

Global Datasets for Disaster Risk Management



Emily White 22nd May 2013

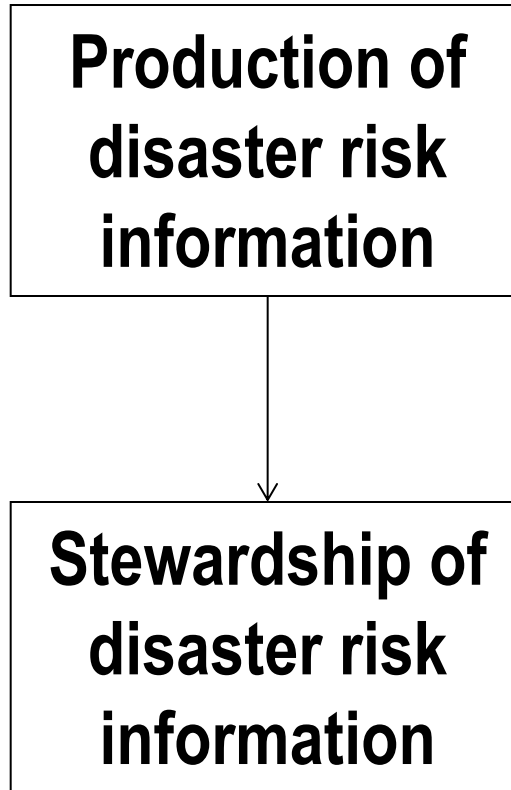
The data challenge is evolving...

- Disaster risk reduction
- Disaster preparedness
- Disaster response and recovery



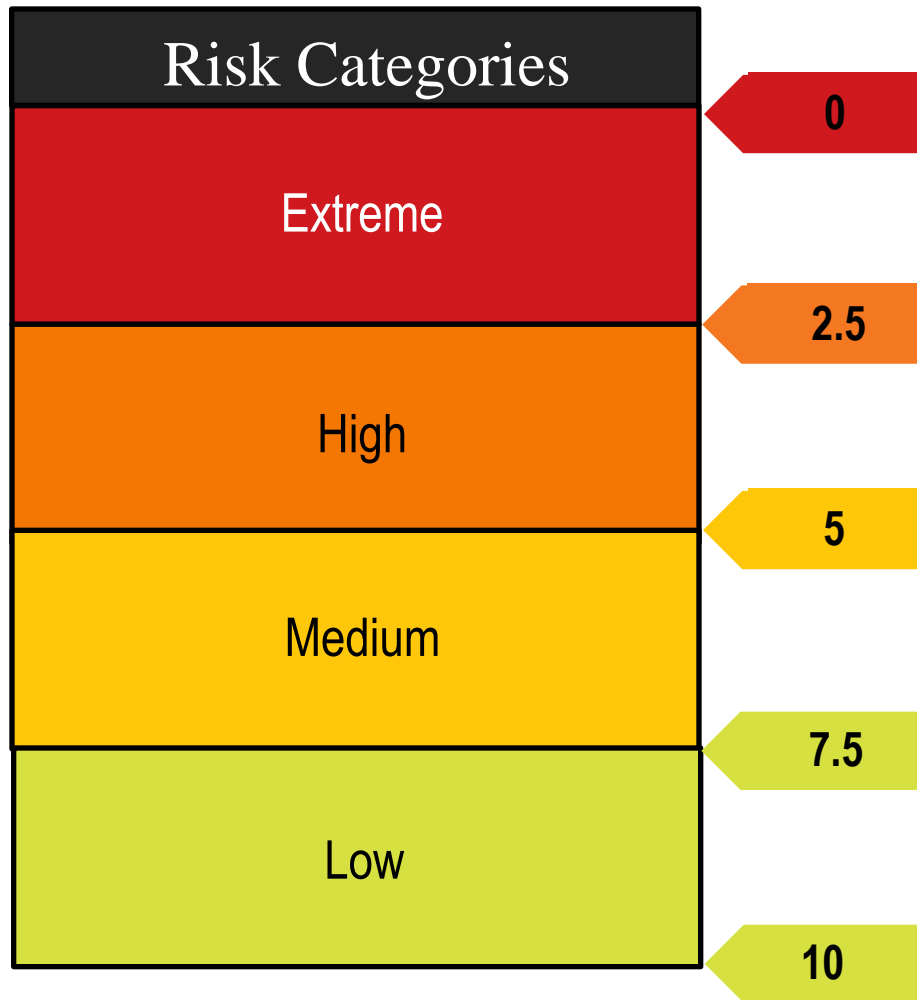
Images from Global Risk Data Platform UNEP/UNISDR; INGC and UNDP; World Bank.

The data challenge is evolving...



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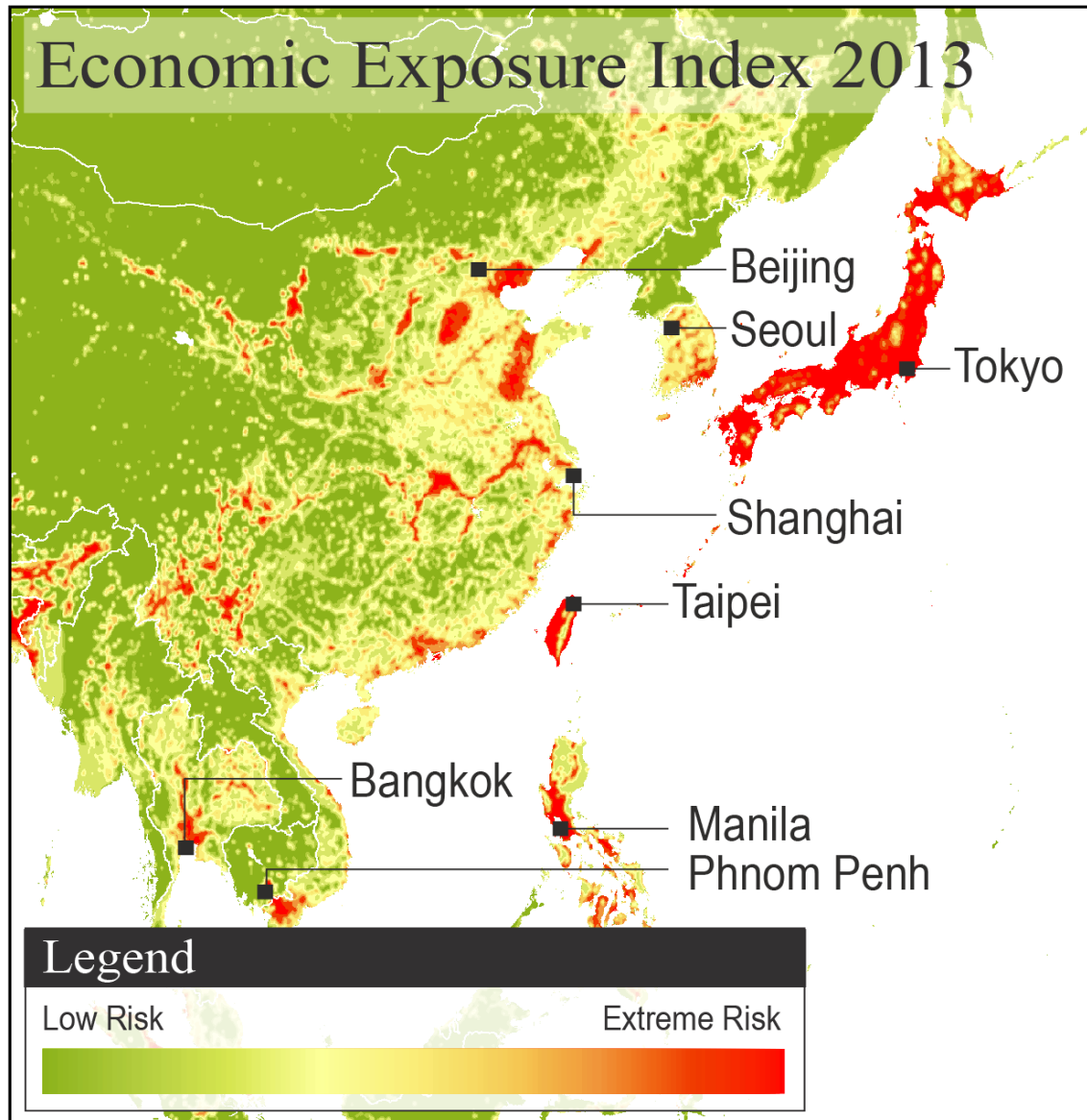
How to derive value from the 'data investment' to date?



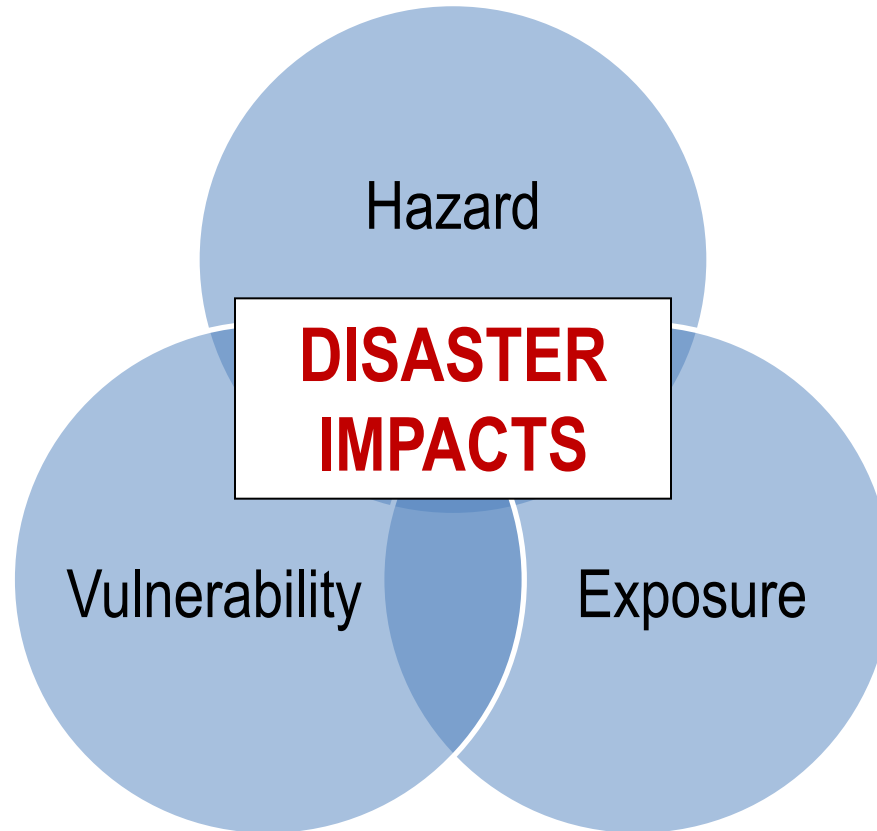
Quantitative risk indices

- Risk is assessed and quantified on a 0 – 10 scale
- Hazard risks mapped to a 25 km² scale for all countries
- 197 countries scored and ranked
- Each country assigned a risk category according to score
- Risks mapped and analysed

How to derive value from the 'data investment' to date?



The framework is set...



A spectrum of hazard, exposure and vulnerability evaluated

Natural Hazard Risk Indices

Hydrological and meteorological risks	Geophysical risks
<i>Flood Risk Index</i>	<i>Seismic Risk Index</i>
<i>Tropical Storm and Cyclone Risk Index</i>	<i>Tsunami Risk Index</i>
<i>Extra-tropical Cyclone Risk Index</i>	<i>Landslide (earthquake-related) Risk Index</i>
<i>Landslide (precipitation-related) Risk Index</i>	<i>Volcanic Risk Index</i>
<i>Severe Storm Risk Index</i>	
<i>Storm Surge Risk Index</i>	
<i>Wildfire Risk Index</i>	
<i>Drought Risk Index</i>	

Economic Exposure

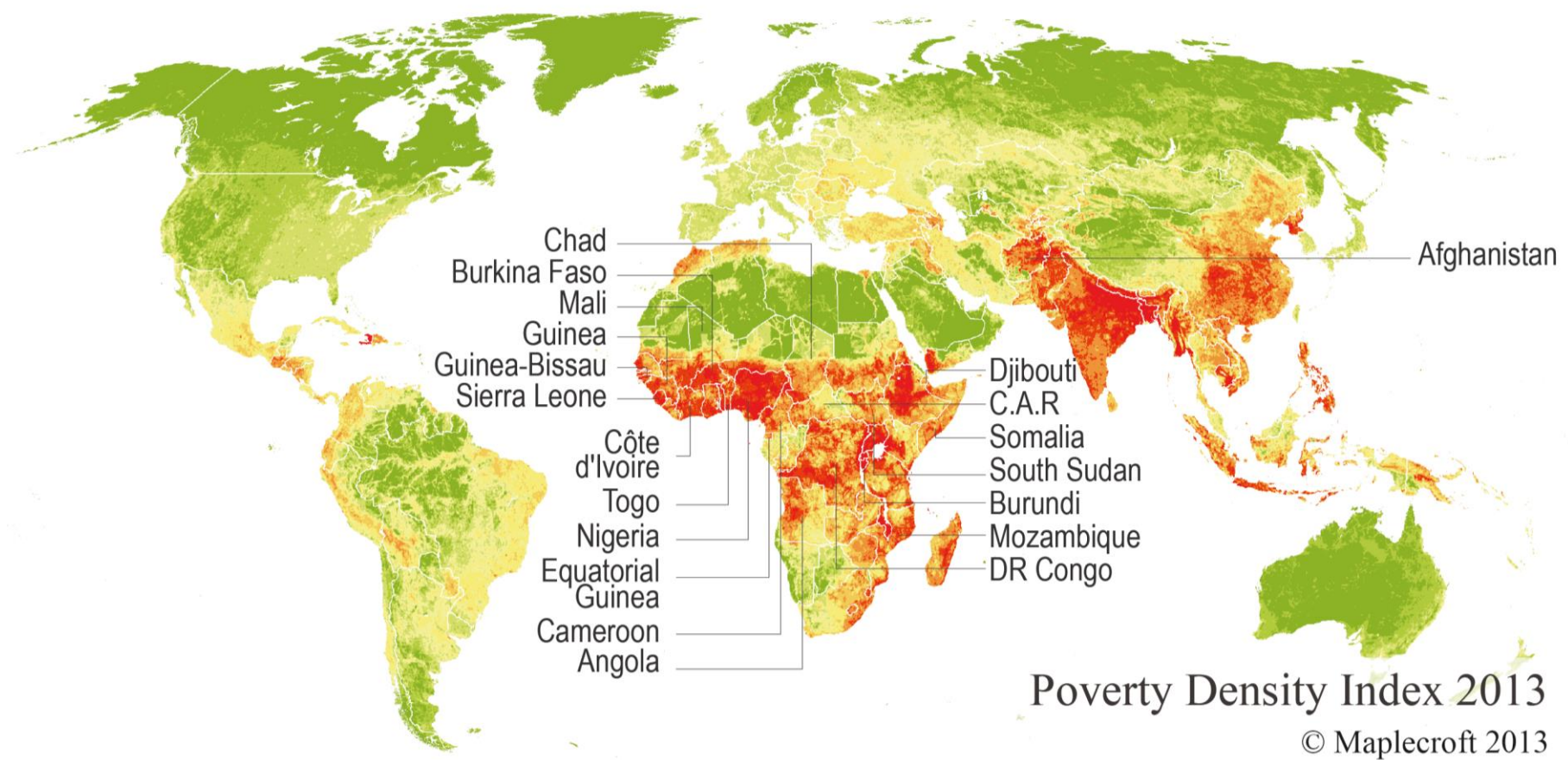
Natural Hazard Risk – Economic Exposure Index	
Absolute Economic Exposure Index	Relative Economic Exposure Index

Socio-economic Resilience Index

Community Vulnerability Index	Institutional Robustness Index	Infrastructure Fragility Index
Livelihood Assets Index	Government Effectiveness Index	Economic Fragility Index
<i>Poverty Density Index</i>	Regime Stability Index	Physical Connectivity Index
	Corruption Risk Index	Recent Occurrences of Natural Disasters Index
	Efficacy of the Regulatory System Index	

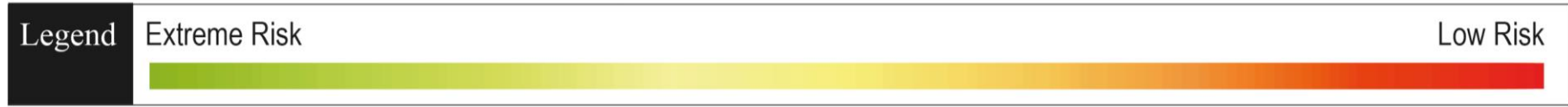
Italics denote a subnational map

A spectrum of hazard, exposure and vulnerability evaluated

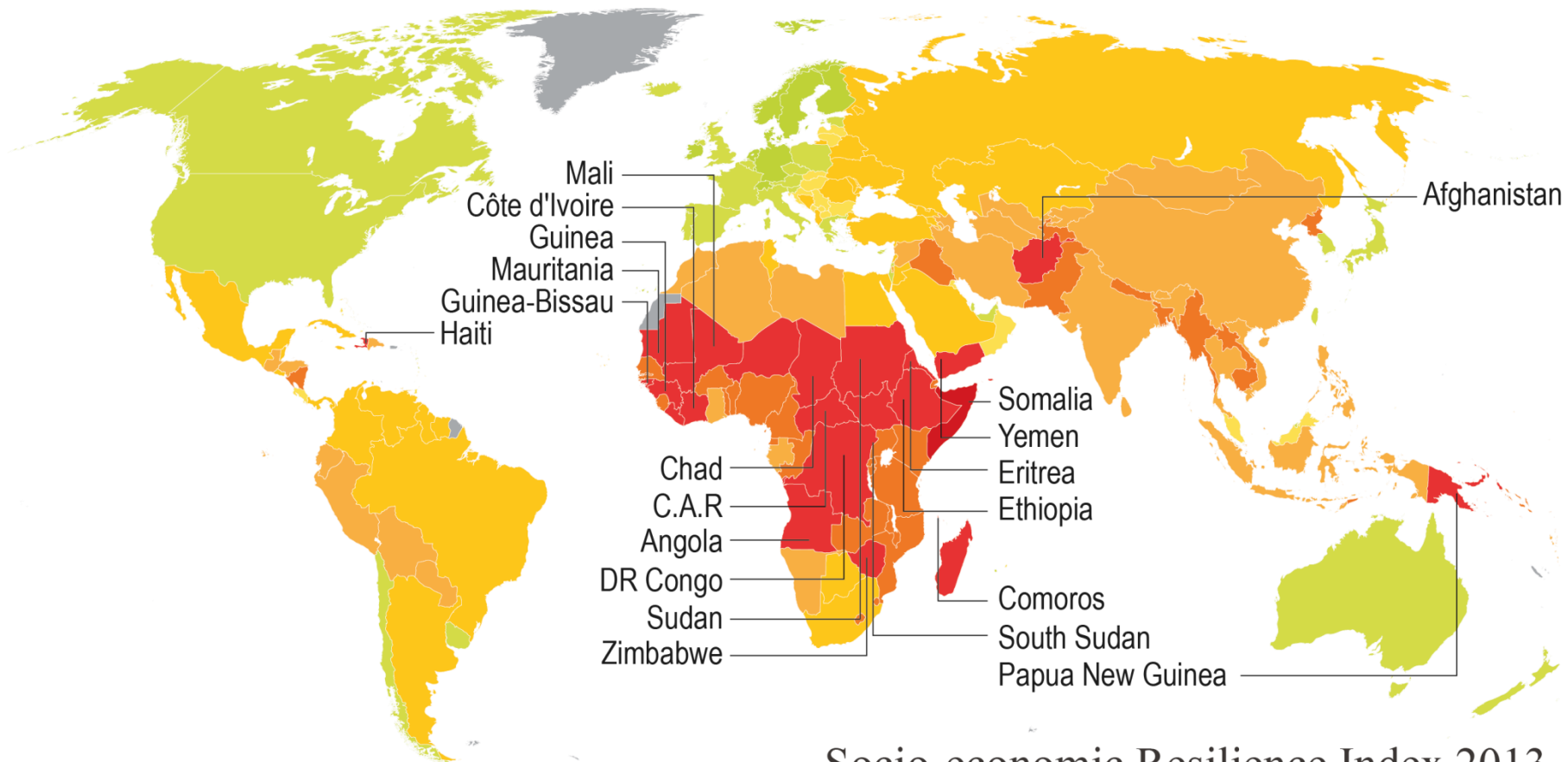


Poverty Density Index 2013

© Maplecroft 2013



Maplecroft's Socio-economic Resilience Index 2013



Socio-economic Resilience Index 2013

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Legend	Extreme Risk	High Risk	Medium Risk	Low Risk
	0.00 - 1.25	>1.25 - 2.50	>2.50 - 3.75	>3.75 - 5.00
			>5.00 - 6.25	>6.25 - 7.50
				>7.50 - 8.75
				>8.75 - 10.00

...to give a global, or regional, picture of risk



Country code	Country	Hazard		Vulnerability				Capacity					
		Human-Induced Hazards (50%)	Natural Hazards (50%)	Poverty density (23%)	Livelihood assets (22%)	Extraordinarily vulnerable populace (22%)	Access to resources (22%)	Health risks (11%)	Public services (33.3%)	Economic (33.3%)	Governance and society (33.3%)		
		Hazards (33.3%)		Vulnerability (33.3%)				Capacity (33.3%)					
AF	Afghanistan	2.57	4.78	1.89	0.16	0.69	4.35	2.78	3.39	1.85	1.22	2.92	1.39
CD	DR Congo	3.85	5.94	1.03	0.03	0.36	1.96	2.50	1.65	1.21	2.23	1.46	
SS	South Sudan	3.75	6.62	2.10	0.17	0.25	1.30	3.27	2.46	2.00	2.44	1.34	
SO	Somalia	3.76	6.35	2.08	0.05	1.92	3.11	1.80	1.63	1.40	2.57	0.88	
PK	Pakistan	1.88	3.20	2.48	0.65	2.55	2.55	4.98	2.79	2.17	3.34	2.84	
SD	Sudan	4.07	6.07	1.84	0.70	1.20	1.20	1.03	3.05	1.98	2.24	1.36	
MM	Burma	3.01	3.17	2.94	0.94	1.39	1.20	1.19	1.92	1.88	2.93	0.83	
NG	Nigeria	3.21	5.30	2.26	0.45	1.45	3.81	1.90	1.69	2.53	2.15	2.90	2.52
YE	Yemen	1.79	1.70	1.70	0.10	1.70	3.08	2.74	4.86	2.07	2.21	2.16	1.84
TD	Chad	5.82	6.21	1.52	0.52	0.52	2.79	2.52	1.81	1.73	1.04	2.13	2.00
IQ	Iraq	3.41	6.05	1.41	0.10	1.97	2.04	4.73	6.33	2.05	2.63	2.21	1.31
CF	Central African Republic	1.16	2.95	1.81	0.10	1.09	2.79	3.67	1.75	1.88	1.04	2.51	2.09
ET	Ethiopia	1.71	5.42	1.42	0.68	1.21	3.51	2.44	2.29	3.12	2.38	2.85	4.13
HT	Haiti	4.10	5.16	2.72	0.84	1.53	4.99	2.72	3.38	2.19	1.73	2.55	2.27
BD	Bangladesh	3.51	2.34	3.18	1.13	3.64	3.60	4.60	5.97	2.62	1.94	3.41	2.53
CI	Côte d'Ivoire	4.64	7.03	2.27	0.41	2.40	3.81	4.61	2.40	2.41	1.88	3.14	2.19
ML	Mali	4.71	6.40	2.98	0.22	2.22	4.83	3.95	3.52	2.54	1.53	1.97	4.11
KE	Kenya	4.87	6.48	1.73	0.87	1.70	2.84	3.14	1.19	3.23	2.66	3.11	3.95
BI	Burundi	5.33	7.81	1.82	0.39	2.67	3.22	3.07	2.47	2.50	1.89	2.32	3.27
NE	Niger	5.93	6.23	2.76	0.61	1.30	4.79	2.92	2.87	2.16	1.04	2.04	3.38
SY	Syria	3.04	5.73	4.77	3.47	6.73	0.97	4.44	8.12	3.16	4.20	3.42	1.89
IN	India	2.87	2.78	3.59	0.97	4.22	4.43	5.45	4.61	3.94	2.97	4.68	4.20
MG	Madagascar	4.99	6.22	3.72	1.05	2.98	6.66	3.18	4.55	2.35	1.56	2.47	3.03
GN	Guinea	6.35	7.87	2.44	0.48	2.18	4.47	4.18	2.89	1.92	1.37	2.32	2.06

EXAMPLE

