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Authors: Ankit Saha (IIMA), Vartika Singh (IIMA), Prantika Das (IIMA), Aditi Joshi (IIMA), Chandan Kumar Jha (IIMA), and Ranjan Kumar Ghosh (IIMA).

National Commitments and Targets

The **National Commitments** pathway aims to show what will happen if national commitments are met. This requires translating policy commitments into quantitative targets that can be modeled in the FABLE Calculator. Teams have reviewed key policy documents to set up these targets for the food and land use system (agricultural production and trade, climate, biodiversity, food security, and dietary recommendations).

In some cases, policy commitments lack clear quantification. **FABLE teams have proposed quantitative targets that are derived or inspired from these national commitments. These are in the yellow column.**

Please provide your feedback regarding these quantitative targets using our [public consultation form](#).

CODE	Policy area	Policy ambition	FABLE team's proposed quantitative national targets	Justification and references
1	FOOD			
1a	Food	Undernourishment	Reduce stunting and undernourishment in children (0-6 years) by 2% per annum up to 6% by 2023. As per the SDG-2 goal of Zero-Hunger, the target is to end all forms of malnutrition by 2030. Stunting and undernourishment thereby reduce to 0 by 2030.	<p>National Nutrition Mission (POSHAN Abhiyan)</p> <p>National Programme of Mid-Day Meal in Schools (MDM)</p> <p>National Iron Plus Initiative (NIPI)</p> <p>National Food Security Act: Two-thirds of the population of the country is eligible to get 5 kg of grains per person per month from fair-price shops in their locality. This meets about 40 percent of staple food demand at subsidized price which is less than one-tenth of the open market price.</p> <p>Integrated Child Development Services (ICDS): improve child health, nutrition, and development. It serves over 19 million pregnant and lactating women as well as 82 million children under 6 years old.</p> <p>National Rural Livelihood Mission: Rural women are supported to start nutri-garden, kitchen garden, and</p>

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				backyard poultry and livestock rearing for improving livelihood and nutrition of the family." Reference: Poshan Abhiyan PM's Overarching Scheme for Holistic Nourishment.
1b	Food	Overweight / obesity	Member states of the World Health Organization have adopted resolutions aiming to achieve 'no increase in obesity levels' by 2025 (based on 2010 levels) for infants, adolescents, and adults.	36% of children under 5 are overweight as per the National Family Health Survey. Reference: Planning for the worst: Estimates of obesity and comorbidities in school-age children in 2025
1c	Food	Diet-related disease	In response to the WHO Global Action Plan for the Prevention and Control of NCDs 2013-2020, India has adopted the National Action Plan with specific national targets and indicators aimed at reducing the number of global premature deaths from NCDs by 25% by 2025.	In a report "India: Health of the Nation's States" by Ministry of Health and Family Welfare (MOHFW), Government of India (GOI), it is found that there is increase in the contribution of NCDs from 30% of the total disease burden 'disability-adjusted life years' (DALYs) in 1990 to 55% in 2016 and also an increase in proportion of deaths due to NCDs (among all deaths) from 37% in 1990 to 61% in 2016. This shows a rapid epidemiological transition with a shift in disease burden to NCDs. References: <ul style="list-style-type: none"> • India: Health of the Nation's State Report • NCD MWCD National Health
1d	Food	Other food-related targets	Reduce consumption of sugar to zero as per India's National Institute of Nutrition. Increase the intake of pulses and coarse cereals in state government programs by 2022.	Reference: Dietary Guidelines for Indians
2	CLIMATE MITIGATION			
2a	Climate mitigation	Total GHG emissions reduction (by Gas or in CO ₂ e - if in CO ₂ e indicate what the global warming	India has pledged to reduce GHG emissions from all sectors to zero by 2070. As per the updated NDC, India now stands committed to reducing the Emissions Intensity of its GDP by 45 percent by 2030, from the 2005 level, and achieving about 50 percent cumulative	References: Ministry of Environment, Forest and Climate Change. India stands committed to reducing the Emissions Intensity of its GDP by 45 percent by 2030, from the 2005 level.

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		potential factor used to convert non-CO2 emissions into CO2)	electric power installed capacity from non-fossil fuel-based energy resources by 2030.	India's Updated First Nationally Determined Contribution Under Paris Agreement
2b	Climate mitigation	Agriculture GHG emissions reduction	No specific national targets regarding agriculture GHG emissions; this will be assessed moving ahead.	There is promotion of sustainable agriculture, and certain state initiatives like by Andhra Pradesh which prioritizes agriculture in their state action plan. Reference: Ministry of Environment, Forest and Climate Change . India stands committed to reducing the Emissions Intensity of its GDP by 45 percent by 2030, from the 2005 level.
2c	Climate mitigation	Land use and land use change GHG emissions reduction	To combat climate change, the National Mission for a Green India was launched in 2014 which aimed to convert 10 Mha of forest and non-forest land to boost forest cover and quality, sequestering carbon to 60 Mt by 2020 and up to 100 MtCO2e thereafter.	The Forest Survey of India announced a 2,261 km ² increase in forest and tree cover from 2019–2021. References: <ul style="list-style-type: none"> • India Climate Transparency Report • National Action Plan on Climate Change (NAPCC)
2d	Climate mitigation	Reduce or halt deforestation	<p>1. India's NDC goals are to increase forest and tree cover by 2.5 to 3 billion tons of CO2 equivalent by 2030 and rehabilitate 26 million acres of damaged land by 2030 advocates vast afforestation.</p> <p>2. The Ministry's Vision 2024 document proposes doubling the yearly plantation objective to 253 crore seedlings by 2024 from the current 143 crores, requiring each State/UT to make a special and consistent effort. Accordingly, the targets for afforestation under the Twenty-point program for the year 2021-22 have been finalized as 2.69 Mha and 175 crore seedlings.</p>	References: <ul style="list-style-type: none"> • Ministry of Environment, Forestry and Climate Change. Annual Report 2021-22. • Ministry of Statistics and Programme Implementation. Annual Report 2021-22. • India's Updated First Nationally Determined Contribution Under Paris Agreement
2e	Climate mitigation	Other climate mitigation-related targets	As per India's REDD+ strategy, the goal is to create additional forest carbon sink by 2.5 to 3 billion tonnes of CO2 equivalent by 2030	To meet the NDC target, improvement and increase in cover of natural forests will need to be supplemented by a concerted focus on trees outside forests (TOF), which contribute significantly to the country's carbon sink.

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				Reference: National REDD+ Strategy INDIA
3	BIODIVERSITY			
3a	Biodiversity	Reduce or halt the loss of natural ecosystems	<p>We assume that deforestation will be halted by 2030. The assumption is based on several national policies that have been implemented (e.g., the Indian Forest Act and Indian Forest Conservation Act) and based on historical trends (FAO, 2020). Therefore, no agricultural land expansion into natural forests is allowed. Agricultural land can be increased by converting other natural vegetation areas that have lower carbon densities than natural forests. Areas under the industrial forestry sector are assumed to be constant and therefore cannot be converted into other land uses.</p>	Reference: FABLE India 2020. Pathways to Sustainable Food and Land Use Systems.
3b	Biodiversity	Promote afforestation	<p>India is a signatory to the Bonn Challenge and has raised its target for afforestation to 26 Mha by 2030. The assumptions are in line with India's commitment to the CBD whereby India has pledged to restore 13 Mha of degraded and deforested land by 2020, and an additional 13 Mha by 2030.</p>	<p>According to B Binod et al., 2017 India has brought an area of 9.8 million hectares (Mha) under restoration since 2011, meaning that work to restore these landscapes is already underway.</p> <p>Reference: Jha, C.K., Ghosh, R.K., Saxena, S. et al. Pathway to achieve a sustainable food and land-use transition in India. <i>Sustain Sci</i> 18, 457–468 (2023). https://link.springer.com/article/10.1007/s11625-022-01193-0</p>
3c	Biodiversity	Expand protected areas or 'Other effective area-based conservation measures (OECMs)	<p>1. As per India's National REDD+, conservation of existing protected areas (PAs) covering 16 mha of forest land is already underway.</p>	<p>India has exceeded the terrestrial component of 17 percent of the Aichi target 11 which aimed towards conserving at least 17% of terrestrial and inland water, and 10% of coastal and marine areas, particularly in areas of great importance for biodiversity and ecosystem services through effectively and equitably managed,</p>

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			<p>2. As per Namami Gange plan, the objective was to expand tree cover across five Ganga basin states by 8 mha by 2023</p>	<p>ecologically representative, and well-connected systems of protected areas and other effective area-based conservation measures (OECMs), and integrated into the wider landscapes and seascapes.</p> <p>According to India’s National Biodiversity Plan 2019, NBT6 which implements ABT 11 by determining area-based conservation targets keeping in view the country’s national priorities aims at bringing over 20% of the geographical area of the country comprising terrestrial inland water, coastal, and marine zones, areas important for species, biodiversity and ecosystem services under area-based conservation. India has already achieved its target and contributes significantly to achieving the global target (Achievement of Aichi Biodiversity Targets 11 and 16, 2018).</p> <p>India’s terrestrial conservation area adds up to 9,27,521.50 km². This is nearly 28 % of the total geographical area of the country which is substantially above 17% mentioned in ABT. With 17.74 % of the world population and only 2.4 % of its area, this is a significant contribution to the global target of 17%.</p> <p>References:</p> <ul style="list-style-type: none"> • A Compendium of OECMs in India Implementation of India’s National Biodiversity Action Plan • Ministry of Environment, Forest and Climate Change. Press Release (2018). India submits Sixth National Report to the Convention of Biological Diversity (CBD) • National REDD+ Strategy INDIA
3d	Biodiversity	Expand cropland area under agroecological practices	Plan to expand the area under agroecological practices (including organic and natural farming) to 2 Mha by	<p>Local initiatives in Chhattisgarh promote rural livelihoods along with organic farming, and in Odisha, Uttarakhand,</p>

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			<p>2024. There is no specific/accurate data available for this target.</p> <p>This needs to be looked into further. Targets need to be identified accordingly.</p>	<p>and Karnataka there is an organic farming policy being introduced.</p> <p>Punjab has been supporting organic farmers by purchasing their crops through the Punjab Agri Export Corporation and selling them abroad.</p> <p>References:</p> <ul style="list-style-type: none"> • Ministry of Agriculture & Farmers Welfare: Organic Farming in the Country • Natural Farming NITI initiative • Patel N., Dorin B., Nagaich R., 2022. A New Paradigm for Indian Agriculture. From Agroindustry to Agroecology, NITI Aayog, New Delhi, 70 p.
3e	Biodiversity	Reduce or halt use of agrochemicals and other agricultural practices that harm biodiversity	India is committed to a 30X30 goal by 2030, safeguarding at least 30% of its lands, waterways, and oceans.	<p>Reference: Implementation of India's National Biodiversity Action Plan</p>
3f	Biodiversity	Other biodiversity-related targets	No other national targets regarding biodiversity.	
4	NITROGEN & PHOSPHOROUS			
4a	Fertilizer use	Limit N use	<p>The potential to minimize nitrogen fertilizer consumption on farms by 10% to 15% is very high when using leaf color sensors. This method could lead to a 20–25% improvement in India's NUE by 2030, together with the use of urea inhibitors when utilizing urea-based fertilizers and better management of manure, urine, and crop wastes.</p>	<p>In 2015, the Government of India decided to introduce 100% neem coating on all subsidized agricultural-grade urea in the country.</p> <p>The proposed national target derives from published research. The Indian government has not adopted any policy on this matter. This target is subject to further discussion.</p> <p>References:</p> <ul style="list-style-type: none"> • Nitrogen Challenges and Opportunities for Agricultural and Environmental Science in India

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				<ul style="list-style-type: none"> • Neem Coated Urea Ministry of Agriculture and Farmers Welfare
4b	Fertilizer use	Limit P use	No measures by the Indian government regarding this; are subject to further discussion.	
4c	Fertilizer use	Other N and P-related targets	No specific targets regarding N and P; need further evaluation.	
5	WATER			
5a	Water	Limit water use	Reduction of 30-37% water use by adopting water efficiency increasing measures such as drip and sprinkler irrigation systems by 2050.	<p>The Government of India has structured the Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) with the vision to extend the coverage of irrigation and improve water use efficiency in a focused manner.</p> <p>PMKSY merges ongoing schemes such as the Accelerated Irrigation Benefit Programme (AIBP), Integrated Watershed Management Programme (IWMP), and On Farm Water Management (OFWM). GoI approved Rs. 500 billion for five years for the implementation of the flagship irrigation scheme across India.</p> <p>Micro irrigation (MI) is an integral component of PMKSY to maximize water use efficiency at the field level and ensure 'Per Drop-More Crop' (PMKSY- PDMC).</p> <p>Reference: India's commitments to reduce the over-extraction of water in various states (Gujarat, Punjab, Haryana, and Rajasthan) also hints towards a more sustainable use of water for irrigation in the future (Chindarkar & Grafton, 2019; Gulati, Priya, & Bresnyan, 2020; Rajan, Ghosh, & Shah, 2020).</p> <p>Reference: India's Ministry of Agriculture & Farmers Welfare.</p>
5b	Water	Other water-related targets	No relevant targets need further evaluation.	-

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6		ECONOMY		
6a	Economy	Self-sufficiency	No targets as of now, need further evaluation.	<p>Through several programs such as the National Food Security Mission, National Agriculture Development Program (RKVY), Bringing Green Revolution in Eastern India (BGREI), Targeting Rice Fallow Areas (TRFA) for pulses & oilseeds production and Mission for Integrated Horticultural Development (MIDH), including protected cultivation and precision farming, the goal of the government is to ensure India' self-sufficiency in agricultural production particularly for food grains including pulses.</p> <p>Reference: Government of India – Doubling Farmers' Income</p>
6b	Economy	Farmers' income	No specific targets as of now. Needs to be further looked into.	<p>PMKISAN: Promoting this mega scheme that provides every farmer cash income three times a year. The ambition is to double farmers' income.</p> <p>Promotes the RUDI (Rural Distribution) Network, an agricultural cooperative business where members procure raw agricultural produce from marginal farmers at market prices, and add value to that stock by cleaning and processing it before packaging and selling it at affordable prices.</p> <p>Innovative Income Support Scheme for Farmers and Labourers: Financial Assistance will be provided to each landless Agricultural Household for Agricultural allied activity. This will particularly benefit the deprived social class of the population of the State. Vulnerable cultivators/landless agricultural laborers will get financial assistance. AIF (Agriculture Infrastructure Fund): financing facility to improve farm infrastructure and easy access to farms.</p>

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6c	Economy	Agricultural exports	<p>India's Agriculture Export Policy seeks to double agricultural exports from present ~US\$ 30+ Billion to ~US\$ 60+ Billion by 2022 and reach US\$ 100 Billion in the next few years thereafter, with a stable trade policy regime. The additional focus is to diversify the export basket and to double India's share in world agri exports by investing in agricultural value chains.</p>	<p>PUSA Basmati 1121 is a good instance of successful domestic research by the Indian Agricultural Research Institute (IARI). The Basmati export industry quadrupled from being a less than US\$ 1 Billion industry to US\$ 4 Billion after its introduction.</p> <p>Basmati Rice exports witnessed a growth of 40.26 percent in nine months of FY 2022-23 as its exports increased from USD 2379 million (April-December 2021) to USD 3337 million (April-December 2022).</p> <p>The export of non-Basmati rice registered a growth of 4 percent in nine months of the current fiscal. Non-basmati rice exports increased to USD 4663 million in nine months of the current fiscal from USD 4512 million in the corresponding months of the previous year.</p> <p>Dairy products recorded a growth of 19.45 percent as its exports rose to USD 471 million in April-December 2022 from USD 395 million in the corresponding months of the previous year.</p> <p>The export of poultry products increased by 91.70 percent and rose to USD 95 million in nine months of the current fiscal from USD 50 million in the corresponding months of the previous year.</p> <p>Wheat exports have registered an increase of 4 percent in nine months of the current fiscal as its exports rose to USD 1508 million in April-December 2022 from USD 1452 million in April-December 2021.</p> <p>Other cereals' exports increased from USD 764 million in April-December 2021 to USD 869 million in April-December 2022</p> <p>The export of milled products increased from USD 188 million in April-December 2021 to USD 255 million in April-December 2022—registering a growth of 35.71 percent in the nine months.</p>
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6d	Economy	Timber exports	No national target regarding timber exports. Needs further evaluation.	
6e	Economy	Employment in the agricultural sector	<p>Pradhan Mantri Kisan Sampada Yojana has been started for the development of food-processing capabilities by working on the forward and backward linkage of agro-processing cluster, which will benefit 0.2 million farmers and create employment opportunities for about 0.5 million (G20 report).</p> <p>Through a focus on the food-processing sector, the expectation is to add 9 million jobs by 2024 in the agricultural sector (KPMG report).</p>	<p>National Rural Employment Guarantee Scheme: provides a constitutional right to one adult member of every rural household to get work for 100 days in a year voluntarily. In the year 2022, 2,892 million person-days of employment were generated as per the scheme.</p> <p>India has launched an initiative to create 10,000 more FPOs (farmers' producer organizations) in the next five years to replicate the experience of successful Farmers' Producers Companies.</p> <p>References:</p> <ul style="list-style-type: none"> Government of India - Summary of the Economic Survey 2022-23 Indian Food Processing Industry - Growth opportunities post the Covid-19 pandemic Government of India – Doubling Farmers' Income Ministry of Rural Development - Year-End Review - 2022