

The Humble Shoe Company: Impact and Environmental Performance Report

May 2021 Edition

The Humble Shoe Company (THSC) considers its environmental management, sustainability and innovation initiatives within the production process and 110% sustainability offset programs as fundamentals to our company's success. Since our first production in 2019, we, along with our supplier and manufacturing partners, have continued to improve our production processes and input materials for our shoes, in order to reduce overall waste and inputs required for production.

Additionally, we offset 110% of our environmental impact, as determined by [Life Cycle Assessment \(LCA\) studies](#) that are performed upon each new production of new product(s), through strategic support of organizations that carry out carbon offsets through reforestation, water restoration initiatives and plastic collection and recycling initiatives. With [89%](#) of consumers stating they want to see how companies benefit society and the environment, we are dedicated to providing the highest degree of transparency for our customers to empower them to live luxuriously, while protecting our Mother Earth.

Our latest Impact and Environmental Performance Report includes updated figures for production and associated offsets carried out in 2021, as of May 2021. This version also contains information regarding our social and community impact, as it relates to further industry impact, as more companies move toward more sustainable and environmentally-friendly vegan footwear and apparel production.

Ultimately, it is our mission to pave the way for a new model of sustainable economic development that can best serve all, including producers, customers, our environment and the future of life on Earth.

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2019

Environmental Footprint

All values related to energy, resource, waste flows and carbon emissions from The Humble Shoe Company products are calculated based on values determined under our various Life Cycle Assessment (LCA) studies. For each new product introduced into the market, a new product-specific study is conducted as part of a continuous LCA process, to determine the values seen below in Table 1. For all values seen in Table 1, we assume 100% of products are shipped from the manufacturing facility to our US distribution center via air freight, as this is currently our primary transportation method at this time. In total, 2,439 shoe pairs were produced in 2019, ranging across 16 styles.

Table 2 aggregates total values for the different variables based on the quantity of each footwear type that was produced.

Table 1. Estimated Energy, Resource, Waste Flows and Global Warming Potential (GWP) from 2019 Production and Distribution, Per Product

	Quantity (Pairs)	PED (MJ)	PERT (MJ)	PENRT (MJ)	HWD (KG)	NHWD (KG)	FW (m3)	GWP (KG CO2)
The Mule	100	18500	1800	16700	0.01720	52.50	63.10	1110.0
Ballerina	319	50083	4497.9	45298	0.04785	147.70	156.31	3014.6
The 95 Pump	230	38870	3611	35190	0.03657	106.49	123.28	2346.0
Slingback Flat	199	32636	2925.3	29651	0.03045	85.37	99.90	1970.1
75 Slingback	395	64385	5727.5	58460	0.06123	171.04	193.95	3886.8
95 Slingback	193	30880	2914.3	27985	0.02934	82.80	99.20	1876.0
Platform	42	10710	852.6	9828	0.00890	28.43	26.42	638.4
Loafer	37	8288	821.4	7474	0.00751	22.16	28.01	495.8
Slipper	192	43008	3993.6	38976	0.03974	114.43	132.10	2611.2
Derby	40	4960	788	4160	0.00716	23.00	25.16	560.0
Ankle Boot	175	29225	4970	24325	0.04393	150.50	157.74	3447.5
Rockerboot / Stefy	197	63040	5535.7	57524	0.05713	176.91	187.74	3841.5
Gaby	109	35970	3280.9	32700	0.02878	104.31	115.54	2169.1
Gisele	78	31980	2784.6	29172	0.02590	43.99	46.88	1918.8
Eliza	96	20064	1641.6	18432	0.01680	54.14	57.70	1200.0
Virginie	37	11026	984.2	10064	0.00910	30.97	34.52	673.4
Total	2439	493625	47128.6	445939	0.467576	1394.743	1547.534	31759.1

All values in Tables 1 and 2 are calculated based on data from our May 28, 2019 and September 11, 2019 [Life Cycle Assessments](#).

LEGEND

PED: Primary Energy Demand

PERT: Total Use of Renewable Primary Energy Resource

PENRT: Total Use of Non-Renewable Primary Energy Resources

FW: Net Use of Fresh Water

HWD: Hazardous Waste Disposed

NHWD: Non-Hazardous Waste Disposed

GWP: Global Warming Potential (determined by TRACI life cycle assessment methodology)

A E R A

Table 2. Estimated Energy, Resource, Waste Flows and Global Warming Potential (GWP) from 2019 Production and Distribution, Total

Quantity (Pairs)	2439 Pairs
PED (MJ)	493,625 MJ
PERT (MJ)	47,128.6 MJ
PENRT (MJ)	445,939 MJ
HWD (KG)	0.46 KG
NHWD (KG)	1394.7 KG
FW (m3)	1547 m3
GWP (KG CO2)	31,759 KG

Strategic Investments / Offsets For Environmental Footprint

Table 3. Strategic Investments From Our 110% Sustainability Promise (2019)

Offset Type	Quantity Offset	Description
Water (FW)	470,000 gallons	Through 470 water restoration certificates purchased through the Bonneville Environmental Foundation (BEF), The Humble Shoe Company offset the fresh water usage associated with production, as determined by the LCAs, by 110%. BEF works to restore water to critically dewatered rivers and streams to help restore ecological, recreational and economic health of critical freshwater ecosystems across the United States. Our specific certificates were allocated to the Middle Deschutes River between Bend and Lake Billy Chinook, Oregon.
Carbon Offsets via Reforestation (GWP)	2,073 trees (80,000 Kg CO ₂ .eq.) 33.91 credits used	2,073 trees were planted as part of the Green Trees Reforestation Project , which works to reforest marginal farmland in the Mississippi Alluvial Valley. Tree planting was purchased through 3Degrees and the quantity of trees planted is equivalent to offsetting 80,000 Kg CO ₂ . (80 credits, 1,000 Kg CO ₂ per credit). To meet our 110% offset threshold, 33.91 of our 80 credits were used to offset 2019 production. 46.09 credits remain outstanding after 2019.
Plastic	564 Kg	Through a purchase of Social Plastic Collection Credits, we offset our plastic use by 110% through Plastic Bank , which creates and enables recycling markets worldwide where people can exchange recovered plastic for monetary and nonmonetary rewards. To meet our 110% offset threshold, 564 Kg out of our 11,360 credits (in Kg) were used to offset 2019 production. 10,796 credits (in Kg) remain outstanding after 2019.

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Total Offset:

Through two Life Cycle Assessment studies and two Environmental Claims Validation studies¹ conducted by SCS Global Services, The Humble Shoe Company was certified as offsetting 110% of its climate footprint and is certified as Carbon Negative as such. The Humble Shoe Company was granted a carbon negative certification by SCS Global Services on May 29, 2019 that is now valid through April 7, 2022.

All offsets per year are calculated based on production in that year, regardless of quantity of units sold within that particular fiscal year, unless otherwise stated. Some offsets were purchased in larger quantities upfront, while others were purchased on a rolling / as needed basis.

Legend:

Met 100% Offset Target

Met 110% Offset Target

Did Not Meet Target

GWP = Global Warming Potential

FW = Fresh Water Consumption

Following our 110% offset investments that encompassed fresh water (FW), reforestation / carbon offsets (GWP) and plastic, our net environmental footprint when factoring in both production and offsetting investments can be seen below:

Fresh Water:

- Net use of fresh water: 1,547 cubic meters (408,674 gallons)
- Water restoration offset purchased via Bonneville Environmental Foundation: 1,779 cubic meters (470,000 gallons)
- **Net Restoration:** 232 cubic meters (61,326 gallons)

Carbon Emissions:

- CO₂ emissions: 30,830 Kg CO₂
- Purchased CO₂ offsets: 33,910 Kg CO₂ (33.91 credits)
 - *A credit equivalent to 80,000 Kg CO₂ (80 credits) was purchased in 2019, from which credits still remain available and in use to date. Net carbon impact is only calculated for 2019.*

¹ In 2019, the Humble Shoe Company's life cycle assessments (LCAs) were carried out by SCS Global Services on May 28, 2019 and September 11, 2019. The two environmental claims validation studies were completed on June 3, 2019 and September 16, 2019. The purpose of environmental claims validation studies, which are complementary to LCAs, is to quantify the cradle-to-delivered product life cycle and associated required carbon offset purchases of 110% based on determined greenhouse gas impacts of our products. Links to all LCAs and environmental claims studies can be found on our website [here](#).

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- **Net CO₂ Impact:** - 3,080 Kg CO₂

Plastic:

- Net use of plastic: 511 Kg
- Plastic offsets through Plastic Bank: 564 Kg
- **Net Plastic Reduction:** 53 Kg

Reduced Environmental Impact Through Sourcing And Production, Compared To Standard Market Competitors

The majority of luxury footwear brands worldwide continue to use animal leather and other animal products as primary inputs to their footwear products.

Given that the input materials selected, and the associated production and manufacturing processes of such inputs represent the category of greatest environmental impact associated with luxury shoe production, the [Higg MSI](#) (Material Sustainability Index) provides additional insight into differing impacts of the main materials used in our shoe production compared to industry standards.

Based on Higg data, the use of PU synthetic leather, which for our products primarily come through its use in the outer material and lining components, reduces freshwater usage by 95.8%, while PU synthetic leather also has a lower environmental impact on all other impact indicators. Eutrophication, for example, which is caused by excess nutrients that often emanate from manure associated with animal feed operations², is reduced by 97.7% through the strategic replacement of traditional cow leather with PU synthetic leather. Additionally, Global Warming Potential is reduced by 77.2%, chemistry (ecotoxicity³) is reduced by 78.8% and fossil fuel depletion by 18.6%.

Social / Community Impact

The impact of our company and products ranges far beyond the direct tangible outcomes of our 110% offset programs. With 165 pairs sold in 2019 and press received from large-scale content platforms such as [Barron's](#) and [Forbes](#), our greatest social and community impact lies in inspiring a more sustainable future in an industry in desperate need of it. Through the efficiencies we continue to build upon, related to creating bio-based vegan products, we are not only showing the path for how apparel businesses can reduce their environmental footprint, but are also inspiring our community and customers to take part in that change, far beyond our products. As a PETA-Approved vegan brand, we believe strongly in the power of the vegan movement across all industries, and see our contribution in this realm as being pivotal to inspiring more people worldwide to switch toward a vegan lifestyle, given that, as concluded by

² <https://www.wri.org/our-work/project/eutrophication-and-hypoxia/sources-eutrophication>

³ For greater details regarding the Higg MSI's chemistry impact framework, see page 42 of the "[Higg Materials Sustainability Index \(MSI\) Methodology](#)" published version from July 31, 2020.

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Oxford University research Joseph Poore (2018), adopting a vegan diet is “the single biggest way to reduce your impact on planet Earth.”⁴

2020

Environmental Footprint

In 2020, 252 additional pairs of footwear across six existing styles were produced. All energy, resource, waste flows and carbon emissions from The Humble Shoe Company products produced in 2020 emanated from our 2019 LCAs, as all pairs produced in 2020 already maintained a Life Cycle Assessment in 2019. For all values seen in Table 4, we continue to assume 100% of products are shipped from the manufacturing facility to our US distribution center via air freight, as this remains our primary transportation method at this time. In total, 252 shoe pairs were produced in 2020, ranging across six styles.

Table 4. Estimated Energy, Resource, Waste Flows and Global Warming Potential (GWP) from 2020 Production and Distribution, Per Product

	Quantity (Pairs)	PED (MJ)	PERT (MJ)	PENRT (MJ)	HWD (KG)	NHWD (KG)	FW (m3)	GWP (KG CO2)
The Mule	10	1840	179	1670	0.00171	5.24	5.20	104.0
The 95 Pump	84	14196	1318.8	12852	0.01319	38.89	46.20	845.9
Slingback Flat	38	6270	554.8	5700	0.00574	16.45	19.00	374.3
75 Slingback	58	9512	846.8	8642	0.00882	25.46	28.77	569.6
95 Slingback	48	7632	724.8	6912	0.00706	20.50	24.58	456.0
Gisele	14	2716	487.2	2226	0.00382	16.24	13.44	322.0
Total	252	42166	4111.4	38002	0.04033	122.784	137.184	2671.7

All values in Tables 4 and 5 are calculated based on data from our May 28, 2019 and September 11, 2019 [Life Cycle Assessments](#).

LEGEND

PED: Primary Energy Demand
 PERT: Total Use of Renewable Primary Energy Resource
 PENRT: Total Use of Non-Renewable Primary Energy Resources
 FW: Net Use of Fresh Water
 HWD: Hazardous Waste Disposed
 NHWD: Non-Hazardous Waste Disposed
 GWP: Global Warming Potential (determined by TRACI life cycle assessment methodology)

⁴ Published in the Journal *Science* by J. Poore and T. Nemecek (2018), “Reducing food’s environmental impact through producers and consumers,” the impact of various food industries on the planet was analyzed by assessing data from 40,000 farms across 119 countries. See the [research study here](#).

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Table 5. Estimated Energy, Resource, Waste Flows and Global Warming Potential (GWP) from 2020 Production and Distribution, Total

Quantity (Pairs)	252 Pairs
PED (MJ)	42,166 MJ
PERT (MJ)	4,111.4 MJ
PENRT (MJ)	38,002 MJ
HWD (KG)	0.04 KG
NHWD (KG)	122.8 KG
FW (m3)	137.2 m3
GWP (KG CO2)	2,672 KG

Strategic investments, as shown in Table 6, represent 110% offsets of our environmental impact across freshwater use, carbon emissions and plastic usage.

Strategic Investments / Offsets For Environmental Footprint

Table 6. Strategic Investments From Our 110% Sustainability Promise (2020)

Offset Type	Quantity Offset	Description
Water (FW)	40,000 gallons	Through an additional 40 water restoration certificates purchased through the Bonneville Environmental Foundation (BEF), The Humble Shoe Company offset the fresh water usage associated with production, as determined by the LCA, by 110% in 2020. BEF works to restore water to critically dewatered rivers and streams to help restore ecological, recreational and economic health of critical freshwater ecosystems across the United States. Our specific certificates were allocated to the Middle Deschutes River between Bend and Lake Billy Chinook, Oregon.
Carbon Offsets via Reforestation (GWP)	2.94 credits used	2.94 credits were allocated from our 2019 carbon offset reforestation purchase through 3Degrees, in support of the Green Trees Reforestation Project , which works to reforest marginal farmland in the Mississippi Alluvial Valley. Trees were purchased through 3Degrees and the quantity of trees is equivalent to 80,000 Kg CO ₂ . (80 credits, 1,000 Kg CO ₂ per credit). To meet our 110% offset threshold, 2.94 of our 80 credits were used to offset 2020 production. 43.15 credits remain outstanding after 2020.
Plastic	39 Kg	Through a purchase of Social Plastic Collection Credits, we offset our plastic used by 110% through Plastic Bank , which creates and enables recycling markets worldwide where people can exchange recovered plastic for monetary and nonmonetary rewards. To meet our 110% offset threshold, 39 Kg out of our remaining 10,796 credits (in Kg) were used to offset 2020 production. 10,757 credits (in Kg) remain outstanding after 2020.

A E R A

Legend:

Met 100% Offset Target

Met 110% Offset Target

Did Not Meet Target

FW = Fresh Water Consumption

GWP = Global Warming Potential

Following our 110% offset investments that encompassed water (FW), reforestation / carbon offsets (GWP) and plastic, our net environmental footprint when factoring in both production and offsetting investments for 2020 can be seen below:

Fresh Water:

- Net use of fresh water: 137.18 cubic meters (36,363 gallons)
- Water restoration offset purchased via Bonneville Environmental Foundation: 151.41 cubic meters (40,000 gallons)
- **Net Restoration:** 14.23 cubic meters (3,759 gallons)

Carbon Emissions:

- CO₂ emissions: 2,672 Kg CO₂
- Purchased CO₂ offsets: 2,940 Kg CO₂ (2.94 credits)
 - *2.94 credits were allocated from the remaining 46.09 credits available to offset 2020 production by 110%. 43.15 credits remained after 2020.*
- **Net CO₂ Impact:** - 268 Kg CO₂

Plastic:

- Net use of plastic: 35 Kg
- Plastic offsets through the Plastic Bank: 39 Kg
- **Net Plastic Reduction:** 4 Kg

Social / Community Impact

While 368 pairs were sold in 2020, THSC's impact continued to grow, with increased exposure across various publications, including [Vogue](#). Ultimately, our products help inspire people worldwide to see they can live a sustainable and vegan lifestyle that is good for the planet and equally luxurious, while inspiring others to do the same.

2021 [as of May 2021]

Environmental Footprint

All values related to energy, resource, waste flows and carbon emissions from The Humble Shoe Company products are calculated based on values determined under our various Life Cycle Assessment (LCA) studies. For each new product introduced into the market, a new product-specific study is conducted as part of continuous LCA strategy, to determine the values seen below in Table 7. For all values seen in Table 7, we continue to assume 100% of products are shipped from the manufacturing facility to our US distribution center via air freight, as this continues to be our primary transportation method at this time. In total, 490 shoe pairs have been produced in 2021 (as of May 2021), ranging across six styles, four of which are new styles introduced in our [2021 LCA](#).

Table 8 aggregates total values for the different variables based on the quantity of each footwear type that was produced.

Table 7. Estimated Energy, Resource, Waste Flows and Global Warming Potential (GWP) from 2021 Production and Distribution, Per Product [as of May 2021]

	<u>Quantity (Pairs)</u>	<u>PED (MJ)</u>	<u>PERT (MJ)</u>	<u>PENRT (MJ)</u>	<u>HWD (KG)</u>	<u>NHWD (KG)</u>	<u>FW (m3)</u>	<u>GWP (KG CO2)</u>
Mina	248	48608	3819.2	44640	0.04018	129.7	134.66	2911.5
Raffaella	19	4541	279.3	4275	0.00321	11.7	11.36	268.1
Patty	91	21112	1310.4	19838	0.01674	53.3	53.05	1248.5
Monica	19	3895	311.6	3591	0.00350	10.7	10.26	238.6
Audrey (Slingback Flat)	44	7260	642.4	6600	0.00664	19.1	21.82	445.3
Sally (75 Slingback)	69	11316	1007.4	10281	0.01049	30.3	34.22	688.6
Total	490	96732	7370.3	89225	0.080759	254.736	265.387	5800.67

All values in Tables 7 and 8 are calculated based on data from our [Life Cycle Assessments](#).

LEGEND

PED: Primary Energy Demand

PERT: Total Use of Renewable Primary Energy Resource

PENRT: Total Use of Non-Renewable Primary Energy Resources

FW: Net Use of Fresh Water

HWD: Hazardous Waste Disposed

NHWD: Non-Hazardous Waste Disposed

GWP: Global Warming Potential (determined by TRACI life cycle assessment methodology)

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Table 8. Estimated Energy, Resource, Waste Flows and Global Warming Potential (GWP) from 2021 Production and Distribution, Total [as of May 2021]

Quantity (Pairs)	490 Pairs
PED (MJ)	96,732 MJ
PERT (MJ)	7,370 MJ
PENRT (MJ)	89,225 MJ
HWD (KG)	0.081 KG
NHWD (KG)	254.7 KG
FW (m3)	265 m3
GWP (KG CO2)	5,801 KG

Strategic Investments / Offsets For Environmental Footprint

Table 9. Strategic Investments From Our 110% Sustainability Promise (2021, as of May 2021)

Offset Type	Quantity Offset	Description
Water (FW)	112,000 gallons	Through 112 water restoration certificates purchased through the Bonneville Environmental Foundation (BEF), The Humble Shoe Company offset the fresh water usage associated with production, as determined by the LCA, by 110%. BEF works to restore water to critically dewatered rivers and streams to help restore ecological, recreational and economic health of critical freshwater ecosystems across the United States. Our specific certificates were allocated to the Middle Deschutes River between Bend and Lake Billy Chinook, Oregon.
Carbon Offsets via Reforestation (GWP)	1 credit used	2,073 trees were planted as part of the Green Trees Reforestation Project , which works to reforest marginal farmland in the Mississippi Alluvial Valley. Trees were purchased through 3Degrees and the quantity of trees is equivalent to 80,000 Kg CO ₂ . (80 credits, 1,000 Kg CO ₂ per credit). To meet our 110% offset threshold, 1.00 of our remaining 43.15 credits were used to offset 2021 production to date. 42.15 credits remain available to be allocated for future production offsets.
Plastic	260 Kg	Through a purchase of Social Plastic Collection Credits, we offset our plastic used by 110% through the Plastic Bank , which creates and enables recycling markets worldwide where people can exchange recovered plastic for monetary and nonmonetary rewards. To meet our 110% offset threshold, 260 Kg out of our remaining 10,757 credits (in Kg) were used to offset 2021 production, as of May 2021. 10,496 credits (in Kg) remain outstanding to date.

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Total Offset:

Through a new Life Cycle Assessment study and a new Environmental Claims Validation study⁵ conducted by SCS Global Services in April 2021, The Humble Shoe Company was certified as offsetting 110% of its climate footprint and remains certified as Carbon Negative as such. The Humble Shoe Company was originally granted a carbon negative certification by SCS Global Services on May 29, 2019 that is valid through April 7, 2022.

Legend:

Met 100% Offset Target
Met 110% Offset Target
Did Not Meet Target

GWP = Global Warming Potential
FW = Fresh Water Consumption

All offsets per year are calculated based on production in that year, regardless of quantity of units sold within that particular fiscal year, unless otherwise stated. Some offsets were purchased in larger quantities upfront while others are purchased on a rolling / as needed basis.

Following our 110% offset investments that encompassed water (FW), reforestation / carbon offsets (GWP) and plastic, our net environmental footprint when factoring in both production and offsetting investments can be seen below:

Fresh Water:

- Net use of fresh water: 385.43 cubic meters (101,818 gallons)
- Water restoration offset purchased via Bonneville Environmental Foundation: 423.97 cubic meters (112,000 gallons)
- **Net Restoration:** 38.54 cubic meters (10,182 gallons)

Carbon Emissions:

- CO₂ emissions: 909 Kg CO₂
- Used CO₂ offsets: 1000 Kg CO₂ (credits were used from outstanding credit balance of 43.15 credits that were remaining prior to 2021; 1,000 Kg CO₂ per credit
 - Remaining credits (in Kg CO₂): 42.15
- **Net CO₂ Impact:** - 91 Kg CO₂

⁵ In 2021, the Humble Shoe Company's life cycle assessment (LCA) was carried out by SCS Global Services on April 7, 2021, which included production for 4 new footwear lines that were introduced and produced. The subsequent environmental claims validation study was also completed on April 7, 2021. Links to all LCAs and environmental claims studies can be found on our website [here](#).

Plastic:

- Net use of plastic: 194 Kg
- Plastic offsets through Plastic Bank: 213 Kg
- **Net Plastic Reduction: 17 Kg**

Social / Community Impact

As we continue to grow in 2021, our target sales figure is 1,700 pairs. The message that a sustainable and vegan lifestyle can also be luxurious is continuing to grow, as evidenced by our recent publications in [The Wall Street Journal](#) and others. Given the immensely deleterious toll of worldwide animal agriculture on our environment⁶, on impacts including water pollution, fresh water availability, greenhouse gas emissions, marine life and more, we measure our impact on the degree to which we inspire more people to live a more sustainable and healthful life, not only for themselves, but for the future of humanity and all life on this Earth. Additionally, the growth of more companies adopting sustainable vegan shoes into their business models also points to the changes we have helped to foster in the industry, most notably, with the recent announcement by [Vans](#) of their launch of 4 new sustainable vegan shoes as part of their Eco Theory collection.

Additionally, H&M's May 2021 launch of the [Higg Index Sustainability Profile](#) for various products across the EU and US markets shows growth in apparel companies' willingness to communicate their products' environmental impact with customers in a clear and transparent way. For these products, customers see detailed information related to water use, global warming, fossil fuel usage and water consumption.

⁶ While the last [UN study](#) on the relative effect of animal agriculture concluded 14.5% of all greenhouse gas emissions emanated from animal agriculture (2004), more recent and comprehensive studies that include contributions from land changes needed for livestock development (e.g. deforestation and loss of forests), such as the study conducted by [The World Watch Institute](#), concluded 51% of total annual GHG emissions being attributable to livestock production. Many agree that this updated estimate is more reliable, as the original 2004 UN report did not include animal agriculture effects on deforestation and loss of forests, both of which are pivotal to understanding true environmental impact across a range of factors.