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Vulnerability Profile of Nepal



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Nepal: graduation road map at a glance

March 2015: Nepal, for the first time, met two of the three thresholds of graduation from LDC status (see p. 12 and p. 16). The Committee for Development Policy (CDP) accordingly found Nepal pre-eligible for graduation. This finding

1. Introduction: historical and institutional context

Nepal was on the first UN list of LDCs in 1971. In its 2015 review of the UN list of Least Developed Countries (LDCs) in March 2015, the United Nations Committee for Development Policy (CDP) observed that Nepal was meeting two of the three thresholds of graduation from LDC status, namely, the graduation borders relevant to the human assets and economic vulnerability criteria. The CDP

Table 1

Nepal's pre-eligibility for graduation from LDC status in the 2015 review of the list of LDCs

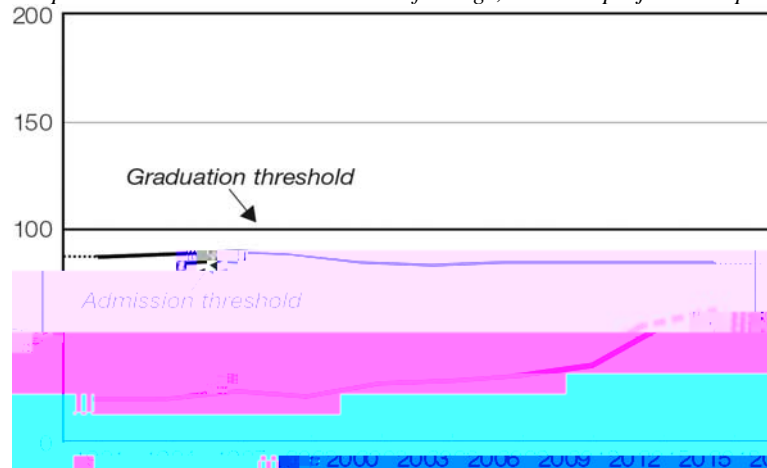
	PER CAPITA INCOME	HUMAN ASSETS	ECONOMIC VULNERABILITY
To pre-qualify for graduation in the 2015 review of the list, an LDC had to meet at least two of the following three graduation thresholds...	...to have a gross national income per capita of at least US \$1,242 (2011-2013 three-year average)	...to have a score >66 under the Human Assets Index (HAI), extreme values of which, among LDCs, were 7.8 (lowest human assets) and 87.6 (highest human assets)	...to have a score <32 under the Economic Vulnerability Index (EVI), extreme values of which, among LDCs, were 71.5 (highest vulnerability) and 24.9 (lowest vulnerability)
Nepal's score under the relevant criterion	\$659 (3-year average GNI per capita)	68.7 (Human Assets Index score)	26.2 (Economic Vulnerability Index score)
Nepal's score in % of the graduation threshold	at 53.1% of the graduation threshold	at 104.1% of the graduation threshold	at 81.9% of the graduation threshold <i>(see footnote 34)</i>

2.1 Evolution under the graduation threshold since 1991

Graph 1

NEPAL: distance to the graduation threshold
under the per capita income criterion (based on GNI per capita)

NB: data up to 2015 are based on actual CDP findings; the 2018 projection is provisional



Source: UNCTAD, based on CDP data up to 2015

At 53% of the graduation threshold in 2015 (vs. 35% in 2012) and an expected 60.5% in 2018, Nepal is on an upward trend, coming nearer to the graduation line relevant to this criterion. Progress took place in the national income (GNI per capita) over the decade preceding 2015 (2004: \$290; 2014: \$730, albeit with 9% inflation on average), while the slowing down of population growth (from 2.5% per annum in 1998 to 1.2% in 2014) partly explains the rise in per capita income. Performance under this graduation line now begins to reflect the beneficial impact of economic diversification. In the early 1990s, Nepal's exports mainly consisted of live animals and food products, some basic manufactures, and limited tourism revenue. Twenty-five years later, the bulk of total export earnings is generated by a small number of industries: textiles, tourism-dominated services and agro-based products of increasingly organic origin.

The economic performance as observed by the CDP in 2015 does not reflect the severe economic impact of the April and May 2015 earthquakes: GDP growth was 6.0% in 2014, 2.7% in 2015, and 0.6% in 2016; GNI per capita was estimated unchanged in 2015 and 2016 from 2014: US \$730.

2.2 Gross Domestic Product and Gross National Income: interpretation

Data on a country's GDP and GNI in dollar terms can differ from one source to the other on account of differences in calculation methods, mainly in data used for estimating GDP components and the applied exchange rates. With regard to Nepal, GDP and GNI data provided by international sources (World Bank, United Nations Statistics Division) and local sources (Ministry of Finance) differ slightly, though without showing major discrepancies with regard to the 2011-2016 period.

Table 2

despite its lasting low-income performance? An examination of the external resources flowing into the Nepalese economy brings some answers to this question.

External resource flows

External resources have had a critical impact on the socio-economic development of Nepal. In addition to export revenue, Nepal can resort to two significant external resources of finance: official development assistance (ODA), and remittances from Nepalese working abroad.

During the 2011-2014 period, Nepal received annually about US \$800 million in ODA, which increased to \$1.2 billion in 2015, following the earthquake. ODA presently accounts for about 25% to 35% of total government expenditure. ODA per capita doubled between 2005 and 2014; after the 2015 earthquakes, it increased 2.6 times (in 2015 as compared with 2005⁷).

While ODA is of critical importance for the functioning of government institutions and programmes, remittances from Nepalese migrant workers are the country's greatest source of external finance, and the financial backbone of a large share of private households. More than 3.8 million permits to work abroad (excluding India), representing 14% of the total Nepalese population, were issued by the Government between 1993/94 and 2014/15⁸. Malaysia, Qatar, Saudi Arabia and the United Arab Emirates absorb about 80% of all Nepalese migrant workers.

Current private transfers from Nepalese migrant workers have largely surpassed

Table 3
Nepal: sources of external finance, 2014

Sources	in US dollars or %
Remittances	\$5.9 billion
Exports of goods and services	\$2.4 billion
ODA	\$0.8 billion
FDI	\$0.03 billion

investment in seeds, technology and extension services is not corroborated by the case of Nepal¹⁴.

At the same time, remittances drive the growth of a largely import-based tertiary sector, notably wholesale and retail trading, and of activities such as construction, real estate development, housing and hospitality. It remains a challenge for the Government to implement policies aimed at attracting remittances for industrial investment, production of competitive goods and services, and employment for Nepalese at home.

Thirdly, calculation of the gross national income includes “net factor income” accruing to national factors of production (individuals and entities) that have been acting outside the domestic territory during a period of less than a year. Remittances to Nepal by Nepalese nationals residing abroad for periods longer than a year or permanently cannot be regarded as factor income and recorded in the GNI of Nepal. These private transfers to households in Nepal constitute substantial income accruing to national households (though not generated by them), yet well above the level of national income indicated by the official GNI figures. Accordingly, the GNI and GNI per capita data relevant to Nepal underestimate the average level of income effectively available to the Nepalese population.

It has been suggested that a gross national *disposable* income (GNDI) should replace the gross national income (GNI) to allow a more realistic assessment of the welfare of nations¹⁵. Calculation of the GNDI/GNI ratio by Capelli and Vaggi for 13 top receivers of remittances revealed that Nepal's GNDI, in 2013, exceeded its GNI by 32%, and that this ratio was the second highest among LDCs (after Liberia)¹⁶. Using GNDI, and accordingly GNDI per capita in a country like Nepal would give a better insight into the country's real achievements under the graduation threshold relevant to the income criterion, thereby counterbalancing the perception of an anomalous graduation case¹⁷.

2.3 The question of income distribution

The most recent Gini index score of Nepal (0.328 in 2010) places the country at a middle rank among Asian LDCs.

Income equality or lack thereof is directly reflected in household expenditure. The household consumption pattern of Nepal indicates a stark gap between the poorest 10% and richest 10% Nepalese households. The richest decile consumes 5.9 times more than the poorest decile. The difference is less striking between the quintil-5.4(eIn10.2op-.)-e(t).5(9lcri)ei

Table 4
Gini coefficients of five Asian LDCs (income distribution)

Country	Gini index score (most recent year)
Cambodia	0.308
Bangladesh	0.32
Nepal	0.328
Lao PDR	0.364
Myanmar	0.381
Bhutan	0.388

The Annual Household Survey 2014/15 revealed that 15.5% of the sampled households had inadequate food consumption, with 10.9% reporting borderline food consumption, and 4.6% recognizing a poor food consumption status²². The Nepal Nutrition and Food Security Portal states that, based on the 2011 census, 38% of the country's population lives with less than the minimum daily calorie intake required for a healthy life²³.

productivity. Maternal mortality therefore has a particularly negative social and economic impact. The MMR is also a proxy for public health impediments and gender inequality. In short, inclusion of the MMR in the Human Assets Index is an attempt to enrich the HAI as a composite indicator of structural progress or lack thereof²⁸.

The MMR is conventionally calculated as the number of maternal deaths per 100,000 live births over a given period of time, usually a year²⁹. Nepal's MMR declined from 901 deaths per 100,000 live births in 1990 to 258 in 2015. Yet Nepal's ratio remains one of the highest among Asian LDCs³⁰, and a far cry from approaching Sustainable Development Goal 3 (Ensure healthy lives and promote well-being for all at all ages), which aims to reduce the global maternal mortality ratio to less than 70 deaths per 100,000 live births by 2030.

3.4 Secondary school enrolment

The estimated gross secondary school enrolment ratio which was used by the CDP in 2015 was 66.6% .

There was considerable progress in the gross secondary school enrolment ratio of Nepal over the past decade, from 45.6% in 2007 to 69.6% in 2016.

The gender gap in secondary school enrolment significantly diminished over the years, to the point of approaching gender parity³¹. However, the 2015 earthquakes devastated the schooling infrastructure and disrupted Nepal's educational services. In 11 of the most impacted districts, 34,500 of the 55,000 existing classrooms were found unsafe for use. This

To eradicate illiteracy, the Government has undertaken literacy campaigns and educational programs through Non-Formal Education Centres. Results have been mixed, due

evolved over the decade and a half), and this methodological change has compelled readers to interpret with caution the contrast between Nepal's EDI performance before 2000 and its EVI performance since 2000.

Graph 3
NEPAL: distance from the graduation threshold
under the economic vulnerability criterion
(based on the *Economic Vulnerability Index*)

NB: data up to 2015 are based on actual CDP findings; the 2018 projection is provisional



Source: UNCTAD, based on CDP data up to 2015

Nepal's progress above the graduation border relevant to this criterion is in theory an indication of diminishing vulnerabilities over time. This should be interpreted *cum grano salis* and not as room for complacency. Nepal remains economically vulnerable, notably as a result of its land-lockedness.

Land-locked countries have no direct access to sea ports. Their ability to competitively trade in goods largely depends on political goodwill domestically and regionally, particularly on efforts by transit neighbours to provide a facilitating technical and

addition of a coast-related variable to the components of the EVI, a variable of relevance to

vulnerability factor statistically, but the challenge of eventually losing LDC treatment and facing losses of competitiveness considerably dampens the perception of non-vulnerability.

4.4 Victims of natural disasters

Nepal's geographical location exposes it to extreme precipitation, seismic activities and landslides. Loss of lives and damage to property and infrastructural assets as a result of natural disasters are a regular phenomenon in the Nepalese economic and social landscape. The number of disastrous events appears to have been on the rise, due to natural and man-made causes.

Like exposure to intense cyclonic frequency in insular regions, exposure to plate tectonics is an acute dimension of Nepal's vulnerability. The country straddles the fault line between two major tectonic plates, the Indian plate and the Eurasian plate, which push each other and displace the crust of the earth. This process periodically causes earthquakes when strain built up along the fault must give way. Historically, there has been dangerous seismic

ranks Nepal 120th out of 181 countries. Nepal's capacity to adapt to climate change impact is rated even lower: 136th among 192 countries⁴³.

Nepal is facing several simultaneous challenges related to climate change: shrinking glaciers, leading to increasingly frequent glacial lake overflow and flash floods; landslides; more erratic precipitation; and alterations in the pattern of temperatures, winds, fog and hailstorms. The Government estimates that 1.9 million people in Nepal are highly vulnerable to risks associated with climate change, and that an additional 10 million will increasingly be threatened by the same risks. Overall, about 37% of the country's population is considered exposed to climate-related factors, particularly through economic and related activities such as agriculture, forestry, water and energy, health, infrastructure and tourism⁴⁴.

An additional major concern, in this context of environmental vulnerability related to climate change, is the rapid growth of the population, a recognized factor of ecological degradation which has become manifest in many parts of the country, notably through the degradation or loss of forests, soil erosion, air pollution, water pollution, and the difficulty in managing solid waste.

Table 5 provides details of the impact of natural disasters on the number of victims in Nepal. These data encompass earthquakes, floods and landslides, which have been the events entailing the heaviest losses of lives and assets, and having the most severe consequences for economic, cultural, environmental and social systems. More than 9 million people, or almost a third of Nepal's population, have been affected by natural disasters since the year 2000. Many of them lost not only their home or family members, but often also their livelihood.

4.5 Instability of agricultural production

Agriculture accounts for a third of Nepal's gross domestic product (GDP), which is twice as much as the contribution of the industrial sector. It continues to be the first source of employment and income for the population. Average real growth of agricultural activities was near to 3% over the past 25 years, but with high volatility, including years of contracting production (see Graph 5).

The instability of agricultural production, in Nepal, has mainly resulted from a mix of factors ranging from climate-related shocks (monsoon rains) to structural issues such as the technological limitations of farmers, particularly the limited availability of high-yield seeds and agro-chemicals, and the relative scarcity of irrigation infrastructure. Yet, due to the heavy economic and social weight of agriculture in Nepal, the stark year-to-year swings in the agricultural output generate ripple effects on the whole economy.

Paddy rice, maize and wheat are the major cereal crops in Nepal. They account for more than 95% of total cereal production. Millet is also cultivated as staple crop, but on a smaller scale and primarily in hilly and mountainous areas.

⁴³ <http://index.gain.org/ranking>

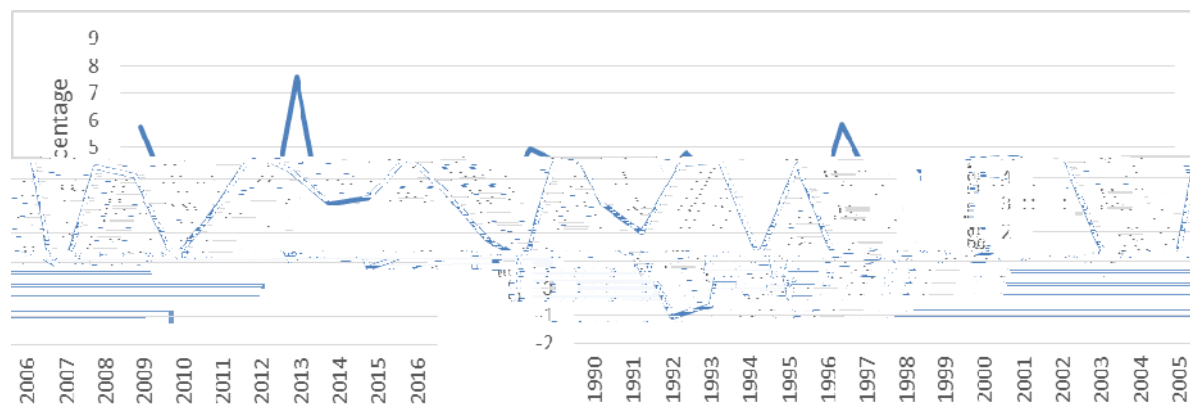
⁴⁴

Table 5
Number of victims of natural disasters in Nepal, 2000 to 2016

Year	Number of events	Deaths	Injured people	People affected otherwise	Homeless people	Total number of victims	Estimated damage (in '000 of US \$)
2000	3	463	70	50,592		50,662	6,300
2001	3	170		21,261		21,261	
2002	3	564	305	265,760		266,065	
2003	2	287	284	43,395	15,575	59,254	
2004	1	185	15	800,000		800,015	
2005	3	69		31,600		31,600	
2006	4	157		200,000	80,000	280,000	
2007	1	214	48	640,658		640,706	2,400
2008	2	115	3	250,000		250,003	29
2009	6	459	62	619,598		619,660	60,000
2010	4	223		13,372		13,372	
2011	7	182	121	194,686		194,807	123
2012	2	83	5			5	1,000
2013	3	244	35	12,474	4,314	16,823	
2014	6	573	324	187,621		187,945	15,000
2015	4	9,034	20,396	5,621,790		5,642,186	5,174,000
2016	3	174	74	20,500		20,574	15,000

Source: EM-DAT: The Emergency Events Database - Université Catholique de Louvain (UCL) - CRED, D. Guha-Sapir - www.emdat.be, Brussels, Belgium

Graph 5
Annual growth of agricultural value added in Nepal, 1990-2016



Source: World Bank Development Indicators, <https://data.worldbank.org/indicator/NV.AGR.TOTL.KD.ZG>

Table 6 provides a synopsis of cultivated areas, production and yield of cereal crops for crop years 2000/2001 and 2015/2016.

Table 6

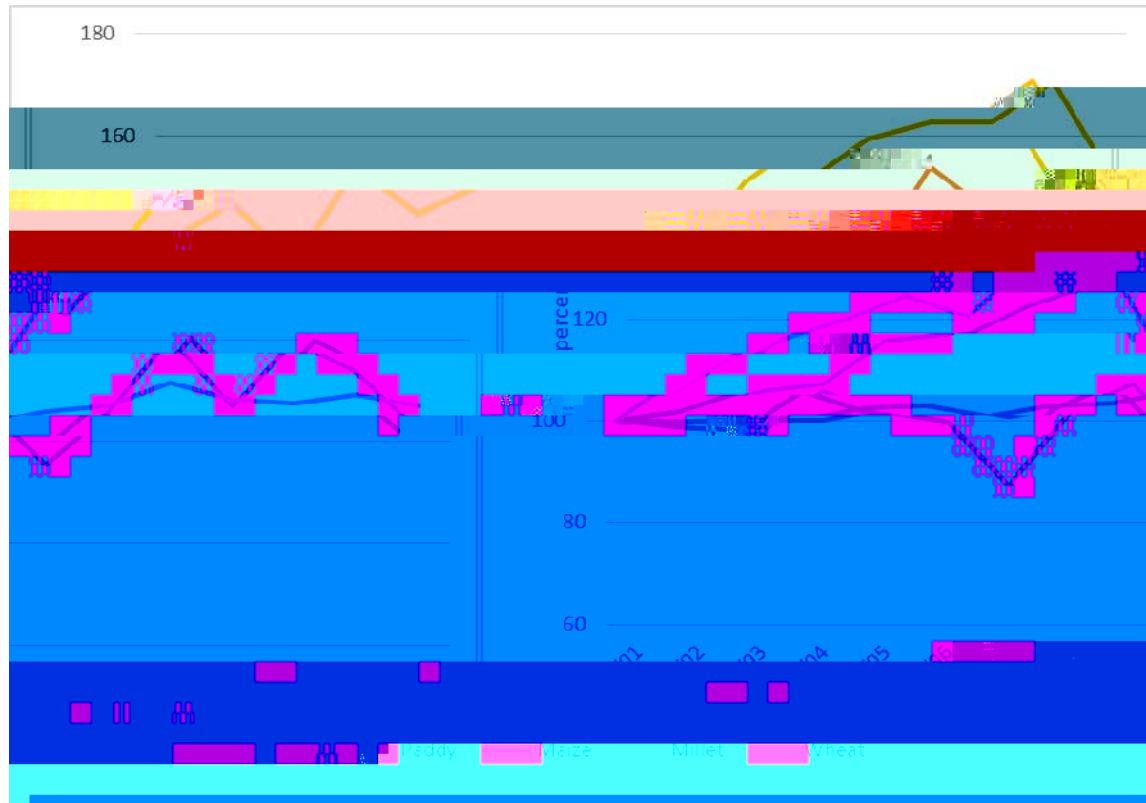
Major cereal crops: area, production and yield, crop years 2000/2001 and 2015/2016

Crops

Moreover, a tax-related rise in the logistic service charge for the use of port facilities adds to the transaction costs which Nepalese merchants incur.

Graph 6

Evolution of the production of major cereal crops, 2000/2001 to 2015/2016 (100 base = 2000)



Source: Govt. of Nepal, Ministry of Ag

This has eroded the competitiveness of several Nepalese exports and favoured imports into

Though imports dropped in 2015 as a consequence of the disastrous events, there has not been any positive change in the structure of Nepal's trade in goods. Preliminary figures for 2016 and 2017 indicate a further widening of the trade deficit.

Nepal's exports of services, in nominal value, more than doubled between 2010 and 2015 (from US \$671 million to \$1,430 million). Yet the balance of services (\$230 million in 2015) has been too insignificant to offset the massive merchandise trade deficit (\$5.7 billion in 2015). International tourism receipts have been Nepal's largest source of export revenue in the sphere of trade in services. It never accounted for less than a third of total service exports (51% in 2010, 38% in 2012, 34% in 2015). However, foreign exchange earnings from international tourism have been as volatile and unstable as the streams of tourist arrivals, which have fluctuated, over the years, in reaction to natural disasters, political instability, and health pandemics (see Graph 8).

Graph 8

Annual changes in gross foreign exchange earnings from tourism
in fiscal years 2000/2001 to 2016/2017

structural economic or social progress of Nepal. A broad assessment of the explanatory value of each one of the 14 measurements is indicated in parentheses.

This overview of the interpretative value of the variables reveals the following:

(i) 8 of the 14 indicators provide an adequate measurement of Nepal's structural progress; 5 of these 8 indicators make up the entire composition of the Human Assets Index (HAI), thereby making the HAI stand out as the most satisfactory of the current tools at the disposal of the United Nations for measuring structural change in Nepal;

(ii) the gross national income (GNI) per capita, an unlikely enlightener by definition when structural economic transformation is the question at stake, is only partially adequate in helping to capture structural progress in Nepal;

(iii) the Economic Vulnerability Index (EVI) appears to be the most debatable of the three aggregates with regard to its ability to explain Nepal's structural handicaps and structural strengths: 4 of the 8 components of Nepal's EVI score inadequately measure the country's economic vulnerability, essentially by underplaying the structural disadvantages of land-lockedness and the exposure to violent shocks.

Table 7

LDC criteria indicators and the goal of measuring Nepal's structural economic progress

14 indicators of performance under 3 LDC criteria	Why is the indicator considered suitable, in theory, for capturing progress toward graduation?	Does the indicator effectively measure Nepal's structural economic progress?
GNI per capita	A rising per capita income will indicate higher living standards. It will also feed the impression of a growing capacity of	

<p>Geographical distance to main markets</p> <p>(component of the EVI)</p>	<p>CDP takes the view that, the more economically remote the country, the more difficult it is for the economy to become or remain competitive and achieve structural transformation: the more remote the country, the more structurally disadvantaged its economy.</p>	<p>With 9% less remoteness than other LDCs taken on average, and despite its land-lockedness, Nepal is misleadingly portrayed as a geographically less isolated, therefore less disadvantaged economy.</p> <p><i>(Inadequate measurement)</i></p>
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Proportion of people in low-lying coastal areas

Graduation criteria and indicators

Graduation criteria used in the 2015 review of the UN list of LDCs	Relevant indicators
Per capita income criterion	<p>Gross national income (GNI) per capita: * based on a 3-year average (2011-2013 in the 2015 review) * graduation threshold in 2015: US \$1,242 * "income-only" graduation threshold: US \$2,484</p>
Human assets criterion	<p>Human Assets Index (HAI): A composite index based on the following 4 indicators: * percentage of undernourished people in the population * under-five mortality rate * gross secondary school enrolment rate * adult literacy rate</p>
Economic vulnerability criterion	<p>Economic Vulnerability Index (EVI): A composite index based on the following 8 indicators: * population * remoteness (average distance from major markets) * share of population living in low-lying areas * share of agriculture, forestry and fisheries in GDP * merchandise export concentration index * share of victims of natural disasters in the population * index of instability of agricultural production * index of instability of exports of goods and services</p>
Summary of the graduation rule	<p>For all three criteria, different thresholds are used for identifying cases of addition to, and cases of graduation from, the list of LDCs. A country will qualify to be added to the list if it meets the addition thresholds on all three criteria and does not have a population greater than 75 million. Qualification for addition to the list will effectively lead to LDC status only if the government of the relevant country accepts this status. A country will normally qualify for graduation from LDC status if it has met graduation thresholds under at least two of the three criteria in at least two consecutive triennial reviews of the list. However, if the per capita GNI of an LDC has risen to a level at least double the graduation threshold and is deemed sustainable, the country will normally be found pre-eligible or eligible for graduation regardless of its performance under the other two criteria.</p>