White Paper 01

food agriculture

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1.

state of the art: international law applicable to agriculture and food

‘Every man
who starves today
is murdered.

Jean Ziegler
Special rapporteur for
the right to food of the United
Nations Human Rights Council
from 2000 to 2008.

Introduction

Purpose of the white paper

The war in Ukraine threatens millions of people with the risk of starvation. What is the third major food crisis in 15 years, however, began long before the conflict. Hunger in the world, which had stabilized since 2014, and food insecurity are increasing again and the causes are not to be found on the side of a shortage of food. They lie in poverty and inequality, global warming, hyper-specialization of land, speculation on agricultural raw materials, market dysfunctions. The conflict in Ukraine cannot hide the observation of the structural weakness of the agricultural and food systems. What will the world look like in 2050 if it did not meet the challenges posed by agriculture and food? What international law do we need in order to prevent historical trends (see panorama below) from continuing and even darker scenarios from unfolding? The purpose of this white paper is not to answer these questions directly, but to draw up an inventory of the challenges to be faced in order to help finding some answers.

The first part of the white paper presents the texts of international law applicable, directly or indirectly, to the agricultural and food sectors. It provides a fairly complete idea of the law as it exists today, whose abundance has failed to prevent food crises, chronic food insecurity, or the deleterious effects of agricultural and food systems on the environment and climate.

The second part presents in a synthetic way the main challenges that, according to a selection of prospective studies, the world will have to face between now and 2050. Three scenarios developed by the FAO then provide an illustration of what the world could look like according to whether or not public policies will be adopted to respond to these challenges and whether the actors of the agricultural and food systems will modify their practices or not.

The third part asks questions which are, in a way, the result of a comparison of the first two parts. This is to fuel the future reflection on the international law that we will need by 2050 if we want to prevent the most apocalyptic scenarios from happening.

This white paper owes a great deal to the expertise of the members of Steering Committeee as well as to the hearings conducted by the latter, which made it possible to collect va-

luable information. Forty personalities around the world were interviewed (annex 02) on the basis of criteria favoring the representation of various interests and geographical, cultural and disciplinary diversity. These hearings particularly fueled the questions posed in the third part of the white paper.

Panorama of the situation of agriculture and food in the world[1]

- Food security exists when all human beings have, at all times, physical and economic access to sufficient, safe and nutritious food to meet their energy needs and food preferences for healthy and active living (World Food Summit, 1996).
- Current global production is enough to feed the world's population. The 2007/2008 food crisis occurred despite a record grain harvest in 2008. The "Arab Spring" protests in 2011 coincided with rising food prices. Healthy food is out of reach for almost 3 billion people around the world due to its cost and the persistence of high levels of poverty and income inequality. The war in Ukraine and the consequences of the Covid 19 pandemic should, according to a recent FAO report, lead to a considerable increase in this figure. In addition, energy poverty in many regions (1.4 billion people do not have access to electricity, most of them living in rural areas of developing countries) is another obstacle to food production and reducing hunger.
- Undernourishment, which had more or less stabilized since 2014, increased by 1.5 points in 2020 to reach around 9.9% of the world's population. Between 720 and 811 million people in the world suffer from extreme hunger. These are 118 to 161 million more people than in 2019 (the Covid-19 pandemic is a cause of this).
- In 2020, 2.37 billion people did not have access to adequate food (one in three people in the world), which is an increase of 320 million people in one year. About 40% of these people (almost 12% of the world's population) are exposed to high levels of food insecurity. No region of the world is spared.

Note 1 See especially the joint study FAO, IFAD, UNICEF, WFP, WHO, The State of Food Security and Nutrition in the World, 2021; UN, Sustainable Development Goals. SDG 2: End hunger, achieve food security, improve nutrition and promote sustainable agriculture.

- The majority of the world's hungry people live in developing countries where nearly 13% of the population is undernourished (418 million in Asia; 282 million in Africa).
- Malnutrition is the cause of 45% of deaths of children under 5 (3.1 million children per year). 66 million children of primary school age in developing countries go hungry when they are in school (including 23 million in Africa).
- In 2020, stunting affected 22% of children under 5 (149.2 million children), wasting 6.7% (45.4 million) and overweight 5.7% (38 .9 million). Most of these children (90%) live in Africa and Asia.
- 600 million people fall ill every year after consuming contaminated food and 420,000 die. Children under 5 bear 40% of the disease burden from foodborne diseases and 125,000 die from them each year, according to the WHO.
- The number of food-related «non-communicable diseases» (diabetes, cardiovascular diseases, etc.) is increasing dramatically. Obesity in adults is on an upward trend, with global prevalence rising from 11.7% in 2012 to 13.1% in 2016.
- Nearly 30% of women aged 15-49 (600 million) suffer from anemia, with a high prevalence in Africa and Asia.
- The gender gap in the prevalence of food insecurity widened during the year of the pandemic. It is 10% higher among women than among men in 2020, compared to 6% in 2019.
- 40% of the world's population derives its income from agriculture. It is the main source of income and employment for poor rural households.
- 500 million small farms provide up to 80% of the food consumed in developing countries.
- Since the 1990s, 75% of crop diversity has disappeared from farmers' fields.
- Most of the pressure on the world's land, soil and water resources comes from agriculture[2]. Land irrigation accounts for 70% of all freshwater withdrawals. The majority of soils would be in poor or very poor condition, with a tendency towards degradation, close to failure, particularly in terms of biodiversity. In addition, according to the IPCC, agriculture, forestry and other land uses accounted for 23% of global greenhouse gas emissions between 2010 and 2019.

Note 2 FAO, The State of the World's Land and Water Resources for Food and Agriculture. Systems on the brink of disruption, 2021 Report.

General international texts

General sources of *hard law*

→ International Covenant on Economic, Social and Cultural Rights (ICESCR), 16 December 1966 (United Nations General Assembly, resolution 2200A (XXI): it specifies the definition and scope of the economic, social and cultural rights recognized by the UDHR and gives them binding legal force in international law. The Covenant recognizes the right of all person to an adequate standard of living for himself and his family, including food (art. 11, §1) States are invited to adopt, including through international cooperation, the necessary measures to guarantee the right freedom from hunger (Art. 11, §2) Article 11 has been interpreted by the Committee on Economic, Social and Cultural Rights (General Comment No. 12). The ICESCR was supplemented in 2009 by an Optional Protocol allowing people who consider themselves victims of a violation of the right to food to seize the Committee on Economic, Social and Cultural Rights when they have not obtained justice at the national level.

→ International Covenant on Civil and Political Rights (ICCPR), 16 December 1966 (United Nations General Assembly, resolution 2200A (XXI)): the right to life is linked to food and the elimination of malnutrition (art. 6). General Comment No. 6 makes this explicit regarding infant mortality and General Comment No. 36 targets access to essential goods and services such as food.

Article 1, §2 of the ICESCR and the ICCPR further recognizes the right of all peoples to freely dispose of their natural resources, without prejudice to the obligations arising from international economic cooperation. “In no case may a people be deprived of its own means of subsistence”.

→ UNESCO Convention concerning the Protection of the World Cultural and Natural Heritage, 16 November 1972, supplemented by the UNESCO Convention for the Safeguarding of the World Cultural Heritage of 17 October 2003).

→ Convention on Biological Diversity, UN, 3-14 June 1992 : adopted at the Earth Summit in Rio de Janeiro, it aims to conserve biological biodiversity and ensure the fair and equitable sharing

of the benefits arising from the exploitation of resources genetics. "The conservation and sustainable use of biological diversity is of the utmost importance for meeting food needs".

→ The Cartagena Protocol on Biodiversity adopted in 2000 also aims to provide signatory States with legally enforceable means to prevent biotechnological risks. In the wake of the Convention, the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of the Benefits Arising from their Use was adopted on October 29, 2010.

→ International Treaty on Plant Genetic Resources for Food and Agriculture (TIRPAA), 3 November 2001: it aims to ensure food security through the conservation of biodiversity, exchange and sustainable use of plant genetic resources.

→ Food Assistance Convention, 25 April 2012 : aims to meet the food and nutritional needs of the most vulnerable populations and provides mechanisms for sharing information and recording commitments made in favor of this assistance.

→ Paris Agreement, 12 December 2015 : international treaty on climate change, it makes food security a "fundamental priority" and recognizes the vulnerability of food production systems to the adverse effects of climate change.

General sources of *soft law*

1. Declarations adopted at international summits and conferences

→ Universal Declaration of Human Rights (UDHR), 10 December 1948 (United Nations General Assembly). Article 25§1: "Everyone has the right to a standard of living sufficient to ensure his health and well-being and that of his family, in particular for food".

→ Universal Declaration for the definitive elimination of hunger and malnutrition, December 17, 1974: adopted by the World Food Conference charged by the General Assembly of the United Nations with defining means in order to solve through development and cooperation international economy the world food problem.

→ Rome Declaration on World Food Security, November 1996 adopted at the World Food Summit convened by the UN, in reaction to the failure to achieve the objectives of the 1974 Conference. States renew their commitment to eradicate hunger and malnutrition and ensure sustainable food security for all.

→ World Food Summit Plan of Action, November 1996: also adopted at the World Food Summit, it aims to overcome the problems linked to the food supply in the world so as to reduce by half the number of undernourished people before 2015.

→ Rome Declaration at the FAO World Food Summit, June 2002: States renew their commitment to eradicate hunger and malnutrition and to ensure sustainable food security.

→ Declaration of the FAO Summit on Food Security: "The five Rome principles for sustainable world food security", Rome, 16-18 November 2009 : food security requires coordination between States, in particular to improve the allocation of resources, act against hunger, realize the right to adequate food, improve the multilateral system.

→ Principles for Responsible Investment in Agriculture and Food Systems (Committee on World Food Security – CFS – October 15, 2014): "promoting responsible investments in agriculture and food systems that contribute to food security and nutrition, and thus promote the progressive realization of the right to adequate food in the context of national food security".

→ Sustainable Development Program, UN, 2015: it defines 17 Sustainable Development Goals (SDGs) to be achieved by 2030, among which «Eradicate hunger, achieve food security, improve nutrition and promote sustainable agriculture» (SDG 2) .

→ Revised World Soil Charter, FAO, 2015: this revised version of the text adopted in 1981 aims to promote and institutionalize sustainable soil management.

2. Declarations by Heads of State and Government (G7, G8 and G20)

Through these declarations, the Heads of State and Government set out the broad guidelines for their action in the field of food and agriculture. See especially the following statements: Actions for global food security (G8, Toyako, 8 juillet 2008), G20 Cannes Summit, 3-4 November 2011, "Action Plan on Food Price Volatility and Agriculture" (G20 Agriculture Ministers' Statement of 22-23 June 2011), « A new impetus for freedom and democracy" (G8, Deauville, 26-27 May 2011)), Maryland Summit (G8 18-19 May 2012), Los Cabos Summit (G20, 18-19 June 2012), Lough Erne Summit (G8, 19 June 2013), Brussels Summit (G7, 4-5 June 2014), Brisbane Summit (G20, 15-16 November 2014), Elmau Summit (G7, 7-8 June 2015), Antalya Summit (G20, 15-16 November 2015), Ise-Shima (G7, 26-27 May 2016), Rome Declaration of G20 Leaders (G20, 31 October 2021).

3. FAO Voluntary Guidelines

→ Voluntary Guidelines in Support of the Progressive Realization of the Right to Adequate Food in the Context of National Food Security, November 2004.

→ Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security, 11 May 2012: they place land governance in the context of national food security and aim to contribute to the progressive realization of the right to adequate food, poverty eradication, environmental protection and sustainable social and economic development. They call on States to recognize and protect the legitimate land rights of indigenous peoples.

Voluntary Guidelines on Ensuring the Sustainability of Small-Scale Fisheries in the Context of Food Security and Poverty Eradication, 2015: they provide complementary guidance to the FAO Code of Conduct for Responsible Fisheries.

→ Voluntary Guidelines for Sustainable Soil Management adopted in Rome by the Intergovernmental Technical Group on Soils (ITPS-FAO), 2017.

→ Voluntary Guidelines on Food Systems and Nutrition, 8-11 February 2021 (Committee on World Food Security).

4. United Nations General Assembly (UNGA) Resolutions

The relevant resolutions for agriculture and food are as follows:

→ Resolution 1803, "Permanent sovereignty over natural resources" (December 14, 1962) ; Resolution 2095, "Renewal of the World Food Programme" (December 14, 1962) ; Resolution 2155, "Study Programme on Multilateral Food Assistance" (November 22, 1966) ; Resolution 2692, "Permanent sovereignty of developing countries over their natural resources" (December 11, 1970) ; Resolution 64/292, "The human right to water and sanitation" (28 July 2010) ; Resolution 68/309,"Report of the Open Working Group on the Sustainable Development Goals" (10 September 2014) ; Resolution 70/259, "United Nations Decade of Action on Nutrition (2016-2025)" (1 April 2016).

5. United Nations Security Council Resolution

→ Resolution 2417 on conflict and food insecurity (24 May 2018)

6. Frameworks for joint actions

→ Paris Declaration on Aid Effectiveness and The Accra Agenda for Action, 2005 and 2008: five principles are formalized:

ownership of development policies and strategies; donor alignment with national priorities; harmonization of development activities; results-based management; mutual accountability for the use of aid between donors and developing countries.

→ Busan Partnership for Effective Development Cooperation, 2011.

→ Framework for Action on Food Security and Nutrition in Protracted Crises, 2015 and 2020: proposes an approach to address critical situations of food insecurity and undernutrition and foster resilience during protracted crises.

Special international texts

International human rights law

1. Special sources of hard law in the field of human rights

→ Convention relating to the Status of Refugees, 28 July 1951 (Geneva Convention): "In the event that there is a system of rationing (...), refugees shall be treated as nationals" (Article 20). Principle extended in the Convention relating to the Status of Refugees and Stateless Persons, 28 September 1954 (Article 20).

→ Convention on the Elimination of All Forms of Discrimination against Women, 18 December 1979: States undertake to ensure that every woman has adequate nutrition during pregnancy and lactation (Article 12§2).

→ Convention on Indigenous and Tribal Peoples, 27 June 1989, ILO:

- Article 14§1: "The rights of ownership and possession over the lands they traditionally occupy shall be recognized to the peoples concerned. (...) measures must be taken ... to safeguard the right of the peoples concerned to use the lands not exclusively occupied by them, but to which they have traditional access for their traditional and subsistence activities. Particular attention should be paid in this regard to the situation of nomadic peoples and itinerant farmers."
- Article 19: "National agrarian programmes shall guarantee to the peoples concerned conditions equivalent to those enjoyed by other sectors of the population with regard to: (a) the granting of additional land when the land available to the said peoples is insufficient to provide them with the elements of a normal existence, or to cope with their possible numerical increase".

→ Convention on the Rights of the Child, 20 November 1989, UN: States undertake to combat disease and malnutrition, in particular through the provision of health care, nutritious food and drinking water, taking into account the risks of pollution of the natural environment (Art. 24, §2, c); to ensure that all groups in society receive information on the health and nutrition of the child, the benefits of breastfeeding (Art. 24, §2, e); to provide material assistance to persons having the care of a child with regard to food, clothing and housing (Art. 27, §3).

2. Special sources of soft law in the field of human rights

→ Declaration of the United Nations General Assembly on Progress and Development in the Social Field, 1969: "Progress and development in the social field shall aim at the continuous raising of the material and spiritual standards of living of all members of society, with respect for and implementation of human rights and fundamental freedoms, through the achievement of the following main objectives": Eradicate hunger and malnutrition and guarantee the right to adequate nutrition (Article 10 (b);" Eradicate poverty, ensure the continuous improvement of living standards and a fair and equitable distribution of income (article 10 (c)).

→ United Nations World Summit for Children, 29-30 September 1990: provision of safe drinking water to children (Goal 2); measures to ensure the eradication of hunger, malnutrition and famine (Goal 3).

→ International Conference on Population and Development (ICPD) (Cairo Conference), 5-13 September 1994: the right to a standard of living of individuals includes food, water supply and adequate sanitation.

→ United Nations Summit on Social Development, 1995: food is not specifically mentioned, but this summit is the cornerstone of the fight against poverty and exclusion, which are among the main causes of malnutrition and undernourishment.

→ United Nations World Summit on Sustainable Development, 2002: access to safe water, sanitation, energy, food security. Ingenious World Agricultural Heritage Systems (GIAHS) are also established. These are "remarkable systems of land use and landscapes that are rich in globally significant biodiversity and are the result of a co-adaptation between a community, with its needs and aspirations for sustainable development, and its environment".

→ UN Declaration on the Rights of Peasants and Other People Working in Rural Areas, adopted by resolution A/RES/73/165, 17 December 2018: Recalling many international principles and texts, the Declaration extends the human rights system to peasants and recognizes many rights (including the right to adequate food, the right to land and natural resources, the right to seed and biological diversity) that are considered inseparable.

International trade

Special sources of hard law in the commercial field

→ Agreement of Blair House (1992) concluded between the United States and the European Union, it concerns export subsidies and the reduction of domestic subsidies in the context of the Uruguay Round of multilateral trade negotiations. It prefigured the Marrakesh Agreement (1994) establishing the WTO, itself derived from the GATT 1947, which had integrated agricultural topics for the first time in 1986.

→ Agreement on Trade-Related Aspects of Intellectual Property (TRIPS), 1994: it integrates intellectual property rights into the WTO system. It includes, inter alia, provisions on patent protection for agricultural chemicals and plant variety protection.

→ General Agreement on Trade in Services (GATS), 1994: it lays down the rules governing the liberalization of trade in services and provides for a mechanism for the settlement of disputes between countries.

→ Agreement on Technical Barriers to Trade (TBT), 1994: its objective is to prevent WTO Members' technical regulations from constituting restrictions on international trade. Agricultural products are concerned.

→ Agreement on the Application of Sanitary and Phytosanitary Measures (SPS), 1994: it lays down the conditions under which WTO Members may adopt the measures necessary to protect human, animal or plant health, without such measures constituting disguised restrictions on international trade.

→ WTO Agreement on Agriculture, 1994: for the first time, it subjects trade in agricultural products to the objective of liberalization. Its aim is to achieve fairer competition and fewer distortions. On the basis of this agreement, WTO members have committed to implementing a programme of reforms to their agricultural policies by establishing disciplines in three major areas: market access, domestic support and export subsidies. A Ministerial Decision of 19 December 2015 WT/MIN(15)/45-WT/L/980, sets the rules for international food aid. It also reaf-

firms the commitment made in the 2013 Bali Ministerial Declaration WT/MIN(13)/40-WT/L/91 on export competition to exercise the utmost restraint with regard to the use of all forms of export subsidies and measures having equivalent effect.

Special source of soft law in the commercial field

→ WHO/UNICEF International Code on the Marketing of Breast-milk Substitutes, 1981: it aims to protect and promote breast-feeding, including by providing adequate information on infant feeding.

→ Code of Ethics of the Codex Alimentarius Commission, 1979, updated in 1985 and 2010: FAO/WHO programme to establish ethical principles for the conduct of international trade in foodstuffs with a view to protecting the health of consumers and promoting fair business practices. It sets out a series of standards and guidelines to which the WTO refers to arbitrate trade disputes.

→ Voluntary norms/standards: Faced with growing consumer demands for the quality, safety and sustainability of production processes, different actors (public and/or private) have developed different types of standards. These go beyond mandatory regulations and have become tools for managing health safety along the entire value chain. Certain standards have been imposed on international markets. The best known are the ISO Standards on agriculture which cover all activities in the sector (irrigation, satellite positioning systems, agricultural equipment, animal welfare, sustainable farm management). There are also GlobalGAP standards : A repository of good agricultural practices created by European distribution companies, they have become the most widely distributed private reference system in the world and have established themselves as a criterion for access to the European market. An attempt has been made to harmonize several of these standard standards. (ISO 22000 and GFSI Standards on health security; ISEAL Standards on sustainability).

Investment law

→ ICSID Convention for the Settlement of Investment Disputes between States and Nationals of Other States of 1966: developed by the Executive Directors of the World Bank to implement the Bank's objective of promoting international investment. On ICSID's jurisdiction, see Salini Costruttori S.p.A. and Italstrade S.p.A. v. Kingdom of Morocco, ICSID Case No. ARB/00/4, 31 July 2001.

→ Agreement on Trade-Related Investment Measures (TRIMs), it specifies trade-related investment measures (e.g. domestic content requirements) found to be inconsistent with the provisions of GATT 1994.

Securing Food Supplies: Agreements on "Commodities"

A series of cooperation agreements on "commodities" has been concluded either by producing and consuming countries or by producing countries among themselves. They contain rules derogating from the principles of free trade (due to the volatility of their market) that were abandoned in the 1990s. However, there is renewed interest in these agreements. Among the main agreements: United Nations Agreement on the Establishment of a Common Fund for Commodities, 1980 ; International Sugar Agreement (UN, 20 March 1992) ; International Cereals Agreement (UN, 1995) ; International Agreement on the Dairy Sector (OMC, 2000) ; International Cocoa Agreement (UN, 25 June 2010).

International humanitarian law

International humanitarian law is an indirect source of food law. Its purpose is to guarantee access to food in extreme conditions, for example for the wounded and sick in armed forces in the field (Article 32, §1 and 5 of Geneva Convention I of 12 August 1949), or armed forces at sea (Geneva Convention II), prisoners of war (Geneva Convention III), and the protection of civilians in time of war (Geneva Convention IV).

International criminal law

Some international criminal law texts take into account food issues in the context of events of particular gravity : Convention on the Prevention and Punishment of the Crime of Genocide of 9 December 1948 ; International Convention for the Suppression and Punishment of the Crime of Apartheid of 30 November 1973 ; Rome Statute of the International Criminal Court (1998) (Deprivation of access to food may fall within the definition of "extermination" used to qualify a crime against humanity [Article 7.2.b] or a war crime [article 8.2.b.xxv]).

Labour law

→ Declaration of Philadelphia, 1944 : the "Conference recognizes the solemn obligation of the ILO to assist in the implementation, among the various nations of the world, of programmes capable of carrying out (...) an adequate level of feeding". It is with this in mind that the following conventions have been adopted,

which constitute indirect sources in the field of agriculture and food (access to adequate food): n°99 de 1951, n°131 de 1970, n°102 de 1952, n°117 de 1963, n°107 de 1957, n°169 de 1989, n°138 de 1973, et n°182 de 1999.

Guides

→ Legal Guide on Contract Farming (UNIDROIT/FAO/IFAD), 2015: This guide provides guidance to those engaged in contract farming or involved in the implementation of public policies that contributes to the creation of a fair and sustainable environment for contract farming (description of the usual contract clauses, etc.).

→ Guide on Responsible Agricultural Supply Chains (FAO/OECD), 2016: This guide provides a common internationally applicable framework to help agribusinesses and investors identify and mitigate the negative impacts of their activities and contribute to sustainable development.

→ Guide to Agricultural Land Investment Contracts (UNIDROIT), 2021: This guide provides practical advice for improving agricultural land investment contracts, applying international principles and standards for the promotion of responsible investment.

→ Guide for Responsible Agricultural Value Chains (FAO/OECD), 2021: This guide helps companies identify the impacts of their operations throughout their value chains and ensure that their actions or inaction do not undermine the Sustainable Development Goals (SDGs).

2.

challenges
to be faced by 2050

‘The *status quo* approach is no longer an option.

Jean Ziegler
The Future of Food
and Agriculture.
Trends and challenges, 2017.

Main challenges to be faced according to prospective studies

Many prospective studies are devoted to agriculture and food, some of which are also regularly updated. (OECD-FAO Agricultural Outlook 2021-2030). Each follows its own methodology and pursues specific objectives. To give just a few examples: some examine the challenges related to food security in a transversal way (especially the FAO annual report on The State of Food Security and Nutrition in the World 2021 or The Future of Food and Agriculture. Alternative pathways by 2050) ; the others do so through the prism of a particular question:

- Climate change (IPCC report, 2020 ; INRAE 2050 Report, 2020).
- The state of soils and natural resources (FAO report, 2021) ;
- The environment (Rapport SPRINGMANN, Options for keeping the food system within environmental limits, 2018).
- Sustainable development (Agrimonde 1 - Scénario 2050 which compares a scenario based on global economic growth and a scenario based on the preservation of ecosystems).
- The globalization of food systems (Mond'alim 2030).

Each of these prospective studies describes different trajectories in support of multiple variables. Each trajectory presupposes the achievement of conditions, some of which are inherent in the food system itself (pressure on land, for example), while others are essentially systemic (conflicts, climate, urbanization). They depend as much on the choice of public policies (national, regional and international), as on the behaviour of actors in the agri-food sector (farmers and peasants, consumer-citizens, processors, distributors, input suppliers). Depending on whether these policy measures are adopted or not and whether or not the actors change their behaviour, the scenarios range from the most optimistic to the most apocalyptic. This makes it all the more difficult to confront them (possibly contradictory trends) because most of the challenges are interdependent, but not all are taken into account in the same way.

Nevertheless, prospective studies make it possible to clearly identify the main challenges to be faced if food systems are to be able to sustainably meet the needs of a world population that could reach 9.7 billion people in 2050 in a sustainable manner. Table 1 presents the main risks identified by the prospective studies and their possible interactions.

Table 1
Main risks and risk interactions

types of challenges	risks	interactions
1. Economic challenges		
Economic growth	Changing diets and increasing demand for natural resource-consuming meat and dairy agricultural products: risks to the sustainable use of resources.	Demographic dynamics, urbanization, technological change, availability of resources.
Economic downturns	Risk of worsening this major cause of hunger and food insecurity	Market fluctuations, conflicts, trade wars, political unrest, pandemic.
Agricultural productivity and innovation	Declining growth in agricultural yields while the world's population is rising and overall production is expected to increase.	Degradation of natural resources, climate change, increased use of inputs.
Investments in food system	Underinvestment in food systems that will lead to leaving hundreds of millions of people undernourished.	Agricultural price volatility that does not encourage the necessary investments.
Subsidies Agricultural	A UN report predicts a tripling of global subsidies to producers by 2030. Risk of worsening of the current situation: distortion of food prices, degradation of the environment, the health of populations and the situation of smallholders.	Worsening of the «triple planetary crisis» (climate change, air pollution, loss of biodiversity).
Fluctuations/ agricultural price volatility	Succession of crises on international markets, limitation of investments, ruin of the most vulnerable farmers, causes of migration.	Financialization and speculation that expose agricultural markets to the dynamics of other markets (energy, etc.); restrictive trade policies of States; competition from agrofuels and feed
Poverty/ Inequalities	Historical underlying structural causes of food insecurity in all its forms.	Poverty and inequality amplify the negative effects of conflict and war, climate change and economic downturns. Causes of migration.

2. Environmental and climate challenges

Environment	The foresight exercises highlight the limits of changes in food systems with regard to the finite nature of the resources mobilized: loss of biodiversity and ecosystem services (pollination, etc.), water withdrawal, continued degradation and artificialization of soils, depletion of the phosphorus resource (necessary for the growth of plants and animals) qualified as a "critical" resource by the European Commission.	Geopolitical challenges ("hydraulic rivalries", land grabbing, etc.); climate change that modifies the water cycle, will limit the resource and therefore irrigation; Waste that puts pressure on resources. Population movements (migration linked to rising oceans, increased extreme events, desertification), security issues (amplification of internal conflicts and rivalries between countries), foreign investment in agricultural land, health (epidemiology and antimicrobial resistance of pests and diseases).
Climate change	A global risk par excellence, climate variability and climate extremes will be one of the main causes of serious food crises (food availability, water shortages, etc.). Climate change will affect health security by changing the probability of occurrence of pathogens (bacteria, viruses, parasites). According to the IPCC (2022), while climate change has already severely affected crop yields, biodiversity and soil biological functions, 10% of agricultural-friendly regions could become climate-inadequate by 2050 and more than 30% by the end of the century. In 2050 the price of agricultural raw materials could increase by 3 to 84% and the number of hungry people by 80 million.	

3. Health challenges

Diseases	The combination of factors on a global scale could lead to an increase in health risks to the security of populations (insufficient food intake, poisoning, contamination of water or food).	Globalization (increased flows of people, animals and goods) promotes the development of diseases and amplifies other factors: the risk of breaking the cold chain, the intensification and specialization of production systems (decline of genetic diversity), land use changes that disrupt ecosystems. Risks of escalation of non-tariff protectionist measures and misuse of sanitary measures for trade purposes.
Antibiotic resistance	The resistance of pathogens to antibiotics could accelerate, as globalization accentuates the homogenization of food production, the large-scale diffusion of antibiotics and plant protection products and territorial specializations (WHO).	
Food scandals and fraud	The complexity and lengthening of global value chains make them channels of global transmission of systemic risks, particularly health risks (contaminated infant milk, horse meat lasagna, etc.).	
Pandemics	Risks related to pandemics (especially zoonotic) that could paralyze production and processing structures.	
Emerging risks	Emerging risks to food systems: nanotechnologies, endocrine disruptors, new GMOs. Uncertainties surrounding these new risks (societal concerns and scientific controversies, in particular about the possible «cocktail effect» resulting from the reciprocal influence of these substances).	

4. Geopolitical challenges		
The interweaving of economics and geopolitics	Food insecurity is both a cause of conflict (hunger riots that led to the overthrow of the Haitian government), a consequence of conflicts (war in Ukraine and shortage of cereals) and another way of waging war (embargo on dairy products, fruits and meats from the European Union by Russia in 2014, Black Sea blockade in 2022).	Cumulative effects on food security of conflict, climate change and economic downturns (exacerbated by pandemic risks); dependence on international markets, export restrictions and increased sensitivity to price fluctuations. Demographic pressure from developing countries that makes employment in rural areas a major challenge in order to avoid mass migration that can result in regional and then global destabilization.
Conflicts and wars	Migration of agricultural workers, destruction of crops, equipment or infrastructure, disruption of local and international markets, capture of food aid.	
Resources	Resources will be a major issue of tensions. A struggle between powers to control «scarce resources» is already underway. Example of the South China Sea where strategic issues are intertwined.	

Illustration from three FAO scenarios

In his prospective study "The Future of Food and Agriculture. Alternative pathways to 2050", FAO describes three distinct scenarios characterized by different ways of addressing key challenges in food security, nutrition and environmental sustainability. These scenarios were developed before the Covid-19 pandemic and the war in Ukraine. But the risks associated with conflicts and pandemics are integrated into most prospective studies that describe their amplifying effect on the challenges identified. It is the interactions between the main risks that will determine the future.

The FAO study should be understood in support of the following:

- Each of the scenarios shares the same population projections (those of the UN) in order to facilitate comparisons and to highlight the interaction between economic growth, equality and the availability of natural resources. There are, however, great uncertainties about population growth: the UN predicts that the world's population will reach 9.7 billion people in 2050 and 11.2 billion in 2100, while a study by The

Lancet (2020) predicts a decline in the population from 2064 that would reach 8.8 billion people in 2100.

- The magnitude of the challenges to be addressed in each scenario is different depending on whether public policies (including at the international level) and the behaviour of actors amplify or reduce the severity of the challenges.

The first scenario *(Business as usual)* is based on the maintenance of current trends (continuation of historical political and behavioral trends). It allows you to understand what the world would look like if it did not meet certain challenges.

The second scenario *(Toward sustainability scenario)* describes the path to sustainability. It helps to understand the changes required to achieve sustainable food for the world's population for the environment and natural resources.

The third scenario *(Stratified societies scenario)*, the darkest, sketches a future of increasingly "stratified" societies, i.e. in which inequalities in income and access to basic goods and services are exacerbated.

Finally, each of the scenarios is structured around four key questions for food security (see the "Questions" column of Table 2).

- Will people's food preferences change in order to limit the expansion of agricultural sectors?
- Can the expansion of agricultural production required to ensure sufficient availability of food take place within the limits of available natural resources?
- Will poverty and inequality continue to restrict access to food? Will food and agricultural systems become more equitable?
- Will the agricultural sector be able to contribute to the reduction of GHG emissions while producing enough food for all?

Table 2
Three FAO scenarios

questions	scenario 1 Maintaining current trends	scenario 2 Towards sustainability	scenario 3 Stratified companies
1. Changing food preferences			
*** Adoption of measures limiting the expansion of the agricultural sector (consumer awareness of sustainable schemes, fight against waste, price policies, limitation of agrofuels).**	Consumers in high-income countries maintain their preferences for resource-intensive foods. Limited income growth in low- and middle-income countries does not support the transition to healthier diets	More sustainable scenario due to a set of simultaneous changes (increase in agricultural prices linked to lower supply and environmental constraints; consumer awareness and changes in their food preferences, reduction of waste, post-harvest losses and pressure from non-food agricultural products).	Increased demand for food due to higher incomes, continued consumer preferences for resource-intensive foods (animal products) and waste (especially in high-income countries).
*** Fairness of food prices (taking into account environmental externalities, production costs, etc.).**	Increase in world agricultural production by about 50%. Up to 100% in sub-Saharan Africa and South Asia (demographic growth).	Satisfactory food availability thanks to rising incomes, with the possible domestic deficit of agricultural products being offset by international trade.	Increase in global agricultural production by about 54%.
*** The need for international trade to reduce national deficits, but without unfair competition towards countries that adopt stricter social and environmental regulations.**		Increase in global agricultural production by about 40%.	

2. Water scarcity and land quality degradation

Need for significant investments to: *** Sustainably intensify the agricultural sector (reducing the increase in demand for land while maintaining soil quality).** *** Rehabilitate degraded land (current agricultural practices lead to productivity losses and require more inputs).** *** Increase the efficiency of water use (climate change and population growth exacerbate water scarcity).** *** Adopt sustainable agricultural practices that may require abandoning increased yields when it degrades the environment and increases GHG emissions.**	Investments in the sustainability of food and agricultural systems (as well as in the energy sector) are limited. Increase in land requirements to 1732 million ha (+11%) due to the expansion of production and intensification of crops.	Significant investments are being made to increase the environmental sustainability of food and agricultural systems, as well as in other sectors of the economy. No additional need for arable land thanks to an intensification of production. This requires a change in the technological dimension of production systems in order to improve their ecological efficiency (precision agriculture, innovative conservation of land, water, biodiversity, production technologies: agroforestry, agroecology and organic farming).	Weak investment to improve the sustainability of food and agricultural systems or other sectors of the economy, particularly in low-income countries. Increase in land needs to 1892 million ha (+21%) due to the expansion of production and intensification of crops. As a result, the dwindling of natural resources intensified.

3. Poverty / inequality

*** The need for greater equity in the distribution of income and in access to assets (land, water, capital, credit) within and between countries.**	The world economy is growing at a moderate pace with very large disparities between regions. Considerable inequalities persist in pay and access to basic goods and services.	The global economy is growing at a moderate pace, but incomes and access to basic goods and services are being distributed more equitably	The global economy is expanding faster than in the other two scenarios. But some regions (sub-Saharan Africa in particular) do not derive real benefits from this growth.
*** A more equitable distribution of income promotes healthy diets.**		No trade-offs would be necessary between environmental and social sustainability, including in low-income countries (through a more equitable distribution of income between and within countries, especially between rural and urban areas, ethnic groups and between women and men).	Inequalities in income and access to goods and services between countries and between different strata of society are exacerbated in favour of elites.
*** The agricultural and food sectors are essential (jobs, income, food) but are no longer sufficient on their own to guarantee equitable access to food. The need for institutions supported by tax regimes for the integration of the poorest into the economy as a whole.**	About 8% of the world's population would still be undernourished in 2050 despite the 50% increase in agricultural production.	The percentage of undernourished people is falling below 4% (less than 400 million people), despite a likely increase in agricultural and food prices.	About 11% of the world's population is estimated to be undernourished, or almost 1 billion people.

4. Climate change

*** Risk of increasing impact of climate change on agricultural yields, soil quality, fish stocks, biodiversity, epidemiology, as well as poverty and inequality. Great uncertainties about the combined effects of these impacts.** *** Need for investment in technologies requiring fewer resources (adaptation of the agricultural sector to climate change: producing enough food with less GHG emissions).** *** The efforts of the agricultural sector will not be enough. Radical GHG reductions in the entire economy are required.**	Climate change (all causes) is having negative effects on agricultural yields due to increasing GHG emissions. Investments in the sustainability of food and agricultural systems (as well as in the energy sector) are limited. The agricultural sector itself will continue to contribute to climate change, with GHG emissions attributable to it increasing by 24%.		GHG emissions are lower (39% reduction) thanks to the reduced expansion of gross agricultural production, coupled with considerable investments resulting in more sustainable production and consumption patterns. The impacts on returns are less severe than in the other two scenarios.	Climate change (all causes) will have negative effects on agricultural yields due to increasing GHG emissions. Without sufficient investment to improve the sustainability of food systems, the agricultural sector itself will continue to contribute to climate change (a 54% increase in GHG emissions from agriculture).

3.

questions
for international law

‘Moving towards
the elimination of hunger
and malnutrition
in all its forms means
moving away from siloed
solutions and towards
integrated solutions.

FAO, IFAD, WHO, WFP and UNICEF
The State of Food Security
and Nutrition in the World, ed. 2021

The first part of this White Paper found that food and farming systems are operating in an environment saturated with rules. What may seem like 'too much' law has not been able to guarantee food security worldwide, nor to protect the environment and the climate from the effects of agricultural and food systems[3]. In a landscape of interconnected challenges (identified in Part 2), could this 'siloed' law claim to be truly effective?

In considering the main issues that international law will have to address by 2050 in order to meet the challenges of agriculture and food, it is necessary to recall the context in which it operates.

- States have never concluded so many treaties and have created a very large number of organisations or agencies among themselves to deal with issues of common interest at the global level, such as food and agriculture (FAO and the Committee on Food Security, World Food Programme, International Fund for Agricultural Development, International Union for the Protection of New Varieties of Plants, etc.). There is no shortage of negotiating forums, but states are struggling to agree on responses to the challenges posed by agriculture and food.

- Most States have ratified the 1966 New York Covenants (ICESCR and ICCPR) and almost all are members of the United Nations, but the fundamental right to food is struggling to become effective for a significant part of the world's population, including in States that have incorporated it into their Constitutions.

- Repeated food crises and chronic food insecurity reveal the shortcomings of global regulation and governance. The latter seems to be struggling to grasp the transformation of the bipolar world, as it existed until the end of the Cold War, into a multipolar world: the hyperpower of the United States of America has crumbled, Asia occupies a decisive place and emerging countries intend to influence international rules. But they "oppose the traditional powers with alternative models of development" far removed from that of the "Washington Consensus"[4]. The stalemate in the Doha Round (the WTO Development Round) is the most emble-

Note 3 See above, Introduction, 2. "Panorama of the state of agriculture and food in the world".

Note 4 See Mond'alim 2030. Prospective Panorama of the Globalization of Food Systems, 2017, p. 156.

matic manifestation of this. The creation of the New Development Bank by the BRICS (Brazil, Russia, India, China, South Africa), as an alternative to the World Bank and the IMF is another.

- In this context of multiple crises and difficulties in getting along in a multipolar world, a new dynamic of global governance has been set in motion. Informal arrangements were preferred to a profound change in law and institutions. The increased role of informal forums such as the G20 and their initiatives in the area of food security since the food crises of 2007/2008 attest to this. But their legitimacy is contested, especially by emerging countries.

- Bilateral and regional – even "mega-regional" – treaties (such as the Trans-Pacific Partnership) are multiplying and their stakes are as much commercial as geopolitical. These agreements, which bind only certain States to each other and between which there is no hierarchy or coordination, are another consequence of the crisis of multilateralism. The process of normative convergence they contain (reduction of non-tariff barriers to trade) feeds, within the countries concerned, fears of loss of regulatory sovereignty over societal choices.

- The crisis of multilateralism and the resulting disorder do not necessarily harm multinational enterprises. They put states in competition with each other and borrow norms and procedures from a multitude of different systems, whose elements they combine. They even create their own norms, especially within global value chains (multiplication of "standards") and thus contribute to the production of a new right. These developments have weakened the traditional monopoly of States on the international scene to the benefit of non-State actors.

- These different factors have given rise to a "multimodal global policy", characterized by an erosion of the distinction between public and private decision-making spaces. Emerging "global assemblages in which whole sections of state authority internalize a private and transnational agenda"[5].

- This overall movement, against the backdrop of the crisis of multilateralism, has led many states to turn inward, the multiplication of "non-cooperative" solutions and an increased mistrust of the ability of international trade – and

Note 5 According to the expression of the American sociologist Saskia SASSEN, quoted by Mond'alim 2030, op. cit. p. 156.

therefore of the market – to ensure food security. Its propensity to affect the maintenance of subsistence agriculture on which the survival of hundreds of millions of people around the world depends is also at stake. The opposition between the approach to food security through international trade, on the one hand, and that based on food sovereignty, on the other, is stronger than ever.

In this context, international law in its current form does not seem to have the means to become a global or worldwide law[6] capable of addressing the challenges of hunger, malnutrition, climate change and the degradation of natural resources. The fundamental principles on which it has been built for two centuries (the monopoly of States on law and sovereignty, in particular) are being abused. Moreover, its fragmentation, resulting from the specialisation of the organisations in charge of the various issues (trade, climate, food, etc.), is an obstacle to resolving closely intertwined challenges. Its means of action must certainly evolve, adapt to the reality of the balance of power involved and to the interpenetration of challenges. What changes would then be necessary in the way it is conceived? The need to decompartmentalize international negotiations – and therefore the resulting public policies and law – could be the breadcrumb trail of these questions that extend to the functioning of markets and international trade and the supervision of multinational companies.

Decompartmentalize international negotiations, institutions and public policies?

- The current institutional and legal context is first of all not favourable to the effectiveness of the fundamental right to food because the WTO was built independently of the United Nations. Human rights are not part of the WTO's "legal corpus ", so that trade "facilitation" (WTO) measures can be deployed in contradiction with those necessary for the "realization" of this right (FAO). Should we seek to reconnect

Note 6 Cf. C. BRICTEUX and B. FRYDMAN, The challenges of global law, Bruylant, 1st ed. 2018.

with the spirit of a text such as that of the Havana Charter[7] signed in 1948, but never entered into force? The Charter provided for the creation of an International Trade Organization which, unlike the WTO, was attached to the United Nations. That connection would have had the effect of forcing that organisation to take human rights into consideration in the implementation of trade liberalisation. Since agricultural products are not ordinary goods, shouldn't their trade be part of a trading system that integrates human rights into the governance of international trade? This is the path that the UN Declaration on the Rights of Peasants (2018) invites States to take in order to develop and interpret international agreements "in a manner consistent with their human rights obligations" (Art. 2, §4). Such a development would probably not be a sufficient solution, as international investment law shows. The World Bank's arbitration body, linked to the UN, refers to human rights but prioritizes the protection of investments and the interests of large investors. An evolution of the arbitral jurisprudence would undoubtedly be necessary on this point (see below).

- The international context is also not adapted to food security because of the fragmentation of international negotiations, which prevents a concerted and coherent design of a food security policy that takes into account both climate change and the effects of the application of the principle of free trade to agricultural products. The negotiations on climate[8], those on trade in agricultural products (WTO Doha Round) and those on food security (FAO/UN) are being held today separately. None of these three negotiations takes concrete account of what is being negotiated in the other two, which could explain their failure. For example, the Nairobi negotiations (WTO, 2015) stumbled on the issue of stockpiling to feed the poorest populations. Can food security be achieved without an agreement to regulate imports/exports of vital agricultural products, which the WTO in principle prohibits? The issue seems all the more crucial given that these three negotiations focus on the three pillars of sustainable development (the economic pillar for the WTO, the environmental pillar for the IPCC and the social pillar of food security for the FAO), which is the stated ob-

Note 7 F. COLLART DUTILLEUL, La Charte de La Havane. Pour une autre mondialisation, Dalloz, collection « Tiré à part », 2017.

Note 8 United Nations Framework Convention on Climate Change and its decision-making body, the Conference of the Parties, work of the IPCC.

jective of the international community. Should we not imagine an international governance that would make it possible to correlate these three pillars?

- Rather than creating a new institution integrating the various dimensions relating to agriculture and food, it was proposed to set up a cooperation pole bringing together resources and expertise from the major institutions concerned: world bank, WTO, IMF, United Nations Environment Programme (UNEP), United Nations Conference on Trade and Development (UNCTAD), FAO, International Fund for Agricultural Development (IFAD), IPCC. The grouping of these competences would take place within a World Food Security Council, attached to the United Nations Security Council, which would facilitate the emergence of cooperation and set the political priorities of the various international institutions with international security as a perspective[9].

Note 9 F. COURLEUX, J. CARLES, « Le multilatéralisme agricole depuis l'OMC : entre échec et renouveau », Le Déméter 2020, p. 77.

International trade and the market

Re-examining the theory of comparative advantage?

The specialization of countries in certain productions and in the supply of certain raw materials is a consequence of the theory of "comparative advantages" which underpins the WTO system. According to this theory, countries would benefit from exchange because it would lead, through the international division of labor, to an optimal use of each other's resources. Wouldn't this matrix of international trade deserve to be questioned? It is transnational companies that, in application of this theory, have gradually fragmented and relocated stages of production, in the search for global production at the lowest cost. However, these relocations imply the closure of production sites within the countries of origin, thus generating unemployment, as well as the need to resort to new imports since production abroad proves to be intended for the world market and no longer for the market of origin. It also results in a strong dependence of many countries on imports, with potentially dramatic consequences of which the war in Ukraine is only a new manifestation. Furthermore, this theory assumes that

markets function efficiently, whereas markets in the agricultural sector are notorious for market failures.

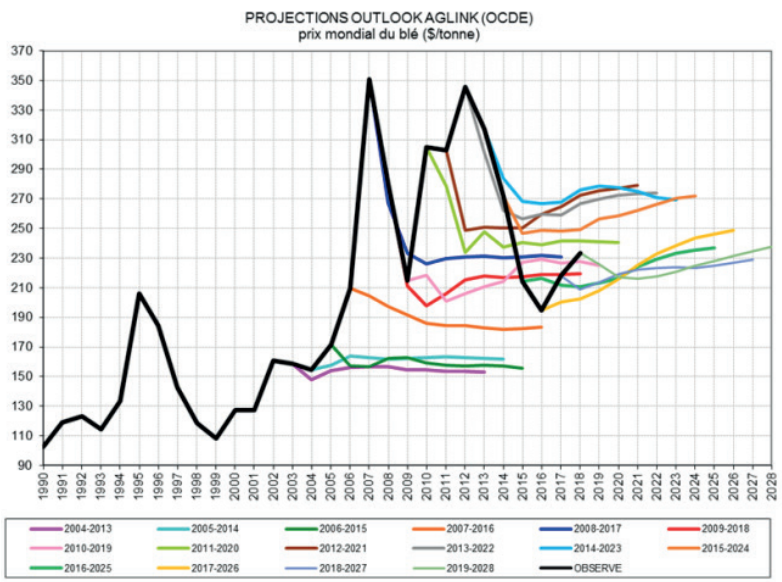
Agricultural market failures and price volatility

The 2007-2008 food crisis was a reminder that it was not enough to reduce "distortions" for agricultural markets to stabilize on their own. The free play of international trade does not lead prices to stabilize at their equilibrium level. In the agricultural sector, price adjustment of supply does not work well and the causes have been described in an abundant literature. Shouldn't the current rules based on the hypothesis of market efficiency be reconsidered? The question is all the more important because the WTO and the OECD are not the only institutions that base food security on the functioning of markets. Even in international bodies in charge of environmental, agricultural and food issues, priority is given to this method of coordinating decisions through prices[10].

The following graph illustrates the difficulty of the "Aglink" general equilibrium model in predicting agricultural price dynamics. Its assumptions do not sufficiently take into account the causes of instability in agricultural markets, even though they are referenced in most international forums and serve as support for their agricultural policy recommendations. The black (chaotic) curve describes the observed evolution of the price of wheat, the colour curves (almost linear) correspond to the OECD forecasts.

Note 10 Rio Declaration of 1992, Article 16; Rio+20 Declaration of 2012, Nos. 118, 281 and 282; FAO Voluntary Guidelines on the Right to Food (pt 4.7).

Comparison of OECD projections and real developments in wheat prices[11]



Reconnect with interstate cooperation?

The belief that the free play of international trade would allow prices to stabilize at their equilibrium level led to the belief that the problem of "choice" would be solved by the market and that it was therefore useless to go through inter-state cooperation. This competition-based "supranationalism" was to lead to the end of the Commodity Agreements which had been conceived as responses to the volatility of their respective markets. However, the Doha Round has stalled precisely at a time when India and the United States have not been able to agree on the measures to be taken within the framework of the WTO in the event of a surge in food prices.

International trade, however, is essential to food security, if only because no country can produce all the food needed to feed its people and for each product, three or four countries concentrate the bulk of production. This is why both the UN Declaration on the Rights of Peasants (Article 2, §6, e) and the Sustainable Development Goals established by the United Nations (SDG 2) recommend the adoption of measures to ensure the proper functioning of food markets, in particular to limit extreme price volatility, through renewed international cooperation.

Note 11 Graph reproduced with the kind permission of Agriculture Strategies.

→ *In response to market failures, GATT and WTO provide for a number of waivers. Can they be effective?*

- Article XI of the GATT allows quantitative restriction measures on imports or exports, but only if they are applied "temporarily to prevent or remedy a critical situation due to a shortage of food or other products essential to the exporting Contracting Party". This text offers no solution to countries in which famine and undernourishment are endemic.
- Article XX-b of the GATT allows for the adoption of measures "necessary for the protection of human, animal or plant life or health". But the WTO Dispute Settlement Body makes the application of this text conditional on proof that the measure taken does not constitute "a means of arbitrary or unjustifiable discrimination between countries where the same conditions exist" and that it is not a "disguised restriction on international trade" (introductory chapeau of Article XX). However, there will automatically be discrimination if all undernourished countries do not take the same derogatory measures at the same time.
- The Agreement on Agriculture recognises the need to take into account the situation of developing countries and the objective of food security. But the agreement sets out to "establish a fair and market-oriented system of trade in agricultural products", with the dual constraint of the most-favoured-nation clause and the national treatment clause.

→ *Faced with market failures, should it not be appropriate to promote inter-State cooperation with a stabilising aim?*

- *Rehabilitate the production limitation measures necessary to reduce the overcapacity that destabilizes the markets?* This is a possible response to the limits of price adjustment under Article 6(5) of the Agreement on Agriculture (Blue Box of Domestic Support Measures). To be effective, this solution requires inter-State measures to coordinate the reduction of supply in order to share the burden among the various producing countries.
- *Rediscover the spirit of the Havana Charter and the Commodity Agreements?* The Havana Charter had built an International Trade Organization (ICO) with a special regime for commodities (art. 55 s.): products of agriculture, fisheries, forestry and minerals. These products were not considered ordinary goods. Their international trade should aim at objectives such as economic development, full employment, food security and the preservation of natural resources. States were allowed to temporarily adapt the rules in the

event of a food crisis, in particular by limiting exports and imports of the agricultural product concerned. This involved "intergovernmental agreements" concluded, through the ICO, between the States concerned by the product that caused a crisis. The Charter never entered into force, *but could its provisions not be a source of inspiration for rethinking cooperation between sovereign States?* It is also through this type of measure that international trade in agricultural products was initially structured through the "commodity agreements" whose rehabilitation deserves to be questioned.

- *Construct a general "agricultural exception" on the model of the "cultural exception" guaranteed by the WTO (GATT, art. III.10) and the 2005 UNESCO Convention on the Protection and Promotion of the Diversity of Cultural Expressions?* It was proposed to rewrite the UNESCO Convention by transposing it *mutatis mutandis* to food security (see proposal here). Such an exception would make international trade in agricultural products subject to the three pillars of sustainable development.

→ *Faced with market failures, should we not stop considering certain public policies as distortions, but on the contrary as being necessary to put international trade back on the track of sustainable development?*

- *Condition market access on compliance with environmental and social standards?* Making compliance with the Paris Climate Agreement a condition for market access would allow concrete progress towards sustainable development. This would, however, amount to giving an advantage to those States or regions that subscribe to it. The emergence of such measures would then require the adjustment of one of the founding principles of the WTO, that of non-discrimination or the "most-favoured-nation clause", which strongly regulates the use of this type of measure. It would also involve "rethinking the respective roles of states and companies in international trade"[12]. Finally, such a solution should be assessed with caution, taking into account the risk of exclusion from the markets of farmers/peasants from the least developed countries whose social and environmental standards are often less restrictive than those of developed countries.

Note 12 F. COURLEUX, J. CARLES, « Le multilatéralisme agricole depuis l'OMC : entre échec et renouveau », Le Déméter 2020, p. 75. The authors provide an example of the renegotiation of the North American Free Trade Agreement (NAFTA), which led to the emptying of the Investor State Dispute Settlement and forced investors to apply directly to national courts or the inter-State arbitral tribunal.

- *A similar question arises with regard to the rules limiting the consideration of "production processes and methods" (PMPs) in international trade.* Article XX of the GATT allows environmental measures but only if they are not discriminatory or protectionist. The principle of national treatment provides that each country must treat imported goods in the same way as like domestic goods. A growing number of disputes are taking place around the concept of "similarity". The issue is whether or not two products from two different PMPs should be considered similar. While the Dispute Settlement Body tends to favour the objective of trade openness and non-discrimination to the detriment of environmental regulations, a shift seems to be emerging in its jurisprudence :
    - DSB, Canada. Certain measures affecting the renewable energy production sector (2014).
    - DSB, United States. Measures concerning the import, marketing and sale of tuna and tuna products (2017): a label excluding fishing practices harmful to dolphins is justified.
- *In order to meet both the challenge of poverty and the migratory challenge, is it not necessary to rehabilitate development strategies through agriculture?* This would mean preserving a minimum of national food sovereignty, creating the conditions for truly undistorted competition between rich and poor countries, promoting the development of local markets and protecting peasants' access to land, seeds and natural resources on which they depend. The UN Declaration on peasants' rights advocates these solutions. This text was essentially signed only by the countries of the South, the countries of the North having abstained for the most part. But could it not be a source of inspiration to enrich the WTO's body of law? The final report of the UN Special Rapporteur on the right to food (2014) concluded on *the need for an "enabling international framework" for national and local policies* (including those of indigenous communities), accompanying "the possibility for communities to choose which food system they wish to depend on".

Supervision of multinational enterprises

Isn't one of the most striking paradoxes of the WTO to limit the action of States while remaining relatively powerless in the face of certain practices of multinationals? Should international law not be endowed with tools to contain the market power of these

companies, to regulate their political influence and normative power and to strengthen their social and environmental responsibility?

Containing the market power of enterprises

→ *The need for international competition law.* International agricultural trade today takes place in markets that bring together atomised farmers and powerful oligopolies located upstream (suppliers of inputs, seeds, agricultural technologies) and downstream (processors and distributors) of agricultural production. Farmers are often caught in chains of subordination: dependence on large seed companies (seed/pesticide/fertilizer linked sales, price increases), power relations with large buyers that make them "price takers". Some restrictions of competition may also be discriminatory and jeopardise efforts to liberalise and open up markets. The absence of international competition law has been identified by the WTO as one of the weaknesses of global governance. For that reason, a Working Group on the Interaction between Trade and Competition Policy had been established by the Singapore Ministerial Conference in 1996, without achieving concrete results. Only agreements on subsidies and countervailing measures and on dumping are the embryo of international competition law. However, some multilateral free trade treaties, such as the Trans-Pacific Partnership, contain a chapter on competition policies. The question also arises of the regulatory authority that would be in charge of litigation. Is it better to create a new supranational agency or to institutionalise cooperation between existing national or regional authorities?

→ *Technological agriculture.* Some innovations (connected agro-equipment, biotechnology, precision agriculture, etc.) can be an effective response to the twin challenges of food security and the preservation of natural resources. "The ambivalence of the effects of technological leaps"[13] is worth considering, however. Will all farmers be able to use these technologies, which require considerable investment? Won't those who can fall into new dependencies? These technologies contribute to the privatization of knowledge and data and their concentration in the hands of a few players, initially foreign to the agri-food sector (from fine chemicals, energy, the digital economy). These could, in the future, organize food systems and define global standards.

Note 13 Mond'alim 2030, p. 185.

Framing the political influence and normative power of private actors

→ *Influence on public policy and the making of law.* Multinational corporations, some non-governmental organizations and foundations are increasingly exerting influence on public policies and are themselves becoming political powers. For example, the Gates Foundation funded an FAO programme "to support reforms and public investment decisions" involving eight African countries. The same foundation supported the World Bank's Enabling the Business of Agriculture project to "secure land investments" in developing countries. Some critics are concerned about a model "dictated from the North to the South" and note that such development aid could constitute "Trojan horses of multinational corporations."

Private actors are also involved in the negotiations of bilateral free trade agreements and mega-regional agreements. The negotiations on the Free Trade Agreement between the European Union and Canada (CETA) provide an illustration of this. Those surrounding the Transatlantic Trade and Investment Partnership (TTIP) project are particularly emblematic: a hundred multinationals have been tasked with advising the executive powers of both parties "on legislative aspects related to trade and investment". The central issue of these agreements is that of non-tariff barriers, i.e. "normative convergence", which is certainly preferable to "normative competition". *But wouldn't the democratic nature of these normative processes that involve societal choices deserve to be questioned?*

→ *Private standards, instruments for controlling global value chains?* Private health and sustainability standards are multiplying (GlobalGAP standards, GFSI standards, ISEAL standards, etc.). In principle, they go beyond mandatory regulations. These standards have virtues, such as facilitating the supply of agricultural raw materials produced in accordance with the principles of sustainable development or reassuring consumers about the sanitary quality of products. They also present disadvantages or risks:

- The proliferation of competing standards increases compliance costs for producers and can lead to the eviction of the most vulnerable among them. The ISEAL standards, which federate different certification systems (*FSC* for sustainable forests, *MSC* on sustainable fisheries, *IFOAM* on organic farming, *Fairtrade* on fair trade) are a first response to this risk.

- These private standards can create new barriers to market entry. They are one of the main challenges for the least developed countries to participate in international trade.
- These standards change the balance of power within global value chains in favour of downstream companies (processors, distributors) and to the detriment of producers.

However, these standards are not covered by WTO rules because of their private nature. The WTO views these risks as one of the main challenges of global governance. Since the Codex Alimentarius texts serve as a reference when a trade dispute is brought before the WTO, could *the Codex Alimentarius Commission (Joint FAO/WHO Intergovernmental Agency) not be entrusted with a role of monitoring and harmonizing these private standards developed in an uncoordinated manner?* In this sense, the Global Food Safety Initiative (GFSI), FAO, the United Nations World Food Programme (WFP) and the Codex Alimentarius Commission met in 2021 to work on public-private partnerships.

Strengthening the social and environmental responsibility of transnational corporations

→ *Enrich the criteria of competition by better informing the consumer.* The consumer is expected to be the ultimate beneficiary of the competitive process. For this, it is still necessary that he has the information he needs to make his choices. Although he has information on prices and brands, he ultimately has access to very little information on other criteria, social and environmental, which could nevertheless guide his choices and exert some pressure on companies. Access to more comprehensive information would certainly reorient the global food system: the cost of a carbon product, the precise mode of production, the industrial or peasant nature of seeds, the number of intermediaries between the producer of primary products and the consumer, the sharing of value throughout the agri-food chain, the precise geographical origin of the main products and ingredients, etc. *All this information is available due to fairly sophisticated traceability systems. Shouldn't they be made available to consumers? Would this be incompatible with international trade law?* Geographical indications are another effective means of informing the consumer about the geographical origin of products and their production methods. But the level of protection afforded to them by the TRIPS Agreement is controversial within the WTO.

→ *Encourage responsible investment.* The failure of the OECD's draft Multilateral Agreement on Investment has led to the proliferation of bilateral agreements. These protect investors by providing a stable legal environment with investor-state arbitration mechanisms. Several States have been condemned for policies related to the environment, health, water, etc., deemed incompatible with investors' rights ("indirect expropriation"). However, "unresponsible" investments are a cause of both food insecurity (forced displacement of populations, loss of access to land, water and productive resources, loss of livelihoods) and environmental damage (deforestation, etc.). On the contrary, responsible investments create jobs (agricultural and non-agricultural), transfer of technology, improve access to local, regional or international markets and increase public revenues. However, no instrument of international law today imposes binding obligations on investors. Most of the regulation of their activities is a soft law and a voluntary approach: self-regulation through Social and Environmental Responsibility strategies, Principles for Responsible Investment in Agriculture and Food Systems (CFS), Guide for Responsible Agricultural Value Chains (FAO/OECD), FAO Voluntary Guidelines on the Responsible Governance of Tenure, for example.

Several possible solutions have been proposed in order to strengthen the international legal responsibility of companies and/or to force them to invest responsibly. Each of them deserves careful consideration.

- Shouldn't the recognition of the right to food as a norm of "general international law" entail the possibility of invoking article 53 of the 1969 Vienna Convention on the Law of Treaties? This text provides for the invalidity of treaties "in conflict with a peremptory norm of general international law" (jus cogens). It is certainly difficult to imagine treaties directly affecting the right to food, but there are many hypotheses of implicit violations (land transfers for non-agricultural purposes, restrictions on local productive capacity).
- The granting of huge areas of land for agricultural purposes to transnational investors can lead to the creation of "extra-territorialized enclaves": in extreme cases, agricultural production is entirely intended for export, while agricultural labour is "imported" from the farmer's country. Can food security be achieved without an agreement to regulate imports/exports of vital agricultural products, which the WTO and most bilateral investment agreements in principle prohibit?

- Would it not be appropriate to facilitate the use of mechanisms such as "state of necessity" (International Law Commission Draft on Responsibility of States for Internationally Wrongful Acts, art. 25) or the "safeguard clause" (GATT, Art. XIX)? This would require an evolution of the jurisprudence of arbitral tribunals, which is currently very restrictive. Perhaps the role of arbitrators should even be reconsidered by obliging them to take into account the right to food when assessing a State measure deemed equivalent to expropriation, but adopted in order to protect the population of the host State.

- Soft law texts (FAO voluntary guidelines, etc.) contain measures that would make it possible to guarantee the food security of populations in the face of certain international investments. Should they not be made binding and integrated into international public order? Private international law could also be the vehicle for the implementation of general international law and the Sustainable Development Goals. The UNIDROIT Guide on Agricultural Land Investment Contracts or the Legal Guide on Contract Farming (UNIDROIT/FAO/IFAD) provide guidance on improving investments in agricultural land by advocating for the application of the UNITED Nations Guiding Principles on Business and Human Rights or the Principles for Responsible Investment in Agriculture and Food Systems of the Committee on Food Security World.

→ *Make companies the subjects of an international law with obligations towards private persons?* States should take the necessary measures to ensure that transnational corporations respect human rights (in this sense, UN Declaration on the Rights of Peasants, Art. 2, §5). But isn't international human rights law too subject to the sovereignty and therefore to the goodwill of States, which partly explains their weakness? It was proposed to emancipate human rights from State supervision and to extend the obligation to respect them to companies. The Office of the United Nations High Commissioner for Human Rights has taken up the issue and developed the Guiding Principles on Business and Human Rights.

annex 01

selective bibliography

Most references are hyperlinks

- GIEC, Climate Change 2022 : Impacts, adaptation and vulnerability, 2022.
- TERRE DE LIENS, Etats des terres agricoles en France, 2022, 72 p.
- FSIN, Global report on food crises. Joint analysis for better decisions, 2022, 277 p.
- IPES FOOD, À nouveau en eaux troubles : comment l'incapacité à réformer les systèmes alimentaires a permis à la guerre en Ukraine de déclencher une troisième crise mondiale des prix alimentaires en 15 ans, et comment éviter la prochaine, 2022, 31 p.
- S. ABIS et M. BRUN (dir.), LE DEMETER 2022, IRIS éditions, 2022, 406 p.
- L. LECLAIR, Hold-up sur la terre, Le Seuil, 2022, 160 p.
- FAO, L'état des ressources en terres et en eau pour l'alimentation et l'agriculture dans le monde. Des systèmes au bord de la rupture, 2021, 93 p.
- FAO, La situation mondiale de l'alimentation et de l'agriculture en 2021, Rendre les systèmes agroalimentaires plus résilients face aux chocs et aux situations de stress, 2021, 202 p.
- IPES FOOD, Un mouvement visionnaire pour une agriculture durable : Transformer les systèmes alimentaires d'ici 2045, 2021, 200 p.
- GIEC, Climate Change 2021 : The Physical Science Basis, 2021.
- ASSEMBLÉE NATIONALE, Rapport au nom de la commission d'enquête relative à la mainmise sur la ressource en eau par les intérêts privés et ses conséquences, n°4376, 2021, 383 p.
- FRANCE STRATÉGIE, Pour une alimentation saine et durable, Analyse des politiques de l'alimentation en France, Rapport pour l'Assemblée nationale, 2021, 369 p.
- FAO, The state of food and agriculture. Making agrifood systems more resilient to shocks and stresses, 2021, 182 p.
- S. ABIS et M. BRUN (dir.), LE DEMETER 2021, IRIS éditions, 2021, 368 p.

- Rosa-Luxemburg-Stiftung, Biba, Bread for the World, FIAN Germany, Forum on Environment and Development, INKOTA-netzwerk, IRPAD, PELUM Zambia, Tabio, and TOAM, False promises : The alliance for a green revolution in Africa (AGRA), 2020, 42 p.
- B. CLEMENCEAU, Le droit à l'alimentation, thèse dactylographiée, Université Paris-Est Créteil, 2020, 780 p.
- T. POUCH et Q. MATHIEU, "Covid 19 : la menace qui plane sur la sécurité alimentaire mondiale", 2020.
- A. COWIE, Lignes directrices relatives à la neutralité en matière de dégradation des terres, rapport établi à la demande du Groupe consultatif pour la science et la technologie du Fonds pour l'environnement mondial, 2020, 64 p.
- INRAE, Place des agricultures européennes dans le monde à l'horizon 2050, Entre enjeux climatiques et défis de la sécurité alimentaire mondiale, 2020, 12 p.
- GIEC, Changement climatique et terres émergées, 2020.
- S. ABIS et M. BRUN (dir.), LE DEMETER 2020, IRIS éditions, 2020, 396 p.
- IPBES, Rapport de l'évaluation mondiale de la biodiversité et des services écosystémiques, 2019, 93 p.
- ACADEMIE DE L'AGRICULTURE DE FRANCE, Quel droit à l'alimentation pour tous?, 2019.
- CGAAER, Rapport n°18066, Agri 2050, une prospective des agricultures et des forêts françaises, 2019, 198 p.
- S. ABIS (dir.), LE DEMETER 2019, IRIS éditions, 2019, 382 p.
- R. DANTEC et J.-Y. ROUX, Adapter la France aux dérèglements climatiques à l'horizon 2050 : urgence déclarée, n°511 (2018-2019), Rapport d'information fait au nom de la mission sénatoriale à la prospective, 190 p.
- X. POUX et P.-M. AUBERT, Une Europe agroécologique en 2050 : une agriculture multifonctionnelle pour une alimentation saine. Enseignements d'une modélisation du système alimentaire européen, Iddri-AScA, Study n°09/18, 2018, Paris, 78 p.
- M. SPRINGMANN et alii, "Options for keeping the food system within environmental limits", Nature, 2018, pp. 519 s.
- C. LE MOUËL et A. FORSLUND, How to feed the world in 2050? A review of the responses from global scenario stu-

dies. European Review of agricultural Economics, 44(4), 2017, pp. 541–591.

- FAO, L'avenir de l'alimentation et de l'agriculture : parcours alternatifs d'ici à 2050, 2017, 180 p.
- A. POPP et alii, Land-use Futures in the Shared Socio-economic Pathways. Global Environmental Change, n°42, 2017, pp. 331-345.
- HLEP, Nutrition and food systems, 2017, 152 p.
- CENTRE D'ÉTUDE ET DE PROSPECTIVE, Mond'alim 2030, Panorama prospectif de la mondialisation des systèmes alimentaires, La documentation française, 2017, 232 p.
- Q. QIN, La sécurité alimentaire en droit international du commerce, 2017, thèse dactylographiée, 620 p.
- OCDE et FAO, Perspectives agricoles de l'OCDE et de la FAO 2016-2025, 2016, 41 p.
- AGRIMONDE et TERRA, Etude prospective sur l'usage des terres et la sécurité alimentaire à l'horizon 2050, 2016.
- SOLAGRO, Le scénario Afterres2050, 2016, 96 p.
- Odegard I.Y.R et van der Voet E.. The Future of Food: Scenarios and the Effect on Natural Resource use in Agriculture in 2050. Ecological Economics, 97: 2014, pp. 51-59.
- T. A. WISE, Pourra-t-on nourrir la planète en 2050? Un état des lieux des modèles de prévisions actuels, 2013, 46 p.
- N. ALEXANDRATOS et J. BRUINSMA, World Agriculture Towards 2030/2050. The 2012 revision. ESA Working Paper No. 12-03. Rome : FAO of the United Nations, 154 p.
- OCDE, Perspectives de l'environnement de l'OCDE à l'horizon 2050, les conséquences de l'inaction, 2012, 79 p.
- CENTRE D'ANALYSE STRATÉGIQUE, Trajectoires 2020-2050, vers une économie sobre en carbone, 2012, 232 p.
- O. DE SCHUTTER, Principes directeurs applicables aux études d'impact des accords de commerce et d'investissement sur les droits de l'homme, présenté au Conseil des droits de l'homme de l'ONU, 2012, 15 p.
- B. N. POUDEL et alii, Providing Numbers for a Food Versus Fuel Debate: An Analysis of a Future Biofuel Production Scenario. Applied Economic Perspectives and Policy, 34, 2012, pp. 637-668.

- K. H. ERB et alii, Dependency of Global Primary Bioenergy Crop Potentials in 2050 on Food Systems, Yields, Biodiversity Conservation and Political Stability. Energy Policy, 47: 2012, pp. 260-269.
- E. ADAM, Droit international de l'agriculture. Sécuriser le commerce des produits agricoles, 2012, LGDJ, 337 p.
- Y. COLLIN, Le défi alimentaire à l'horizon 2050, n°504 (2011-2012), Rapport d'information fait au nom de la délégation sénatoriale à la prospective, 607 p.
- M. GRIFFON, "La PAC marche sur des œufs. Préparer l'agriculture aux défis de 2050", Revue Projet, 2011, n°321, pp. 37-44.
- FAO, Le droit à une alimentation suffisante, 2010, 65 p.
- FAO, Documents techniques de la Réunion d'experts sur le thème : "Comment nourrir le monde en 2050", 2009.
- FAO, How to feel the world in 2050, 2009, 35 p.
- B. D. MCINTYRE et alii, Agriculture at a Crossroads : Global Report. In: International Assessment of Agricultural Knowledge, Science and Technology for Development (IAASTD). Washington: Island Press, 2009, 606 p.
- B. DORIN et S. PAILLARD, Agrimonde. Agricultures et alimentations du monde en 2050 : scénarios et défis pour un développement durable, INRA, CIRAD, 2009, 32 p.
- B. HUBERT et P. CARON, "Imaginer l'avenir pour agir aujourd'hui, en alliant prospective et recherche : l'exemple de la prospective Agrimonde", Natures Sciences Sociétés, n°17, 2009, pp. 417-423.
- K. H. ERB et alii. Eating the Planet: Feeding and Fueling the World Sustainably, Fairly and Humanely: A Scoping Study. Commissioned by Compassion in World Farming and Friends of the Earth UK. Institute of Social Ecology and PIK Potsdam, Vienna, Potsdam, 2009, 116 p.
- S. R. CARPENTER et alii, Ecosystems and Human well-being: Findings of the Scenarios Working Group, 2005, 155 p.
- FAO, Changements du climat et production agricole, 1997, 406 p.
- D. MEADOWS, The limits to growth, 1972, 211 p.

annex 02

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