



WEEKLY EPIDEMIOLOGICAL REPORT

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Ministry of Health & Mass Media

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Climate Change and the Rise of Food-Borne Diseases - Part II

*This is the second article of two in a series on
“Climate Change and the Rise of Food-Borne
Diseases”*

Foodborne Viruses and Climate Change Norovirus

Norovirus is one of the leading causes of stomach infections worldwide. It spreads very easily through contaminated food, water, and contact with infected people. While symptoms usually last only a few days, they can be serious for young children, older adults, and people with weak immune systems.

Climate change increases norovirus risk in two ways. First, warmer conditions expand the areas where the virus can survive. Second, floods and water supply disruptions caused by extreme weather events help spread the virus to new populations.

Hepatitis A Virus (HAV)

HAV causes liver infection and spreads through contaminated food and water. Warmer temperatures may help the virus survive for longer periods. Flooding, sea level rise, and poor sanitation create ideal conditions for HAV outbreaks. Vulnerable populations, especially children, the elderly, and people with other health problems, are most at risk.

Foodborne Parasites and Climate Change

Parasites are another group of germs that climate change affects. Many are zoonotic, meaning they can move between animals and hu-

mans. They often spread through contaminated meat, fish, vegetables, or water.

Rising temperatures and changing rainfall patterns provide good conditions for parasites to grow and spread. For example, warmer soil and water allow parasite eggs or larvae to survive longer, increasing the risk of human infection. Poor sanitation in food establishments can also lead to outbreaks, especially if food handlers are infected.

Mycotoxins and Climate Change

Not only germs but also fungi threaten food safety. Certain fungi, such as *Aspergillus*, *Penicillium*, and *Fusarium*, produce poisonous substances called mycotoxins. These toxins contaminate crops like maize, peanuts, and wheat, either during growth or after harvest.

Common mycotoxins include aflatoxin, fumonisin, and ochratoxin A. They can cause long-term health problems, including damage to the liver, nervous system, and even cancer. Mycotoxins are especially dangerous because they remain in food even after cooking or processing.

Climate change, with its mix of higher temperatures and unpredictable rainfall, makes fungal growth and crop infection more likely. This means mycotoxin contamination will probably become a bigger problem in the future, particularly in tropical and subtropical countries where staple crops are already vulnerable.

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The rise in food-borne diseases linked to climate change is already being seen worldwide. For example, Europe has experienced more *Vibrio* infections over the past 20 years because warmer seas allow the bacteria to thrive. In Africa and Asia, warmer temperatures and heavy rains are linked to outbreaks of *Salmonella* and *Campylobacter*.

These illnesses are not just a health issue. They also affect economies and societies. Outbreaks increase healthcare costs, reduce productivity, and disrupt food trade. In addition, they damage trust in food systems. The groups most affected are often those least able to cope: children, the elderly, and poor communities with limited access to clean water, sanitary facilities and healthcare.

Dealing with climate-related food-borne diseases requires strong action at global, national, and community levels. A few key steps

- Better monitoring helps detect outbreaks quickly and limit their spread.
- Farming methods that adapt to changing conditions can reduce the risk of contaminated crops.
- Ensuring access to clean water during floods or droughts is critical.
- Safe fish farming practices can reduce the risks from warming seas.
- Teaching safe food handling and storage practices can reduce household-level risks.
- Recognising the connection between human, animal, and environmental health helps create coordinated solutions like the One Health approach.

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References:

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<https://doi.org/10.1007/s10584-024-03748-9>
2. <https://climate-adapt.eea.europa.eu/en/observatory/evidence/health-effects/food-borne-illness#mycotoxins>
3. <https://www.who.int/health-topics/foodborne-diseases#>
4. <https://www.who.int/news-room/fact-sheets/detail/food-safety>

Table 1 : Water Quality Surveillance
Number of microbiological water samples July 2025

District	MOH areas	No: Expected *	No: Received
Colombo	18	108	0
Gampaha	15	90	9
Kalutara	13	78	79
Kalutara NIHS	2	12	30
Kandy	23	138	14
Matale	13	78	34
Nuwara Eliya	13	78	31
Galle	20	120	170
Matara	17	102	94
Hambantota	12	72	85
Jaffna	14	84	136
Kilinochchi	4	24	22
Mannar	5	30	13
Vavuniya	4	24	22
Mullatvu	6	36	21
Batticaloa	14	84	24
Ampara	7	42	26
Trincomalee	12	72	0
Kurunegala	29	174	0
Puttalam	13	78	NR
Anuradhapura	23	138	39
Polonnaruwa	9	54	23
Badulla	16	96	177
Moneragala	11	66	8
Rathnapura	20	120	NR
Kegalle	11	66	1
Kalmunai	13	78	0

* No of samples expected (6 / MOH area / Month)
 NR = Return not received

Table 1: Selected notifiable diseases reported by Medical Officers of Health 09th–15th Aug 2025 (33rd Week)

RDHS	Dengue Fever		Dysentery		Encephalitis		En. Fever		F. Poisoning		Leptospirosis		Typhus F.		Viral Hep.		H. Rabies		Chickenpox		Meningitis		Leishmania-		Tuberculosis		WRCD	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	T*	C**
Colombo	87	8263	0	24	1	11	1	11	1	33	7	312	0	5	1	14	0	0	19	397	3	52	0	3	39	1306	94	100
Gampaha	91	5402	1	33	0	25	2	3	1	127	24	545	1	10	0	14	0	0	25	583	7	115	5	33	30	754	100	100
Kalutara	56	1755	2	30	0	6	0	17	0	45	7	434	0	3	0	5	0	0	18	607	2	35	1	2	9	371	96	99
Kandy	80	3134	0	38	0	3	0	6	7	36	3	204	1	41	0	7	0	0	9	368	0	18	5	50	21	435	100	100
Matale	13	896	1	20	0	2	0	0	15	65	3	175	0	4	1	9	0	0	3	93	1	8	2	199	3	103	100	100
Nuwara Eliya	3	240	2	65	0	6	0	4	0	57	5	107	0	46	1	2	0	0	7	198	0	23	0	0	10	188	100	100
Galle	48	1492	2	33	0	4	0	5	2	55	12	569	1	59	0	8	0	1	7	525	4	117	0	3	15	329	90	100
Hambantota	15	676	4	28	0	5	0	0	0	4	7	287	2	27	0	10	0	0	4	235	0	18	3	200	0	107	100	100
Matara	35	1184	0	12	0	2	0	1	1	12	5	338	0	12	1	13	0	0	12	281	1	31	5	76	0	113	100	100
Jaffna	20	898	3	69	0	2	2	13	1	42	0	126	6	402	0	2	0	2	4	256	0	21	0	0	1	146	79	93
Kilinochchi	2	72	0	13	0	1	0	4	0	5	1	63	0	11	0	1	0	0	0	4	0	0	0	2	0	35	100	100
Mannar	1	127	0	5	0	0	0	0	0	2	0	23	0	14	0	1	0	0	1	18	0	13	0	5	0	39	100	100
Vavuniya	2	67	0	9	0	0	0	1	0	38	1	72	0	8	0	0	0	0	1	37	0	17	0	15	0	40	100	100
Mullaitivu	0	48	0	5	0	0	0	1	0	23	0	53	0	9	0	0	0	0	0	29	0	5	0	3	0	21	100	100
Batticaloa	5	1525	3	107	0	14	0	2	0	156	2	88	0	2	2	22	0	0	7	147	1	26	0	1	6	98	100	100
Ampara	0	189	0	37	0	11	0	0	0	17	4	172	0	3	0	8	0	1	3	154	1	36	0	21	0	40	43	100
Trincomalee	2	891	0	35	2	4	0	1	1	72	1	117	0	9	0	5	0	0	1	96	0	11	2	7	0	85	100	100
Kurunegala	23	1244	2	38	1	15	0	1	1	48	1	534	0	23	1	7	0	1	17	591	3	117	17	411	8	232	93	100
Puttalam	11	492	1	24	0	3	0	0	0	5	4	205	1	33	1	2	0	1	2	117	3	69	1	25	0	135	92	100
Anuradhapura	11	435	3	29	0	6	0	3	2	30	2	302	0	21	0	12	0	0	11	237	0	48	7	510	2	209	87	100
Polonnaruwa	3	266	0	13	0	6	0	1	2	10	7	226	0	1	1	19	0	0	8	139	0	16	27	310	1	63	100	90
Badulla	12	591	1	23	0	9	0	3	0	6	2	215	1	22	3	50	0	0	3	286	2	53	2	41	8	204	94	100
Monaragala	17	643	0	20	0	3	0	0	0	4	2	436	1	30	7	34	0	0	3	122	0	38	7	146	5	100	100	100
Ratnapura	79	3682	4	86	0	6	0	3	0	54	26	1073	0	24	1	12	0	1	7	319	2	83	20	154	4	277	100	100
Kegalle	19	1104	1	49	1	13	0	9	0	32	13	537	0	13	0	15	0	0	28	624	5	82	0	22	4	184	91	100
Kalmunai	6	311	0	27	0	6	0	0	1	19	3	85	0	1	0	3	0	1	2	125	3	40	0	0	2	90	92	100
SRILANKA	641	35627	30	872	5	163	5	89	35	997	142	7298	14	833	20	275	0	8	202	6588	38	1092	104	2239	168	5704	94	99

Source: Weekly Returns of Communicable Diseases (surveillance.avid.gov.lk). T=Timeliness refers to returns received on or before 15th Aug, 2025 Total number of reporting units 360 Number of reporting units data provided for the current week: 359. C**=Completeness. A = Cases reported during the current week. B = Cumulative cases for the year.

Table 2: Vaccine-Preventable Diseases & AFP

09th – 15th Aug 2025 (33rd Week)

Disease	No. of Cases by Province									Number of cases during current week in 2025	Number of cases during same week in 2024	Total number of cases to date in 2025	Total number of cases to date in 2024	Difference between the number of cases to date in 2025 & 2024
	W	C	S	N	E	NW	NC	U	Sab					
AFP*	00	00	01	00	00	0	00	00	00	01	01	40	42	-4.8%
Diphtheria	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
Mumps	00	00	01	01	02	00	01	00	00	05	04	165	174	-5.7 %
Measles	00	00	00	00	00	00	00	00	00	00	25	01	272	-99.6%
Rubella	00	00	00	00	00	00	00	00	00	00	00	04	02	-100%
CRS**	00	00	00	00	00	00	00	00	00	00	00	01	00	0 %
Tetanus	00	00	00	00	00	00	00	00	00	00	00	05	04	25 %
Neonatal Tetanus	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
Japanese Encephalitis	00	00	00	00	00	00	00	00	00	00	00	04	06	33.3 %
Whooping Cough	00	00	00	00	00	00	00	00	00	01	01	17	37	-54 %

Key to Table 1 & 2

Provinces: W: Western, C: Central, S: Southern, N: North, E: East, NC: North Central, NW: North Western, U: Uva, Sab: Sabaragamuwa.

RDHS Divisions: CB: Colombo, GM: Gampaha, KL: Kalutara, KD: Kandy, ML: Matale, NE: Nuwara Eliya, GL: Galle, HB: Hambantota, MT: Matara, JF: Jaffna, KN: Killinochchi, MN: Mannar, VA: Vavuniya, MU: Mullaitivu, BT: Batticaloa, AM: Ampara, TR: Trincomalee, KM: Kalmunai, KR: Kurunegala, PU: Puttalam, AP: Anuradhapura, PO: Polonnaruwa, BD: Badulla, MO: Moneragala, RP: Ratnapura, KG: Kegalle.

Data Sources:

Weekly Return of Communicable Diseases: Diphtheria, Measles, Tetanus, Neonatal Tetanus, Whooping Cough, Chickenpox, Meningitis, Mumps., Rubella, CRS,

Special Surveillance: AFP* (Acute Flaccid Paralysis), Japanese Encephalitis

CRS** =Congenital Rubella Syndrome

NA = Not Available

Take prophylaxis medications for leptospirosis during the paddy cultivation and harvesting seasons.

It is provided free by the MOH office / Public Health Inspectors.

Comments and contributions for publication in the WER Sri Lanka are welcome. However, the editor reserves the right to accept or reject items for publication. All correspondence should be mailed to The Editor, WER Sri Lanka, Epidemiological Unit, P.O. Box 1567, Colombo or sent by E-mail to chepid@sltnet.lk. **Prior approval should be obtained from the Epidemiology Unit before publishing data in this publication**

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