

Anna Modayil Mani

The Weather Woman of India

23 August 1918 — 16 August 2001 · Peermade, Travancore → Thiruvananthapuram

The life

Anna Modayil Mani — one of India’s pioneering female scientists — was born in 1918 in Peermade (Peermedu), Travancore, now Kerala, the seventh of eight children of a Syrian Christian family. Her father, Modayil Pothan Mani, was the first Indian engineer to work for the Travancore Public Works Department. Her mother, Ammamma, was a homemaker who raised five boys and three girls.

She completed her schooling at Christava Mahilalayam, Aluva, with distinction, topping all the girls of her batch. A voracious reader, she is famously said to have asked for a set of encyclopaedias instead of the traditional gift of diamond earrings on her eighth birthday. At the Indian Institute of Science she was one of only three women in C. V. Raman’s laboratory and published six single-author papers on the optical properties of rubies and diamonds — yet was never awarded her doctorate, for reasons that remain unclear.

In 1948 she joined the India Meteorological Department at Pune. Under her leadership the department standardised the design drawings for over one hundred different weather instruments, ending India’s dependence on imports. In the 1950s and 60s she pioneered India’s own ozonesonde — the balloon-borne apparatus for measuring atmospheric ozone — making India one of the few countries in the world to build its own. She helped establish the Thumba Equatorial Rocket Launching Station observatory and, in retirement, turned her instruments to the wind, laying the groundwork for what became the National Institute of Wind Energy.

“We have only one life. First equip yourself for the job, make full use of your talents and then love and enjoy the work, making the most of being out of doors and in contact with nature.”

— to young meteorologists · WMO Bulletin, 1991

Life & milestones

1918

Born in Peermade, Travancore — seventh of eight children in a Syrian Christian family.

1925

Aged eight, refuses a gift of diamond earrings; asks for books instead. Gandhi's visit that year leaves a lifelong imprint — khadi thereafter.

1939

Graduates from Presidency College, Madras, with Honours in Physics and Chemistry.

1940-45

Researches the optical properties of rubies and diamonds under C. V. Raman at the Indian Institute of Science, Bangalore.

1945-48

Studies meteorological instruments at Imperial College, London.

1948

Joins the India Meteorological Department, Pune. Directs the standardisation of design drawings for over 100 weather instruments — India begins to build rather than import.

1950s-60s

Pioneers India's own ozonesonde for measuring atmospheric ozone; establishes solar-radiation measuring stations across the country.

1969

Deputy Director-General of the IMD; consultancy work with the WMO through the 1970s.

1976

Retires from the IMD. Continues research on wind and solar energy — the seed of what becomes the National Institute of Wind Energy library at Chennai.

1987

Awarded the INSA K. R. Ramanathan Medal for meteorological research.

1994

A stroke, and the onset of a Parkinson's-plus condition, curtails her later years.

2001

Dies on 16 August in Thiruvananthapuram, a week before her 83rd birthday.

Legacy

Anna Mani measured the Indian sky — sun, ozone, wind — and, in doing so, helped an independent country learn to measure itself. She is remembered as the Weather Woman of India: exacting, frugal, principled, and quietly certain that the work would speak for itself. She never married; her independence was total. Her precept, recalled by her friend and WMO colleague Oliver Ashford, was disarmingly plain — you can but do your best.

Compiled for annamani.co.in · Sources include Anna Mani: The Uncut Diamond by Asha Gopinathan (National Book Trust, 2025); Abha Sur's essay in Lilavati's Daughters (Indian Academy of Sciences, 2008); the WMO Bulletin interview (1991); and Oliver M. Ashford's tribute in Current Science (2001).