



# KARMAYOGA

QUARTERLY IN-HOUSE NEWSLETTER OF SAI ETERNAL FOUNDATION  
Vol. 1, No. 3, Jul-Sep., 2024 New Shimla, H.P.

## QUOTE FOR THE ISSUE

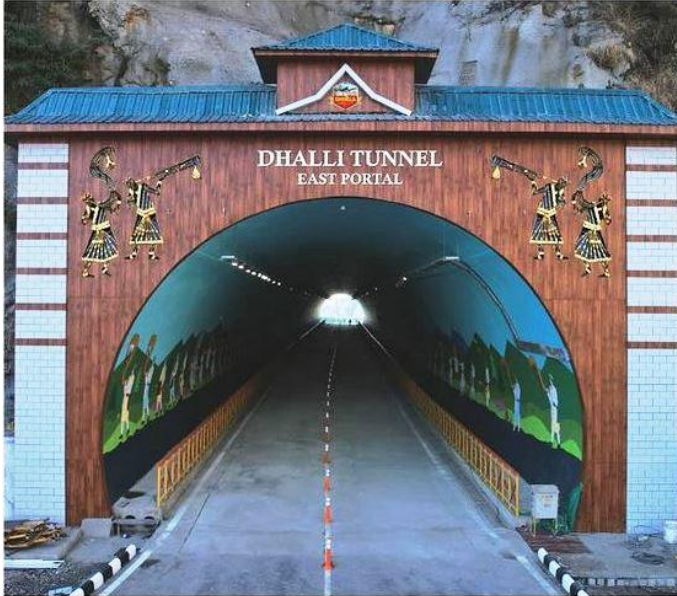
शुश्रूषा श्रवण ग्रहण धारण विज्ञानोहापोह तत्त्वाभिनिवेशः प्रज्ञागुणाः।

अर्थशास्त्र 6.1.4

सीखने की इच्छा रखना, सुनना, याद रखना, संदेह निवारण करना,  
और वास्तविकता जानने की निष्ठा रखना ये बुद्धि के गुण हैं।

The desire to learn, the ability to listen, perception, memory retention, the elimination of doubt and determination to know the truth are qualities of the intellect.

### Photo of the Quarter



Dhali Tunnel

Titang	1.77	0.26	0.22	0.18
<b>Total</b>	<b>61.71</b>	<b>58.29</b>	<b>43.16</b>	<b>54.30</b>

It may be seen that at the overall level, the generation during the quarter under report was 88 per cent of the projected generation in the DPR. As compared to the corresponding quarter for 2023, the generation increased by about 25.81 per cent owing specifically to the rejuvenation of Marhi HEP and Toss HEP. This, however, was lower than the generation achieved during the corresponding period for 2022. Efforts will be made to achieve DPR's generation if the hydrology conditions remain favourable.

### PROJECTS:

The project-wise and component-wise data for the quarter is as follows:

#### 1. Kothipattan Bridge

Sai Eternal Foundation is executing the work of "160 metres Span (Double lane) Bridge with footpath over River Beas at Kothipattan on Dharampur Sandhole road via Seoh Langana." The bridge span consists of one 102.83 m span (expansion joint) and one 57.17 m span (of expansion joint). The bridge is almost complete except for the approach road. It is targeted to complete and hand-over the Project in the next quarter.

## QUARTERLY ROUND UP

### ELECTRICITY GENERATION

Project	Generation during Jul.-Sep. Quarter (Million Units)			
	As per DPR	2022	2023	2024
Shyang	4.53	5.18	4.195	4.172
Tangling	8.38	8.24	8.47	7.52
Marhi	11.04	11.09	7.38	10.6
Toss	22.08	15.31	4.21	14.37
Kareri	4.32	10.57	10.4	11
Simla	9.59	7.64	8.28	6.46

## 2. Nand-Nagroun Bridge

Sai Eternal Foundation is executing the work of “Construction of 387.00 metre span expansion joint double lane bridge i.e. footpath on back water of Govind Sager Lake at Nand-Nagroun including 400 metre approaches towards Jhandutta side and 90 metre approaches towards Jejwin side.”



The bridge consists of five spans consisting of three spans of 101.84 m, left bank span of 44.87 m and right bank span of 33.40 m.

## 3. Dhalli Tunnel

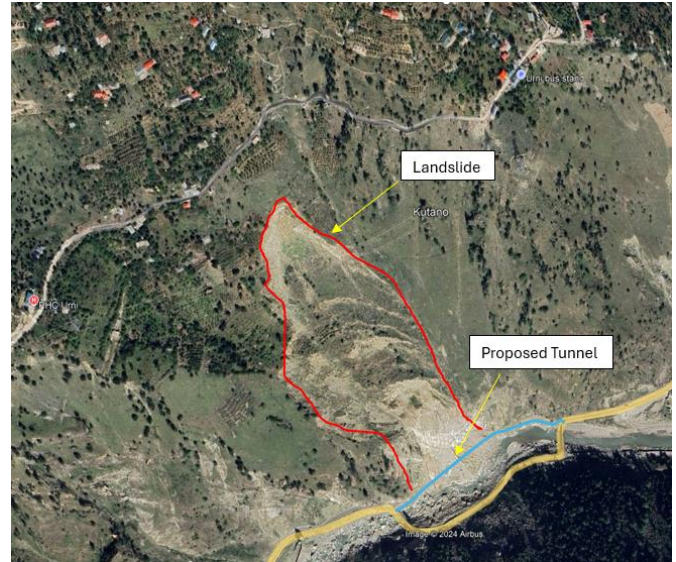
The project involving a two lane tunnel with pedestrian path was entrusted to M/s. Sai Eternal Foundation in collaboration with Sai Shakti Solutions LLP with construction commencing on March 11, 2022 and was efficiently completed with essential support treatment measures such as rock bolting, lattice girder installation, shotcreting with consolidation grouting, and forepoling, in a remarkably short time-frame. Notably, the project employed mechanical means and technology without blasting. The tunnel has been completed and handed-over to the Authority for public use and facilitation of smooth traffic movement.

## 4. Urni Tunnel

This Project has been awarded under the “Engineering, Procurement and Construction (EPC)” model, encompassing design, engineering, procurement and construction, with an additional requirement for the contractor to maintain the structure for a period of 10 years after construction.

The scope of work includes the construction of RCC Tunnel with Earth/Rubber Cushion, marking a significant step towards rejuvenating the vital National Highway 05 in the state of Himachal Pradesh. This aims to reclaim and restore the damaged stretch from KM 347/250 to KM 347/510, promising improved infrastructure and connectivity.

Upon mobilization, we initiated a comprehensive survey and investigation during which it was observed that the landslide had reactivated, resulting in frequent boulder falls. During the survey, boulders began rolling, endangering the survey team. The height of the land slide also continued to increase significantly.



The construction in the most hazardous stretch, from RD 347/370 to RD 347/450 (a length of 80 metre), would be infeasible due to continuous falling of boulders, posing a serious risk to both personnel and property.



Additionally, boulders exceeding the specified dimensions in the contract are anticipated to impact the proposed artificial structure, which raises concerns about the potential for structural damage and risk to human life throughout the project's lifespan.

It is proposed to replace the planned artificial tunnel in reach RD 347/370 to 347/450 with an underground tunnel, spanning 80-metre length. A revised scope of work proposal has been prepared accordingly and submitted to the Authority for approval and implementation. Apart from this adjustment in tunnel length and type, the remaining scope of work remains consistent with the original plan. This modification ensures that the structure is better suited to the site's geological conditions while maintaining the overall project objectives and alignment as initially specified.

Constructing an underground tunnel with modified section in the critical section would offer a technically superior and safer solution, as falling boulders and debris would pass harmlessly over the surface, leaving the underground structure unaffected. This underground tunnel design offers multiple benefits, enhancing both safety and durability in the 80-meter sliding section by protecting the structure from river Sutlej flooding and severe weather events. By retaining the natural angle of repose, debris flows harmlessly over the tunnel, reducing structural stress. The improved alignment/geometry reduces the road length by 20 meters, minimizing potential damage from rock-falls or flooding. Additionally, the tunnel's increased stiffness and superior structural strength make it highly resistant to overburden pressure and boulder impacts. Given its strategic importance as a route to the Indo-China border, this fail-safe design ensures uninterrupted access, meeting both safety and long-term sustainability needs.

### **5. Bulk Water Supply Scheme Shimla**

Sai Eternal Foundation in joint venture with M/s. LCC Projects Pvt. Ltd. is executing the "Design Build Operate (DBO) contract for bulk water supply for Shimla from river Sutlej".

The Shimla Bulk Water Supply Scheme is the biggest water supply project in the State of Himachal Pradesh. This project is being financed by the World Bank. This is the first Bulk Water Supply Scheme on River Sutlej. This scheme is being designed for 42 MLD with futuristic provisions of 67 MLD. This water shall be supplied at the existing reservoir at Sanjauli.

42 MLD capacity of this scheme will cater the water demand of Shimla City up to year 2035.

67 MLD capacity of this scheme will cater the water demand of Shimla City up to year 2050.

The water will be supplied to the existing reservoir at Sanjauli through a 750mm Rising Main pipeline, in three stages:

Stage-1 Shikrodi Water Treatment Plant

Stage-2 Dwada Pumping Station

Stage-3 Dummi Pumping Station



**Bulk Water Supply Scheme, Shikrodi**

The civil works for the project are 80% complete, with the remaining tasks primarily focused on hydromechanical and electrical works. The installation of the Rising Main pipeline from the River Sutlej to Sanjauli is 95% accomplished, with the final steps involving the installation of valves and the construction of thrust blocks.

### **6. Slope Stabilization, Mall Road, Shimla**

The work of "Space to be developed on Ridge near Padam Dev Complex as per decision of Hon'ble High Court i.e. Stabilization of whole rock mass/strata Phase-I from Gaiety Theatre up to Padam Dev Complex under Shimla Smart City project" is being undertaken by the Foundation. The work is under progress and the major activities done are as under:

- Micro Piles with Grouting Work
- Providing and Installing self-Drilling Anchors (SDA)
- Re-profiling the slope by providing horizontal benches
- Providing and laying shotcrete
- Providing and fixing 15m long Cable Anchors
- Construction of RCC building

## PHILANTHROPIC ACTIVITIES:

During the quarter, massive plant distribution drives were started at various places for environmental protection and to increase livelihood of farmers. Fruit bearing and medicinal plants were distributed to the villagers along with imparting them with the knowledge in the subsequent awareness campaigns.



Scholarships continued to be awarded to the deserving students at various levels of School/College education under Sai Scholarship Scheme and financial assistance was also provided to various individuals/Institutions/Self Help Groups. Hope the scholarship recipients will find this humble input extremely useful in encouraging them to pursue education and become better citizens for the future.



The Foundation successfully revitalized the 123-year-old Seog tank free-of-cost, restoring a critical source for water supply to Shimla. This historic British-era tank, which had been dry for years, is now filled up to the brim and functional once again. The capacity of the tank is One Crore litres.

In the health sector, activities like organizing holistic medical camps, distributing free

medicines/spectacles were organised, 3-seater stainless steel chairs were provided to the Atal Institute of Medical Super Specialities for facilitating seating of patients in various OPDs. The activity of providing financial assistance to poor and needy people for treatment continued to be pursued.



The Foundation will continue to reach out as far and wide as possible to provide succour and promote well rounded socio-economic development.

## PEARLS OF WISDOM FROM OUR SCRIPTURES:

यथैधांसि समिद्धोऽग्निर्भस्मसात्कुरुतेऽर्जुन।

ज्ञानाग्निः सर्वकर्माणि भस्मसात्कुरुते तथा॥

भगवत गीता 4.37

जैसे प्रज्वलित अग्नि ईन्धन को भस्मसात् कर देती है वैसे ही, हे अर्जुन ज्ञानरूपी अग्नि सम्पूर्ण कर्मों को भस्मसात् कर देती है।

As a kindled fire reduces wood to ashes, O Arjun, so does the fire of knowledge burn to ashes all reactions from material activities.

दशपुत्रसमा कन्या दशपुत्रान्प्रवर्धयन्।

यत्फलं लभते मर्त्यस्तल्लभ्यं कन्ययैकया॥

स्कंदपुराण कौमारिका खंड 23.47

एक बेटी दस बेटों के बराबर है। जो भी फल (गुण, अच्छे परिणाम) एक व्यक्ति को दस पुत्रों को पालन से प्राप्त होते हैं, वही एक अकेली बेटी को जन्म देने से प्राप्त होते हैं।

One daughter is equal to ten sons. Whatever phala (merits, good results) a person attains by siring and upbringing ten sons, the same phala is attained by begetting a single daughter alone.

लक्षणम् मनसः ज्ञानस्य अभावः भाव एव वा।  
सति हि आत्म इन्द्रियार्थानां सन्निकर्षेण एव वर्तते॥

चरक संहिता शरीरस्थान 1.18

मन का लक्षण - ज्ञान का न होना और होना मन का लक्षण है। क्योंकि आत्मा और इन्द्रिय का विषय के साथ सन्निकर्ष होने पर भी अगर मन का योग नहीं होता तो ज्ञान नहीं आता।  
मन का योग होने पर ही ज्ञान होता है।

Mind is defined as: the entity which, even on contact with self, sense organs and sense objects, is responsible for production or otherwise of knowledge by it's attending or non-attending respectively. Subtleness and oneness are known as two qualities of the mind.

एको धर्मः परं श्रेयः क्षमैका शान्तिरुत्तमा।  
विद्यैका परमा दृष्टिरहिसैका सुखावहा॥

विदुर नीति 48

धार्मिकता एक सर्वोच्च चीज है; क्षमा एक सर्वोच्च शांति है;  
ज्ञान एक सर्वोच्च संतोष है; और परोपकार, एकमात्र खुशी॥

Righteousness is the one highest good;  
forgiveness is the one supreme peace;  
knowledge is one supreme contentment; and  
benevolence, one sole happiness.

नभो न रुपं जरिमा मिनाति पुरा तस्या अभिशस्तेरधीहि।  
ऋग्वेद 1.71.10

जैसे धुंध एक रुप को धुंधला, वैसे उम्र हमें नष्ट कर देती है, उम्र  
बीत जाने से पहले, जागो।

As a mist dims a form, age diminishes us; before  
that hurt falls upon us, arrive.

## “USE OF AI (ARTIFICIAL INTELLIGENCE) IN ENGINEERING AND CONSTRUCTION INDUSTRY”

- Developed by Bharat Thakur  
(by using Chat GPT)

Artificial Intelligence (AI) is revolutionizing industries worldwide. What once seemed like futuristic technology has now become a game-changer in enhancing operational efficiency, decision-making and safety standards. In India, where the engineering and construction sectors are critical to the country's economic development, the adoption of AI is accelerating, creating a new paradigm for how work and processes are conducted.

### How AI is Being Used in the Construction Industry ?

#### 1. Automation of Routine Tasks

AI is taking over repetitive, time-consuming tasks that were traditionally done manually. Tasks such as data entry, document tracking and report generation are now being handled by AI-powered systems, allowing human work force to focus on more complex decision-making roles. For instance, software can now automatically update project timelines, track procurement orders or generate payroll reports.

#### 2. Enhanced Project Management

AI-driven project management tools can predict potential delays or resource shortages by analysing large datasets from past projects. By using machine learning algorithms, these systems can forecast issues before they become problems. This allows project managers to make real-time adjustments, improving the overall efficiency of the project. In an industry like construction, where delays can lead to heavy financial losses, such predictive abilities are invaluable.

#### 3. AI in Safety and Risk Management

Safety is a critical aspect of construction, where the risk of accidents is high. AI-powered surveillance systems can monitor worksites for unsafe practices, automatically flagging

violations in real-time. Drones equipped with AI capabilities can survey construction sites, identifying hazards that might not be visible to the naked eye. This proactive approach to risk management not only saves lives but also prevents costly accidents.

#### 4. Optimized Resource Allocation

In a typical construction project, managing resources like manpower, material and machinery in an integrated manner is a challenge. AI helps optimize the allocation of these resources by analysing data from ongoing and past projects. This allows companies to ensure that no material is wasted, equipment downtime is minimized and the workforce is efficiently utilized. In India, where large-scale infrastructure projects such as roadways and metro systems are constantly under construction, efficient resource allocation can result in significant cost savings.

#### 5. Improving Worker Productivity

AI can track worker performance in real-time, offering insights into where productivity can be improved. Wearable devices, such as smart helmets or vests can monitor the health and safety of workers. By analysing this data, managers can ensure that workers are not overburdened and that optimal working conditions are maintained.

#### Challenges in Adopting AI in India

Despite the promising benefits, the Indian construction industry faces several challenges in adopting AI which primarily include:

- **Lack of Skilled Workforce:** There is a significant skills gap when it comes to understanding and managing AI systems. Most workers in the Indian construction sector come from conventional backgrounds and training them to work with AI can be a challenge.
- **Cost of Implementation:** While AI promises long-term savings, the initial cost of implementing AI-powered tools and systems is high, **particularly** for smaller firms. This makes AI adoption slower for many companies in the industry.

- **Resistance to Change:** Much like other industries, construction in India has its fair share of resistance to new technology. Employees who have been in the business for decades might be skeptical about the benefits of AI, preferring traditional methods.

While challenges exist, the future of AI in India's construction industry is promising. As the government pushes for modernization through its initiatives like 'Digital India' and the 'Smart Cities Mission,' AI adoption is likely to grow. Companies that embrace AI stand to gain a competitive edge, not just in terms of project efficiency but also in improving safety, reducing costs and enhancing the overall quality of construction.

#### “FROM REJECTION TO REDEMPTION: THE UNTOLD RESOLVE OF A VISIONARY”

Courtesy: Google and Magazines

In the late 1990s, a prominent Indian businessman faced one of the toughest moments of his career. His company had ventured into a new industry, aiming to make a mark in the burgeoning automobile sector. With high hopes, his team designed a sleek, modern car, a new Indian luxury sedan, to compete with established players in the market. The project, however, didn't go as planned.

The car, which had taken years to develop, received underwhelming reviews. Consumers were not impressed and sales figures reflected the disappointment. The company had invested heavily in this venture and now, it looked like it might be a failure. The situation became dire enough that some members of his Board suggested selling off the entire car business.

Left with no choice but to explore a potential sale, he flew to the United States, hoping to negotiate a deal with a global automobile giant. He believed that handing over the company to a more experienced player would be the best course of action. After all, it was not just his reputation on the line, but also the future of the thousands of employees who worked in the company.

During a meeting in Detroit, the businessman sat across the table from the CEO of one of the world's largest automobile manufacturers. He proposed the

sale, putting everything on the line. But the response he received was far from what he had expected.

The American executive was dismissive and condescending. He showed little interest in the details of the business or the people who worked for it. Instead, he mocked the idea of an Indian company attempting to succeed in the global automobile industry. He questioned the capability of Indian engineers and suggested that the businessman should stick to industries they were familiar with. The remarks were not just humiliating but also a clear indication that this deal wasn't going to happen.

The businessman left the meeting feeling disrespected, but more importantly, deeply motivated. He had travelled halfway across the world, hoping to make what he believed was a rational business decision, only to be met with disdain. Instead of accepting defeat, he made a decision that would change the course of his company's future.

He returned to India with a new determination. The car division would not be sold. Instead, he chose to double down on his commitment to it, convinced that with the right strategy and improvements, the company could succeed. He urged his team to rethink their approach, to focus on innovation, quality and customer needs. Slowly but surely, things began to turn around.

The company made significant improvements in design, performance and technology. It also expanded its portfolio to include affordable cars, making them accessible to a larger segment of the Indian population. Over the next few years, the automobile division not only survived but thrived, eventually becoming one of the most recognized names in the global auto industry.

But the story doesn't end there.

A few years after the humbling meeting in Detroit, this businessman did the unthinkable. In a bold and unexpected move, his company acquired two of the most iconic luxury car brands from the very same American company that had dismissed him. It was a moment of poetic justice, but he never gloated about it. His focus remained on building his

company, ensuring that it thrived and contributed to the country's industrial growth.

This businessman, who turned a setback into a stepping stone, was none other than **Ratan Tata**. His decision to persist in the face of adversity and his eventual acquisition of Jaguar and Land Rover in 2008, is a testament to his visionary leadership and belief in Indian potential. It's a story that continues to inspire countless entrepreneurs around the world, proving that resilience, humility, commitment to pursue dreams and courage can lead to extraordinary success.

### **From the Founder's Desk**

It brings me immense joy to witness the revival of our quarterly newsletter. I gratefully acknowledge Shri D. K. Sharma Ji, Director and Editor for taking initiative to revive Karamyoga: a platform through which we



can once again share the Foundation's initiatives, activities and achievements with all of you. In an age of digital communication, the tangible experience of reading a printed newsletter still holds a special place and it is with this sentiment that we have decided to bring it back.

Reflecting on the past years, the Foundation has seen remarkable progress by transitioning from Small Hydro Power Sector and expanding reach in infrastructure projects related to water supply, bridges, highways, tunnels, slope stabilisation, etc. From humble beginnings as a Society in the year 1989 to present status as a Section-8 Not for Profit Company, the Foundation has made significant strides toward our financial growth. However, due to many constraints and unfavourable environment, the progress achieved is not significant.

The present Board of Directors (BoD) comprise of experienced, socially-driven individuals who bring diverse strengths. They regularly review performance and strategic plans, serving as passionate, committed members, without any compensation. Under their guidance, the Foundation has moved in the direction of becoming a pulsating and thriving organisation. The

Foundation is committed to persistently reach out as far and wide as possible to provide succour and promote well rounded socio-economic development.

The Foundation is a self-sustaining entity – only one of its kind in the State and does not lean on any financial support from Central or State Government, Semi-Government Agencies or Foreign Funding. The resources for undertaking charitable activities continue to come from revenue generating activities of the Foundation. The surplus of revenue over expenditure is utilised for the welfare of society by undertaking charitable activities in various fields like education, health, environment, sports, agriculture, construction services, renewable energy, livelihood, disaster relief, water and sanitation, etc. These initiatives have positively impacted countless lives and our ongoing commitment remains as strong as ever.

Let us remember that all achievements are by Lord's grace. We are simply instruments in fulfilling a greater purpose. With faith in Lord's guidance, I am confident that we will overcome any obstacles that lie ahead in our journey. Our collective effort is what drives the Foundation forward and I urge all of us to stay motivated and focused on our goals. We must continue to support one another, stay committed to our mission and trust in the path we are on. It is essential that we continue to evolve with the times. The challenges we face demand adaptability, innovation and resilience. It is a must that we place the right and committed people in the right positions to ensure sustainable growth.

To our valued staff, I encourage you to remember that our success depends on the strength of our commitment, discipline and integrity. Let's use this opportunity to build on the successes we've already achieved and strive for even greater heights.

I humbly seek the blessings of all, so that we may continue to serve with dedication and make a lasting difference in the lives of those we touch.

Om Sai Ram!

## From the Editor's Desk

Nearly a decade has gone by since the last issue of Karmayoga. The hiatus occurred due to some inertia which kept on for so long. But it is never too late to start all over again and here we are. One hopes that our collective and concerted efforts will lead to taking the Foundation to a larger and higher orbit of activities and constructive public engagement. In this endeavour, we seek our experienced staff to contribute towards building innovation and bringing "newness" in actions and thought. Fortune favours the brave and so it shall be. Let us feverishly compete with each other within the Organisation to put the best foot forward and build a role model for others to follow.



**Editor**