

Global Migration in the Future

Introduction

Migration has been a central element in the adaptation of human beings to environmental conditions as well as to societal, economic and political challenges. Mobility of people changed the world in past centuries: numerous examples show the extent to which labor or settlement migration, flight, displacement or deportation influenced the makeup of the population, the development of labor markets or cultural and religious orientations. Migration will also remain a global topic in the future. This is underlined by current debates on, for example, the consequences of the continuing growth of the world's population, the ageing of societies in the rich "North", climate change or the lack of specialists for increasingly complex and internationally connected "knowledge-based societies".¹

Conditions, forms and effects of migration

Migration can be understood as a long-term shift of an individual's, a family's, a group's, or even a whole population's usual place of residence. Various manifestations of global population mobility can be differentiated between. Among these various forms are labor and settlement migration, nomadism, migration for educational, training, cultural, prosperity or marriage purposes, as well as forced migration.

The overview of the background and time-space dimensions of migration (cf. Table 1) illustrates the complexity of the phenomenon, whose development depends upon a multitude of factors: labor migration is a symptom of economic trends and crises and the change of its dimensions and developments are reflected in the development of regional, national, and global economies. Migration is, how-

Table 1: Background and Time-Space Dimensions of Migration

<i>Background</i>	• realization of opportunity (labor and settlement migration) • compulsion (flight, displacement, deportation, mostly due to political opinion and worldview or as result of war) • crisis/catastrophe (e.g. emigration due to human or natural environmental disaster, acute economic and social plight) • education/training (acquisition of academic and job-related qualifications) • lifestyle (culture or prosperity migration)
<i>Space</i>	• intraregional (migration within the same region or municipality) • interregional (medium distances) • international (do not necessarily mean great distances, but the crossing of national borders generally has considerable legal consequences for the individual) • intercontinental (great distances with generally relatively high costs)
<i>Direction</i>	• unidirectional (migration to a destination) • phased (intermediary stops made, primarily to finance journey) • circular (a more or less regular change between two places) • return migration (re-migration)
<i>Length of Stay</i>	• seasonal • several years • work life • lifetime and intergenerational

The author's own representation

ever, also tied to power relations and political processes: the individual or collective action of (potential) migrants is shaped by state, political and administrative influences and intervention. Forced migration, on the other hand, is an expression that the limitations of freedom of individuals and of the right to protection of their physical health and safety are tolerated by the state and society. People react to armed conflicts with mobility, meaning they flee to a(n) (allegedly) secure place. As a large number of displacements and deportations both in history and in the present show, the notion that the compulsion to migrate can stabilize power or enforce political interests is widespread.

A look into the future: problems and perspectives

Because the genesis of the outlined (and other) influencing factors can scarcely be predicted, the view into the migratory future of the world is uncertain. However, based on certain trends in the past years and decades, an outline can be sketched of some developments that can be expected in the foreseeable future and certain factors that have an impact on them. In the following, the consequences of three global processes that decidedly shape migration activity are of interest: 1) population growth, 2) urbanization and 3) environmental changes.

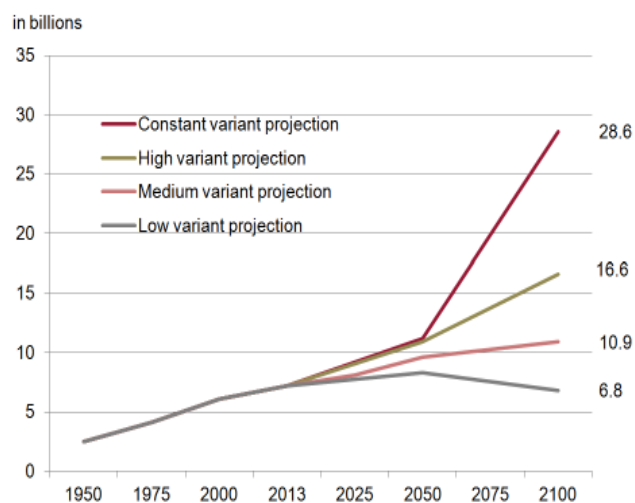
Skepticism is attached to all statistical information. This is not only due to the already mentioned complexity of the observed phenomenon. Even states with well functioning statistical offices as a general rule offer only insufficient information about international migration as well as intra- and interregional migration. Most of the time different definitions are used for the various migration phenomena. The strongly varying criteria for data compilation also change frequently, which is why comparisons and the bringing together of information on individual countries is difficult to organize. Definite statements can be neither made about the past nor about the present, and most certainly not about the future of migration patterns and the size of migration flows.

What Consequences Does the Increase of the World Population Have for Migration Patterns?

Projections of population growth

According to information from the United Nations, the world population in the year 2013 totals approximately 7.1 billion. According to the medium variant projection, its size will reach over 8 billion by 2015, 9.6 billion by 2050 and 10.9 billion by 2100. The development of the earth's population signifies two trends in the coming decades which could not be more oppositional to one another: In the (relatively) rich "North", the population will stagnate due to the low number of children and will become increasingly older because the percentage of younger people is decreasing while life expectancy is continuing to increase. In the (relatively)

Figure 1: Development of the World's Population by 2100

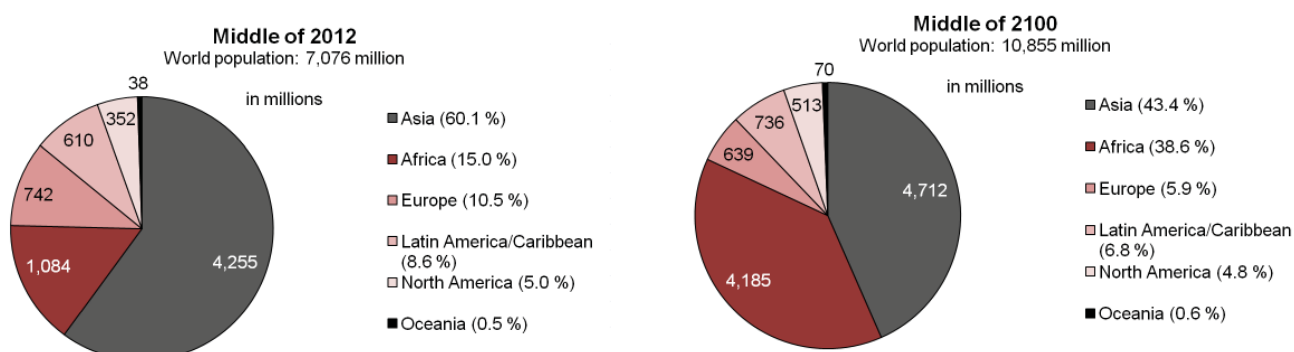


The author's own representation based on UN World Population Prospects. The 2012 Revision.

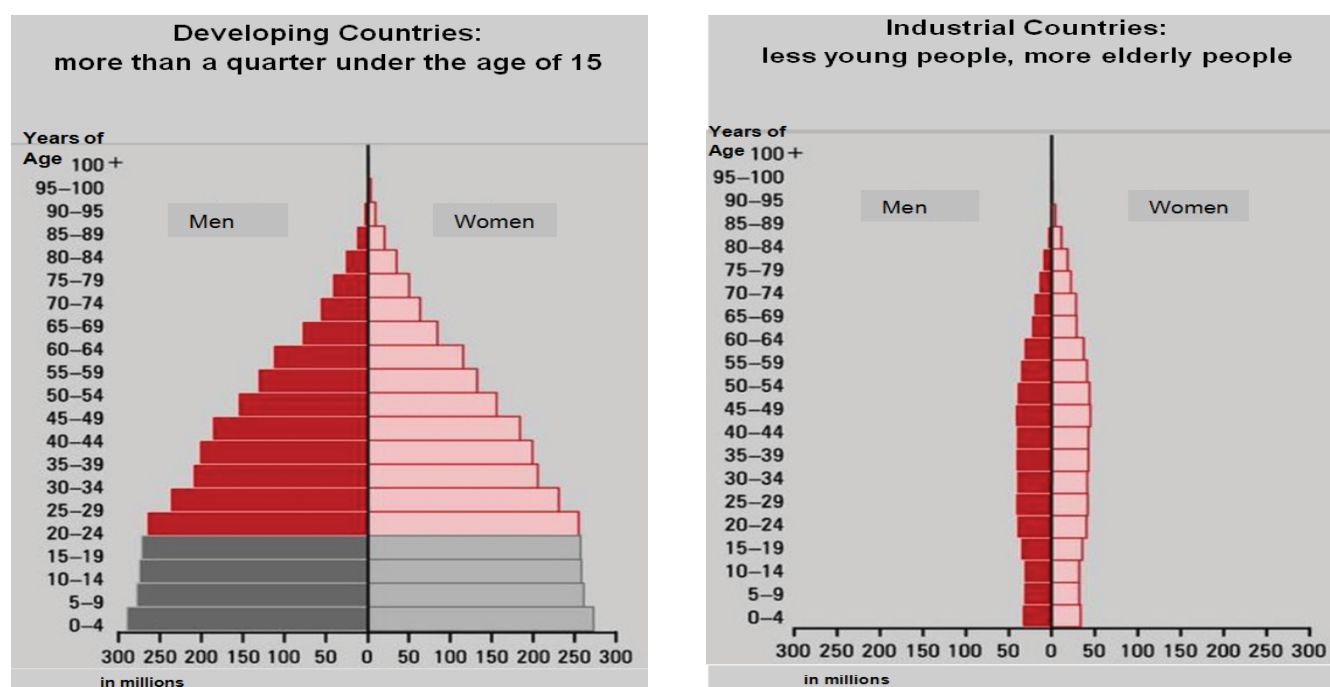
poor "South", however, the population size is substantially increasing and the share of young people is growing.² The continual climb of the world population will be caused almost exclusively by the growth of the populations in less developed countries, where approximately 5.7 billion people presently live, which estimations suggest will climb to around 8 billion by 2050. The population of the 49 least developed states will double from the present 900 billion to 1.8 billion. The speed of this increase, however, is slowing. The reason for this is the worldwide progressive adjustment of the average number of children that women bring into the world. At present, in the 58 states with the highest birthrates (of which 39 are in Africa, 9 in Asia, 6 in Oceania, and 4 in Latin America), women give birth to 4.9 children on average. This figure will decline significantly down to 2.8 by 2050 and 2.1 by 2100, according to UN estimations following the medium variant projection. The consequences are seen, for example, when looking at both of the most population-rich countries of the world: the population of India is expected to surpass that of China by the year 2021. The population of China should stop growing as of 2025/2030 owing to the policy implemented at the beginning of the 1980s restricting families to only having one child, and even begin to rapidly decline as of 2050, while that of India will enter a stagnation phase starting in 2030/2035.

Projections of the development of migration movements

Although the population in poorer countries will grow while it stagnates in the industrial countries, the UN assumes that the extent of migration from the less developed countries into the more developed countries will decrease, even though in the two decades between 1985 and 2005 there was a clear increase of migration from the lesser de-

Figure 2: Regional Distribution of the World's Population according to the Medium Variant Scenario

The author's own representation, modeled after Stiftung Weltbevölkerung, based on data from UN World Population Prospects. The 2012 Revision.
Rounded numbers.

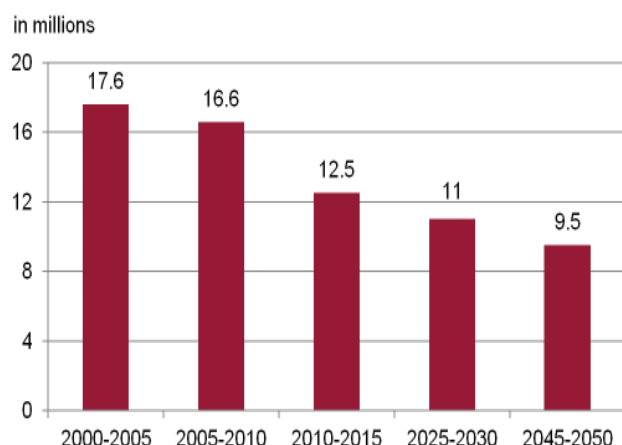
Figure 3: Pyramid of Age Structures of Populations in Developing and Industrial Countries

Source: Stiftung Weltbevölkerung based on data from UN World Population Prospects. The 2010 Revision.

veloped into the developed countries of the world. For the period from 2000 to 2005 the UN calculated 17.6 million people migrating from less developed into more developed countries, of which 8.1 million came from Asia, 6 million from Latin America and 3.1 million from Africa. The UN has already observed a drop to 16.6 million in the five years from 2005 to 2010. This trend will continue. For the next five year period (2010-2015) the UN predicts it will sink to 12.5 million, from 2025 to 2030 it will further decrease to 11 million, and from 2045-2050 to 9.5 million migrants. Long-term predictions based on the yearly number of migrants are as follows: from 2013-2015 2.4 million people per annum are expected to move from emerging nations and developing countries to developed countries, but between 2050 and 2100 this number will drop to only one million each year.

In total it can be stated that the extent of movements from the poorer "South" towards the richer "North" will continue to decrease in the future. It was slight in past decades anyhow. This is a discovery that completely contradicts the loudly proclaimed opinion on the assumed threat to "Western" societies from mass migration from the less developed regions of the world.³

Figure 4: Development of Migration from the Less Developed to the Developed Regions of the World



The author's own representation based on data from UN World Population Prospects. The 2012 Revision.

Reasons for the low level of South-North migration

Financial resources are a crucial requirement for the development of an individual migration project. For example, formalities (i.e. documents) for emigration and immigration must be paid for, transport costs come in addition (travel costs, shipping), illegal migrants generally have to pay (expensive) smugglers. It is not to be expected that the arrival in a country of destination is immediately connected with the start of gainful employment, meaning that sometimes startup capital is necessary, savings are used, and money must be borrowed. For a large portion of the citizens of the world the realization of such a migration project is il-

lusionary. Numerous studies have shown that poverty massively limits mobility. A large part of the (not rarely illegal) immigrants that presently reach Europe from Africa are among those that have a relatively good financial background and a comparatively high level of education.

But not only financial resources are lacking. Moreover, continual and reliable information about the place of destination is required for migration movements to reach a certain size and duration. A central element is the verbal or written transmission of knowledge about opportunities elsewhere through those who migrated prior (pioneers, so to speak) and whose information is attributed value. In light of relatively small South-North migration movements in the recent past, however, the number of these pioneer migrants and the number of relative-acquaintance networks that span continents is relatively small which means that in the poorer population of the world reliable knowledge about the possibilities the developed countries have to offer is scarce. These circumstances keep the number of South-North migrants at a low level.

Migration directions

The decline of the already small emigration from poor countries to the developed states does not mean that the total number of global migrants is decreasing. Estimations proceed from the assumption that at present between 175 and 215 million people have crossed state borders as temporary or long term migrants. The largest part of these movements takes place either between the stronger developed states of the world or between the less developed. This is illustrated in the Federal Republic of Germany for example: Only 5% of all immigrants that presently reach Germany come from countries outside Europe or Turkey. Despite globalization, immigration to Germany remains, as a rule, European.

There is much evidence that movements between states regarded as more developed will not diminish in the future. This development also results from the migration policy orientation of countries in the present and foreseeable future. The borders of the developed countries are (relatively) open for skilled workers and the highly qualified, mostly coming from developed countries. Current discussions on the future of aging societies in the rich "North" clearly show that little will change regarding this orientation towards qualified and highly qualified immigrants in the coming decades. The immigration of unskilled or low skilled workers can compensate for neither the assumed problems of an aging society, i.e. the decreasing economic productivity and economical capacity for innovation, nor can the recruitment of caregivers and other medical personnel compensate for a population whose average age is continually rising and whose age-related illnesses, so to speak, will inexorably increase.

It can also be assumed that the movements between the less developed and emerging countries will rather increase in the coming decades in light of the population growth in these regions. In the future it will be developing Asian states in particular such as China, India, Thailand and Malaysia which so far have had negative migration balances that will rapidly attract ever more people. Already at the beginning

of the 21st century, in both Malaysia and Thailand, over one million foreign workers were employed. Taiwan and South Korea, having undergone a rapid industrialization process in the last decade of the 20th century, became destination countries for immigrants as well. Brazil could also become an increasingly attractive destination for labor migrants.⁴

What Consequences Does the World-wide Growth of Cities Have for Migration Conditions?

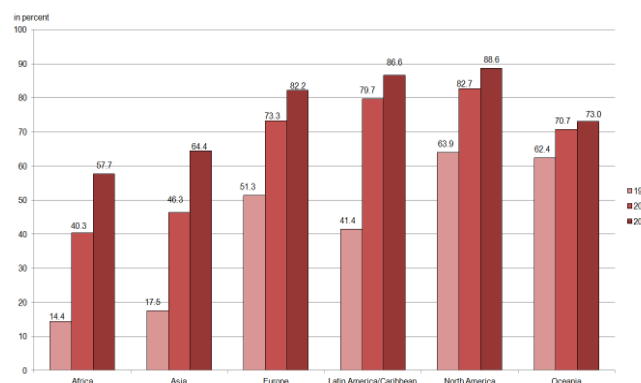
Development of “mega-” and “metacities”

According to UN data, in 2008 the number of urbanites worldwide surpassed that of the rural population. It is likely that in 2050 more than two-thirds (72%, or 6.3 billion) of the earth's population will live in cities.⁵ Around 1900, 9 of 10 of the world's largest cities were in Europe and the USA. However, since the middle of the 20th century, urbanization has boomed around the world, meaning that the urban population, particularly in “third world” countries, dramatically increased. In 1950 there were only two cities in the world that had more than 10 million inhabitants each. Today there are 23 such “megacities”, 5 of which are in the “Global North” and 18 in developing or emerging countries. In all likelihood there will be 14 more of these agglomerations by 2025 (cf. Table 2).⁶ The development of gigantic “mega-regions” (or “metacities”) is already well advanced. These regions are defined as urban areas with more than 20 million inhabitants. They result either from the merging of individual megacities together or from a megacity merging with a metropolitan region in the area. By the year 2015, the Japanese mega-region Tokyo-Nagoya-Osaka-Kyoto-Kobe is expected to contain 60 billion people (the distance from Tokyo to Kobe covers almost 430 km; more than a quarter of the Japanese population live in Tokyo, with almost half in this mega-region). In Brazil a metropolis agglomeration belt stretches from São Paulo to Rio de Janeiro with around 43 million inhabitants and the Chinese mega-region Hong-kong-Shenzhen-Guangzhou has an astonishing population of 120 million. Especially characteristic of mega-regions is their economic capacity: 40 of the largest city concentrations contain less than 18 percent of the world's population, but make up two-thirds of the worldwide economic activity and excel in technological and scientific innovations.⁷

Urbanization in regional perspective

However, small and middle-sized cities under 500,000 inhabitants will grow considerably faster than megacities.⁸ Four-fifths of the worldwide rise in urban populations will take place in Africa and Asia by 2030, doubling in size from 1.7 to 3.4 million. The largest part of the population by far will also continue to live in less developed countries whose urban population is expected to double between now and 2050, according to UN estimations from 2.6 to 5.2 million people. How rapid the growth of the urban population in past decades took place or will take place

Figure 5: Share of Urban Population according to Region



The author's own representation based on data from UN World Population Prospects. The 2012 Revision.

in the future is illustrated by some data for the African population: In 1910, the number of Africans living in cities amounted to only 4 million, but by 2007 had climbed to 373 million, and will likely reach 770 million by 2030.⁹

A large share of the city and urban agglomerations that grew in Africa, Asia or South America did so unplanned in past decades. The infrastructure (streets, water supply and disposal systems, electricity, and waste disposal) has developed for the most part less dynamically than the size of the urban population. Large social issues and the erection of slums have accompanied this process. Slums are defined as informal, mostly overpopulated settlements characterized by precarious building structures, poorly built infrastructure, and limited protection from weather conditions and intruders. At present, it is likely that almost one billion people live in slums worldwide, with vast differences in distribution across regions of the world. Notably in sub-Saharan Africa more than two-thirds of the people living in cities are classed as slum inhabitants, and a rate of two-fifths is assumed for Asia.¹⁰ However, cities will continue to offer attractive immigration destinations for many people in the future. They are centers of economic growth and innovation, offering varied and plentiful employment opportunities in both the formal and informal sectors, the health system is generally better, as well as the offer of goods for daily needs or education opportunities.¹¹ Because of this, in addition to natural population growth, the growth of cities will be to a large extent a result of rural-urban migration.¹²

Rural-urban migration in the example of China

To what extent the accelerated integration of an economy into the world market can impact the growth of cities, rural-urban migration and intra- and interregional migration is shown in the example of the People's Republic of China. In 1976, as the founder figure of the People's Republic died with Mao Zedong, 82% of the total population lived in rural districts. The economic revolution began in the 1980s, which linked the gradual introduction of market economy elements with the opening to the world market and ever more strongly supported exports as a driver for growth. The rapid industrialization of the country led to rapid urbanization. In

Table 2: Development of City Agglomerations with more than 10 Million Inhabitants (2011)

		Population (millions)				Average annual rate of change (percentage)		
		1970	1990	2011	2025	1970-1990	1990-2011	2011-2025
Africa	Lagos (Nigeria)	1.4	4.8	11.2	18.9	6.08	4.08	3.71
	Cairo (Egypt)	5.6	9.1	11.2	14.7	2.42	1.00	1.98
Asia	Tokyo (Japan)	23.3	32.5	37.2	38.7	1.67	0.64	0.27
	Delhi (India)	3.5	9.7	22.7	32.9	5.07	4.03	2.67
	Shanghai (China)	6.0	7.8	20.2	28.4	1.30	4.52	2.43
	Bombay (India)	5.8	12.4	19.7	26.6	3.80	2.20	2.12
	Beijing (China)	4.4	6.8	15.6	22.6	2.14	3.96	2.66
	Dhaka (Bangladesh)	1.4	6.6	15.4	22.9	7.86	4.02	2.84
	Calcutta (India)	6.9	10.9	14.4	18.7	2.26	1.33	1.87
	Karachi (Pakistan)	3.1	7.1	13.9	20.2	4.15	3.16	2.68
	Manila (Philippines)	3.5	8.0	11.9	16.3	4.07	1.89	2.26
	Osaka – Kobe (Japan)	9.4	11.0	11.5	12.0	0.80	0.19	0.33
	Guangzhou (China)	1.5	3.1	10.8	15.5	3.45	6.01	2.54
	Shenzhen (China)	----	0.9	10.6	15.5	18.44	11.89	2.71
North America	New York - Newark (USA)	16.2	16.1	20.4	23.6	-0.03	1.12	1.05
	Los Angeles – Long Beach – Santa Ana (USA)	8.4	10.9	13.4	15.7	1.31	0.99	1.13
Latin America	Mexico City (Mexico)	8.8	15.3	20.4	24.6	2.79	1.38	1.32
	São Paulo (Brazil)	7.6	14.8	19.9	23.2	3.31	1.42	1.08
	Buenos Aires (Argentina)	8.1	10.5	13.5	15.5	1.30	1.20	0.98
	Rio de Janeiro (Brazil)	6.6	9.6	12.0	13.6	1.84	1.05	0.93
Europe	Moscow (Russian Federation)	7.1	9.0	11.6	12.6	1.17	1.22	0.56
	Istanbul (Turkey)	2.8	6.6	11.3	14.9	4.30	2.58	2.00
	Paris (France)	8.2	9.3	10.6	12.2	0.64	0.62	0.97

The author's own representation based on data from UN World Urbanization Prospects. The 2011 Revision.

2009, the share of city inhabitants had already reached 46 percent (620 million). In 2011, for the first time, more than half of China's population lived in cities. However, many of the new city dwellers were only tolerated because they were seen as indispensable laborers. They did, however, not have the necessary permission to migrate to and live in a city.¹³ In 2007, 46.5 percent of all employed people in cities were labor migrants from rural districts. For the most part the rural-urban migrants were of prime working age, only a small amount was over the age of forty. According to census data, the number of rural-urban migrants stood at 221 million in the year 2010.¹⁴ They predominately worked in the manufacturing, construction, trade and restaurant trades—conversely, the concentration of migrants in such sectors meant a monopolization of specific gainful employment sectors by rural-urban labor migrants. According to the 2000 census data, 80 percent of the workforce in the construction industry and 68 percent of those in the manufacturing industry were labor migrants from other regions.

The direction of migration movements has not changed considerably since the 1990s. Migration destinations for those domestically relocating are the mega-urban regions in the Pearl River Delta which stretch along the Chinese east coast, including Shanghai, the Yangzi Delta and the Peking-Tianjin region. The provinces that attract most of the internal migrants are Guangdong, Zhejiang, Jiangsu and Shandong.¹⁵ In 2004, the southeast Chinese province of Guangdong alone took on around 28 percent of all labor migrants.¹⁶ These people made up almost 43 percent of the province's total population.¹⁷ There is contradictory data on the composition of rural-urban migration: Males appear to have long shaped interregional migration movements, but since the middle of the first decade of the 21st century the share of females has increased. Yet the share of men still accounts for two-thirds.¹⁸ Because the working population generally migrates, their children often remain in the place of origin under the care of relatives. According to new estimations, the number of children left behind amounts to 58 million – an important social phenomenon that has recently become less important because labor migrants tend to take their children along with increasing frequency into cities where they have better educational opportunities.¹⁹

Rural-urban labor migrants are furthermore also employed for the most part in informal sectors of the labor market which remain characterized by high health risks, heavy physical exertion and difficult wage conditions. The interregional migrants generally work longer for considerably less money than those in the workforce who permanently reside in cities. To some extent the miserable wage and working conditions are often tolerated by the local authorities to enable the establishment of new companies.²⁰ Moreover, the labor migrants who are mostly put in contact with employers by relatives or acquaintances also accept these conditions because the wages paid in cities usually far exceed those in the regions of origin and the working conditions in agriculture or in rural small-scale businesses are in no way better.

Many things speak for the scope of interregional migration in China to continue climbing if the regionally highly unequally distributed growth of industry production and services continues. The economic growth in the coastal urban agglomerations depends upon migration from the countryside and smaller cities. The Chinese example illustrates the high economic potential of interregional migration. It has reduced un- and underemployment in past years in some parts of the country²¹ and at the same time provided for regions which had a large urgent need for laborers which could not be covered from within the region with the necessary workforce. Interregional migration has presumably raised the growth of China's gross domestic product (GDP) by about 16 percent. Furthermore, the Chinese rural-urban migrants sent part of their earnings back to remaining family members. These so-called remittances amounted to US\$ 30 billion in the year 2005 alone. In this way they have reduced the worsening of rural poverty and also possibly contributed to the economic upswing in the lesser developed parts of China.²² It is to be expected that China will increasingly become a destination for international migration, considering the foreseeable stagnation of the Chinese population whose decline will begin in the 2020s, the observable increase of labor costs and the accelerating rise in the level of prosperity which leads to the rapid development of the growth of the middleclass.

Which Effects Do Global Environmental Changes Have for Migration Relations?

Volume of environmental migration

It is indisputable that the extent of ecologically unstable regions is growing year after year due to salinization, erosion, flooding and pollution, and desertification, that is, the expansion of deserts.²³ Despite the reality of the problem and the many debates on the reach of global climate change, our knowledge is still relatively limited regarding the meaning environmental determinants have on migration movements and, conversely, the role of migration flows in global environmental changes. The differing assessments on the scope of environmentally determined global migration alone show this.

At the beginning of the 21st century the United Nations High Commissioner for Refugees (UNHCR) estimated that 24 million people were forced to move due to growing environmental degradation. In contrast, the International Committee of the Red Cross estimates the number at 500 million. Most recent estimates by the German government's scientific advisory board, "Global Environmental Changes", refer to 25 to 60 million people so far that have had to leave their region of origin because of climate change. The UN-Framework Convention on Climate Change (UNFCCC) predicts that this number will climb to 150 million by the year 2050.²⁴

Lack of a standard definition of the term “environmental refugee”

The wide range of different estimates leads back to a lack of clarity in definition.²⁵ The use of the definition

“environmental refugee” or “climate refugee” for the various forms of environmental migration rather obscures the complexity of the underlying causes and motivations to migrate because it does not evaluate environmental and other determining factors. The environmental

Table 3: Selected Estimates and Projections on the Extent of Environmental Migration Worldwide

Source	Estimations on the number of “environmental refugees” at time of publication	Projections of the number of future “environmental refugees”
Global Humanitarian Forum 2009: The Anatomy of a Silent Crisis. Geneva, pp. 48-49	26 million “climate refugees”	72 million “climate refugees” by 2030
Environmental Justice Foundation (EJF) 2009: No Place Like Home. Where Next for Climate Refugees. London, p. 4		200 million “environmental refugees, on which 150 million are “climate refugees” by 2050
United Nations University - Institute for Environment and Human Security 2007: Control, Adapt or Flee. How To Face Environmental Migration? Bonn, pp.15-18	10 million “environmental refugees”	50 million “environmental refugees” by 2010; 200 million “environmental refugees by 2050
Friends of the Earth 2007: A Citizen’s Guide to Climate Refugees. Amsterdam, p. 8		200 million “climate refugees” by 2050
Greenpeace 2007: Klimaflüchtlinge. Die verleugnete Katastrophe. Hamburg, pp. 1-2, 27	20 million “climate refugees”	150-200 million “climate refugees” in the course of the next 30 years
Nicholas Stern 2007: The Economics of Climate Change. The Stern Review. Cambridge, pp. 128-130		150-200 million “climate refugees” by 2050
Christian Aid 2007: Human Tide: The real Migration Crisis. London, pp. 5-6	25 million “environmental refugees”	50 million “environmental” and 250 million “climate” refugees by 2050; plus a possible 645 million more people displaced by development projects like dams
United Nations 2005: Millennium Ecosystem Assessment Report. Washington.	20 million “environmental refugees”	50 million “environmental refugees” by 2050
United Nations High Commissioner on Refugees (UNHCR) 2002: Environmental Migrants and Refugees. Refugees No.127. Geneva, p. 12	24 million “environmental refugees”	
International Federation of Red Cross and Red Crescent Societies: World Disaster Report 2001. Focus on recovery. Geneva, p.11	25 million “environmental refugees”	
WorldWatch Institute 1988: Environmental Refugees: A Yardstick of Habitability. Washington, p. 38	10 million “environmental refugees”	
United Nations Environmental Program (UNEP) 1985: Environmental Refugees. Nairobi, p.8	30 million refugees, of which many are “environmental refugees”	

Source: Aufenvenne/Felgentreff [2013].

strain on one's place of origin is rarely the only cause for emigration, but generally works in cooperation with other economic, social, cultural and political factors.

Affected regions

Climate changes take effect immediately where areas are threatened because of rising sea levels due to flooding or salinization.²⁶ Climate research assumes that the sea level rose a total of 15 to 20 centimeters in the 20th century. Since the beginning of the 1990s, it has risen about 3 centimeters per decade. Current model calculations predict a rise of one meter by the year 2100.²⁷ A large portion of the world population is distributed across the edges of the continents. Around two-thirds of all people currently live in zones that are within 100 kilometers from the ocean.²⁸ Of the 50 largest cities of the world, 30 are located on the ocean. In the Pacific, around 7 million people live on islands that are threatened by a rise in sea level, among which are the "Sinking Islands" such as the Maldives, the Marshall Islands, Palau and the Salmon Islands, among others. Low-lying regions on the Gulf of Bengal, which in the past have already been confronted year after year with extensive flooding, are likewise endangered. This is also the case, for example, for the coastal zone in Bangladesh, where the rise in sea level due to climate change can reach between 1.44 and 2.09 meters by 2050. This would result in a reduction of the residential area by 16 to 18 percent, in which 13 to 15 percent of the population lives. Against this backdrop, apart from movement within the country, emigration from Bangladesh to India could increase. India is already the most significant destination of migration from Bangladesh. India's present efforts to secure the border to Bangladesh against migrants have thus far shown limited effectiveness, despite great effort and expense in the erection of a strongly secured fence stretching almost 3,500 kilometers.²⁹ For Egypt, estimates for 2050 show an increase in sea level between 1.01 and 1.44 meters which will result in a 15 to 19 percent loss of possible livable surface area and could affect 14 to 16 percent of the total population. The largest proportion of those affected may be able to relocate inside the country.³⁰

The rise in sea level leads not only to a loss in potential residential surface area, but also to a loss of farmland. This in turn has effects for food security. Many of the low-lying coastal regions of Asia are "granaries" of the world in so far as a large share of the global rice production is concentrated there, on which millions of people are directly or indirectly dependent. Estimates are that the rice supply of around 200 million people is immediately threatened by the rise in sea level.

Effects of environmental crises

Environmental crises usually worsen already precarious economic structures, so that the temporary or permanent emigration appears to offer an improvement in living conditions. They often also appear at the same time to be culture crises, and are often politically exploited or

lead to political conflicts, which in turn causes migration. In regions where there is little political stability, weakly developed state problem-solving capacities, and economies prone to crisis and social unrest, environmental crises will only increase the vulnerability of the region. They could even act in this regard as a catalyst and initiate a collapse of an already unstable political, social and economic order. On the other hand, it can be that stable political, social and economic systems develop reaction patterns that raise expectations of a more or less conflict-free resolution of the effect of environmental crises.³¹

Yet looking at environmental migration also raises the question of potential migration destinations and with that also of the areas that could profit from climate change. The increased weight of environmental determinants in global migration is not expected to lead to trans- or intercontinental mass migration. The long history of avoiding famines and migration reactions to "failed states" makes it clear that due to limited resources of many of those affected, the reactions to climate and environmental change will especially influence the local and regional migration movements in areas of the world particularly at risk. According to estimates by the German government's scientific advisory board on "Global Environmental Changes", the rich "North" will, as a main contributor to climate change, likely be affected little or not at all by migration in the "Global South" due to environmental changes because the largest part of these movements will remain on a small-scale or occur as "South-South migration".

Political and legal treatment of environmental migrants

Various aid organizations call for an extension of the Geneva Convention on Refugees and the recognition of the effects of climate change as grounds for protection. This request has thus far been rejected because the various overlapping motives those persons affected have for migrating make environmental causes almost impossible to determine. Moreover, the expansion of the right to asylum leads to the strengthening of restrictive asylum policies of some states that wish to limit immigration opportunities.³² The majority of those affected do not cross national borders anyway and thus are categorized under "internally displaced persons" (IDPs), a group of people who do not fall under the protection of the Geneva Convention on Refugees.³³ Until now only Sweden and Finland have created a legal framework in the context of environmental migration. In Finland those affected can receive humanitarian protection and receive a temporary residency permit e.g. in the case of an environmental catastrophe, whereas asylum or subsidiary protection is not granted.

Conclusion: The Political Order of Global Migration in the Present and Future

The leading economic countries in the world have set up migration policies that aim at strict control over migration. This is done, for one, through restrictive visa and entry

conditions for potential migrants who are not considered to be desirable bearers of (human) capital because they are neither wealthy nor possess high qualifications. Other approaches include contracts with countries of origin aimed at guaranteeing the return of those immigrants that are considered temporarily necessary. Refugees and displaced persons who have been confronted in the last two or three decades with the shutdown of many migration channels (i.e. legal immigration possibilities) that the asylum system had provided also fall under the general suspicion of being a possible burden on a society's security, economy, social security system or specific cultural values and political ideas. The development of migration policies of the EC/EU refers to these restrictive components—cooperation between the member states has thus far essentially been limited to the development of strict regulations for common border and visa policies as well as cooperation in restricting asylum-related migration.³⁴

Such findings do not contradict the observation that migration will continue to be a means of dealing with economic, social and political changes and making use of opportunities for individuals, groups and populations. Restrictive migration regimes cannot prevent migration altogether, as illegal border crossings and irregular residence e.g. in the USA or the EU show. Economically prospering regions continue to attract people and, as shown in numerous studies, immigrants contribute to that prosperity. The economic importance of migration for the countries of origin also continues to be high. In 2011, the remittances that migrants sent to their relatives in developing countries alone amounted to at least US\$ 372 billion³⁵ according to estimates of the World Bank (in addition there were large sums that were transferred through irregular channels), which surpassed the amount of state payments in the context of development cooperation by almost three times. For various smaller states, these remittances make up a central source of their GDPs, which is the case in Tadjikistan, Lesotho, or Moldova, for example. For larger states like India, the proportion of remittances sent by migrants to the GDP is much smaller and ranges in the low single-digit percentile but they have an unequally high importance for the foreign-exchange balance.³⁶ This situation is also unlikely to change greatly in the future.

Notes

¹ Here and in the following in brief outline: Oltmer (2012).

² For the UN population projection here and in the following in detail: United Nations Department of Economic and Social Affairs, Population Division (2013).

³ Hein de Haas (2008).

⁴ Kaur (2007); Koser (2011, pp. 164f.).

⁵ Birch/Wachter (2011, p. 3); United Nations Department of Economic and Social Affairs, Population Division (2012b, p. 3).

⁶ United Nations Department of Economic and Social Affairs, Population Division (2012b, p. 7).

⁷ United Nations Human Settlement Programme (2008, p. 8).

⁸ Martine et al. (2008, pp. 6f.).

⁹ Fourchard (2011, p. 223).

¹⁰ López Moreno (2011).

¹¹ Hanna/Hanna (2009); Saunders (2010, p. 23).

¹² For an overview see Zlotnik (2006); Hugo (2006); Cerrutti/Bertoncello (2006).

¹³ For further details see Fan (2011); Luo (2012); Gransow (2012).

¹⁴ Gransow (2012, p. 2).

¹⁵ Gransow (2012, p. 3).

¹⁶ Shen (2011).

¹⁷ Junyong (2011, p. 145).

¹⁸ Hussain/Wang (2010, pp. 139-141f.).

¹⁹ Opitz (2011, pp. 24-30); Wing Chan (2011, pp. 91-99).

²⁰ Fu Keung Wong et al. (2007).

²¹ Luo/Yue (2010).

²² Koser (2011, pp. 167f.).

²³ For a short overview: Latif (2010).

²⁴ Wissenschaftlicher Beirat der Bundesregierung "Globale Umweltveränderungen" (2008); further estimates are summarized in Hummitzsch (2009); McLeman/Brown (2011, pp. 175-177).

²⁵ White (2011, pp. 20f.).

²⁶ Oliver-Smith (2011).

²⁷ Rahmstorf/Schellnhuber (2012); Latif (2012).

²⁸ Small/Nicholls (2003); McGranahan et al. (2008).

²⁹ N.N. (2010, p. 411); Arnold (2012, pp. 217f.).

³⁰ On Bangladesh and Egypt see Jacobson (1988, pp. 32-35).

³¹ Concerning this see e.g. McDowell/Morell (2010, pp. 117-136).

³² McAdam (2011, p. 56).

³³ Guidelines on dealing with internally displaced persons: www.idpguidingprinciples.org

³⁴ Angenendt (2011).

³⁵ The World Bank: Topics on Development, Migration and Remittances: <http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/0,,contentMDK:21924020~pagePK:5105988~piPK:360975~theSitePK:214971,00.html> (accessed: 7-16-2013)

³⁶ Arnold (2012, pp. 215f.).

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Online resources

Population Reference Bureau (World Population Data Sheets): www.prb.org/Publications/Datasheets.aspx

Stiftung Weltbevölkerung [Foundation World Population]: www.weltbevoelkerung.de

The World Bank: Topics on Development, Migration and Remittances:

<http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/0,,contentMDK:21924020~pagePK:5105988~piPK:360975~theSitePK:214971,00.html>

Guiding Principles on Internal Displacement:

www.idpguidingprinciples.org

United Nations Department of Economic and Social Affairs, Population Division:

www.un.org/en/development/desa/population

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