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India
National Policies and Global Commitments
Renewable Energy, Equitable Growth, and Gender Equality

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Content

National Policies and Global Commitments

The alignment of G20 policies with the Sustainable Development Goals (SDG) is high on the Indian Prime Minister Narendra Modi's agenda.[1] India's 2016 submission to the G20 agenda made the direct connection link: «With one-sixth of the world's population and considerable ‹development deficit›, India today is also among the fastest growing major economies and one with an ambitious program to tackle climate change. This places India at the centre-stage of efforts towards the achievement of SDGs.»[2]

India's submission provides hardly any explicit quantifiable objectives, but instead focuses on institutions and monitoring mechanisms to be used to ensure alignment between SDGs and national policies. The system is elaborate, and vast: With the NITI Aayog (i.e. the government's official think-tank, called the «National Planning Commission» until 2014) at the top, coordination is taking place not only with ministries (52 of them, by the end of 2016), but also with the various «Missions» or «flagship schemes» by which Indian governments, over the years, have increasingly come to set their marks pointing to their political priorities, over and beyond existing ministerial structures.

Coordination is obviously always a challenge in India's vast institutional and bureaucratic setup; thus it is of little help to merely check for data or conceptual inconsistencies in different existing policy documents. Instead, it appears more useful to look at how currently implemented policies – some of which India's government strongly «markets» to its own population – relate to global commitments in the UNFCCC or SDG processes, respectively.

The Indian government's submission to the G20 claims, in a wholesale manner, that its policies and especially the flagship schemes are «in sync with the SDG 2030 Agenda», and are to be financed out of the general budget.[3] Given India's diversity and size, virtually all SDGs are highly relevant – on the country level and also in their global impact. This paper picks three areas which are of special relevance from a green political perspective: energy and climate policy; sustainable and inclusive economic growth; and gender equality.

1 «PM Modi urges G20 nations to align with UN's Sustainable Development Goals», 15.11.2015, http://www.dnaindia.com/money/report-pm-modi-urges-G20-nations-to-align-with-un-s-sustainable-development-goals-2145588

2 G20 2016 China: G20 Action Plan on the 2030 Agenda for Sustainable Development, p. 29, https://www.bundesregierung.de/Content/DE/_Anlagen/G7_G20/2016-09-08-g20-agenda-action-plan.pdf?__blob=publicationFile&v=3

3 Ibid., p. 30.

Energy and Climate Policy

The contrast between India's development needs and its already high climate impact is very marked. Per capita electricity consumption reached only about 1,000 kWh/year (2014-2015)[4]; the world average is over 3,000, and the OECD average around 8,000)[5]. Even though the grid reaches about 97% of India's villages,[6] many households don't have a connection; electricity supply quality is often very poor; about 75 million rural households are affected by energy poverty.[7] While per capita CO_2 emissions were only 1.6 tons in 2013 (world: 5.0, OECD average: 9.7), due to its vast population India has already become the world's third largest emitter of CO_2 by 2010, with about 70% coal being used for elec-tricity generation. Much coal is available in the country, but other fossil fuels are largely imported. Indian energy demand is expected to double by 2040, requiring massive invest-ment and posing challenges for energy security.[8]

SDG 7 targets for 2030 the «universal access to affordable, reliable and modern energy services», a substantial increase of the share of renewable energy in the global energy mix, and a doubling of the global rate of improvement in energy efficiency».[9] The global fulfill-ment of these targets will to an important extent depend on India's contribution; the tension between them and the global need to keep climate change below the two degree target is obvious.

Over the next few decades, India is going to contribute more than any other country to the projected rise in global energy demand. This is going to amount to around one-quarter of the total: and even if this is being achieved, per capita energy consumption per capita in 2040 will still be 40% below the world average. India's power system needs to almost quadruple in size by 2040 to catch up and keep pace with electricity demand. The Inter-national Energy Agency estimates requirements for new installed capacity is estimated at nearly 900 GW, half of it coming from coal.[10]

4 «India's per capita electricity consumption touches 1,010 KWh», LiveMint, 20.6.2015, http://www.livemint.com/Industry/jqvJpYRpSNyldcuUlZrqQM/Indias-per-capita-electricity-consumption-touches-1010-kWh.html (26.12.2016), based on data of India's Central Electricity Authority.

5 World Bank, http://data.worldbank.org/indicator/EG.USE.ELEC.KH.PC (26.12.2016); the data refer to 2013 and are based on data of the International Energy Agency.

6 «Power in Numbers: Growing India's Minigrid Sector», 2.3.2016, http://www.renewableenergyworld.com/articles/2016/03/power-in-numbers-growing-india-s-minigrid-sector.html

7 «The extent of India's energy poverty», Down to Earth, 12.3.2015, http://www.downtoearth.org.in/news/the-extent-of-india-s-energy-poverty-48966

8 OECD/DEA, India Energy Outlook, 2015, p. 11-15, https://www.iea.org/publications/freepublications/publication/IndiaEnergyOutlook_WEO2015.pdf

9 https://sustainabledevelopment.un.org/sdg7

10 See note 8.

India's Intended Nationally Determined Contributions (INDC) to the UNFCCC process[11] promise «to put forward and further propagate a healthy and sustainable way of living based on traditions and values of conservation and moderation», and «to adopt a climate friendly and a cleaner path than the one followed hitherto by others at corresponding level of economic development.» In concrete figures, India's global climate commitments look impressive: Building on its very ambitious goal of installing 175 gigawatts (GW) of renewable power capacity by 2022 (100 GW of it from solar),[12] the INDC set a new target to increase the share of non-fossil-based electric power capacity from 30% today to about 40% by 2030 (assuming availability of international financial and technological support). The World Resources Institute (WRI) has calculated that this latter figure is likely to result in «merely» 200 GW renewable power capacity by 2030 – which would mean rather little progress beyond the 2022 target already set. India's INDC has also committed to reduce emissions intensity per unit GDP, by 2030, by 33- 35% below the 2005 baseline; however, «India's emissions intensity (carbon dioxide emissions per unit of GDP) declined by approximately 18 percent between 1990 and 2005, and the country has already committed to reduce it by another 20-25 percent from 2005 levels by 2020», and there are estimates that the country could even without major efforts exceed the intensity targets. The INDC furthermore promises to create an additional carbon sink of 2.5 to 3 billion tons of carbon dioxide through additional tree cover and the prioritization of efforts to build resilience to climate change impacts.[13]

India is already undergoing a phase of rapid expansion of renewable energy. Wind power doubled between 2007 and 2012 and is still growing fast; it reached 28.4 GW cumulative installed capacity by end of November 2016. Enabled by policy incentives and massive cost reductions, there is accelerated growth in solar power especially since 2014 (8.9 GW by November 2016).[14]

Doubts were raised regarding the feasibility of the solar target, but even a substantial partial fulfillment would be quite an achievement. Other voices – especially from the NGO world – pressure for more, and by now even some relevant government bodies indicate ambitions that go beyond the INDC commitments. The Draft National Electricity Plan published in December 2016 by the Government of India's Central Electricity Authority, estimates that by 2027, nearly 56.5% of installed electricity-generation capacity is going to be

11 «India's Intended Nationally Determined Contribution: Working Towards Climate Justice», http://www4.unfccc.int/submissions/INDC/Published%20Documents/India/1/INDIA%20INDC%20TO%20UNFCCC.pdf

12 Climate Policy Initiative: Driving foreign investment to renewable energy in India, in: http://climatepolicyinitiative.org/wp-content/uploads/2016/04/Driving-Foreign-Investment-to-Renewable-Energy-in-India_Executive-Summary.pdf

13 Apurba Mitra et al: «5 Key Takeaways from India's New Climate Plan», 2.10.2015, http://www.wri.org/blog/2015/10/5-key-takeaways-india%E2%80%99s-new-climate-plan-indc

14 http://mnre.gov.in/mission-and-vision-2/achievements/ (accessed 22.12.2016).

based on non-fossil fuels.[15] While expansion of coal-based thermal power plants is ongoing, the Authority argues that no additional coal projects would be required in the period 2017-22. The financial advantage of coal-based power is rapidly eroding, even in India.

All this is commendable, even impressive, but at the same time, concerns remain. One is related to the fact that the mindset of many people in India's energy planning infrastructure continues to be fixed on coal. For them, it remains the most convenient and cheapest available option, as long as sufficient inputs are available. In recent years, however, this has not always been the case as far as water is concerned, and coal import prices have risen, even though the supply of locally as well as imported coal has improved.

Another concern is India's definition of «non-fossil» energy sources which includes, without much critical reflection, any type of hydropower, especially the envisaged expansion of large scale hydropower projects in the Himalaya region, especially in Himachal Pradesh and the Northeastern states of Sikkim and Arunachal Pradesh.[16] Much of this is driven, in a mostly non-transparent manner, by agreements between state governments and hydropower companies, involving much speculation and political patronage.

«Non-fossil» according to India's INDC also includes nuclear power with an installed capacity of 5.78 GW, currently provides less than 3% of India's electricity. The government continues to push nuclear reactors after having overcome, on the one hand, international restrictions in the supply of fissile material to India (through the India-U.S. Civil nuclear deal of 2005) and, on the other hand, difficulties arising from India's own nuclear liabilities legislation. There are plans to increase India's nuclear power installation by several times – in 2011, the parliament was informed of a target of 27.5 GW by 2023, a figure often quoted since then. But even the most optimistic scenarios do not envisage any substantial increase in the nuclear share in electricity generation.[17] The alternatives are not only getting ever cheaper, but nuclear (like big dams) is bound to more protests and resistance by affected local communities. Given India's recent ambitious renewable energy goals, large-scale hydro and nuclear power projects – while being politically pushed by relevant interest groups – are going to play a minor role only; though one should expect much political conflict arising from attempts to expand them in the years to come.

At the same time, energy access is improving, by campaigns to link unconnected villages to the grid as well as by numerous initiatives – by government, companies and NGO alike – to set up mini-grids,[18] sometimes competing with one another in an uncoordinated manner.

15 Government of India, Ministry of Power, Central Electricity Authority: Draft National Electricity Plan (Vol 1): Generation. December 2016, p xxv. http://www.cea.nic.in/reports/committee/nep/nep_dec.pdf

16 For an overview and critical assessments of these plans see the website of the South Asian Network on Dams, Rivers and People, http://sandrp.in/about-sandarp

17 For an overview see Aniruddh Mohan, The Future of Nuclear Energy in India, ORF Occasional Paper, 9.8.2016, http://www.orfonline.org/research/the-future-of-nuclear-energy-in-india/

18 See note 6.

One thing is clear: However decentralized electricity production and distribution can be made, overall energy availability for the vast population is going to come from substantially increased electricity production, and much of this is going to be grid-based.

Investment in energy efficiency has a huge potential for somewhat reducing the growth of energy generation needs, but overall energy efficiency in India (per unit of GDP) does not appear to show any consistent trend over the last decade.[19] India operates a range of energy-saving initiatives, some of them directed at consumers, such as LED light distribution schemes and energy efficiency-labeling schemes for household devices. Others are directed at industries – it is often said that three quarters of all building stock in India by 2040 is still to be built, and thus there are enormous potentials for efficiency savings, from building codes for energy efficiency to resource-saving technologies for cement- and brick-making etc.[20] However, the vast small-scale «informal» manufacturing sector puts limitations for systematic policy intervention in this area.

Sustainable and Inclusive Growth

SDG 8 and 10 talk about economic growth and (in)equality, and SDG 15 about the (non-marine) environment. Relating to all these issues, India's very development path is at stake, and obviously it provides many tradeoffs and contradictions.

Most markedly among the world's largest emerging economies, India is currently on a path of high economic growth; with 7% or more GDP growth p.a., it even surpasses China. The Indian government intends to continue and even accelerate this course. In fact, Narendra Modi had won the 2014 general elections primarily because of this promise and the popular perception that he, more than anyone else, would be able to fulfill it.

Some of India's fundamentals are very promising indeed, especially the much-quoted «demographic dividend» of a large, young and dynamic population that is driving economic growth – to a certain extent, even without much policy intervention. At the same time, serious limitations are well-known, reaching from poor public education and health services through low skill levels to massive infrastructure deficits. The government addresses these deficits with a myriad of schemes and reforms; despite pursuing «business-friendly» policies by trying to reduce bureaucratic «red tape», India's position in the World Bank's «Ease of Doing Business» ranking reached only position 130 (out of 190) in 2016, with considerable regional differences.[21] The new Goods and Services Tax system, to be implemented

19 For some statistical data see Government of India, Ministry of Power, Bureau of Energy Efficiency: Annual Report 2014-15, p. 11, https://www.beeindia.gov.in/sites/default/files/Annual%20Report%202014-15.pdf

20 International Energy Agency: India Energy Outlook 2015, https://www.iea.org/publications/freepublications/publication/IndiaEnergyOutlook_WEO2015.pdf

21 http://www.doingbusiness.org/rankings (accessed 27.12.2016).

from 2017, promises a more unified, less fragmented system of taxation.[22] The Modi government has bundled its approach towards growth in the «Make in India» strategy, but there are doubts whether such a growth model that focuses on export-oriented manufacturing similar to China's strategy since the 1990s will still work in a «post-globalization» world with reducing openness and shrinking global growth. India's huge internal market is unlikely to more than partially compensate for the growing limitations of global markets. There are disturbing indicators behind the shining policy declarations: Despite high growth, industrial output growth has been surprisingly low in the last few years,[23] while job creation (especially in the formal sector; an estimated 92% of the workforce continues to work in the informal world[24]) is far too little to absorb the ca. one million young people that enter the labour market every month.[25] But it is still too early to say how far the export-oriented strategy will reach and how far it can contribute, in the medium and long term, to reaching the ambitious growth and development goals that the Indian government has set for itself.

Post-liberalization economic growth since the 1990s saw a substantial reduction in the number of people in poverty and the rise of a new middle class. But about 270 million people remain very poor.[26] Social inequality has been growing, though the Gini distribution index remains lower than in other emerging economies (but inequality data for India are notoriously incomplete and methodologically problematic).[27]

In the highly competitive democratic environment of India, all governments pursue social policies that involve substantial redistribution of resources. India has a range of distributive welfare systems (much of it couched in the language of rights, including the largest food subsidy scheme in the world). But it increasingly employs technology (especially the biometry-based universal identity documentation Aadhaar) and insurance systems (such as the Rashtryia Swasthya Bima Yojna – RSBY – health insurance and others). While there is much debate on the right policies, the difference in overall approach between different parties in governments is perhaps less than the rhetoric may suggest.

One peculiar aspect of an inclusive growth strategy is financial inclusion (SDG 8.10). With the Pradhan Mantri Jan-Dhan Yojna, about 260 million bank accounts for poor parts of

22 http://www.gstindia.com/about/

23 http://www.tradingeconomics.com/india/industrial-production (accessed 27.12.2016)

24 ILO: India Labour Market Update, July 2016, p. 3. http://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---sro-new_delhi/documents/publication/wcms_496510.pdf

25 http://www.firstpost.com/business/a-million-indians-reach-employable-age-each-month-more-jobs-better-jobs-data-needed-2741546.html (27.12.2016), with more information about the problems of India's labour statistics.

26 http://povertydata.worldbank.org/poverty/country/IND (27.12.2016); this refers to a poverty line of 1.90 USD/day.

27 A comprehensive dataset available for OECD and major emerging economies (though without China) is at http://www.chartbookofeconomicinequality.com/inequality-by-country/india/, and it shows India's Gini figures lower than in other BRICS countries.

the population have been created in a little more than two years until the end of 2016,[28] though it is unclear how many of them are actually used, and whether the demonetization of higher currency notes since November 2016 will really increase usage.

India's economy is bound to grow further, and this is going to lead to even more severe environmental problems and further increased pressure on local communities in areas affected by infrastructure investment and mining. By now, there is a sound legal basis for environmental protection in India, but the system of Environmental Impact Assessments and public hearings, strengthened a decade ago, is flawed in numerous ways, and communities have no role in checking fulfillment of requirements identified in the process. A far more systematic and participatory approach is required to get better compliance results.[29] Furthermore, popular policies of the Modi government such as the «Swachh Bharat Abhiyan» (Clean India Mission) campaign also work towards providing sanitary infrastructure and effecting behavioural change in broad segments of the population, although it is difficult to sustain such momentum over longer time frames.

Gender Equality

SDG 5 on gender equality and women's empowerment demands the elimination of all forms of discrimination, violence and harmful practices against women and asks for universal access to sexual and reproductive health. It demands to ensure women's participation in leadership and decision-making processes and to include women – as the main providers of care work – into social protection schemes and public services.[30]

The December 2012 rape and murder case in Delhi has made India globally infamous for violence against women. While the statistical evidence is ambiguous – the rising number of registered rape cases in a city like Delhi, first of all, appears to point most likely to an increased readiness to involve the police or courts[31] – the multiplicity of issues, such as domestic violence, dowry killings, acid attacks etc., but also a systematic discrimination against female embryos – continues to remain frightening. India has a wide range of legislation against such violence; much of it was extended in 2012, though legislation against marital rape was not introduced. But implementation always remains a challenge, even though there are many women's organizations exerting popular pressure on these issues, and police and courts at least in the cities have become much more sensitive to the issues. Change for the better in gender relations, especially among the educated youth, is very

28 http://pmjdy.gov.in/ (accessed 26.12.2016)

29 http://www.thehindu.com/opinion/op-ed/Assessed-approved-but-scant-attention-to-compliance/article16946182.ece

30 https://sustainabledevelopment.un.org/sdg5

31 https://factly.in/rape-cases-in-india-statistics-has-anything-changed-after-the-nirbhaya-incident-part-1/ provides a summary of data and possible interpretations.

much visible in Indian society today. Still, the patriarchal mindsets underlying both systemic discrimination and manifest violence remain pervasive.

Ambiguities and contradictions also exist with regard to women's political participation. Like in other South Asian countries, India has had and continues to have its fair share of prominent women in top political leadership positions on federal and state levels. A 33% reservation for women operates at the local panchayati raj level of governance, and an expansion of the quota to 50% is under discussion. But there is little hope that the quota principle is going to be applied on the national level any time soon – even if India has a long legacy of operating affirmative action and reservation systems on the federal level (e.g., constitutional reservation for «scheduled castes» and «scheduled tribes», i.e. Dalits and tribal populations).

Women provide a substantial part of the total workforce, in agricultural production, in the informal sector (including the well-visible informal construction sector in the cities) and of course in the household. Statistics that go beyond the formal sector are necessarily difficult to come by, and some of the data are plainly irritating. Even the International Labour Organisation regards as «puzzling» the long-term trend of falling female labour force participation rates in India, from 34.1% in 1999-2000 to 27.2% in 2011-12. This trend is particularly marked among rural women, and it held despite strong economic growth and rising wages and incomes. The explanation appears to be multifactoral, from lack of employment opportunities (including opportunities to work from home) over increased and prolonged educational engagement to increasing «domesticity», i.e. the readiness to focus on «domestic duties« rather than employed work, and this phenomenon appears to have been growing alongside rising household incomes.[32] Against this overall trend, the role of women is much stronger in middle- and higher-level jobs in some of the new sectors of the Indian economy: «While only one in 10 Indian companies are led by women, more than half of them are in the financial sector. Today, women head both the top public and private banks in India.»[33] Limitations to female participation in the work force have a strong cultural dimension, and to surmount them will take more than government policy.

32 Sher Verik: «Female labour force participation in India: Why is it so low?» 2014 http://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---sro-new_delhi/documents/genericdocument/wcms_342357.pdf

33 Suchetana Ray: «As India economy grows, female participation in work force declines: ILO», Hindustan Times, 8.3.2016, http://www.hindustantimes.com/business/as-india-economy-grows-female-participation-in-work-force-declines-ilo/story-pGjf3zWf0VpnWfevajMUsM.html

Conclusion

It is sometimes said that «whatever you can rightly say about India, the opposite is also true.»[34] This is a familiar experience when looking at the country on a macro-policy level. In climate policy, India undertakes great strides to increase energy supply by promoting renewables. It does so on a scale that until recently few people would have expected, and which even some among Indian climate policy negotiators would have regarded as inappropriate (from a «climate justice» perspective) for a relatively poor country such as India. Thus, India is playing a progressive role in international climate action, even though the country is still going to increase coal use and emissions for several decades. India's economic growth currently appears to be most robust among the major emerging economies. This is likely to continue for some years (unless the world undergoes rapid «deglobalization», that is) and there is considerable optimism in the country. But there must be serious questions as to how far this expansion can and will go in a society characterized by severe deficits in education, health and other infrastructures; and the management of the ecological impacts of economic growth remains a particularly massive challenge in a country with 18% of the world population, but only 11% of the world's arable land (much of it used less efficiently than elsewhere in the world). Ambivalent and contradictory messages also come out with regard to gender equality: As India's educated young women have a good chance for professional progress, patriarchal mindsets continue to dominate large segments of the society.

34 A quote usually attributed to economist Joan Robinson, as quoted by Amartya Sen, «Contrary India», The Economist, 18.11.2005, http://www.economist.com/node/5133493

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