United Nations expert group meeting on population, food security, nutrition and sustainable development

New York, 16-17 September 2019

Report of the Meeting

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ESA/P/WP/258

Department of Economic and Social Affairs
Population Division

United Nations expert group meeting on population, food

Population change, 2019-

who migrated into or out of particular countries greatly exceeded the volume of net migration, which was the difference between in- and out-migration. Most international in- and out-migrants moved between countries in the same region.

Mr. Swiaczny also described basic features of the methods the Population Division used in developing the population projections. The calculations employed a cohort-component approach. Assumptions about future trends of fertility and mortality were derived primarily from past trends for a given country but were also informed by theories of demographic change and by historical experience of other countries. Alternative future trends had traditionally been described using low, medium and high variants and scenarios based on alternative assumptions about future changes in fertility. Recently, the Division had also projected future trends using a probabilistic model, which was calibrated for each country using a procedure that relied primarily on data for that country. Data for other countries influenced projections, especially for countries in which the transition to low fertility and mortality was less complete (see https://population.un.org/wpp/Methodology/). Examination of past revisions of the population projections showed that the medium-variant projections generally had a good record of anticipating actual growth of the world population.

Discussion

In the discussion, Ms. Aburto responded to several questions regarding nutrition. She agreed that it was important to understand dietary choices and risks beyond just questions of adequate caloric and micronutrient availability. Detailed individual-level data about actual diets was currently quite limited. However, FAO and WHO were collaborating to build a platform for compiling and sharing of individual-level data about diets in different countries. Another question concerned metabolic adaptation to deprivation. Ms. Aburto said that there had been numerous follow-up (nt)6.2 (i)-4.6 0 Td[up (nt)6.2 (i)-461.7 (d)-93.6

C. FOOD SECURITY AND POPULATION CHANGE

1. Food security, growth, consumption and sustainability

Ms. Aisha Dasgupta (UNPD) moderated the first part of the session on food security, growth, consumption and sustainability.

Presentations

Mr. Lorenzo Bellù (FAO) gave the session's first presentation, on "Growth and consumption trends: projections of food and agriculture." The central question was whether global food and agricultural systems would be able to feed humanity sustainably and satisfactorily in the future, while also accommodating additional non-food agricultural demand. Ten challenges all needed to be met to achieve that goal (see the box).

FAO had addressed those issues in a comprehensive foresight exercise that examined three possible scenarios of how agricultural and economic trends might develop up to 2050.[3] Before turning to the scenarios, Mr. Bellù briefly reviewed past trends in the two main drivers of demand for agricultural production and food: population growth and economic growth. With the exception of China, there had been little or no convergence in income levels between the high-income countries and middle- and lower-income countries. The average gross domestic product (GDP) per capita in all such countries (excluding China) in 2015 was under 10 per cent

changing population age structure, since caloric needs are higher for adolescents and working-age adults than for young children or older persons. Urbanization could also affect requirements, since urban dwellers tended to have a more sedentary lifestyle. Economic inequalities within countries and policies targeting access to the poor could also have an important impact on how much agricultural production would need to expand in order to provide access to a healthy diet for all.

Mr. Valin next turned to IIASA's work on modelling future food and environmental trade-offs. IIASA was part of a community of researchers examining those questions using “integrated assessment models” (IAMs). As did others in that research community, IIASA structured aimons0-3..6 Prcehrk on m, i(Srcle

communicated frequently to compare and discuss results of different models. That process could, over time,

three major challenges involving food systems: (1) food waste; (2) diminishing land and water resources; and (3) health and environmental impacts.

Mr. Boileau said that an estimated one third of food was wasted. The causes of food loss and waste varied by region. For example, in sub-Saharan Africa most of the loss occurred during food production, handling and storage, while in Northern America most of the loss occurred at the retail and consumption stages. Food loss and waste contributed about 10 per cent of global GHG emissions.

The food system contributed to climate change through GHG emissions, but it was also affected by climate change, as land was lost to desertification, and as more frequent droughts decreased available freshwater. Agriculture was estimated to produce about 25 per cent of anthropogenic GHG emissions; livestock production alone was responsible for 9 per cent of emissions. The greatest impact of livestock was from ruminant animals – mainly cattle, sheep and goats – because they produced methane as part of their digestive process. Meat production also used over 75 per cent of agricultural land, including pasture and grazing land and farmland used for growing animal feed. Another serious issue was that inappropriate use of antibiotics on farm animals was contributing to the growing problem of bacterial antibiotic resistance, with potentially deadly effects on human health. In addition, some farming practices were making food production unsustainable; these otudi.5 (e)-3.ti unstPeiou7ta aoeng

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GHG emissions that were due to the food system range from 21-37 per cent, projected to increase by 30-40 per cent by 2050. GHG-induced climate change also added to the stresses on food systems; the average temperature had already increased by 1°C above preindustrial levels, and if global temperatures rose to 2°C the risk of food system instability would be very high, with an increased frequency of extreme events such as droughts and flooding. There were already clear signs of climate-induced stress in some areas. Climate models were in broad agreement that yields of major grain crops were likely to decline in tropical areas as atmospheric CO_2 levels rose, including in much of Africa and Latin America and southern parts of Asia and the Pacific. There could be small benefits for yields in northern temperate latitudes if temperatures rose by 1-3°C. However, recent research showed that some crops, such as rice and wheat, had lower protein content and lower levels of some micronutrients when grown under higher CO_2 conditions.

Ms. Rosenzweig emphasized the potential environmental and health benefits that could result from switching to a predominantly plant-based diet, and that there was a large potential for reducing food

region, primarily through increased food production, although some countries were also net importers of food. Despite those improvements, undernourishment remained a serious problem. At the same time,

in rural and those in urban areas were much more likely to be poor than were their counterparts in other regions. In high-income countries the agricultural transformation had involved increases in average farm size and decreases in the number of farms, but that was not what was happening in many low- and middle-income countries. In some countries there were large farms that mainly grew crops for export, but the average farm size had been decreasing since 1980 in low- and middle-income countries.

In discussions of migration in the context of urbanization, the focus was usually on net migration from rural to urban areas, but many more people moved back and forth between urban and rural areas, between different rural areas or between different cities. In sub-Saharan Africa over 75 per cent of all internal population movements took place within rural areas. With respect to international migration, Mr Bellù presented survey results from several low- and lower-middle-income countries showing that most migrants moved for work-related reasons. He observed that the motivation for moving internationally in hopes of higher earnings in a wealthier country was likely to remain strong so long as income gaps between countries remained as large as they currently were. The development literature created an expectation that the income gaps between early- and late-industrializing countries would close over time, but apart from some notable exceptions such as China, that was not what had been happening.

FAO had examined possible ways that small and mid-sized cities could help advance rural development. Smaller cities tended to be the ones that were growing most rapidly, and they had closer ties to rural areas than did larger cities. There was a large potential for agro-development around many smaller cities, for instance by building improved storage facilities and factories for food processing. Governments could help provide support for such investments, which were especially needed in “late-transforming” countries where much of the population relied on agriculture for work and where [illegible]

noted that it was difficult to establish causality in these studies, and that the decision to migrate usually involved multiple considerations.

The literature showed

Mr. Bellù recalled results presented earlier showing that climate change was likely to improve growing conditions in northern latitudes but worsen them in the tropics. This would represent a huge transfer of wealth from areas where incomes were relatively low to northern countries that were already better off, and this should be considered in future discussions of migration and migration policy, as well as in a broader reconsideration of the whole development paradigm.

In response to a question about policies that would work for rural youth, Ms. Savastano said it was easier to say what didn't work. It was clear, for instance, that traditional vocational education was not meeting the needs of rural youth.

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D. NUTRITION AND POPULATION HEALTH

1. Hunger and undernutrition

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access to labour-saving technologies. Inadequate maternity leave policies and lack of effective social protection schemes often made it har

Childhood overweight and obesity impaired health during childhood and later in life. Overweight and obese children also tended to have lower self-esteem than others and were more likely to be bullied, had

Ms. Aburto gave two examples to help illuminate what a food-systems approach might entail. One example was from a programme to help improve nutrition in parts of Ecuador through the social protection scheme. The programme involved helping to support local growers and grocers in order to improve the variety and nutritional quality of foods that were available to consumers, and it provided nutrition education and preventive health services through the social protection programme. Outcomes included increased dietary diversity within households, improved knowledge about nutrition, and improved skills for local grocers. The second example was a programme in Chile that aimed at reducing obesity and overweight among children. A new law required specific labelling, using prominent “stop sign” labels to signal unhealthy foods. It also restricted marketing of unhealthy foods to children (for example, images of cartoon characters on packets of sugary cereals were banned), imposed taxes on sugary drinks, and included consumer education about the new labelling and about nutrition more generally. The labelling was popular with mothers, who reported that children understood the stop-sign labels too. Within two years, manufacturers had reformulated approximately 20 per cent of products in order to avoid their being labelled as unhealthy.

Those examples illustrated the kinds of multi-sector, multi-level actions that would be needed to move diets and food systems towards a healthy and sustainable future. Harmonized data and analyses were also leessiould or m14.4 (eduTw -22.469[4 (s)3j-0.0 ( )-3.11504 Td[Th)40.933 (s).9 (l)7.1 (t)(i)]TJ0 o Tc 0.0Td3

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and other crops that, under current conditions, must be sold quickly or else they would spoil. This often meant that farmers had to sell when prices were low; safe storage facilities would reduce spoilage and would also boost farm income by enabling farmers to sell when they could get a better price. In a different policy area, Brazil had adopted a policy aimed at improving child nutrition through the school food programme by requiring that a significant proportion of the diet come from locally producheocah w 12.063 00d[f)

One favourable trend was that the policy and programme environment had improved. At least 44

larger ones, but this had so far happened only to a limited extent in Africa. In recent years some African countries had experienced large-scale purchases of agricultural land by foreign buyers. Ms. Covic said that African governments had sometimes permitted such sales at prices that greatly undervalued the longer-term potential of the land, and there was a need to develop improved policies and regulations regarding such purchases.

Regarding nutrition and health, there had been progress in reducing stunting among young children in sub- .
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- Impact of population growth on food consumption: Population growth is an important driver of increased food consumption. However, rising income and consumer demand will account for a larger

- Reducing the risk of malnutrition: “Double-duty” actions can simultaneously prevent or reduce the risks of both nutritional deficiencies associated with underweight, wasting and stunting and those leading to rising burdens of overweight and obesity.

- Advice on how to eat: Dietary guidelines should take into account the potential impacts on the environment and issues of sustainability.

- Building the food system of tomorrow: Investments should be directed toward seed systems for fruits and vegetables, not only for staple crops. Also, food fortification and biofortification are important tools. The future development of food systems should make use of plant diversity and increase the production of underutilized plant-based foods.

- Potential contributions to discussions about food security and nutrition: The upcoming CPD session, including the reports of the Secretary-General and the deliberations of Member States, can feed into other processes – including, for example, the draft voluntary guidelines on food systems and nutrition by the Committee on World Food Security – while recognizing that the main added value of the session will be its focus on connections to population processes.

G. CLOSING

In closing the meeting, Mr. Wilmoth thanked the participants for two days of highly interesting and informative discussions, which would greatly assist the Population Division in preparing for the upcoming session of the Commission on Population and Development.

ANNEX 1: ORGANIZATION OF WORK

16-17 September 2019

UNITED NATIONS EXPERT GROUP MEETING ON POPULATION, FOOD SECURITY, NUTRITION AND SUSTAINABLE DEVELOPMENT
Population Division
Department of Economic and Social Affairs
United Nations Secretariat, Conference Room 12
New York

ORGANIZATION OF WORK

Monday, 16 September 2019

10:00-10:15
Session I: Opening of the meeting

John Wilmoth, Director, Population Division/DESA

10:15-11:30
Session II: Setting the stage: Trends, concepts, definitions, and data sources

Moderator – Sandile Similane, UNFPA

Nancy Aburto, FAO - Overview of food security and nutrition concepts; hunger and food security indicators: trends and data sources
Ruben Grajeda, WHO AM/PAHO (video link) – Nutrition indicators: trends and data sources
Frank Swiaczny, Population Division/DESA – Demographic megatrends and global population growth

11:30-11:45 Break

11:45-1:00
Session III: Food security and population change

a. Food security, growth, consumption and sustainability

Moderator – Sara Hertog, Population Division/DESA

Lorenzo Bellu, FAO – Growth and consumption trends, projections of food and agriculture
Hugo Valin, IIASA– Pathways toward sustainable land use and food systems
Marco Springmann, Oxford University - Health and nutritional aspects of sustainable diet strategies and their association with environmental impacts

1:00-3:00 Lunch

3:00-4:15

III.a continued

Moderator – Astra Bonini, Division for Sustainable Development Goals/DESA

Pierre Boileau, UNEP –Environmental and health impacts of food systems: Assessment by the sixth Global Environment Outlook

Cynthia Rosenzweig, NASA Goddard Institute for Space Studies – Food security findings from the IPCC Special Report on Climate change and land

Prajal Pradhan, Potsdam Institute for Climate Research - Climate change and food security, highlighting urban food system and regional specificity

4:15-4:30 Break

4:30-6:00

b. Food security, population movements and settlement patterns

Moderator – Clare Menozzi, Population Division/DESA

Sara Savastano, IFAD – Rural transformation and creating opportunities for rural youth

Lorenzo Bellu, FAO - Population dynamics, rural transformation, rural employment, rural urban linkages

Alan de Brauw, IFPRI – Relationships between migration and food security

Tuesday, 17 September 2019

10:00-11:00

Session IV: Nutrition and population health

a. Hunger and undernutrition

Moderator – Karoline Schmid, Population Division/DESA

Mawuli Sablah, UNICEF – Causes and impacts of undernutrition over the life course

UNFPA – Nutrition and reproductive health

11:00-11:15 Break

11:15-1:00

b. Obesity and overweight

Moderator – Paul Skoczylas, WFP

Leendert Maarten Nederveen, WHO AM/ PAHO (video link) – Trends, causes, and consequences of overweight and obesity

Simon Barquera, Instituto Nacional de Salud Publica (Mexico) – Double burden of obesity and undernutrition in Latin America

Mr. Marco Springmann
University of Oxford
Oxford, United Kingdom

Mr. Hugo Valin
International Institute for Applied Systems Analysis
Vienna, Austria

UNITED NATIONS SYSTEM

United Nations Population Fund

Ms. Maria Teresa Bejarano

Mr. Sandile Simelane

World Food Programme

Ms. Leslie Elliott
New York Liaison Office

Mr. Paul Skoczylas
New York Liaison Office

United Nations Department of Economic and Social Affairs

Division for Sustainable Development Goals

Ms. Astra Bonini

Population Division

Mr. Jorge Bravo

Ms. Aisha Dasgupta

Ms. Clare Menozzi

Ms. Cheryl Sawyer

Ms. Karoline Schmid

Mr. Frank Swiaczny

Mr. John Wilmoth

Ms. Mary Beth Weinberger