Factsheet 2

International technology governance
What is international governance?

How does the international regulation of technologies work?

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What is international governance?

- International (or sometimes “global”) governance describes the institutions, policies, norms, procedures and initiatives through which States and their citizens try to address transnational challenges. **Effective international governance requires effective international cooperation**[1]. It helps to think of many of the challenges facing the world as collective action problems that require specific strategies to address.

The United Nations System is one of the main means by which States seek to coordinate and address these problems at the multilateral level. Members agree to adhere to the obligations of the UN Charter (itself a treaty) and establish international agreements (such as treaties and conventions that form international law) to regulate and address challenges. While non-binding norms, rules and principles exist, treaties and conventions are laws. In the case of armed conflict, international law prevails against domestic law[4]. The UN Charter also states that members’ obligations under it outweigh any competing obligations under any other international agreements[5]. The Charter codifies the major principles of international relations, from sovereign equality of States to the prohibition of the use of force in international relations[6].

### Collective action problems
A collective action problem is one in which the uncoordinated actions of each “player” may not result in the best outcome they can achieve[2]. “Players” need to act collectively to reach the best results (this is called the Prisoner’s Dilemma).

### Transnational challenges
These are challenges that require collective responses, such as peace & security and climate change. No single State or group can prevent catastrophic climate impacts alone. Similarly, no single State can make itself immune to conflict or other security threats. States can spend huge sums on arms, and only leading their neighbours to do the same, increasing costs but reducing their actual security (this is called the security dilemma[3]). Only coordinated international action can address these problems.

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What is international governance?

- When people talk about the UN, they are generally describing two aspects of it, which sometimes get confused:
  - The 193 Member States of the United Nations, who vote to determine the mandates of the organization.
  - The organs, funds, programmes and other entities of the UN System (like the Secretariat, or UNICEF (United Nations International Children's Emergency Fund).
- Decisions about new international law, or whether to impose sanctions or authorize the use of force, are made by the Member States through voting, often through one of the organs in which they meet, such as the Security Council (which has five permanent members, and nine rotating non-permanent members elected by the General Assembly). New treaties and conventions are generally adopted by States on a voluntary basis. It is common for treaties to be adopted by a majority of, but not all, Member States. For example, the Arms Trade Treaty, which regulates the international arms trade, was adopted by the General Assembly in 2013, and has 111 State Parties.
- While it is States that negotiate and have the final say on treaties, international governance is not an issue of States alone. Civil society organizations, academia, the private sector, regional organizations and individuals are all amongst those that engage in and can influence international governance. The Ottawa Treaty (the “Mine Ban” treaty), was initially spearheaded by six NGOs, for example.
How does the international regulation of technologies work?

- There are a number of different ways regulation can function, with varying formats, names and compositions. Some regulations are legally binding (hard law). Others are non-binding (soft law), and these might take the form of voluntary codes of conduct, for instance. Some regulations apply internationally, and others only at the regional or national levels. Regulations can also be adopted multilaterally or unilaterally by States (governmental regulations) or other actors like companies, universities, or identified communities (self-regulation). Regulations that are defined and adopted by States and other actors follow a so-called multi-stakeholder governance model.

<table>
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<th>Soft law</th>
<th>Hard law</th>
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<td>These are agreements, principles and declarations that are not legally binding. Most UN General Assembly resolutions are soft law. Soft law can “harden” over time, leading to customary law or treaties.</td>
<td>These are legal obligations that are binding on the parties involved and which can be legally enforced before a court. In addition to treaties, UN Security Council resolutions can be a source of hard law.</td>
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Self-regulation

This is a common feature of private sector uses of emerging technologies. Members of an industry monitor their own adherence to legal, ethical, or safety standards, instead of being monitored by an independent third party. This approach can be a useful way of addressing issues that it would be very difficult to tackle through intergovernmental co-operation.
How does the international regulation of technologies work?

- Generally speaking, international regulations of technologies can be divided in two types based on their purpose.
  - The first type focuses on enabling and ensuring collaboration around the use of technology. Regulations in this category typically aim at enabling consumer friendly competition, setting technical standards, and facilitating specific forms of technological cooperation or exchange. The use of radio frequencies for instance is regulated by international treaty: the Radio Regulations. Such regulations may be overseen or implemented by dedicated institutions. For instance, the radio spectrum needs of satellites are overseen by the International Telecommunication Union (ITU), a specialized agency of the UN. Overseeing institutions do not need to be part of the UN system or be managed by States. For example, the Internet Corporation for Assigned Names and Numbers (ICANN) uses a multi-stakeholder governance model which involves global voices from business, academia, civil society and governments.[7]
  - The second type focuses on limiting development and use of certain technologies, such as in the civilian or military context. In the civilian context, an example of such type of regulation is the General Data Protection Regulation (GDPR). This is a regulation in European Union (EU) law on data protection and privacy in the EU and the European Economic Area. Though it was drafted and passed by the EU, it imposes obligations onto organizations anywhere, so long as they target or collect data related to people in the EU. The regulation was put into effect on 25 May 2018, and seeks to balance the need to process data on a large scale, and individual rights to privacy. Its implications and requirements for cybersecurity and data collection make it particularly relevant here. In the military context, such regulations typically support arms control & disarmament purposes. They seek to balance the legitimate needs for peaceful uses of technology with the risks that those technologies present to peace and security. These can be further divided in three sub-categories:

How does the international regulation of technologies work?

- (1) **Strategic arms control** seeks to regulate “strategic arms”. Strategic nuclear weapons are considered to be those able to reach over 5500km. Intercontinental Ballistic Missiles, designed for nuclear warheads, are an example of such a strategic weapon. The huge reduction in the number of strategic nuclear weapons since the 1980s is seen as a success of strategic arms control.

- (2) **Humanitarian arms control** is concerned with mitigating the consequences of the use of weapons as well as their deliberate misuse during and following intra-state conflicts. An example is the Ottawa Treaty, which looked at the disproportionately negative civilian impacts of landmines.

- (3) **Strategic trade control** seeks to balance the need to facilitate trade and support legitimate economic and technological development, with the need to control items involved in the development, production, or use of weapons of mass destruction and conventional weapons and their delivery systems. This seeks to address both proliferation to States, as well as to non-state actors. A sub-element of strategic trade control is **export control**. Export controls regulate and restrict the release of critical technologies, information, and services to foreign nationals, and foreign States for reasons of foreign policy and national security. The scope of controlled items can be very broad, including items like equipment, software code, chemical and biological materials, and technical data.

- Some useful examples of instruments of these types that try to balance peaceful needs and dangerous risks of technologies include:
  - The **Strategic Arms Reduction Treaty (START I)** was a bilateral treaty negotiated between the United States and the Soviet Union on the reduction and limitation of strategic arms. It was signed on 31 July 1991 and entered into force on 5 December 1994. The treaty barred its signatories from deploying more than 6000 nuclear warheads and a total of 1600 intercontinental ballistic missiles and bombers. Despite the fall of the Soviet Union, the treaty continued in effect and its obligations passed to twelve Soviet successor States. By the time of its final implementation in 2001, the treaty had led to the removal of about 80 percent of all strategic nuclear weapons then in existence.[9] The treaty expired on 5 December 2009 and was replaced the next year by New START, which is scheduled to run through 2026.
The Biological Weapons Convention, which was negotiated in the UN framework. It effectively prohibits the development, production, acquisition, transfer, stockpiling and use of biological and toxin weapons, and also addresses the risks presented by bioterrorism and non-state actors. However, the technologies involved in such development are also necessary for medical advancements, responding to pandemics and other beneficial efforts. Article X of the convention therefore protects States Parties’ right to exchange biological materials, technology, and information for peaceful purposes. States Parties also agree to avoid hampering the economic or technological development of States Parties to the Convention or international co-operation in the field of peaceful biological activities. In order to ensure it is able to adapt to technological advances, States Parties meet for review conferences every five years.

The United Nations Convention on Certain Conventional Weapons prohibits or restricts the use of certain conventional weapons which are considered excessively injurious or whose effects are indiscriminate. It includes a number of protocols addressing different topics (like protocol III, on incendiary weapons & IV, on blinding laser weapons). It was designed so that new protocols could be negotiated within the framework of the Convention, which also has regular review conferences, to respond to new developments. Since 2017 a Group of Governmental Experts has met in this framework to assess questions related to emerging technologies in the area of lethal autonomous weapons systems (see also FS1).

The Australia Group, founded in 1985, is an informal forum of States which seek, through the harmonisation of export controls, to ensure that exports of certain chemicals, biological agents, and dual-use chemical and biological manufacturing facilities and equipment, do not contribute to the spread of chemical or biological weapons. The group maintains common control lists and guidelines for the transfer of sensitive chemical or biological items.
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