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Hunger and Food Security Concerns for India

Introduction

In 2015, the global community achieved a landmark by agreeing on a comprehensive development agenda under the rubric of Sustainable Development Goals (SDGs). The SDGs are a sequel to the Millennium Development Goals that dominated global development thinking throughout the first decade and half of this century. Compared to the MDGs, the SDGs are more elaborate. They are supposed to be goals for all countries rather than for poor countries alone. The SDGs evolved from an extensive consultation process at the United Nations involving member countries, civil society organisations, business community and other actors. The SDGs comprise 17 goals which in turn have been broken up into 169 targets. The progress towards these targets will be measured by indicators. As many targets are proposed to be measured by multiple indicators, the total numbers of indicators are greater than the number of targets. Presumably the indicators could be substituted depending on relevance and statistical capacity.

Global governance through the organs of United Nations and associated institutions is complex and often not well defined with respect to domestic sovereignty and domestic political processes. Global institutions that simply coordinate country policies (such as international postal unions) are not contentious. But when such institutions seek to impose a uniform architecture and a set of rules (such as in WTO), they need to be backed by explicit country commitment. These are contentious domestically and it is not surprising that consensus or simply give and take deals are hard to achieve. Disparities in interests stretch not only across countries but also within countries.

At first blush, SDGs seem hardly contentious. Indeed, who can possibly disagree with the outcomes embodied in the goals? It might then seem that SDGs reflect common aspirations and express the unity of human experience. But the need to articulate these goals and that too after extensive consultation, suggests: (a) that these goals were not all obvious and (b) that articulation is seen as a visible commitment of sorts by member countries that otherwise would remain buried. The commitments, however, carry no bite. The supremacy of country sovereignty means that countries are free to accord the degree of importance to the SDGs in their own development agenda. While there are no formal sanctions (unlike say in WTO), there is probably a hope that being held to a global yardstick would be sufficient motivation and failure to achieve it would risk shame to a proud nation.

But then the puzzle is why countries voluntarily submit to the risk of shame intrinsic in international comparisons. This is not an unlikely outcome. India's progress in reducing the prevalence of underweight children, reducing infant mortality or in schooling has been less than stellar even when compared to more impoverished countries. So why does India sign on to these goals? Surely, even the political leadership would concede the primacy of some of the SDGs (or MDGs) and may undertake necessary measures.

The truth is that greater efforts are required to connect international commitments with domestic politics and economic priorities. A stand that such goals are in the domain of domestic policies alone

would appear unnecessarily churlish since they impose no formal demands on country resources and nor do they impose constraints on country policies.

The well-meaning countries, the networked civil society organisations and the international bureaucracy that staffs the UN and related organisations that have promoted global development goals are not unaware of the tension within domestic processes. They are, however, counting that even with no formal commitment mechanisms (with penalties and rewards), global goals can mobilise collective consciousness and hasten the progress. Of course, countries that are dependent on donor resources could be elicited to be more responsive although even in these cases it is hard to achieve meaningful advance on the ground if the countries just go through the motions.

From this context, it is clear that assent to SDGs does not lay out a clear path for country development agendas to be consistent with global goals. In the past, MDGs were not a major consideration in India's economic policies and the future may not be very different with respect to SDGs in general. Of course, the extent to which SDGs overlap with domestic agenda, will impact reinforcement of policies in those spheres. From the point of view of India's development priorities, SDGs could, empower local domestic constituencies that seek to mobilise support for some of the global goals and thereby alter local political economy at the margin. In this paper, an attempt has been made to respond to SDG 1 and SDG 2. The first goal relates to the elimination of poverty and the second goal relates to ending hunger and other related outcomes of achieving food security, improved nutrition and promoting sustainable agriculture.

SDG 1 and SDG 2

SDG 1: End Poverty in all its forms everywhere

SDG 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture

The annexure shows the first and second goals, the targets that comprise the goals and the indicators that have been proposed to measure the targets. Targets 1.1 and 1.2 relate to poverty outcome measures that are generally well known and for which the data base (household expenditure surveys) exists in many but not all countries. India's significant achievement in terms of poverty eradication is depicted in Figure 1. Figure 2 indicates overall achievement of MDG 1 target on poverty measured in terms of head count ratio.

Target 1.3, by comparison, is an explicit policy directive to achieve social protection mechanisms. However, the target is not quantified and the attributes of social protection are not defined either. Indian social policy does place emphasis on social protection mechanisms (Integrated Child Development Services, Public Distribution System, National Rural Employment Guarantee Act, Old Age Pensions, Indira Awas Yojana) although their efficiency has been vigorously debated.

Target 1.4 that seeks equal rights to economic resources and access to basic services would be more novel in the Indian context. The proposed indicators do not do a great job of clarifying this target – they manage to be both vague and modest. It is unlikely that this target can be quantified in a comprehensive manner. Target 1.5 that seeks resilience of the poor to climate and other shocks is a worthwhile goal and hopefully it would lead India to collect and estimate the impact of natural disasters. Resilience is a much used word in the development discourse these days; it is sometimes forgotten that resilience is best achieved by higher prosperity and growth. Targets 1a and 1b are about development assistance and sound policy frameworks read as statements of intent for global cooperation rather than targets for domestic policies.

Interestingly, the second goal under the SDGs concerning hunger may not follow directly from the previous goal on poverty in the Indian context. Some factual details on decline in poverty as well as average per capita calorie intake and an increase in the extent of calorie deprivation in recent years for India are as follows. For the country as a whole rural poverty declined from 45.61 per cent in 1983 to 28.30 percent and urban poverty declined from 42.15 per cent to 25.70 per cent between 1983 and 2004-05. During the intervening period, average calorie intake per capita declined from 2221 to 2047 and from 2089 to 2020 kcal in the rural and urban sectors, respectively. As regards calorie deprivation, its extent increased from 69 to 85 per cent in rural India and from 60 to 65 per cent in urban India (Suryanarayana, 2013). This is also reflected in the fact that both statisticians and policymakers have been confronted with serious debates stemming from determining poverty levels based on minimum calorie intake (Box 1).

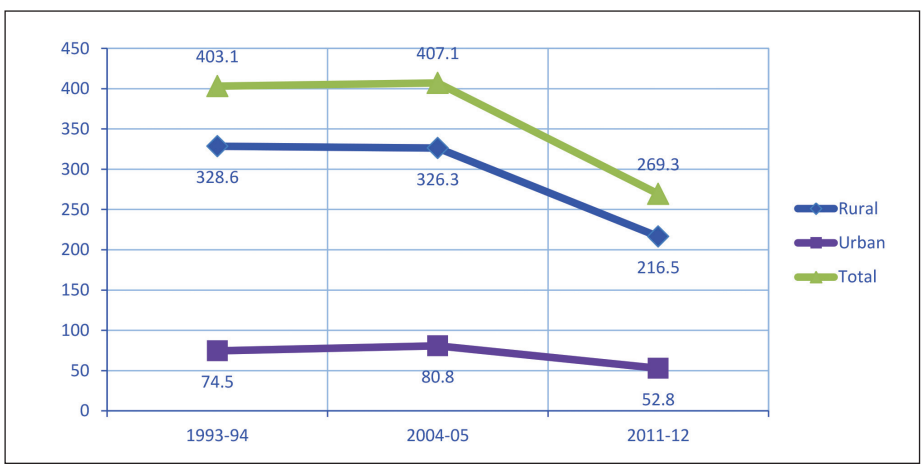
SDG Targets 2.1 and 2.2 continue the MDGs of ending hunger and malnutrition. These are the big targets in this section. The indicators for ending hunger focus on energy intake and food security while the proposed indicators for malnutrition measure stunting and obesity for children measuring the so-called double burden of under-nutrition and over-nutrition. India has a very high rate of incidence of diabetes and to the extent that the composition of food intake matters to it, the obesity measure will be increasingly relevant accordingly. At this point, however, the major concern is with under-nutrition and therefore, it may be important to supplement the stunting indicator with other measures of poor nutrition including under-weight children, low birth weights, particular deficiencies in micro-nutrients and the health of young women. The nutritional needs of adolescent girls, pregnant and lactating women comprise a separate Target 2.2 but do not yet find indicators. With some effort, surveys can be done on quality of dietary intake of women and this is a direction that should be pushed in India.

Highlighting the crucial importance of nutritional status of children, Indicator 4 under Target 2, in MDGs was identified as 'Prevalence of underweight children Under 5 years of age'. In India, data on this indicator for the reference age group are not available for all time points. The National Family Health Survey (NFHS) collected data on underweight children between 0-35 months and 0-47 months of age in 1992-93 (NFHS-1), between 0-35 months in 1998-99 (NFHS-2) and between 0-35 months as well as 0-59 months in 2005-06 (NFHS-3).Thus the survey results are comparable only for the age group 0-35 months in India and therefore, Target 2 is measured in terms of nutritional status of children below 3 years (Government of India MDG Report, 2015).

It is estimated that in 1990, 52 per cent of children below 3 years were underweight. In order to meet the target, the proportion of under-weight children should decrease to 26 per cent by 2015. The NFHS shows that, the proportion of under-weight children below 3 year declined from 43 per cent in 1998-99 to 40 per cent in 2005-06. At this rate of decline the proportion of underweight children below 3 years is expected to reduce to 33 per cent by 2015, which indicates India is falling short of the MDG target.

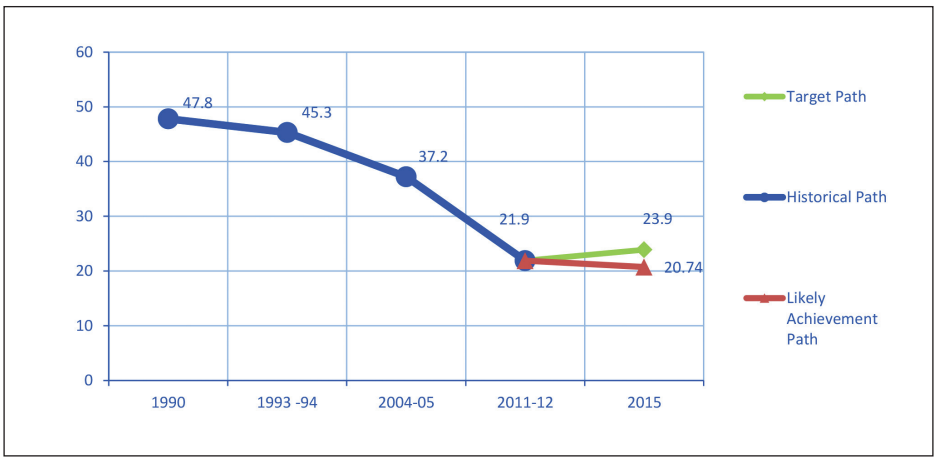
The report based on NFHS finds that, under-nutrition is substantially higher in rural areas than in urban areas. While in the urban areas the proportion of under-weight children below 3 years decreased from 34 per cent in 1998-99 to 31 per cent in 2005-6, the decrease was marginal in rural areas from 45 per cent to 44 per cent during the same time (see Table 1). In addition to underweight, stunting was also highly prevalent among children below three years of age. As per NFHS-3, even in urban areas, one in every 3 children is stunted, characterised by lack of appropriate height according to their age and in rural areas almost half of the children are stunted. NFHS-3 also reported that nutritional status of children is strongly related to maternal nutritional status. Under-nutrition is much more common for children of mothers whose body mass index is below 18.5 than for children whose mothers are not underweight. Also, under-nutrition

Figure 1: Number of People below Poverty Line (in million)



Source: Planning Commission (now renamed as NITI Aayog).

Figure 2: Trend in Poverty Head Count Ratio-All India



Source: Planning Commission (now renamed as NITI Aayog).

Box 1: Poverty Line and Calorie Intake – The Debate

The Indian poverty lines are based explicitly on estimates of the normative nutritional requirement of the average person in the rural and urban areas of the country separately. These national norms[1], which are 2,400 kilocalories/day and 2,100 kilocalories/day for rural and urban areas, respectively are not arbitrary figures, but have been derived from age-sex-occupation-specific nutritional norms by using the all-India demographic data from the 1971 Census. Therefore, it is more than likely that state-specific calorie norms derived from the state wise age-sex-occupation distributions would differ from the national norms even in the base year, but it would be within a fairly narrow range. Moreover, it is quite possible for the actual calorie consumption to deviate substantially from these base-year national norms as a result of variations in the age-sex-occupation structure of the population over time and across regions without necessarily violating the nutritional requirements.

The second criticism of the poverty line, from a nutritional point of view, is that a purely calorie-based measure of food adequacy is simply wrong. It is rightly asserted that the mere consumption of an adequate number of calories may not ensure sufficient intake of other nutrients, such as proteins, fats and micro-nutrients, which are just as essential for human health. It can further be argued that there is a distinction between gross calorie intake and net calorie absorption, and that the relationship between the two may change over time depending upon the incidence and severity of gastro-intestinal disorders. Thus, on the one hand, it is entirely possible that a person may be consuming the requisite number of calories, but she/he could still be seriously malnourished.

Source: Sen (2005).

decreases steadily with increase in the wealth index of the household. The state-wise disparity is shown in Table 2.

Targets 2.3 and beyond relate to agriculture and its sustainability. While productivity measures are routinely collected, disaggregating it for small farmers and for women farmers requires additional effort. In order to facilitate productivity growth, it is important to ensure that farmers receive lucrative prices for their produce. Issues related to price fall under two categories. First, for some commodities and in some regions, the government has arrangement for procurement at a preannounced Minimum Support Price (MSP). By design, the MSP is available only in regions where the government procures the commodities and only on commodities it chooses to procure. In other regions, even for commodities covered, not all farmers are able to sell their produce at the MSP. Second, the prevailing marketing arrangements under the conventional Agricultural Produce Market Committee (APMC) Acts in the states have meant that the farmer receives a small fraction of the price paid by the final consumer. Marketing arrangements under these acts have undermined the interests of the farmers and benefited the intermediaries (Chand, 2012; Gulati, 2013; NITI Aayog, 2015).

Table 1: Trends in Nutritional Status of Children below 3 years

	NFHS -2 (1998-99)			NFHS-3 (2005-06)		
	Urban	Rural	Total	Urban	Rural	Total
Children Stunted (Height for age) %	41.1	54.0	51.0	37.4	47.2	44.9
Children Wasted (Weight for height) %	16.3	20.7	19.7	19.0	24.1	22.9
Children Underweight (Weight for age)%	34.1	45.3	42.7	30.1	43.7	40.4

Source; NFHS -3 (2005-06) Volume 1

Table 2: Trends in Proportion of Underweight Children in States

States showing worsening of nutritional status of children (in terms of underweight) during 1998-99 to 2005-06			**States showing improvement of nutritional status of children (in terms of underweight) during 1998-99 to 2005-06**		
Percentage of underweight Children below 3 years			**Percentage of underweight Children below 3 years**		
	1998-99	**2005-06**		**1998-99**	**2005-06**
Arunachal Pradesh	21.9	29.7	Andhra Pradesh	34.2	29.8
Bihar	52.2	54.9	Chhattisgarh	53.2	47.8
Haryana	29.9	38.2	Delhi	29.9	24.9
Jharkhand	51.5	54.6	Himachal Pradesh	36.5	31.1
Madhya Pradesh	50.8	57.9	J&K	29.2	24.0
Nagaland	18.8	23.7	Karnataka	38.6	33.3
Sikkim	15.5	17.3	Maharashtra	44.8	32.7
Meghalaya	28.6	42.9	Mizoram	19.8	14.2
			Odisha	50.3	39.5
			Rajasthan	46.7	36.8
			Tamil Nadu	31.5	25.9
			Uttar Pradesh	48.1	41.6
			Uttarakhand	36.3	31.7
			West Bengal	45.3	37.6

Source: National Family Health Survey-2 (1998-99), National Family Health Survey-3, 2005-06.

Target 2.4 about sustainability of food production systems would also be a goal for domestic policy makers. The notion of sustainability in the context of agricultural practices which is critically linked with the nature of inputs may not fall under one size fits all parameters. Hence, the proposed indicators seem to be partial and inadequate. The target focuses on resilient agricultural practices that are expected not only to increase productivity and production but also to maintain ecosystems and improve land and soil quality. Table 3 depicts the current status of area, production, yield and percentage area irrigated with food grains in different states of India. This should indicate the expanse of cultivable land in India and hence the gigantic needs in terms of sustainability practices, and resources and technology deepening. Uttar Pradesh accounts for the largest share by area as well as production by a wide margin. It accounts for almost one-fifth of the country's food grain production. While Punjab and Haryana have been traditionally seen as the major contributors to food grain production, Madhya Pradesh, Andhra Pradesh, Rajasthan and West Bengal have emerged as significant producers in recent years.

Countries would also applaud Target 2.5 relating to genetic diversity; however, difficulties in collecting data on indicators may dissuade countries from embracing the target. Target 2a is a desire to increase

Table 3: Area, Production and Yield in Food Grain in 2013-14 and the Proportion of Area under Food Grains in 2011-12

State	Area (in Hectares)	Percentage of Total Area	Production (million tonne)	Percentage of Total Production	Yield (Kg per hectare)	Percentage of Area Irrigated (2011-12)
Uttar Pradesh	20.23	16.05	50.05	18.9	2474	76.1
Punjab	6.56	5.2	28.9	10.92	4409	98.7
Madhya Pradesh	14.94	11.85	24.24	9.15	1622	50.5
Andhra Pradesh	7.61	6.04	20.1	7.59	2641	62.5
Rajasthan	13.42	10.64	18.3	6.91	1364	27.7
West Bengal	6.24	4.95	17.05	6.44	2732	49.3
Haryana	4.4	3.49	16.97	6.41	3854	88.9
Maharashtra	11.62	9.22	13.92	5.26	1198	16.4
Bihar	6.67	5.29	13.15	4.97	1971	67.4
Karnataka	7.51	5.95	12.17	4.6	1622	28.2
Tamil Nadu	3.55	2.81	8.49	3.21	2396	63.5
Odisha	5.15	4.09	8.33	3.15	1617	29
Gujarat	4.29	3.4	8.21	3.1	1917	46.0
Chhattisgarh	4.95	3.93	7.58	2.86	1532	29.7
Assam	2.53	2.01	4.94	1.87	1952	4.6
Jharkhand	2.24	1.77	4.19	1.58	1874	7.0
Uttarakhand	0.89	0.71	1.78	0.67	2001	44.0
Others	3.26	2.59	6.38	2.41		
All India	126.04	100	264.77	100	2101	49.8

Source: "Raising Agricultural Productivity and Making Farming Remunerative for Farmers", NITI Aayog, 2015.

investment in rural infrastructure, agricultural research, extension services, technology development and related activities. Like some of the other targets (such as 2.4), this one too defies quantification. The proposed indicator of measuring government expenditures on agriculture is useful but only up to a point. There is no natural benchmark of what level can be considered adequate.

Conclusion

SDGs 1 and 2 resonate strongly with the Indian development agenda: elimination of poverty and hunger continue to be our major goals despite progress towards these goals in the last 50 years. The data base for poverty indicators is robust and India also has some of the elements of a social protection network although the measurement of their coverage and their impacts is less assured. As regards hunger, India is justly proud of its success in food production. However, this has not automatically taken care of the problem of hunger because access to food also depends on incomes and prices. If India succeeds in the goal towards poverty reduction, it will also contribute substantially to the elimination of hunger.

Indian policy has, however, placed too much emphasis on hunger measured in terms of low dietary energy intake. Over the last two decades, we have come to understand that India faces a serious problem with nutrition. Too many of our children are shorter and weigh less than children in even other impoverished countries in our region and elsewhere. This may partly be due to the young age of marriage of women and also their poor nutritional status. The policy has not evolved a robust response to this problem. The official policy should work out standard routine official data surveys that can capture, report and monitor the extent of the problem. This is the principal challenge today and if we can accomplish this, then it would take us a long way in meeting the SDGs as well.

Endnote

[1] Although, the figure on nutrition intake is different in NSSO Report 2011-12, the data shows that per capita calorie consumption rose to 2099 kilocalories per day in rural areas and 2058 kilocalories per day in urban areas. Both numbers are still below a Planning Commission benchmark of 2,400 kilocalories per day.

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Annex

Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture: Indicators and Targets	
2.1 By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round	2.1.1 Prevalence of undernourishment 2.1.2 Prevalence of moderate or severe food insecurity in the population, based on the Food Insecurity Experience Scale (FIES)
2.2 By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons	2.2.1 Prevalence of stunting (height for age <-2 standard deviation from the median of the World Health Organization (WHO) Child Growth Standards) among children under 5 years of age 2.2.2 Prevalence of malnutrition (weight for height >+2 or <-2 standard deviation from the median of the WHO Child Growth Standards) among children under 5 years of age, by type (wasting and overweight)
2.3 By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment	2.3.1 Volume of production per labour unit by classes of farming/pastoral/forestry enterprise size 2.3.2 Average income of small-scale food producers, by sex and indigenous status
2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality	2.4.1 Proportion of agricultural area under productive and sustainable agriculture
2.5 By 2020, maintain the genetic diversity of seeds, cultivated plants and farmed and domesticated animals and their related wild species, including through soundly managed and diversified seed and plant banks at the national, regional and international levels, and promote access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge, as internationally agreed	2.5.1 Number of plant and animal genetic resources for food and agriculture secured in either medium or long-term conservation facilities 2.5.2 Proportion of local breeds classified as being at risk, not-at-risk or at unknown level of risk of extinction
2.a Increase investment, including through enhanced international cooperation, in rural infrastructure, agricultural research and extension services, technology development and plant and livestock gene banks in order to enhance agricultural productive capacity in developing countries, in particular least developed countries	2.a.1 The agriculture orientation index for government expenditures 2.a.2 Total official flows (official development assistance plus other official flows) to the agriculture sector
2.b Correct and prevent trade restrictions and distortions in world agricultural markets, including through the parallel elimination of all forms of agricultural export subsidies and all export measures with equivalent effect, in accordance with the mandate of the Doha Development Round	2.b.1 Producer Support Estimate 2.b.2 Agricultural export subsidies
2.c Adopt measures to ensure the proper functioning of food commodity markets and their derivatives and facilitate timely access to market information, including on food reserves, in order to help limit extreme food price volatility	2.c.1 Indicator of food price anomalies

Goal 1: End poverty in all its forms everywhere: Targets and Indicators	
1.1 By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than $1.25 a day	1.1.1 Proportion of the population below the international poverty line, by sex, age, employment status and geographical location (urban/rural)
1.2 By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions	1.2.1 Proportion of population living below the national poverty line, by sex and age
	1.2.2 Proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions
1.3 Implement nationally appropriate social protection systems and measures for all, including floors, and by 2030 achieve substantial coverage of the poor and the vulnerable	1.3.1 Proportion of population covered by social protection floors/systems, by sex, distinguishing children, unemployed persons, older persons, persons with disabilities, pregnant women, newborns, work-injury victims and the poor and the vulnerable
1.4 By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance	1.4.1 Proportion of population living in households with access to basic services
	1.4.2 Proportion of total adult population with secure tenure rights to land, with legally recognized documentation and who perceive their rights to land as secure, by sex and by type of tenure
1.5 By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters	1.5.1 Number of deaths, missing persons and persons affected by disaster per 100,000 people[a]
	1.5.2 Direct disaster economic loss in relation to global gross domestic product (GDP)[a]
	1.5.3 Number of countries with national and local disaster risk reduction strategies[a]
1.a Ensure significant mobilization of resources from a variety of sources, including through enhanced development cooperation, in order to provide adequate and predictable means for developing countries, in particular least developed countries, to implement programmes and policies to end poverty in all its dimensions	1.a.1 Proportion of resources allocated by the government directly to poverty reduction programmes
	1.a.2 Proportion of total government spending on essential services (education, health and social protection)
1.b Create sound policy frameworks at the national, regional and international levels, based on pro-poor and gender-sensitive development strategies, to support accelerated investment in poverty eradication actions	1.b.1 Proportion of government recurrent and capital spending to sectors that disproportionately benefit women, the poor and vulnerable groups

Note: [a] An open-ended intergovernmental expert working group on indicators and terminology relating to disaster risk reduction established by the General Assembly (resolution 69/284) is developing a set of indicators to measure global progress in the implementation of the Sendai Framework. These indicators will eventually reflect the agreements on the Sendai Framework indicators.