

Working paper

Nexus: compendium

In search of nexus triple wins

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January 2022

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How to cite: Pickard, S. and Lemma, A (2022) Nexus: compendium. In search of nexus triple wins. ODI working paper London: ODI.

Acknowledgements

We are grateful to Andrew Shepherd for extensive reviewing, Aaron Griffiths for close editing and useful suggestions, and Adina Sadiq for publication support. This is a working paper and subject to review and revision. We therefore warmly welcome suggestions and comments to improve this report.

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Acronyms

DR	Dominican Republic
FDI	foreign direct investment
GDP	gross domestic product
GHG	greenhouse gas
NCSD	National Council on Sustainable Development
NESDB	National Economic and Social Development Board
PSE	Philosophy of the Sufficiency Economy
SEZ	special economic zone
SDG	Sustainable Development Goal
SIGI	Social Institutions and Gender Index

Executive summary

Achieving prosperity for all within planetary boundaries requires that governments take wide-ranging transformative action, but joining up policies across different fields (economic, social, environmental) can be challenging. Economic transformation, social inclusion and ecological sustainability objectives guide interventions by many governments and international agencies, but rarely are they well integrated. The ODI Nexus project, supported by Sida, has set out to explore the synergies and trade-offs among these three objectives, aiming to outline a more integrated landing space for joined up policies and illustrate how to overcome the obstacles along the way.

A companion analysis also undertaken under the ODI Nexus project (Diwakar, 2022) empirically analysed key development indicators and identified the Dominican Republic, Sri Lanka and Thailand as front-runners in achieving more holistic development outcomes. Taking a deeper look at these case studies, this compendium seeks to identify national policy interventions that struck balances between the different objectives or realms of development. Originally focused on identifying development planning that has led to significant measurable outcomes, our research grew to explore the policy development, legislation and implementation processes required for integrated transformational policy to succeed.

In each of the countries we found strong evidence of national-scale, triple-win policies led from the main seats of power. However, there is not yet strong evidence of triple-win outcomes being achieved. That is, despite targeting balanced development outcomes, the case study countries have performed well in only one or two areas, often implicitly trading off the other realm. Insofar as a light-touch desk-based literature review can reveal, we find that some of these implementation gaps may be filled in time while others are constrained by governance challenges that must be overcome and political economy struggles that must be won to enable the type of transformational change envisaged.

We also observed that until recently the development pathways followed by the three countries was often 'additive' – economic growth, then social inclusion then ecological sustainability – rather than transformational. Adding new goals alongside existing ones without fully interrogating the trade-offs between the realms and administrative inertia made it harder to achieve more truly multi-dimensional development. Although we found some examples of balance and interlinking between realms, in general their relative

standing in inter-government power struggles appears linked to when they emerged. Macroeconomic factors outdate and frequently outweighed social inclusion, with both often subordinating ecological issues. These relative standings are also translated in the way that progress is measured, analysed and communicated. Economic data is generally longer ranging, more regular and more easily disaggregated than the data that tracks social inclusion and ecological issues, making it easier to observe economic changes. In countries that have undergone significant demographic changes in recent decades, the preference for using proportional measures also serves to minimise the absolute negative impacts observed in social and ecological realms.

Through investigating how nexus thinking has emerged in these front-running countries, and how it has moved to the centre of policy making, we found that the articulation of nexus themes by empowered administrations only began to occur alongside a reckoning with the failures of previous development pathways. The triggers for these often-abrupt changes of direction in development planning varied between the countries: a financial crisis in Thailand; the emergence from a civil conflict in Sri Lanka; and the rewriting of the constitution in the Dominican Republic. Similarly, the ideas that underpinned the more holistic development pathways reached the centre of public administration through different routes. In Thailand, nexus thinking arrived via the moral authority of the King; in Sri Lanka, it was a change of political ideology; and in the Dominican Republic, the articulation of new ideas at the national level built on those proposed previously by subnational actors and was supported by international agencies. International collaboration also served to concretise the efforts that the countries began in the 2000s with the adoption of the Sustainable Development agenda later formalising high-level, cross-ministry councils or task forces to lead on sustainable development.

Following this initial attempt to identify and link transformational policies and their outcomes, we set out the research that will be required to unpick not only how to outline integrated 'landing spaces' for transformational or 'joined up' policies, but also how to support them to achieve their outcomes in the timeframes required to ensure equitable prosperity within planetary boundaries. The ideas here represent opportunities for future work and integration with the other streams of the Nexus project and range from conducting key-actor interviews, to identifying intermediate outcome indicators and interrogating transformational changes in other areas to identify factors that may accelerate a broader transition to nexus thinking.

1 Introduction

1.1 Triple wins

Joining up policy across different realms of government can be challenging. Economic transformation, sustainability and inclusion are pursued by many governments and international agencies separately, but rarely are they well joined up. The ODI Nexus project, supported by Sida, sets out to explore the synergies and trade-offs among these three objectives with a view to showing how a more integrated 'landing space' for 'joined up' policies can be achieved and how to overcome the obstacles along the way.

This 'Triple Win' Compendium, one of the initial components of the ODI Nexus Project, was originally conceived to provide a series of empirically identified case studies that best represent a triple-win transformative change through the achievement of three goals:

- 1 Economic transformation: moving economic resources from lower- to higher-productivity sectors or activities within sectors. The aim is to increase the supply of higher-productivity, higher-income jobs in developing countries.
- 2 Green growth: sustainable growth, ensuring that growth does no or little harm to the environment, including the climate, promoting necessary mitigation and/or adaptation measures.
- 3 Social inclusion: the promotion of inclusive growth and the gradual eradication of extreme and relative poverty.

Running across all three goals is also a risk and resilience component, meaning that economic transformation, green growth and social development wins need to be resilient to environmental, economic, social or health shocks – for instance, those resulting from the Covid-19 pandemic.

Following initial analysis and discussion among the ODI Nexus team, the focus of the compendium was refined. Originally, it aimed to showcase examples where governments had achieved economic growth that was transformative, sustainable, inclusive and resilient. However, the national trends presented in the accompanying indicators analysis (Diwakar, 2022) illustrate the differing extents to which countries have traded off inclusion and ecological sustainability goals in their economic development pathways. Rather than analysing progress through a lens of whether economic growth was more or less inclusive or sustainable, the compendium sought examples of governments adopting a balance between the different

‘realms’ of development (economy, ecological sustainability, poverty alleviation and inclusion, risk-informed resilience).

To pin down where integrated policies have been transformative rather than marginal or superficial, we sought to tie examples of development planning to measurable outcomes. In cases where gaps remained between goals and outcomes, this then led us to begin to explore the political economy issues surrounding integrated transformational policy.

This report summarises the ‘triple-win’ lessons learnt from three case study countries: Sri Lanka, the Dominican Republic and Thailand. The rest of this report is structured as follows. First, a brief overview of the methodology used to select and analyse the case studies is presented. We then present narrative and data summaries of findings for each of the case study countries. Drawing on the evolution of nexus themes in each country, we present observations and implications from the analyses, highlighting what these individual cases can and cannot tell us about transformational integrated policymaking more generally. We conclude with a short reflection on the gaps in our knowledge and suggest how to fill these in other components of the Nexus project.

1.2 Case study country selection

The country selection process began with a quantitative analysis of three basic groups of indicators that represented the nexus: economic transformation, sustainability, and inclusion.

Table 1 Selection criteria

Inclusiveness	Multidimensional Poverty Index headcount [~typically two data points since 2010]
	Percentage of population living below \$1.90 headcount [interpolated 2000–2019]
	Social Institutions and Gender Index (SIGI) [2014, 2019]
	Ratio of income of bottom 20% to bottom 50% [2000–2019 with missing values]
Environment	Greenhouse gas emissions, per capita [2000–2018, with three-year lag]
	Per capita material footprint [2000–2019]
	Population-weighted PM2.5 air pollution [2000, 2005, 2010–2017]
	Proportion of terrestrial/marine areas that are protected [2015–2018]
Economics	Real GDP per employed person (labour productivity) [2000–2020]
	Real GDP per capita growth [2000–2019]
	Diversification Index [2000–2020]

Three to four metrics were selected which best represented each group (see Table 1), making a total of 11 metrics. These were then gathered for all low- and middle-income countries, covering the 2000 to 2021 period (where available).

The countries were then ranked according to both their average values over the period and their relative progress in the rankings throughout the 2000 to 2021 period. This created a country long-list which was narrowed to three typologies of countries: (1) those with the ‘best-performing’ values and that had shown the highest progress; (2) those that had had the highest progress but were weak in terms of average levels (or vice versa); and (3) those that were weak in both absolute performance and progress. Alongside these indicators, we considered the risk profile of countries, based on their INFORM risk score, ND-GAIN readiness index and Worldwide Governance Indicators government effectiveness scores, using these as a proxy for the strength of the enabling environment.

Selecting case studies from this list involved highlighting those that would be most useful to inform work in Sida focus countries, ensuring geographic diversity and accounting for prior ODI knowledge and expertise. Countries with weak risk profiles and those already selected for further in-depth studies as part of the Nexus project (e.g., Bangladesh and Kenya) were also removed. From the short-list that remained, the Dominican Republic, Sri Lanka and Thailand were selected, retaining the possibility that future studies analyse additional countries.¹

1.3 Case study analysis

Mixed-mode analyses were carried out for the case studies, broadly following three main channels: (1) transformational outcomes; (2) evolution of policy within each realm; and (3) relation to and impact of changes in the broader context. These ‘light-touch’ analyses were intended to be exploratory rather than comprehensive and were built iteratively rather than using a rigid framework. The specifics varied between realms and contexts, but generally adhered to the following approaches.

- 1 **Transformational outcomes.** Building on the findings from the indicator analysis, the first step was to begin looking deeper into the available data to identify transformational outcomes within each of the nexus realms. This followed one of three routes:
 - a Extending the data series used for the indicator analysis (2000–2019) further into the past, for example to identify the impact of historic market liberalisation policies on labour productivity and employment observed today.
 - b Looking into the indicator analysis data more deeply, for example exploring which of the factors within the ND-GAIN or SIGI indices were responsible for the changes seen in the headline figures.
 - c Identifying alternative data sources to try to unpick, explain or support the headline trends, for example to investigate

¹ While none of these are current Sida focus countries, they are judged to be countries from whose history Sida focus countries can learn. No Sida focus countries were in the best-performing group.

whether households, transport or industry were responsible for increasing CO₂ emissions.

Typical sources consulted included international statistics databases, government statistics publications, and development bank country diagnostic reports (see list of data sources in the References).

- 2 **Evolution of policy within each realm.** Achieving desired transformational outcomes at the national level often requires the implementation of tailored policy several years prior to any changes being observed, but policy is rarely enacted without precedents to build on. The story of 'development' has followed a well-defined pathway since the end of the Second World War that has seen poverty and later sustainability included alongside economic growth as driving objectives (UNRISD, 2016). This part of the analysis investigated how the evolution of these separate realms of policy making occurred within national administrations and sought to establish what priorities were successively set by governments and what political power was ascribed to those promoting these policies. As well as attempting to chart when issues that are currently in vogue began receiving attention in dedicated ministries, we were interested in seeing when these issues moved towards the centre of policymaking. Here, we mainly focused on legislative updates for initial policies, and then began looking at medium- and long-term strategies set – or at least backed – by the whole of government or the prime minister/president.
- 3 **Broader context.** Understanding how transformational change occurs (or why it doesn't) requires some appreciation of the historical and broader issues that each country encounters. For political reasons, these are often omitted from the narratives of governments and international finance institutions, so we also consulted academic historical analysis. These were Peebles (2006) and Wickramasinghe (2014) for Sri Lanka and Baker and Phongpaichit (2014) for Thailand. No suitable single source could be found for the Dominican Republic, so the context was derived by drawing on writings from left-leaning academics (e.g., Betances, 2016) and the surprisingly critical analyses of government departments and international agencies.

A final stage of the work was to try to pull together the analysis to introduce the political economy that underpins the connection between these three distinct areas. Specifically, to begin to investigate how policies were enacted in the first place and why they have or have not been successful in achieving their outcomes.

2 Sri Lanka

Key sources: ADB (2017); Byiers et al. (2015); Government of Sri Lanka (2017); Lemma, A. (forthcoming); Parliament of the Democratic Socialist Republic of Sri Lanka (2017); Peebles (2006); Rajapaksa (2005; 2010); Wickramasinghe (2014); World Bank (2015)

2.1 Nexus themes within Sri Lanka's development pathway

2.1.1 20th century

For several decades after its independence in 1948, Sri Lanka (Ceylon until 1972) was one of the most equal, wealthy and well-educated post-colonial countries, with effective bureaucracies and a competent civil service. There were hopes for the sort of rapid economic growth seen in countries like Singapore, but in practice its economic performance was closer to the average of its neighbours.

Through to the 1970s, poverty headcounts and inequality were far below those of its regional peers, in large part because of universal government subsidies on food, health and education and the evolution of welfare schemes providing pensions, clothing and housing. Economic policy was characterised by import substitution and the promotion and protection of state-owned enterprises. Services have been the largest source of economic output since at least the 1960s, while tea produced in colonial-era plantations remained the dominant export for several decades.

A mixture of particularly slow economic growth, high welfare expenditures, low profits from state-owned enterprises and a perceived lack of efficiency led to the first economic liberalisation programme in 1977 opening the economy to market rules, limiting the power of state-owned enterprises and creating subsidies to attract foreign direct investment (FDI) into the re-energised free-trade zones. Forms of targeting were also introduced to previously universal support packages, which also underwent a series of redesigns and rebranding over the following decades, increasingly focussing on providing access to goods and services via markets rather than equity-based in-kind support.

Reflecting international donors' ideological support for the liberalisation agenda, Sri Lanka became highest aid recipient per capita in the world as aid- and debt-funded infrastructure projects

expanded rapidly. Many of these had poverty-alleviating aspects, such as creating and expanding settlements and improving access to basic services, the most ambitious being the Accelerated Mahaweli Programme, which completely reshaped the Mahaweli river basin to provide new agricultural lands, energy generation and secure water supplies.

The garment sector boomed with the expansion of the free trade zones and soon surpassed agricultural products as the dominant export sector, growing nearly 30-fold in nominal terms in less than a decade, creating large numbers of jobs for so-called 'low-skilled' workers and contributing to a marked increase in the country's per capita income. The country also saw very little increase in CO₂ emissions since almost all electricity was sourced from renewables prior to the arrival of fuel-oil generation in the mid-1990s.

Despite these positives, the impact of the liberalisation reforms on Sri Lanka's aim of economic development and poverty reduction were a hotly contested topic in the late 20th century. With hindsight and improved data, it now seems that, on balance, the policies of the first reform period occurred alongside an 8-percentage point increase in the proportion of households living in poverty between 1978 and 1987 (Ismail et al., 2002). How much of this increase in poverty can be attributed to the reforms is unclear given that there were also gains made in other development indicators as well as the early part of the protracted civil war (see Box 1).

A second economic liberalisation programme was initiated from 1989 in concert with IMF structural adjustment agreements. These reforms extended the previous trade incentives alongside a wave of wider-ranging privatisation and deregulation and marked a clear acceleration in the country's environmental footprint and labour productivity. In the social realm, new safety nets were also introduced to increase benefit levels, devolve decision-making and provide support to conflict-affected areas. In practice, the performance of these measures has been found wanting in subsequent assessments both in terms of their execution and the poverty alleviation outcomes targeted. Separately, this was also the period when the first specifically environmental policies began to emerge and when environmental sustainability framings began to change. Whereas the first Environment Act in 1980 talked of rational exploitation of resources, the 1990s included calls for sustainable resource consumption, the regeneration of forest cover and the need for large projects to carry out biodiversity impact assessments. This shift towards conservation also laid the groundwork for a shift to environmental protection. For example, pollution limits were adopted for air and water using both ambient and source-based (e.g., from industry and vehicles) approaches.

Buoyed by the reforms, the garment sector continued to expand throughout the 1990s and into the early 2000s despite much of the

country being increasingly affected by the conflict, limiting development in other sectors, such as tourism. Low-wage garment sector jobs, military employment and, to a lesser extent, remittances and safety net programmes decreased income poverty. Despite these gains, the reforms also ushered in a period of rapidly increasing income inequality, with the highest income decile capturing most of the economic gains. Environmental impacts such as CO₂ and material footprints also began to accelerate steeply, with CO₂ emissions roughly doubling in the decade from 1993.

Box 1 The impact of civil conflict on nexus themes in Sri Lanka

The conflict broke out along religious and ethnic lines in 1983 and eventually terminated in 2009. It had far-reaching impacts that are difficult to disentangle from other changes in economic and social outcomes and demographic phenomena. Most acutely, the conflict claimed more than 100,000 lives, displaced an order of magnitude more, and was the theatre for human rights abuses committed by both sides. It also accounted for 40% of government spending by the turn of the millennium, limiting productive and redistributive spending, and meant that many of the country's poorest regions were excluded from national poverty surveys, skewing the reliability of the data. Progress towards successive liberalisation reform agendas continued but was constrained by the vacillating intensity and geographic coverage of the conflict. Tourism, official development assistance, and FDI in special economic zones (SEZs) were periodically curtailed during the fiercest years of fighting only to re-emerge after ceasefire agreements. As well as being a result of the war, wide variations in socio-economic development within the country were also key sources of conflict, although the interrelation with headline poverty rates is complex.

On one hand, homes, businesses and economic assets were routinely lost during the cycles of violence and the costs of necessities in conflict-affected areas often spiked well above those found elsewhere in the country. On the other hand, the associated enrolment of soldiers from largely poor households helped to lift many of them out of poverty. Although peace has held for more than a decade, the impacts of the conflict are clearly present in Sri Lanka today. Injustices are increasingly being documented along the social divides associated with the conflict, while the current government's withdrawal from a UN-mediated resolution on reconciliation and accountability has pushed the country towards further human rights violations.

2.1.2 2000–2010

Whether the stages of economic liberalisation created beneficial socio-economic transformation remains the source of heated and

ideological debate. By the 2000s it was becoming clearer that the policies promoted manufacturing-related GDP, attracted FDI and fostered a garment industry that created many low-skilled jobs and proved resilient to global sectoral shocks. Yet, the policies had also led to highly concentrated manufacturing and export sectors that largely failed to attract either higher value, higher skilled technologies or create linkages to domestic industries. While average incomes rose and poverty incidence fell through the 1990s and early 2000s, inequality grew substantially, in part because of the high fiscal costs of the policies limited fiscal redistribution. The decades of tax holidays enjoyed by some firms mean Sri Lanka's tax receipts as a portion of GDP were among the world's lowest, hampering the government's ability to invest in public goods like health, education and social protection, especially since large portions of the budget were assigned to fighting the conflict.

Alongside ramping up the conflict with Tamil separatists, the government that gained power in 2005 pledged to turn away from the liberalisation agenda and move back towards a mixed-economy model, focus less on manufacturing and design a range of interventions that while still targeting high rates of economic growth aimed at wresting power back from global markets. Key examples include a desire to improve incomes for the millions of people working in the agricultural sector by re-establishing guaranteed crop prices, positioning Sri Lanka as a global transport hub by developing its port and airport infrastructure, and plans for developing the tourism industry. The 2005 Vision (Box 2) set out by the incoming president contained a range of ideas that were ahead of their time in the way they began to cross nexus boundaries, including conserving biodiversity in protected areas, developing industry in environmentally sensitive ways, and arresting the growth in private transport. Energy policy that called for affordable electricity for all weaved social and economic aspects together, but like most countries, most of the generation capacity added around this time was fossil fuelled rather than the hydropower that had supplied Sri Lanka's grid throughout the 20th century. The re-emergence of full-scale conflict in 2005 following the 2002 ceasefire stalled emissions growth for a time, but this picked up again owing to the increases in fossil fuel electricity generation and private vehicle ownership. These factors, along with the beginnings of a huge increase in external-debt-fuelled infrastructure spending that coincided with the end of the conflict, caused emissions to leap and were also reflected in substantial increases in material footprints, particular of non-metallic ores. reflected in substantial increases in material footprints, particular of non-metallic ores.

Box 2 Mahinda Chinthana 2005

Mahinda Rajapaksa's 2005 presidential manifesto was perhaps the first articulation of nexus thinking by Sri Lanka's central government. The document presented social inclusion, environmental protection

and economic development visions for the future alongside criticisms of previous development ideologies and political opponents. Launched during a hiatus in the civil conflict, most of the topics covered related to non-conflict themes.

The vision (re)introduced several cash and in-kind social transfer schemes, including targeting support to pregnant women, children, those affected by the 2004 tsunami, the poor and the homeless. Job creation was a key theme, particularly in the public sector where pledges were made to raise wages and other benefits like pensions and health insurance, but also efforts to promote emigration (and thus remittances) and home working for women in rural villages. Gender inclusion was also targeted, with a promise to enact a gender equality law.

Economic development was framed around a new approach that sought to balance liberalisation with protection of domestic firms while targeting 8% annual GDP growth. This included some measures to continue attracting FDI into SEZs, develop international transport infrastructure, introduce incentives for environmentally friendly materials in the construction industry, and develop an environmentally sustainable tourist industry. But the most concrete aspects related to an 'agricultural renaissance', with government intervention to guarantee prices for certain staple crops, scaled-up production of farm inputs, and subsidies for organic fertilisers. Similar benefits were promised to the fishing industry alongside efforts to curb destructive fishing methods.

Along with commitments to new coal-fired power stations and oil and gas infrastructure (globally common at the time), noteworthy environmentally sustainable aspects include specifically articulating the need to protect biodiversity and soil integrity, support for increased use of public transport – including procurement of 5,000 new buses and funding for new train lines, tackling solid waste and eliminating single-use plastics.

The period was marked by high levels of economic migration, with 2 million Sri Lankans living abroad by the early 2010s, and their remittances contributing more to the Sri Lankan economy than exported goods. Unemployment continued to fall, with new jobs increasingly in the services sector, but large gender imbalances continued with double the number of men employed than women, while most work remained in the informal sector. Jobs, economic growth, remittances and increases in welfare payments contributed to further reductions in measured poverty headcounts, but – aside from temporary effects of the global finance crisis – the 2000s saw almost no progress on improving inequality.

The decade also saw environmental regulations and protected areas beginning to appear and themes such as sustainable development,

climate change and biodiversity discussed more widely across government. A Strategy for Sustainable Development was released by the environmental ministry in 2007, reflected institutionally by the formation of the presidency-led National Council on Sustainable Development (NCSD). In policy terms, the NCSD's aim to integrate environmental protection into development planning was articulated in the National Action Plan for Haritha (Green) Lanka Programme in 2009.

2.1.3 2010 onwards

The end of the conflict following the military defeat of the Tamil separatists in 2009 enabled a shift in focus to more traditional development objectives. The 2010 Vision of the re-elected government targeted poverty by aiming to increase incomes in three main ways: job creation through new infrastructure projects and a growing public sector; increased reach and benefits of the Samurdhi (Prosperity)² and national pension schemes; and bolstering agricultural livelihoods by further securing price guarantees for agricultural products and subsidising inputs. Support – and much of the infrastructure plan – was provided for economic sectors featured originally in the 2005 Vision and the 10-year plan of the same name, like global connectivity and tourism. The updated vision also set out approaches to tackling non-income aspects of deprivation and exclusion, for example supporting universal home ownership and access to electricity, and calls to elevate women's standing in society.

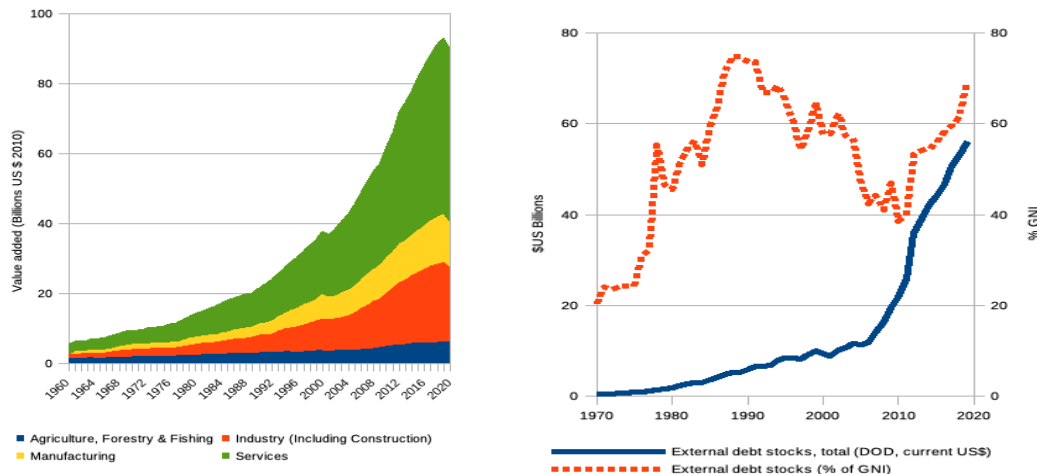
As well as reaffirming many of the 2005 environmental goals, the manifesto explicitly recognised that further environmental pollution would be a drag on economic development, continuing to draw environmental issues closer to the centre of policymaking. Energy policy continued to be mixed with targets set for renewable and coal power generation and for the drilling of oil while ecological protection continued to gain importance. Several environmental policies that crossed nexus boundaries were also published during this period, such as a national climate change policy in 2012. A green accounting framework was released in 2014, building on seven years of collaboration between the Ministry of Environment, local think tanks, international support from UNSD, and a dedicated National Steering Committee. In the policy brief that followed in 2015, the environment ministry cited the Sustainable Development Goals' (SDGs) commitment to a greener world as its motivation for questioning the rationale for using GDP as the key economic indicator.

At the same time, financing the infrastructure plan contributed to a rapid increase in external debt, creating a short-term boost for GDP that exceeded the government's 8% target. The export diversification index increased from its historically stable levels after 2009 but then began falling sharply from 2014 onwards, spurred by a relative

² This was a programme started in 1994.

growth of less complex exports such as tourism and transport services, and a decline in the export of more complex manufactured goods such as chemicals. Around the same time, GDP growth tailed off as infrastructure investments slowed, resettling into its historical average range up until the COVID-19 pandemic.

Figure 1 Gross value added by sector (1980-2020) (left) and national debt (1970-2020) (right) in Sri Lanka

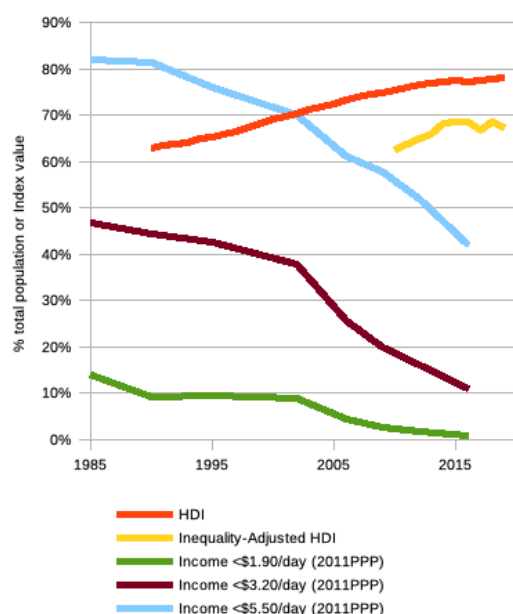


Source: WDI

The 2015 elections saw the opposition party take control in a new government led by President Maithripala Sirisena and Prime Minister Ranil Wickremesinghe that tacked back towards the deregulation and private-sector-led growth approach of the 1990s. In Vision 2025, the government aimed for Sri Lanka to become a 'knowledge based, highly competitive social market economy', dedicating the majority of the presidential manifesto to economic growth and relegating social and environmental considerations to secondary status. Despite the manifesto's change of language and prioritisation, perhaps because of sustainable developments established institutional power within the civil service, the government built on many of the initiatives established previously. As well as promising to bring forward a Sustainable Development Act in its manifesto, the government would also go on to ratify the Paris Agreement on Climate Change, complete the nation's first biodiversity accounts, increase renewable energy targets, update various pollutant restrictions and even begin to phase out of single-use plastics.

In 2016, the first full household survey since the conflict was carried out with headline results showing that almost all Sri Lankans lived above the \$1.90 poverty line and indicating that the proportion of households experiencing multidimensional poverty had fallen to 3%. In contrast, the survey also highlighted Sri Lanka's ongoing struggles with inequality and social precarity: 40% of households lived below the \$5.50 line, highlighting a large development challenge the country would have to confront as it moved towards graduating to upper-middle-income country status.

Figure 2 Poverty headcounts and Human Development Indices in Sri Lanka (1985–2015)



Source: WDI, HDR & OPHI

The government also passed the 2017 Sustainable Development Act, expressly bringing together nexus realms. The act also established the Sustainable Development Council, a cross-ministerial group led by secretaries to the president, the environment ministry and the finance ministry. The act aimed ‘to promote the integration and maintain the equipoise of environmental, economic and social factors in the making of all decisions by government’. Although it is unclear how much it differs from the NCSD established in the late 2000s, the Sustainable Development Council is now a key focal point for nexus issues, and in 2019 was mandated to oversee the country’s pathway under the National Policy on Sustainable Consumption and Production in 2019.

International transport, economic emigration (and associated remittances) and tourism continued to gain policy support and the latter boomed throughout both the 2010 and 2015 administrations, with the number of international tourists increasing five-fold between 2009 and 2018.

Another change in government occurred in 2019 when the presidential election was won by Mahinda Rajapaksa’s brother Gotabaya Rajapaksa, followed in 2020 by parliamentary elections won by their party. This once again signalled a turn away from the liberalising agenda of the previous few years, with a national security-focused manifesto also drawing on the language and framing of sustainable development and the SDGs. However, combined with effects of the pandemic that emerged in 2020 it is too soon to consider the effects of this political change in the analysis here.

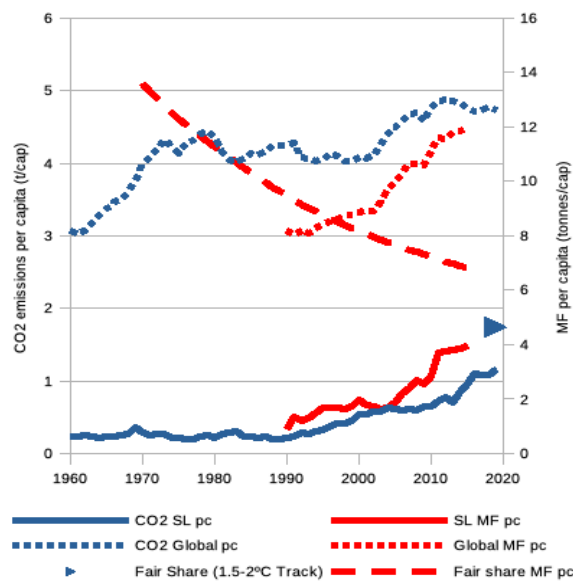
Before the pandemic, services remained the largest source of economic output, followed by industry, manufacturing and agriculture. Service-based exports, led by travel and transport, had grown to the equivalent of three-quarters of goods exports, and the service sector had become the main source of employment, even though 2 million Sri Lankans continued to work in agriculture. Two-thirds of the labour force was male and two-thirds of employment was in the informal sector, putting many workers outside the reach of welfare schemes and pushing one in four Sri Lankans to work beyond the official retirement age.

Many social inclusion indicators have also shown limited progress in recent years. For example, at the national level income inequality has barely changed, some aspects of discrimination against women have worsened, and an emerging body of evidence has highlighted persistent deprivations suffered by those of certain castes or ethnicities, making visible the divisions associated with the civil war.

Despite recent growth, Sri Lanka's per capita CO₂ and material footprints remain well below the global average and below its 'fair share' of global consumption. It is also ahead of many countries in other areas: for example, it convened the 2019 'Colombo Declaration' in which countries agreed to halve nitrogen pollution by 2030. Nonetheless, Sri Lanka has not yet managed to decouple negative ecological impacts from economic growth. If the trajectory prior to the global pandemic is resumed, fair share limits will very soon be exceeded for CO₂ emissions, shortly followed by material consumption, which is especially driven by non-metallic minerals for construction.

The increase in CO₂ emissions aligns with the growth in increasingly carbon-intensive energy, though as part of its recently updated NDC, Sri Lanka targets generating 70% of its electricity from renewables by 2030. To achieve the NDC's target of a fully carbon neutral country by 2060, Sri Lanka will have to tackle the other main source of emissions growth: the use of fossil fuelled private transportation, which has steadily increased despite decades of policies aimed at incentivising public transport options.

Figure 3 Environmental footprints (1960–2020)



Source: Global Carbon Atlas and MaterialFootprint.net

Other issues that have seemed impervious to measures to counter them include corruption and the low value generated by the agricultural sector. Habitat and food security are areas vulnerable to climate change risks and are key to Sri Lanka remaining highly vulnerable overall, as recently recognised in government policy. Although the civil war's impact on the perception of governance issues has declined, the re-elected government's disengagement with truth and reconciliation efforts have drawn concern that tensions are again building.

2.2 Lessons from Sri Lanka

Despite two pushes to liberalise and industrialise the economy in the late 1990s, Sri Lanka's economic growth has been slower than its peers in South and Southeast Asia, yet the country has remained more egalitarian and environmentally balanced than countries that subscribed more fully to the Washington Consensus, perhaps because of the periodic electoral success of economically left-of-centre nationalist parties. The three-decade conflict which ended in 2009 obviously impacted the development of nexus realms. Development remains directly and indirectly scarred by the fallout, particularly in terms of inclusion of those from different ethnic groups and those areas that were most affected. As a tropical island nation, the country is also highly vulnerable to the impacts of climate change as well as non-climate environmental risks, as illustrated by the 2004 Boxing Day Tsunami and the sinking of the XPress Pearl container ship in 2021 that spilled toxic chemicals into the sea near Colombo.

From the final years of the conflict onwards, social inclusion and environmental awareness have featured alongside economic development in the presidential manifestos that set the goals for each

government term, but legislation that integrated the various nexus realms into longer-term plans has only begun to emerge in the last five years or so.

Prior to the global pandemic, the average Sri Lankan's environmental footprint was both much lower than the global average and still below their global fair-share. These averages mask considerable inequality within Sri Lankan society and show little signs of decoupling social and economic transformation from negative environmental impacts. Fair-share thresholds will quickly be surpassed if the pre-pandemic development pathway prevails.

Sri Lanka's declaration on building no more coal-fired power stations in the run-up to United Nations Climate Change Conference in 2021, its creation of a politically high-level Sustainable Development Council, and its stated commitments to renewable energy, sustainable agricultural development and ecologically positive tourism offer hope that the country will soon be able to inclusively develop different economic sectors without creating unsustainable ecological impacts. However, it remains to be seen whether the country can overcome the implementation barriers that have held back these and similar long-standing ambitions. Perhaps more than other nations, achieving these goals could represent a 'quadruple win', not only generating environmentally balanced, social inclusive economic transformation, but also helping to mitigate some of the social and environmental risks the country faces.

3 Dominican Republic

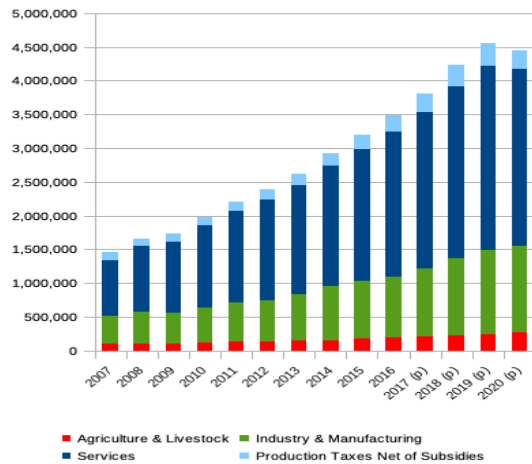
Key sources: Betances (2016); Burguard and Farole (2011); Comisión ODS (2021); Comparative Constitutions Project (2010; 2015); ILO (2013); Marques-Garcia Ozemela (2019); MEPyD (2012; 2020); MEPyD & CNRE (n.d.); Rufin et al. (2014); World Bank (2018)

3.1 Nexus themes in the Dominican Republic's development pathway

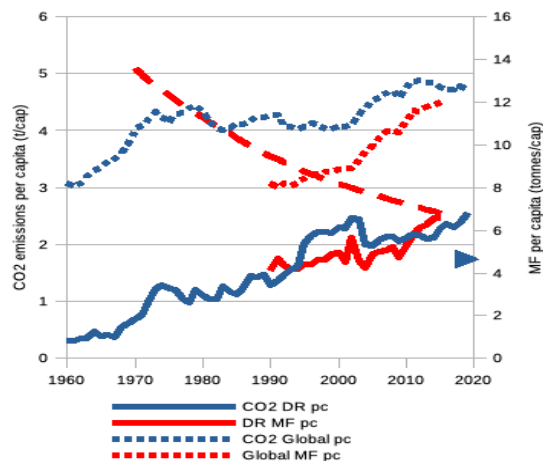
3.1.1 20th century

Through the 1980s and particularly 1990s, the Dominican Republic's (DR) high and volatile rates of economic growth were propelled by trade liberalisation, tax incentives and neoliberal structural adjustment programmes. Together, these attracted FDI to SEZs, shifting exports away from agricultural products and concentrating on manufacturing garments for markets in the United States. Later in this period, the tourist industry also benefited from tax incentives and, like SEZs, grew rapidly, providing jobs and wealth that lifted some out of poverty. Economic growth and increases in labour productivity were mainly driven by increased output from the service sector which would grow to dominate the DR economy, yet these changes accompanied equally rapid increases in the consumption of raw materials, particularly fossil fuels. However, the 1980s also saw DR begin to reverse the decades-long trend of deforestation caused by agricultural expansion. This yielded environmental and biodiversity benefits but, initially at least, was not always socially inclusive, with some early forest protection strategies forcibly resettling forest-dwelling peasants. Over time, with vocal support from key politicians, the government shifted from prohibiting tree cutting and fire setting to providing economic incentives and stakeholder and community outreach to promote conservation, accelerating progress that has been maintained ever since.

Figure 4 GDP by sector (2007–2020) (left) and environmental footprint (1960–2020) (right)



Source: BCRD



Source: Global Carbon Atlas & MaterialFootprint.net

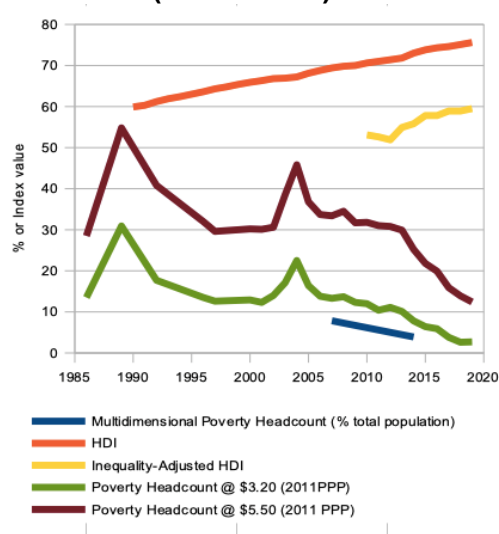
3.1.2 2000–2010

DR's strong economic growth reduced income poverty among the fast-growing population but the benefits were spread inequitably. Minimum wages that varied significantly between sectors, remittances from emigrants that mainly benefited the better off, and considerable levels of economy-wide informality fed into an already consistently high degree of income inequality. The impact of this on multidimensional poverty (~8% of the population in 2007) was exacerbated by some of the region's lowest levels of government investment in health and education and poor-quality public goods which drove the middle classes to opt out of many public services. Dominated by a single commodity for a single market (garments for the United States), DR's SEZ model was sensitive to global dynamics and created few benefits outside the zones. When international markets and trading terms changed, making DR apparel manufacture less competitive globally, new subsidies were introduced to attract manufacturers to diversify into more complex and capital-intensive

products, further limiting the national budget's ability to redistribute wealth via social spending in areas like education and healthcare.

DR's sizeable economically vulnerable population meant the fallout from a domestic banking crisis in 2003 plunged 1.5 million people (one-sixth of the population) back into income poverty. Negative environmental impacts also fell, but then – like GDP – rebounded quickly to former growth rates while poverty levels took close to a decade to fall back to their pre-crisis levels. Material consumption continued to grow in line with population growth and greenhouse gas (GHG) emissions grew faster still, despite both remaining well below global averages.

Figure 5 Poverty headcounts and Human Development Indices (1985–2020)



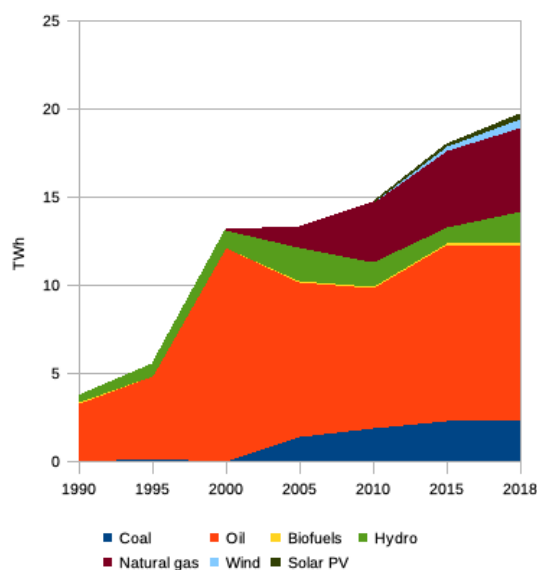
Source: WDI, HDR & OPHI

National policies increasingly recognised the need to combat a range of injustices, particularly focusing on improving gender equality. Although many women entered the labour force in the years that followed the banking crisis, most new jobs were in low-productivity roles. Minimum wages were set at levels insufficient to satisfy basic consumption levels and years of delay in providing adequate social pensions forced somewhere between a quarter and a third of older adults to continue working long beyond the nominal retirement age. Many people experienced a fall in wages in real terms and the country saw little change in the persistent gender income gap despite sustained efforts by national policy-makers to create programmes to counter this and other injustices.

Alongside these macro-level outcomes, changes were also occurring within sectors of the economy and society. Aided by conducive government FDI policy and driven by demand for all-inclusive package holidaymakers from North America and Europe, the ministry of tourism oversaw a boom in the industry, which increased in value to become comparable to the total goods exported. But along with

growth came opportunities for corruption, while several developments in ecologically sensitive areas exposed the government's willingness to trade off environmental protection in favour of economic growth. Persistently poor-quality public services had already pushed many middle-income households into private education and healthcare services, as has since been repeated in the transport sector. The most maligned public good was electricity, where technical, governance and social factors combined to create frequent blackouts, forcing businesses and households to purchase backup generators, and severely delaying the investment needed to shift the grid away from its chronic dependence on expensive and carbon-intensive imported fuel oil.

Figure 6 Electricity generation by source (1990–2018)



Source: IEA

3.1.3 2010 onwards

By the early 2010s it was widely acknowledged that the social contract was severely strained in Central America and the Caribbean's largest economy. An International Labour Organization study (ILO, 2013) spoke of the 'Dominican paradox – high growth, declining wages, stubborn poverty and informality'.

This was not news to the government, which in 2012 released a new 20-year national development strategy (END, 2030) as required by the 2010 constitutional reform. Much of the analysis that underpinned the strategy was supported by international funders. The frank assessment seems to have set the country on a new path, explicitly recognising 'important deficiencies' in the country's prior economic development strategy and governance. The strategy and its 2030 vision remain the anchor for all development planning and is the basis for most of the work on nexus themes.

Closing the gulf between the status quo and the 2030 vision in 18 years seems ambitious given the high degree of informality throughout DR's economy and society and how long it has taken to effect change historically. There have been some important gains since the strategy was launched, not least more stable economic growth, marked decreases in monetary poverty, increased public spending on education and nascent progress towards greater income equality. Nonetheless, progress to date is off-track in a majority of the 58 objectives. Some of the country's problems have proved more deep-rooted than anticipated, including: the treatment of Haitian migrants and their descendants; powerful vested interests opposed to reforming and decarbonising the electricity sector as part of the multi-stakeholder *pacto eléctrico*; continued growth in GHG emissions, leading the government in 2020 to submit a revised emissions target for 2030 that was 20% higher than that projected in 2015; and the continued development of tourist resorts in ecologically sensitive areas by well-connected businessmen.

Although off-track, annual reports on progress towards achieving the national development strategy and the SDGs present detailed accounts of how DR is seeking to overcome the complex problems mentioned above, most of which have been further complicated by the Covid-19 pandemic. The last few years have seen the launch of dozens of nexus-related programmes and initiatives across different levels of government and society, initially focused on the capital and subsequently expanding nationwide, but the causes of this expansion remain unclear.

These initiatives are too numerous to cover in this report and many are too new to have had any observable impact, but nexus-related opportunities include:

- empowering decentralised and participatory decision-making to rebuild the social contract and ensure that development opportunities are broadly shared, locally relevant and risk-informed
- basing the developing 'new urban agenda' around urban environmental justice
- ensuring that the promotion of sustainable development on the border with Haiti and the 'Special Plan for the Frontier Zone' incorporate the wide-ranging recommendations from the DR–Haiti Inter-ministerial collaboration on the Green Border programme
- interrogating whether the 16 lines of action related to 'supporting the competitiveness, diversification and sustainability of the tourist sector' probe whether the projected near doubling in size of the tourist industry between 2015 and 2023 is socially inclusive, domestically ecologically sustainable and climate-compatible
- using the ongoing work of the high-level inter-institutional commission on sustainable development and successful cross-

ministerial projects as exemplars for overcoming siloed policy-making and rebalancing political power between ministries.

In addition, there are other important issues spanning different realms that could benefit from more consideration and an explicit nexus framing. For example, linking demographics, macroeconomics and social inclusion policymakers could investigate how the ongoing demographic shift towards slower population growth and a growing proportion of working-age people can support the fiscal reform process to provide a foundation for a prosperous future for all. Linking social inclusion, environmental and economic aspects, planners could seek to embed the 'four Ds' of a just energy transition (decarbonisation, decentralisation, digitisation and democratisation) (Soutar, 2021) in the ongoing reform of the energy sector. Other sector-specific actions could link climate- and nature-positive technologies and practices. For example, by exploring overlaps between increased smallholder agricultural production for local and export markets, good jobs for rural communities, and the Law on Sovereignty, Food Security and Nutrition.

3.1.4 Summary of lessons from the Dominican Republic

Throughout the second half of the 20th century, as its population grew rapidly, DR's development aims and achievements followed a pathway familiar to many middle-income countries. The young democracy's singular focus on economic growth policies through the 1970s and 1980s took a 'social turn' in the 1990s and 2000s, with environmental concerns increasingly playing a role in the past decade or so. The country's approach to risk has tended to focus on addressing the frequent environmental crises DR faces owing to its vulnerability to extreme weather and seismic events. In general, these realms were considered in isolation.

Wide-ranging nexus thinking only really begun to emerge at the top levels of government in 2012 following the publication of the 2010–2030 national development strategy. This placed at its centre an overhaul of the country's weak governance practices as well as articulating a positive vision for the country's future. Closely aligned to the SDG agenda, which has supported and further formalised its efforts, much of this strategy appears to be moving DR in a progressive direction. However, our exploratory analysis of economic, social and environmental realms suggests it has usually taken at least a decade for issues to move from the siloed fringes of government to the administrative centre where they can begin to shape policy, and at least a decade more until policies have an observable effect on outcomes. This in turn suggests significant political economy challenges in overcoming status quo inertia (e.g., vested interests in the electricity and tax-free export sectors) and entrenched public opinion (e.g., on public service quality). And so, even though much national policy has recently been oriented towards nexus themes, and although there are scattered crossovers between the realms, it remains too soon to observe the degree to which DR

has managed to internalise the risk-based, sustainable, inclusive economic transformation that is at the heart of the nexus approach.

4 Thailand

Key sources: ADB (2007; 2013); Baker and Phongpaichit (2014); Lorsuwannarat and Buracom (2011); OECD (2018); NESDB (1987; 1992; 1997; 2002; 2007; 2012; 2017); World Bank (2016)

Box 3 Circumventing political turbulence and bias in the Thailand study

Thailand has endured a turbulent political climate since the end of the Second World War that has been shaped by international and domestic powers. Strong links at different times to Japan, United States, China and neighbouring countries have given rise to repeated tussles between capitalist and communist economic ideologies alongside ‘traditional’ interpretations of how the country’s socioeconomic systems should be organised. At the same time, political struggles within Thailand have given rise to peaceful and violent transitions that have seen power veer between governments controlled by elected politicians, army generals and mixtures of the two. Each government has also cultivated different relationships with the state bureaucracy, the monarchy and the populace. These nebulous, complex and transitory coalitions make synthesising Thailand’s ideation, legislation and implementation of policy challenging. Thailand also has sharp and overlapping divisions that split the country along geographic, cultural, ethnic, income, age and urban/rural lines in more complicated ways than in the other case studies. Together, its turbulent political climate and heterogenous demographics make it especially difficult to understand the implementation and impacts of the type of transformative policy nexus thinking requires. With this in mind, we caution that these variations and their often-profound impact on nexus themes made the Thailand study particularly interesting, but also presented the difficulty of identifying and interpreting so many potential biases in the source material. We therefore focus closely on the evolution of nexus themes in Thailand’s five-year plans, assuming that these planning documents, which translate long-term goals to medium-term strategies and ostensibly set budget priorities, are a good proxy for tangible government intent and action.

4.1 Nexus themes in Thailand's development pathway

4.1.1 20th century

Since 1961, Thailand has adopted five-year plans published by the National Economic and Social Development Board (NESDB), which is located within the Office of the Prime Minister. As the board's title suggests, economic themes have been paramount (an explicit economic growth target was often the first goal), but the plans increasingly included poverty alleviation and social development issues. Ever since the first plan, which was derived from a World Bank report, their focus has generally evolved in concert with the thinking of development finance institutions, but they are notable for how early many nexus themes were included.

Until the 1980s, social policy in Thailand mainly involved providing basic services, but the near doubling of the population between 1960 and the 1980s resulted in plans that focused on demographics, targeting 'an appropriate population size and structure' (NESDB, 1987; 8). The Sixth Plan (1987–1991) also called for gender equality in the labour force, environmental conservation and more attention to socio-economic risks. When first introduced, these other realms tend to be framed in terms of their impacts on the plans' central tenets of economic growth and national security, but there was also an awareness of the interrelations between the realms. For example: 'Natural resources are important in increasing production output and alleviating poverty. At the same time, the rate of use of natural resources increases in response to the pressure of population growth' (ibid: 113).

Perhaps the largest environmental issue was the breakneck rate of deforestation that occurred through the second half of the 20th Century. At the end of the Second World War, two-thirds of Thailand was forested, and the first National Plan stipulated that approximately half of the country should be dedicated to forest. But by 1975, at the end of the Viet Nam war – in which Thailand hosted the main US base and in which US military aid helped maintain a 'militarised state' (Baker and Phongpaichit, 2014) – coverage had dropped to 41%, falling to 30% a decade later. The government mainly blamed unlicensed agricultural expansion driven by population growth and reacted by classifying millions of people as 'squatters' in public forest areas, giving rise to their subsequent forced relocation in the early 1990s (ibid). Agricultural expansion clearly resulted from deforestation, but academics have since suggested that the government tacitly – and the army openly – supported much of the logging activities, believing it would deny cover to forest-dwelling rebel groups. Sources also suggest many public servants personally benefited from the logging activities – part of the corruption that has

plagued Thai politics and helped to fuel the social discontent that has often led to conflict.

Mirroring the growth in agriculture, Thailand's fishing industry also expanded rapidly as the number of trawlers, their size and their use of advanced machinery all grew at pace through the 1970s. As a result, overfishing and destruction of habitat were already recognised as depleting fishing stocks in the 1980s, a trend that accelerated through the 1990s. By the 2000s hourly fishing catches had fallen to less than one tenth of those in the 1960s.

In the late 1970s and early 1980s, building on pressure from reform-minded IFIs, Thailand's economy was on the cusp of transforming away from small-scale agriculture and state-owned industries. In the mid 1980s, a series of domestic and international events and liberalisation reforms triggered a shift towards an export-oriented economy. This attracted huge overseas investment from mainly East Asian countries, creating new manufacturing industries that ranged from labour-intensive garments to capital-intensive automobiles and electronics. The government also supported the development of the tourism industry and arrivals increased from 600,000 in 1970, already spurred by the rest and recuperation tours of American soldiers, to 7 million by the mid 1990s. Although the government sought to increase the reach of the private sector, the foreword to the Sixth Plan also cautioned that 'the pursuit of economic growth should not be at the expense of economic security and stability: the loss of national economic independence would create hardship for the Thai people in the future.'

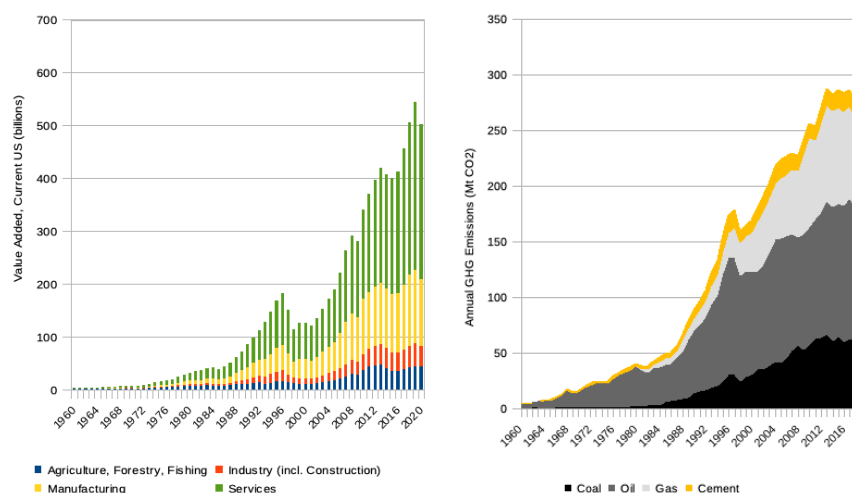
This proved to be remarkably prescient, but went unheeded. Helped by another series of liberalisation reforms in the early 1990s, the economy doubled in size in the decade to 1996. The fastest-growing sector was manufacturing, though services continued to contribute the most to GDP. The combination of economic growth and the creation of millions of jobs sharply reduced extreme income poverty on average, from one in five people in 1980 to less than one in fifty by 1996.

The scale and pace of aggregate growth meant that income equality improved even if the average figures hid large differences between regions, particularly between rural and urban areas, exacerbating the impacts of unequal levels of access to public services. The disparity extended prior urbanisation trends and the urban population tripled between 1960 and 1990. Previous calls for gender equality in the labour market also went largely ignored. Instead, manufacturers employed women, and later migrants, in low-level roles where they could pay them less, while men continued to dominate roles in public administration and at the top of most companies. Nonetheless, the rapid rise in employment of women in factories and in urban service jobs created important social changes as women delayed getting

married and having children, constituting the majority of rural-urban migrants in the mid-1990s (Baker and Phongpaichit, 2014).

The pace of increasingly industrialised economic growth also marked a stark acceleration in environmental impacts. Driven mainly by increased use of products of crude oil, per capita CO₂ emissions tripled in the decade to 1996 while material footprints grew by half in the five years from 1990, surpassing for the first time global fair share levels. Much of this increase was driven by the manufacturing sector's appetite for energy, water and material inputs, but domestic consumption also increased with, for example, annual sales of motorbikes reaching 2 million in the mid 1990s (Baker and Phongpaichit, 2014).

Figure 7 Value added by sector (left); emissions by source (right) (1960–2020)



Source: WDI; Global Carbon Atlas

The pace of economic growth and the government's reluctance to intervene in macroeconomic affairs prompted many commentators to warn of an impending financial crisis. Ironically, the crisis began to appear around the time a new constitution was being drawn up that explicitly recognised the need to protect the country from the excesses of globalisation. In 1997, international speculators betting against the Thai currency forced the central bank to commit enormous reserves to try to save Thailand's financial institutions. The bank's reserves were insufficient, and the country turned to the IMF for a loan, agreeing to a range of reforms including a severe austerity package. The reforms did little to revive the economy, which contracted by 11%, forcing the collapse or sale to foreign investors of large swathes of previously Thai-owned industry and the loss of 2 million jobs (Baker and Phongpaichit, 2014). Some found new roles while those who had the safety net of supportive rural communities to return to did so, but even official unemployment figures rose by 1 million. The austerity package was soon abandoned owing to popular anger at its social impacts: using the national poverty definition,

official figures show that 3 million people fell back into absolute poverty between 1996 and 1999.

4.1.2 Post-crisis evolution of the sufficiency economy

Buoyed by the public debate that had led to the new constitution and the newly elevated moral authority of the King, the crisis came at a watershed moment when policymakers were transforming how they talked about social and economic planning. The Eighth Plan (1996–2000) ‘revised the development concept, shifting from a growth orientation to people-centred development’ (NESDB, 2002), while ‘economics was deployed as a tool to help people achieve greater happiness and a better quality of life’ (NESDB, 2007: 9). Such attempts to transform national planning were initially nullified by the financial crisis as all efforts were instead focused on regaining control of the economy. However, the crisis also prompted the NESDB (2007: 11) to accelerate the transformation:

The economic crisis was a lesson in unbalanced and unsustainable development [which] was caused by strategic planning that adopted economic liberalism or capitalism which focused mainly on wealth and income inflow into the country and used income per capita as a success indicator of development.

As a result, nexus thinking came to dominate economic planning as the Thai King’s Philosophy of the Sufficiency Economy (PSE) was adopted as the guiding framework for national development planning from the Ninth Plan (2002–2006) onwards.

Box 4 The philosophy of the sufficiency economy

Rooted in Buddhist teachings, PSE was officially disseminated to the Thai people in 1999 but had been articulated in different forms for more than a decade. PSE opposes globalisation and free-market agendas, focusing instead on the actions of individuals across all levels of Thai society to increase their resilience. Building on the King’s long history of rural development projects supporting small-scale autarkic agricultural communities, PSE was cited as a way to avoid the free market capitalism/communism dichotomy that had wracked Thai society through the 20th century. Of particular relevance to nexus themes, PSE was formulated specifically in terms of seeking balance between economic, social and environmental realms, emphasising the ‘middle way’ of neither too much nor too little and patient, sequential progress. In a speech soon after the financial crisis, the King explained that: ‘Being sufficient does not restrict people from having a lot or possessing luxurious items, but it implies that one must not take advantage of others. Everything must be within its limits. Saying what is necessary, acting just as needed, and working adequately’ (NESDB, 2007).

PSE has been taken up by thousands of projects across Thailand, extending far beyond its original focus on small rural communities. An official group of academics and policy makers has repeatedly tried to translate PSE's concepts of self-driven development, moderation, reasonableness and resilience for national planning purposes. However, its proliferation has led to continually evolving interpretations and a multitude of analyses of its impacts on factors as wide-ranging as corporate social responsibility to community-based climate adaptation.

4.1.3 Targets of PSE and human-centred development

Although the phrasing and slogans have changed between five-year plans, a number of themes have been woven through them since the PSE was adopted as the guiding principle. Development pathways are typically described as holistic, balanced or integrated and are always accompanied by efforts to improve governance. Through criticising previous development and the status quo, the plans highlight trade-offs between nexus realms, especially linking the liberalisation of the Thai economy and its subsequent rapid economic growth to the erosion of Thai people's morals, environmental destruction and social inequalities. They often seek greater public participation in policymaking, which they aim to decentre away from Bangkok, reflecting a desire to also decrease the gulf between the provision of urban and rural public services, in particular education, and training to foster the transition to a knowledge-based economy. Agriculture, tourism, regional interconnectivity, higher-value manufacturing and 'uniquely Thai' products and services are often targeted as economic drivers, while social aspects tend to focus on promoting equality of income and access to basic services, and gradually extending social safety nets. Environmental aspects focus on protected areas and limiting per capita environmental impacts in line with regional peers. Reflecting its turbulent recent history and its exposure to episodic and annual environmental hazards, the national plans have long considered risk in multi-dimensional analyses that cross the other three nexus realms.

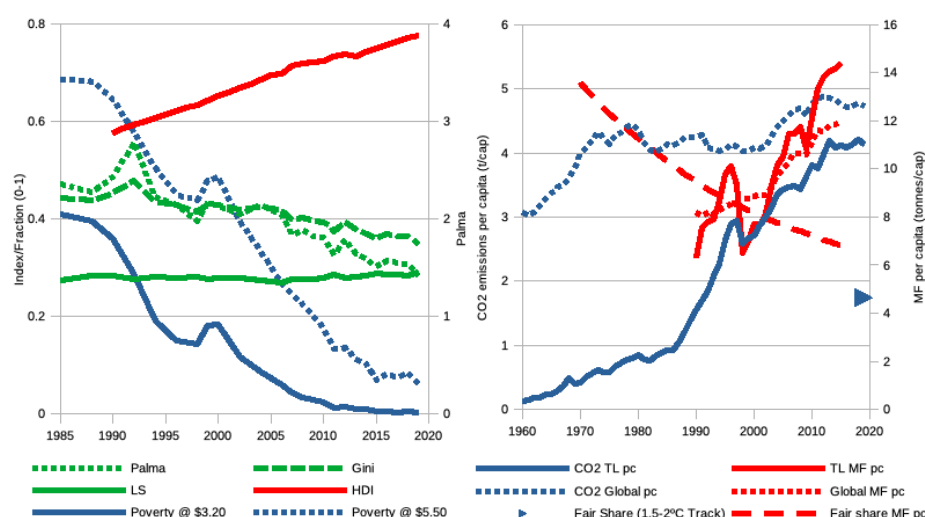
4.1.4 PSE's limited impact on national outcomes

PSE is widely known across Thai society, with countless examples of its application at household, community and business levels. However, despite being central to government planning for more than two decades, its impact on national outcomes remains limited, with most trends seeming to have at least partly regained their pre-crisis trajectories.

Economic growth has continued to be volatile since 1997, albeit at a lower average rate than before the financial crisis, while targets on increasing the domestic market's contribution to the economy and boosting agriculture have had almost no impact. Progress has been made in decreasing poverty levels, which, measured using the

national poverty line, declined until around 2015 but have since plateaued at about 8% – double the 2011 target. Thailand has fared much better in multidimensional poverty assessments, where the poverty headcount has been approximately 1% since the 2010s. Although Thailand is generally viewed as scoring relatively well on gender equality, and a gender equality act was introduced in 2015, inclusion scores worsened between the 2014 and 2019 SIGI assessments. There has similarly been no decoupling of material footprint and only very recent partial decoupling of the CO₂ footprint, which, given the continued population increase, has resulted in total emissions today being nearly twice those at the time of the financial crisis. Looking forward, recent analysis of Thailand's plans for acting on climate change found them to be 'critically insufficient' (CAT, 2021), though the government does seem to have managed to stabilise forest coverage. Social and economic damage from environmental hazards like annual floods and droughts and the 2004 tsunami illustrate persistent vulnerability, while governance issues continue to be problematic. Examples include a coup in 2014, several opposing mass protests, a long-running conflict in the southern border regions that has claimed more than 7,000 lives, one ex-prime minister in exile and another in jail for corruption, de facto and de jure limits to free speech, and widespread allegations of torture by government forces.

Figure 8 Poverty and inequality indicators, (1985–2020) (left) and per capita CO₂ emissions and material footprint (1960–2019) (right)



Source: WDI, PovcalNet, HDR

Source: Global Carbon Atlas, MaterialFootprint.Net

The stark differences between the articulation of nexus themes and PSE principles in national planning documents and the outcomes can be summarised by the gulf between the government's vision for Thailand and its own assessment of the situation three cycles later:

In the Ninth Plan, major emphasis is placed on balanced development of human, social, economic and environmental resources. A priority goal is pursuance of good governance at all levels of Thai society in order to achieve real sustainable people-centered development.

(NESDB, 2002: ii)

In addition to persistent levels of income inequality, Thai citizens still lack the knowledge, skills, qualities and attitudes needed to realize the country's development potential. [...] Meanwhile, natural resources and the environment have rapidly deteriorated in both quantity and quality, resulting in higher economic costs and devastating negative impacts on people's quality of life. In addition, public administration has been inefficient, lacking in transparency, and highly corrupted. All of these factors will be constraints to national development and will leave some parts of society behind.

(NESDB, 2017: 1)

A fuller analysis of the political economy and political ecology issues present in Thai society and their relationship to internal and exogenous shocks and transitions would be required to better understand what barriers are preventing these laudable aims from being met. However, our research into the policy development process has highlighted several reasons that could begin to explain this in terms of the challenges in translating PSE theory into practice and in implementing the plans' goals within existing governance structures.

4.1.5 Challenges with translating PSE theory into practice

PSE has been revered in Thailand's national development plans since it was adopted as the guiding framework following recovery from the 1997 financial crisis and there are thousands of real-world examples claiming to apply PSE principles. However, it appears that translating PSE principles from their original application of small rural agricultural villages to the broader Thai economy has been challenging for policymakers. These challenges are reflected in subtle changes to the way PSE is introduced in development plans and a more selective interpretation of PSE within the plans.

For example, while PSE aims: 'to create balance in all dimensions of the holistic approach to "people-centered development" [integrating the] economic, social, cultural, environmental, and political dimensions of development' (NESDB, 2007), much of the actual text within the plans takes an instrumental view of social and environmental realms. One illustration of this is how social development and inclusion has increasingly been directly linked to 'human resource development' and making Thai citizens a 'valuable asset for the country' (NESDB, 2017: 19). A concrete example comes from the Eleventh Plan: 'The promotion of social equality will focus on strengthening economic and social security so that everyone in Thai

society has access to quality services, resources, and basic infrastructure *that are essential* for starting a career and maintaining a stable income.’ (NESDB, 2012; ‘g’; emphasis added). Similarly, a key objective in the Twelfth Plan is ‘to preserve and restore natural resources and environmental quality *in order to* support green growth and enhance the quality of life of Thai citizens’ (NESDB, 2017: 77; emphasis added). The point here is not that social equality should not contribute to employability or that ecological sustainability should not contribute to socioeconomic development, but that framing these topics only in these ways may encourage policymakers in social and environmental ministries to prioritise projects that create economic co-benefits over those that would most benefit their own realm (something that does not appear to be reciprocated by economic policy-makers) while also precluding important discussions about the inevitable trade-offs between realms.³

Although less explicit in government documents, it is also clear that many of the PSE themes run counter to the motivations of other actors that are competing to make and implement policy. Perhaps unsurprisingly given the constitutional deference to the monarchy, other actors appear to sidestep the issue rather than publicly contesting the King’s ideas. Given the prevalence of the PSE in national planning documents, it is notable that it is almost completely absent in the diagnostic reports and strategies of the major development finance institutions active in Thailand (e.g., ADB, 2007; 2013; World Bank, 2016).

Despite thousands of projects and entire government departments that support the PSE, it has failed to garner mass appeal (Baker and Phongpaichit, 2014). This inability to connect with Thai citizens is often reflected as corruptions of ‘authentic Thai culture’ by Western capitalist consumerism that must be corrected. Attempts to change mindsets and behaviour have become increasingly paternalistic. The Ninth Plan notes that a: “‘Quality Society’ connotes adhering to balanced development principles that will *encourage and empower* all people to be capable, ethical, responsible, public minded, and self-reliant’ (NESDB, 2002; emphasis added); the Tenth Plan explains that “‘sustainable production and consumption’ *must be promoted by... adjusting consumer behavior*, in particular the urban society’s attitude towards “sufficiency” (ONSDB, 2007; emphasis added). The Twelfth Plan requires that ‘Thai people’s *attitudes must be changed* to be virtuous, disciplined, accountable, and ready to adapt to changes in accordance with the principle of protecting the common interest’ (NESDB, 2017; 3; emphasis added).

4.1.6 Challenges of implementing the five-year plans

Since at least the Eleventh Plan (2012–2016), the NESDB has detailed challenges in implementing its five-year plans and others

³ This is not universal: Some parts of the plans explicitly recognise that economic growth opportunities may have to be curtailed to avoid negative social or environmental impacts, but these instances are much rarer than those where social or environmental development are justified in order to support economic development.

can be inferred by reading the sequential plans together. Many of these challenges relate to Thailand's splintered and overlapping political infrastructure. For example, the national five-year plans have typically been released too late to be factored into budget requests for the initial years of the plan by individual ministries or subnational authorities, each of which are driven by separate sectoral or subnational multi-year plans that may not align with the national plans. Added to this, the five-year plans are often framed as staging points within longer-term national reforms and strategies, yet these too have continued to evolve: there have been several different 20-year strategies since 2000 while the Twelfth Plan alone has had to accommodate three separate, wide-ranging and current longer-term strategies which adopt subtly different interpretations of PSE principles depending on their own framings.⁴

Downscaling the ambitions of the NESDB plans into everyday policymaking also appears to have been problematic. This seems true whether pursued via the Area-Function-Participation approach (which was introduced in the Eighth Plan to decentralise decision making to the most appropriate level of the civil service and encourage citizen participation) or the Strategic Performance-Based Budgeting (which was introduced in 2003 and forces civil servants to create budgets with output-based performance metrics). In 2005 this budgeting process was coupled to a four-year Government Administrative Plan, which is tied to election cycles. In practice, and despite being signed off by the Prime Minister, this 'means that instead of government responding to a 5-year plan drawn by technocrats, the government agencies now have to respond to the will of the elected government' (Lorsuwannarat and Buracom, 2011: 108).

Alongside changes to the process, the NESDB has blamed under-trained, inefficient and corrupt branches of government while also recognising that civil servants cite a lack of clarity over targets in the five-year plans as a particular challenge. Even the Twelfth Plan, which notes these issues and sets out to provide 'clear economic, social, and environmental targets that have to be achieved within the next 5 years' (NESDB, 2017: 4), speaks to multiple wide-ranging issues in very general terms. For example, one of the 20 'main emphases and development issues' is Natural Resource Stock Security and Environmental Quality Enhancement, which is summarised as follows:

This aims to preserve and restore the natural resource base. Therefore, it is important to increase efficiency in water resource management, foster green growth, and clean up pollution. Simultaneously, it is critical to build a transparent and fair management system as well as promote sustainable consumption and production. In terms of climate change, it is necessary to be

⁴ The 20-year (2017-2036) National Strategy framework; The (2030) Sustainable Development Goals, and the Thailand 4.0 Policy.

prepared for greenhouse gas mitigation, raise adaptive capacity, whilst reducing natural disaster risks.

(NESDB, 2017: 23)

4.1.7 Lessons from Thailand

National development in Thailand since the mid 20th century has been strongly shaped by international forces and the country's tumultuous politics that have seen the country lurch, often violently, between democratic and authoritarian values. Rapid economic expansion, led by export-focused manufacturing sectors, brought the country considerable wealth through the 1980s and 1990s lifting many out of poverty as the growing economy exploited low-waged employees and the country's bountiful natural resources. Thailand's 'social turn' towards 'people-centred development' in the 1990s accelerated following a severe financial crisis, which was brought on by weak macroeconomic stewardship and what the government would later term unsustainable and unbalanced development.

Thailand's pivot to a more holistic, nexus-related development pathway has been intrinsically linked to the Thai King's PSE, which has been the guiding framework for development planning through the 21st century. PSE directly challenged contemporary mainstream development thinking, advancing many of the themes that would later come to define the Sustainable Development Goals. PSE's links to nexus thinking lie in its focus on individual actions to promote balanced development that enable human development, environmental protection and community resilience.

Despite having been in place for nearly two decades, national outcomes suggest the PSE framework appears to have had little impact on Thailand's development pathway, as many macro indicators have largely resumed their pre-crisis trajectories. A failure to achieve many of the five-year plans' targets may be attributed to a collection of factors including challenges in making PSE ideals nationally relevant, overcoming structural challenges associated with the public administration, and the political-economic struggles required to overcome corruption and the power of vested interests.

5 Observations and implications

5.1 Strong examples of triple-win policies, but no evidence (yet) of triple-win outcomes

In each of the case studies, inclusion and ecological sustainability have joined economic growth as central pillars of national planning. This type of integrated policy arrived first in Thailand with the adoption of the Thai King's PSE as a central tenet of post-1997 five-year plans. Similar themes emerged in Sri Lanka as part of President's post-conflict vision for the country in the 2000s and in the Dominican Republic in the early 2010s following the launch of the first long-term strategy. These domestic agendas have been fortified by the evolution of international discourse and policy towards the UN's Agenda for Sustainable Development.

Perhaps the starkest finding from the case studies was the lack of evidence for integrated policies having achieved transformational outcomes across all nexus realms. Confirming the findings of the cross-country indicators analysis, each of the three case studies demonstrated impressive progress in different realms and at different times, but positive national-scale outcomes in one realm tended to ignore or be traded-off against outcomes in another. Many of these trade-offs were transformational if not necessarily positive. For example, more highly industrialised countries tend to be more dependent on fossil fuels to maintain the socioeconomic status quo, let alone build on it. Historical examples, prior to the adoption of nexus-related policies include:

- Thailand's rapid economic growth provided jobs that elevated the income of many millions of people, allowing them to lift themselves out of extreme poverty. However, much of this economic growth has been driven by unsustainable environmental exploitation and has created wide social inequalities that contributed to social and political unrest.
- The three-decade conflict in Sri Lanka has negatively impacted many aspects of inclusion and suppressed economic development. Yet, this also is likely to have limited the development of highly polluting industries, resulting in an environmental footprint that is far below those of the country's peers, while the armed forces provided livelihoods for many men from poor households.

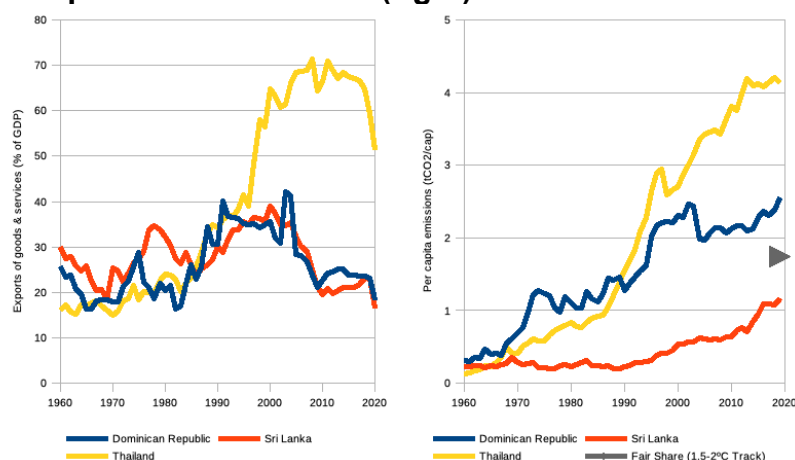
- The marked export-led economic growth in the Dominican Republic elevated the country to middle-income status, but the net impact of the fiscal regime it created decreased social inclusion and eroded faith in public goods and services. A knock-on effect of this was a growth in private transport vehicles which has created an unsustainable ecological footprint.

5.2 Additive development pathways

Each of the countries analysed exhibit typical development pathways for countries that subscribed to the austerity and liberalisation ideologies of the 1980s (see UNRISD, 2016). Further work in countries that took alternative economic development pathways would be needed to understand their relevance for development pathways in general, but the following is broadly accurate for the three countries studied.

From the late 1970s until the 1990s, countries were strongly encouraged to promote exports and attract foreign capital in manufacturing and tourist industries, among others, usually by providing tax incentives, reducing regulation and limiting the power of state-owned industries. In each country this started an economic transformation that created economic growth and jobs, but the degree of socio-economic transformation and the environmental impacts varied. This was in part related to a given economy's dependence on these newly created industries, and in part due to the degree to which economic development was traded off against these other realms. The charts below show that while all countries saw their economies' dependence on exports increase through the 1990s, it was only in Thailand that this became a dominant feature. There is also a correlation between the growth of exports and CO₂ emissions in Thailand, while the Dominican Republic also saw emissions grow as exports became less important to the economy.

Figure 9 Comparison of export dependence (left) and per capita GHG emissions (right)



Source: WDI, Global Carbon Atlas

The evolution of policy in the case studies supports the idea of development thinking being more additive than transformational. This additive approach to policy is particularly clear in Thailand (e.g., NESDB, 2002: 4) but is implicit in the other cases too. For many countries, social inclusion joined economic growth as a central government objective in the 1980s and 1990s. Ecological sustainability was then added as a key driver of national goals around a decade later. These ‘turns’ in development planning to include social and environmental issues in the case studies appear to have occurred slightly before they were observed in most other countries (UNRISD, 2016). However, in the case studies as in the global development narrative, it is unclear if these shifts were transformational or simply reframed prior goals. For example, Figure 11 shows that emergence of a discourse focused on ‘inclusive growth’ coincided with a decrease in published references to ‘poverty alleviation’.

Despite this broader narrative, the original sources of the key nexus policies may be unusual in the way they explicitly recognise the way that previous development pathways have traded off the different nexus realms.

Figure 10 Emergence of nexus realms in mainstream economic narratives

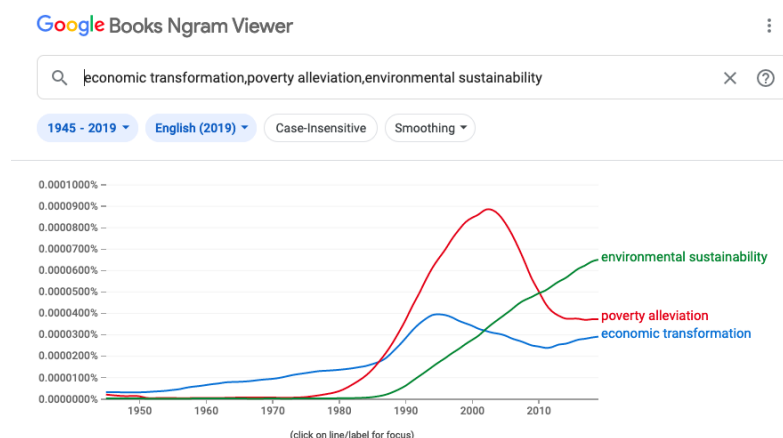
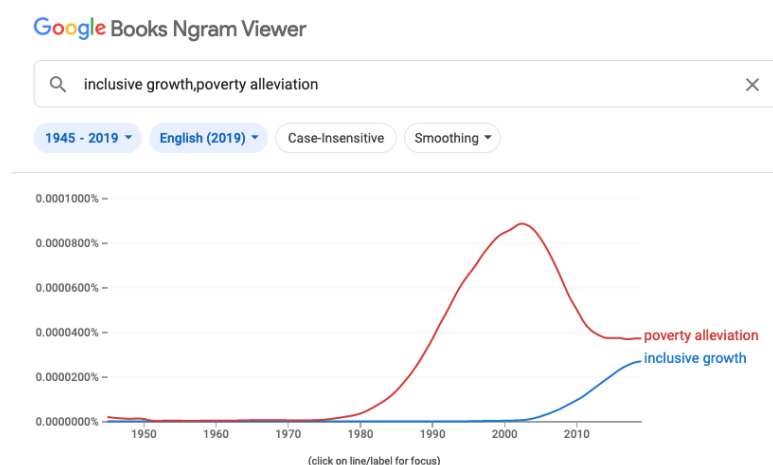


Figure 11 Reframing of poverty alleviation as inclusive growth



Source: Google Books Ngram Viewer

5.3 Sources of change

It is challenging to chart precisely how nexus ideas have moved from the political fringes to creating transformative policy, especially when relying on government-published literature. There is a large literature focused on how policy evolves from the fringes to the mainstream (i.e., into the 'Overton Window'), which could be addressed in further research for this programme. Here we explain three routes identified in the case studies that resulted in nexus ideas becoming national policy. These are not exhaustive and cannot be understood in isolation, but instead are entwined with each other and with other routes that we do not cover here.

5.3.1 Responding to crises

Any event that creates even a partial disruption to the status quo offers an opportunity for change. Greater shocks make it easier to challenge more fundamental ideas, but even relatively small events can create transformational departure points. These events can be internal and range in scale from a peaceful change of government to a local environmental catastrophe. They can also be external, ranging from a change in the rules governing an international market to a global pandemic. Examples include the impact of the Asian Financial Crisis on Thailand being a trigger for framing national policymaking in PSE terms, and the end of the conflict in Sri Lanka requiring a more inclusive narrative to unite the country. In the Dominican Republic, rather than a sudden event, the turning point for implementing nexus policies was a national listening exercise and constitutional reform. The case studies also demonstrate that a country's response to a shock is unique. For example, Thailand, Sri

Lanka and the Dominican Republic were affected differently by the ending of the quotas that formed the Multi Fibre Arrangement in 1994, despite each country being a major garment exporter at the time.

5.3.2 Bottom-up or outside-in routes to the seat of power

Radical experiments in policy (which nexus thinking has been for most of history) appear more likely the further removed they are from the centre of power. In this route, the nexus ideas can either form at lower levels of government or begin in one nexus realm and then move to the centre of policy making. In the Dominican Republic, themes previously championed by the politically weak environmental ministry were later taken up by the newly created Ministry of Economic Planning and Development. This illustrates the outside-in route, while the bottom-up approach is reflected in the way that Thailand's PSE was crafted from projects with agricultural communities. In Sri Lanka, nexus ideas arrived with a change of political leadership rather than from the margins.

5.3.3 External or 'apolitical' authorities breaking through status quo bias

Popular opinion and power imbalances within society can prevent the public articulation of nexus thinking by governments, contributing to a status quo bias that delays the implementation of transformational policy. The case studies in Thailand and the Dominican Republic illustrate that external and 'apolitical' agents can provide resources and use their platforms to shift popular opinion or navigate powerful actors to advance nexus thinking. In Thailand, it was the King's moral authority that was invoked to expand PSE while in the Dominican Republic, technical assistance and convening powers by international donors appear to have catalysed the government's clear-eyed analysis of previous development and its articulation of radical change. Sri Lanka and the Dominican Republic also adopted a targeting and measurement framework that aligns with the SDGs, which are also increasingly used to frame Thailand's five-year plans. This suggests that progressive global agreements can also shape domestic policy agendas (though not necessarily ensure they are better implemented).

5.4 Challenges in identifying transformation

5.4.1 Demographics

Most data used by policymakers and analysts focuses on relative measurements. These are helpful when comparing different contexts and over time because they allow a degree of normalisation (for example, comparing economic growth or the proportion of a population living in poverty for two countries of very different sizes). They are also useful for aspects that are best measured in terms of rates of change rather than absolute values. For example, economic

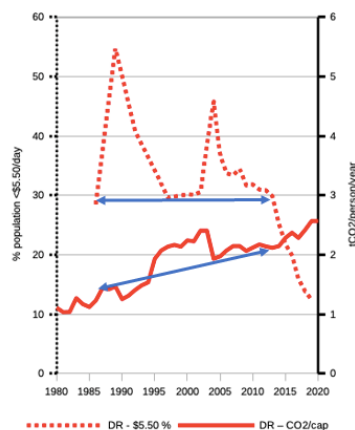
development is usually targeted according to a rate of growth rather than the size of the economy.

Relative measures are also commonly employed in social and environmental data collection and analysis, but here the absolute numbers are at least equally important because of planetary constraints. For example, every 1% of the global population living in poverty today means approximately 80 million people, while stabilising global temperatures in line with the Paris agreement on climate change requires that we limit the total tonnes of GHGs that are released to the atmosphere within a finite carbon budget.

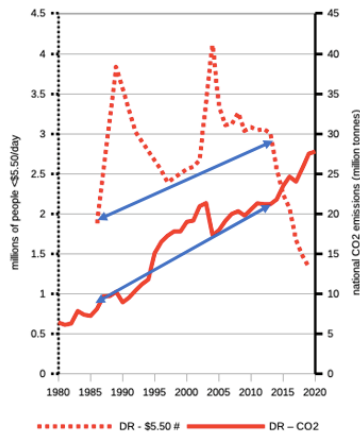
Using relative data for time-series analysis can also be problematic within individual countries undergoing rapid demographic shifts. For example, the number of people in the Dominican Republic living on less than the US₂₀₁₀\$5.5 poverty line was 28% of the population in both 1986 and 2013, but in the latter year this represented an extra 1.1 million people living in poverty. Similarly, CO₂ emissions per capita increased by 70% between these dates, but population growth meant that total emissions increased by 160%. Such analyses are further complicated given that we also know that CO₂ emissions within populations are strongly skewed as higher income groups create a disproportionate amount of national emissions.

Figure 12 Income poverty (\$5.50) and CO₂ emissions in Dominican Republic, 1980-2019

Relative measures



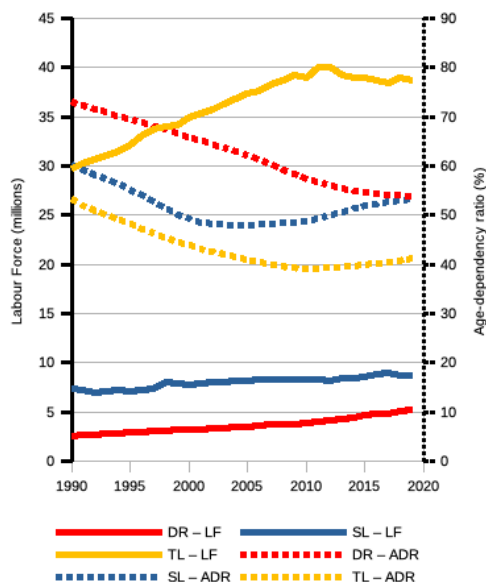
Absolute measures



Source: WDI and Global Carbon Atlas

A country's age profile can also influence how we should interpret different types of data. For example, working-age adults are likely to produce more GHGs and have a greater impact on poverty alleviation than children or older adults. Therefore, marked changes in a country's age-dependency ratio could make invisible changes in per capita measurements. For example, while the Thai government mainly blames population increase and unsustainable consumption for the increase in CO₂ emissions, some of this change may also be attributed to the marked fall in the age-dependency ratio as the labour force grew faster than the total population between 1990 and 2010.

Figure 13 Labour force and age-dependency ratio in the three countries (1990–2019)



Source: WDI

5.4.2 Data fidelity varies between nexus realms

Data availability for separate realms has also evolved stepwise rather than holistically, mirroring each realm's growing importance in policymaking. The Appendix illustrates this using screenshots from the World Development Indicators webpages that show the time and geographical coverage of a selection of economic, social inclusion, and environmental indicators.

Longer time series that provide baseline data and allow the filtering out of exogenous shocks are needed to identify transformational changes. Headline figures for macroeconomic data are widely available from the 1960s onwards. Some income and inequality data was available from the 1970s, but it was only from the 1990s and 2000s that coverage for social inclusion data began to reach the levels we have today. Some environmental data can be calculated retrospectively using economic data (e.g., using fuel sales to calculate CO₂ emissions), but other data only became widely available from the 2000s and 2010s onwards. The example in the Sri Lanka study of the absence of income and poverty data for conflict-affected zones also illustrates how data availability can vary within countries across the realms.

The screenshots in the Appendix also illustrate that different realms' datasets can be disaggregated to different degrees. The more disaggregated data is, the easier it is to spot transformational trends. Figure 14 shows a stylised version of how easily different types of disaggregated data can be found today.

Figure 14 Ease of finding disaggregated data



Taking these aspects together, the easily disaggregated, long time series for economic data make it easier to observe national impacts of economic policy compared to other realms. In addition to systemic inertia (discussed below), this can bias how easily we can observe transformational change in each of the realms.

5.4.3 Systemic inertia

Countries have witnessed economic output, household incomes and environmental impacts increase exponentially over recent decades with each indicator typically measured in terms of annual compound growth. These forms of growth present different challenges to achieving transformative 'triple-win' outcomes because of contrasting perspectives on how growth translates to progress (or a lack of it) across the realms and how these different trajectories interact to reinforce or weaken those of others. Achieving progress relies not only on the direction taken by these trajectories, but also where they

are starting from and the inertia of a country's socio-economic system up to that point. In turn, these relationships impact how easily transformational changes can be observed from national data and the narratives used to communicate them. There are clearly exceptions to such generalisations, but adding electricity capacity provides a stylised example of how these factors interrelate.

The starting point is that to support economic development most low- and middle-income countries seek to increase the amount of generating capacity installed on their electricity grids while also ensuring that all households have affordable access. Most countries' existing electricity generation systems depend heavily on burning fossil fuels in plant that are designed to operate for several decades. Table 2 illustrates how the addition of generating capacity affects a country's progress towards goals in different realms.

Table 2 Different realms' goals, impacts, measurement and outcomes of adding electricity capacity

Perspective/ realm	Goal	Impact of adding new generating capacity	Ease of measurement/ assessment of progress	Trajectory to goal's relationship to historic trend	Outcome / narrative
Economic	Increase value created by sector	Value created by selling electricity and when it is used for productive purposes. Additional pollution costs not valued.	Straightforward and instant (revenue from electricity sales + Δ commercial consumption)	Reinforcing (systemic inertia tends to increase the amount of electricity supplied)	Positive: more electricity supply analogous to progress.
Social Inclusion	Ensure affordable electricity access for all (SDG7) (i.e., reduce number of households without access to 0).	No direct impact but indirect potential (e.g., using extra revenue to subsidise consumption by poor households or accompanying new generation with household or MSME electrification programme)	Separate and periodic (e.g., household surveys)	Largely indifferent (weak correlation between poor households' energy consumption and electricity generation)	Neutral/Indirect (progress dependent on complementary initiatives)
Environmental	Reduce GHG emissions from power sector to zero	Adding new fossil fuel capacity would increase power sector emissions. Adding renewable capacity would maintain emissions at their prior level.	Straightforward but interpretation often obfuscated by relative metrics (e.g., renewables % of total generation or energy intensity of economy)	Opposite (until now power sector emissions have grown, in the future they must plateau and then fall in absolute terms)	Neutral/negative (unlikely that new capacity accompanies retirement of existing capacity)

The table shows that owing to the way we analyse and communicate data, progress 'looks' different in different realms. In the example above, the economic gains represent a continuation or acceleration of prior trends; for social inclusion, they are largely unaffected unless

accompanied by complementary electricity access initiatives; and for environmental aspects, prevailing trends in indicators connected to the physical limits the environmental goals are bound by must not only be stalled but reversed.

5.5 Overcoming the time-lag between policy and outcomes

The case studies highlighted a significant time-lag between the articulations of transformational policy and the realisation of transformational outcomes. This section suggests two areas where further research could illuminate how to close these gaps.

5.5.1 Checkpoints and intermediate indicators

One way to interrogate where the implementation of policy is faltering would be to identify the stages lie between policy articulation and transformational outcome for nexus themes. This could support traditional political economy analyses that look at societal power dynamics across the different realms with a mixture of checkpoints and indicators that represent defined steps along the path to implementation.

We did not seek to define such indicators in this piece, but the table below provides some examples that might be of use in understanding how the nexus policymaking process is evolving within a country. In future work on this theme, it will be valuable to explore these indicators of change alongside input and outcome indicators.

Table 3 Example intermediate indicators for nexus policies

5.5.2 Learning from other transformations

Another opportunity to better understand how the nexus policymaking process can result in transformational outcomes is to investigate how other cross-government and cross-society transformational outcomes have or have not occurred, for better or for worse. Discussions among the ODI Nexus team suggested the following types of transformation may be of use:

- technology and/or private sector led, for example digitalisation or agriculture
- social and/or justice led, for example the national and global advance of the gender or sustainability agendas
- ideology and/or governance led, for example transformations to democracies and/or market economies

6 Conclusions

This summary report provides an overview of the aims, evolution, methodology and findings for case studies in search of nexus ‘triple wins’ in the Dominican Republic, Sri Lanka and Thailand. From these, we draw observations related to how nexus policy has been conceived and implemented and its impact on achieving nexus-related outcomes. We then identify challenges we encountered in our search for nexus policies and their outcomes alongside barriers that may hamper the successful implementation of nexus themes.

We find that nexus thinking’s entrance into national politics can be traced to the late 1990s and illustrate the different ways in which themes from disparate realms have arrived to coalesce at the centre of government. We also show that, despite many having been in place for years, it remains difficult to observe nexus-related outcomes at the national level. Given the effects of the pandemic – slowing economic growth, increasing poverty and temporarily slowing the rate of environmental degradation – it may be speculated that many countries will struggle to return to joined up policy making in the immediate future.

To extend the analysis begun here, we suggest that future work interrogates the space between implementation and outcome to identify ways to close this gap. Alongside qualitative analysis of power structures relevant to nexus themes, this could define intermediate indicators that illustrate where countries’ transformational nexus policies are stalling. We also suggest that accelerating transformational policy in nexus themes may benefit from experience garnered during prior transformational policy and society changes in non-nexus areas of policymaking.

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Appendix 1 Examples of availability of different data types in World Development Indicators database

Growth and economic structure				
Indicator	Code	Time coverage	Region coverage	Get data
GDP (current US\$)	NY.GDP.MKTP.CD			
GDP growth (annual %)	NY.GDP.MKTP.KD.ZG			
Agriculture, value added (annual % growth)	NV.AGR.TOTL.KD.ZG			
Industry, value added (annual % growth)	NV.IND.TOTL.KD.ZG			
Manufacturing, value added (annual % growth)	NV.IND.MANF.KD.ZG			
Services, value added (annual % growth)	NV.SRV.TOTL.KD.ZG			
Final consumption expenditure (annual % growth)	NE.CON.TOTL.KD.ZG			
Gross capital formation (annual % growth)	NE.GDI.TOTL.KD.ZG			
Exports of goods and services (annual % growth)	NE.EXP.GNFS.KD.ZG			
Imports of goods and services (annual % growth)	NE.IMP.GNFS.KD.ZG			
Agriculture, value added (% of GDP)	NV.AGR.TOTL.ZS			
Industry, value added (% of GDP)	NV.IND.TOTL.ZS			
Services, value added (% of GDP)	NV.SRV.TOTL.ZS			
Final consumption expenditure (% of GDP)	NE.CON.TOTL.ZS			
Gross capital formation (% of GDP)	NE.GDI.TOTL.ZS			
Exports of goods and services (% of GDP)	NE.EXP.GNFS.ZS			
Imports of goods and services (% of GDP)	NE.IMP.GNFS.ZS			

Growth and economic structure				
Indicator	Code	Time coverage	Region coverage	Get data
GDP (current US\$)	NY.GDP.MKTP.CD			
GDP growth (annual %)	NY.GDP.MKTP.KD.ZG			
Agriculture, value added (annual % growth)	NV.AGR.TOTL.KD.ZG			
Industry, value added (annual % growth)	NV.IND.TOTL.KD.ZG			
Manufacturing, value added (annual % growth)	NV.IND.MANF.KD.ZG			
Services, value added (annual % growth)	NV.SRV.TOTL.KD.ZG			
Final consumption expenditure (annual % growth)	NE.CON.TOTL.KD.ZG			
Gross capital formation (annual % growth)	NE.GDI.TOTL.KD.ZG			
Exports of goods and services (annual % growth)	NE.EXP.GNFS.KD.ZG			
Imports of goods and services (annual % growth)	NE.IMP.GNFS.KD.ZG			
Agriculture, value added (% of GDP)	NV.AGR.TOTL.ZS			
Industry, value added (% of GDP)	NV.IND.TOTL.ZS			
Services, value added (% of GDP)	NV.SRV.TOTL.ZS			
Final consumption expenditure (% of GDP)	NE.CON.TOTL.ZS			
Gross capital formation (% of GDP)	NE.GDI.TOTL.ZS			
Exports of goods and services (% of GDP)	NE.EXP.GNFS.ZS			
Imports of goods and services (% of GDP)	NE.IMP.GNFS.ZS			
Poverty rates at international poverty lines				
Indicator	Code	Time coverage	Region coverage	Get data
Poverty headcount ratio at \$1.90 a day (2011 PPP) (% of population)	SI.POV.DDAY			
Poverty headcount ratio at \$3.20 a day (2011 PPP) (% of population)	SI.POV.LMIC			
Poverty headcount ratio at \$5.50 a day (2011 PPP) (% of population)	SI.POV.UMIC			
Poverty gap at \$1.90 a day (2011 PPP) (%)	SI.POV.GAPS			
Poverty gap at \$3.20 a day (2011 PPP) (%)	SI.POV.LMIC.GP			
Poverty gap at \$5.50 a day (2011 PPP) (%)	SI.POV.UMIC.GP			
Distribution of income or consumption				
Indicator	Code	Time coverage	Region coverage	Get data
GINI index (World Bank estimate)	SI.POV.GINI			
Income share held by lowest 10%	SI.DST.FRST.10			
Income share held by lowest 20%	SI.DST.FRST.20			
Income share held by second 20%	SI.DST.02ND.20			
Income share held by third 20%	SI.DST.03RD.20			
Income share held by fourth 20%	SI.DST.04TH.20			
Income share held by highest 20%	SI.DST.05TH.20			
Income share held by highest 10%	SI.DST.10TH.10			
Shared prosperity				

Climate				
Indicator	Code	Time coverage	Region coverage	Get data
CO2 emissions (metric tons per capita)	EN.ATM.CO2E.PC			
PM2.5 air pollution, mean annual exposure (micrograms per cubic meter)	EN.ATM.PM25.MC.M3			
PM2.5 air pollution, population exposed to levels exceeding WHO guideline value (% of total)	EN.ATM.PM25.MC.ZS			
Average precipitation in depth (mm per year)	AG.LND.PRCP.MM			
Environment				
Indicator	Code	Time coverage	Region coverage	Get data
Forest area (% of land area)	AG.LND.FRST.ZS			
Total natural resources rents (% of GDP)	NY.GDP.TOTL.RT.ZS			
Terrestrial protected areas (% of total land area)	ER.LND.PTLD.ZS			
Terrestrial and marine protected areas (% of total territorial area)	ER.PTD.TOTL.ZS			
Marine protected areas (% of territorial waters)	ER.MRN.PTMR.ZS			

Source: <https://datatopics.worldbank.org/world-development-indicators/themes.html>