ENVISIONING ENVIRONMENTAL SUSTAINABILITY

ENVISIONING ENVIRONMENT SUSTAINABILITY

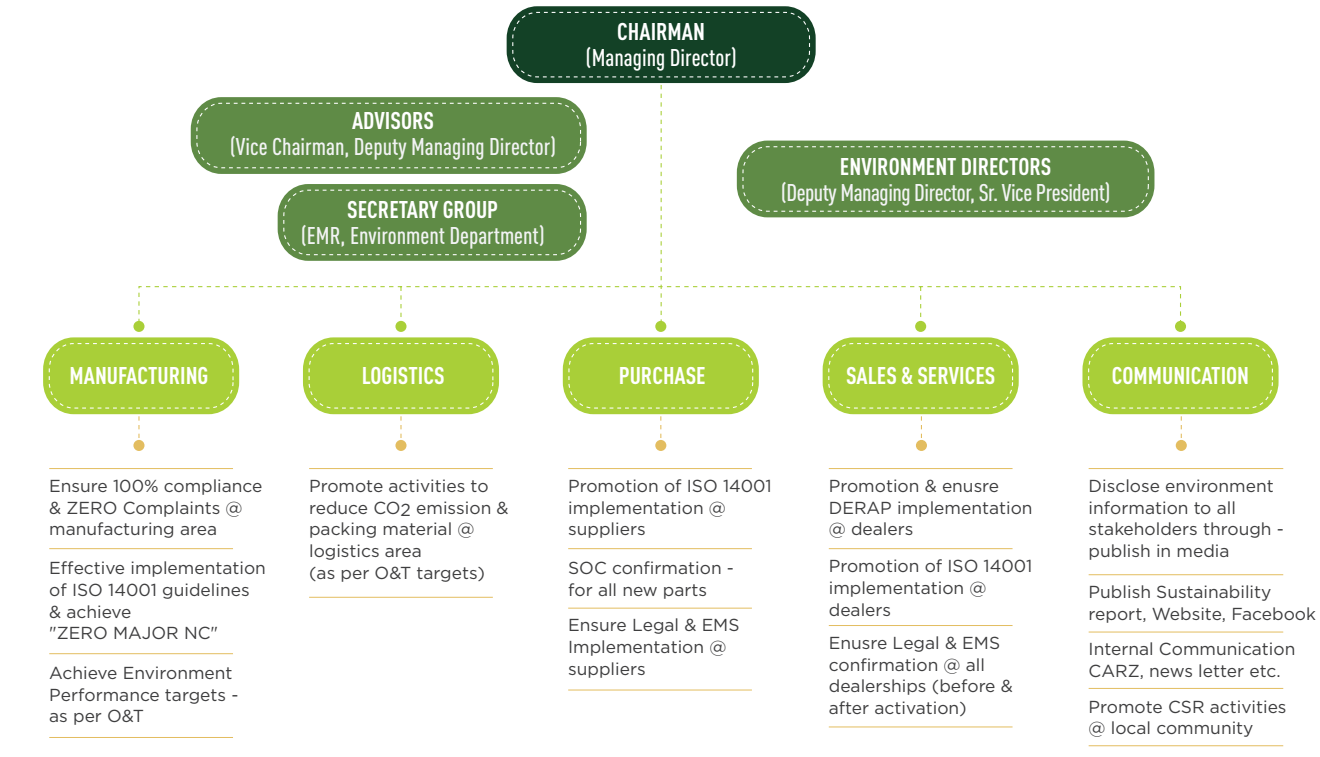
Toyota's stance on the protection of global environment dates back to the establishment of Toyota Earth Charter (issued in 1992, revised in 2000), followed by the formulation of first Environment Action Plan in 1993. Ever since every five years, an action plan is rolled out to ensure implementation of environmentally responsible actions amongst all Toyota affiliates.

We have always positioned Environment Management as a top priority issue.We believe that our effective environmental policy, robust action plans and consistent performance will help us endeavor for an environment positive footprint. We follow the actions prescribed in our five-year action plan to address the six global challenges and achieve the set short-term (annual) to mid-term (five years) targets. This complements our efforts to accelerate continuous improvements in manufacturing processes; and the integration of environment best practices across our value chain, while keeping a check on environmental compliance.

ENVIRONMENT MANAGEMENT

The ever-rising environment risks and compliance obligations require the company to align the environment management with its business strategy. It has also created the need for moving from 'environment conservation' to 'environment protection'. Hence, we have transitioned towards ISO 14001:2015 EMS in this reporting year and revisited our environment risk register.

CORPORATE ENVIRONMENT COMMITTEE



ENVIRONMENTAL POLICY

We believe, to integrate environmental management in operations and to be compliant with norms, having a company-wide policy is important. Hence, we drive all our environmental initiatives through our environment policy. In alignment with this, we commit to engage with all stakeholders (employees, suppliers, dealers, customers, contractors, community), to create eco-consciousness.

The detailed Environment Policy can be found in **www.toyotabharat.com**

TOYOTA GLOBAL EMS

The Global EMS (Environmental Management System) integrated with ISO 14001 standards was established and implemented in 2001 to achieve compliance with the Global EMS requirements. We have consistently improved our environmental performance through PDCA (Plan, Do, Check, Action) and ensured compliance with applicable legal requirements.

The scope of this certification is not only confined to the manufacturing process, but also extended to all the regional facilities. The yearly EMS evaluation is carried out by our Regional Headquarters, Toyota Motor Asia Pacific [TMAP], Thailand. Since FY 2012-13 we have consistently achieved 100% conformance including in FY 17-18. Presently, we are working to update our environmental management system to achieve conformity with the new version of ISO 14001:2015 standard.

TKM has not been levied any fines or penalties for non-compliances with environmental laws in the reporting period.

LEGAL COMPLIANCE

Environment Legal compliance is of critical importance, as non-compliance with the legal requirements directly affects the company's relationships with external stakeholders. We also have a standard practice of adhering to 20% more stringent compliances than the applicable regulatory standards.

We monitor legal compliance on a real-time basis through the Legal Compliance Monitoring Tool [LCMT], to ensure compliance at all levels of operations. In addition, we conduct bi-annual compliance audits at all our facilities, monthly monitoring of all consent conditions prescribed by the state pollution control board, followed by quarterly audits to ensure compliance.

LEGAL COMPLIANCE IN THE VALUE CHAIN

As non-compliances might lead to legal action, we ensure that our vendors, suppliers, and dealers are compliant with all the applicable laws of the land. Hence we assess our value chain on legal compliance before we associate with them. We also carry out periodic audits to confirm the compliance status and follow up regularly for countermeasure implementation.

The company's commitment is supported by best practices, adoption of policies, long-term action plans and periodic reviews to achieve environmental legal compliance. To keep up the pace with the changing regulations, we carry out bi-weekly monitoring of new regulation/requirement. We also engage with experts on a monthly basis to guide us on the changing and upcoming regulations. The information is updated and communicated to the relevant stakeholders to ensure conformance with the latest regulations.

TOYOTA ENVIRONMENTAL CHALLENGE 2050: CHALLENGE TO ZERO & BEYOND

The global environment is facing several challenges in recent days which are going to decide on the sustainability of the planet in the near future to come. Global community has joined hands to address the situation through several platforms and the global goals are set to address the issues collectively.

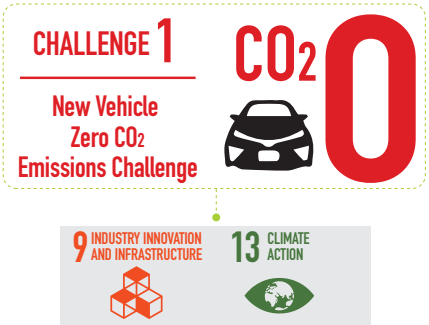
In response to the situation, we need to take on new challenges that consider the world 20 or 30 years in the future, in order to remain closely aligned with the global environment. This means not merely trying to reduce negative factors associated with automobiles as close to zero as possible, but at the same time, looking beyond zero, challenging ourselves in all-Toyota initiatives toward a net positive impact.

TOYOTA GLOBAL CHALLENGE 2050: IN ACTION

The Global Environment Challenge 2050 (announced in 2015), has reaffirmed Toyota's commitment towards the creation of climate resilient society in 'harmony with nature'. It is in-line with the United Nations Sustainable Development Goals [SDGs].

CHALLENGE OF CARBON FREE MOBILITY

As the regulatory norms are becoming stricter every day, it is important for us to manufacture vehicles that are more fuel efficient and less polluting. All our vehicles produced are BS IV compliant. We are continuously working on product improvement, not only to make them BS VI compliant in terms of fuel efficiency and low carbon emission but also compliant with customer safety standards. For this, we are striving for technological advances in design and development of better engines, transmission, and the vehicle body to facilitate energy conservation and reduced CO_2 emissions. We are also extensively promoting low CO_2 emitting 'diversified fuel' next-generation vehicles in India.



OUR APPROACH

TRANSITION TOWARDS ELECTRIC- HYBRID ELECTRICALS

PREPAREDNESS FOR ELECTRICAL VEHICLES

FOSTERING HYDROGEN BASED SOCIETY

Toyota has provided licensing rights of FCV patents at no charge to initiate cooperative actions for the popularization of new technology vehicles.

PIONEERING IN HYBRID SYSTEMS

Development of Toyota Hybrid Electric Systems in 1997, followed by the launch of Prius - world's first mass-produced hybrid passenger vehicle; made Toyota a pioneer in the global Hybrid electric vehicle space. In India, with the launch of Camry- India's first ever locally manufactured Hybridelectric in 2013, we marked a milestone in the history of the Indian Automobile Industry.

Worldwide sale of Toyota Hybrids Electric Vehicles crossed 11 Million Units in the year 2017

Camry Hybrid

We sincerely appreciate the Government's ambitions to reduce the pressing issue of pollution in the country through electrification of vehicles. Globally Toyota has been a leader in introducing alternate electric mobility solutions as HEVs, PHEVs, and FCVs, to help reduce the CO_2 emissions. We will continue our efforts to bring in the best technologies towards solving the national issues of rising pollution and fuel import, with the right direction from Government"

Mr. Akito Tachibana
Managing Director, Toyota Kirloskar Motor

PARTNERING FOR A GREENER FUTURE

Toyota globally believes that the electrification of vehicles is required to reduce CO_2 emissions. We have signed Memorandum of Understanding (MOU) with the Government of Andhra Pradesh [AP] to introduce Plug-in Hybrid and Electric vehicles [PHEV] in the State.

Under this MoU, we will conduct a feasibility study towards the introduction of "Prius PHEV" and "Small EV Commuter" ambitious smart city project 'Amaravati'.

FOCUSING ON EV

Even though our Hybrid Electric Vehicles have gained extreme popularity in the Indian market, we consider the government's push for Electric Vehicles as a business opportunity. We strongly believe that the 'PHEV' Plug-in Hybrid Electric Vehicle is a realistic solution considering the present status of the charging infrastructure available in the country. It is also in line with our Global Challenge 2050 to achieve zero CO_2 emission units.

FOSTERING HYDROGEN BASED SOCIETY

Toyota considers 'hydrogen' as a potential alternative fuel and is actively developing technologies to harness it from various primary sources. The launch of Mirai - the fuel cell vehicle [FCV] in 2014, was the first step towards promoting hydrogen-powered vehicles. Apart from the hydrogen-powered cars, Toyota aims for hydrogen-powered production lines for manufacturing by 2020. However, in India, we are extensively investing in hybrid technology and electric vehicles.

Toyota Mirai

REDUCING LIFE CYCLE EMISSIONS

CHALLENGE 2

Life Cycle Zero CO_2 Emissions Challenge

CO_2 0

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

13 CLIMATE ACTION

We at TKM have adopted the best lean manufacturing practices to reduce our carbon footprint during various stages of our vehicle production and in our logistics operations. We have also initiated a GHG inventorization study to drive GHG emission reduction throughout the vehicle lifecycle. To reduce emissions in the upstream, we procure materials/parts which are free from SOCs and make efforts to maximize the steel yield ratio.

OUR APPROACH

- ASSESSING LIFECYCLE IMPACTS
- GREEN LOGISTICS TO REDUCE TRANSPORT EMISISONS
- HANDHOLDING SUPPLY CHAIN PARTNERS FOR CO_2 REDUCTION

COMMITMENT TO SCIENCE BASED TARGETS

The Science-Based Targets initiative, which is a partnership between CDP (formerly known as the Carbon Disclosure Project), the United Nations Global Compact, the World Resources Institute (WRI), and the World Wildlife Fund (WWF) to curb the global warming to below 2 degree celsius increase. Toyota is a signatory to the SBT and is committed to reduce its GHG emissions throughout life cycle.

SCIENCE BASED TARGETS

DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

ASSESSING LIFECYCLE IMPACTS: GHG INVENTORIZATION

In alignment with Toyota's journey towards the achievement of Science-Based Targets [SBT], we are making efforts to adopt a uniform methodology for GHG accounting in our manufacturing plant and across our value chain. In the reporting year, we have initiated development of GHG database management system and GHG inventorization for FY 2017-18. This serves as a baseline data for future GHG accounting. Based on the outcomes of this study, we aim to take up GHG emission reduction activities and set targets for GHG emission reduction.

GREEN LOGISTICS

Freight operations play a crucial role in the overall CO_2 emission patterns. To reduce CO_2 emissions in our logistic operation, we are taking measures to improve distance optimization, packaging efficiency and transport efficiency of vehicles.

MIX LOGISTICS

In continuation of our collaboration with group suppliers for mix logistics, in various regions & routes, we have conducted joint studies for volumes (load), packing, standardized window timing and cost sharing to optimize the travel routes. Through this, we could cut down the CO_2 emissions by 482.5 MT in the reporting period.

PACKAGING OPTIMIZATION

To ensure the quality of auto parts, they are wrapped with additional plastic. To drive awareness on consumption of plastic, we assessed locally supplied auto parts and their wraps to optimize plastic usage. Rigorous trials with detailed analysis and CFT (Supplier, Quality, and Production) confirmations, we could eliminate 16.36 MT of plastic, which is equal to reducing CO_2 emissions by 38.61 MT in the reporting period.

TRAIN OPERATION ENHANCEMENT

Over the years, our logistics team has studied potential alternate modes of transport. In the reporting period, the railways were utilized for vehicle delivery to the North East dealerships. Despite various challenges such as meeting railway schedules, prolonged vehicle delay due to floods etc., the vehicles were delivered to the dealerships without disruption. This alternate mode of transportation helped us eliminate CO_2 emissions by 199 MT in the reporting period.

HANDHOLDING SUPPLY CHAIN PARTNERS

We have made multiple efforts to spread our eco-spirit throughout our value chain. We handhold our suppliers and dealers for CO_2 reduction through clear Guidelines, focused workshops, regular follow-ups and also assist with the audits to ensure the reduction. The details of our supply chain initiatives are explained in Responsible Procurement Practices chapter.

TOWARDS AN ENVIRONMENT POSITIVE MANUFACTURING PLANT

Energy plays a critical role in the country's economic growth. The ever-rising energy demand has become an issue of increasing significance due to its environmental implications. We are driving energy optimization by deploying simple and effective energy efficient techniques in our daily operations. With the government's effective policies towards National Solar Mission, we procure green energy through various power trading platforms. We have also installed renewable energy generation systems at our premises.

CHALLENGE 3

Plant Zero CO_2 Emissions Challenge

CO_2 0

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

13 CLIMATE ACTION

OUR APPROACH:

SLIM AND SIMPLE MANUFACTURING

HARNESSING GREEN ENERGY

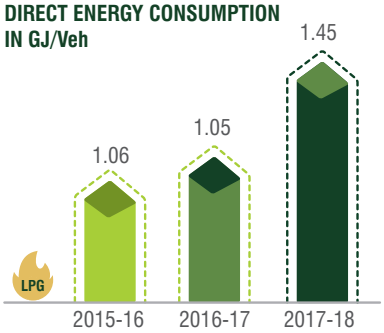
ENERGY CONSERVATION THROUGH KAIZENS

SAFE AMBIENT AIR QUALITY BY EMISSION REDUCTION

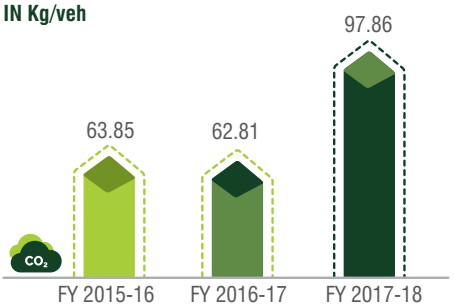
SLIM AND SIMPLE

With the concepts of Yosedome – lean manufacturing and 'Kara- kuri' (an innovative process that doesn't consume energy at all), we are driving continuous improvement to simplify and streamline our manufacturing processes and make them more energy efficient.

DIRECT ENERGY CONSUMPTION IN GJ/Veh



SCOPE 1 EMISSIONS IN Kg/veh



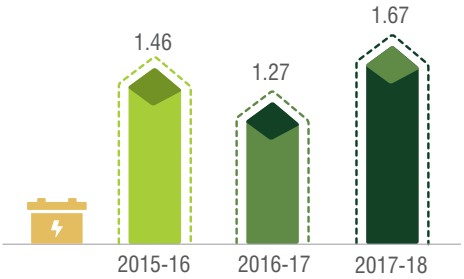
In the previous years, we reported Scope 1 emissions only with regards to the LPG consumption. From this reporting year, we are also capturing the fuel consumption of the internal vehicles and DG sets. Hence, the values of direct energy consumption and Scope 1 emissions have considerably increased.

Please note that the refrigerants in AC and contract vehicles operating at site such as lawn mowers, crane, tractors etc. are excluded from scope1 emissions. However, we are in the process of developing mechanism to track the consumption details in the future.

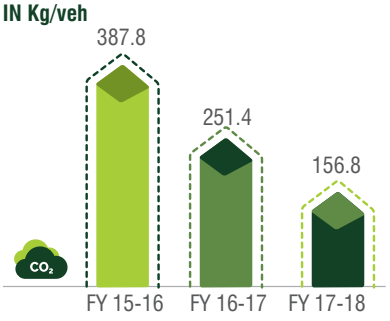
SWITCHING TO DIFFERENT FORMS OF ENERGY

We have taken a leap in our commitment of meeting our internal energy demands by renewable sources. This is majorly due to enhanced energy procurement and energy consumption from in-house solar energy system.

INDIRECT ENERGY CONSUMPTION IN GJ/Veh



SCOPE 2 EMISSIONS IN Kg/veh

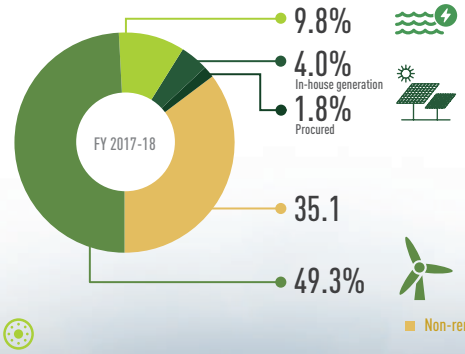


Rooftop solar installation at TKM Premises

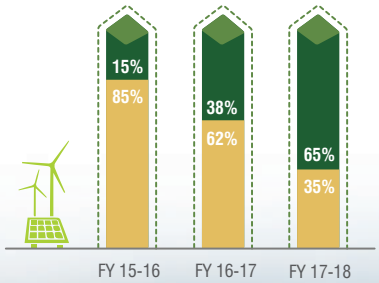
The Scope 2 emissions have considerably decreased from the previous reporting period due to increase in renewable energy utilization. In the previous report, the sum of renewable energy was not deducted from the total Scope 2 emissions. However, this reporting period we are showcasing the trend of decrease in our Scope-2 emissions due to increased utilization of renewable energy.

In addition to the existing 3.2 MW solar installations, we also installed 5.2 MW solar installations at our premises during the reporting period.

RENEWABLE ENERGY CONSUMPTION



RENEWABLE ENERGY TREND



In FY 2017-18, 64.8% of our total plant energy demand was met by renewable sources compared to 38% in FY 2016-17. Further, we have enhanced our mid-term target and aim to meet 80% of our internal energy needs through renewable energy sources by 2020.

Ground mounted solar installation at TKM Premises

ENERGY CONSERVATION THROUGH KAIZENS

Our Team Members actively involve in the energy conservation activities which has helped us to reduce our CO_2 emissions in production process.

Mr. Vinay Kumar, General Manager, Manufacturing, receiving Toyota Asia Pacific Gold Award

Kaizens

- We have introduced an intelligent real-time energy control system to reduce the LPG/energy consumption during the equipment preparation and start up at the paint shop. This has led to the reduction of carbon emissions by 67.65 MT in the reporting period.

- The Air Handling Unit [AHU] in paint bumper shop consumed a fixed amount of energy even during the low production volume. Hence, the width of the booth was reduced and the unnecessary air flow in the unutilized pitch was stopped, making the equipment flexible as per the production demand. This led to the reduction of CO_2 emissions by 182.35 MT in the reporting period.

- The chilled water supply circuit was assessed for efficiency. It was found that there were multiple issues such as the mixing of chilled water with return water, ineffective utilization of CT fan, internal energy losses etc. that caused unnecessary consumption of energy. As a countermeasure, a smart control system was established. This led to a reduction of energy consumption of 405.52 MWH or CO_2 reduction of 877 MTin the reporting period.

EMISSION REDUCTION

We recognize air pollution as a significant issue. Ever since our establishment, we have taken all the necessary steps to curb the emissions at source by the installation of relevant air pollution control equipment in our production areas. Even though we do not have implications on the ambient air by way of our operations, we monitor our surroundings as per Ambient Air Quality Standards [AAQS]. Our stack emissions are monitored on a quarterly basis.

VOC Emission Reduction

We recognize air pollution as a significant issue. Ever since our establishment, we have taken all the necessary steps to curb the emissions at source by the installation of relevant air pollution control equipment in our production areas. Even though we do not have implications on the ambient air by way of our operations, we monitor our surroundings as per Ambient Air Quality Standards [AAQS]. Our stack emissions are monitored on a quarterly basis.

MONITORING PARAMETERS	MT/ANNUM
SPM	541.2
SO2	1.5
NOx	8.0

The NOX, SOX values mentioned in the previous report were pertaining to AAQS. However, in the present period, we have reported the stack emissions of NOx, SOx and SPM .

ADVANCING TOWARDS ZERO FRESH WATER FOOTPRINT

CHALLENGE 4

Challenge of Minimizing and Optimizing Water Usage

6 CLEAN WATER AND SANITATION

14 LIFE BELOW WATER

Today, water scarcity is a global issue of increasing significance. According to forecasts, 40 percent of the world's population is expected to suffer water shortages by 2050. As India is progressing with its National Water Mission, we have steadily implemented measures to gradually conserve water.

OUR APPROACH

REDUCE - YOSEDOME

REUSE - RAINWATER HARVESTING SYSTEM

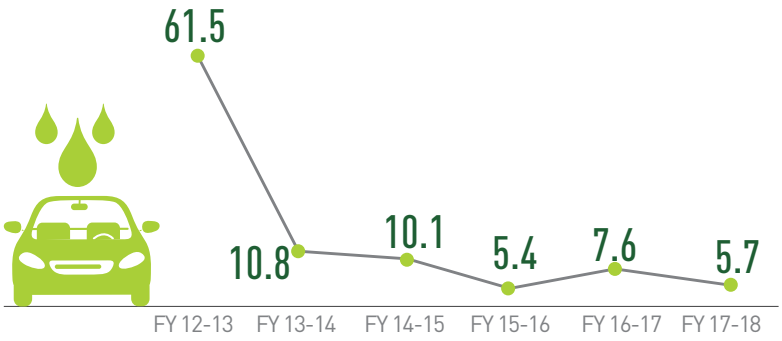
RECYCLE - MBR & RO

REDUCING WATER CONSUMPTION

Through the five year action plan of TKM, we have set the targets for the water consumption reduction and the same is driven in to each of the shops through the yearly hoshin of the shops. The performance against the target is closely monitored to ensure the reduction.

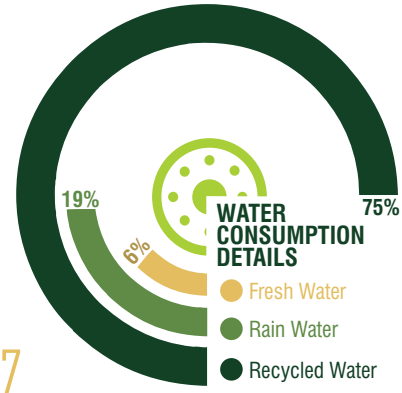
We have adopted water-efficient fixtures and eco-friendly sanitation system at our premises and promote water conservation amongst our employees.

PERCENTAGE OF FRESHWATER CONSUMED



DOMESTIC WATER CONSUMPTION REDUCTION

We depend only on KIADB for our freshwater needs, for water which is sourced from river Cauveri. To achieve maximum efficiency, it is important to ensure that our rainwater and recycled water supply meets our manufacturing demand. As the water demand is subjected to seasonal variations, production numbers, changes in the plant layout and models, we are consistently striving to bridge the supply and demand gap.



94.3% of the total manufacturing water demand is met by Rainwater and Recycled water.

Water Consumption m³

35,589	1,22,459	4,69,387
Freshwater	Rainwater	Recycled water

ENHANCING RAINWATER HARVESTING (RWH)

The existing RWH tank of capacity 25,000m³ is the primary source of fresh water for manufacturing process, followed by recycled water. We also have a natural RWH pond of capacity 26,000 m³ as a part our Eco Zone project.

Rainwater Harvesting Pond at TKM premises

WASTEWATER RECYCLING

RO and MBR Installation at TKM premises

The effluent from our operations is treated in common effluent treatment facility [CETP] at our premises followed by RO and MBR. So far, we have been able to cut down the fresh water demand for manufacturing by recycling 63% of the treated effluent back into manufacturing. The excess treated effluent is used for micro-irrigation and eco-friendly sanitation system at our premises. This ensures 'Zero discharge' outside the plant, resulting in zero contamination of water bodies.

TOWARDS A RECYCLE BASED SOCIETY

CHALLENGE 5

Challenge of Establishing a Recycling-based Society and Systems

11 SUSTAINABLE CITIES AND COMMUNITIES

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

13 CLIMATE ACTION

The indiscriminate usage and over-exploitation of limited natural resources have caused the risk of irreversible damage to the natural world. Hence, we have embraced resource conservation and waste minimization at source through our 5R strategy – Reduce, Reuse, Recycle, Refine and Retrieve. We are also striving to ensure resource optimization and waste management across our value chain.

OUR APPROACH:

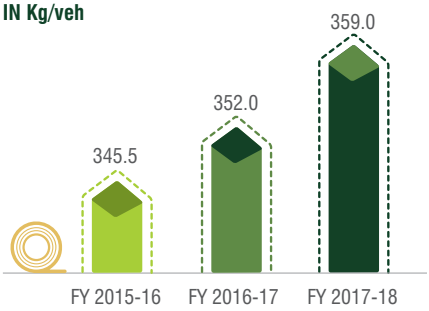
- RESOURCE OPTIMIZATION
- WASTE REDUCTION
- EFFECTIVE WASTE MANAGEMENT
- END OF LIFE MANAGEMENT

RESOURCE OPTIMIZATION

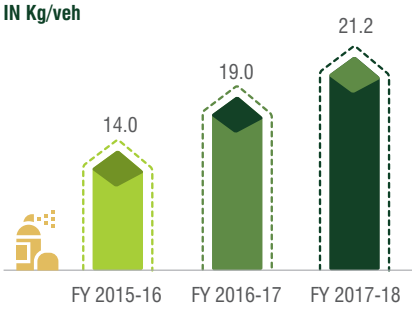
We strive to reduce resource consumption from production activities through effective utilization of resources while making continual day-to-day improvements.

The two most important raw materials -steel and paint consumption is monitored to utilize resources efficiently.

STEEL CONSUMPTION IN Kg/veh



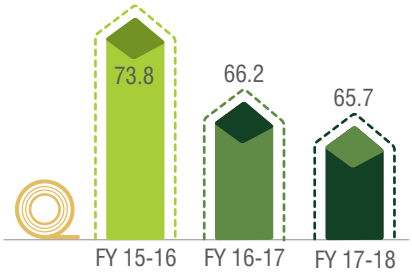
PAINT CONSUMPTION IN Kg/veh



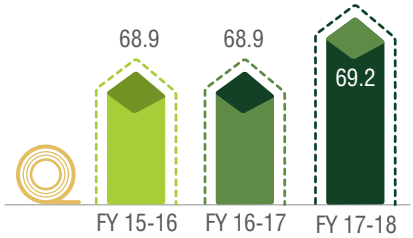
Presently, we are enhancing processes to use renewable/recycled material as input material. However, we are making efforts to increase the steel yield ratio.

STEEL YIELD RATIO

STEEL YIELD RATIO % (MODEL:INNOVA)



STEEL YIELD RATIO % (MODEL:ETIOS)



We have a special task force in collaboration with blanking vendors and authorized recyclers, to reduce our dependency on virgin steel. As we do not utilize recycled raw materials to ensure the highest quality of our products, our major raw materials are subjected to maximum yield and minimum wastage.

We are making efforts to refine our resource utilization capacity. Our team members have invented equipment which segregates copper and rubber from the electric cable before disposal. This showcases active participation and innovative interventions at our manufacturing facility towards resource conservation.

WASTE REDUCTION

Solar sludge drying: One of the kaizen ideas is reduction of waste sludge – unwanted excess moisture content in waste sludge increases the volume of waste and results in higher environmental impacts. In TKM, we introduced solar sludge drying beds in which the excess moisture is removed to reduce the environmental impacts resulting from the same.

EFFECTIVE WASTE MANAGEMENT

Toyota Earth Charter- Basic policy of Toyota defines and encourages “pursuing production activities that do not generate waste”. TKM five-year action plan derived from earth charter also in place which speaks on “Reduction in hazardous waste generation” and “continuous efforts to achieve Zero Waste to Landfill”.

At Toyota, we consider waste as “Value”. These mindsets have driven a case for ensuring waste segregation and thereby enhance the overall recyclability.

We also handhold our waste handlers who reprocess and dispose the wastes to ensure that there is no significant impact on environment. The audits are conducted at vendor sites to understand the gaps and we handhold vendors to handle and dispose waste in scientific manner.

HAZARDOUS WASTE GENERATION			
FY 2016-17	Hazardous Waste*	1064.25	MT/A
FY 2017-18	Hazardous Waste*	1115.7	MT/A
	Spent solvents & used oil	73.5	KL/A
	Empty container	120017	Nos/Annum
NON- HAZARDOUS WASTE			
FY 2016-17	Recyclable Waste	23591	MT/A
FY 2017-18	Recyclable Waste	23687	MT/A

** excluding spent solvents used oil and empty containers*

The used oil, spent solvents and the empty containers generated are handed over to KSPCB authorized recyclers. The hazardous waste generated (paint sludge, phosphate sludge, chemical sludge) is sent for co-processing at a cement kiln. The other hazardous waste generated is sent for incineration. The detailed list of waste generated along with the disposal details is attached as annexure. The non-hazardous waste generated is sent for recycling.

MANAGEMENT OF END OF LIFE VEHICLES

100 dismantler project: When End-of-life vehicles are not properly disposed or dismantled, that may not only affect regional environments, but cause risks to the health and safety of local residents. To prevent these problems, Toyota promotes the Toyota Global 100 Dismantlers Project.

Through this project, we aim to establish social systems for properly treating of End-of-life vehicles without imposing regional environmental impact.

Vehicle Dismantling Unit: In India, the regulation on the management of end -of -life vehicles is still in progress and might roll out for implementation in the near future. A study was conducted on the available recycling facilities and it was found that there are no authorized recyclers for vehicle dismantling in India. It was observed that the available recyclers lacked scientific approach for dismantling and had inadequate environmental and safety considerations. This facilitated the need for us to have a technologically advanced and safe dismantling facility at our own premises. Also since we always strive to keep pace with the regulations, we have taken a step ahead and established an End-of-Life treatment facility at our premises. This is aligned with Toyota's Global 100 Dismantlers project.

Presently, we dismantle vehicles used for tests, trails and training and/or that are damaged during their transit. We have also established scientific standard operating procedures [SOPs] to ensure maximum resource recovery with utmost priority towards environmental compliance and safety of our personnel.

A FUTURE SOCIETY -IN HARMONY WITH NATURE

Toyota strongly believes in conserving the natural ecosystems for the harmonious coexistence of humans with nature. Hence, with its sixth challenge, it aims to conserve biodiversity and collaborate with all its internal and external stakeholders to create awareness and promote environmental education. It has established the 'Toyota Green Wave project', 'Today for Tomorrow' and 'Education for Sustainable development' projects to endeavor for a society in harmony with nature.

CHALLENGE 6

Challenge of Establishing a Future Society in Harmony with Nature

11 SUSTAINABLE CITIES AND COMMUNITIES | 13 CLIMATE ACTION | 15 LIFE ON LAND | 17 PARTNERSHIPS FOR THE GOALS

OUR APPROACH

GREEN WAVE - MASS AFFORESTATION

TODAY FOR TOMORROW - BIODIVERSITY & ECOSYSTEM SERVICE PROJECTS

EDUCATION FOR SUSTAINABLE DEVELOPMENT-DEVELOPING ECOCONCIOUS CITIZENS

GREEN WAVE PROJECT

Afforestation: Since 2009, we are expanding our afforestation activities inside and outside our premises through cross-functional cooperation (involving all stakeholders).

We have maintained our green belt based on Miyawaki method, which helps in creating a natural forest with native species.

TODAY FOR TOMORROW PROJECTS

Biodiversity Conservation: Even though we are not placed near any ecologically sensitive areas, we have conducted initial biodiversity impact assessment in 10 km radius of the plant. The main objective was to identify various native species inside and outside the premises. As there has been considerable increase in our afforestation activities over the years, we partnered with IBBI to conduct biodiversity mapping and impact assessment study. This main objective of this is to understand diverse ecosystem in and around our manufacturing unit and across our value chain and develop Biodiversity management plan in the future.

Our Green Partnerships:

We have collaborated with International Union for Conservation of Nature [IUCN] through their 'Leaders for Nature' project, to exchange our best practices with our peers and benchmark regional and global environment biodiversity conservation best practices. This will also empower us to respond to the emerging environmental challenges.

We have partnered with Confederation of Indian Industries [CII] under its India Business and Biodiversity Initiative [IBBI] to mainstream our biodiversity conservation agenda in a sustainable manner.

Lake Rejuvenation: Karnataka is witnessing depleting natural water resources – due to pollution and sinking of underground water. As a part of the water conservation and environment drive, TKM adopted a lake in the vicinity - a first of its kind project, with an objective to protect the natural resource. Rejuvenating the lake, which will help to enhance the level of underground water, and providing good civic amenities, are planned under this project.

Phase I of the project was completed in 2017-18. Civil works like de-silting, bund preparation/pitching, wastewater diversion etc. were completed as per the plan. Phase II will be implemented in FY 2018-19 and full pledged lake will be operational from 2019 onwards.

Abbanakuppe Lake

EDUCATION FOR SUSTAINABLE DEVELOPMENT

GREEN-ME

Green-Me, is a curriculum based environmental education program aimed to inculcate positive environment attitude amongst children. Since its initiation in 2015, we have partnered with education department and 30 government higher primary and 5 high schools across Bidadi region, Ramanagara district.

The program aims at promoting environment awareness and conservation activities through both knowledge enhancement and practical implementation. After the successful completion of Phase II, Phase III was initiated in August, 2017. Consequently, the program has gained momentum and is successful in expanding environment awareness to the local community through 'Child as an agent of change' approach.

STUDENT CONNECT

We continuously engage students in various ways to bring about a behavioral change. After the completion of Phase III, we evaluated children on their environmental awareness.

Video show on environmental awareness

70 SCHOOL COMPETITIONS

280 DEMONSTRATIONS

700 CLASS ROOM SESSIONS

SCHOOL CONNECT:

We introduced Star Rating System to evaluate schools on a scale of 5. The evaluation criteria is based on child awareness levels and various activities such as plantation & clean up drives, water & waste management, community campaigns etc.

TKM manufacturing plant visit

35 GOVERNMENT SCHOOLS

140 TEACHERS

1477 STUDENTS

VILLAGE CONNECT

To create awareness on environmental concerns amongst local community, the Green ME concept was introduced in Gram Panchayat meeting. Further, the school children along with the NGO partners organized campaigns, video shows and demonstrated environment good practices.

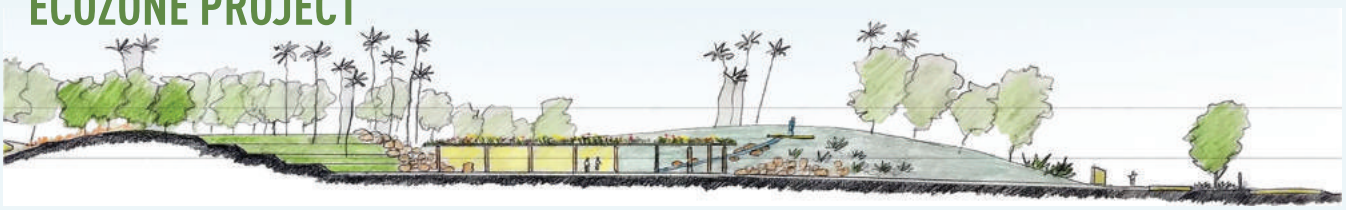
Environmental awareness amongst local community

5 GRAM PANCHAYAT

85 VILLAGE RESOURCE MAPS

35 VILLAGES - COMMUNITY AWARENESS CAMPAIGNS

ECOZONE PROJECT



In our endeavor to towards establishing future society in 'harmony with nature', we are developing "Eco Zone" in our TKM premises. Eco Zone is an outdoor environment learning center, specially being designed to provide experiential learning to students. It is spread across an area of 25 acres alongside 500KW solar park.

Under this project, we aim to connect "Children with Nature"and promote environmental awareness beyond classroom learning. This is done through experiential learning by providing hands on training on the varied environmental issues. Further, it also provides opportunities to learn and experience “harmonious coexistence” of humans and nature through various interesting activities.

This state of art educational park has 17 theme parks, each of which educates the children on various environmental aspects.

TOYOTA PLAZA : It is the entrance to the park with a mini auditorium to screen eco movies and presentations. we aim to showcase eco friendly automobile technologies and Toyota’s efforts in manufacturing eco-friendly vehicles.

VALUE ZONE: This theme park showcases the problem of waste management in India and its importance.Further, it teaches the importance of 3R (reuse, reduce, recycle) on a real time basis through working models, exercises & games.

UNDERGROUND ECOLOGY: This theme park depicts life under ground, importance of conservation of soil quality and impact of soil contamination, waste dumping, littering and groundwater extraction on environment.

WATER CONSERVATION THEME AREA: It educates children on the importance of water conservation and the impacts of polluting water. Various concepts for optimal usage and conservation of water, lake ecology would be emphasized in this zone.

JAPANESE GARDEN: This garden will allow the visitor to understand the impact of Noise. Noise pollution impacts the peace and tranquility of birds, animals, it drives them all away leaving behind an uninhabitable space.

ENERGY CONSERVATION THEME AREA: In this zone, children are educated on best practices & some Toyota unique efforts on energy conservation. Different modules here will exhibit energy demand, energy shortage and energy crisis.

EDUCATION BUILDING: A simple low cost building in a design of a traditional Indian type construction is a space for engaging the students in active discussions, putting high level thinking, skills into practice to the point where students are synthesizing the information at a deeper level of understanding.

EVOLUTION TIMELINE: The timeline tour laced with murals of fauna and flora which have evolved, perished & originated gives an insight into how we must take care of earth & respecting the species that we have. t gives insights on interventions and its impacts.

CLIMATE CHANGE & FUTURE LANDSCAPE: The concept of Climate Change and its impact is introduced in this park. Here the visitor will understand how humans have caused changes in the natural ecosystems that has in turn impacted the natural cycles.

FOOD WEB PARK & POLLINATION GARDENS: The park will take children towards the journey of Food production which is approximately 1 year of effort of various people before the grain makes it to the plate of the individual. it will also emphasize the significance of pollinators in pollination gardens.

VEGETABLE GARDEN, DRYLAND FARM, ORGANIC FARM, ORCHARDS, PHYTOREMEDIATION: This park will showcase the significance of agriculture in India and farming best practices. At orchards, Indian heritage of Ayurveda will be explained with how every tree, shrub or a herb has a medicinal value.