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Pathway Narratives			
	A) CURRENT TRENDS	B) NATIONAL COMMITMENTS	C) GLOBAL SUSTAINABILITY
<b>General description</b>	<b>We do not act differently than in the past decade/today</b>	<b>National actions/policies are aligned with national commitments</b>	<b>National actions/policies are aligned with global sustainability targets</b>
<b>Country Narrative</b> - main elements that have guided the selection of the assumptions under each pathway	The current trends pathway depicts a business-as-usual scenario where current trends are continued, or values stay at the same level as 2015. No change is assumed for diets, imports, exports, share of protected areas, and share of agroecological practices. For a reduction in food waste, crop and livestock productivity, and ruminant density, a continuation of the currently observed trends is assumed.	The national pathway depicts the plans that have been made by the German government for the agricultural sector. The plans include an increase in organic agricultural area to 30% by 2030, a reduction of livestock density to 2 units per ha, a change in diet with a 15% reduction of sugar and red meat, a rapid 50% decrease in food waste until 2030, a reduction of soy imports and red meat and milk exports, an increase in protected areas to 50% by 2050, and zero biofuel demand by 2030. It is unclear if these plans align with national commitments to reduce GHG emissions.	In the global sustainability pathway, an ambitious change in policies and efforts is assumed, without some of the policies envisioned in the national pathway. The changes include a change in diets towards the <i>EAT-Lancet</i> planetary health diet, a 50% reduction of food waste by 2030, a reduction of soy imports and red meat and milk exports, an increase in protected areas to 50% by 2050, a higher than observed increase in crop and livestock productivity, and an increase in agricultural area under agroecological practices to 70% of the total agricultural area.

Pathway Assumptions					
		A) CURRENT TRENDS	B) NATIONAL COMMITMENTS	C) GLOBAL SUSTAINABILITY	Justification
<b>1. Macroeconomics</b>	<b>1.1)</b> GDP per capita	GDP variation 2020-2050: 1.5 (SSP2)	Same as CT	GDP variation 2020-2050: 1.6 (SSP1)	Publicly available projections based on socioeconomic change scenarios
	<b>1.2)</b> Population	79 million inhabitants in 2050 (UN medium scenario)	Same as CT	Same as CT	Publicly available projections based on socioeconomic change scenarios. Choice of scenario based on <a href="#">Statistisches Bundesamt</a> .
	<b>1.3)</b> Inflation	Increase by 57% between 2020 and 2050	Same as CT	Same as CT	Due to a lack of other data, prices under inflation change are based on the average yearly CPI change in the 2000-2020 period
	<b>1.4)</b> Inequalities	-	-	-	-
<b>2. Land</b>	<b>2.1)</b> Constraints on agricultural expansion/deforestation	No productive land expansion beyond the 2010 value	Same as CT	Same as CT	<a href="#">Klimaschutzprogramm der Bundesregierung</a>
	<b>2.2)</b> Afforestation, and forest plantations targets	No afforestation/ reforestation target	Same as CT	Same as CT	Germany's afforestation goals focus on other countries <a href="#">Klimaschutzprogramm der Bundesregierung</a>
	<b>2.3)</b> Urban and settlements area	The urban share of total population increases from 81% in 2020 to 90% in 2050	Same as CT	Same as CT	Publicly available projections based on socioeconomic change scenarios (SSP (IIASA), UN-ESA (2017))
	<b>2.4)</b> Protected areas	No expansion of protected areas beyond the current approx. 25%	Global Biodiversity Convention (min 30% by 2030)	Global Biodiversity Convention (min 30% by 2030)	<a href="#">BMZ. The core area of German development policy.</a>

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<b>3. Productivity and management</b>	<b>3.1)</b> Crop productivity for the key crops	Between 2020 and 2050, crop productivity decreases from 8.7 to 8.3 t/ha for maize and from 7.2 to 6.9 t/ha for wheat, stays constant at 40 t/ha for potato, and increases from 65 to 73 t/ha for sugar beet and 3.9 to 5.1 t/ha for rape	Same as CT	Between 2020 and 2050, crop productivity increases from 8.7 to 10.6 t/ha for maize, from 40 to 76 t/ha for potato, from 3.9 to 5.9 t/ha for rape, from 65 to 86.6 t/ha for sugar beet, and decreases from 7.2 to 7.1 t/ha for wheat	Based on extrapolations of historic growth; growth assumption is more conservative for Current Trends and National Commitments pathways, and more optimistic for Global Sustainability.
	<b>3.2)</b> Cropland under agroecological practices	No expansion of cropland under agroecological practices beyond the current share	30% of total cropland under agroecological practices by 2030	70% of total cropland under agroecological practices by 2030	<a href="#">Coalition agreement between SPD, Bündnis 90/Die Grünen and FDP</a>
	<b>3.3)</b> Livestock productivity for the key livestock products	Between 2020 and 2050, the productivity per head increases from 0.1 to 0.15 t/head for beef cattle, from 7.4 to 9.4 t/head for dairy cattle, and from 0.9 to 1.5 t/head for pigs	Same as CT	Between 2020 and 2050, the productivity per head increases from 0.1 to 0.19 t/head for beef cattle, from 7.4 to 12.2 t/head for dairy cattle, and from 0.9 to 1.9 t/head for pigs	Based on extrapolations of historic growth; growth assumption is more conservative for Current Trends and National Commitments pathways, and more optimistic for Global Sustainability.
	<b>3.4)</b> Pasture stocking rate	A decline from 2.5 animal units per ha pasture to 2.3 between 2010 and 2050	A decline from 2.5 animal units per ha pasture to 2.0 between 2010 and 2050	Same as CT	National pathway: There is a tentative plan by the government and environmental organizations to enforce the organic farm maximum stocking rate on conventional farms.
	<b>3.5)</b> Forest management	-	-	-	-

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<b>4. Trade</b>	<b>4.1)</b> Share of consumption which is imported for key imported products (%)	Constant import shares	Import share of soy cake reduced by 50% by 2050 compared to 2010	Import share of soy cake reduced by 50% by 2050 compared to 2010	Following a more sustainable diet, as outlined in <a href="#">the National Reduction and Innovation Strategy for Sugar, Fats, and Salt in Processed Foods</a> , there may be changes in the production and key imports/exports of certain food products. Imports of soybeans may increase, even though they are already at a high level (100% import). This increase could be due to the shift towards a more sustainable diet. Conversely, imports of soy cake may decrease because of reduced demand. This is based on the assumption that even though there is a small amount of locally produced soy, including soy cake as a byproduct, demand reductions are likely to affect imports.
	<b>4.2)</b> Evolution of exports for key exported products (1000 tons)	Constant exports	Exports targets of beef, pork, and milk reduced by 25% by 2050 compared to 2010	Exports targets of beef, pork, and milk reduced by 25% by 2050 compared to 2010	For exports, we assume global shifts towards more sustainable diets and local production of animal products. Consequently, we assume that milk, pork, and beef exports will decrease by 25%.
<b>5. Food</b>	<b>5.1)</b> Average dietary composition	By 2050, the average daily calorie consumption per capita will be 3,193 kcal and composed of 25% cereals, 9% dairy, 10% red meat, 3% other meat, 21% oil and fat, 12% sugar, 5% fruits and vegetables, 0.4% pulses, 2% nuts, 3% roots and tubers	By 2050, the average daily calorie consumption per capita will be 3,193 kcal and composed of 25% cereals, 9% dairy, 8% red meat, 4% other meat, 23% oil and fat, 10% sugar, 5% fruits, and vegetables, 0.5% pulses, 2% nuts, 3% roots and tubers	By 2050, the average daily calorie consumption per capita will be 2,348 kcal and composed of 29% cereals, 5% dairy, 1% red meat, 4% other meat, 16% oil and fat, 4% sugar, 7% fruits and vegetables, 10% pulses, 10% nuts, 1% roots and tubers	<a href="#">The National Reduction and Innovation Strategy for Sugar, Fats, and Salt in Processed Foods</a>

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	<b>5.2)</b> Share of food consumption which is wasted at household level	Reduces by 50% by 2050 compared to 2010	Reduces by 50% by 2030 compared to 2010	Reduces by 50% by 2030 compared to 2010	<a href="#">National Food Waste Reduction Strategy</a>
<b>6. Biofuels</b>	<b>6.1)</b> Targets on biofuel and/or other bioenergy use	Biofuel demand accounts for 53% of total rape production and 3% of total wheat production by 2025	No crops will be used for biofuel after 2030	Same as CT	National pathway: in January 2023 <a href="#">the Federal Minister of Agriculture proposed a tentative plan</a> to reduce the share of biofuel to 0% by 2030.
	<b>6.2)</b> Targets on other non-food use	-	-	-	-
<b>7. Water</b>	<b>7.1)</b> Irrigated crop area	No increase	Increase by 2% between 2020 and 2050	Increase by 5% between 2020 and 2050	We were not able to find quantitative projections. Qualitative statements indicate that more farmers aspire to irrigate their lands but may not get water rights due to water shortages in some regions. Rising irrigation costs expected in 2024 may reduce profitability. The prognosis is that the irrigated areas will increase at a slower pace, compared to previous years, only in a few Bundesländer. We used conservative values accordingly. Sources: <a href="#">Erträge sichern im Klimawandel: Landwirte haben stärker investiert. Agrarheute.</a> / <a href="#">Kosten für Bewässerung in Landwirtschaft steigen. Proplanta.</a> / <a href="#">Zur Zukunft der Bewässerung – Grundsatzbeitrag. Landwirtschaftskammer Niedersachsen.</a>