

# Combating Desertification: Maharashtra's Vanvadi Bears Testimony to Magic of Forest Regeneration

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*Tribal women, trudging uphill to their village with drinking water from Vanvadi open well, with an innovative rotatable water container. (Sanjiv Valson and Rishi Gangoli)*

Our lonely living planet harbours in its biosphere – as thin as the dew on a lotus – millions of life forms evolved over aeons. The earth's soil is the mother of all life ... desertification a spiral of its death.

Spreading desertification, induced by man, ushers an age of great, rapid extinctions. Nearly 170 countries are affected by desertification. The earth already has over 2 billion hectares of degraded land. According to FAO, at current rates of soil degradation, the world's topsoil could be completely eroded in 60 years.

*And then there are a few who battle relentlessly against this growing trend and regenerate the degraded lands around us. One such novel attempt is Vanvadi, a forest farm just two-hours drive away from Mumbai. Over the two decades, this 65-acre clear land has been regenerated into a sumptuous forest. On the occasion of 'World Day to Combat Desertification and Drought' on June 17, one of the owners of Vanvadi, Bharat Mansata, discusses how soil and forest regeneration can help in survival and wellbeing of many. He believes that regenerating forests, rejuvenating soils, recharging groundwater, and reviving human spirits, all go hand in hand! The Story of Vanvadi Musing quietly by himself, Bua suddenly laughed. "Last night, 9 of them – sons, daughters-in-law, grandchildren – rushed out into the pouring rain. Soaked to the skin, they laughed, sang and danced for a good half hour!" It was the first rain-shower after a long, dry, scorching summer, with its daily trudge to fetch a few pots of water from far away. Last year, the summer ritual started early ... in winter! The Adivasi village open well, on the table-land above Vanvadi, usually dries by March-end. It now ran empty in January. The Vanvadi open well built by us has not dried since over a decade. This year, with the monsoon around the corner, it is still more than half full.*

*Neighbouring village women, collecting water at Vanvadi open well. (Sanjiv Valson and Rishi Gangoli)*

*The earth under the Vanvadi forest is a dense maze of plant roots, teeming with zillions of soil-dwelling creatures. The pores they make in the soil turn the forest floor into a massive sponge that soaks in rain. This then percolates down to recharge groundwater aquifers from which humans draw for much of their needs.*

**Stream-bed water harvesting and Vanvadi community house. The surrounding forest also soaks in rainwater like a sponge to recharge underground aquifers. (Sanjiv Valson and Rishi Gangoli)**

Twenty-five monsoons ago, when we first visited the land, most of the trees had been clear-felled just a year or two ago. Over two dozen of us pooled contributions to collectively buy about 65 acres, with the primary objective of ecological conservation and regeneration.

In 1994, the hand-pumps in village Vare, below us, ran dry by peak summer. But within just 10 years of our protecting and regenerating the Vanvadi forest, the downstream pumps began to yield round the year. Chinchwadi, the Adivasi village above us, did not have this benefit, as water flows and percolates down gravitationally.

The rain that falls on forested land is buffered by multiple canopies of trees, climbers, shrubs, understory vegetation and dry leaf litter on the ground. The wrenching force of the monsoon downpours is significantly reduced by the time it reaches the soil, which is bound too, by the densely growing roots of the various forest plants. The rain run-off from such land largely flows as clear water.

[Tranquil, clear water in Vanvadi's oldest rain harvesting pond. \(Sanjiv Valson and Rishi Gangoli\)](#)

In stark contrast is the dark red runoff, bleeding the fertility of all bare, clear-felled, JCB-ed land on which rain falls.

Inexorably creeping desertification and summer droughts are not startling in very low rainfall regions; though even here, the decline in the rain has usually followed deforestation. In very high rainfall regions like the Sahyadri foothills of the Konkan Western Ghats, where Vanvadi is located, water scarcity is sheer madness, self-created by the 'ecological sins' of modern man, ravaging nature.

Largest water harvesting body at Vanvadi- a dammed reservoir of a blood red stream that has collected soil from lands beyond Vanvadi during peak monsoon. (Sanjiv Valson and Rishi Gangoli)

*Neighbouring clear-felled plot with Vanvadi forest in background. The JCB-ed topsoil, bereft of binding tree roots gets eroded and flows into our Vanvadi water bodies, silting them up. (Sanjiv Valson and Rishi Gangoli)*

Bereft of vegetation and soil life, the rainfall on sloping terrain not only runs off but also wrenches off massive quantities of topsoil. The eroded fertile soil flows away to deposit in stream beds and water bodies, reducing the space available to hold water, which then flows further away over silted river-beds into the salty sea.

The land thus faces a double whammy of soil and water loss, draining the 'ecological capital' on which the survival of humanity depends. Water scarcity is currently plaguing almost half of India; and according to FAO, the world's topsoil could be completely eroded within the next 60 years if current soil degradation rates continue.

*The 'ecological capital', silt from upstream topsoil erosion is removed from stream beds and being spread across the farming zone of Vanvadi. (Sanjiv Valson and Rishi Gangoli)*

Regenerating forests, rejuvenating soils, and recharging groundwater ... all go hand in hand! Massive quantities of carbon released in the air by modern industrial man can be recaptured and sequestered to mitigate/counter global warming and climate change, while efficiently harvesting and storing the sun's energy. Forests also bring rain, replenish and cleanse our rivers and water bodies, buffer against floods, and provide habitats for rich biodiversity. They also provide a huge variety of useful produce ... free gifts of Mother Nature ... who we now torture!

The Vanvadi forest harbours a botanical wealth of over 120 traditionally useful species, including more than 50 edible plants, over thirty medicinal species, over 20 timber species ... and then there are plants which yield oils (edible and combustible), gums, resins, natural dyes, botanical 'pest control' functions, cattle fodder, firewood, fibre, craft materials ... and a precious gene pool of seeds for birthing more forests!

The Western Ghats are recognized as a global heritage of vital ecological significance, with a highly evolved biodiversity of flora and fauna. The traditionally prosperous and happy indigenous communities of the region have a correspondingly rich bio-culture with knowledge of several thousand traditionally useful species, including many hundreds of wild/forest foods.

A hefty volume, 'The Useful Plants of India' (Publications and Information Directorate) provides capsulated information on 5,000 traditionally useful plant species, distilled from the older and far more detailed 12 volume encyclopaedic compilation, 'The Wealth of India'. But tragically, this real wealth, contained in our fabulously rich biodiversity – evolved over millions of years – is now sorely neglected and indeed, destroyed. The Western Ghats and its adjoining coastal region are in a steroidal rush to chase cancerous economic/monetised growth, masquerading as 'development'. Paradise is under heightened assault!

**Mahadu Bua holding an edible forest plant of 'lot', a wild yam, found abundantly at Vanvadi. (Sanjiv Valson and Rishi Gangoli)**

*Ambibai, an indigenous expert of forest foods explains some interesting facts about forest foods. (Sanjiv Valson and Rishi Gangoli)*

Cultivated food garden behind community house in Vanvadi. (Sanjiv Valson and Rishi Gangoli)

Women planting native tubers with Vanvadi open well in background. (Sanjiv Valson and Rishi Gangoli)

While the forest wilderness covers 90% of its area, Vanvadi also has a quarter acre of irrigated farmland for cultivated crops like fruit, vegetables; and about an acre of rainfed (unirrigated) area for growing field crops like rice and various millets: nacchni/ragi (finger millet), varie (common millet), and kangu (foxtail millet).

Rice transplanting in July at Vanvadi. (Sanjiv Valson and Rishi Gangoli)

Vanvadi has been hosting, particularly since 2016, a number of workshops and activities which serve as nature sensitization gatherings that also spread ecological awareness and understanding, especially among youth.

*Forest foods walk with local indigenous experts Ambibai and Mahadu Bua. (Sanjiv Valson and Rishi Gangoli)*

Sample collections from 'forest foods foraging walk' at Vanvadi. (Sanjiv Valson and Rishi Gangoli)

Since the last 15 years, Vanvadi has also been hosting every October an annual Vanutsav (forest festival) – “to celebrate nature and community, and to share creativity”. This is an 'open agenda,' multi-generational gathering, where the participants themselves volunteer to conduct any workshops or activities they like, that others can choose to attend or skip, according to their interest.

*Community cooking and eating at Vanvadi vanutsav. (Sanjiv Valson and Rishi Gangoli)*

*Making broad-leaf screens for toilets in preparation for Vanvadi vanutsav. (Sanjiv Valson and Rishi Gangoli)*

“Why every year? Why not every month?” declared little Zui at our very first Vanutsav, when told that we would have it every October.

A girl atop ladder during repair of clay tile roof of Vanvadi community house. (Sanjiv Valson and Rishi Gangoli)

Contact [the author](#)

*Bharat Mansata is an environmental activist, involved in ecological regeneration, and author of several books, including 'The Vision of Natural Farming' and 'Organic Revolution'. He can be reached at [bharatmansata@yahoo.com](mailto:bharatmansata@yahoo.com).*

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