. The legal policy in each territory might be influenced by different factors. For example, countries belonging to the European Union must adopt the bloc's position instead of separate domestic law. Another factor is the fact that certain countries lack access to gene editing or research, and therefore have weak legislation for the issue.

On top of that, it is important to keep track of technicalities regarding each country. Some countries, like the United States, require national agencies such as the Food and Drug Administration (FDA) to approve clinical trials that involve gene editing. In contrast with China, which only demands approval of a hospital's ethics committee. While the European Union commands that any gene editing attempt must comply with heavy legislation such as the European GMO Directive established in 2001 (Gene Literacy Project, n.d.).

2. International Organizations

Considering that there is no international legislation regulating gene editing and that such technology is growing in popularity, International Organizations play a vital role in keeping track of developments in the topic.



taken from: UNESCO



taken from: WHO

The World Health Organization (WHO), apart from the previously mentioned framework, created a “global, multi-disciplinary Expert Advisory Committee to examine the scientific, ethical, social and legal challenges associated with human genome editing” (World Health

Organization, n.d.). On the other hand, the United Nations Educational, Scientific and Cultural Organization (UNESCO) introduces an important dimension to the topic– the socio-cultural implications of gene editing. UNESCO motivated the adoption of the *Universal Declaration on the Human Genome and Human Rights*, with the premise that “UNESCO regards the human genome as the “heritage of humanity” and believes it should be protected and passed on to future generations and that advances in science need to be considered in the light of human rights” (Universal Declaration on the Human Genome and Human Rights, n.d.).

3. Scientific Institutions and Biotech Companies

Scientific institutions and research labs are the entities that receive approval from national agencies or national legislation to execute clinical trials and research. For example Broad Institute (USA), which co-developed the CRISPR/Cas9, is active in advocating for transparency and debates regarding patents. On the other hand, the Chinese Academy of Sciences created “motherless mice” for the first time, sparking a controversial debate regarding the future of such technology and the implications it could have in humans (The Times, 2025). While biotech companies work more closely with regulated gene therapy and its usage in clinical treatments for diseases such as sickle cell disease (Shah, 2024).

IMPORTANCE OF THE TOPIC

Gene editing is a broad topic; nonetheless, CSTD must focus on the implications of gene editing technologies in our daily lives. Its growing popularity in clinical trials and research all around the world has made this an important debate for scientists and country leaders. There is no uniformity in national legislations regarding the limits of this type of research, as each country has determined different regulations in light of the lack of international legislation. This represents a difficult challenge regarding the possibility of standardization for the use of gene editing technologies. Following that train of thought, the implications of this tool in humans, especially the germline type, can have negative implications, for example, at a socio-cultural level. The future scenario of people being able to determine the phenotype– skin colour, eye colour, hair colour– of their descendants might pose a serious threat to socio-cultural orders all around the world. This topic must be addressed carefully and consciously, embracing the discoveries that science brings, but also the responsibility of making them a part of us.



QAR

TOPIC A

1. How can the current global IP system (e.g., TRIPS) be reformed to better facilitate technology transfer to developing countries?
2. Which mechanisms does your delegation propose to guarantee a safe and appropriate transfer of technology, considering the intellectual property (IP) theft?
3. How can countries build domestic capacity to innovate and manage IP within just a global framework?
4. What role do public-private partnerships play in facilitating fair and ethical technology transfer?
5. Should technology transfer be more flexible during national or international crises, such as sanitary emergencies, climate disasters, among others?

TOPIC B

1. How can low and middle-income countries be supported in developing safe and effective regulatory systems for gene editing?
2. In the case that those low and middle-income countries lack access to gene editing technology and therefore lack legislation regarding it as well, how should the international community intervene?
3. How can states prevent gene editing technologies from creating social inequalities through for example ‘designer babies’?
4. Should there be a global ethical standard that all countries must follow regarding gene editing technologies?
5. What role— consultative, investigative, among others— should international organizations such as the WHO or UNESCO play in overseeing gene editing governance?

MIAS



GLO

- **Biotechnology / Biotech:** the use of biological systems or living organisms for the development of products. It also encompasses various disciplines, including genetics, biochemistry, and molecular biology.
- **Gene/genome editing:** a process in which an organism's DNA is altered.
- **Intellectual Property (IP):** “Creations of the mind protected in law by, for example, patents, copyright, and trademarks, which enable people to earn recognition or financial benefit from what they invent or create” (WIPO, n.d.).
- **Knowledge and Technology Transfer (K + TT):** The purchase or acquisition of both legal rights to emulate or copy a technological invention, equipment, as well as techniques, methods, or any previous knowledge needed to operate it and improve it. (UNIDO, n.d.)

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