NOTE of OPPOSITION to EAST PARK SOLAR ENERGY PROJECT

This proposed development is fundamentally flawed for two main reasons:

First, the level of annual solar radiation in the UK is much too low to justify such a scheme. The World Bank's Energy Sector Management Assistance Program (ESMAP) report: "Global Photovoltaic Power Potential By Country", June 2020, ranked the UK 229th out of 230 countries/locations in its practical PV power potential. This is the result of the UK's very low level of solar irradiation. Figure 3.8 (three parts), pages 29-31 of this report sets this out clearly. The World Bank also set out in a two-page Country Factsheet for the UK detailed statistics to further emphasise the facts and their technical implications (copyright 2026). The crucial factor is that between mid-September and early April solar radiation levels are very low and resort has to be made to other fuel sources.

It may be noted that two nearby solar PV schemes – Little Staughton and Chelveston – have achieved rolling average annual load factors of 11.5% and 10.0% respectively. Few such schemes achieve over 12%, a further indication of lack of efficacy. Current highest performers are Arborfield (Wiltshire) at 13.7% and Triangle Farm, near Soham, Cambridgeshire at 13.5%. The claim that the East Park scheme would achieve a rolling average annual load factor of 12.4% seems optimistic.

Second, the placing of solar panels on good quality agricultural land in the UK is also flawed due to the UK's dependence on food imports (already about 48% of annual requirements). This import dependency is widely regarded as likely to increase markedly – some estimates claim by 23 percentage points – by 2050-2070.

The implications of 70% food import dependency, possibly within 25 years, should be of grave concern given potential geopolitical conflicts.

Climate change is likely to further constrain domestic food production. Instead of offering handouts to farmers and other landowners for low efficacy solar schemes UK energy and agricultural policies should incentivise effectively domestic food production now and in future.

The foregoing should therefore not be taken as indifference to issues of fossil fuel dependency, anthropogenic climate change, or the potential – for instance of small modular nuclear power reactors and wind generated grid electricity – for reducing fossil fuel dependency. More attention should be paid to raising wind energy's contribution to electricity generation through improved linkages to the national grid and rapid storage back-up.

This writer has [redacted] years of direct experience in energy and energy policy matters. He was the chief economist of Shell International [redacted] and subsequently holder of other senior planning and energy supply positions there; chairman of the policies committee of the World Renewable Energy Network; senior editor of the journal 'Energy Policy' (and currently on its supervisory board); Deputy Secretary General of the World Energy Council (where he spent ten years under attack from climate change sceptics for his concerns about climate change); and 25 years closely involved with the Intergovernmental Panel on Climate Change (and recipient of the IPCC's Certificate for contributing to its award of the Nobel Peace Prize in 2007). He is an Affiliate Professor of the ESCP Europe Business School.

Michael Jefferson Email address [redacted]

The above note is dated March 18th following the Planning Inspectorate's meeting in Bedford on March 17th. Except for some additional data on rolling average annual load factors for ground-based solar PV schemes in England, provided in yesterday's open floor hearing, it is unchanged from the original paper version.

ESMAP
Energy Sector Management Assistance Program

GLOBAL PHOTOVOLTAIC POWER POTENTIAL BY COUNTRY

JUNE 2020

THE WORLD BANK
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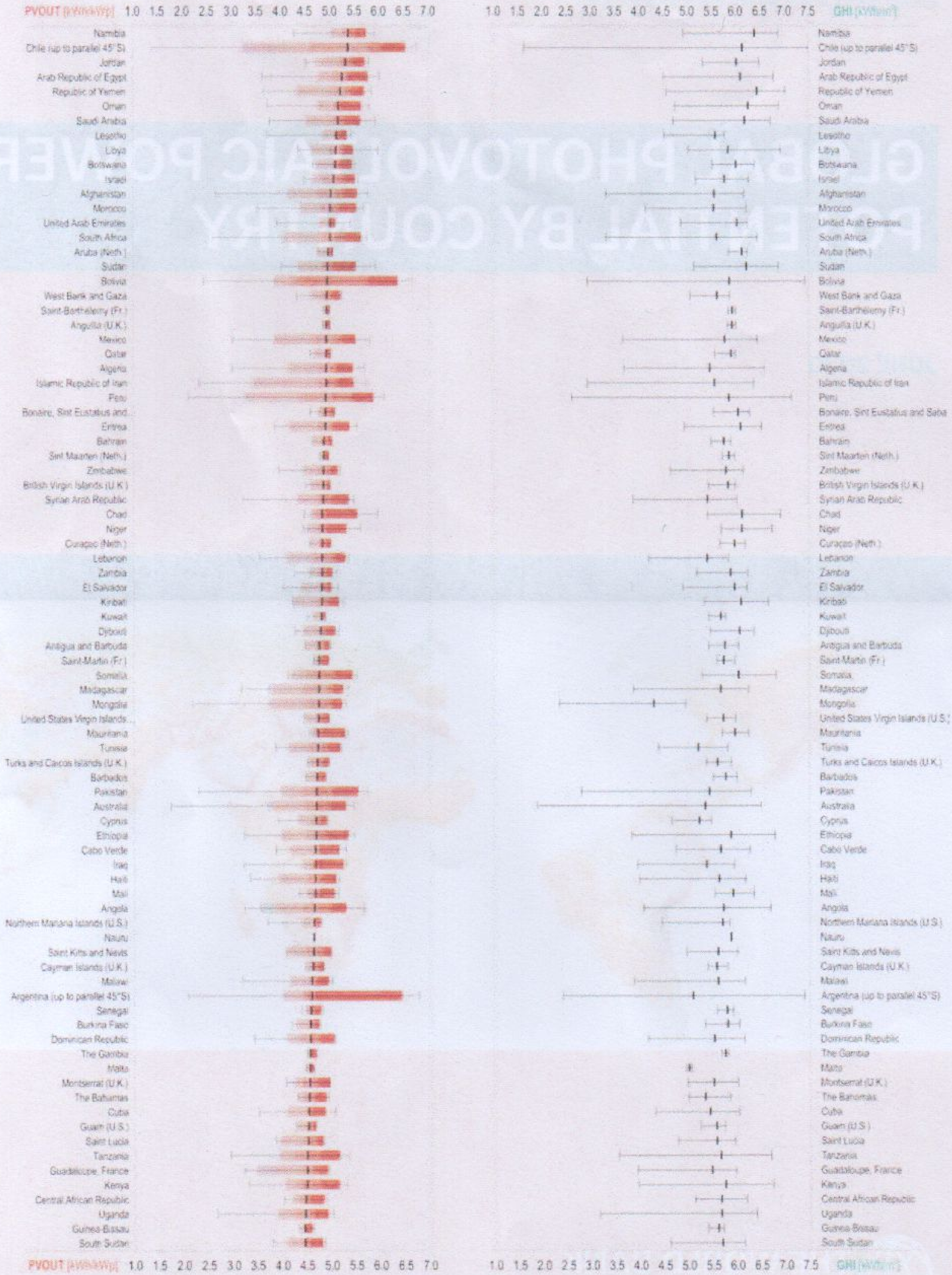
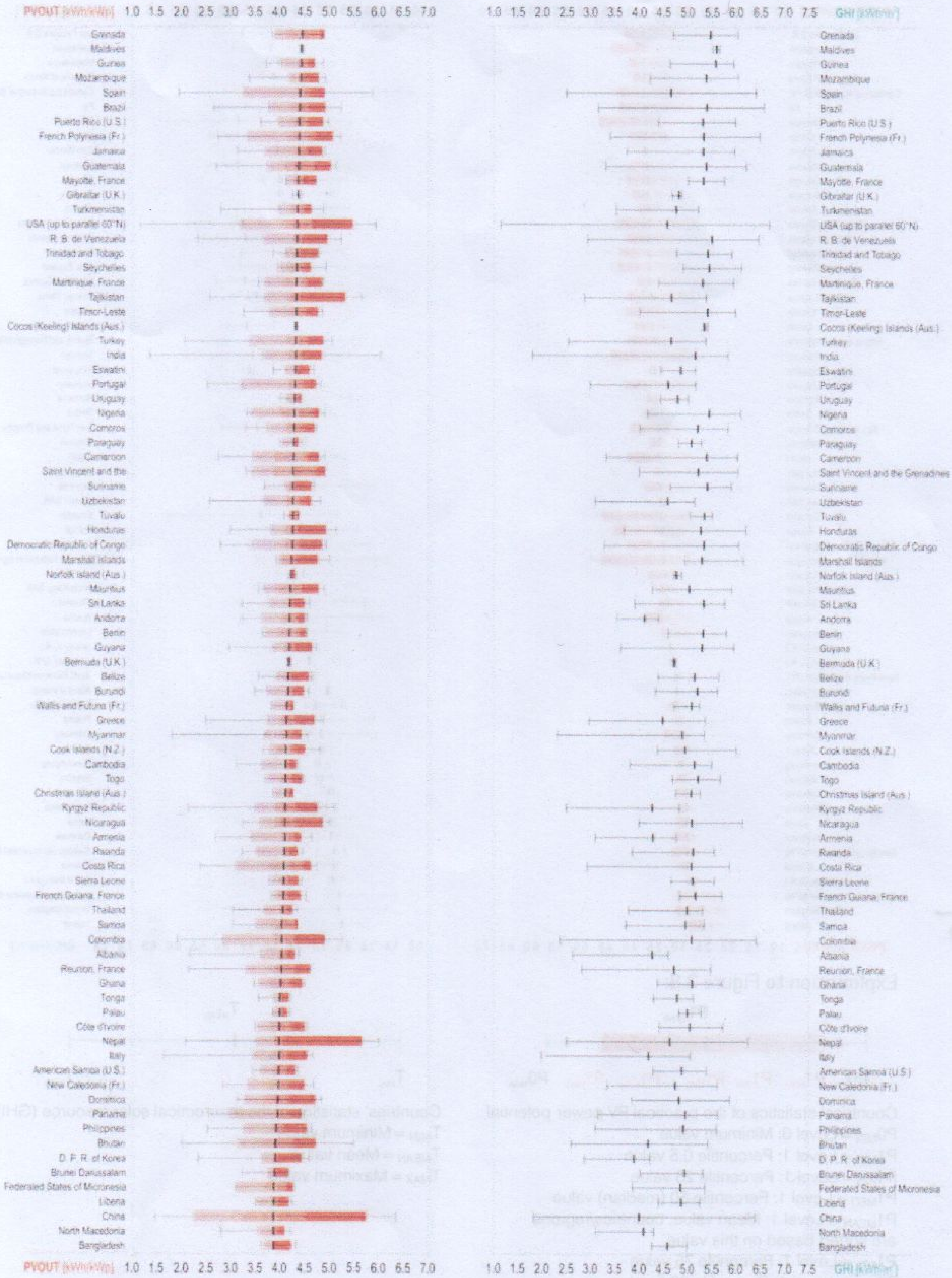
FIGURE 3.8 (PART 1 OF 3): RANKING OF SELECTED COUNTRIES, BASED ON ZONAL STATISTICS OF PRACTICAL PV POWER POTENTIAL



Source: Authors.

FIGURE 3.8 (PART 2 OF 3): RANKING OF SELECTED COUNTRIES, BASED ON ZONAL STATISTICS OF PRACTICAL PV POWER POTENTIAL



Source: Authors.

FIGURE 3.8 (PART 3 OF 3): RANKING OF SELECTED COUNTRIES, BASED ON ZONAL STATISTICS OF PRACTICAL PV POWER POTENTIAL

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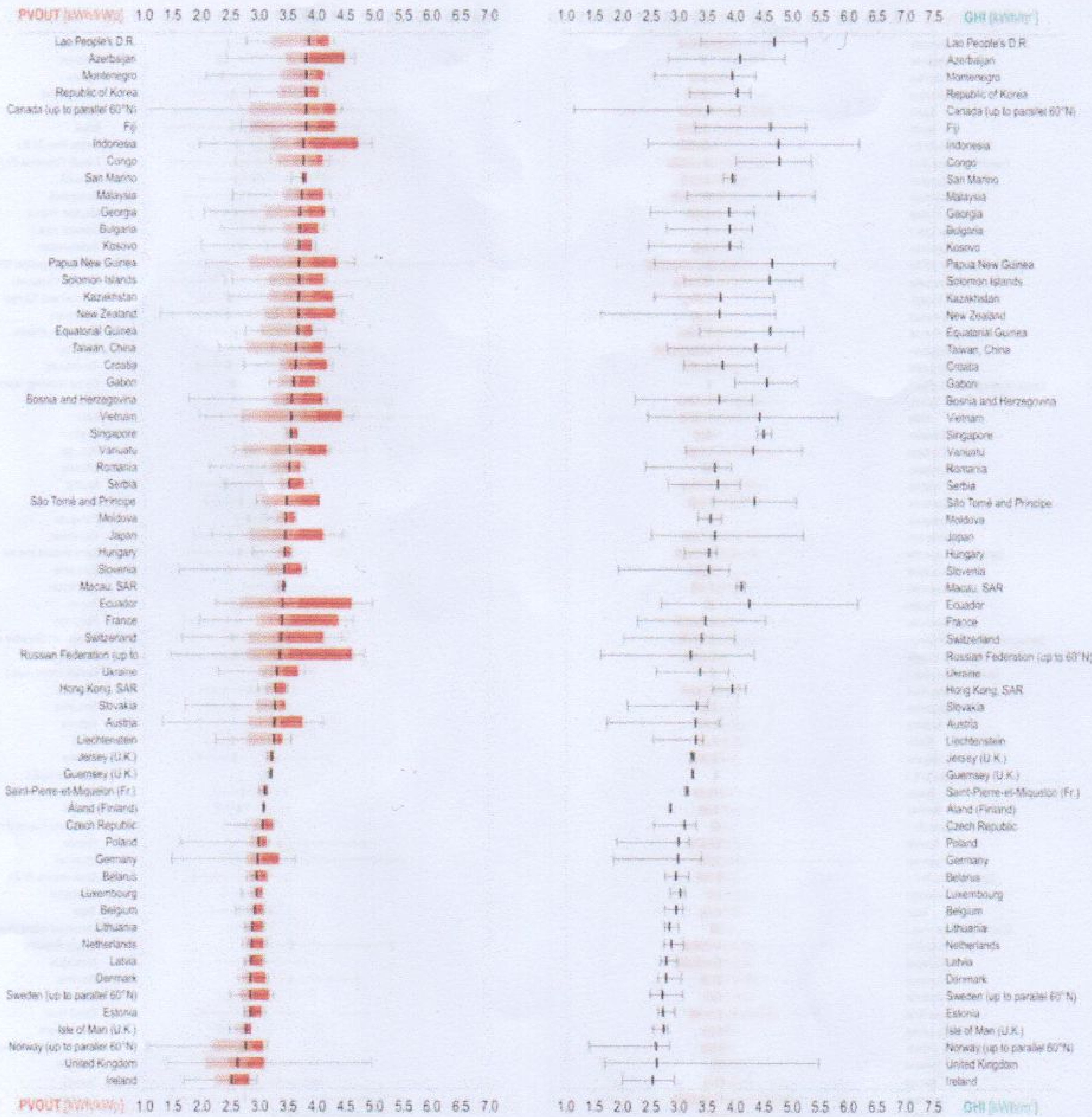


Explanation to Figure 3.8:

Countries' statistics of the practical PV power potential
$P0_{MIN}$ = Level 0: Minimum value
$P1_{MIN}$ = Level 1: Percentile 0.5 value
$P1_{P25}$ = Level 1: Percentile 25 value
$P1_{MED}$ = Level 1: Percentile 50 (median) value
$P1_{MEAN}$ = Level 1: Mean value; countries/regions are sorted based on this value
$P1_{P75}$ = Level 1: Percentile 75 value
$P1_{MAX}$ = Level 1: Percentile 99.5 value
$P0_{MAX}$ = Level 0: Maximum value

Countries' statistics of the theorectical solar resource (GHI):
T_{MIN} = Minimum value
T_{MEAN} = Mean value
T_{MAX} = Maximum value

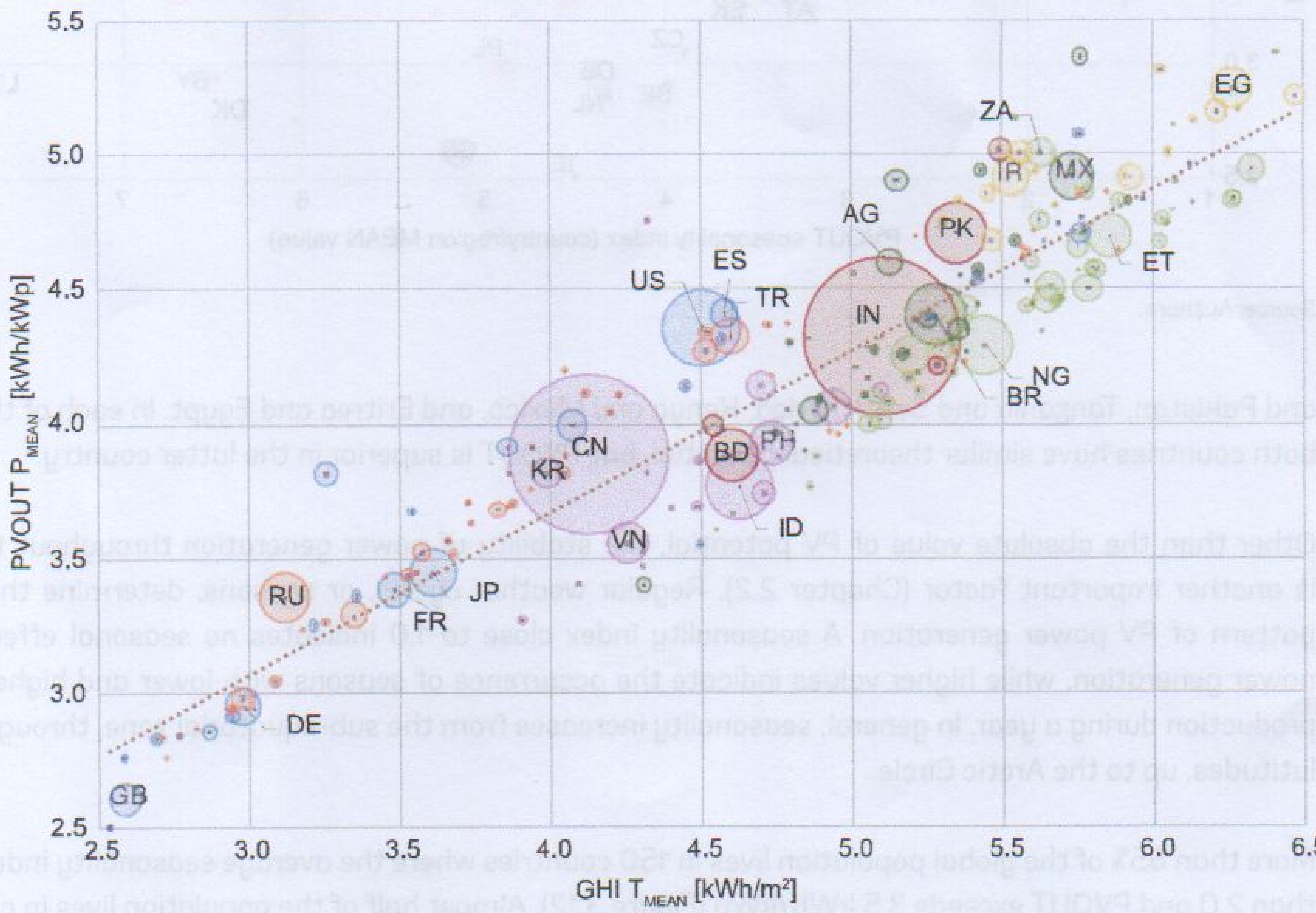
Source: Authors.

The data and graphs available in this report are also available for interactive viewing and may be downloaded from the Global Solar Atlas.

FIGURE 3.10: COUNTRY GROUPS, ACCORDING TO THE WORLD BANK, USED IN FIGURES 3.11 TO 3.19

Source: Authors.

FIGURE 3.11: AVERAGE PRACTICAL PV POWER POTENTIAL AT LEVEL 1 (PVOUT) COMPARED TO THEORETICAL POTENTIAL (GHI)

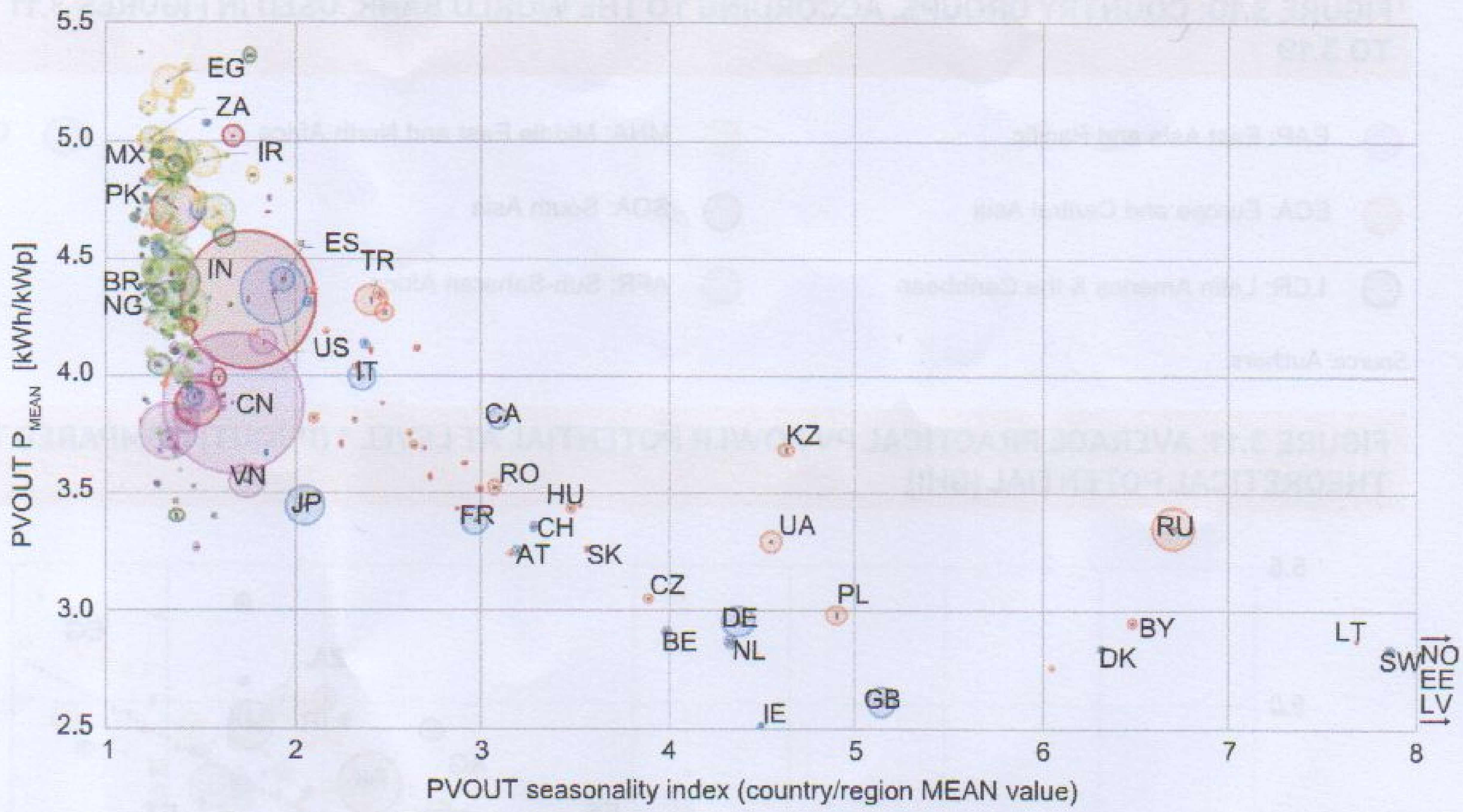


Source: Authors.

Figure 3.11 is an alternative view of the P_{mean} values presented in Figure 3.8. It shows that the theoretical potential, represented by GHI, is not fully proportional to practical PV power potential PVOUT. The main reason for this is that air temperature influences the performance of PV power plants. For the same GHI values, the specific PV power generation is higher in regions with a colder air temperature, and lower in regions with a higher air temperature.

Indonesia and Turkey are both striking examples: the mean GHI value is similar, 4.75 and 4.66 kWh/m^2, respectively. Although Turkey has slightly lower GHI, the country's mean value of PVOUT is almost 15% higher compared to Indonesia (4.32 and 3.77 kWh/kWp, respectively). Other notable cases are Nigeria

FIGURE 3.12: ABSOLUTE VALUES OF PRACTICAL PV POWER POTENTIAL COMPARED TO PV SEASONALITY INDEX



Source: Authors.

and Pakistan, Tanzania and South Africa, Kenya and Mexico, and Eritrea and Egypt. In each of the pairs, both countries have similar theoretical potential, but PVOUT is superior in the latter country.

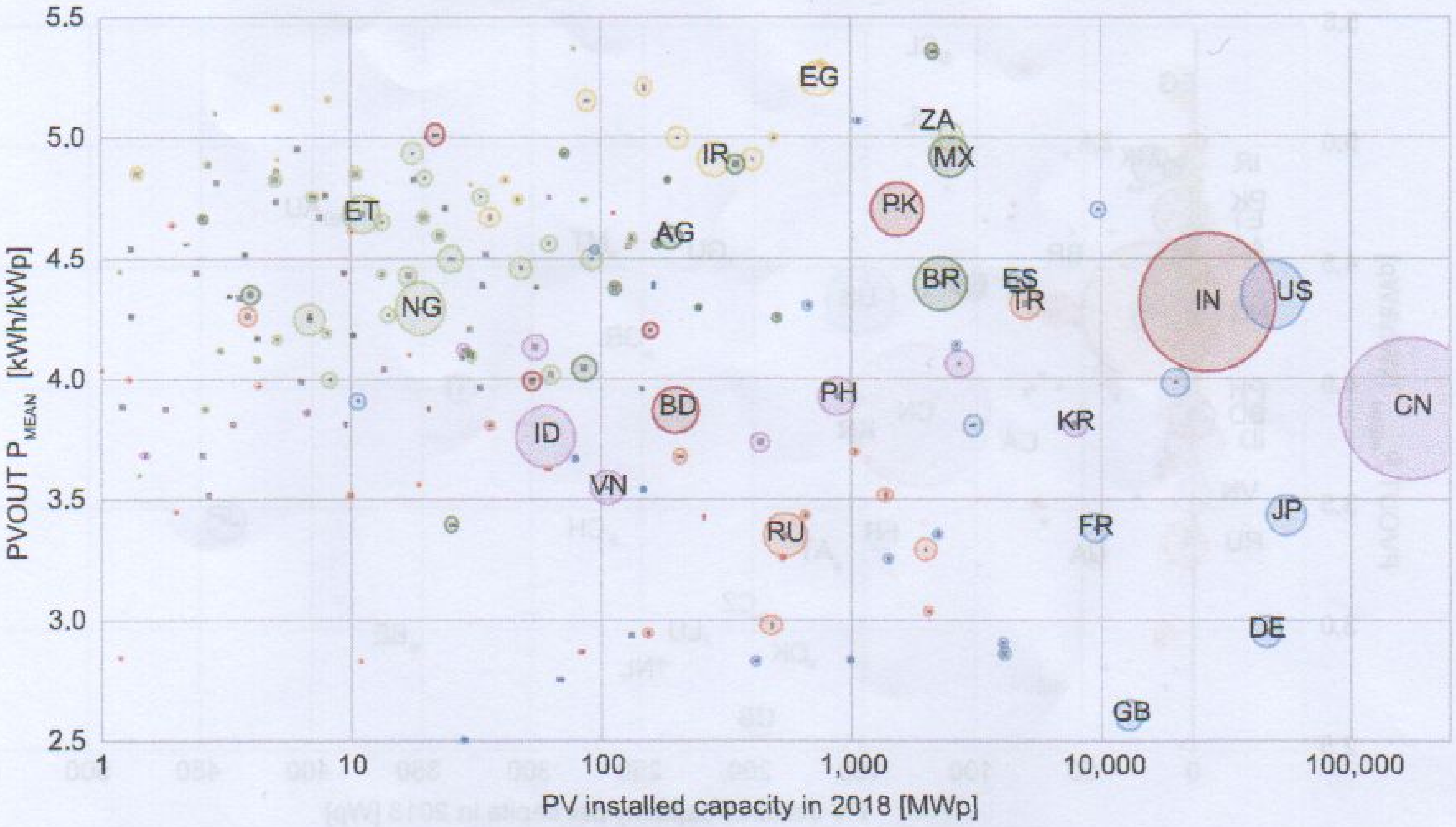
Other than the absolute value of PV potential, the stability of power generation throughout the year is another important factor (Chapter 2.2). Regular weather cycles, or seasons, determine the yearly pattern of PV power generation. A seasonality index close to 1.0 indicates no seasonal effect in PV power generation, while higher values indicate the occurrence of seasons with lower and higher power production during a year. In general, seasonality increases from the sub-equatorial zone, through higher latitudes, up to the Arctic Circle.

More than 85% of the global population lives in 150 countries where the average seasonality index is less than 2.0 and PVOUT exceeds 3.5 kWh/kWp (Figure 3.12). Almost half of the population lives in countries where the seasonality index is around 1.5 or less. Furthermore, approximately 80% of the population lives in countries that comprise at least some area with a negligible seasonality effect (up to 1.3).

Low seasonality increases the value of solar power, but a moderate seasonal effect of PV power generation can be in natural synergy with seasonal demand in areas where cooling is the primary energy challenge. This applies in most of the countries with tropical, subtropical, and temperate climates.

On the contrary, high seasonality challenges the countries in the higher latitudes, where the highest demand for energy is during cold winters. At the same time, short daylight periods and low sun angle limit the PVOUT generation. Countries in the northern part of Europe are the typical examples—and, perhaps paradoxically, this includes Germany, which is one of cradles of the PV industry.

FIGURE 3.13: PRACTICAL PV POWER POTENTIAL VERSUS INSTALLED CUMULATIVE PV CAPACITY IN 2018



Note: x-axis has a logarithmic scale.
Source: Authors.

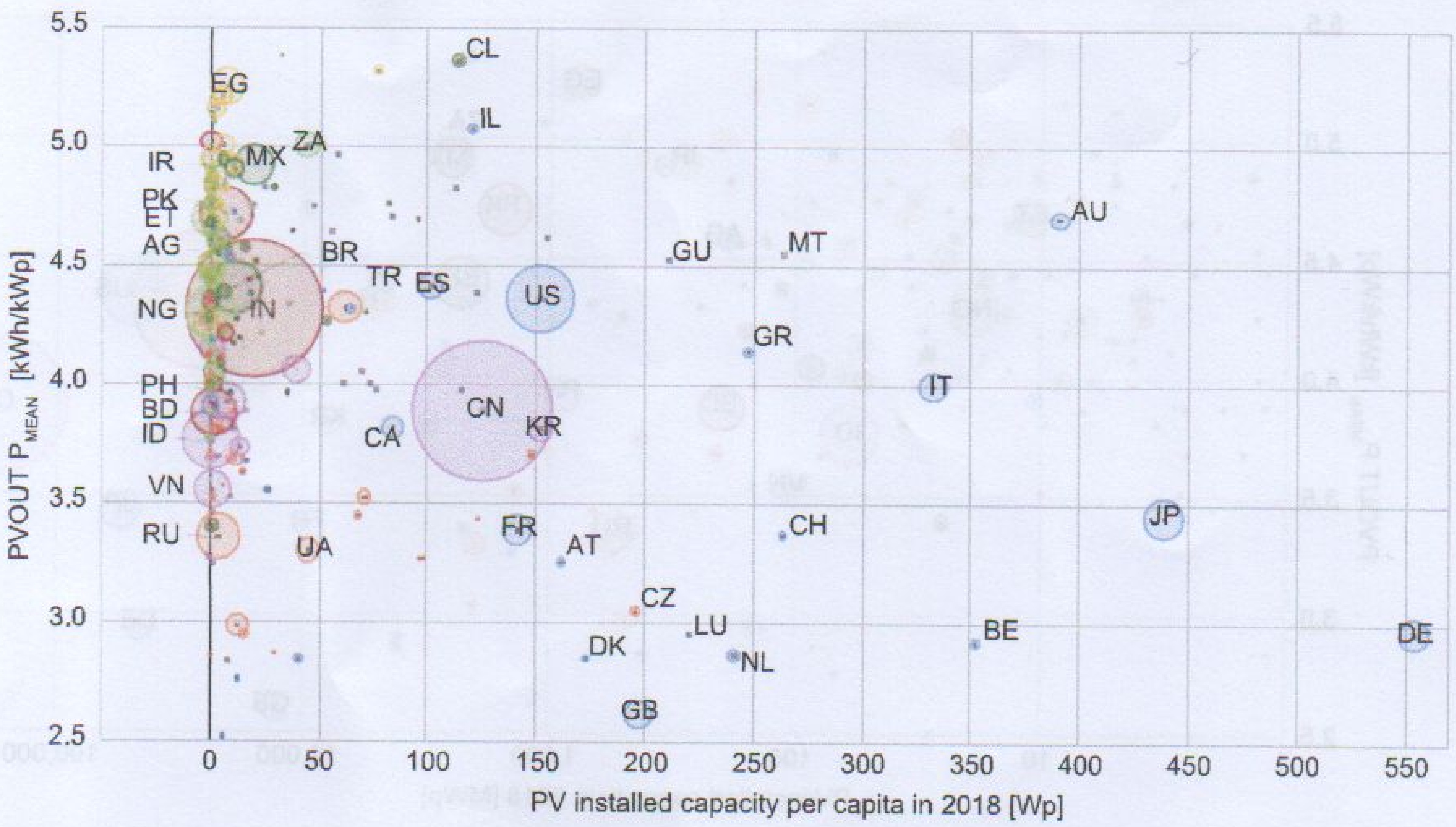
The existence of extreme seasonal cycles is a challenge for the smart technical optimization of PV power plants as owners seek to smooth the PV power generation curve during the year. These practical challenges include the tilt of the modules and the involvement of the tracking systems, as well as the fact that other energy sources are likely dominant during the seasons with very low PV power output. However, this does not disqualify PV from being a significant part of the regional energy mix (see Figure 3.13).

Indeed, achieving synergy with other renewable and nonrenewable energy sources may play an important role in the energy mix. Hydro-connected PV power plants are an excellent example of such synergy [32, 33], especially in monsoon-affected countries such as India and Vietnam, as well as Africa. Hydro plants only have enough water during the rainy season, during which the cloudy conditions will also reduce PV electricity generation. However, the opposite effect occurs during the dry season, and indicates the technologies could complement each other well.

In 2018, a cumulative capacity of more than 480 GWp of PV power was installed worldwide [26]. Over one-third of the global capacity was installed in China, while the second third was made up of a combination of Japan, the United States, and Germany. In total, the top 15 countries accounted for 90% of all PV capacity (Figure 3.13). The uneven distribution of installed capacities in that year is a typical sign of a young and developing industry.

In terms of installed PV capacity per capita (Figure 3.14), the top three positions belong to Germany (554 Wp per capita), Japan (438 Wp), and Australia (390 Wp). At the same time, the top three countries represent very different regions in terms of PV potential: low, moderate, and high.

FIGURE 3.14: PRACTICAL PV POWER POTENTIAL VERSUS INSTALLED CUMULATIVE PV CAPACITY PER CAPITA IN 2018



Source: Authors.

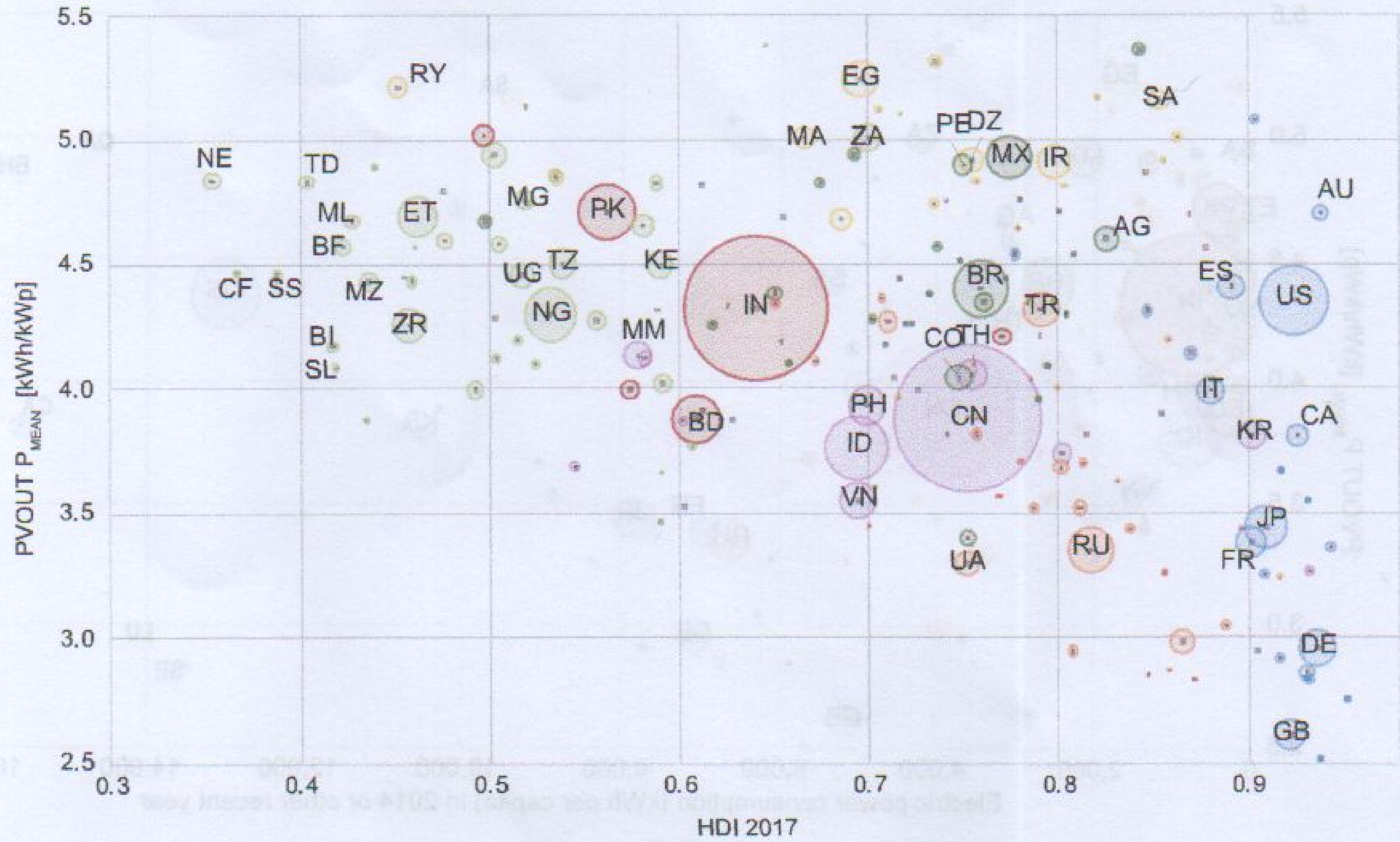
The margin of 100 Wp per capita is exceeded in 28 countries. On the contrary, around 120 countries had PV installed capacity lower than 10 Wp per capita. Approximately half of those had minimum or no installed PV capacities (below 1 Wp per capita). It is striking that this includes many countries with exceptional PV potential, including almost all African countries except South Africa, as well as Bangladesh and Indonesia. This shows that the rollout of solar PV in many countries with high PV potential has been lagging [26].

The top benefits of solar PV are scalability, versatility, and short project construction times. These are crucial factors that would support the acceleration of the growth of solar PV among users in energy-dependent sectors, especially in developing countries with low electricity generation capacities.

Almost all nations with lower Human Development Index (HDI) rankings show outstanding PV potential (Figure 3.15). Most of the countries from Sub-Saharan Africa, followed by countries from the south Asia region, are characterized by low HDI and high PVOUT (upper-left quadrant of the chart). In contrast, many countries with high HDI and lower PV power potential systematically support the growth of solar renewable energy (compare with Figure 3.14).

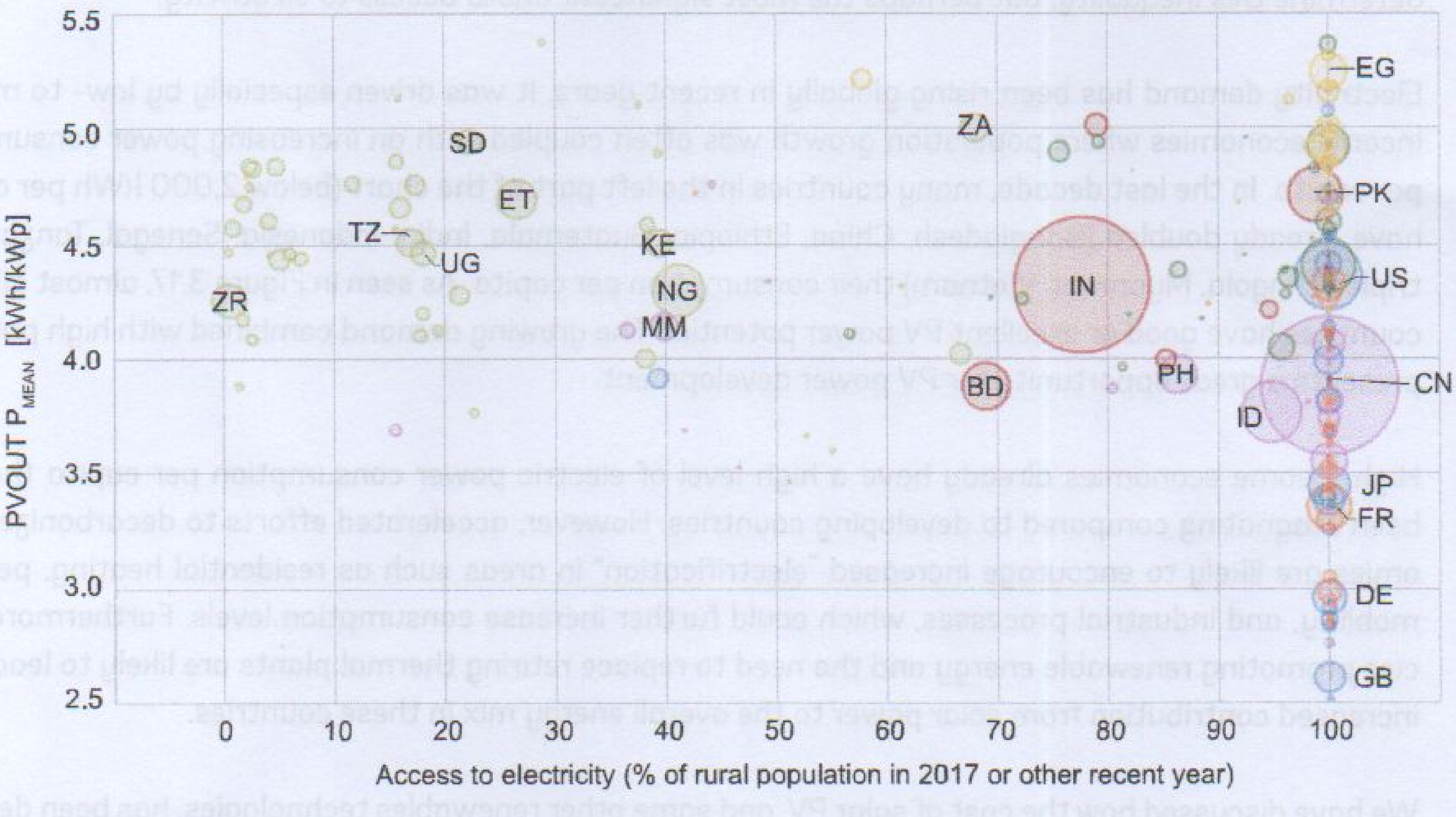
We see a similar pattern of the distribution of countries/regions in the graph that shows access of the rural population to electricity (Figure 3.16). Most countries with limited rural access to electricity show practical PV potential over 4 kWh per day. In parallel to HDI, this includes countries in Sub-Saharan Africa, followed by South Africa. Some countries in Latin America and southeast Asia also have not reached universal electricity access, especially in more remote locations. In such cases, implementation of off-grid, micro-grid, or hybrid PV solutions is likely to be a high priority.

FIGURE 3.15: PRACTICAL PV POWER POTENTIAL VERSUS HUMAN DEVELOPMENT INDEX



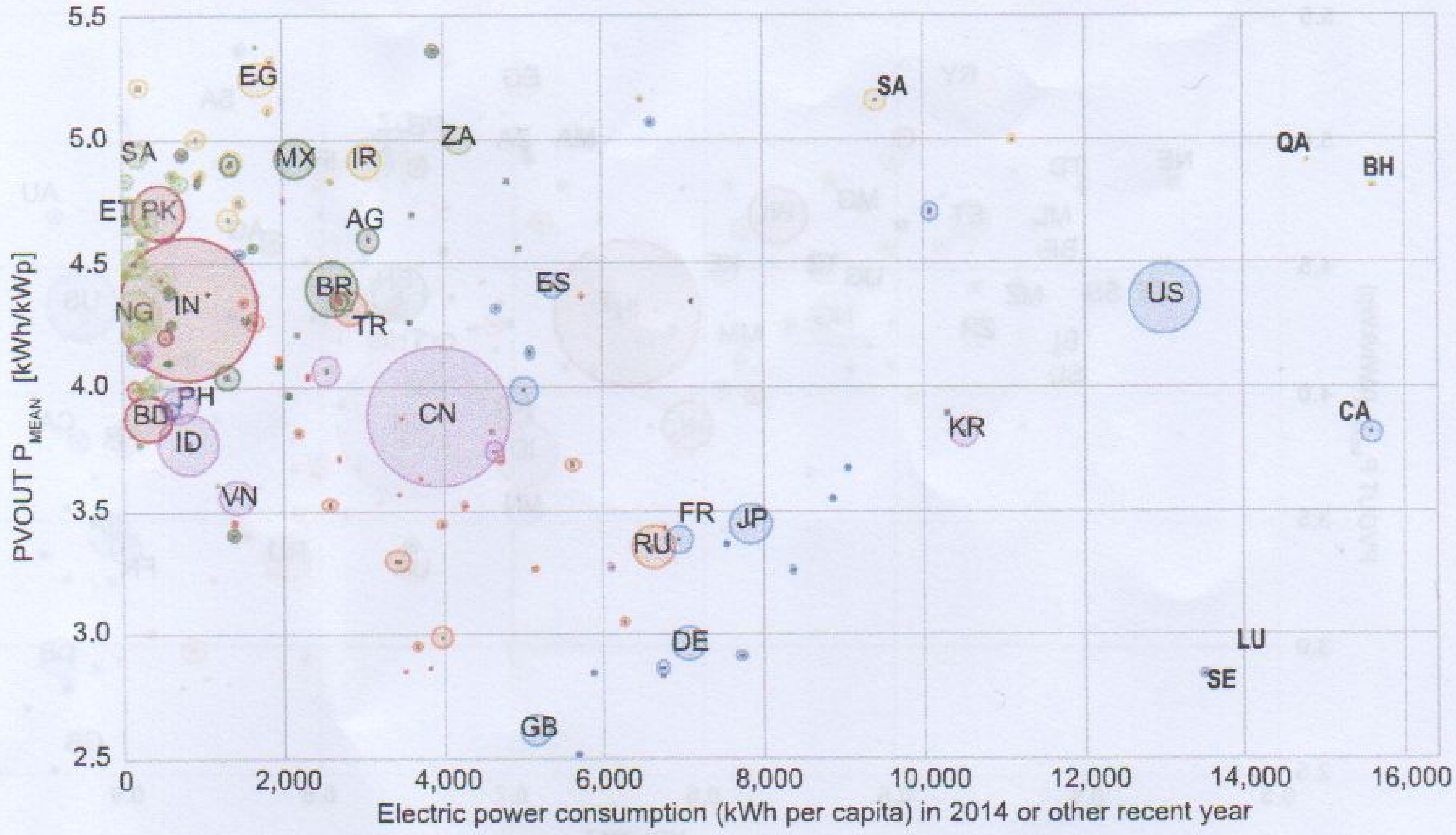
Source: Authors.

FIGURE 3.16: PRACTICAL PV POWER POTENTIAL VERSUS ACCESS TO ELECTRICITY BY THE RURAL POPULATION



Source: Authors.

FIGURE 3.17: PRACTICAL PV POWER POTENTIAL VERSUS ELECTRIC POWER CONSUMPTION



Source: Authors.

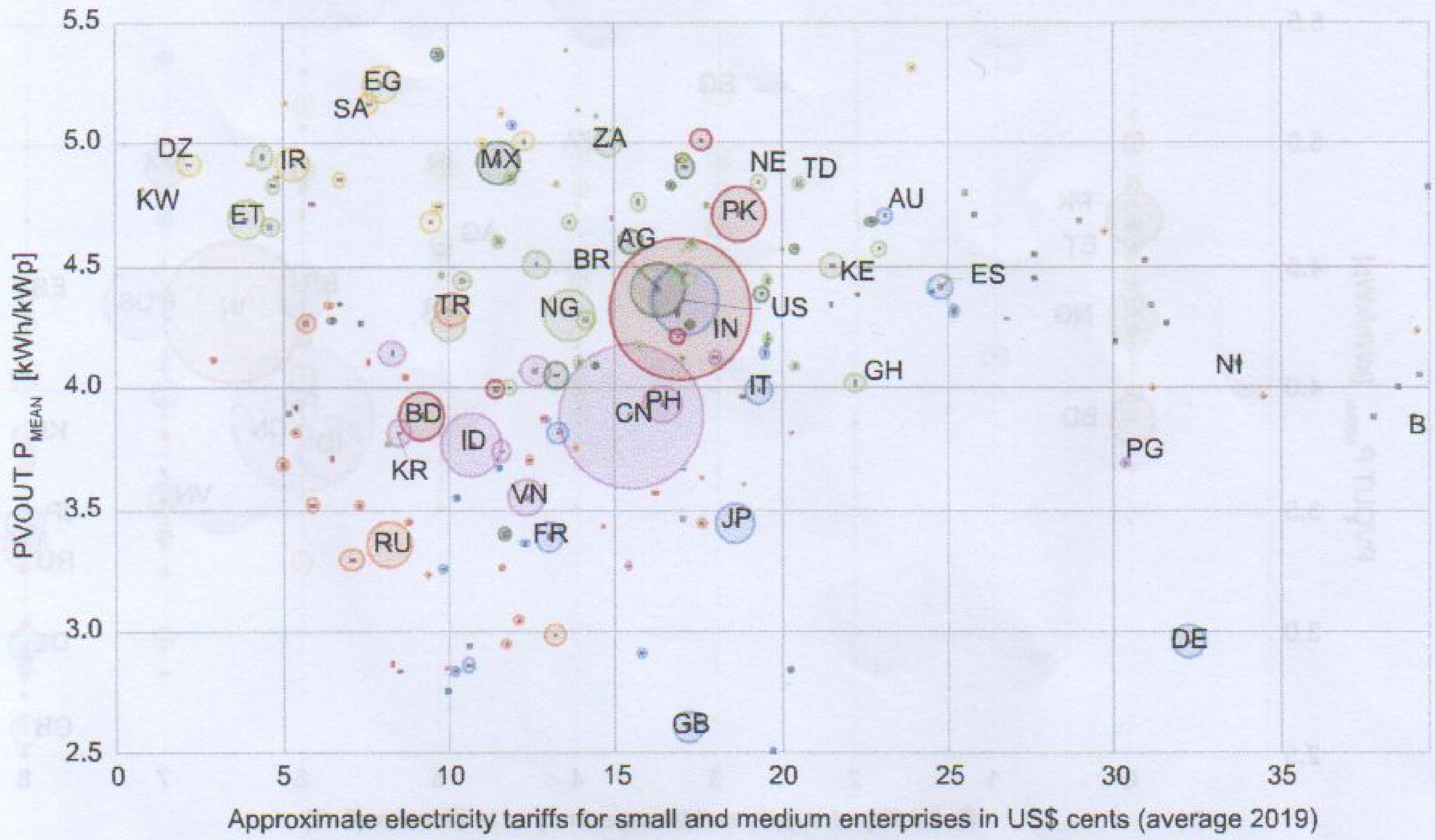
Electricity consumption per capita varies enormously across the world (Figure 3.17). In some economies, the figure exceeds 10,000 kWh per capita per year. On the other hand, around 40% of people in the world live in countries with annual electric power consumption below 1,000 kWh per capita. Many factors determine this inequality, but perhaps the most significant one is access to electricity.

Electricity demand has been rising globally in recent years. It was driven especially by low- to middle-income economies where population growth was often coupled with an increasing power consumption per capita. In the last decade, many countries in the left part of the chart (below 2,000 kWh per capita) have already doubled (Bangladesh, China, Ethiopia, Guatemala, India, Indonesia, Senegal, Tanzania) or tripled (Angola, Myanmar, Vietnam) their consumption per capita. As seen in Figure 3.17, almost all these countries have good or excellent PV power potential. The growing demand combined with high potential presents a great opportunity for PV power development.

High-income economies already have a high level of electric power consumption per capita that has been stagnating compared to developing countries. However, accelerated efforts to decarbonize economies are likely to encourage increased "electrification" in areas such as residential heating, personal mobility, and industrial processes, which could further increase consumption levels. Furthermore, policies promoting renewable energy and the need to replace retiring thermal plants are likely to lead to an increased contribution from solar power to the overall energy mix in these countries.

We have discussed how the cost of solar PV, and some other renewables technologies, has been decreasing in the last decade [17]. Comparing PV potential with end-user electricity tariffs (Figure 3.18) offers another useful insight. Electricity tariff models in some countries may be quite complex and dynamic. For example, large economies tend to have regionally diverse tariff structures, while other economies

FIGURE 3.18: PRACTICAL PV POWER POTENTIAL VERSUS TYPICAL AVERAGE ELECTRICITY TARIFFS FOR SMALL AND MEDIUM ENTERPRISES



Source: Authors.

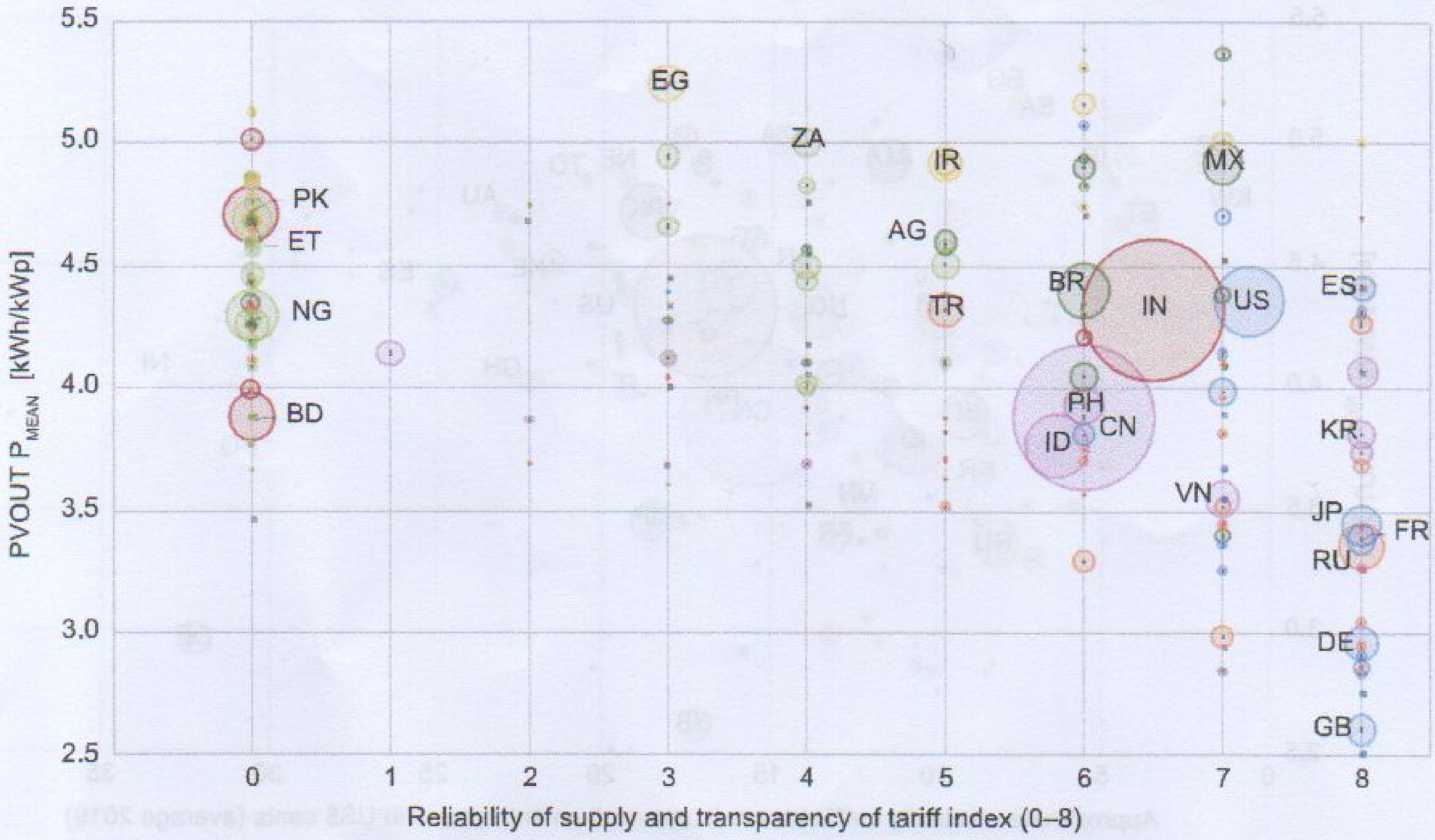
may have a uniform and straightforward structure. For the sake of comparison, we consider the average electricity tariff for small- and medium-sized enterprises [31].

At present, solar PV is cost competitive in most countries. Moreover, PV has become the most economic option in high-potential and high-tariff countries (located in the top-right segment of Figure 3.18), including Australia, Kenya, and Spain. In the case of many remote islands or isolated nations, electricity production is dominated by polluting diesel generators. In such cases, the tariffs can be extremely high due to the expensive import and transport of fuels, making PV and storage technologies an attractive alternative.

Economically, PV is competitive even in countries with lower practical PV potential. This is because of high end-user electricity prices, but also reasonable policies supporting clean energy such as net metering. These and other factors have made investment in PV technologies a rational and secure long-term decision in the private sector. This is the case in a few high-income countries with modest PV power potential, including Denmark, Germany, and Japan.

Persistent low end-user electricity tariffs in some countries with high PV power potential (located in the top-left quadrant of Figure 3.18, such as Kuwait, Qatar, Saudi Arabia) indicate why the investments in the PV sector stagnated until recently. Even so, the dramatic fall of LCOE from solar has opened the market in these regions.

FIGURE 3.19: PRACTICAL PV POWER POTENTIAL VERSUS RELIABILITY OF ELECTRICITY SUPPLY AND TRANSPARENCY OF TARIFFS



Source: Authors.

As shown in Figure 3.19, the electricity supply is not reliable in many countries. Dedicated studies [29] give the lowest score (0 out of 8) to about 50 of 183 analyzed countries/regions. Half of those are located in Sub-Saharan Africa and the other half are spread across the world, involving mainly low-income countries. About 100 countries scored up to 5, including almost all Sub-Saharan countries (except Mauritius and Namibia). The scoring encompasses quantitative data on the duration and frequency of power outages, as well as additional qualitative information.

All analyzed countries with a score of 5.0 and less have good or excellent practical PV power potential (the country average exceeds 3.5 and, in most cases, 4.0 kWh/kWp). In these countries, PV combined with storage technologies could provide an affordable way to boost the availability and reliability of electricity services.

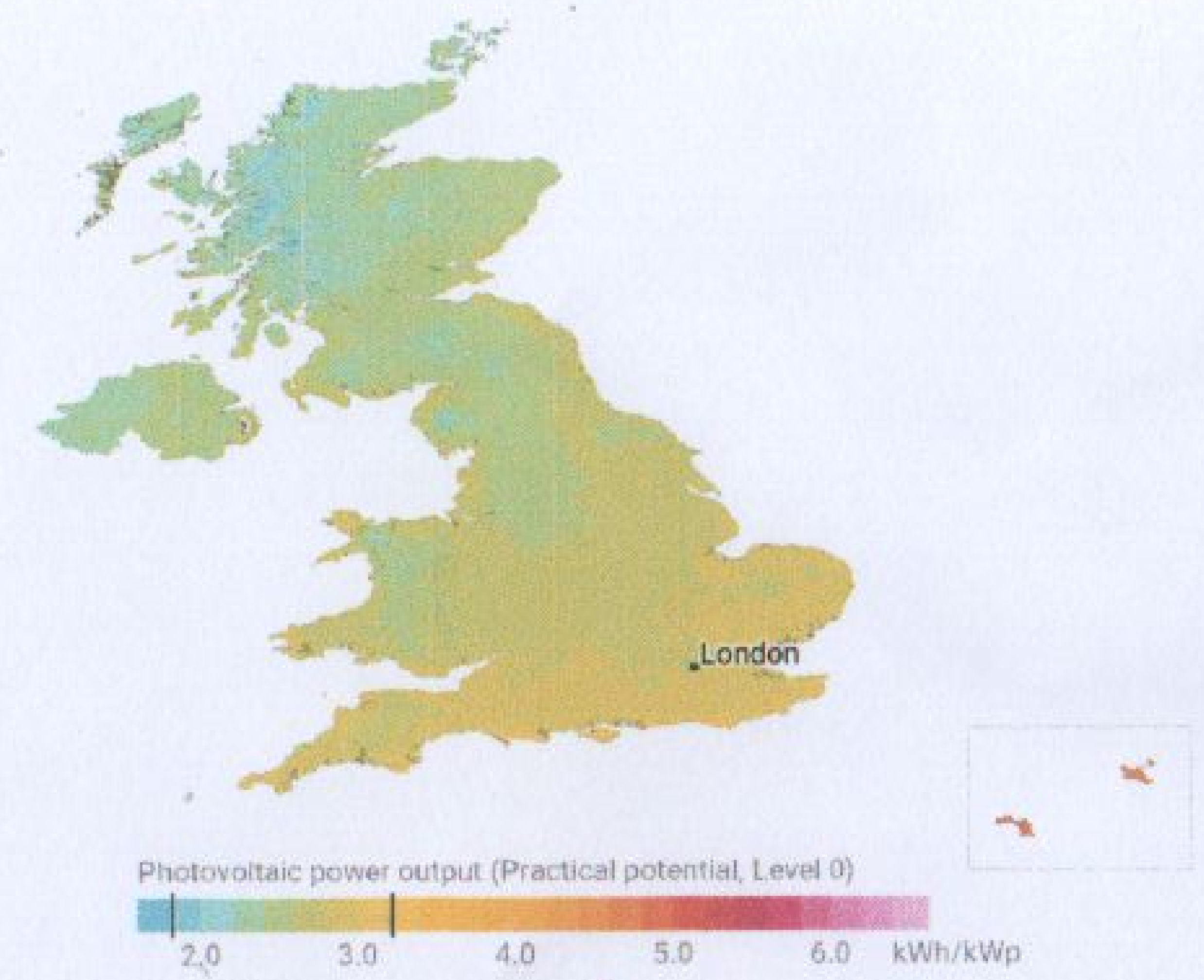
3.4 COUNTRY FACTSHEETS

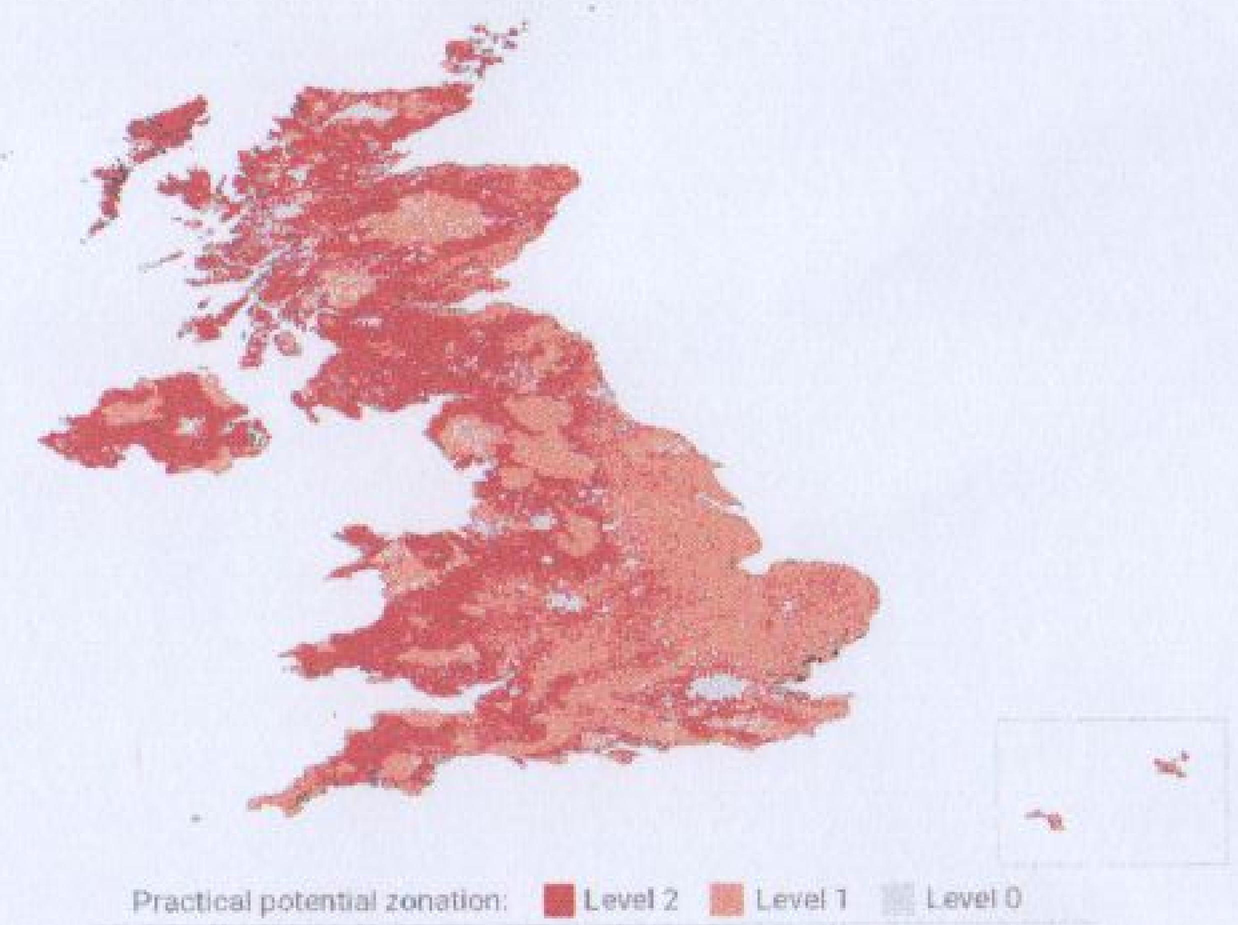
This study is accompanied by comprehensive country factsheets, which include information about theoretical, practical, and economic potential, and the position of the country in the global context of the abovementioned indicators.

Each factsheet consists of the following numerical and graphical components:

- Photovoltaic power potential map of the country with a unified color legend for all countries worldwide. Minima and maxima color intervals for the country are marked in the legend. The map also shows actual coverage of data (for some countries, the data is missing in high latitudes).

United Kingdom





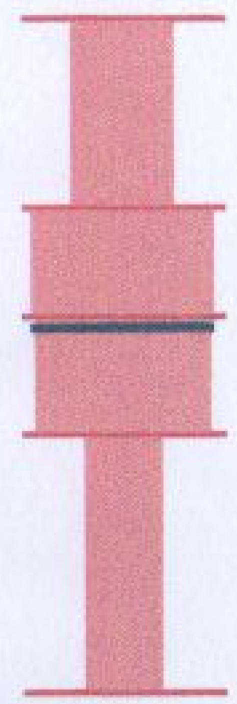
The boundaries, colors, denominations and any other information shown on the maps do not imply, on the part of The World Bank, any judgment on the legal status of any territory, or any endorsement or acceptance of such boundaries.

INDICATORS

Total area / Evaluated area	**243,610 / 241,880** km^2
Population (2018)	**66,488,991**
GDP per capita (2018)	**42,491** USD
HDI / rank (2017)	**0.92 / 13**
Electricity consumption per capita (2014)	**5,130** kWh/year
PV installed capacity (2018)	**13,108** MWp
Average theoretical potential (GHI) / rank	**2.592** kWh/m^2 **/ 208**
Average practical potential, level 1 / rank	**2.613** kWh/kWp **/ 209**
PV equivalent area	**2.45%**
PVOUT seasonality index (country range)	**5.13 (3.48 – 29.03)**
LCOE average (country range)	**0.15 (0.13 – 0.19)**

SUMMARY STATISTICS

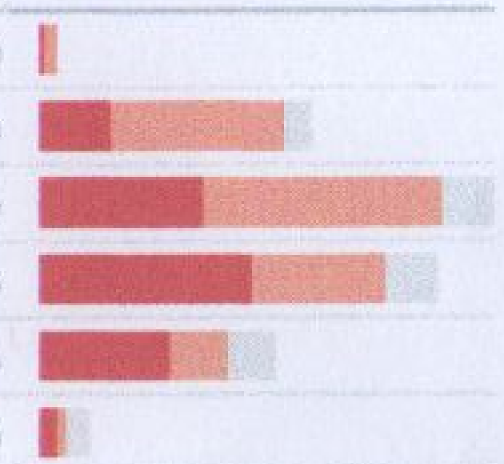
	GHI	PVOUT
Maximum	3.08	3.08
Percentile 75	2.78	2.79
Median	2.61	2.62
Average	**2.60**	**2.61**
Percentile 25	2.43	2.45
Minimum	2.16	2.05



Theoretical potential kWh/m² GHI — Practical potential, Level 1 kWh/kWp PVOUT

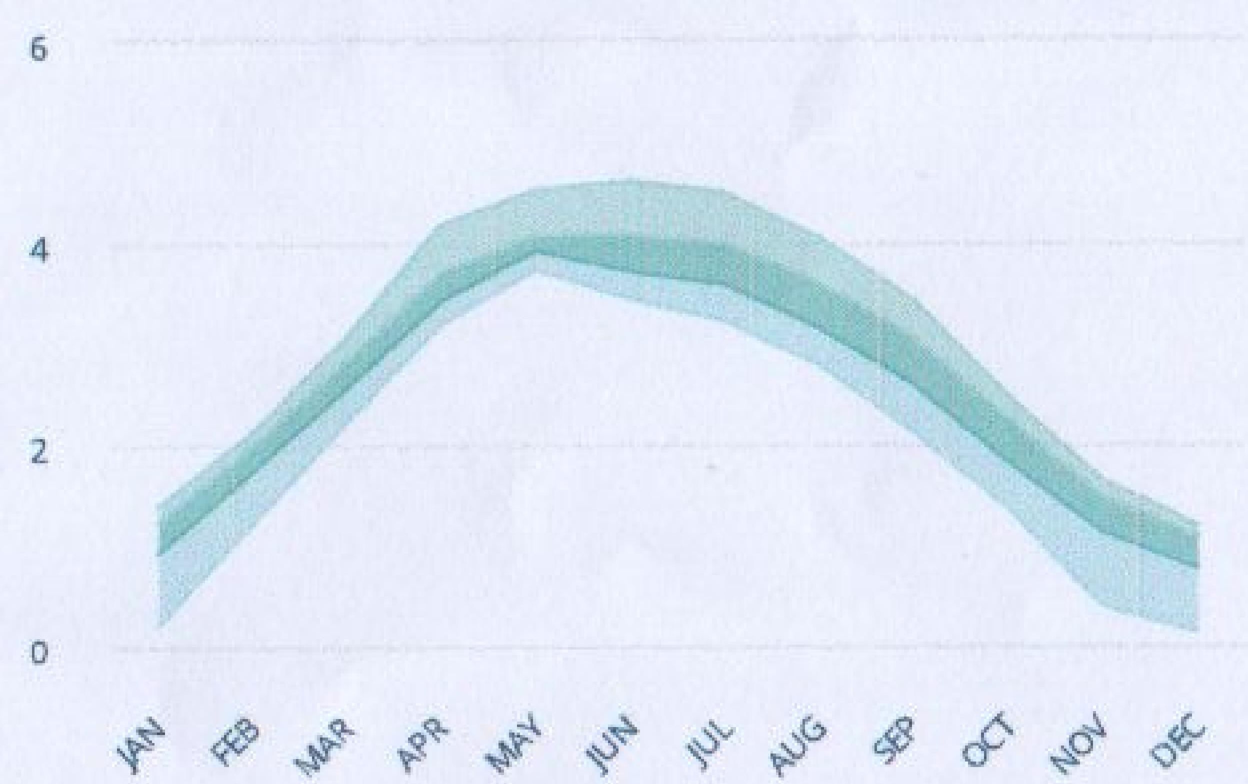
DISTRIBUTION OF PHOTOVOLTAIC POWER OUTPUT

kWh/kWp	42.0 %	85.3 %	100.0 % of evaluated area
over 3.0	0.2 %	1.3 %	1.4 %
3.0 — 2.8	4.9 %	17.0 %	19.1 %
2.8 — 2.6	11.5 %	28.0 %	31.6 %
2.6 — 2.4	14.9 %	24.0 %	27.7 %
2.4 — 2.2	9.1 %	13.1 %	16.6 %
below 2.2	1.3 %	1.9 %	3.6 %



Practical potential: Level 2 Level 1 Level 0

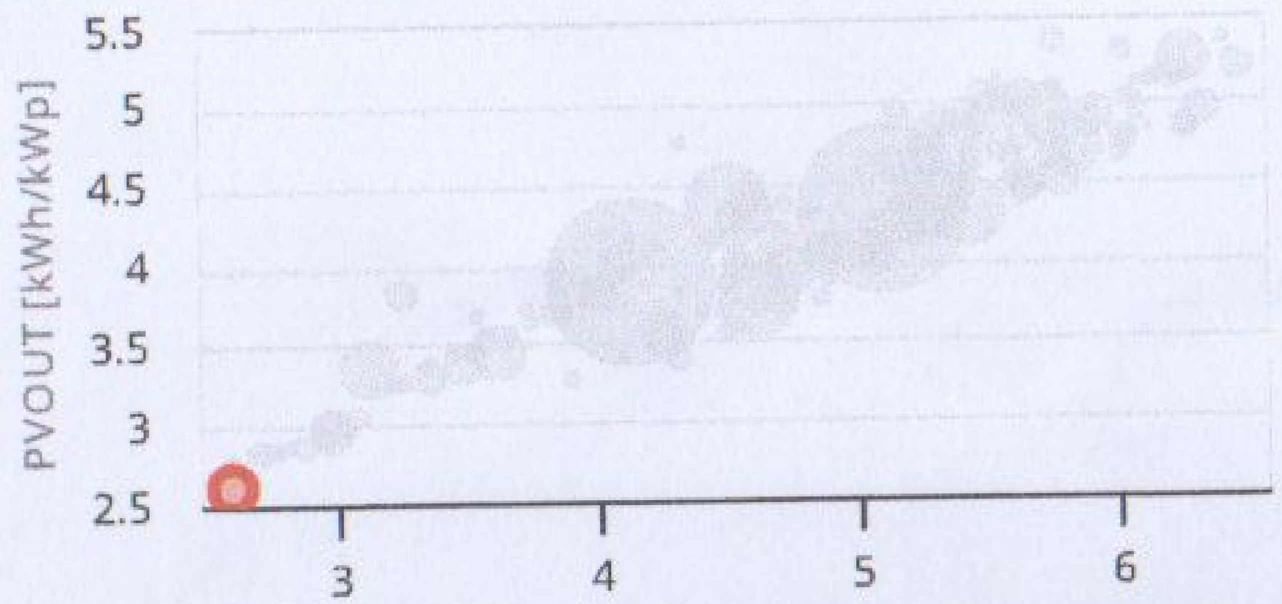
MONTHLY VARIATION OF PHOTOVOLTAIC POWER OUTPUT



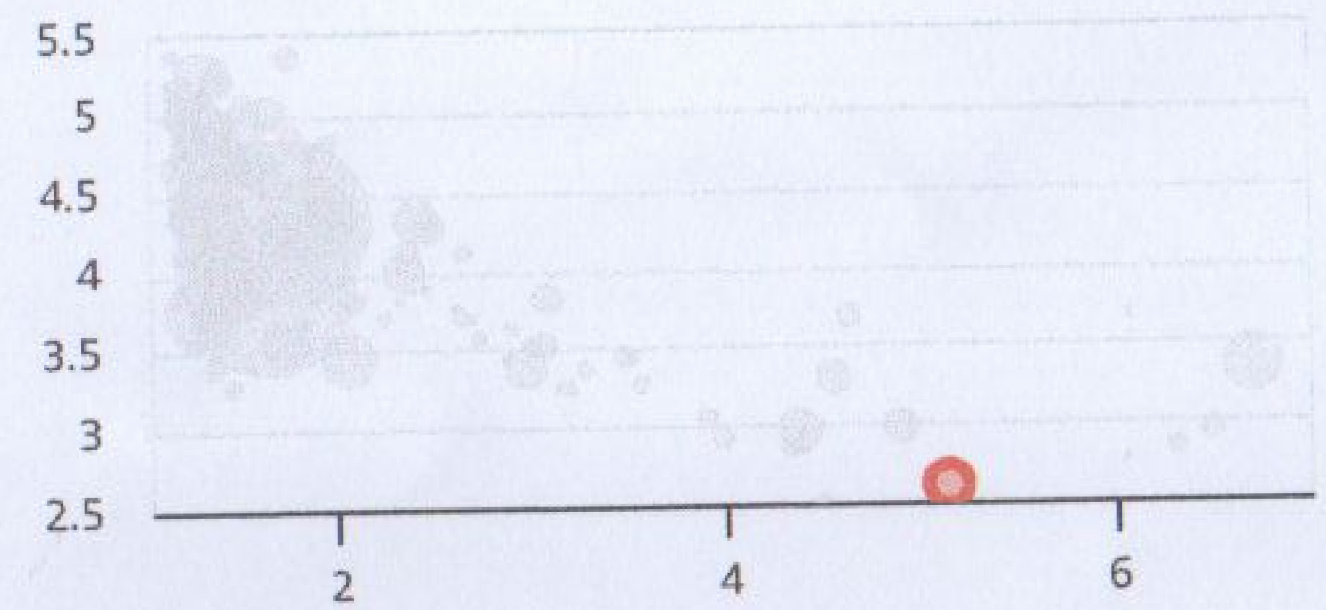
Practical potential, Level 1: Median; Percentile75 to maximum; Percentile25 to percentile75; Minimum to percentile25

United Kingdom

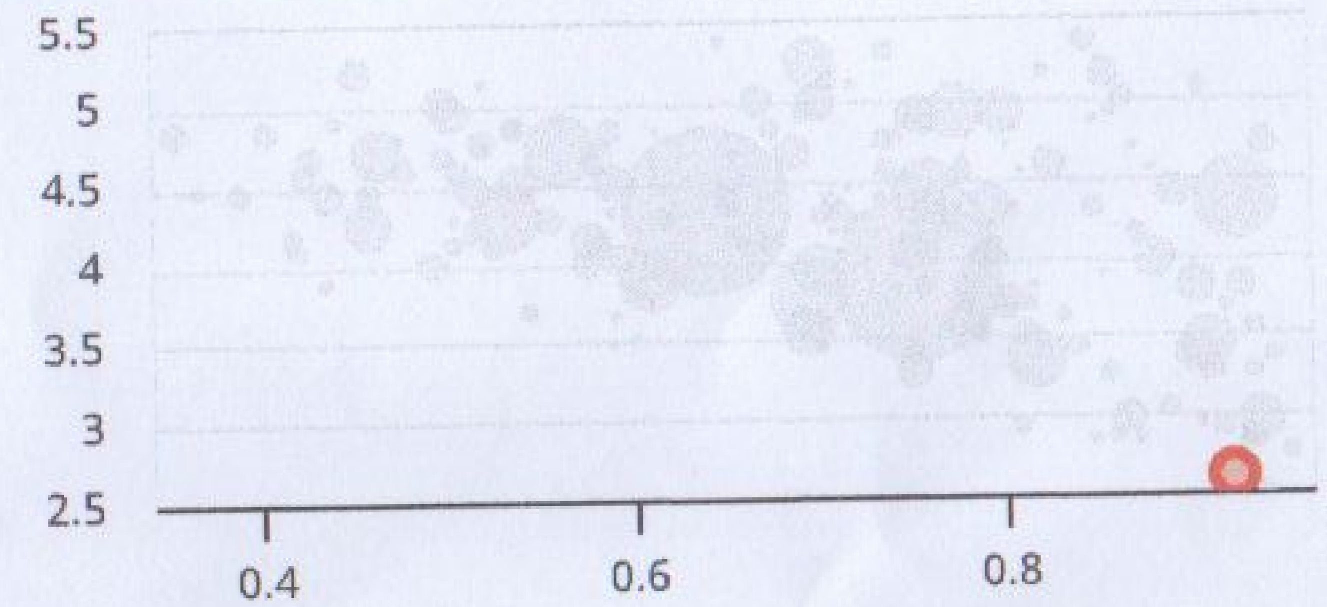
Average theoretical potential (GHI, kWh/m^2) 2.592



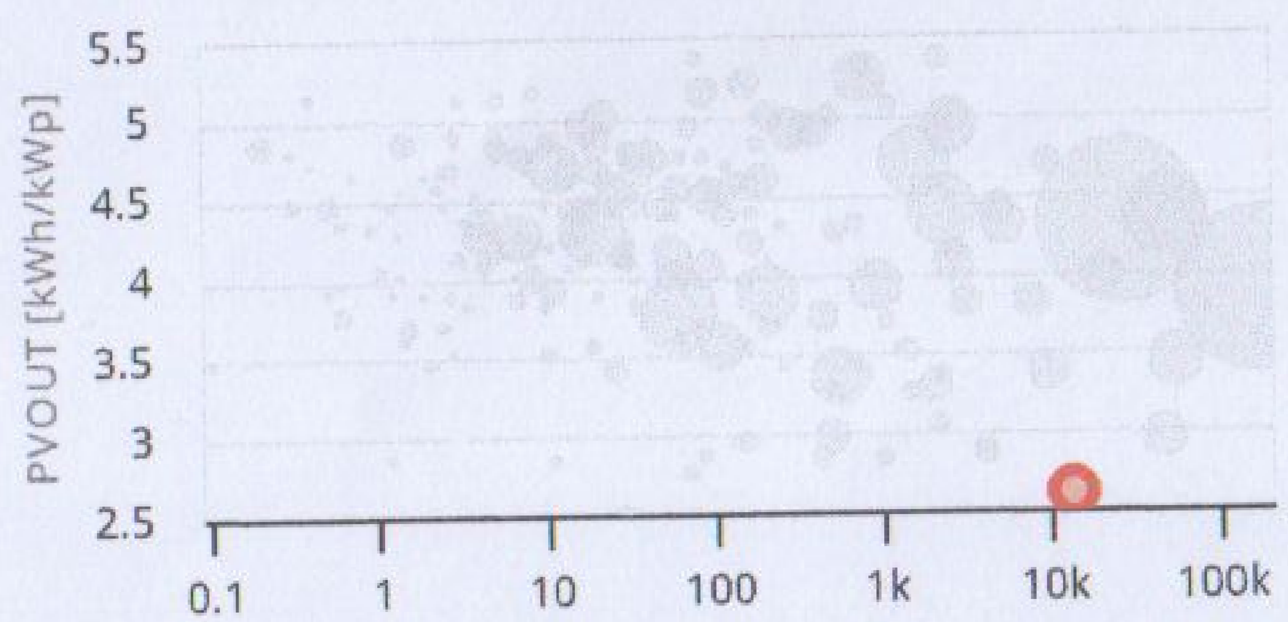
Seasonality index 5.13



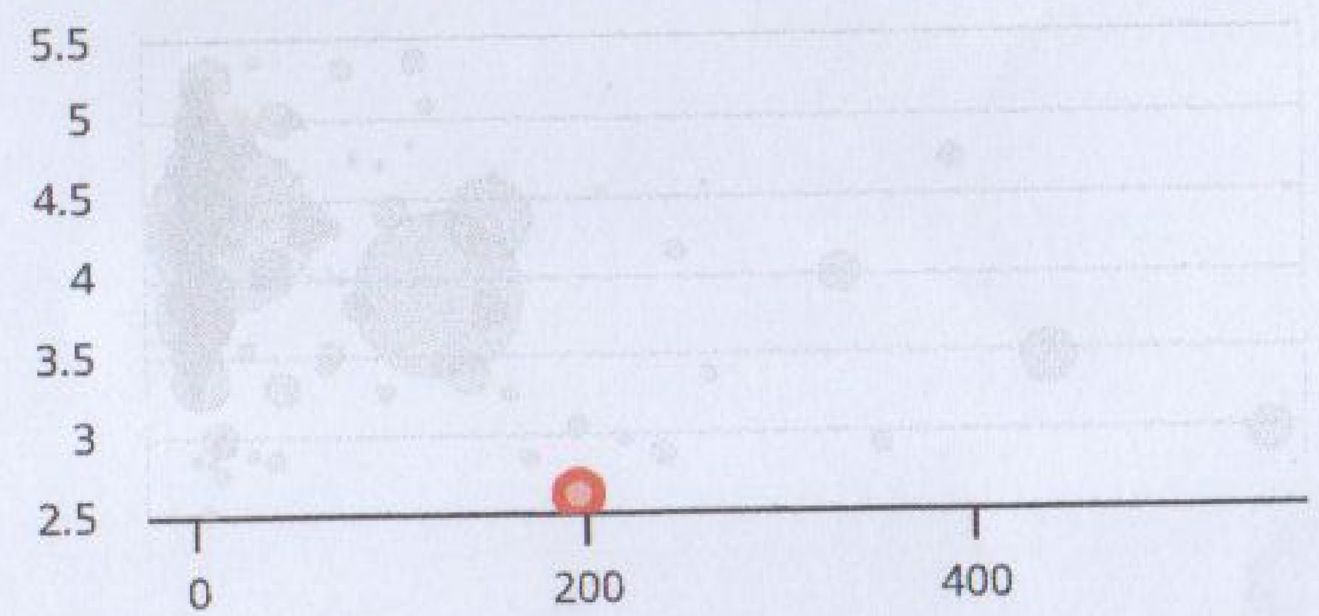
Human development index (2018) 0.92



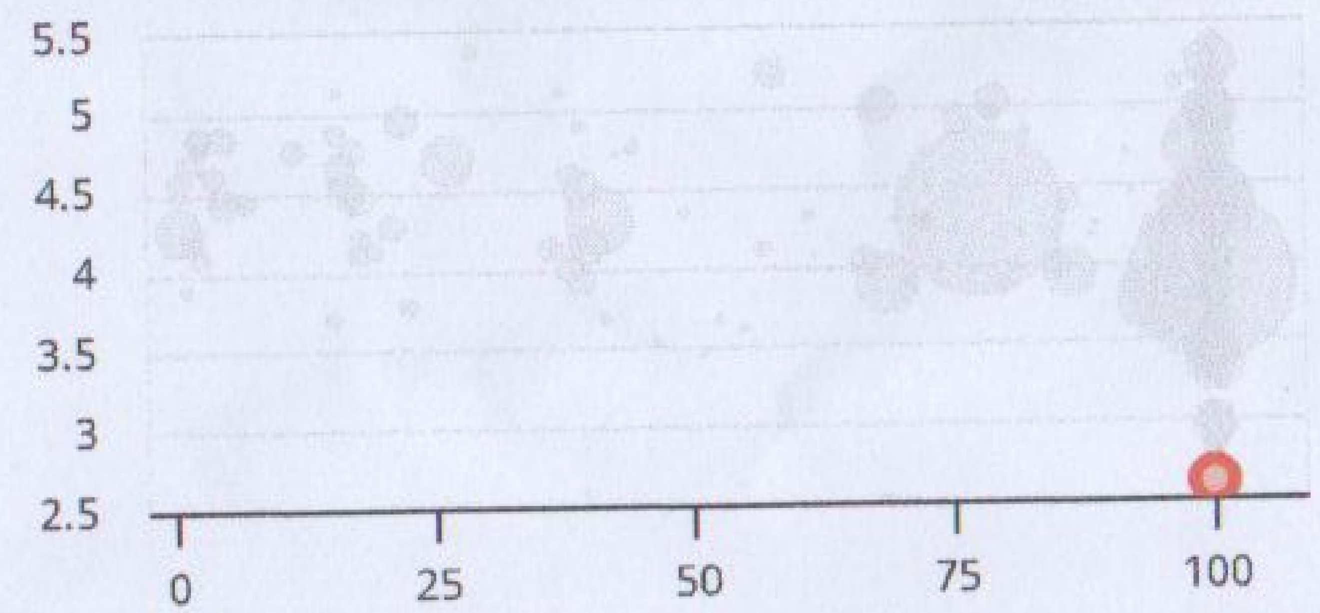
PV installed capacity (MWp, 2018) 13,108



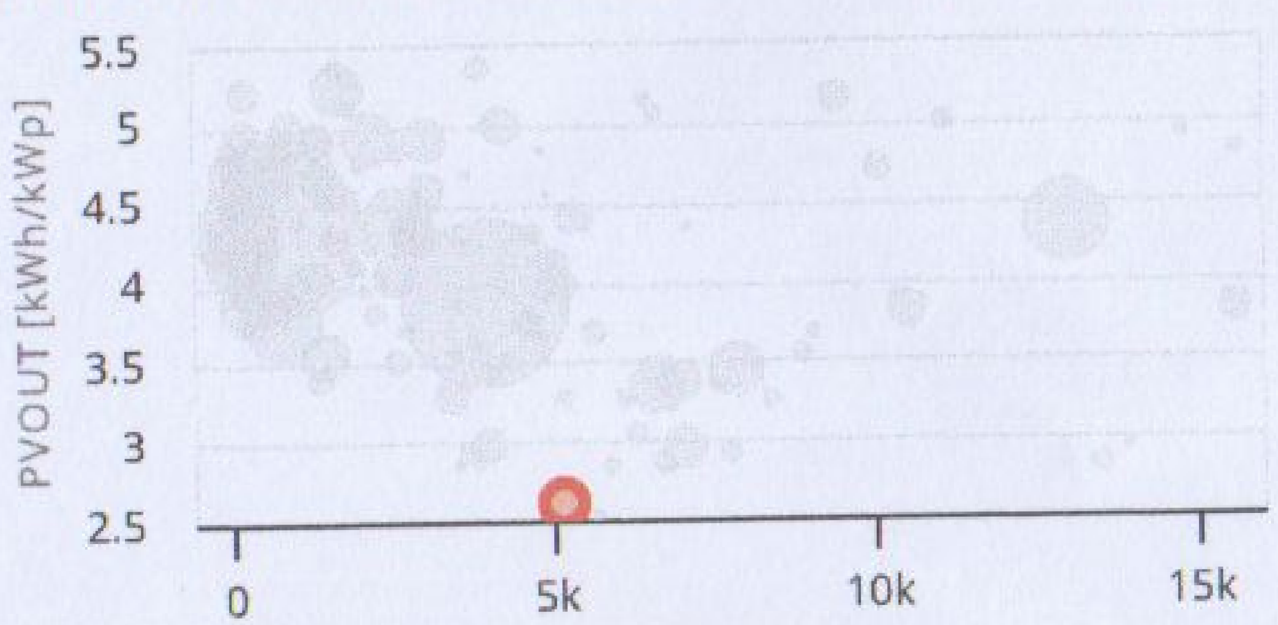
PV installed capacity per capita (Wp, 2018) 197



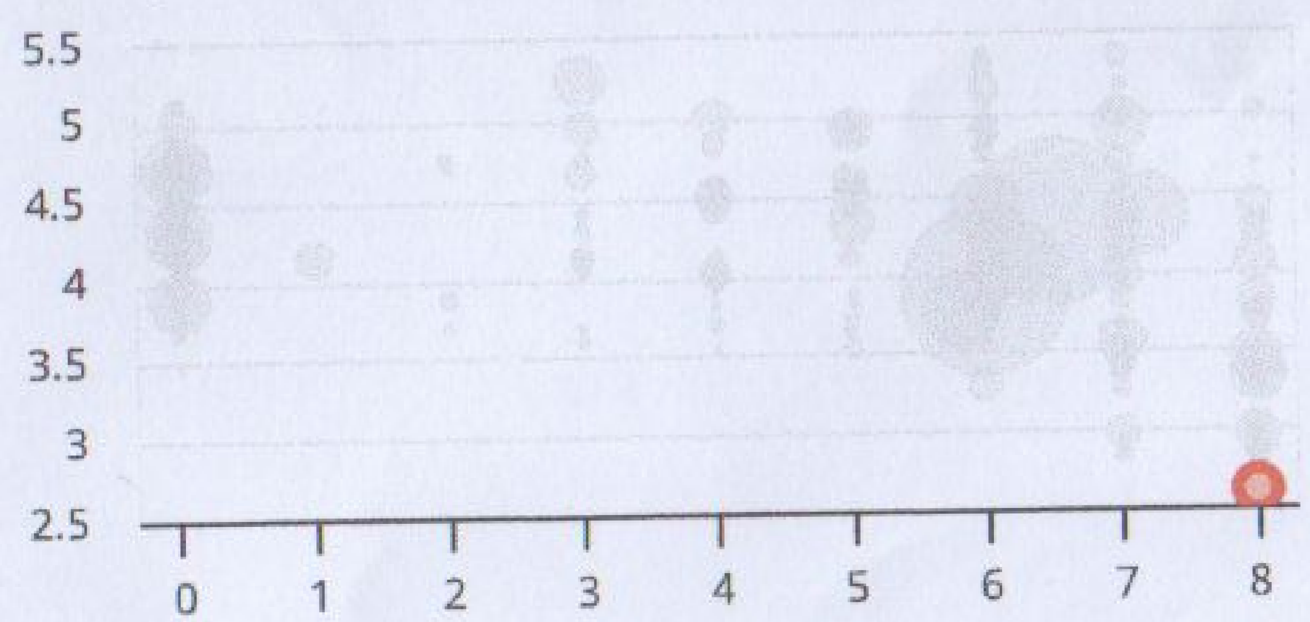
Access to electricity (% of rural population, 2016) 100.0



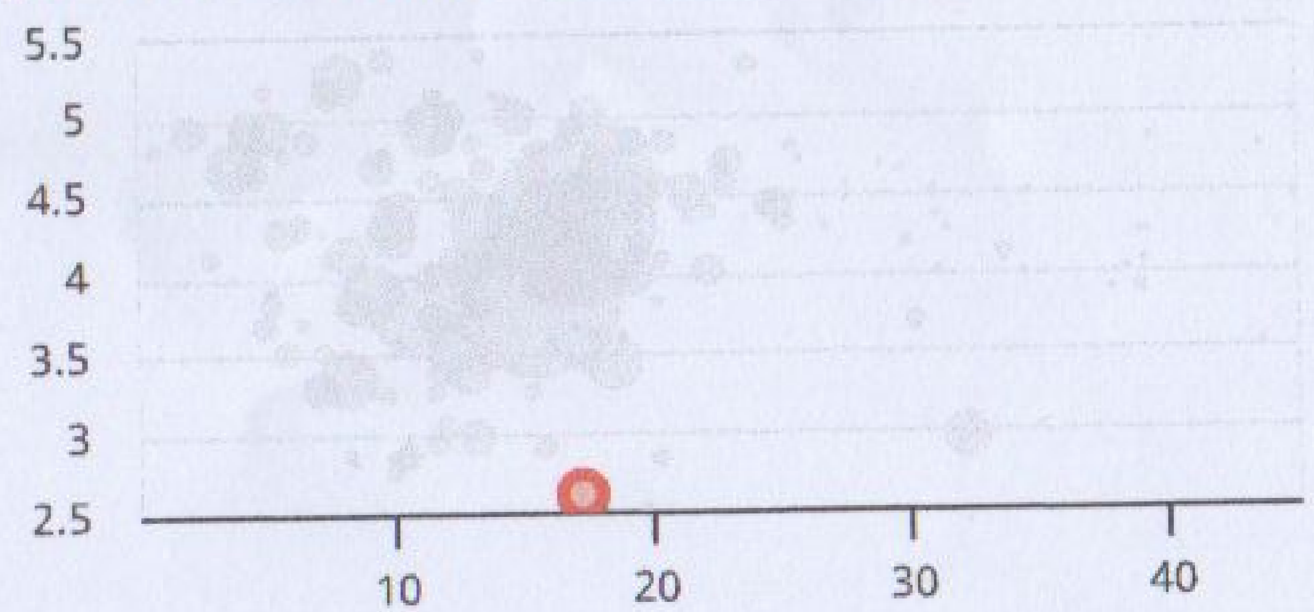
Electricity consumption (kWh/capita/year, 2014) 5,130



Reliability of supply and transparency of tarrif 8.0



Approximate electricity tarriffs (USD cents, 2019) 17.2



THE WORLD BANK ESMAP SOLARGIS

globalsolar**atlas**.info/global-pv-potential-study/

ABOUT

The World Bank Group publishes this factsheet as a part of the Global Photovoltaic Power Potential study, analyzing data from the Global Solar Atlas, World Bank Open Data, and other public sources. It is a part of the ESMAP initiative on Renewable Energy Resource Mapping, to support the appropriate scale-up of solar power in the worldwide energy mix.

The methodology and details behind the data analytics, explaining the graphics and figures in this factsheet, are discussed in the study. The findings aim to address the needs of policymakers, project developers, financial and academic sectors, as well as professionals and individuals interested in solar energy.

This factsheet involves numerical and graphical components:

- Photovoltaic power potential map of the country with the unified color legend for all countries worldwide (thus maps from various factsheets are comparable). Minima and maxima intervals for the country are marked in the legend.
- Country zonation map, showing how the country area is split into practical potential levels 0, 1 and 2
- Indicators section present basic country facts and statistics relevant to PV status in the country
- Summary statistics provide selected results of country-based evaluation of theoretical (GHI) and practical potential on level 1 (PVOUT)
- Distribution of photovoltaic power output histogram communicates how much land in the country is available in practical potential levels 0, 1 and 2, and various PVOUT ranges. It helps to understand, what might be the approximate area for PV development available in the best or moderate parts of the country.
- Monthly variation of the photovoltaic power potential details the seasonal PV electricity generation throughout a typical year; it is an important supplement to the seasonality index
- The bubble charts portray the position of the country in the global context of socio-economic and energy-related indicators. The bubble size is proportional to the population of the country. Current country is highlighted, other countries are in grey. Axis X represents the given indicator, axis Y represents the average practical PV potential at level 1.

Explore more

For more country fact-sheets, country and regional maps, interactive tools, PV calculator, statistics, reports and raster data in GIS formats visit Global Solar Atlas at https://globalsolaratlas.info.
More detailed data and technical solutions for specialists are provided by Solargis company (https://solargis.com).

THE WORLD BANK ESMAP SOLARGIS

GLOSSARY

Theoretical PV Potential

Global horizontal irradiation (GHI, measured in kWh/m^2/day), the long-term amount of solar resource available on a horizontal surface on Earth.

Practical PV Potential

Photovoltaic power output of a PV system (specific yield, measured in kWh/kWp/day); in this case, the long-term power output produced by a utility-scale installation with fixed-mounted, monofacial c-Si modules with optimum tilt

- **Level 0** – Practical potential disregarding any land-use constraints
- **Level 1** – Level 0 practical potential, excluding land with identifiable physical obstacles to utility-scale pv plants
- **Level 2** – Level 1 practical potential, excluding land possibly under land use regulations due to nature and cropland protection

Economic PV Potential

Levelized cost of electricity (USD/kWh) – the lifetime costs associated with construction and operation of the power plant divided by the electricity produced during this lifetime (the lower the cost, the higher is the economic potential)

PV seasonality index

Ratio between the highest and the lowest of monthly long-term PVOUT averages.

PV equivalent area

Presumed country area proportion to be covered by PV plants producing the equivalent of yearly electricity consumption. The estimated area includes both the active area of PV modules and the area between the module rows (assuming the optimum row spacing).

Total / Evaluated area

Total area is a surface area of a country derived from official statistics, including inland water bodies and some coastal waterways. Evaluated area is a true area, from which the statistics were calculated. It includes land areas, without coastal waters, interior parts of the large water bodies, areas with missing input data and minor outliers caused by input data resolution.

Acronyms

DIF – Diffuse horizontal irradiance
DNI – Direct normal irradiance
GDP – Gross domestic product
GHI – Global horizontal irradiance
HDI – Human development index
LCOE – Levellized cost of electricity
PVOUT – Photovoltaic power output
PV – Photovoltaic

DATA SOURCES

Solargis

Average theoretical potential – GHI (kWh/m^2/day)
Average practical potential – PVOUT (kWh/kWp/day)
Distribution of photovoltaic power output
Monthly variation of photovoltaic power output
PV equivalent area (% of the total country area)
PV seasonality index

The World Bank

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forecast of uk food import 2070

While there is no single numerical forecast for the exact volume of UK food imports in 2070, government and industry reports project a significant **increase in import reliance** and a **shift in what is imported** due to climate change and domestic land-use pressures. Countryside Jobs +2

Key Drivers of 2070 Import Trends

Current long-term outlooks identify several factors that will shape the UK's food import landscape by 2070:

- **Decreased Domestic Production:** Some projections warn of a potential **32% decline** in domestic food production by 2050 if current trends in land-use and climate impacts continue. By 2070, this could necessitate a much higher proportion of imported staples to meet the needs of a growing population.
- **Climate-Driven Crop Shifts:** By 2070, UK summers are projected to be up to **5.1°C warmer and 60% drier**. This may lead the UK to begin growing items it currently imports (like mandarins, avocados, or okra) while potentially increasing imports of traditional cool-weather crops that may struggle domestically.
- **Land-Use Competition:** Up to **23% of currently farmed land** could be lost by 2050 to housing, solar energy, and carbon sequestration efforts. This loss of domestic capacity is expected to displace production, likely leading to a structural increase in food imports over the following decades.
- **Global Supply Vulnerability:** The UK currently imports nearly half of its food. By 2070, increased global competition for resources and more frequent "multi-breadbasket failures" (projected to triple in frequency by 2040) could make these imports more expensive and less

Ask anything

+

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Would you like to explore **specific food categories** (such as meat vs. fresh produce) that are expected to see the most significant import shifts?

Double-check important information

It's a good idea to check information in multiple places.

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forecast of uk food imports 2070

While there is no single official government "2070 forecast" for food imports, long-term scientific and policy projections indicate that the UK's reliance on food imports is expected to face significant structural shifts and increased risks over the next 45 to 55 years.

Long-Term Drivers & Projections

- **Climate-Driven Import Risk:** By the 2050s and beyond, nearly half of the UK's fruit and vegetable imports will be sourced from regions (such as Spain and Peru) facing **severe climate threats**, including 1000% increases in "hot days".
- **Declining Domestic Self-Sufficiency:** Recent reports warn that up to **23% of currently farmed UK land** could be lost to competing uses (housing, solar, and carbon sequestration) by 2050, potentially displacing domestic production and increasing import needs.
- **Systemic Fragility:** Research suggests the UK's food system—currently 40% reliant on imports—faces risks from extreme weather and global resource conflict that could lead to shortages and significant price volatility in the next **10 to 50 years**. Countryside Jobs +4

Projected Shifts in Crop Suitability (to 2080)

Climate change is expected to fundamentally alter *what* the UK imports versus grows domestically by 2070-2080:

- **Declining Suitability:** Major current staples like **wheat, strawberries, onions, and oats** may become harder to grow in traditional regions like Southeast England and East Anglia.

Ask anything

+

Fruit & Veg Imports	84% Fruit / 47% Veg	Critical vulnerability due to climate in source countries
Supply Concentration	80% from UK & EU	Increased competition for global food and water resources

For the most detailed current analysis of these trends, you can refer to the United Kingdom Food Security Report 2024 from the Department for Environment, Food & Rural Affairs (Defra).

Would you like to explore how **specific crop yields** are expected to change in your region of the UK by 2070?

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uk farmers protest at crop prices

In early 2026, UK farmers have escalated protests over a **"squeeze" on crop and produce prices**, as well as a controversial new inheritance tax. Farmers argue that "abysmal" farmgate prices—the amount they are paid by retailers—no longer cover the soaring costs of production for key crops like potatoes and cereals. FG Farmers Guardian +2

Latest Protest Activity (March 2026)

- **Westminster Tractor Rally (3 March 2026):** Farmers drove tractors to Parliament Square ahead of the **Spring Statement**. They warned that low commodity prices, combined with rising fuel and fertiliser costs, are threatening national food security.
- **Supermarket Distribution Blockades:** Groups such as **Farmers For Action** have targeted major retailer hubs.
  - **Tesco & Asda:** Depots in **Didcot** and **Lutterworth** were blockaded in late January to protest low prices and "unfair" supermarket margins.
  - **Lidl:** Distribution centres in **Peterborough**, **Doncaster**, and **Houghton Regis** faced pre-dawn tractor blockades over food policy and imports.
- **Port Disruptions:** Protests at the **Port of Dover** and **Port of Felixstowe** have aimed to highlight the impact of cheap foreign imports that undercut British standards. FG Farmers Guardian +6

Key Grievances

- **Price Inbalance:** Farmers claim they are paid "pennies" while retail shelf prices remain high. For example, potato growers reported breaking even at approximately £175 per tonne while only receiving just under £200, leaving no room for investment.
- **Production Costs:** Input costs for cereal farmers have risen by over 40% since 2019, with fertiliser prices jumping from £180 to over £400 per tonne.
- **Inheritance Tax (IHT):** A major driver of recent anger is the government's plan to impose a 20% tax on farm assets over £1m (or up to £2.5m/£3m with allowances) starting in **April 2026**. Farmers fear this will force the sale of land to pay tax bills. Farmers Guide +5

Government & Retailer Response

- **Department for Environment, Food & Rural Affairs (Defra):** Maintains they are backing farmers with a £2.4bn–£2.7bn annual budget and a new **Farming and Food Partnership Board** to improve supply chain fairness.
- **Supermarkets:** Retailers like **Asda** and **Tesco** state they are committed to British sourcing but must also provide value to customers during high food inflation. BBC +3

Would you like more details on the upcoming **High Court judicial review** regarding the inheritance tax, or specific **regional protest dates**?

Double-check important information
It's a good idea to check information in multiple places.

Ask anything

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BBC

Monday 16 March, 2026

FarmersGuardian™ James Michael Jefferson

Spring Statement 2026: Farmers tell Reeves food security must take centre stage in latest Westminster protest

As the world holds its breath with conflict ongoing in the Middle East, will Chancellor Rachel Reeves take decisive steps to outline how food security is national security in the Spring Statement?

[redacted] [redacted]

03 March 2026 • 3 min read

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Image: Farmers returned to Parliament Square for the second time to fight for the future of food security in the UK. (All Farmers)

00:00 00:00

Farmers have returned to Westminster once more in a protest to warn Government that they need to take food security seriously as conflict in the Middle East continues to escalate.

Ahead of Chancellor Rachel Reeves' Spring Statement, producers had made their way to Parliament Square today (March 3) to tell the Government that food security and national security is in jeopardy as conflict heightens in the Middle East.

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Farming in Five by Farmers Guardian

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Future of British abattoirs hangs in the balance	5:32
Bluetongue: Farmers report worrying rise in cases of abortion	5:35
Aldi commits to securing 50% of domestic produce through multi-year deals by 2027	5:38

Tractors had lined the streets of Parliament Square with air horns blaring when Prime Minister Sir Keir Starmer and the Chancellor arrived at the Palace of Westminster.

Farmers at the protest said current geopolitical tensions in the world should make the Government think again about its Inheritance Tax (IHT) policy and the need to support domestic food production.

Food producers had previously held a protest at Parliament Square on February 11 to warn the Government that the sector was still angry and hurt by IHT changes.

PreviousNext

On Saturday (February 28), Israel and the United States began a series of strikes against Iran to target the country's leadership, security forces, nuclear programme and missile sites.

Middle East uncertainty

President Donald Trump said the strikes aimed to induce regime change in Iran and to address concerns regarding its nuclear programme, adding that combat operations will continue until the US has achieved 'all its objectives'.

In response, Iran has launched a series of counter-strikes against Israel, US military bases in the region, and military and civilian locations in Arab states that house US forces.

UK bases in Bahrain, Qatar and Cyprus have also been attacked and the RAF has been deployed in a 'defensive capacity'.

READ NOW: Spring Statement 2026: Reeves urged to 'right the wrongs' of Autumn Budget 2024 to restore farmers' confidence

At a time when British farmers face an uncertain future with changes to IHT, protestors at Parliament Square on Tuesday (March 3) said that without immediate action being taken to reverse that specific 'wrong' and protect food security, the country faces a cliff-edge if it cannot feed itself during a time of conflict and instability across the world.

Food security must be centre stage

A food producer, who wished to remain anonymous, told *Farmers Guardian* that British farming and food security must be centre stage in Westminster during such uncertain times.

"Inheritance tax changes threaten family farms and family businesses," they said.

PLEDGE YOUR SUPPORT: Join Farmers Guardian's Save Britain's Family Farms campaign

"Food security is in jeopardy - therefore so is national security.

"It is really important that we keep these issues in the public eye.

Ask the Expert: strategies to protect farmla

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"With everything unfolding in the Middle East and growing global instability, you would think Government would apply some common sense."

Another farmer, who wished to remain anonymous, said Prime Minister Sir Keir Starmer must 'wake up' and realise that the UK will need farmers more than ever if a war breaks out across the world.

Shadow Defra Secretary Victoria Atkins said she stood in solidarity with farmers at the protest to make the Chancellor reconsider the family farm tax.

"Farmers are trying to make the case to the Chancellor that family farm tax, even with their partial U-turn, is still hurting British farming," Ms Atkins added.

"We Conservatives will keep the fight on in the House of Commons but we are also going to back British farming by closing the [Union] 'flag loophole'."

READ NOW: Spring Statement 2026: What can farmers expect and what do farmers need?

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