



GOALPARA - GREEN TECHNOLOGY



Febuary, 2018. Road construction had come to a standstill in Goalpara, Assam as there was no stone construction material available since stone quarries had shut down on expiry of their lease periods. The situation further worsened when, in March 2018, the RCC bridge on NH 37 – the main lifeline for the District – was severely distressed at Keshnani choking the delivery route for construction materials. In the meantime, a project for 565 Km of much needed road length was sanctioned by the National Rural Infrastructure Development Agency (NRIIDA) for Goalpara district under Pradhan Mantri Gram Sadak Yojana (PMGSY). Given the tough raw material situation, no bidder came forward to carry out the works. This was in the backdrop of the fact that pace of constructing PMGSY roads for the district had always been sluggish due to a variety of reasons. The situation appeared bleak indeed.

In the face of challenges caused by depleting natural resources, closure of stone quarries and logistical bottlenecks, the district authorities started a frantic search for possible solutions. The idea that emerged was to connect all rural habitations with all-weather rural roads using alternative green technologies and using non-conventional materials for road construction such as waste plastic. The goal was to achieve the PMGSY targets while also reducing dependence on conventional materials for road construction. After consultations with the National Rural Infrastructure Development Agency (NRIIDA), State Rural Road Development Agency (SRRDA) and State Technical Agency (STA) it was decided to go ahead with the use of green technologies in road construction in Goalpara. This was also quite in line with the “Clean Goalpara, Green Goalpara” mission of the District Administration.

The initiative also promised to solve another problem – that of plastic pollution. It had been observed that clogged drains were the root cause of frequent flash floods experienced by the district. Many cases of animals choking due to consumption of plastic had also been reported. The path to success was definitely less paved than the beautiful “green roads” subsequently built under the initiative. Substitution of conventional materials for road construction by green technologies did lead to some public resistance. Local people were not familiar with use of new materials like waste plastic, geo-grid, cold-mix, cement concrete blocks and were initially a little apprehensive. Through a series of awareness meetings and demonstrations, the District Administration not only allayed all reservations and built consensus but soon had people actively cooperating and demanding more number of “green roads” in their localities. In the initial period, sourcing of green material was a challenge. However, this was resolved within a few months as local manufacturing units came up – with some initial handholding – within the district for manufacturing the material. This also provided new employment avenues for the local youth.



OBJECTIVES

- REDUCING DEPENDENCE ON CONVENTIONAL MATERIALS FOR ROAD DEVELOPMENT.
- INTEGRATE PLASTIC WASTE MANAGEMENT WITH ROAD CONSTRUCTION

OUTCOMES

Green Technologies like Waste Plastic Technology, Cell Filled Concrete Technology, Geogrid Technology (Texas 3D Grid), Cold Mix Technology and Interlocking Concrete Pavement Block (ICBP) have helped complete 237.652 km of roads pegging the achievement at 300% of the annual target. Goalpara District was recognised for being the 1st in the state to use waste plastic technology for construction of roads under various schemes. With the use of Cell-Filled/Panel Concrete Technologies 76.67 km of roads have already been constructed under PMGSY and 18.4 km of roads under other state sponsored schemes. Likewise for Geo-Grid, Cold Mix and Cement Concrete Block Technologies, 19.40 Km, 36.54 Km and 107.48 Km Roads have already been constructed under PMGSY alone.

Carrying forward the aim of greening, afforestation was carried out to compensate for the trees felled along the road alignments. 3000 saplings of various plant species were planted along various rural roads constructed in the district. The districts border with the neighbouring state of Meghalaya is a riverine area with dense forest cover where connectivity poses a major challenge. To overcome the problems of supervision and monitoring of the road works, the Goalpara District Administration developed the “Infrastructure Saptshot App”. It is an Android based one-of-its-kind convergence app that has helped the administration to gather valuable feedback on monitoring the quality of roads and satisfaction levels of the public from use of green material and technology in construction of roads.

The introduction of roads constructed with the help of green material and technology has ushered in a new era of all round socio-economic development in the district. These all-weather roads have brought in new economic opportunities, reducing poverty by opening up access to rural markets where the local communities including agriculturists can now sell their produce at more remunerative prices. The freedom of mobility also provided more opportunities for socio-political, administrative activities in rural areas. People have started getting access to better medical facilities. Connectivity through new roads has also increased enrollment in schools. There has also been a gradual increase in entrepreneurial activities in the district.

Even as it has been building roads, the district administration has also embarked on ecological restoration and waste recycling for undoing the damage to the environment. It will ensure a better and greener future for the generations to come by transforming into reality the vision of “Clean Goalpara, Green Goalpara”.