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Re-anchoring CBDR-RC in Human Development and SDGs for Climate Justice

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RE-ANCHORING CBDR-RC IN HUMAN DEVELOPMENT AND SDGS FOR CLIMATE JUSTICE

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Abstract

The year 2015 marked a pivotal moment for global sustainability with the adoption of the Paris Agreement and the 2030 Agenda for Sustainable Development. Yet, the balance between climate ambition and development remains uneven. The United Nations Framework Convention on Climate Change (UNFCCC), through Articles 3 and 4, enshrines the principle of Common but Differentiated Responsibilities and Respective Capabilities (CBDR-RC), linking equity to sustainable development and the means of implementation. This paper examines the interlinkages between human development and energy consumption to operationalize CBDR-RC in the contemporary context. It proposes an energy-consumption- and Human Development Index (HDI)-based zoning framework as a tool for applying CBDR-RC in practice and argues for a renewed multilateral compact that bridges the gap between the Sustainable Development Goals (SDGs) and global climate objectives. This zoning system can serve as a foundation for designing equitable energy and climate policies by linking HDI improvements with sustainable energy-use thresholds, thereby forming the empirical basis of a *Zone of Climate Justice*.

Keywords

sustainable development, climate justice, energy consumption, equity, human development, CBDR-RC

List of Acronyms

CBDR-RC	Common but Differentiated Responsibilities and Respective Capabilities
G20	Group of Twenty
HDI	Human Development Index
kWh	Kilowatt-hour
SDGs	Sustainable Development Goals
TERI	The Energy and Resources Institute
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNU	United Nations University

1. Introduction

The year 2015 was a watershed in the evolution of global sustainability. It marked not only the adoption of the Paris Agreement but also the 2030 Agenda for Sustainable Development. Yet, in the decade since, global attention has been disproportionately drawn toward climate change, while the Sustainable Development Goals (SDGs) have receded into the background.

The narrow framing of climate ambition—centred almost entirely on emissions—has neglected the deeper structural question that Article 4 of the United Nations Framework Convention on Climate Change (UNFCCC) raised more than three decades ago: how to protect the climate system "on the basis of equity and in accordance with common but differentiated responsibilities and respective capabilities," while recognizing that "economic development is essential for adopting measures to address climate change."

At its core, the UNFCCC envisioned sustainable development not as a by-product of climate action, but as its foundation. The Rio Conventions on climate change, biodiversity, and desertification were born of a single conviction at the 1992 Earth Summit: that human progress and planetary stability must advance together. Thirty-three years later, climate negotiations have evolved into a specialised and technocratic exercise—disconnected from the universal aspirations of the SDGs and from the lived realities of billions still deprived of energy, infrastructure, and opportunity.

The Human Development Index (HDI) captures progress across three fundamental dimensions: health (SDG 3), education (SDG 4), and standard of living (SDG 8) (UNDP, 2025). Empirically, HDI correlates strongly with energy access and electricity consumption. For developing economies, this correlation coefficient for the top ten energy-consuming countries has remained consistent at 0.75 since 1990. A study of 60 countries found that HDI rises with energy consumption—particularly around 4,000 kWh per person annually—corresponding to an HDI of 0.9 (Pasternak, 2000). For developed countries, the correlation has gradually declined, while for developing countries, it remains high. Energy consumption, particularly electricity, continues to play a critical role in enhancing human development. Moreover, as energy consumption correlates closely with emissions, the implications for climate action become increasingly salient.

This evidence underscores a moral and developmental truth: energy poverty is human poverty. Without reliable and affordable power, nations cannot deliver healthcare, education, or livelihoods. Yet, the dominant global narrative continues to treat energy consumption primarily as a problem rather than as a precondition for a basic quality of life.

2. 2000-Watt Lifeline Energy Consumption and Equity

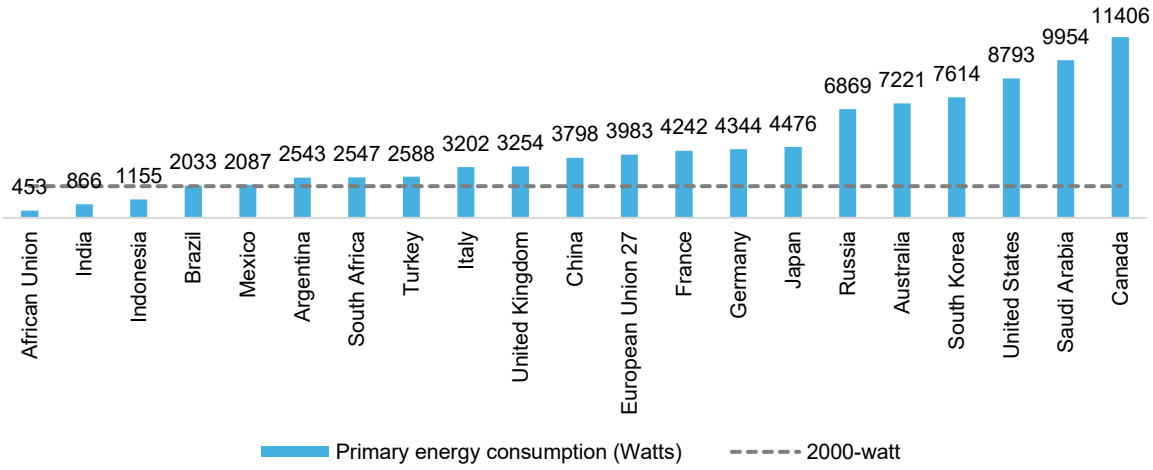
The '2000-Watt Society' is a concept designed to address sustainable and equitable energy consumption (Bretschger et al., 2010; Imboden, 2000; Saran & Sharan, 2015; UNU, 2009; Zulliger, 1999). The concept gained prominence due to increasing energy demand, and the linkages to emissions, which have highlighted the need for sustainable energy solutions. It advocates limiting energy use per person per year to approximately 2000 watts (48 kWh per day) while maintaining a high quality of life.

The 2000-Watt Society conceptual framework is built on three core principles of efficiency, sufficiency, and consistency. The concept can act as a reference point for energy consumption levels and SDG 7 (affordable and clean energy). The 2000-Watt Society concept strengthens SDG 7 by shifting focus from energy outputs to the quality and sufficiency of energy needed

to meet human well-being within sustainable limits. It offers a normative benchmark that links equitable access to energy with environmental responsibility, ensuring that "clean energy for all" also supports a dignified standard of living.

Figure 1 provides a comparative analysis of primary energy consumption across various countries and groupings of the G20 against the 2000-watt benchmark.

Figure 1: Per capita primary energy consumption in 2023 for G20 countries and groupings (Watts)



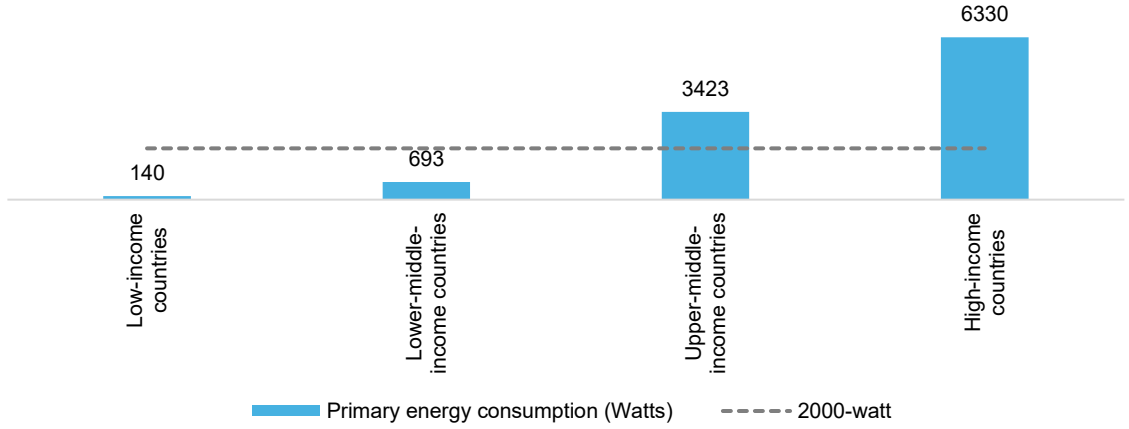
Source: Authors' calculation based on Our World in Data (2025)

The African continent consumes only 453 watts per person, and India 866 watts, reflecting the starkly low energy access in these regions. Indonesia (1,155 watts) remains below the benchmark of 2,000 watts. Brazil (2,033 watts), Mexico (2,087 watts), Argentina (2,543 watts), South Africa (2,547 watts), and Turkey (2,588 watts) hover around the 2,000-watt target. Further up the scale, Italy (3,202 watts) and the United Kingdom (3,254 watts) represent industrialized economies with moderately high energy use. China (3,798 watts) and the European Union (3,983 watts) sit in the same range. Among advanced industrial nations, France (4,242 watts), Germany (4,344 watts), and Japan (4,476 watts) stand roughly twice the sustainable benchmark. The contrast becomes more pronounced for high-energy economies: Russia (6,869 watts), Australia (7,221 watts), South Korea (7,614 watts), the United States (8,793 watts), Saudi Arabia (9,954 watts), and Canada (11,406 watts) all exceed the 2,000-watt threshold multiple times over. These figures highlight the disproportionate energy consumption of many industrialized countries in G20.

Figure 2 depicts the stark differences in primary energy consumption across countries classified by World Bank income levels: low-income, lower-middle-income, upper-middle-income, and high-income. The comparison is made in relation to the 2,000-watt target.

Primary energy consumption varies sharply across income groups, revealing deep global inequities. Low-income countries consume only 140 watts per person, reflecting severe energy poverty. Lower-middle-income countries reach 693 watts, indicating early industrial growth. Upper-middle-income economies average 3,423 watts, exceeding the sustainable 2,000-watt benchmark, while high-income countries consume an unsustainable 6,330 watts.

Figure 2: Per capita primary energy consumption in 2023 for income groupings (Watts)



Source: Calculation and depiction based on Our World in Data (2025)

The 2000-Watt Society can serve as a benchmark for sustainable consumption by promoting reduced energy use while maintaining a high quality of life. The 2000-Watt Society concept faces several challenges, including obstacles related to lifestyle changes and infrastructure limitations (Morosini, 2010; Scarinci et al., 2017). Despite these limitations, the 2000-Watt Society remains a vital framework for future energy consumption. Furthermore, considering the high correlation between energy consumption and human development, the 2000-watt target could serve as an indicator for climate justice.

3. Mapping Sustainable Energy Consumption and HDI for Operationalising CBDR-RC

In the global context of climate change, underconsumption and overconsumption of energy play a critical role in shaping the discourse on climate justice. Addressing both overconsumption and underconsumption of energy is crucial to achieving climate justice. Figure 3 depicts a framework for considering energy consumption and human development.

Figure 3: Mapping energy consumption against levels of human development for operationalising CBDR-RC

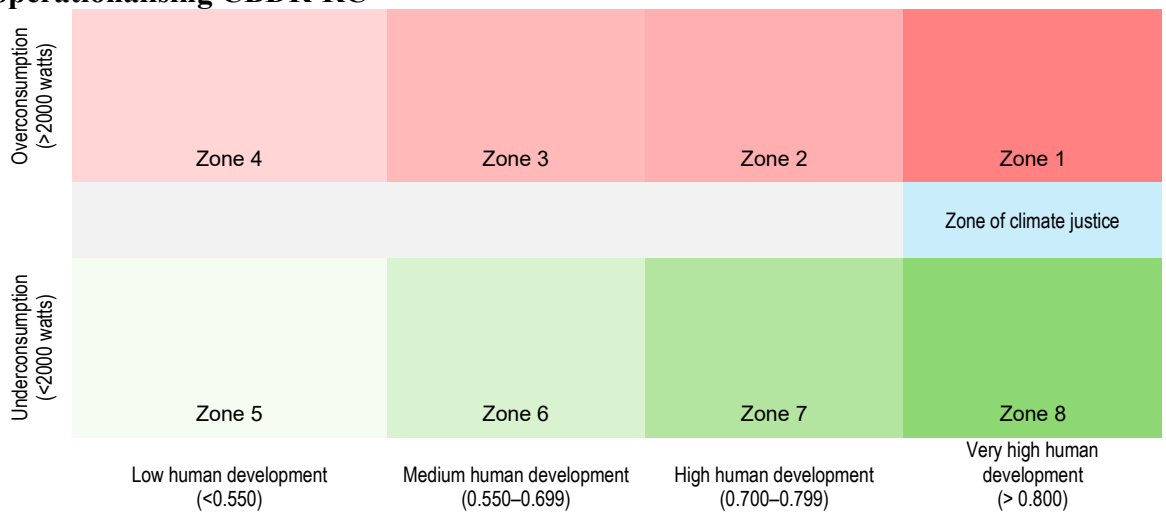
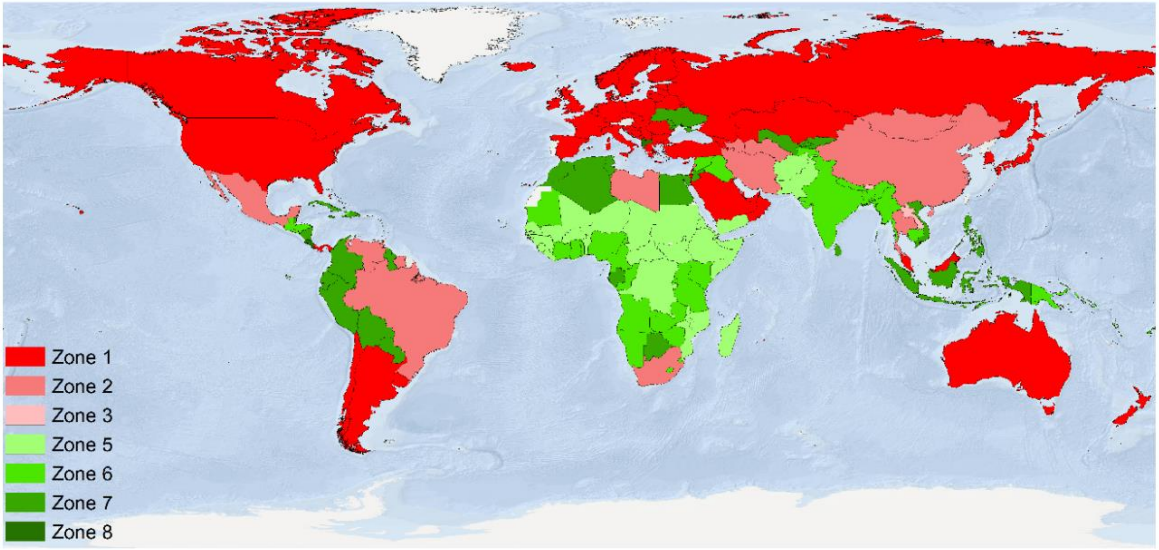


Figure 4 presents a cross-sectional mapping of 187 countries across eight zones based on their per capita primary energy consumption and Human Development Index (HDI) levels.

Figure 4: Zone mapping in energy consumption-HDI framework



Source: Calculation and depiction based on Our World in Data (2025) and UNDP (2025)

Zone 1 (68 countries) represents countries with very high human development coupled with high or excessive energy consumption. These include advanced industrial economies such as the United States, Canada, Australia, Japan, and several members of the European Union. These countries fall within the *Zone of Climate Obligation*, where deep decarbonisation and lifestyle changes must be prioritised, along with the provision of means of implementation to developing countries.

Zone 2 (15 countries) includes emerging economies such as China, Brazil, South Africa, and Indonesia, where human development is high, but energy intensity remains around sustainable thresholds. These represent the *Zone of Climate Transition*—countries that must balance the dual imperatives of advancing human development and decoupling growth from emissions.

Zone 3 (2 countries) contains two medium-HDI nations that are approaching sustainable limits but have not yet achieved balance between energy use and human development.

Zone 4 (no country) currently has no representation, showing that no country with low HDI has high energy consumption.

Zone 5 (26 countries) have countries with low human development and extremely low per capita energy consumption, mainly in Sub-Saharan Africa and South Asia. They face severe energy poverty and high climate vulnerability, requiring urgent international support.

Zone 6 (40 countries) includes lower-middle-income countries with medium human development such as India, Bangladesh, and Nigeria. These nations are progressing economically but may need to consume energy for achieving human development.

Zone 7 (33 countries) comprises countries with high HDI and moderate energy use but are still vulnerable countries that should aspire for high human development.

Zone 8 (3 countries) includes Albania, Costa Rica, and North Macedonia which have achieved very high HDI but have low levels of energy consumption.

Zone-wise classification of countries is depicted in Annexure 1. HDI and energy consumption (in watts) is depicted in Annexure 2.

Over time, developed countries should aim to transition from Zone 1 to sustainable levels of consumption, while developing countries need to progress from Zone 5 to sustainable levels of consumption and a high Human Development Index. This latter transition must be equitable and supported by means of implementation, such as finance, technology, and capacity building.

While there may be slight variations above or below the 2,000-watt threshold depending on geographical and climatic conditions, it can still serve as a useful benchmark for per capita energy consumption to help identify and guide progress toward a *Zone of Climate Justice*. This *Zone of Climate Justice* would be between Zone 1 and Zone 8 where countries achieve high human development and sustainable energy consumption. Similarly, zoning can be developed for climate vulnerability for informing climate adaptation related actions.

4. Discussion

Article 4 of the UNFCCC operationalised the principle of Common but Differentiated Responsibilities and Respective Capabilities (CBDR-RC) articulated in Article 3. It translated this ethical foundation into actionable commitments across mitigation, adaptation, and means of implementation. UNFCCC Annex I includes countries that were members of the OECD (Organisation for Economic Co-operation and Development) in 1992 and "Economies in Transition" (EITs) which refers to countries in Central and Eastern Europe transitioning from centrally planned to market economies (such as Russia, Ukraine, and Baltic States). Annex II is a subset of Annex I, comprising only OECD countries from 1992 and excluding EITs.

All Parties are obliged to prepare greenhouse gas inventories, adopt national programmes for mitigation and adaptation, and promote research, education, and public awareness. However, differentiation lies at the core: Annex I Parties must take the lead by adopting and reporting national emission-reduction measures, while Annex II Parties must provide new and additional financial resources and facilitate technology transfer to developing countries. These provisions reflect both historical responsibility and capacity to act. Crucially, CBDR-RC was also designed to ensure means of implementation through provisioning of finance and technology.

The evolution CBDR-RC reflects a trajectory—from static differentiation under the UNFCCC, to binding but binary obligations under the Kyoto Protocol, to universal participation with self-differentiation under the Paris Agreement. Since the Kyoto period is over, there have been attempts to have classify countries based on unequitable indicators such as aggregate emissions. The proposed HDI-Energy Zoning Framework advances this progression by transforming CBDR-RC into a dynamic, measurable, and goal-driven system. By linking human development and per-capita energy use, it enables continuous reclassification of countries based on responsibility, capability, and human development needs. Importantly, it also serves as an aspirational and normative framework, establishing a *Zone of Climate Justice* that all countries can ultimately strive toward—where sustainable energy use and high human development coexist. This approach bridges the divide between development, just transitions, and low carbon development. The metrics and zoning framework developed in this chapter, linking per-capita energy use and HDI, can further refine the practical application of CBDR-RC.

The framework thus translates CBDR-RC into a visual and analytical tool for equity, allowing policymakers to identify differentiated yet complementary trajectories—contraction for the

overconsuming and expansion for the underconsuming. This zoning system can serve as a basis for designing equitable energy and climate policies by linking HDI improvements with sustainable energy use thresholds, forming the empirical foundation of a *Zone of Climate Justice*.

5. Conclusion

If 2015 represented the promise of integration, 2025 marks the reckoning of fragmentation. The Paris Agreement bent the emissions curve but failed to bend the arc of inequality. A climate regime divorced from development cannot deliver justice, and development pathways divorced from planetary limits cannot deliver sustainability. The coming decade must therefore be guided by a simple proposition: every person deserves a fair share of energy for human development, within the Earth's ecological ceiling.

By incorporating HDI and per capita energy use into global climate negotiations, the international community can better target climate and SDG 7 policies. This approach would ensure that countries with higher levels of overconsumption take greater responsibility for reducing their environmental footprint, while countries suffering from underconsumption receive the support necessary to develop sustainably.

High-energy-consuming countries must reduce their consumption to more sustainable levels, while low-energy-consuming countries should be empowered to increase their consumption in a way that raises living standards but relies on low-carbon energy sources. This balancing act requires international cooperation, with the developed world taking responsibility for its historical emissions and supporting developing countries in their quest for sustainable growth.

Equity and just transitions will not be achieved through incremental pledges or market tweaks. It demands a re-anchoring of global cooperation in the principles that birthed it: equity, responsibility, and shared prosperity. As the world celebrates a decade since the adoption of the Paris Agreement and SDGs, it is time to reclaim that vision, one where climate action and sustainable development are not parallel tracks but a single, indivisible journey toward human and planetary wellbeing.

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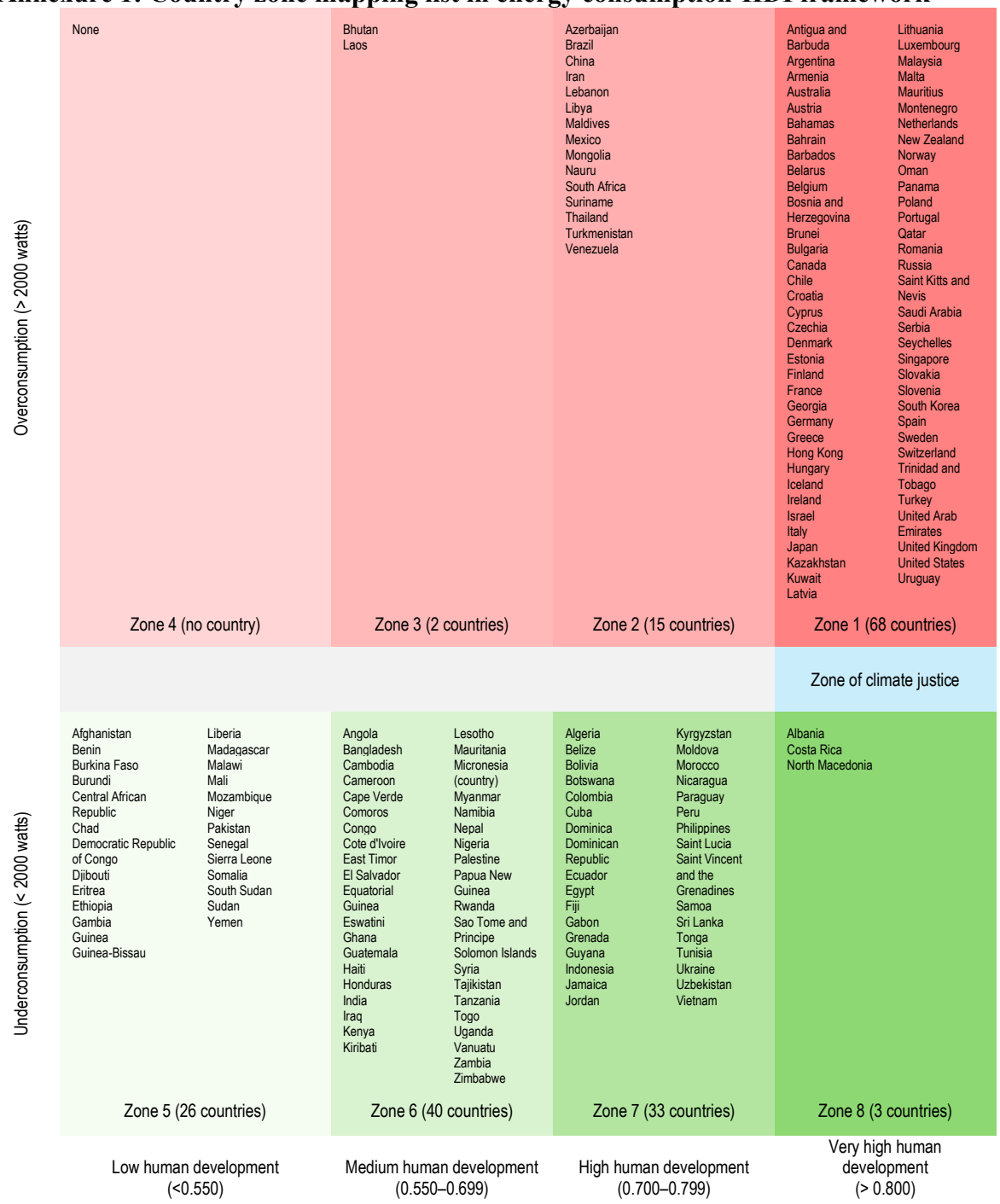
Annexure 1: Country zone mapping list in energy consumption-HDI framework



Source: Calculation and depiction based on Our World in Data (2025) and UNDP (2025)

Annexure 2: Human development index and energy consumption for mapped countries

#	Country	Category	Human Development Index	Consumption Type	Per Capita Energy Consumption (Watts)
1	Afghanistan	Low human development	0.50	< 2000 watts	77
2	Albania	Very high human development	0.81	< 2000 watts	1610
3	Algeria	High human development	0.76	< 2000 watts	1765
4	Angola	Medium human development	0.62	< 2000 watts	319
5	Antigua and Barbuda	Very high human development	0.85	> 2000 watts	3364
6	Argentina	Very high human development	0.87	> 2000 watts	2543
7	Armenia	Very high human development	0.81	> 2000 watts	2019
8	Australia	Very high human development	0.96	> 2000 watts	7221
9	Austria	Very high human development	0.93	> 2000 watts	4903
10	Azerbaijan	High human development	0.79	> 2000 watts	2498
11	Bahamas	Very high human development	0.82	> 2000 watts	4047
12	Bahrain	Very high human development	0.90	> 2000 watts	18392
13	Bangladesh	Medium human development	0.69	< 2000 watts	336
14	Barbados	Very high human development	0.81	> 2000 watts	2629
15	Belarus	Very high human development	0.82	> 2000 watts	3558
16	Belgium	Very high human development	0.95	> 2000 watts	6272
17	Belize	High human development	0.72	< 2000 watts	849
18	Benin	Low human development	0.52	< 2000 watts	284
19	Bhutan	Medium human development	0.70	> 2000 watts	3172
20	Bolivia	High human development	0.73	< 2000 watts	806
21	Bosnia and Herzegovina	Very high human development	0.80	> 2000 watts	2627
22	Botswana	High human development	0.73	< 2000 watts	1071
23	Brazil	High human development	0.79	> 2000 watts	2033
24	Brunei	Very high human development	0.84	> 2000 watts	11789
25	Bulgaria	Very high human development	0.85	> 2000 watts	3401
26	Burkina Faso	Low human development	0.46	< 2000 watts	103
27	Burundi	Low human development	0.44	< 2000 watts	34
28	Cambodia	Medium human development	0.61	< 2000 watts	461
29	Cameroon	Medium human development	0.59	< 2000 watts	182
30	Canada	Very high human development	0.94	> 2000 watts	11406
31	Cape Verde	Medium human development	0.67	< 2000 watts	828
32	Central African Republic	Low human development	0.41	< 2000 watts	33
33	Chad	Low human development	0.42	< 2000 watts	41
34	Chile	Very high human development	0.88	> 2000 watts	2931
35	China	High human development	0.80	> 2000 watts	3798
36	Colombia	High human development	0.79	< 2000 watts	1373
37	Comoros	Medium human development	0.60	< 2000 watts	187
38	Congo	Medium human development	0.65	< 2000 watts	268
39	Costa Rica	Very high human development	0.83	< 2000 watts	1365
40	Cote d'Ivoire	Medium human development	0.58	< 2000 watts	271
41	Croatia	Very high human development	0.89	> 2000 watts	2881
42	Cuba	High human development	0.76	< 2000 watts	1054
43	Cyprus	Very high human development	0.91	> 2000 watts	2908
44	Czechia	Very high human development	0.92	> 2000 watts	4605
45	Democratic Republic of Congo	Low human development	0.52	< 2000 watts	47
46	Denmark	Very high human development	0.96	> 2000 watts	3776
47	Djibouti	Low human development	0.51	< 2000 watts	318
48	Dominica	High human development	0.76	< 2000 watts	1204
49	Dominican Republic	High human development	0.78	< 2000 watts	1140
50	East Timor	Medium human development	0.63	< 2000 watts	184
51	Ecuador	High human development	0.78	< 2000 watts	1470
52	Egypt	High human development	0.75	< 2000 watts	1108

#	Country	Category	Human Development Index	Consumption Type	Per Capita Energy Consumption (Watts)
53	El Salvador	Medium human development	0.68	< 2000 watts	808
54	Equatorial Guinea	Medium human development	0.67	< 2000 watts	1415
55	Eritrea	Low human development	0.50	< 2000 watts	104
56	Estonia	Very high human development	0.91	> 2000 watts	4791
57	Eswatini	Medium human development	0.70	< 2000 watts	683
58	Ethiopia	Low human development	0.50	< 2000 watts	99
59	Fiji	High human development	0.73	< 2000 watts	1053
60	Finland	Very high human development	0.95	> 2000 watts	6838
61	France	Very high human development	0.92	> 2000 watts	4242
62	Gabon	High human development	0.73	< 2000 watts	914
63	Gambia	Low human development	0.52	< 2000 watts	106
64	Georgia	Very high human development	0.84	> 2000 watts	2378
65	Germany	Very high human development	0.96	> 2000 watts	4344
66	Ghana	Medium human development	0.63	< 2000 watts	398
67	Greece	Very high human development	0.91	> 2000 watts	3369
68	Grenada	High human development	0.79	< 2000 watts	1077
69	Guatemala	Medium human development	0.66	< 2000 watts	652
70	Guinea	Low human development	0.50	< 2000 watts	146
71	Guinea-Bissau	Low human development	0.51	< 2000 watts	77
72	Guyana	High human development	0.78	< 2000 watts	1563
73	Haiti	Medium human development	0.55	< 2000 watts	118
74	Honduras	Medium human development	0.65	< 2000 watts	581
75	Hong Kong	Very high human development	0.96	> 2000 watts	3824
76	Hungary	Very high human development	0.87	> 2000 watts	2843
77	Iceland	Very high human development	0.97	> 2000 watts	19112
78	India	Medium human development	0.69	< 2000 watts	866
79	Indonesia	High human development	0.73	< 2000 watts	1155
80	Iran	High human development	0.80	> 2000 watts	4520
81	Iraq	Medium human development	0.70	< 2000 watts	1750
82	Ireland	Very high human development	0.95	> 2000 watts	4081
83	Israel	Very high human development	0.92	> 2000 watts	3850
84	Italy	Very high human development	0.92	> 2000 watts	3202
85	Jamaica	High human development	0.72	< 2000 watts	1397
86	Japan	Very high human development	0.93	> 2000 watts	4476
87	Jordan	High human development	0.75	< 2000 watts	1048
88	Kazakhstan	Very high human development	0.84	> 2000 watts	4821
89	Kenya	Medium human development	0.63	< 2000 watts	223
90	Kiribati	Medium human development	0.64	< 2000 watts	279
91	Kuwait	Very high human development	0.85	> 2000 watts	11604
92	Kyrgyzstan	High human development	0.72	< 2000 watts	1059
93	Laos	Medium human development	0.62	> 2000 watts	2151
94	Latvia	Very high human development	0.89	> 2000 watts	2509
95	Lebanon	High human development	0.75	> 2000 watts	2150
96	Lesotho	Medium human development	0.55	< 2000 watts	243
97	Liberia	Low human development	0.51	< 2000 watts	122
98	Libya	High human development	0.72	> 2000 watts	3227
99	Lithuania	Very high human development	0.90	> 2000 watts	2785
100	Luxembourg	Very high human development	0.92	> 2000 watts	6546
101	Madagascar	Low human development	0.49	< 2000 watts	58
102	Malawi	Low human development	0.52	< 2000 watts	53
103	Malaysia	Very high human development	0.82	> 2000 watts	4443
104	Maldives	High human development	0.77	> 2000 watts	2017
105	Mali	Low human development	0.42	< 2000 watts	133
106	Malta	Very high human development	0.92	> 2000 watts	8485
107	Mauritania	Medium human development	0.56	< 2000 watts	455

#	Country	Category	Human Development Index	Consumption Type	Per Capita Energy Consumption (Watts)
108	Mauritius	Very high human development	0.81	> 2000 watts	2252
109	Mexico	High human development	0.79	> 2000 watts	2087
110	Micronesia (country)	Medium human development	0.62	< 2000 watts	729
111	Moldova	High human development	0.79	< 2000 watts	1827
112	Mongolia	High human development	0.75	> 2000 watts	2558
113	Montenegro	Very high human development	0.86	> 2000 watts	2162
114	Morocco	High human development	0.71	< 2000 watts	818
115	Mozambique	Low human development	0.49	< 2000 watts	256
116	Myanmar	Medium human development	0.61	< 2000 watts	350
117	Namibia	Medium human development	0.67	< 2000 watts	999
118	Nauru	High human development	0.70	> 2000 watts	2467
119	Nepal	Medium human development	0.62	< 2000 watts	184
120	Netherlands	Very high human development	0.96	> 2000 watts	6185
121	New Zealand	Very high human development	0.94	> 2000 watts	5221
122	Nicaragua	High human development	0.71	< 2000 watts	487
123	Niger	Low human development	0.42	< 2000 watts	47
124	Nigeria	Medium human development	0.56	< 2000 watts	291
125	North Macedonia	Very high human development	0.82	< 2000 watts	1835
126	Norway	Very high human development	0.97	> 2000 watts	11533
127	Oman	Very high human development	0.86	> 2000 watts	10571
128	Pakistan	Low human development	0.54	< 2000 watts	445
129	Palestine	Medium human development	0.67	< 2000 watts	457
130	Panama	Very high human development	0.84	> 2000 watts	3090
131	Papua New Guinea	Medium human development	0.58	< 2000 watts	242
132	Paraguay	High human development	0.76	< 2000 watts	1802
133	Peru	High human development	0.79	< 2000 watts	1143
134	Philippines	High human development	0.72	< 2000 watts	593
135	Poland	Very high human development	0.91	> 2000 watts	3182
136	Portugal	Very high human development	0.89	> 2000 watts	2935
137	Qatar	Very high human development	0.89	> 2000 watts	25896
138	Romania	Very high human development	0.85	> 2000 watts	2034
139	Russia	Very high human development	0.83	> 2000 watts	6869
140	Rwanda	Medium human development	0.58	< 2000 watts	54
141	Saint Kitts and Nevis	Very high human development	0.84	> 2000 watts	2386
142	Saint Lucia	High human development	0.75	< 2000 watts	1552
143	Saint Vincent and the Grenadines	High human development	0.80	< 2000 watts	941
144	Samoa	High human development	0.71	< 2000 watts	834
145	Sao Tome and Principe	Medium human development	0.64	< 2000 watts	378
146	Saudi Arabia	Very high human development	0.90	> 2000 watts	9954
147	Senegal	Low human development	0.53	< 2000 watts	286
148	Serbia	Very high human development	0.83	> 2000 watts	3155
149	Seychelles	Very high human development	0.85	> 2000 watts	5244
150	Sierra Leone	Low human development	0.47	< 2000 watts	56
151	Singapore	Very high human development	0.95	> 2000 watts	18296
152	Slovakia	Very high human development	0.88	> 2000 watts	3676
153	Slovenia	Very high human development	0.93	> 2000 watts	3901
154	Solomon Islands	Medium human development	0.58	< 2000 watts	216
155	Somalia	Low human development	0.40	< 2000 watts	25
156	South Africa	High human development	0.74	> 2000 watts	2547
157	South Korea	Very high human development	0.94	> 2000 watts	7614
158	South Sudan	Low human development	0.39	< 2000 watts	84
159	Spain	Very high human development	0.92	> 2000 watts	3778
160	Sri Lanka	High human development	0.78	< 2000 watts	518
161	Sudan	Low human development	0.51	< 2000 watts	265
162	Suriname	High human development	0.72	> 2000 watts	2316

#	Country	Category	Human Development Index	Consumption Type	Per Capita Energy Consumption (Watts)
163	Sweden	Very high human development	0.96	> 2000 watts	6427
164	Switzerland	Very high human development	0.97	> 2000 watts	4083
165	Syria	Medium human development	0.56	< 2000 watts	629
166	Tajikistan	Medium human development	0.69	< 2000 watts	876
167	Tanzania	Medium human development	0.56	< 2000 watts	104
168	Thailand	High human development	0.80	> 2000 watts	2211
169	Togo	Medium human development	0.57	< 2000 watts	127
170	Tonga	High human development	0.77	< 2000 watts	765
171	Trinidad and Tobago	Very high human development	0.81	> 2000 watts	12186
172	Tunisia	High human development	0.75	< 2000 watts	1087
173	Turkey	Very high human development	0.85	> 2000 watts	2588
174	Turkmenistan	High human development	0.76	> 2000 watts	7795
175	Uganda	Medium human development	0.58	< 2000 watts	88
176	Ukraine	High human development	0.78	< 2000 watts	1916
177	United Arab Emirates	Very high human development	0.94	> 2000 watts	17104
178	United Kingdom	Very high human development	0.95	> 2000 watts	3254
179	United States	Very high human development	0.94	> 2000 watts	8793
180	Uruguay	Very high human development	0.86	> 2000 watts	2091
181	Uzbekistan	High human development	0.74	< 2000 watts	1898
182	Vanuatu	Medium human development	0.62	< 2000 watts	338
183	Venezuela	High human development	0.71	> 2000 watts	2783
184	Vietnam	High human development	0.77	< 2000 watts	1569
185	Yemen	Low human development	0.47	< 2000 watts	123
186	Zambia	Medium human development	0.60	< 2000 watts	390
187	Zimbabwe	Medium human development	0.60	< 2000 watts	301

Source: Calculation and depiction based on Our World in Data (2025) and UNDP (2025)

World Sustainable Development Summit

The World Sustainable Development Summit (WSDS) is the annual flagship multistakeholder convening organized by The Energy and Resources Institute (TERI). Instituted in 2001, the Summit series has a legacy of over two decades in making 'sustainable development' a globally shared goal. As the only independently convened international summit on sustainable development and the environment based in the Global South, WSDS strives to provide long-term solutions for the benefit of global communities by assembling the world's most enlightened leaders and thinkers on a single platform. Since its inception, WSDS has convened 59 Heads of State and Government, 149 ministers, 13 Nobel Laureates, 2,158 business leaders, 3,730 speakers, and more than 41,000 delegates representing a diverse base of ecosystem actors from around the globe.

Act4Earth

The Act4Earth initiative, launched at the valedictory session of the 21st WSDS, builds on WSDS discussions to sustain engagement through research and dialogue. Its core objectives are to amplify the perspectives of Global South for equitable global governance and to accelerate progress towards climate and SDGs through knowledge-based dialogue. Act4Earth comprises two interlinked components—the COP Compass, which seeks to promote equitable multilateral mechanisms capable of driving paradigm shifts in climate action; and the SDG Charter, which focuses on identifying policy gaps and recommending measures to embed sustainability within governance frameworks, thereby advancing environmental, social, and economic outcomes.

Re-anchoring CBDR-RC in Human Development and SDGs for Climate Justice

Abstract

The year 2015 marked a pivotal moment for global sustainability with the adoption of the Paris Agreement and the 2030 Agenda for Sustainable Development. Yet, the balance between climate ambition and development remains uneven. The United Nations Framework Convention on Climate Change (UNFCCC), through Articles 3 and 4, enshrined the principle of Common but Differentiated Responsibilities and Respective Capabilities (CBDR-RC)—linking equity to sustainable development and the means of implementation. This paper examines the interlinkages between human development and energy consumption to operationalise CBDR-RC in the contemporary context. It proposes an energy-consumption- and Human Development Index (HDI)-based zoning framework as a tool for applying CBDR-RC in practice and argues for a renewed multilateral compact that bridges the gap between the Sustainable Development Goals (SDGs) and global climate objectives. This zoning system can serve as a basis for designing equitable energy and climate policies by linking HDI improvements with sustainable energy use thresholds, forming the empirical foundation of a "Zone of Climate Justice".

Keywords

sustainable development, climate justice, energy consumption, equity, human development, CBDR-RC

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