

## Supplementary Materails

**Table S1.** Incidence of Cystic echinococcosis in 1990 and 2019 in 204 countries, with EAPC from 1990 and 2019.

location	Num_1990	ASR_1990	Num_2019	ASR_2019	Num_change	EAPC_CI
Afghanistan	527 (294–872)	5.29 (2.93–8.4)	1759 (878–3063)	5.24 (2.91–8.39)	2.34% (1.78–2.68)	–0.08% (–0.1––0.06)
Albania	35 (26–45)	1.13 (0.88–1.4)	35 (28–43)	1.14 (0.88–1.4)	0% (–0.12–0.15)	0.01% (0.01–0.01)
Algeria	2987 (1546–5032)	13.09 (7.34–21.02)	5586 (3001–9111)	13.17 (7.32–20.72)	0.87% (0.48–1.36)	–0.02% (–0.04–0)
American Samoa	0 (0–0)	0.07 (0.05–0.09)	0 (0–0)	0.07 (0.05–0.09)	0.19% (0.1–0.29)	0.12% (0.1–0.14)
Andorra	0 (0–0)	0.42 (0.17–0.81)	0 (0–1)	0.41 (0.17–0.78)	0.65% (0.19–1.23)	0.02% (0.01–0.04)
Angola	158 (100–232)	1.77 (1.23–2.45)	471 (301–688)	1.79 (1.24–2.46)	1.98% (1.87–2.11)	0.06% (0.05–0.06)
Antigua and Barbuda	0 (0–0)	0.01 (0.01–0.02)	0 (0–0)	0.01 (0.01–0.02)	0.48% (0.26–0.72)	–0.06% (–0.02– 0.09)
Argentina	177 (143–216)	0.54 (0.44–0.66)	256 (207–310)	0.54 (0.43–0.65)	0.45% (0.37–0.52)	0% (0–0.01)
Armenia	1902 (873–3500)	56.48 (26.55–101.85)	1849 (862–3383)	56.11 (25.8–100.3)	–0.03% (–0.21– 0.21)	–0.01% (–0.03–0)
Australia	4 (3–5)	0.02 (0.02–0.03)	7 (5–10)	0.02 (0.02–0.03)	0.78% (0.68–0.87)	0% (0–0)
Austria	30 (25–35)	0.35 (0.29–0.42)	31 (26–37)	0.32 (0.26–0.39)	0.05% (–0.03–0.14)	–0.41% (–0.67– 0.15)
Azerbaijan	3958 (1726–7618)	56.26 (25.42–99.52)	6198 (2739–11638)	55.83 (25.38–102.43)	0.57% (0.25–0.9)	–0.02% (–0.04– 0.01)
Bahamas	0 (0–0)	0.01 (0.01–0.02)	0 (0–0)	0.01 (0.01–0.02)	0.53% (0.3–0.84)	–0.07% (–0.1––0.03)
Bahrain	3 (1–6)	0.65 (0.31–1.14)	11 (5–21)	0.66 (0.31–1.18)	2.21% (1.43–3.4)	0.02% (0–0.04)
Bangladesh	1466 (305–4270)	1.76 (0.42–5.59)	2735 (618–8823)	1.77 (0.43–5.74)	0.87% (0.38–1.54)	0.01% (–0.01–0.03)
Barbados	0 (0–0)	0.01 (0.01–0.02)	0 (0–0)	0.01 (0.01–0.02)	0.21% (0.03–0.44)	–0.08% (–0.11– 0.06)
Belarus	763 (625–918)	6.57 (5.43–7.91)	765 (621–919)	6.53 (5.41–7.8)	0% (–0.07–0.08)	–0.01% (–0.01– 0.01)
Belgium	5 (4–6)	0.04 (0.03–0.05)	8 (7–10)	0.06 (0.05–0.08)	0.74% (0.61–0.92)	1.12% (0.81–1.43)
Belize	0 (0–0)	0.01 (0.01–0.02)	0 (0–0)	0.01 (0.01–0.02)	1.26% (0.98–1.63)	–0.07% (–0.11– 0.03)
Benin	62 (40–92)	1.54 (1.05–2.15)	175 (110–262)	1.55 (1.05–2.16)	1.82% (1.71–1.95)	0.06% (0.04–0.07)

location	Num_1990	ASR_1990	Num_2019	ASR_2019	Num_change	EAPC_CI
Bermuda	0 (0–0)	0.29 (0.23–0.37)	0 (0–0)	0.29 (0.23–0.36)	0.2% (0.05–0.37)	–0.06% (–0.08–0.03)
Bhutan	8 (2–24)	1.78 (0.44–5.55)	13 (3–39)	1.74 (0.41–5.46)	0.51% (0.09–1.05)	–0.16% (–0.19–0.12)
Bolivia (Plurinational State of)	0 (0–1)	0.01 (0–0.01)	1 (0–1)	0.01 (0–0.01)	0.96% (0.71–1.34)	–0.03% (–0.04–0.02)
Bosnia and Herzegovina	147 (116–182)	3.16 (2.5–3.87)	122 (97–152)	3.13 (2.47–3.89)	–0.17% (–0.25–0.07)	–0.03% (–0.03–0.02)
Botswana	0 (0–0)	0 (0–0.01)	0 (0–0)	0 (0–0.01)	0.7% (0.44–1.12)	0.01% (0.01–0.01)
Brazil	804 (255–2013)	0.64 (0.23–1.77)	167 (89–321)	0.07 (0.04–0.14)	–0.79% (–0.87–0.62)	–6.65% (–7.06–6.23)
Brunei Darussalam	0 (0–0)	0.01 (0–0.01)	0 (0–0)	0.01 (0–0.01)	0.76% (0.52–1.13)	0.01% (0.01–0.01)
Bulgaria	305 (243–374)	3.15 (2.48–3.87)	257 (205–321)	3.13 (2.48–3.87)	–0.16% (–0.22–0.07)	–0.03% (–0.03–0.02)
Burkina Faso	125 (77–187)	1.55 (1.06–2.22)	314 (196–472)	1.57 (1.07–2.23)	1.52% (1.41–1.63)	0.06% (0.05–0.07)
Burundi	4 (3–6)	0.07 (0.05–0.1)	9 (6–12)	0.07 (0.05–0.1)	1.21% (1.08–1.35)	0.% (0–0.01)
Cabo Verde	5 (3–7)	1.52 (1.03–2.14)	9 (6–13)	1.53 (1.04–2.16)	0.81% (0.58–1.14)	0.04% (0.03–0.06)
Cambodia	10 (2–29)	0.09 (0.03–0.24)	17 (4–49)	0.1 (0.03–0.28)	0.77% (0.5–1.4)	0.11% (0.06–0.16)
Cameroon	47 (28–75)	0.53 (0.35–0.77)	147 (86–236)	0.54 (0.35–0.79)	2.09% (1.94–2.26)	0.09% (0.07–0.11)
Canada	17 (13–21)	0.06 (0.05–0.07)	26 (21–32)	0.06 (0.05–0.07)	0.52% (0.39–0.67)	–0.07% (–0.08–0.06)
Central African Republic	43 (28–64)	1.79 (1.24–2.49)	87 (56–128)	1.8 (1.25–2.5)	1.01% (0.92–1.1)	0.02% (0.02–0.03)
Chad	78 (49–114)	1.53 (1.06–2.14)	215 (132–324)	1.55 (1.06–2.15)	1.76% (1.59–1.93)	0.07% (0.05–0.08)
Chile	141 (119–166)	1.14 (0.97–1.33)	292 (254–335)	1.44 (1.25–1.66)	1.07% (0.91–1.24)	0.4% (–0.18–0.99)
China	4975 (1540–11580)	0.41 (0.14–0.89)	6665 (2962–13327)	0.46 (0.19–0.95)	0.34% (–0.06–1.07)	0.57% (0.49–0.65)
Colombia	6 (4–8)	0.02 (0.02–0.03)	11 (8–15)	0.02 (0.02–0.03)	0.84% (0.59–1.16)	0.04% (0.03–0.04)
Comoros	0 (0–0)	0.01 (0.01–0.02)	0 (0–0)	0.01 (0.01–0.02)	0.59% (0.38–0.89)	0.01% (0–0.02)
Congo	14 (8–22)	0.64 (0.42–0.91)	32 (20–48)	0.65 (0.43–0.93)	1.27% (1.07–1.59)	0.05% (0.04–0.06)
Cook Islands	0 (0–0)	0 (0–0)	0 (0–0)	0 (0–0)	0% (0–0)	0% (0–0)
Costa Rica	1 (0–1)	0.02 (0.02–0.03)	1 (1–1)	0.02 (0.02–0.03)	0.95% (0.69–1.3)	0.04% (0.03–0.04)

location	Num_1990	ASR_1990	Num_2019	ASR_2019	Num_change	EAPC_CI
Croatia	121 (101–142)	2.21 (1.85–2.6)	95 (82–110)	1.92 (1.65–2.23)	–0.21% (–0.27–0.14)	–0.42% (–0.47–0.37)
Cuba	2 (1–2)	0.01 (0.01–0.02)	2 (1–3)	0.01 (0.01–0.02)	0.13% (–0.08–0.37)	–0.07% (–0.11–0.04)
Cyprus	2 (1–2)	0.21 (0.17–0.27)	4 (3–5)	0.26 (0.22–0.32)	1.28% (1.07–1.56)	0.44% (0.28–0.61)
Czechia	39 (31–47)	0.34 (0.27–0.42)	42 (33–51)	0.33 (0.26–0.4)	0.07% (–0.02–0.16)	–0.13% (–0.19–0.08)
Democratic People's Republic of Korea	96 (21–261)	0.48 (0.1–1.28)	128 (30–335)	0.48 (0.11–1.24)	0.32% (0.06–0.76)	0.03% (–0.02–0.08)
Democratic Republic of the Congo	589 (374–876)	1.78 (1.24–2.45)	1427 (908–2117)	1.79 (1.24–2.47)	1.42% (1.33–1.53)	0.03% (0.02–0.04)
Denmark	0 (0–0)	0 (0–0)	0 (0–0)	0.01 (0–0.01)	0.98% (0.38–2.23)	0.72% (0.28–1.17)
Djibouti	0 (0–0)	0.07 (0.05–0.1)	1 (1–1)	0.07 (0.05–0.1)	1.52% (1.25–1.87)	0.02% (0.02–0.03)
Dominica	0 (0–0)	0.01 (0.01–0.02)	0 (0–0)	0.01 (0.01–0.02)	–0.05% (–0.16–0.11)	–0.08% (–0.11–0.06)
Dominican Republic	1 (1–2)	0.01 (0.01–0.02)	2 (1–2)	0.01 (0.01–0.02)	0.55% (0.35–0.84)	–0.07% (–0.11–0.04)
Ecuador	0 (0–1)	0 (0–0.01)	1 (0–1)	0 (0–0.01)	1.01% (0.52–1.71)	0.25% (–0.1–0.61)
Egypt	2661 (1433–4416)	5.21 (3–8.45)	5094 (2746–8425)	5.2 (2.94–8.38)	0.91% (0.76–1.12)	–0.03% (–0.04–0.02)
El Salvador	5 (4–6)	0.11 (0.08–0.13)	7 (5–8)	0.11 (0.08–0.14)	0.38% (0.26–0.51)	0.04% (0.04–0.05)
Equatorial Guinea	1 (0–1)	0.16 (0.09–0.24)	2 (1–4)	0.15 (0.09–0.24)	2.71% (2.39–3)	–0.07% (–0.07–0.06)
Eritrea	11 (8–15)	0.39 (0.3–0.5)	26 (20–35)	0.39 (0.3–0.5)	1.35% (1.23–1.46)	0.02% (0.01–0.02)
Estonia	44 (36–53)	2.49 (2.04–3)	39 (32–48)	2.46 (2.03–2.97)	–0.1% (–0.16–0.02)	–0.04% (–0.04–0.03)
Eswatini	0 (0–0)	0 (0–0.01)	0 (0–0)	0 (0–0.01)	0.39% (0.16–0.75)	0.01% (0.01–0.01)
Ethiopia	629 (481–797)	1.29 (1.04–1.61)	1372 (1051–1745)	1.29 (1.03–1.6)	1.18% (1.1–1.26)	–0.01% (–0.01–0)
Fiji	0 (0–0)	0 (0–0.01)	0 (0–0)	0 (0–0.01)	0.15% (–0.08–0.48)	0.05% (0.04–0.06)
Finland	0 (0–0)	0 (0–0.01)	0 (0–0)	0 (0–0.01)	0.17% (–0.2–0.88)	–0.02% (–0.26–0.23)
France	54 (19–116)	0.09 (0.03–0.2)	64 (24–141)	0.09 (0.03–0.2)	0.19% (–0.08–0.5)	0.01% (–0.04–0.07)
Gabon	6 (3–9)	0.63 (0.41–0.91)	11 (7–17)	0.64 (0.41–0.93)	0.94% (0.82–1.13)	0.07% (0.06–0.09)

location	Num_1990	ASR_1990	Num_2019	ASR_2019	Num_change	EAPC_CI
Gambia	4 (3–7)	0.52 (0.35–0.77)	11 (7–18)	0.53 (0.35–0.78)	1.52% (1.42–1.62)	0.09% (0.07–0.1)
Georgia	381 (313–468)	6.52 (5.35–8.01)	210 (176–251)	5.26 (4.42–6.3)	–0.45% (–0.51–0.39)	–1.04% (–1.23–0.85)
Germany	2 (1–3)	0 (0–0)	4 (2–6)	0 (0–0.01)	0.8% (0.15–2.42)	1.78% (1.28–2.28)
Ghana	203 (131–299)	1.53 (1.06–2.12)	476 (316–696)	1.56 (1.08–2.18)	1.34% (1.18–1.5)	0.07% (0.06–0.08)
Greece	0 (0–1)	0 (0–0.01)	0 (0–0)	0 (0–0)	–0.1% (–0.33–0.2)	–0.43% (–0.68–0.17)
Greenland	0 (0–0)	0.01 (0.01–0.02)	0 (0–0)	0.01 (0.01–0.02)	0.14% (–0.02–0.37)	–0.09% (–0.1–0.08)
Grenada	0 (0–0)	0.01 (0.01–0.02)	0 (0–0)	0.01 (0.01–0.02)	0.21% (0.02–0.44)	–0.08% (–0.12–0.05)
Guam	0 (0–0)	0.01 (0.01–0.02)	0 (0–0)	0.01 (0.01–0.02)	0.25% (0.12–0.43)	0.14% (0.12–0.16)
Guatemala	1 (1–2)	0.02 (0.02–0.03)	3 (2–5)	0.02 (0.02–0.03)	1.46% (1.2–1.72)	0.05% (0.04–0.06)
Guinea	28 (17–44)	0.53 (0.34–0.78)	61 (36–97)	0.54 (0.35–0.8)	1.18% (1.03–1.3)	0.09% (0.07–0.11)
Guinea–Bissau	14 (8–20)	1.55 (1.05–2.16)	28 (18–41)	1.57 (1.07–2.18)	1.05% (0.95–1.15)	0.06% (0.05–0.08)
Guyana	2 (2–3)	0.29 (0.23–0.37)	2 (2–3)	0.29 (0.22–0.36)	0.03% (–0.05–0.15)	–0.07% (–0.09–0.04)
Haiti	1 (1–1)	0.01 (0.01–0.02)	2 (1–3)	0.01 (0.01–0.02)	0.96% (0.75–1.24)	–0.07% (–0.1–0.04)
Honduras	1 (1–1)	0.02 (0.02–0.03)	2 (1–3)	0.02 (0.02–0.03)	1.34% (1.08–1.61)	0.03% (0.02–0.04)
Hungary	133 (105–164)	1.15 (0.9–1.43)	130 (102–161)	1.14 (0.89–1.42)	–0.02% (–0.1–0.06)	–0.03% (–0.04–0.03)
Iceland	0 (0–0)	0 (0–0)	0 (0–0)	0 (0–0)	0.3% (–0.05–0.78)	0% (0–0)
India	4314 (3416–5378)	0.57 (0.46–0.69)	9041 (7379–10973)	0.66 (0.54–0.79)	1.1% (0.96–1.25)	0.69% (0.56–0.82)
Indonesia	499 (119–1524)	0.26 (0.07–0.74)	354 (97–957)	0.14 (0.04–0.36)	–0.29% (–0.45–0.01)	–3.23% (–3.82–2.64)
Iran (Islamic Republic of)	3029 (2435–3750)	5.97 (4.94–7.17)	5760 (4753–6977)	6.55 (5.4–7.93)	0.9% (0.69–1.17)	0.19% (0.09–0.3)
Iraq	1972 (1013–3322)	13.05 (7.38–20.85)	5489 (2905–8992)	13.08 (7.38–20.67)	1.78% (1.45–2.12)	–0.03% (–0.04–0.01)
Ireland	3 (1–7)	0.07 (0.02–0.18)	4 (1–9)	0.07 (0.02–0.18)	0.39% (0.06–1.01)	0.11% (0.09–0.13)
Israel	20 (8–37)	0.41 (0.17–0.77)	39 (18–71)	0.41 (0.17–0.77)	0.97% (0.66–1.33)	0.04% (0.03–0.06)
Italy	559 (466–658)	0.9 (0.75–1.08)	4295 (3667–5032)	5.76 (4.88–6.83)	6.69% (5.84–7.64)	0.94% (–0.65–2.56)

location	Num_1990	ASR_1990	Num_2019	ASR_2019	Num_change	EAPC_CI
Jamaica	0 (0–1)	0.01 (0.01–0.02)	0 (0–1)	0.01 (0.01–0.02)	0.23% (0.07–0.44)	–0.07% (–0.11– –0.04)
Japan	79 (23–239)	0.06 (0.02–0.18)	33 (17–69)	0.03 (0.01–0.06)	–0.59% (–0.73– –0.2)	–3.79% (–4.57– –3.01)
Jordan	182 (144–224)	5.64 (4.63–6.69)	1000 (825–1206)	8.55 (7.11–10.07)	4.5% (4.03–5.14)	2.06% (1.66–2.47)
Kazakhstan	26055 (21264–31968)	164.09 (135.28– 197.75)	23986 (19796–28908)	127.56 (105.34– 153.8)	–0.08% (–0.14– –0.01)	–1.22% (–1.44– –0.99)
Kenya	254 (192–322)	1.14 (0.91–1.41)	579 (446–736)	1.13 (0.9–1.41)	1.29% (1.2–1.38)	0.03% (–0.02–0.08)
Kiribati	0 (0–0)	0 (0–0.01)	0 (0–0)	0 (0–0.01)	0.63% (0.34–0.99)	0.06% (0.05–0.07)
Kuwait	88 (44–147)	5.01 (2.76–7.92)	251 (132–450)	5.15 (2.87–8.18)	1.86% (1.26–2.52)	0.06% (0.04–0.08)
Kyrgyzstan	2757 (2259–3382)	68.56 (56.57–82.4)	6211 (5183–7653)	95.61 (80.36–116.11)	1.25% (1.08–1.45)	1.30% (0.94–1.67)
Lao People's Democratic Republic	4 (1–14)	0.1 (0.03–0.28)	8 (2–23)	0.11 (0.03–0.31)	0.79% (0.45–1.14)	0.03% (0.02–0.05)
Latvia	63 (51–76)	2.04 (1.67–2.46)	43 (37–50)	1.82 (1.56–2.13)	–0.31% (–0.38– –0.23)	–0.23% (–0.31– –0.16)
Lebanon	398 (214–651)	13.14 (7.32–21.37)	689 (380–1124)	13.21 (7.38–20.88)	0.73% (0.48–0.99)	–0.02% (–0.04–0)
Lesotho	0 (0–0)	0 (0–0.01)	0 (0–0)	0 (0–0.01)	0.14% (–0.07–0.46)	0.02% (0.02–0.03)
Liberia	9 (5–14)	0.53 (0.34–0.78)	25 (14–39)	0.54 (0.35–0.8)	1.72% (1.52–1.91)	0.06% (0.05–0.08)
Libya	484 (245–832)	12.87 (7.24–20.5)	962 (520–1587)	13.1 (7.31–20.88)	0.99% (0.55–1.56)	0% (–0.02–0.03)
Lithuania	115 (96–139)	2.89 (2.41–3.44)	85 (74–98)	2.46 (2.11–2.86)	–0.27% (–0.33– –0.19)	–0.4% (–0.57––0.22)
Luxembourg	0 (0–0)	0.04 (0.03–0.05)	0 (0–0)	0.04 (0.03–0.05)	0.6% (0.37–0.85)	–0.08% (–0.26––0.1)
Madagascar	8 (6–12)	0.07 (0.05–0.1)	20 (13–29)	0.07 (0.05–0.1)	1.32% (1.17–1.5)	0.02% (0.01–0.03)
Malawi	36 (26–48)	0.39 (0.3–0.5)	74 (54–99)	0.39 (0.3–0.5)	1.05% (0.95–1.15)	0.01% (0–0.02)
Malaysia	18 (5–54)	0.1 (0.03–0.26)	32 (9–86)	0.1 (0.03–0.27)	0.77% (0.5–1.4)	0.01% (0.01–0.01)
Maldives	0 (0–1)	0.1 (0.03–0.28)	0 (0–1)	0.1 (0.03–0.28)	1.14% (0.45–2.35)	0.01% (–0.01–0.03)
Mali	112 (73–164)	1.54 (1.04–2.12)	298 (187–447)	1.55 (1.04–2.15)	1.65% (1.49–1.78)	0.05% (0.04–0.06)
Malta	0 (0–0)	0 (0–0)	0 (0–0)	0 (0–0)	0.12% (–0.15–0.5)	0.03% (0.02–0.04)
Marshall Islands	0 (0–0)	0 (0–0.01)	0 (0–0)	0 (0–0.01)	0.19% (–0.08–0.58)	0.06% (0.05–0.07)
Mauritania	28 (18–40)	1.52 (1.04–2.13)	59 (38–86)	1.54 (1.04–2.15)	1.13% (1.06–1.21)	0.07% (0.06–0.08)
Mauritius	1 (0–4)	0.1 (0.03–0.3)	1 (0–3)	0.1 (0.03–0.3)	0.1% (–0.15–0.81)	0% (0–0)

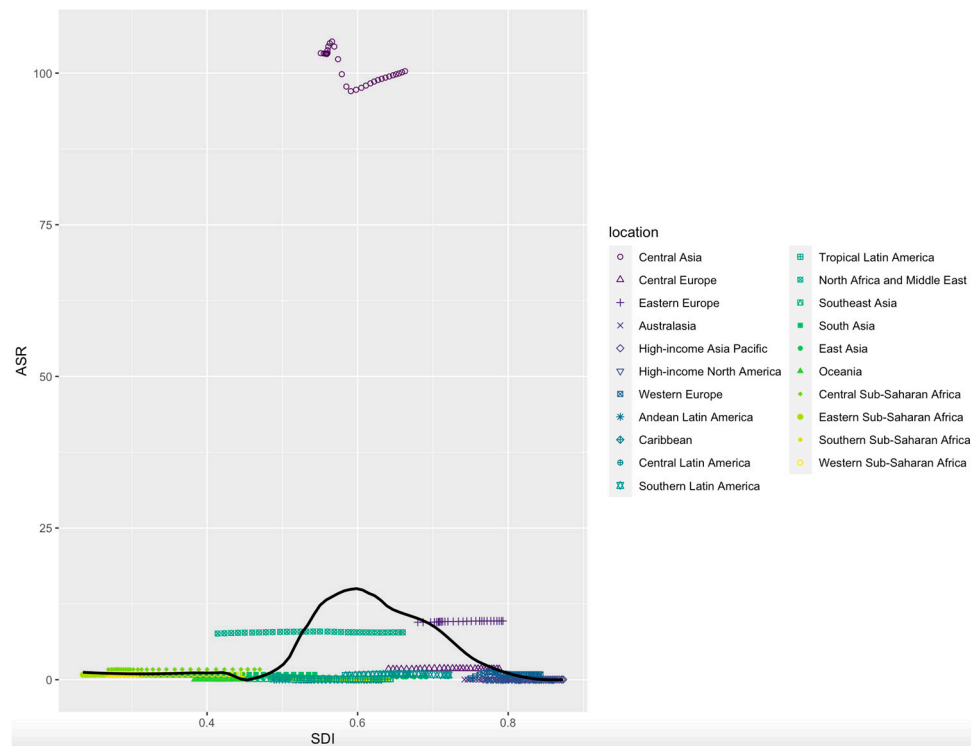
location	Num_1990	ASR_1990	Num_2019	ASR_2019	Num_change	EAPC_CI
Mexico	74 (19–234)	0.09 (0.02–0.29)	58 (22–148)	0.05 (0.02–0.12)	–0.22% (–0.45–0.47)	–1.68% (–2.45––0.91)
Micronesia (Federated States of)	0 (0–0)	0 (0–0.01)	0 (0–0)	0 (0–0.01)	–0.04% (–0.25–0.27)	0.06% (0.05–0.08)
Monaco	0 (0–0)	0 (0–0)	0 (0–0)	0 (0–0)	0% (0–0)	0% (0–0)
Mongolia	1036 (433–2102)	55.98 (25.19–100.22)	1858 (815–3484)	55.52 (25.61–100.56)	0.79% (0.4–1.29)	0% (–0.02–0.01)
Montenegro	7 (6–9)	1.14 (0.9–1.41)	8 (6–10)	1.14 (0.9–1.41)	0.09% (0–0.21)	–0.02% (–0.03––0.02)
Morocco	3097 (1623–5184)	13.12 (7.19–21.2)	4938 (2672–7969)	13.18 (7.26–21)	0.59% (0.35–0.91)	–0.03% (–0.05––0.01)
Mozambique	50 (36–65)	0.39 (0.31–0.51)	114 (83–151)	0.39 (0.3–0.5)	1.29% (1.18–1.43)	–0.01% (–0.01–0)
Myanmar	44 (11–133)	0.11 (0.03–0.28)	59 (15–167)	0.11 (0.03–0.3)	0.33% (0.12–0.75)	0.02% (0.01–0.03)
Namibia	0 (0–0)	0 (0–0)	0 (0–0)	0 (0–0)	0.68% (0.43–1.08)	0.06% (0.05–0.07)
Nauru	0 (0–0)	0 (0–0)	0 (0–0)	0 (0–0)	0% (0–0)	0% (0–0)
Nepal	1 (0–1)	0 (0–0.01)	2 (1–2)	0.01 (0–0.01)	0.92% (0.48–1.57)	0.73% (0.58–0.88)
Netherlands	14 (4–30)	0.09 (0.03–0.19)	16 (6–35)	0.09 (0.03–0.2)	0.19% (–0.06–0.55)	0.05% (0–0.1)
New Zealand	1 (1–2)	0.03 (0.02–0.05)	2 (1–3)	0.04 (0.02–0.06)	0.71% (0.34–1.05)	0.12% (–0.12–0.36)
Nicaragua	1 (0–1)	0.02 (0.02–0.03)	1 (1–2)	0.02 (0.02–0.03)	1.02% (0.75–1.35)	0.04% (0.03–0.04)
Niger	102 (63–153)	1.53 (1.05–2.15)	302 (183–464)	1.55 (1.06–2.19)	1.97% (1.83–2.1)	0.06% (0.05–0.07)
Nigeria	419 (248–657)	0.52 (0.34–0.76)	1055 (610–1725)	0.53 (0.35–0.79)	1.52% (1.37–1.68)	0.12% (0.1–0.14)
Niue	0 (0–0)	0 (0–0)	0 (0–0)	0 (0–0)	0% (0–0)	0% (0–0)
North Macedonia	23 (18–29)	1.14 (0.9–1.4)	28 (22–34)	1.13 (0.88–1.39)	0.18% (0.08–0.3)	–0.04% (–0.05––0.04)
Northern Mariana Islands	0 (0–0)	0.01 (0.01–0.02)	0 (0–0)	0.01 (0.01–0.02)	–0.08% (–0.21–0.15)	0.13% (0.11–0.16)
Norway	9 (6–12)	0.2 (0.13–0.27)	22 (15–30)	0.37 (0.25–0.52)	1.42% (1.18–1.68)	2.42% (1.75–3.11)
Oman	85 (45–145)	4.94 (2.83–7.88)	237 (119–415)	4.9 (2.8–7.67)	1.77% (1.21–2.3)	–0.04% (–0.1–0.01)
Pakistan	1532 (335–4485)	1.75 (0.42–5.49)	3195 (635–9540)	1.74 (0.4–5.58)	1.08% (0.79–1.32)	–0.01% (–0.02–0.01)
Palau	0 (0–0)	0 (0–0)	0 (0–0)	0 (0–0)	0% (0–0)	0% (0–0)
Palestine	226 (117–387)	13.16 (7.3–21.21)	621 (332–1027)	13.11 (7.41–20.54)	1.75% (1.49–2.04)	–0.05% (–0.07––0.03)
Panama	0 (0–1)	0.02 (0.02–0.03)	1 (1–1)	0.02 (0.02–0.03)	1.03% (0.81–1.29)	0.03% (0.02–0.03)

location	Num_1990	ASR_1990	Num_2019	ASR_2019	Num_change	EAPC_CI
Papua New Guinea	0 (0–0)	0 (0–0.01)	0 (0–1)	0 (0–0.01)	1.41% (0.94–1.95)	0.06% (0.05–0.07)
Paraguay	12 (10–15)	0.38 (0.31–0.46)	24 (20–29)	0.37 (0.31–0.45)	0.96% (0.83–1.12)	–0.01% (–0.01–0)
Peru	6 (5–9)	0.03 (0.03–0.04)	11 (9–14)	0.03 (0.03–0.04)	0.75% (0.57–0.97)	0% (0–0)
Philippines	2 (1–3)	0 (0–0)	3 (1–5)	0 (0–0)	0.71% (0.26–1.28)	0% (0–0)
Poland	401 (328–485)	1 (0.81–1.22)	425 (366–493)	0.93 (0.79–1.09)	0.06% (–0.03–0.17)	–0.1% (–0.15––0.04)
Portugal	45 (19–82)	0.41 (0.17–0.78)	52 (25–103)	0.41 (0.17–0.78)	0.17% (–0.14–0.56)	0% (–0.01–0.01)
Puerto Rico	11 (8–14)	0.29 (0.23–0.37)	12 (10–15)	0.29 (0.23–0.36)	0.11% (–0.03–0.27)	–0.05% (–0.08– –0.03)
Qatar	8 (6–10)	1.68 (1.35–2.06)	52 (41–66)	1.68 (1.37–2.04)	5.9% (5.28–6.54)	–0.21% (–0.36– –0.06)
Republic of Korea	14 (10–18)	0.03 (0.02–0.04)	18 (14–24)	0.03 (0.02–0.04)	0.35% (0.11–0.66)	–0.02% (–0.03– –0.01)
Republic of Moldova	778 (643–929)	17.07 (14.15–20.34)	768 (631–923)	16.93 (14–20.2)	–0.01% (–0.09– 0.06)	–0.02% (–0.02– –0.02)
Romania	768 (640–926)	3.08 (2.54–3.71)	859 (737–985)	3.96 (3.42–4.6)	0.12% (0–0.25)	0.9% (0.65–1.16)
Russian Federation	17908 (14797–21262)	10.79 (8.98–12.76)	19163 (15764–22876)	10.89 (9.12–12.87)	0.07% (0.01–0.13)	0.05% (0.03–0.06)
Rwanda	5 (3–7)	0.07 (0.05–0.1)	9 (6–14)	0.07 (0.05–0.1)	0.87% (0.73–1.02)	–0.01% (–0.02–0)
Saint Kitts and Nevis	0 (0–0)	0 (0–0)	0 (0–0)	0 (0–0)	0% (0–0)	0% (0–0)
Saint Lucia	0 (0–0)	0.01 (0.01–0.02)	0 (0–0)	0.01 (0.01–0.02)	0.37% (0.12–0.74)	–0.07% (–0.1––0.05)
Saint Vincent and the Grenadines	0 (0–0)	0.01 (0.01–0.02)	0 (0–0)	0.01 (0.01–0.02)	0.08% (–0.12–0.35)	–0.08% (–0.11– –0.05)
Samoa	0 (0–0)	0 (0–0.01)	0 (0–0)	0 (0–0.01)	0.28% (0.04–0.59)	0.06% (0.05–0.07)
San Marino	0 (0–0)	0 (0–0)	0 (0–0)	0 (0–0)	0% (0–0)	0% (0–0)
Sao Tome and Principe	0 (0–0)	0.12 (0.07–0.19)	0 (0–0)	0.12 (0.07–0.19)	0.88% (0.75–1.1)	0.1% (0.08–0.12)
Saudi Arabia	725 (370–1237)	4.99 (2.8–7.96)	1993 (1026–3486)	5.04 (2.85–7.98)	1.75% (1.13–2.47)	0.01% (–0.01–0.03)
Senegal	34 (20–55)	0.52 (0.35–0.76)	76 (45–121)	0.53 (0.35–0.79)	1.21% (1.07–1.36)	0.09% (0.07–0.11)
Serbia	226 (188–268)	2.22 (1.84–2.66)	248 (208–287)	2.42 (2.04–2.81)	0.1% (0–0.23)	0.34% (0.23–0.44)
Seychelles	0 (0–0)	0.1 (0.03–0.29)	0 (0–0)	0.1 (0.03–0.29)	0.28% (0.03–0.84)	0.02% (0.02–0.02)
Sierra Leone	17 (11–27)	0.53 (0.34–0.78)	42 (25–67)	0.54 (0.34–0.8)	1.47% (1.31–1.61)	0.07% (0.05–0.08)
Singapore	0 (0–0)	0.01 (0–0.01)	0 (0–1)	0.01 (0–0.01)	0.9% (0.53–1.39)	0.01% (0–0.01)
Slovakia	44 (36–54)	0.81 (0.65–0.98)	46 (38–54)	0.74 (0.6–0.89)	0.03% (–0.05–0.13)	–0.25% (–0.33– –0.16)

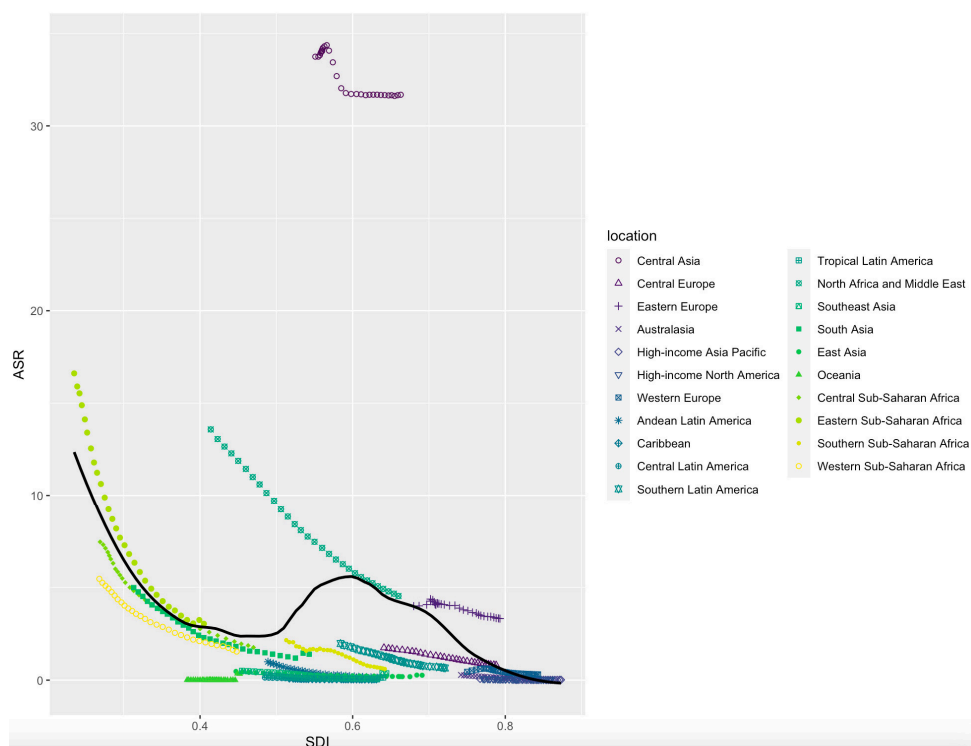
location	Num_1990	ASR_1990	Num_2019	ASR_2019	Num_change	EAPC_CI
Slovenia	29 (24–35)	1.37 (1.11–1.65)	32 (27–37)	1.3 (1.08–1.56)	0.1% (0.01–0.2)	–0.21% (–0.26– –0.15)
Solomon Islands	0 (0–0)	0 (0–0.01)	0 (0–0)	0 (0–0.01)	0.92% (0.56–1.36)	0.06% (0.05–0.07)
Somalia	27 (19–36)	0.39 (0.3–0.49)	77 (56–103)	0.39 (0.3–0.5)	1.88% (1.72–2.08)	0% (0–0.01)
South Africa	19 (14–26)	0.05 (0.04–0.07)	28 (21–36)	0.05 (0.04–0.06)	0.46% (0.36–0.58)	–0.06% (–0.08– –0.05)
South Sudan	71 (53–90)	1.25 (0.99–1.53)	114 (86–144)	1.26 (1.01–1.54)	0.61% (0.53–0.68)	0.04% (0.04–0.04)
Spain	1 (1–2)	0 (0–0)	1 (1–2)	0 (0–0)	0.13% (–0.07–0.36)	–0.32% (–0.68–0.03)
Sri Lanka	18 (4–54)	0.1 (0.03–0.27)	22 (6–57)	0.1 (0.03–0.27)	0.22% (0.02–0.8)	–0.01% (–0.01– –0.01)
Sudan	2288 (1202–3842)	13.1 (7.53–20.76)	5070 (2661–8432)	13.17 (7.47–20.85)	1.22% (1.06–1.41)	–0.03% (–0.06–0.1)
Suriname	0 (0–0)	0.07 (0.06–0.1)	0 (0–1)	0.07 (0.05–0.09)	0.53% (0.38–0.74)	–0.08% (–0.12– –0.05)
Sweden	23 (18–28)	0.25 (0.2–0.31)	44 (36–54)	0.41 (0.33–0.52)	0.92% (0.79–1.11)	1.37% (0.76–1.98)
Switzerland	7 (5–8)	0.09 (0.07–0.11)	11 (9–13)	0.1 (0.08–0.13)	0.6% (0.47–0.74)	0.41% (–0.13–0.95)
Syrian Arab Republic	1439 (739–2441)	13.03 (7.32–20.82)	2027 (1129–3260)	13.37 (7.45–21.26)	0.41% (0.18–0.76)	0.03% (0–0.06)
Taiwan (Province of China)	1 (0–1)	0 (0–0)	1 (0–1)	0 (0–0)	0.06% (–0.3–0.7)	0.17% (0.13–0.2)
Tajikistan	5535 (2492–10858)	123.34 (60.01–214.46)	10887 (4891–20170)	121.88 (58.57– 213.93)	0.97% (0.71–1.33)	–0.03% (–0.04– –0.02)
Thailand	65 (16–201)	0.11 (0.03–0.31)	73 (23–186)	0.11 (0.03–0.3)	0.13% (–0.25–1.1)	–0.01% (–0.02–0)
Timor–Leste	1 (0–2)	0.1 (0.03–0.27)	1 (0–4)	0.1 (0.03–0.27)	0.85% (0.72–1.15)	–0.01% (–0.01–0)
Togo	49 (30–74)	1.54 (1.05–2.15)	115 (74–168)	1.55 (1.06–2.18)	1.36% (1.2–1.6)	0.05% (0.04–0.06)
Tokelau	0 (0–0)	0 (0–0)	0 (0–0)	0 (0–0)	0% (0–0)	0% (0–0)
Tonga	0 (0–0)	0 (0–0.01)	0 (0–0)	0 (0–0.01)	0.04% (–0.16–0.28)	0.06% (0.05–0.07)
Trinidad and Tobago	0 (0–0)	0.01 (0.01–0.02)	0 (0–0)	0.01 (0.01–0.02)	0.24% (0.03–0.53)	–0.09% (–0.12– –0.06)
Tunisia	1041 (560–1737)	13.11 (7.39–21.05)	1606 (913–2605)	13.18 (7.49–20.6)	0.54% (0.23–0.94)	–0.04% (–0.06– –0.01)
Turkey	1906 (1525–2374)	3.36 (2.75–4.06)	3297 (2810–3826)	3.77 (3.22–4.38)	0.73% (0.52–0.98)	0.44% (0.32–0.57)
Turkmenistan	1825 (775–3600)	56.57 (26.03–101.9)	2822 (1231–5170)	55.86 (25.25–99.31)	0.55% (0.21–0.91)	–0.04% (–0.07– –0.01)



location	Num_1990	ASR_1990	Num_2019	ASR_2019	Num_change	EAPC_CI
Tuvalu	0 (0–0)	0 (0–0)	0 (0–0)	0 (0–0)	0% (0–0)	0% (0–0)
Uganda	205 (156–259)	1.25 (1–1.54)	504 (379–646)	1.25 (1–1.53)	1.46% (1.35–1.57)	0.01% (0–0.01)
Ukraine	4125 (3381–4960)	6.84 (5.66–8.25)	3720 (3027–4504)	6.8 (5.66–8.19)	–0.1% (–0.16– –0.03)	–0.01% (–0.02–0)
United Arab Emirates	34 (16–60)	1.87 (1.02–3.05)	189 (95–372)	1.88 (1.02–3.08)	4.59% (3.15–6.48)	–0.02% (–0.05–0.01)
United Kingdom	97 (25–298)	0.16 (0.04–0.46)	35 (14–74)	0.05 (0.02–0.12)	–0.64% (–0.79– 0.42)	–2.99% (–4.05– –1.92)
United Republic of Tanzania	146 (108–193)	0.58 (0.46–0.73)	287 (214–371)	0.52 (0.4–0.65)	0.97% (0.85–1.11)	–0.33% (–0.44– –0.21)
United States of America	113 (58–219)	0.04 (0.02–0.08)	92 (52–164)	0.02 (0.01–0.04)	–0.19% (–0.39– 0.06)	–2.37% (–2.88– –1.86)
United States Virgin Islands	0 (0–0)	0.29 (0.23–0.37)	0 (0–0)	0.29 (0.23–0.36)	0.09% (–0.05–0.26)	–0.07% (–0.09– –0.04)
Uruguay	18 (15–22)	0.54 (0.44–0.66)	21 (17–25)	0.54 (0.43–0.65)	0.16% (0.09–0.22)	0% (–0.01–0)
Uzbekistan	22460 (9914–43740)	124.35 (57.81–220.68)	41079 (18351–76048)	123.53 (58.65– 219.16)	0.83% (0.57–1.23)	–0.03% (–0.05– –0.01)
Vanuatu	0 (0–0)	0 (0–0.01)	0 (0–0)	0 (0–0.01)	0.95% (0.54–1.46)	0.03% (0.02–0.04)
Venezuela (Bolivarian Republic of)	3 (2–5)	0.02 (0.02–0.03)	6 (5–9)	0.02 (0.02–0.03)	0.89% (0.62–1.23)	0.02% (0.01–0.03)
Viet Nam	2 (1–3)	0 (0–0)	3 (1–4)	0 (0–0)	0.36% (–0.01–1.06)	0.25% (0.2–0.29)
Yemen	569 (292–961)	5.21 (2.89–8.1)	1525 (767–2630)	5.26 (2.89–8.42)	1.68% (1.46–1.92)	0.02% (0–0.03)
Zambia	30 (22–41)	0.39 (0.31–0.5)	71 (52–95)	0.39 (0.3–0.5)	1.34% (1.24–1.47)	–0.02% (–0.02– –0.02)
Zimbabwe	0 (0–1)	0 (0–0.01)	1 (0–1)	0 (0–0.01)	0.42% (0.24–0.69)	0% (0–0)



**Figure S1.** Association between age-standardized incidence of cystic echinococcosis and SDI in 21 GBD regions from 1990 to 2019.



**Figure S2.** Association between age-standardized DALY rate of cystic echinococcosis and SDI in 21 GBD regions from 1990 to 2019.