### Creating a Better World



A promise he kept and legacy he left for the organisation and future generations.





"Enterprise instead of Money, Hard work instead of Wealth and Responsibility instead of Glory."

Bhavarlal H. Jain Founder 1937-2016





Sustainability Report 2016

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Sustainability at Jains since 1963

### A man, no matter how busy or big, is m erely one amongst millions in society.



— Bhavarlal H. Jain, Founder (1937-2016)

### Leave this world better than you found it!

These words define our DNA, articulate our corporate credo and show us the way forward. Our Founder Chairman lived by this philosophy and demonstrated how we can leave behind a better world.



Dr. Bhavarlal Hiralal Jain, Founder Chairman (fondly known as Bhau) seen here during a bountiful harvest (2015)

## An Epic Life

In India and across the world, agriculture is grappling with myriad challenges with inadequate and unseasonal rains, soil erosion, depleting groundwater and other perils of climate change. The result is that more and more farmers are dependent on the weather gods for water and irrigation needs. A simple innovation has taken a radical step forward to help reduce the suffering of farmers in India and other parts of the world. Drip irrigation, a technique that allows for micro irrigation of crops, is making sure that small as well as big farmers have access to round-the-year water supply.

This has led to optimum utilisation of precious water, energy and larger volumes of crops and vegetables to feed billions of people across the world. And the man whose down-to-earth ideas revolutionised global sustainable agriculture and transformed the lives of millions of farmers, associates, stakeholders and the society at large is Bhavarlal Jain, affectionately known as Bhau to millions of his friends and admirers.

Our beloved 'Bhau' or 'Brother' and the Founder Chairman of Jain Irrigation Systems Limited (Indian multinational with 30 manufacturing plants worldwide, 10,500+ associates and a revenue of nearing billion dollars) passed away on 25th February, 2016, at the age of 79.

He was a man of many facets – farmer, businessman, social activist, environmentalist, writer, public speaker and a beloved friend and mentor to many.

We, at Jain Irrigation Systems Ltd., are inspired by his epic life and legacy; and are committed to follow his example of creating a better world for all.



Kerosene



Refined Papain





Seeds



Farm Accessories







Wood Substitute Plastic Sheet



Greenhouse





Drip & Sprinkler Irrigation



Polyethylene Pipe



Solar Water Heater



Fruit Processing

Solar Photovoltaic Modules





Solar Water Pumping Systems



Green Energy



Sustainable Agro-commercial Finance Ltd.



Biofertilizer



Food Retail



Solar Photovoltaic Appliances



Drinking Water Purification Project



Founder Chairman Bhavarlal Hiralal Jain, after successfully completing LLB (1956)

"My religion, my simple middle class agrarian background, have ingrained in me values which guided me by instinct to do good for others and wait for a little while for something good to happen. I have never been disappointed!"



Bhau with his wife Kantabai; he credited her for all his successes and accomplishments in life. Here they are seen sharing some happy moments at Jain Hills (1994). She passed away on 6th September 2005

### The Beginning

Bhau was born in a farming family in Wakod village of Jalgaon district of Maharashtra on 12th December 1937. Despite hardships, he remained optimistic till the very end of his eventful life. Bhau's impressive rise from a student struggling to read under the only lamp in the village square, to spurning a government job and starting his own small business of selling kerosene on a bicycle, is now part of a legend.

His journey was never smooth, but adversity was his great teacher. He failed in his initial attempts at entrepreneurship, but never lost hope. He learnt from his mistakes, adapted to changing business realities and evolved with time. But throughout his journey, he was guided by his vision to bring real and fundamental differences in the lives of farmers and the community. He took challenges in his stride and founded the world's second largest drip irrigation company, Jain Irrigation Systems Ltd. (JISL).

### **Global recognition**

Bhau had won 49 national and international awards in his lifetime. In 2007, he was conferred the prestigious UNESCO West-Net 'Water Conserver of India' award by the Honourable Union Minister of Water Resources, Professor Saif-Ud-Din Soz. The award ceremony, held in Delhi, was attended by eminent delegates from the World Bank, UNICEF, UNESCO, Central Water Commission and TERI. India for services in the Science & Technology sector - agriculture science and water technology.

The North Maharashtra University awarded him the degree of Doctor of Letters (Honoris Causa) for his 'Remarkable achievements in the field of agriculture, industry and social work'.

Maharana Pratap University of Agriculture and Technology, Rajasthan awarded him the degree of Doctor of Science (Honoris Causa) for distinguished services to the nation by putting up research projects and drip irrigation projects, benefiting millions of people.

Konkan Krishi Vidhyapeeth, Maharashtra also bestowed on him the degree of Doctor of Science (Honoris Causa) for 'Significant Contribution in the field of Agriculture, Horticulture, Micro Irrigation & Water Conservation'.

In 2012, Jain Irrigation Systems Ltd., was awarded 'The Good Company Award' by Forbes for changing the lives of millions of farmers with its modern drip irrigation systems.

He also received the Crawford Reid Memorial Award for promoting proper irrigation techniques, which has been given to only two Asians till date. This remains the most significant, and also the first major recognition on an international platform.

In 2008, Bhau was awarded the Padma Shri, one of India's prestigious civilian awards by the Government of



Founder's inspiration Mother Gaurabai Jain Father Hiralal Jain



Founding members who joined Bhau from 1963-65. Seen from L to R: Kantilal Jain, Shivraj Jain, Girdharilal Oswal, Bansilal Jain, Bhau and Dalichand Oswal (2008)



Bhau explaining Hybrid cotton production (H4) at Wakod farm to Honourable Minister K. M. Patil, GoM (1975)



Bhau displaying onions grown at Jain Hills and watered by Jain Sprinklers (2015)

"All my life, my activities have been focused on serving the farm and the farmers. Having a natural empathy for the tiller of the soil, I reached out and focused on ways and means to improve their agricultural inputs for higher productivity."



Bhau interacting with a group of farmers across generation at Jain Hills (2004)

# Empathy for the Tiller

Yes, that was his overriding philosophy of life, whatever be the consequences. One particular year, Jain Irrigation's margins were under pressure, but Bhau would not relent. At one Board meeting, he surprised everybody by leading a discussion on whether the Company should cut its margins, so that the farmer could benefit more.

His contribution to India's agriculture is legendary. He introduced the concept of drip irrigation in India in 1989. Farmers, by using drip irrigation today, are not only saving water, but are also improving productivity and the soil, so that the same land can provide them better yields for decades to come.

Introduced in Jalgaon, Maharashtra in 1989, drip irrigation replaces the wasteful practice of flood irrigation where fields are inundated with water to grow crops. In drip irrigation, water is allowed to drip slowly from the soil's surface to the root of the plant, aiding what we call 'precision agriculture', optimising the balance of water, energy and fertilisers to enhance output. This immensely improves the water use efficiency which in today's difficult times is invaluable. His consistent efforts to upgrade drip irrigation systems as well as other technologies strengthened JISL's reputation across the world. Today, JISL is preferred choice for irrigation solutions. At JISL, we promote water security and food security with the slogan, 'More Crop Per Drop'.

To increase the income of farmers while attaining business growth, Bhau forayed into the food processing sector. The concept of contract farming which Bhau introduced as far back as 1979-80, has been a successful venture for farmers and secured higher-than-market prices for them. This business model largely benefited the farming community. In the arid region of Khandesh, Bhau's work on watershed management, rainwater harvesting and conservation is a significant milestone in the history of agriculture. Under his leadership was built the Kantai Dam on the Girna River near Jalgaon in Maharashtra. It is built as a public-private partnership and is a shining example of its kind. The spread of the water is 5.6 km from the weir. This storage structure is benefiting the surrounding 7-8 villages with the population ranging from 15,000-16,000. It ensures sustainable and secured supply of water for agriculture as well as for drinking purpose.

Bhau set up a Hi-Tech Agri Institute at Jain Hills. The institute has the largest number of agronomists and doctorates in the private sector, who train farmers across the world on latest farming methods. Besides, he established one of India's leading bio-tech lab that conducts research in various fields of agriculture. These institutions have been instrumental in making possible some of the most impactful agricultural advances like tissue culture banana, strawberry and pomegranate plantlets. Today, we are driving biotechnology initiatives, with a tissue culture capacity of 100 million plantlets annually.



Bhau warmly greeting progressive onion farmer Dagaji Keshav Patil (2008)



Bhau operating coal boiler at the Pipe Factory (1979)

"What do you look for when you enter a particular business? You look for size, you look for growth prospects, you look for depth, you look for reach. Agriculture offers all of this. Agriculture is inherently a very absorbing profession."



Bhau explaining Drip Irrigation in India to John De-Paolo a collaborator (1989)



Bhau describing to Mr. & Mrs. Maier & Mr. Faver about Pipe Extrusion Machines at the Pipe Production Plant during their visit to the factory (1991)

### Enlightened Entrepreneur

Bhau showed the world that a globally acclaimed thought-leader in agriculture could be an astute entrepreneur as well. He passionately sought new avenues of value creation; and through his perseverance established a billion-dollar multinational corporation. His management style was also unique; he gave a patient earing to every stakeholder. He believed every voice needed to be heard. He was always keen to foray into emerging businesses and adopt new technologies. He was particularly interested in those ventures that had a social impact and affected the disadvantaged sections of society. At the same time, he never compromised on the quality of products. That is the reason why, even

during adversities his customers and associates never deserted him.

He never entirely relied on data and charts to reach an important business decision. He listened to his inner voice to find answers. Bhau's efforts in the field of business have received recognitions from across the world. A case study on JISL by the Harvard Business School is a part of their graduate programme. Forbes International USA hailed JISL as the only Indian company in the top 50 most influential companies of the world. Jain Irrigation was the only Indian company and ranked 7th in the list of Fortune's 51 'change the world' companies by Doing Well Doing Good.



20 HP demo Solar Pump installation at Jain Valley being tested by the solar technical team (2010)



Bhau with his four sons, Atul, Anil, Ashok and Ajit at Kantai Dam (2014)

"Entrepreneurship is not limited to business only. There can be social entrepreneurs and even political or spiritual entrepreneurs. Gandhiji was a political as well as spiritual entrepreneur. The practice of entrepreneurship can be applied to any discipline of human activity."



Bhau felicitating CM of Gujarat Narendra Modi at Jalgaon (2009)



Bhau with Tissue Culture Lab associates. A unique feature of this lab is that it is entirely run by women associates as Bhau believed in empowerment of women (2008)

### Social Engineer

Bhau believed innovative ideas could bring societal change. His ideas were not restricted to the realms of business alone. He devoted a considerable amount of time to education and community upliftment. He focused on imparting value-based education to children. He thought opportunities for quality education should be available to every section of society. Bhau founded the Anubhuti English Medium School for underprivileged children. The school provides free education, books, wholesome meals and other necessities to hundreds of bright youngsters. He believed that the aim of education should not only be personal material advancement, but collective wellbeing.

Before starting Anubhuti English Medium School, he started Anubhuti International Residential English Medium School that follows modern teaching methods and curriculum. While providing international-quality education, it also retains relevant Indian customs, ethos and values that are appropriate in forming the character of the young generation of learners. Bhau also established the Gandhi Research Foundation (GRF), a monument in the memory of Mahatma Gandhi who greatly influenced his life. The GRF is one of Bhau's significant contributions in the field of social enterprise. A thematic, state-of-the-art, interactive multimedia museum, the Gandhi Teerth, an extensive library, classrooms and state-of-the art archives occupy a whole of 81,000 square feet and is located on 20 acres of orchards and landscaped gardens at Jain Hills, Jalgaon.



Anubhuti English Medium School - A dream of uplifting the lives of under privelleged children turned into reality in 2011



Bhau discussing with the villagers, the importance of water conservation during construction of 'Kantai Dam' on the Girna River, Jalgaon (2013)



Bhau explaining future farming technologies to Former President of India and Bharat Ratna A. P. J. Abdul Kalam at Jain Tissue Culture Park, Takarkheda, Jalgaon during his visit (2014)

"Environment and economic conditions are closely and inherently interwoven. No progress or economic development can be sustained without ecological and environmental regeneration."



Bhau along with Marathi Poet N. D. Mahanor, Dalichand Oswal, Dr. D. N. Kulkarni, G. R. Oswal displaying varieties of banana grown with tissue culture (2008)





Bhau explaining nursery grafting technique with Devendra Fadnavis, CM, Maharashtra State & Girish Mahajan, Irrigation Minister, GoM (2016)

### Green Crusader

Bhau believed that we must endeavour to establish and maintain optimal, selfperpetuating and self-upgrading equilibrium between natural resources and human & animal life. This, according to him, was an essential precondition for sustainable human progress. He wholeheartedly supported initiatives to aid biodiversity and sustainable development. His work in the world of agriculture and water management reflects his concern for the environment. Under Bhau's leadership, JISL diversified its product portfolio to include renewable energy solutions with solar photovoltaic



Bhau dedicated his life to bring water use efficency in agriculture and independence from conventional energy resources. It was his vision which transformed Jain Tissue Culture Park, Takarkheda into an oasis of greenery.

(PV) modules to harness the sun's energy.

JISL also introduced a wide range of solar-powered devices, including water pumps, water heaters, street and home lighting. It also generates electricity and gas using biogas plants for running the school, GRF and some of the food processing plants.

Bhau also transformed Jain Hills, a 650 acre barren land and its environs into a fertile green paradise, planting millions of trees and energising the combat against climate change.



Once barren landscape (Jain Hills) of 600 acres is converted into an afforested green area by Bhau's vision.



Bhau explaining the symbiotic relationship of agriculture and life to Anubhuti school students during his Sunday interaction (2009)

"I would like to tell the story of my humble work and experiences to the youth of today, who are on the verge of entering a practical world."



Bhau with Raghunath Mashelkar, former Director General of the Council of Scientific & Industrial Research and a Director of Gandhi Research Foundation (2013)



Bhau extolling the virtues of renewable energy to the next generation (2008)

### Man of Ideas

Bhau was a man of ideas and profound experience, which he passionately loved to share with the world. His rich knowledge and eloquence on various subjects made him a much sought after public speaker nationally and internationally.

His anecdotes and stories enthralled, entertained and enchanted his audiences. During his last visit to

'Tee aani Mee', (She and Me) published in Marathi, Hindi and English is an autobiographical account of his life with his wife which gives an underlying message to society.

the US, he gave an hour-long speech on his journey as an agricultural entrepreneur. This prompted Prof. Ray A. Goldberg, (George M. Moffett Professor of Agriculture and Business, Emeritus) to call him his brother. Later, the professor, along with other professors and the Dean of Harvard Business School visited Jalgaon with a delegation. Today, Harvard Business School uses JISL as a case study for their graduate programme.

Being a prolific writer, Bhau wrote several books in English and Marathi. His book,

'A Telling Tale' is based on his learnings and the experiments he conducted in watershed management. It can be useful for the general public as well as for students, because the subject is pertinent and the narrative is lucid. His book 'Aajchi Samaj Rachana' (Concept of Today's Social Constitution) on the ills of the social structure, written decades ago, is relevant even today. His books, 'An Entrepreneur Deciphered' and 'The Enlightened Entrepreneur' reflect his unique perspectives on business, society and the world around.



When two 'Watermen' come together the ripples can be felt at vast distances! Bhau brainstorming future of rivers in India with Shri Rajendra Singh (2014)



Bhau at the function to release his first book on societal reforms necessary in India to build a harmonious society (2001)



Bhau felicitating Prof. Emeritus Ray A. Goldberg, Agri Business (Harvard) at Jain Hills (2012)

"The scientific world must realise that it is the industrious men who can commercialise their pioneering work and put it to good use. It is they who can unlock the applied value of science and create products that serve humanity."



The man who pioneered Drip Irrigation in India in a big way and made millions of small farmers happy and prosperous. Bhau believed ''When farmers progress, Nations prosper.'' (2008)



Bhau was always exploring new frontiers. Here he is observing with keen interest the pomegranate TC plant in TC Lab (2013)

### Devotee of Science and Industry

In his writings, Bhau unequivocally proclaimed that industry is the vital link between the laboratory and the market. He thought that a scientific work, no matter how ingenious, can only gather dust if it is confined to the cupboards. Knowledge and know-how need entrepreneurial zeal and zest to transform them into tangible gains.

He looked upon research and development as the critical step to facilitate any commercial innovation. He often regretted the fact that the scientific community and businesses work in isolation and tried hard to bridge this gap.

Under Bhau's leadership, JISL focused on scientific techniques, innovation and technology to enhance its business value. JISL uses modern hi-tech irrigation systems and innovative technologies in order to save precious water and significantly improve crop yields, especially for small farmers. Jain Integrated Irrigation Solutions (JIIS) can be adopted in canal command areas to enhance the efficiency of water use up to 85% vis-à-vis 40% in the conventional irrigation methods. This is based on the concept of bringing water from 'Reservoir to Root', which includes lifting water from the reservoir, creating a pipe distribution network, and optimising water utilisation, using advanced irrigation and automatic techniques.

Bhau trying the onion seed sowing machine developed with the help of Jain Technology (2010)



Bhau receiving Doctor of Science award from Pratibha Devisingh Patil, Chancellor, MPUAT & Governor, Rajasthan (2006)





Bhau tilled his farm in the traditional way before transforming it with technology (1999)

"As a son of the soil, I dug wells, laid non-pressure cement pipelines for farm irrigation, later replaced the cement pipes with PVC pipes, constructed a farmhouse and cattle sheds. I produced hybrid cotton seeds, high yielding chillies, and also ushered in ratoon cropping for hybrid jowar. With this kind of first-hand feel and experience, I became part and parcel of the rural ethos; and, thus, rejuvenated and cemented my links with the farm, farmer and farming."



For Bhau 'Soil' was Mother of all life on this Earth (2008)



Bhau discussing utility of nuclear energy in agriculture with Dr. Anil Kakodkar (former chairman of the Atomic Energy Commission of India) at Jain Hills (2013)

### Son of the Soil

Bhau's tireless efforts to convert traditional agriculture to modern farming, closely acquainted him with the intricacies of farm operations and the psychology and environment of rural life. He quickly grasped the realities with his inherent farming instincts. His subsequent exposure to higher learning and the decade-long experience of trading in farm inputs further honed his skills and insight. Bhau's invaluable farming experience enabled him to lay the foundation of JISL, and transform the lives of millions of farmers globally. And it all started from his native district of Jalgaon.

His hi-tech irrigation techniques have created several millionaires in the parched region of Jalgaon. The water conservation activities and the smart usage of water to convert an arid hill into a green park hosting numerous demonstrative projects has earned Bhau another epithet, Krishi Pandhari (Protector of Agriculture) Bhau with his yeoman services, put Jalgaon. He helped uplift the region through demonstration farms; he brought agricultural prosperity in a dry area and introduced innovation in agriculture and horticulture. His achievements have been recognised by the Government of Maharashtra and global institutions like UNESCO, IFC and others in the US.

While the efforts are felt across crops, his most notable success has been in micro propagation of tissues for enhancing bananas' yield and quality and reduction of the crop life cycle. The research and consequent commercialisation of the tissue culture of banana has benefited farmers by improving production by over 100% and reducing the harvest cycle by 30%. Sugar cane farmers, using drip irrigation, have seen their average yield more than double to around 60 tonnes per acre, compared to the country's average yield of around 25 tonnes per acre. There are a few farmers who are even reaping a yield of 100 tonnes per acre.



Visionary Bhumiputra - a son of the soil who spent his lifetime nurturing 'Mother Earth' (2009)



Bhau believed in the potential of villages to become the centres of sustainable growth (2009)

"One of Gandhiji's primary thrusts was channelising of human intellect and talents towards social, cultural and environmental development."



Bhau was deeply influenced by the Gandhian philosophy of rural empowerment and developed technologies for the prosperity and dignity of small farmers (2015)

### Innovative Gandhian

Born into a Jain family, Bhau was well acquainted with the virtues of Ahimsa, Brahmacharya, Aparigraha and Anekanth Siddhant (Concept of non-violence, celibacy, non-possessiveness and nothing is permanent). These virtues were further reinforced when he read about Gandhiji's philosophy of Sarvodaya and its inspiration 'Unto This Last' by John Ruskin. They helped him understand what great souls meant by 'non-violent living' or 'life based on truth'; that is 'the life of a tiller and craftsman is the life worth living'. By dedicating his life to agriculture, he became an ardent Sarvodaya practitioner in modern times.

His early orientation to morality and Gandhian philosophy helped Bhau lay an ethical foundation for his enterprise. Undeterred by the challenges that shook his business to its core, he pursued his business with steadfast ethical conviction and inspired thousands of associates, and small farm-holders around the world. With his steadfast adherence to principles, he consciously refrained from any business that exploited scarce resources or the weaknesses of other human beings.

By promoting micro irrigation, Bhau not only encouraged 'precision agriculture' and water conservation in the subcontinent, but offered a technology with a human face to millions of farmers. As an admirer of Gandhiji's principels, Bhau wanted to create something substantial, so that Gandhiji's life-work and his vision may be preserved for posterity. His vision transformed into a reality in the form of the Gandhi Research Foundation (GRF).

To help the children to grow with right orientation, Bhau wanted them to get acquainted with Gandhiji's life, works and thought. He initiated a programme called Gandhi Vichar Sanskar Pariksha (GVSP), with this purpose. Thanks to GVSP, over two hundred thousand students get a chance to read Gandhiji's literature every year, throughout the country.



Bhau receiving Gandhi-Ambedkar award from Justice Chandrashekhar Dharmadhikari, for his *pioneering efforts in social transformation and effectively proving that business and social cause can co-exist* (2003)



Bhau standing before "The Father of Nation' whose ideas are so relevant to build the India of Tomorrow (2014)



Nation honours our Founder Chairman with 'Padma Shri' for services in the science & technology sector — agriculture science and water technology. Bhavarlal H. Jain, Founder of Jain Irrigation Systems Ltd., receiving the 'Padma Shri' one of India's highest civilian awards from the President of India Pratibha Devisingh Patil (2008)

## Taking forward the legacy of our beloved Bhau

"Enterprise instead of Money, Hard work instead of Wealth and Responsibility instead of Glory."

### Jain Irrigation -Committed to Create a Difference

Jain Irrigation Systems Limited (JISL) is a multinational organisation of Indian origin operating across multiple businesses. We are into the businesses of drip and sprinkler irrigation systems, PVC & PE piping systems, tissue culture, greenhouses, biofertilisers and solar products. We also manufacture aseptic fruit purees and concentrates, frozen fruits and dehydrated vegetables.

We have pioneered a revolution with modern irrigation systems and innovative technologies using cuttingedge research and development. Our aim is to save precious water and energy, while at the same time enhance crop yields, using global agronomical knowledge to benefit millions of small as well as large farmers.

We have also ushered in a new concept of large scale Integrated Irrigation Projects and 24x7 water supply projects. 'More Crop Per Drop' is our approach to water security and food security.

Each of our products is an outcome of an effort to conserve nature's precious resources, through substitution or value addition. This is the legacy of a deliberate and conscious endeavour that stems from a deep-rooted concern for nature, along with unwavering focus on the growth of agriculture, resulting in higher income for farmers. Crop Per Drop



Jain Irrigation Systems Ltd. Small Ideas. Big Revolutions.®

### I CULTIVATED THE HIGHEST YIELD OF BANANA RECORDED BY THE DEPARTMENT OF HORTICULTURE.

Gurunathan installed JAIN's DRIP IRRIGATION and FERTIGATION technique with TISSUE CULTURE BANANA. He now earns a profit of 9.20 lakhs per acre with a total yield of 150 MT per hectare.

Gurunathan Theni District-Tamil Nadu +91-9790233210

**#IAmAJainFarmer** 

### The Best Bottom Line is a Farmer's Smile



with Fertigation in his onion farm. He now earns a profit of 1.25 lakhs/hectare with a total yield of 600 quintals of onion.

Sunil Bherulal Patidar Kuali, Taluka Mhow, District- Indore +91-9977761225

**#IAmAJainFarmer** 



### MY PROFITS HAVE DOUBLED IN A SPAN OF JUST 9 MONTHS.

Para Pandu Ranga Rao uses Jain's drip fertigation technology in his 2.5 acre of red chilly farm Profit earned: 2.30 lakhs per acre Yield: 46.1qtls per acre

Para Pandu Ranga Rao District- Khammam, State- Telangana

**#IAmAJainFarmer** 

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Jain Irrigation Systems Ltd. Small Ideas. Big Revolutions.®



Poornachandar Rao uses Jain's drip irrigation system Profit earned: 1.50 lakhs per acre Yield: 30 mts per acre

Poornachandar Rao District- Nizamabad, State-Telangana

#IAmAJainFarmer

### Corporate Philosophy



### **Our Vision**

Establish leadership in whatever we do at home and abroad.

### **Our Mission**

Leave this world better than you found it.

### **Our Credo**

- Serve and strive through strain and stress
- Do our noblest, that's success

### **Our Goal**

Achieve continued growth through sustained innovation for total customer satisfaction and fair return to all other stakeholders. Meet this objective by producing quality products at optimum cost and marketing them at reasonable prices.

### **Our Guiding Principle**

'Toil and sweat' to manage our resources (men, material and money) in an integrated, efficient, economic and sustained manner. Earn profit, keeping in view commitment to society and environmental.

### **Our Quality Perspective**

Make quality a way of life.

### **Our Work Culture**

Experience: Work is life, life is work.

### **Our Guidelines**

### **Customer and Market**

- Commit to total customer satisfaction.
- Build and maintain market leadership.

### **Quality excellence**

Strive continually to reach and maintain quality in every aspect.

### Safety and health

Secure safety and health of associates and other assets.

### **Environment and society**

- Protect, improve and develop environment.
- Cherish the symbiosis and nurture creative

partnership between the society and environment.

### Development of other stakeholders

Adopt transparency and fair practices for continuous sustainable growth.

### Small Ideas. Big Revolutions.®

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### Founder 's Conviction

The Founder inherited farming instincts. Moreover, as a first generation entrepreneur, he also had hands-on experience regarding every aspect of farming. A strong desire and determination to use cutting edge technology and science for development of agriculture propelled him on to the growth path.

These convictions pervaded the past five decades of his life:

• In India, 70% of about 1.25 billion people are associated with agriculture. Farming symbolizes their culture, not only their economy.

Transformation of our agrarian society into an industrial society will take centuries. In the meantime, there is no escape from taking the help of Science & Technology for agriculture, agri-business and agri-industry.

Such an approach alone can ensure long-term food security, sustainable & inclusive growth and self-reliance.

No other sector's progress, howsoever phenomenal, can ever substitute the development of agriculture. - 1979

• There is no gainful agriculture without irrigation. Availability and management of water holds the key for future agricultural progress-its production and productivity. "More Crop Per Drop" should become a national priority. — 1991

• In today's context, availability of water by itself does not guarantee higher production or productivity. One needs supply of good quality, reliable and sustainable energy to pump the water to the farm boundary and thereafter distribute the same to the root zone of the crop. Green energy alone can be the energy source for sustainable agricultural growth.

With the increased agri-output, agriculture will not remain viable without value addition through processing and the development of cold chain, proper market linkages and information flow. - 1995

• As we grow agriculturally and industrially, we must not do so at the cost of the environment. That will become counterproductive and non-sustainable. — 1996 • A corporation should understand and appreciate social issues and problems and must pro-actively take part in the society's progress through the process of shared value, inclusive growth and social consciousness.

Briefly stated, we must take a holistic view of our business as well as environmental and societal imperatives. They are inseparable. -2001







Solar photovoltaic panels and tracker systems developed by Jain Irrigation.



Soil-less culture and aeroponics



Farmer at Lohara, showing the bumper-crop of high yielding citrus.



Bhau addressing audience at Gandhi Research Foundation (GRF)

Solar system operated hand pump developed by Jain Irrigation commissioned in the villages of Bhandara district, Maharashtra



### Excerpts from Chairman's Speech

### Dear Friends,

For the past 29 years, our beloved Bhau, Dr. Bhavarlal Jain, the respected Founder Chairman of JISL, had been providing us energy, inspiration, guidance, motivation, courage, direction, vision and plans for the future progress of the company. Today, while shouldering this enormous responsibility for the first time as the Chairman of JISL, I am choked with emotions. We could never imagine that we will have to face the fact that he is no more with us, so soon. We are indeed bereaved, but with the trust, support and encouragement of all of you, I am confident of overcoming all challenges and together head towards a brighter future!



When Bhau founded his first enterprise, 'Jain Brothers' in 1963, Bansibhau and Dalubhau were the first to join him; Shivrajbhau, Kantibhau and Giridharbhau



joined soon after. These were the founding fathers of our organization. A few years ago we lost Shivrajbhau. Recently we lost the senior most of them all, the 90-year-old Bansibhau. Let us pay homage to these respected departed souls.

Bhau had removed the mechanical monotony of shareholder meetings and had turned them into a festive celebration of

the shareholders. I promise that this will forever remain the principal format of the future meetings!

Bhau always thought and worked for a sustainable, allinclusive progress. Since 1963, he was ardent about fulfilling the company's social responsibility as he genuinely believed that we owe gratitude to the society. This was much before the very term: 'Corporate Social Responsibility (CSR)' was coined. He always maintained that the company can ensure its stakeholders' and its own progress only through the prosperity of its customers i.e. millions of small farmers. In another first, five or six years before the Government



Give more than you take - Jain Solar Pump reducing women drudgery in remote rural areas in Maharashtra

passed the CSR bill, Bhau had proposed in the shareholder meetings of the Company that 3% of the Company's net profit should be utilized for fulfilling its social responsibilities. In the very next meeting, it was increased to 5%! In fact, it is my strong conviction that he was the first to introduce the novel concept: 'Customers progress is stakeholders' profit', to the corporate world, and he should get the credit for this. Any company dedicated to the farm, farming and farmers who are totally reliant on the unreliable moods of the Weather Gods, can expect only untold challenges throughout its life. But Bhau had this knack of turning every challenge into an opportunityto progress and prosper. Bhau never compromised his principles or sacrificed his moral values while expanding his small enterprise which was started with a meager capital of INR 7000/- to a global conglomerate with a business of INR 64,000 mn. He achieved this through sheer hard work, honesty, ethics, and an environment-friendly, all inclusive unique business model.

This global multinational company has grown organically like a colossal honeycomb where each associate works like the owner of the Company. He considered all his associates part of his extended family.

His concerns for the well-being, progress and prosperity of the small farmers the world over went beyond the boundary of being only an industrialist or corporate businessman and elevated him to the exalted pedestal of a humanitarian, philanthropist and philosopher, aside from being an agriculturist and water scientist. Addressing the Indian Council of Chemists in 1999, he said, "I dream of self-reliant farmers and perfect farming. I always strive to conserve the environment while adding value to the farm produce" — and Jain Irrigation has always been flourishing on this main principle.

Bhau's vision had always been far-reaching. He liked to experiment and innovate. Being a true businessman first, he never lost sight of the profitability of anything that he ventured into. He achieved excellence in whatever he did. In fact, Our Company's mission: "More Crop Per Drop®", now with a slight variation, has become the Government of India's vision: "Per Drop More Crop"!

Today the Company, is all set for far-reaching global expansion. Starting with the manufacturing of PVC pipes, the company is now making forays into futuristic vertical, soilless, aeroponic farming. In Ladakh where the soil is infertile and is covered with snow for eight months a year, we have demonstrated to the local people how to take a flourishing crop in just four months with the help of modern high-tech farming. The whole world has admired this path-breaking achievement of ours at the highest altitude farm in the world.

This dedication of Bhau for the betterment of the farmers and society at large impressed the Professor Emeritus (Management) of Harvard Business School (HBS) so much, that he commissioned a special case study of Bhau and JISL to be included in the graduate programme of the management curriculum of HBS- USA.



In those last few days of his life, he also asked his associates to improve upon their new breakthrough innovation of a solar based water purification technology to make drinkable water available at the cost of 5 paisa per litre.

Bhau has left behind a huge vacuum for us four brothers to fill. Replacing him is absolutely impossible, but we will do our best to fulfil our duties and responsibilities.

Our Late Chairman always perceived the Company as a river. Honouring his magnificent legacy, it is our sacred duty to let this river keep flowing and growing by giving it the right direction. Let all of us now work together, determined to actualize Bhau's ever inspiring vision: "Leave this world better than you found it."



Aeroponics to multiply potato planting material.

Ashok B. Jain Chairman



Soil-less cultivation system - developed for future farming.



Maize crop on drip irrigation system.



Bhau discussing the vertical farming for urban agriculture with Mr. Ajit Jain.

# Message from the CEO's Desk

sectors and help create a better world for all. Today more than 6 million farmers are participating in the inclusive growth created by our pioneering solutions across the globe. Our agribusiness model is designed on the concept of "resources to roots" which not only addresses the water, energy and food security, but especially helps the smallholder farmers to improve their incomes significantly. We have been able to transform the lives of millions of farmers with drip and sprinkler irrigation systems that save water, electricity, fertilizers and increase the produce twofold or even threefold. Our piping systems with a life of more than a hundred years, provide sustainable water supply and distribution solutions as these pipes are rust-free, temperature resistant and demonstrate the least

> life cycle footprint. Some of the world's most innovative water supply projects have become a reality today with the application of our HDPE pipes. The Ice Stupa Artificial Glacier project in Ladakh, where the 66 feet tall Ice Stupa will supply water to 5000 saplings and the Chennai Water Desalination project that supplies 100 million litres of water a day to Chennai city are just two examples.

Our tissue culture division produces tissue cultures of various types of bananas and pomegranates. It is the largest tissue culture facility of its kind in the world producing almost 70 million tissue cultured plants of banana every year. Tissue culture technology not only increases

Our Founder Chairman Dr. Bhavarlal Jain set us a mission four decades ago— "Leave this world better than you found it". His vision reflects in all our endeavours as we grow as an organization and progress as a business. Strongly driven by our founder's conviction, we bring innovations in the field of agriculture, irrigation, food technology and green energy smallholder farmers' income by improving the farm productivity over 200%, but also provides employment opportunities to hundreds of rural women of surrounding villages. Strawberry is the new addition to the family of Jain's developed tissue cultured plants.
The company has set up a wholly owned subsidiary for its food business, and has entered into strategic partnership with financial investors Mandala Capital Limited. The management is also working towards growing the food business by 25% year-on-year, with a focus on the B2C product line; the potential of value-added products and the fresh fruits segment is yet to be tapped. We have also launched our first branded retail product 'AamRus' under the 'Jain Farm Fresh Foods' brand.

A recent major success in our environmental sustainability efforts has been the solar agri-pump project, launched

by the Government of Maharashtra through MSEDCL. We bagged MSEDCL's tender to supply and install 8,959 solar agripumps, in the pilot phase of the world's largest solar agri-pump project, which will see the installation of 500,000 pumps across Maharashtra. In 2015, we also acquired Pure Sense Environmental Inc., a Fresno, CA-based company



supplying proprietary state-of-the-art irrigation and field monitoring solutions for agriculture since 2006. With Pure Sense, our farmers will have access to timely and accurate data for each monitored irrigation set. Through this acquisition, JISL will make notable progress in our journey towards delivering "More Crop per Drop".

Over the reporting period, we continued to grow moderately despite many challenges, including two major droughts. As we grew and progressed, we ensured that we maintained the highest standards of operational excellence,







adhered to the established international standards in identifying social, environmental, and safety risks, and mitigating their impact. Our overseas operations are also performing well according to expected growth levels. With our scale of operations growing globally, our consolidated revenue also grew from INR 62,074 million in FY 2014-15 to INR 63,842 million in FY 2015-16; an increase of 2.8%. Our partner in this growth journey is our current team of more than 10,000 associates.





Jain Solar Pumps installed in tribal belts of Maharashtra.

As a testament to our pursuit of excellence and focus on R&D in the spheres of innovation and environmental sustainability, we have received significant recognition during the reporting period. We were ranked seventh in the list of Fortune 51 companies that are changing the world. Moreover, we are the only Indian company on this prestigious list. Among our other significant recognitions are — CNN-IBN's Innovation Award, CNBC's CSR Award, Financial Times / International Finance Corporation's (FT / IFC) Transformational Business Award, and the Porter Prize for creating shared value.

We continue our projects for societal development through the Bhavarlal and Kantabai Jain Foundation (BKJF) Trust, Jalgaon, and the Gandhi Research Foundation (GRF), Jalgaon. Our CSR expenditure which focuses on rural development, sports promotion, education, and conservation of natural resources – remained unaffected, even though the reporting period wherein we saw a reduction in net profit due to change in business model (subsidy to cash and carry). We remain committed to our sustainability journey and the milestones established earlier.

Our future efforts are broadly directed towards achieving the UN's Sustainable Development Goals (SDGs), while strengthening the balance sheet and achieving a debt to equity ratio of 1:1. Management is focusing on the retail micro irrigation business, along with offerings from SAFL (Sustainable Agro-commercial Finance Limited). The company is also looking at doing more integrated projects like Ramthal in Karnataka which provides irrigation to more than 13000 hectares of land. We are also exploring export demands coming from Africa and other developing nations. Lastly, as we work to create a 'Sustainable' Agri-business model, we aim to evolve through innovation, enhance stakeholder engagement, expand our geographical presence, and widen our market network globally. All this, while strengthening cash flows and de-leveraging our balance sheet. We are confident that with this 'Resource to Root' approach, we will give a new meaning to Agri-business in India and across the globe.







#### Anil Jain

Vice-Chairman and Managing Director



Bhau explaining Dr. APJ Abdul Kalam about the modern agriculture practices which will help feeding the future world.

# Our Journey to Sustainability Reporting





From nature we learnt the art of doing business with social conscience



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1<sup>st</sup> Sustainability Report



3rd Sustainability Report

We are glad to present our fourth Sustainability Report, capturing our sustainability-related performance for the financial years 2013-14, 2014-15, and 2015-16. Our sustainability performance is linked with our efforts to create shared value for all our stakeholders. This translates to not only our economic growth, but also the positive social and environmental impact created by our businesses. In this report, we offer a consolidated view of these initiatives, supported by relevant technical and quantitative information.

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Our report is intended to help our stakeholders in understanding the economic, social and environmental performance of JISL. Our stakeholders include our employees (we call them "associates"), our suppliers and dealers, local communities, the government, the media, and those with business interests in our company (shareholders, business partners, and industry associations) etc.

The materiality disclosure service of GRI is taken for the current report and GRI's organistional mark is used on the GRI content index page.

## **Report Boundaries**

The report covers all manufacturing locations across the world.

Manufacturing facilities in India	International Manufacturing facilities	
💳 Jain Plastic Park, Jalgaon, Maharashtra	Cascade Specialties Inc. USA	
Iain Plastic Park, Kondamadgu, Telangana	Jain Irrigation Inc. Fresno & Ontario in California, USA	
Jain Plastic Park, Udumalpeth, Tamil Nadu	Chapin Watermatics, Inc. Watertown, NY, USA	
Jain Plastic Park, Alwar, Rajasthan	Jain Irrigation Inc., Florida, USA	
Jain Plastic Park, Bhavnagar, Gujarat	NuCedar Mills, Inc. Chicopee, Massachusetts, USA	
Jain Food Park, Jalgaon, Maharashtra	White Oaks Frozen Foods, California, USA	
Jain Food Park, Chittoor, Unit-1 & Unit-2, Andhra Pradesh	THE Machines SA, Switzerland	
Jain Food Park, Baroda, Gujarat	Pro Tool AG – Switzerland	
Iain Energy Park, Jalgaon, Maharashtra	Jain Sulama Sistemleri Sanayi Ve Ticaret AS., Turkey	
Iain Agri. Park, Jalgaon, Maharashtra	Sleaford Quality Foods Ltd., Lincolnshire, UK	
Demo, Research and Development Farm at	Excel Plastics Ltd., County Monaghan, Ireland	
Jain Agri Park & Jain Tissue Culture Park; Jalgaon & Jain Agri Park Udumalpeth	NaanDanJain Irrigation System Ltd., Israel	
	NaanDanJain Irrigation System Ltd., Brazil	
	NaanDanJain Irrigation System Ltd., Spain	
	Gavish Control System, Israel (as a part of NaanDanJain)	
	Pan Systems S.A., Chile (as a part of NaanDan Jain)	

## **Reporting Profile**

Reporting Year	FY 2009	FY 2011	FY 2013	FY 2016
In Accordance with	GRI G3 Guidelines (A+ application level)	GRI G3 Guidelines (A+ application level)	GRI G3.1 Guidelines (A+ application level)	GRI G4 Guidelines (In accordance-Comprehensive)
Reporting Cycle	Annual	Biennial	Biennial	Three years*
Assurance and Verification Agency	Ernst & Young (E&Y)	Det Norske Veritas (DNV)	TUV India Private Limited	Bureau Veritas Certification India
Assurance and Verification Standard	ISE 987	AA1000AS	AA1000AS	AA1000AS (Type 2)
Contact point	Atin Kumar Tyagi, Manager, Sustainability and Climate Change; Email: tyagi.atin@jains.com			
Company's Headquarter Location	n Jain Irrigation Systems Ltd., Jain Plastic Park, N. H. No. 6, Bambhori, Jalgaon-425001			
*The current report discloses information for three years as we switched from GRI G3.1 guidelines to the GRI G4 guidelines "in accordance" with comprehensive option, and this transition required establishment of systemic processes, especially for stakeholder consultations				

## Report Content

In this report, we disclose the sustainability data for the financial years 2013-14, 2014-15, and 2015-16. The data in this report has been reviewed for completeness and accuracy at the operations level. Unless otherwise stated, we used the metric system to report data and INR to report currency. There are no specific restatements of the information and no significant changes in terms of physical boundaries from the previous reporting period. The GRI Index on pages 149 to 155 provides a list of GRI indicators and disclosures (as per the GRI G4 guidelines), and their locations within this report. This report has been audited and verified by Bureau Veritas Certification India and checked for materiality disclosure by the GRI.

## **Report Organisation**

The report begins with a description of the company profile and the way JISL harbours sustainability strategies. Following this, the report has been organized into three distinct sections: 'Recalculating Economic Value'; 'Redesigning Environmental Practices'; and 'Re-invigorating Stakeholder Relationships'. These sections elaborate; company's Sustainability strategy and policy, governance, ethics & integrity, identified material aspect in sync with JISL's practices and its impact on the business, environment and stakeholders.



# JISL-Redefining Sustainability

#### World's Largest Integrated

Irrigation Project at Ramthal Executed by JAIN project worth more than INR 3850 mn. Provides irrigation to more than 13000 hectares of land. Increased water use efficiency more than 90% in the fields of more than 7000 farmers

### Drinking Water Project – Dar es Salaam

JISL has been awarded around **INR 2200 mn** for a drinking water project for Dar es Salaam (Tanzania)

#### 'Make in India' Initiative

JAIN signed an MOU with Hindustan Coca-Cola in February-16 for orange juice production at Morshi. The plant will be established with the help of the Maharashtra Government's Agricultural and Marketing Department, in the Vidarbha region of Maharashtra. This project will provide more than **500 employment opportunities for local people and also benefit 20,000 orange producing farmers.** 

#### Project UNNATI

Hindustan Coca–Cola Beverages Pvt. Ltd. (HCCBPL) and Jain Irrigation scaled up the joint initiative Project UNNATI with investments amounting to INR 500 mn over a period of 10 years.

#### Solar PV-based Water Purification System

JISL, in partnership with Massachusetts Institute of Technology (MIT), USA, **developed a path-breaking solar PV-based water purification system** based on the Electrodialysis Reversal principle, which can **convert brackish groundwater with 5,000 ppm salinity into drinking quality water**.

### Solar Off-grid Power Plants

Supplied, installed, and commissioned 450 kWp solar off-grid power plants (worth INR 68.8 mn) in two phases for HIMURJA, Shimla at various pump houses of the IPH Division, Himachal Pradesh.

#### Solar Pump Manufacturing Plant

A one-of-a-kind **solar pump** manufacturing plant started by our Founder Chairman Shri Bhavarlal Jain.

#### **IQF & BQF**

Inauguration of Individual Quick Frozen (IQF) and Block Frozen Food (BQF) plants in Maharashtra.

### Programme FALI

Jain Irrigation and Enterprise Solution to Poverty (ESP), USA initiated Programme FALI (Future Agriculture Leaders of India) with the primary aim of sowing the seeds of agriculture leadership in students during their primary education.

### **Project 'Chess in School'**

Jain irrigation and the Maharashtra Chess Association established the 'Chess in School' project and organised the **Maharashtra Chess League** in the presence of Grand Master Vishwanathan Anand.

# Our Performance Track Record

1963

Started our trading business in agricultural inputs and equipment

₹64+bn

Aggregate revenues as on 31st March, 2016

5,2 mn

Farmer lives have been touched

49 BCM

Water saved through micro irrigation systems

30+ years

Rich industry experience in creating sustainable value for stakeholders

₹40,333 mn

Market capitalisation as on 28th August, 2016

10,500H Associates globally

8+bn

Electricity units saved by micro irrigation systems

In mango processing globally

NO1

In tissue culture production of banana and pomegranate globally

Manufacturer of plastic pipes in

India, covering a wide range of pipes and fittings

In solar Agriculture pump globally

Largest microirrigation company globally

In onion and vegetable dehydration globally

Line of businesses across irrigation systems, piping systems, PVC sheets, food processing, tissue culture and renewable energy among others 30

globally

Manufacturing plants across the globe

Countries served with our products

8626+Dealers and distributors base

## Increasing Global Footprint through Acquisitions



**Acquisition of Driptech India Pvt. Ltd.:** Driptech India Pvt. Ltd., was acquired by JISL in 2015. The Company produces affordable, high-quality irrigation systems designed for small farmers. The Company caters both domestic and international markets.

Acquisition of PureSense, USA: PureSense is at the forefront of field monitoring solutions and irrigation management strategies that

enable growers to make fast field decisions within easy-to-use software interface. PureSense has been successfully deployed in over 1,400 farms and more than 50 different varieties of crops. JISL acquired PureSense in February 2015.





Launch of Jain Plumbing Division: Launched in 2015, Jain Plumbing pipes and fittings systems offer multiple solutions to plumbing requirements. Plumbing products are new additions to the wide range of JISL's existing sustainable products. Jain's plumbing solutions will contribute to the development of sustainable infrastructure and water supply systems in urban and semi-urban sector.

## Ramthal Integrated Micro Irrigation Project at Hungund, Karnataka

In this project main water source is backwater of Narayanpur reservoir. This backwater is lifted and delivered to main delivery chamber provided under Marol Lift Irrigation scheme. Near this main delivery chamber sump and centralised pump house has been established from where water is lifted through HDPE / PVC distribution network and proposed to provide irrigation facility to 12300 hectare through drip irrigation systems. Centralised self-cleaning filtration units are established at the pump house. Secondary automated filtration units are proposed at the block level (100 hectare ). Automated irrigation control is proposed at each farmer level through wireless automation system. Fertigation equipment is provided at farmer level for the drip system.

#### **Key Features:**

Location	Hungund, Dist: Bagalkot, Karnataka
Area Irrigated (Acre)	30,381
No of Beneficiaries	7,382
Crop	Maize, Sunflower, Groundnut, Pulses Jowar, Chilli & Vegetables, etc.
Water Source	Narayanpur Reservoir Backwaters
Crop Season	Тwo
Project Cost (Rs. Million)	3857.8
Cost per acre	Rs. 1,27,000
Construction Period	18 months
Maintenance Contract	5 Years
System Type	Pressurised Fully Automatic Drip System



Combined view of pumps, primary filter and panels



Sump cum pump house with rota clean filters installed at pump station at Ramthal project site



A farmer's field view with secondary filtration system, remote transmission unit, water meter and micro irrigation system installed

## Solarisation of Lift Irrigation Pumping Station

The project for solarisation of lift irrigation pumping stations by Himachal Pradesh Government (involving supply, installation, and commissioning of 450 kWp solar off-grid power plants worth INR 68.8 mn) is the first such project in the country which is supplying both drinking water and water for irrigation. In Himachal Pradesh, agriculture land is distributed over hilly terrains. In most of the cases, irrigation is being done through lifting water from canal or reservoir. All these pumping stations are situated in lower level than the farms. Jain Irrigation Systems Ltd. solarised the pumping station without changing or disturbing existing infrastructure. In particular pumping station, there were no space available for installation of solar plant, therefore, the solar panels were installed on canal top.

Out of 450 kWp off-grid solar power plants to be installed at various pump houses of Irrigation and Health Public Division (IPH), a 100 kWp plant has been installed at the canal top at the IPH Sathana, Shahnahar site in the Kangra District. With the power generated, the IPH pump house powers the existing 5 HP to 65 HP AC submersible pumps, which lift water from the canals to the nearest villages for drinking water supply and irrigation purpose. The IPH Division is no longer dependent on grid power to provide continuous water supply to the villages. The villagers are also happy now with sufficient and regular water for drinking and irrigation purpose. Despite the tough and remote site conditions, JISL has executed all project sites successfully.



100 kWp power generation plant installed at the canal top at Sathana (H.P.) under Himurja project



Fixed solar structures at Kangra district making villagers independent of grid electricity



# Our Sustainable Agri-business Model



## 1

Watershed planning Water Harvesting Soil/Water Saving Water Resource Estimation Waste Land Reclamation

## 2

Drip and Sprinkler Irrigation Tissue Culture Plants Biofertilisers Green houses PVC Piping Systems HDPE Piping Systems

## 3

Turnkey Projects Agro-consulting Training Agronomy Services Surveys and Analysis – Water and Soil Irrigation Scheduling Fertigation Scheduling

## 4

Contract Farming Dehydrated Onions and Vegetables Processed Fruits

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In a constant endeavour to deliver quality, Jain Irrigation is the only Indian company that has made it to the first ever list of Fortune's 51 companies that are changing the world— it has been ranked number seven.

Fortune criteria checklist:

- ✓ The degree of business innovation involved
- ✓ The measurable impact at scale on an important social challenge
- The contribution of the shared-value activities to the company's profitability and competitive advantage
- ✓ The significance of the shared value effort to the overall business

Fortune's 'Change the World' list was an attempt to highlight companies who have shown progress in addressing social problems as a part of their core business strategy; the 51 companies on the list have had a significant impact on the social and environmental problems of their business. Apart from economic growth, these companies strive for sustainable development as part of responsible business. These companies have driven innovation to improve health outcomes, make progress on climate change, provide better access to education, and

create new economic opportunities for the deprived. They realize that business can – and must – compete to change the world. In its citation, Fortune Global mentioned Jain Irrigation's efforts to improve the livelihood of 5 million small farmers in India. Emphasising the advancement of technology at JAIN and the company making it affordable for the farmers, the magazine highlighted the "More crop per drop" slogan, based on the drip irrigation technique, which helped increase yields dramatically—50% to 300%. It also mentioned some significant advancements at Jain Irrigation, which include the introduction of more viable crop varieties, farmers trained in more productive growing techniques such as high-density planting for mangoes, moving towards solar water pumps, financing, and food processing for Coca-Cola and Unilever to provide a ready market for the farmers.



"It is indeed an honour to be included in Fortune's global list of companies that are changing the world. It represents decades of passion and devotion that our team has invested in working with small farmers. Whatever success we

have achieved stems from our belief that only if the farmer prospers, will we prosper. The company's mission statement is "Leave this world better than you found it"; we are striving to achieve this by improving the farmer's income and confidence levels on the one hand, while conserving the precious natural resources of the world on the other. Together, this ensures social change and environmental protection. All our business lines are in keeping with national priorities, with a global reach. It is our firm belief that with this spirit, we can envisage a phenomenal potential for growth for



millions of small farmers and other stakeholders. It is with a great sense of fulfilment that we cherish this recognition and ranking.

# Creating Shared Value Through Our Business Practices: JISL Wins The Porter

Through our rural engagements, we have aimed to create shared value by redefining the markets and products, and by creating societal and economic progress. For the same, our Company was honoured with the Porter Prize 2015. Named after the world renowned marketing guru and father of modern strategy, Michael Porter, this prestigious award was received by Anil Jain, Managing Director of Jain Irrigation. The Porter Prize gives recognition

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Mr. Anil Jain and Mr. Surindar Makhija accepting Porter Prize 2015 at a special ceremony at New Delhi

to businesses that have created shared value while conducting their respective businesses, and have adopted the principles of value addition, R&D, innovation and a sustainable policy.

We have built a global and valuable position through our business practices. Enhanced reach to the small farmers and our cutting edge technology has helped us create this shared value and undertake programmes for the community. One example has been in the field of R&D to save water; this technology has paved the way for the financial development of farmers. Overall, we have made this high-level technology available to 5 million small farmers, enabling them to benefit financially and thus lead a better life.

The core focus of our organization, since its inception has been on empowering the rural India, in particular the farming community, whether by introducing cutting edge technology and innovative products, reaching out to the small farmers and creating shared value, or the programmes undertaken by us as a part of our social responsibility. The Porter Prize has been awarded to Jain Irrigation for our contribution to bring about positive development and progress in the lives of the farmers across India.

# JISL—the Company at a Glance

Jain Irrigation Systems Ltd. (JISL) is an integrated player in the global food system, with a diverse range of products and services targeted at and centred on farmers. Our modern irrigation systems and innovative technologies have not only helped significantly increase crop yields for millions of small and large farmers, but have also drastically cut the consumption of water in the fields. **"More Crop per Drop"** is our approach towards assuring food and water security for all. Besides Indian operations the Company has developed a strong International base. The Company's

10,500+ Serves over 120 associates & countries across 8 626+ dealers five continents and distributors INR 64+ bn 10 diverse aggregate businesses & 30 revenues as on manufacturing March 31, 2016 plants **JISL - 30** years young

organisation

international marketing, sales and distribution platform is comprised of approximately 4,028 distributors and customers, 130 sales managers and 66 agents located in North America, Europe, South America, Asia, Australia and other locations. In addition, it operates 18 manufacturing facilities outside of India located in four continents, namely Europe, North America, South America and other parts of Asia. The Company's Global footprint includes sales operations in the United States and South America which it believes are attractive growth markets for the sales of its products. Each of our products and services reflect our deep-rooted concern for the development and growth of sustainable agriculture, as well as generating higher income for farmers. Similarly, our Agro-Processed products provide farmers with an opportunity to sell to us, thereby integrating their business towards the company's **"ONE STOP AGRI SHOP"** concept. This legacy of a deliberate and conscious endeavour to fulfil our vision of **"Leave this world better than you found it"** has helped us emerge as a leading multinational organisation operating across





the entire agricultural value chain. Furthermore, it has brought us global recognition as a leading practitioner of sustainable development, and a thought leader in the business model of "Creating Shared Value" from eminent institutions such as the International Finance Corporation (IFC – World Bank), Harvard Business School and G-20.

## Products & Services

We provide numerous products and services under three business heads, namely; Plastics (Micro Irrigation & Piping Systems), Agro-Processed Products (Fruit & Vegetable Dehydration) and Green Energy (Solar Products).



The Jain Virtuous Self-Sustaining Agri Cycle

## JISL the Brand



## JISL the Market Leader

Over the past few decades, we have been leaders in the manufacturing of MIS, plastic pipes & products, agro-processed



## Collaborating for a Sustainable

Future

Associated Chamber of Commerce and Industry (ASSOCHAM)

Confederation of Indian Industry (CII)



ASSOCHAM

World Business Council for Sustainable Development (WBCSD)



Bombay Chambers of Commerce and Industry (BCCI)



Federation of Indian Chambers of Commerce and Industry (FICCI)

Business Alliance for Water Stewardship (COP-21, Paris)





## Corporate Structure



# Sustainability-Doing it JISL's Way

## Governance Structure

Our governance structure is a three-tiered pyramid with Shareholders — Board of Directors, Committees of the Board, and Executive Management. Each of the tiers operates within given parameters, as per the prevailing laws and regulations or practices prevalent in the industry. The onus of our shareholders, as well as that of the governance of JISL's management, lies with the Board of Directors. Our Board of Directors ensures the company's performance through a triple bottom-line approach (including economic, environmental, and social topics) and also harbours a sense of responsibility for the company's affairs as related to international, national, and state laws; the company's code; regulations; and overall performance.

Shareholders - Board of Directors Committees of the Board Executive Management

In addition, the linking of the remuneration paid to committee members and executive management with organisational performance emphasises this accountability. Through the various interactions with the Board committees and management, the Board is kept informed of company operations and businesses. Its involvement with the company's strategic planning, leadership development, and succession planning reinforces our risk management processes. In addition, the Board oversees these strategic plans and associated risks, channellising them towards senior management for mitigation.

# Sustainability Framework & Governance

Sustainability at JISL is driven by the Sustainability Committee of the Board of Directors. This committee is responsible for governance related to business responsibility. The committee is also responsible for guiding the top management on responsible business practices. It further monitors the implementation of various sustainability initiatives across all operations of the company. The committee also submits review reports to the Board of Directors at regular intervals.

The Board of the Company undertakes a formal and rigorous annual evaluation of its own performance as well as its Committees and individual Directors. The procedures for the same are elaborated performance evaluation policy<sup>1</sup> of the Company. It is the responsibility of the Board of Directors as a whole with the assistance of the Nomination, Remuneration and Compensation Committee (NRC) to conduct the evaluation process for the Board, its Committees and individual Independent Directors. The Independent Directors are responsible for performance review of; Chairperson, taking into account the views of Executive and Non-executive Directors, Board as a whole and Non-Independent Directors or Executive Directors. The NRC is responsible for performance review of the individual Directors.

## Committees of the Board

At JISL, the Board has constituted the following committees to oversee the various aspects of governance.

The committee members are nominated by the Board based on their education and experience. Further details on the committees are described in the Corporate Governance Report section of our Annual Report for 2015-16. http://www.nseprimeir.com/Pages/Reports.aspx?value=3cYDU7170mvM600MSHCcMw==

Committee	Responsibility	
Audit Committee	Overses financial performance and processes	
	• Review legal compliance and functioning of vigil mechanism and whistle blower mechanism	
Nomination and Remuneration Committee	Nominates and recommends suitable Directors for the Board	
	• Recommends remuneration for Directors and select Executive Management members	
Stakeholders Relationship Committee	<ul> <li>Reviews securities transfer and redressal of shareholders' / investors' / security holders' complaints</li> </ul>	
	Monitors the prohibition of insider trading	
Risk Management Committee	Conducts review of risks and plans to mitigate those risks	
CSR Committee	CSR Policy development and implementation	
Sustainability Committee	<ul> <li>Guides top management in ensuring responsible business practices across all operations of the company</li> <li>Implements and monitors various sustainability initiatives across all operations of the company</li> <li>Submits periodic reports to the Board of Directors, as it deems fit</li> </ul>	
Operations Review Committee	<ul> <li>Approves sanction letters and delegates authority for completing documentation related to borrowing, and operational efficiency and effectiveness</li> </ul>	

## Sustainability Policy & Strategy

At Jain Irrigation, our mandate is to help create a better world for all, and our business model is closely aligned with the UN's Sustainable Development Goals (SDGs) as part of its 2030 Agenda for Sustainable Development of the planet. We believe that



"A farmer is the backbone of economy of any country and a firm foundation of it's culture."



## "Earth provides enough to satisfy every man's needs, but not every man's greed."

a commitment to sustainable development is a key component of responsible corporate citizenship, and therefore deserves to be accorded the highest priority. In today's challenging globalised world, responsible business practices enable companies to develop innovative, inclusive, and financially viable business models that meet social, environmental, and economic needs in a sustainable and scalable manner. Such a strategy will help businesses co-create significant societal value while safeguarding natural resources. Responsible business forms an integral part of Jain Irrigation's core philosophy. 'Aparigraha', the concept of non-possessiveness, inspires much of our business.

- Mahatma Gandhi

'Doing well by doing good' is part of our company's corporate strategy. Driven by our Mission Statement "Leave this world better than you found it", we at JISL believe in creating opportunities where it is needed most by incorporating the bottom of the pyramid (BOP) into our value chains. We are committed to a triple bottom line model through collaboration and integrated value addition. While on our path of economic development, we create shared value for all stakeholders and also to the environment more than our responsibility. It leads to an increase in value not only for shareholders, but also for other stakeholders, including consumers, suppliers, business partners, and the community at large.

## Guiding Principles Abiding by the Code of Conduct



The company has put in place a comprehensive code of conduct for all its senior functionaries; every senior functionary is responsible for complying with the code in letter and spirit. This

comprises a policy related to the conflict of interest in governance and senior management; the Company Secretary is the Compliance Officer for the purpose of this code. In line with the provisions of the Companies Act 2013 as amended, the company has formulated a 'Code of Internal Procedure & Conduct. The code of conduct has been explained and circulated to the associates, and is implemented by the Compliance Officer, who reports to the Managing Director.



The company's objectives are defined broadly by the Vision and Mission Statement adopted over the last few decades and implemented continuously by the management team. The credo, guiding principle, work culture, and quality perspective are all clearly defined and practically achievable. With this background of objectives, the Internal Financial Control is guided by the Audit Committee and Board of Directors, based on the following broad parameters. The company has retained KPMG LLP to advise on a phase-wise implementation to further strengthen the Internal Financial Control.

### a) Policies and processes adopted for orderly and efficient conduct of business

The company has formalised various policies at the Board level to ensure the ethical, orderly, timely, flexible, and efficient conduct and control of business in all its divisions, namely micro sprinkler irrigation, PVC & PE piping systems, tissue culture, greenhouses, biofertilisers and green energy products, besides processing of foods and vegetables.

### b) Safeguarding of assets

The company has evolved an efficient, effective mechanism for safeguarding its assets, whether tangible or intangible: assets and property with self-control or third parties; funds or securities and negotiable instruments; and associates. Besides providing for safety, housekeeping, and security, the assets are adequately insured against perils/incidents, etc.

#### c) Prevention and detection of fraud and errors

The company has an internal audit department at each of its manufacturing locations, which conducts a comprehensive audit of every single financial transaction, as well as a reconciliation to accomplish control and ensure the prevention of fraud; it is aided by an "external" internal audit, which reviews not only manufacturing locations, but also depots/other processes like purchase, statutory compliance, collection, foreign exchange, taxation, costing, compliance, accounting, etc. The company's management information and accounting system also integrates an internal control mechanism.

### d) Accuracy and completeness of accounting records

The company has a fully integrated ERP system in place, based on SAP software, and its subsidiaries' records are also integrated while consolidating the same, as per the requirements of the laws currently in force. The ERP system encompasses an authorisation matrix and maker / checker verifications to ensure transparent and timely flow of information and recording, thus creating an appropriate and conductive platform for effective control and decision-making. The accounting system has a provision for an audit trail and check mechanisms for use by various auditors.

#### e) Timely preparation of reliable financial information

The company has a robust and efficient mechanism for the timely preparation of reliable financial information within given timelines, and has a track record of submitting information to the relevant authorities without any delay.

#### f) Monitoring and reporting

The company has put in place a mechanism to monitor its financial statements. Consolidated financial statements along with the relevant documents are available on the company's website.



Safety personnel taking oath of occupational health & safety during National Safetly week at Jain Food Park at Jain Valley, Jalgaon.

## Composition of the Board



Dr. Bhavarlal H. Jain (1937-2016) Founder & Chairman till 25th Feb. 2016



Ashok Bhavarlal Jain Chairman

He joined the management team in 1982. Over a long period of 34 years he has nurtured all business divisions of the company and is responsible for future direction.



Atul Bhavarlal Jain Joint Managing Director

He joined the management team in 1990. He is director in charge of the fast growing plastic product division and has extensively done global and institutional sales and marketing for all business divisions of the company.



Anil Bhavarlal Jain Vice Chairman & Managing Director

He joined the management team in 1984. He has extensive experience in Finance, Strategic Planning, M&A, Global operations and is responsible for entire business.



R. Swaminathan Executive Director

He joined the Jain Group in 1982 and was appointed a whole-time Director in 1996. Looking after plastic manufacturing operations and is responsible for major innovations & breakthroughs.



Ajit Bhavarlal Jain Joint Managing Director

He joined the management team in 1984. He is director in charge of micro irrigation division including guidance for extension service and development of new applications and products.



Devendra Raj Mehta Independent Director

He was appointed as Independent Director in 2007. He was the Chairman of Securities and Exchange Board of India (SEBI), Deputy Governor of RBI, Director General of Foreign Trade, Ministry of Commerce. He has received Padma Bhushan and is the founder of 'Jaipur Foot'. Our Board of Directors, at a current strength of 10, comprises Executive and Non-Executive Directors. Upholding the independent and unbiased functioning of the Board is a key attribute of an effective Board. Our Independent Directors are expert professionals in their fields, and come from varied backgrounds of finance, law, and agriculture. At present, three of the five Independent Directors have been associated with the Board for less than nine years. Additionally, separate meetings of the Independent Directors are held to evaluate the performance of the Chairperson, as well as that of the Board as a whole. As on 31st March, 2016, the board had five Executive Directors and six Non-Executive Directors; the Board had one female Director. All our Directors were above the age of 50 years, except two who were in the age group of 30-50 years during FY 2015-16. One of the Directors was from a minority community.



Vasant V. Warty Independent Director

He was appointed as Independent Director (Additional Director) in 2004. Has held various senior positions in domestic and international Banking in State Bank of India.



Harishchandra Prasad Singh Independent Director

He was appointed as Independent Director in 2014. He is a prime mover for horticulture research and development in India and is an architect of the Golden Revolution (Horticulture). Has held senior government & academic positions.



Ghanshyam Dass Independent Director

He was appointed as Independent Director in 2009. He has had an outstanding career in domestic, international banking and Capital Markets for over 34 years.



Manoj Lodha Chief Financial Officer

He joined the management team in 1998. A chartered accountant by qualification, he has extensive expertise in raising of funds, corporate structuring, accounts, audit & taxation in India and at a global level.



Radhika Pereira Independent Director

She was appointed as Independent Director in 2005. Currently, she is a Partner in Amarchand Mangaldas and has strong practice in corporate and contract laws



Avdhut V. Ghodgaonkar Company Secretary & Chief Compliance Officer

He joined the management team in 1992. A company secretary by qualification, he has extensive expertise in compliance issue, SEBI & Stock exchange matters and general legal and company law.

## Key Risk Analysis and Management

The company has significant experience in managing risks related to farming, climate change, seasonality, global markets, currency fluctuation, and impact of government policy. During the last few very volatile years, this experience and expertise has helped the company smoothly navigate turbulent times, resulting in sustained growth, improved margins, and increasing market share despite a historic financial meltdown and violent disruption of all types of global markets. Three major risks affecting our business are; seasonality in the agriculture sector, impact on produce due to frequently occurring fluctuations in weather conditions caused by climate change and currency fluctuations. Business-wise key risks and opportunities are summarised in the table here:

## **Key Risks & Opportunities**

Business Segment	Risks	Opportunities
Micro & Sprinkler Irrigation	• High initial cost while major drivers in this industry identified are cost-effectiveness with fertigation.	<ul> <li>Government focus on micro irrigation through various schemes</li> <li>Integration of micro irrigation with major irrigation schemes</li> </ul>
		• Large market to develop because 50% of the arable land in the country is rain fed
PVC Piping	<ul> <li>Constant fluctuation in prices of raw material</li> <li>High impact duty on raw material affects end product's demand</li> </ul>	<ul> <li>Government's focus on rural water management with adequate water supply infrastructure</li> <li>Expansion of housing sector</li> <li>Increasing replacement demand for cPVC</li> </ul>
Biotech Tissue Culture	<ul> <li>Short shelf life and stringent quality requirements</li> <li>High cost of inputs</li> </ul>	<ul> <li>Government initiatives:</li> <li>to promote horticulture</li> <li>financial assistance and subsidies for tissue culture projects</li> <li>development of biotech clusters</li> </ul>
PE Piping	<ul> <li>Declining prices of steel</li> <li>Increase in R&amp;D cost due to new innovation technologies</li> </ul>	<ul> <li>Government's thrust to improve infrastructure and planned investment of INR 13.23 million</li> <li>Increased demand for pressure irrigation and implementation of National Optical Fibre Network project</li> </ul>
Onion and Vegetable Dehydration	<ul> <li>Increase in local and international competition</li> <li>Frequently occurring adverse weather conditions and their impact on produce</li> </ul>	<ul> <li>Decentralised food processing industry</li> <li>Market is expected to grow at a CAGR of 16% by 2020</li> <li>MIS implementation helps adapting to climate change impacts</li> </ul>
Fruit Processing	<ul> <li>Inconsistent availability of required quality of raw material at the right time and right price</li> <li>Increasing cost of energy</li> <li>Perishable raw materials</li> </ul>	<ul> <li>Increased focus from Ministry of Food Processing industries for sector's development</li> <li>Company's focus on innovation and development of new technologies</li> <li>Jain FarmFresh Foods Ltd. (JFFFL's) focus on new lines of business like juices, fresh fruit export and spices manufacturing, and launch of new consumer brands</li> </ul>
PVC Sheets	Inflation has countered purchasing power of the retail customer	<ul> <li>Asia-Pacific market shows huge growth potential</li> <li>JISL is a market leader in this segment</li> <li>Wide applications in consumer products, industrial products, agricultural products, and construction</li> <li>Inherent positive characteristics of PVC products – longevity, low maintenance cost, and recyclability</li> </ul>
Green Energy	<ul><li> High production cost</li><li> Lack of awareness</li><li> Relatively nascent technology</li></ul>	<ul> <li>Multiple government initiatives increase penetration of green energy in India</li> <li>Government's target of adding 175 GW of renewable energy by 2022</li> </ul>

We embark on a strong risk assessment process to mitigate environmental, social, and economic risks. The common risk stemming from manufacturing operations (i.e. micro irrigation systems, piping, processed fruit and puree, and renewable energy products) in emerging markets is occupational health and safety. Additionally, projects in emerging markets are likely to be exposed to environmental and social risks such as pollution, poor labour conditions, and negative impacts on community well-being. However, JISL has a strong environmental and risk assessment process to mitigate these risks, including a robust Occupational Health and Safety process and compliance with International Finance Corporation (IFC) performance standards. The robustness of the company's Occupational Health and Safety risk mitigation process stems from the company's Quality, Environment, Occupational Health and Safety Policy (available at http://www.jains.com/Company/quality%20policy.htm) and an ISO 9001, ISO 14001, ISO 50001, ISO 14064, and IOHSAS 18001-certified management system. In addition, a Risk Management Committee, with three members of the Board of Directors, has been formed to assess and mitigate the economic risks.



Jain Irrigation's HDPE pipes helped 'Ice man' Mr. Sonam Wangchuk to create artificial glaciar (called Ice Stupa) in Ladakh. Such Ice Stupas will supply irrigation water to 5000 plants during summers.



Transport of HDPE Pipes by Yaks in Sikkim. These pipes were used to drain Glacial Lakes to avoide the Glacial Lake Outburst flood (GLOF)

## Stakeholder Engagement

Jain Irrigation is assiduously working for sustainable agriculture, environment conservation & protection, fuel conservation, energy conservation, biodiversity conservation, contract farming, food processing, etc. to ensure a better future for the farmers. These initiatives not only maximise the yield, but also improve the productivity of every resource employed in the interest of sustainable agriculture. Inclusive



A group of progressive farmers from Wade village, Tal. Bhadgaon, District Jalgaon meeting with Bhau and discussing about modern agriculture practices.

e. Inclusive growth is fundamental to our values and integral to our



business approach.

We believe that to find relevant solutions for the interconnected environmental, social, and economic challenges of present times, effective stakeholder engagement is crucial; we need to go beyond the conventional framework of price, product, place, and promotion. To create a sustainable and inclusive business model, it is necessary to involve the most critical component, i.e. our stakeholders. One of our important

stakeholders is the community, it forms part of our business initiatives because it is impacted by our products and services and, in turn, can impact the business.



A happy pomegranate growing farmer showing bumper yield from Jain's Tissue Culture Pomegranate Plants he planted in his field



Panoramic View of water harvesting structures at Bhaunchi Shrushti. The entire area has a capacity to capture and store 600 million cubic metres of water from a catchment area of about 500 acres.



Ms. Uma Bharti, Minister for Water Resources and Ganga Rejuvenation monitoring water harvesting work at Bhaunchi Shrushti, Jalgaon.





Land-levelling work for watershed management in nearby rural areas by Gandhi Research Foundation.



## The Process of Stakeholder Engagement



We are into the business of developing sustainable agriculture within the country and across borders. In this process we are working with about 5 million farmers. The nature of our business is so, that we interact with farmers, their families, government officials, NGOs, academia, etc. on a regular basis. Therefore, stakeholder consultation is an on-going part of business activities in India as well as in overseas. Our internal teams (e.g., purchase, manufacturing, marketing, extension, HR, etc.) also provide input on environment, economic, and social parameters. We take the inputs as a part of internal consultation.

In addition we have also set up a specific stakeholder engagement process exclusively for sustainability reporting purpose from the current reporting onwards. Inputs from both (on-going as well as excusive) stakeholder consultations are considered to define the scope of sustainability report.

We engage with our stakeholders via different platforms through regular physical meetings and written and verbal feedback. Some of the stakeholder engagement platforms are depicted here. Inputs are sought from stakeholders through these engagements on economic, environmental, and social parameters.

## A. On going engagements as part of business activities

The various teams taking inputs from stakeholders as a part of business activities include but are not limited to extension team, CSR Team, contract farming team, Unnati Project Team, personnel team, purchase team and marketing teams. Given below are examples of the ways these teams interact with a wide range of stakeholders on daily, weekly, monthly and yearly basis.

Awareness programes and farmer meetings [Operations: India and Overseas, Stakeholders Group: farmers, NGOs, academia and customers): The farmer is not only our customer but also our supplier for agro-processing business and hence one of our important stakeholders. Farmer meetings include a group of farmers ranging from 10 to 500, sometimes even more than that. The discussions mainly focus on increasing awareness on productivity increase with the optimum resource and cost inputs (more with less). Such meetings and programes are designed and conducted by our extension team across the country. Sometimes relevant government organizations and NGOs jointly conduct awareness programes and farmer meetings with JISL.

Capacity building [Operations: India and Overseas, Stakeholders Group: farmers, NGOs, government officials, private companies, customers, suppliers and academia]: Jain Irrigation has one of the largest pools of agronomists and agroscientists in private sector. The agronomy team designs and conducts trainings on modern irrigation techniques and precision farming practices that help in improving yield and protecting environment. Specific training modules are designed based on the need for; farmers from different states, government officers, other private companies, academia, students, dealers and associates.

JISL's extension team has been conducting such trainings since 2001 in India. On an average 50,000 trainees attend per annum (including overseas) from diverse groups of stakeholders, however major being the farming community. The trainings are conducted in our FAO certified training centres at Jain Hills in Jalgaon and Udumalpet in Tamil Nadu. Apart from trainings, workshops, seminars and product demonstration centres are also conducted for farmers, academia, students, NGOs and different community groups.

NaanDanJain Israel, Jain Irrigation Inc, USA, and NDJ Brazil are the major farmer training centres for farmers and other stakeholders overseas.

**Contract farming and JAINGAP [Operations: India, Stakeholders Group: farmers]:** A team of 100 "Gram Sevaks" (agronomy support team) stay in villages and support about 6000 onion and banana growing farmers for seed sowing/tissue culture planting, fertigation, good agriculture practices (GAP) implementation and harvesting practices.

Unnati Project [Operations: India, Stakeholders Group: farmers and NGOs]: Unnati Project team is working in Southern India to improve the yields of conventional mango growers with ultra-high density plantation and JAIN GAP. Presently Unnati



Stakeholder consultation organised at Jain for Gold Standard's water benefit standard project on 26 February 2015

## **GAP**



Stakeholder consultation organised at Jain for Alliance for Water Stewardship (AWS) and for sustainability reporting at Jain Hills on 10th September 2015



Agronomists taking farmers from the other States to onion fields in Maharashtra where contract farmers grow high quality onion with the help of Jain's micro-irrigation technology.



Exposure training being organised at onion contract farmers' fields.

team is working with 1000 farmers and they want to take this number to 10,000 in next five years. Through their mobile bus they have so far interacted and trained 25000 farmers on improved horticulture practices in Andhra Pradesh, Tamil Nadu and Karnataka. Sustainable Income to the mango farmers with UHDP



technology and ensuring marketability of their products through buy back are the objectives of Unnati Project. Besides quality of the produce, traceability, environmental safety etc. The ultimate objective is to increase the productivity and quality of mango, increase the area under mango and improve the productivity of old and senile orchards by rejuvenation.

Customer meetings and after sale service [Operations: India and Overseas, Stakeholders Group: Customers]:such

meetings are organized to provide technical support and guidance on precision farming practices, maintenance of irrigation systems, on farm health & safety and post-harvest activities.

Supplier meetings (other than farmers) [Operations: India and Overseas, Stakeholders Group: Suppliers]: Suppliers' interactions take place through EHS due diligence as a part of integrated management systems and annual supplier meetings. In addition one to one supplier meetings are also organized.

Annual Meeting [Operations: India and Overseas, Stakeholders Group: shareholders, bankers and financial institutions]: Business as usual engagements with shareholders include annual meeting of shareholders, quarterly financial results and investor link on website (http://www.nseprimeir.com/z\_JISLJALEQS/index. aspx?value=3cYDU7170mvM600MSHCcMw==)

**Community Development [Operations: India and Overseas, Stakeholders Group: community]:** JISL is extensively connected with community near to its operational area. We engage with the local communities through our company foundations; Bhavarlal and Kantabai Jain Multipurpose Foundation (BKJMF), Gandhi Research Foundation (GRF) and on our own. Currently we are working in 30 villages near to GRF locations and in coming years we will extend our community initiatives to 150 villages.

Overseas plants also join hands with local NGOs/foundations for community development time to time. Jain Irrigation Inc. USA works with Workforce 20/20 and Chapin Living Waters Foundation for community development projects. NaanDan Jain Israel contributes to special programme in school for developing a programme in agriculture and they also support aforestation programes in Israel. Another subsidiary- NDJ Spain contributes to support associations of boys and girls with physical and mental disabilities in the assembling of some of our products. NaanDanJain Brazil interacts with youths of universities in their country through a specially designed apprentice programme.

**Industry, trade groups and policy organizations:** JISL is member of major industry houses nationally as well as internationally; we engage with them in various industry collaborations, joint value creation initiatives and in policy dialogue, etc.

**Engagement with associates and their families:** An employee at JISL is called associate of the company. Associates are engaged through various direct and indirect employee welfare and feedback platforms by personnel and human resource development department. There are specific trips designed where, associates and their family visit and interact with major departments of the company. A feedback system is also implemented and made accessible to all the associates to submit their feedbacks and thoughts on company's activities.

## B. Stakeholder engagement for reporting purpose:

Although business-as-usual activities keep us very much connected with a wide range of stakeholders, we have also conducted a comprehensive reporting specific on stakeholder consultation on 10th September 2015 at our headquarters locations in Jalgaon. More than 100 stakeholders representing diverse groups e.g. farmers, community representatives, suppliers, dealers, customers, NGOs, regulatory authorities and bankers participated in the meeting and provided their opinion on various sustainability issues. More than 20 key sustainability topics were identified and discussed during the consultation. In the end each stakeholder group gave a priority ranking on each of the identified sustainability topics.

Feedbacks from internal consultation, ongoing business-as-usual consultations and reporting specific external stakeholder consultations were compiled and analysed based on the priority rankings given to sustainability topics by each stakeholder group during the consultation meeting

## Materiality Assessment



Materiality assessment is an important part of sustainability practices, wherein we define the material issues that are of the utmost importance to all our stakeholders, as well as to our own business. As a part of the materiality assessment process, we actively interacted with our stakeholders regarding sustainability aspects to understand their perspectives and concerns about their engagement with JISL. The different stages of the materiality assessment process at JISL are shown here:



Based on the deliberations of internal committees, key stakeholder groups who are important to us were identified. The stakeholder engagement process is followed as described in GRI guidelines, subsequently, the material issues have been identified and reported. The list of material issues which various stakeholder groups ranked on a priority scale is tabulated here. The issues/aspects are also classified based on their potential impact within and outside the organisation. The most prominence has been given to water by all stakeholders, followed by biodiversity and ecosystem protection, R&D and extension activities, and then followed by renewable energy and other energy sources, labour management, and occupational health and safety of the associates.



## Material Aspects and Boundary

Material Issues	Impact of issue		Aspect Boundary	
	Internal Impact	External Impact	India Operations	Overseas Operations <sup>2</sup>
Water management / WATER	1	$\checkmark$		
Energy efficiency in operation and product use / ENERGY	$\checkmark$	$\checkmark$		
Waste Management / EFFLUENT AND WASTE	1	$\checkmark$		
Greenhouse Gas Management / EMISSIONS	$\checkmark$	$\checkmark$		
Biodiversity and Ecosystem Protection		1		-
Renewable and other energy sources	1	1		
Creating Shared Value	1	$\checkmark$		
After Sales Services (Agriculture)		$\checkmark$		
Occupational Health and Safety	1	$\checkmark$		
Material Sourcing	$\checkmark$			-
Human rights, ethics, and integrity	1			
Labour Management	$\checkmark$			
Employee Diversity, Talent Management, and Retention	1			
Grievance Redressal	$\checkmark$			
Community Development (CSR)		$\checkmark$		-
Supply Chain Management		$\checkmark$		-
Customer Satisfaction		$\checkmark$		-
Training and Development	1			
R&D and Extension Activities	1			-
Collaboration, merger and acquisition	1			
Product safety	1	$\checkmark$		

Fully reported

Partially reported

Not significant/Not applicable/Not reported



## Materiality Matrix



The material issues, identified on a scale of zero to four, and their ranking based on scoring given by stakeholders (maximum, minimum, average) is depicted in the diagram below:



These identified material aspects are further highlighted in the next three sections. These sections lay emphasis on how JISL focusses on these aspects and thus matures as an enterprise in its attempt to re-invent the Indian agri-business.
# Recalculating Economic Value

Though our economic performance during FY 2015-16 was challenging, owing to various reasons like droughts, unseasonal rains, and general agrarian distress in India, our consolidated revenues grew by 2.8%, from INR 62,074 million in FY 2014-15 to INR 63,842 million in FY 2015-16, on account of the growing scale of our operations globally. Our consolidated EBIDTA increased by 3.2%, from INR 8,616 million in FY 2014-15 to INR 8,890 million in FY 2015-16. Our consolidated net profit increased by 59.39%, from INR 554 million in FY 2014-15 to INR 883 million in FY 2015-16.

Consolidated Revenue During the Reporting Period (INR Million)



63,842

## Direct Economic 2013-14 2014-15 Value Generated and Distributec

The statistics of the direct economic value generated and distributed during the reporting period is tabulated below. There were no monetary political contributions across our global operations during the reporting period.

			INR (Million)
Basis on	Consolidated	Consolidated	Consolidated
A. Direct Economic Value Generated	FY 2013-14	FY 2014-15	FY 2015-16
Net Sales	57,451.85	60,489.66	62,199.31
Net Sales Export Services	6.23	18.20	0.03
Revenue from Export Incentives	823.23	1,018.64	671.99
Revenue from Sale of Assets	4.53	32.33	33.72
Revenue from Financial Investment	-	-	0.14
Other Operating income	458.46	377.67	431.69
Increase (Decrease) in Stock	501.88	1,160.89	693.11
Total (A)	59,246.18	63,097.39	64,029.99
B. Direct Economic Value Distributed	FY 2013-14	FY 2014-15	FY 2015-16
Operating Costs	47,323.30	50,791.33	51,473.43
Salary and Wages	5,718.28	6,200.35	6,201.23
Benefits and Contribution	423.02	458.01	482.59
Cost of Self-generated Capital Equipment	(372.87)	(146.72)	(79.32)
Payment to Providers of Capital - Dividend	270.50	278.27	286.76
Finance Costs	4,676.45	4,692.76	4,768.82
Payment to the Government	233.02	77.72	24.10
Loss on Sale of Assets	-	-	-
Other Non-operating Loss Forex	2,300.37	763.01	206.15
Community Investments	-	-	-
Charity and Donations (Incl. CSR)	37.19	27.86	9.92
Total (B)	60,609	63,143	63,374
Total (A-B)	(1,363)	(45)	656

## Economic Performance by Region

Our major operations are within India, and the region remained the largest contributor, generating over 54.2% of the company's revenue for FY 2015-16. The region-wise revenue mix for FY 2015-16 is as shown in the chart:

#### Region-wise Revenue Mix FY 2015-16 (%)



## Business-wise Economic Performance

Our flagship business of the MIS remained the largest contributor, contributing to 39.7% of the company's standalone turnover. Our PVC pipes business remained flat during FY 2015-16 and contributed about 19.3% to the standalone turnover. Our PE piping business grew by 28% and turned out to be the best performing division. This business contributed about 13.6% to the turnover. The growth was primarily driven by demand from infrastructure segments like telecom, and gas and water pipelines, among others. Our tissue culture crossed revenues of INR 1,050 million, registering a year-on-year growth of 5.7%. Our renewable business registered a growth of about 8.6%; this segment holds significant potential for future growth owing to the growing demand for green energy. The consolidated revenue mix for FY 2015-16 is shown in the chart; the business-wise consolidated revenue during the reporting period is shown in the graph here:

Business-wise Consolidated Revenue Mix FY 2015-16 (%)



#### Business-wise Consolidated Revenue During the Reporting Period (INR Mn)



Note: Gross Revenue (excluding other operating revenue)

In addition to the above Jain's products and services have created shared value for society in general and agriculture sector in

particular. Some of the key tangible and intangible impacts are explained depicted here.

1. Pioneering Effort: Impro	ved living standard of small far	mers					
Activity	General benefits to the socie	ety					
PVC Piping System	Saving in maintenance cost, co irrigation	Saving in maintenance cost, consumption of water, long life of system and larger area under irrigation					
Micro Irrigation System	Additional income to the tune c more area under irrigation	Additional income to the tune of INR 15,000 additional income of per ha/per year, 50-70% more area under irrigation					
Jain Hi-Tech Agri Institute	Training, Awareness & Agronon	Training, Awareness & Agronomic Support, Empowerment for all the stakeholders					
Processing	Higher farm productivity & farm	incomes, assured returns					
Banana Tissue culture	Additional income to the tune of weight and early maturity, Doub	f INR 50,000 or more per hectare bling of GDP.	. Uniform bunches of higher				
Contract Farmers	Market or contract price which	ever is higher, value addition & hig	pher realization				
2. Trend Setting: Increased	I Industrial Activity						
PVC Piping Systems	450 plus entrepreneurs	Profitable self-employment & sec					
Micro Irrigation System	150 Plus entrepreneurs	generation with cascading effect					
Tissue Culture	100 plus entrepreneurs						
3. Meeting National Priorit	y: Water Conservation						
Activity	Savings per annum	Estimated Savings from JISL's products (billion litres)	Estimated Monetary Impact <sup>3</sup> (INR million)				
PVC Piping	15% to 20%	5700	3.8				
Micro Irrigation Systems	50% to 100%	49640	3318				
Total		55340	3321.8				
4. Serving National Need:	Energy Conservation						
Activity	Savings per annum	Estimated Savings from JISL's products (million kWh)	Estimated Monetary Impact <sup>4</sup> (million INR)				
PVC Piping /Foot Valves	15%	630.00	15.82				
Micro Irrigation Systems	30%	365.00	913.5				
Solar Water Heating	1200 kWh/household	31.64	78.4				
Total		1026.64	1007.72				





Jain solar pumping systems lifting water for irrigation-farmer's site in Maharashtra.

<sup>3</sup> This estimation is derived using most conservative average of water rates available at the online reference http://www.fao.org/docrep/008/y5690e/y5690e0b.htm on 31st March 2016 <sup>4</sup> This estimation is derived using the assumption INR 4/kWh of electricity saved.

Senior agronomist Mr. K. B. Patil explaining benefits of Tissue Culture Banana and micro-irrigation systems to a group of farmers

# Redesigning Environment Practices

Developmental activities and environment management are not only interrelated, they are inter-dependent. Any developmental process impacts the environment and is, in turn, impacted by it as well. Since inception, the conservation of natural resources and environmental protection has been the philosophy and criteria for the selection of busineses for JISL. All the company's products and projects are in harmony with the Group's mission of "Leave this world better than you found it". Through the implementation of sustainable practices, we create a partnership between development and the environment. An increase in green cover, conservation of scarce resources, and control of pollution while promoting economic progress are important guiding lights we follow for creating shared value for the environment. Being the pioneers of sustainable agriculture, all our business initiatives have been carried out while safeguarding environment and biodiversity. Additionally, our watershed and agro-forestry projects have been instrumental in converting non-arable land into productive land, reducing soil erosion, and elevating the groundwater table. In order to fulfil our commitment to environment management, we continuously improve and update our processes, products, and facilities, and spread awareness by educating and training our associates.



#### Prestigious DESAL Prize bestowed to Jain Irrigation for it's Innovation - Solar Based EDR Technology Converting Saline Water into Potable Water.

Jain Irrigation Systems Ltd. in partnership with Massachusetts Institute of Technology (MIT), USA has developed a pathbreaking solar PV based water purification technology. This new technology is based on Electro-dialysis-Reversal principle. The environment friendly system is powered by solar PV. It desalinates the brackish water into drinking quality water with least

regeneration or wastage. Jain Irrigation and MIT has bagged the prestigious Desal prize for this technology. Desal Prize competition was organised by The U.S. Agency for International Development (USAID) and the Bureau of Reclamation (USBR), in partnership with the Swedish International Development Cooperation Agency, the Ministry of Foreign Affairs of the Kingdom of The Netherlands. JISL and MIT stood first and won the prize money of USD 140,000 Purpose of prize is to 'secure water for







food' by creating cost efficient and energy efficient technologies for potable water and water for crop. USAID chose five finalists among 68 projects from 29 countries. Five finalist innovator teams competed for prize funds in head-to-head demonstrations at the Bureau of Reclamation's Brackish Groundwater National Desalination Research Facility in Alamogordo, N.M. After rigorous testing and evaluation by a panel of expert judges, two winning teams were chosen and we were honoured with a place in it. These two teams, and a team that received an honourable mention, will be eligible to receive grant funds totalling \$400,000 to implement pilot projects in late

summer or early fall with small holder rural farmers in a USAID mission region.

We look forward to commercialize the technology in the near future to provide access of drinking water in the world even at remote areas at very cheap rates. At Jains, we are committed to address water challenges being faced by India and other nations and will continue to inspire innovation to bring affordable and sustainable solutions for the benefit of citizens and farmers alike.

# Environment Management and Compliances

The organisation is committed to maintaining and continually improving its overall environmental performance. JISL has formed a separate HSE team to monitor and report on its quality, environment, and occupational health and safety indicators to the top management. All the manufacturing units at JISL are in compliance with the requirements of ISO 9001:2015/BRC, ISO 14001:2015, and OHSAS 18001:2007. Moreover, the organisation adheres to IFC Performance Standard I, II, III, and IV to manage social, environmental, and safety risks and impacts, and to enhance development opportunities. We comply with statutory guidelines for environment protection, and all the emissions or wastes generated from our premises are within the given limits of the CPCB, SPCB, and IFC standards, and their disposal is as per the applicable norms. There were no cases of non-compliances with environmental laws and regulations during the reporting



period. We do not have separate environmental grievance mechanisms; grievances about environmental impacts are resolved through our grievance redressal system. However, there were no grievances about environmental impacts filed through our formal grievance mechanism during the reporting period.

The company has implemented a Quality, Environment, Occupational Health and Safety Integrated Management System (IMS) with certifications, and the same is maintained with continual improvement at all locations, including the Jalgaon, Chittoor, Hyderabad, Udumalpet, Alwar, Bhavnagar and Vadodara plants. The scope of the IMS had been expanded to include survey, design, installation, and servicing activities of project sites during FY 2015-16, and it has received IMS certification from TUVNORD for the same.

JISL reviews its energy consumption and associated impact on the environment on a continuous basis and progressively moves to set up new renewable energy sources. The organisation has implemented an Integrated Energy and GHG Management System in compliance with the requirements of international standards ISO 50001:2011 and ISO 14064-1:2006 at its Jalgaon operations. Recently, the boundary of the GHG Management System (ISO 14064) was extended to all the India manufacturing facilities. Moreover, a water management system, in accordance with ISO 14046:2014 is being implemented at all the plants in India.

## Material Usage

Though there is no scope for recycling basic raw materials, i.e. fruits and vegetables in the food processing sector, we constantly work to increase process efficiency to minimise wastage. The basic raw material for the fruit processing sector is raw fruits, which include mango, guava, banana, Indian gooseberry, pomegranate, tomato, and papaya, while onions are the raw material for the vegetable processing sector. For the onion dehydration



plant in Jalgaon, approximately 50% of the raw material is procured through contract farmers. The significant raw material used in the processing of PVC, PC, LLDP, LDPE, PE, and HDPE is resin. PVC accounts for 40-50% of all resin consumption. On an average, 11-12% of process-rejected material (due to technical faults or machine defects) were recycled into pallets and reused in the MIS and plastic pipe manufacturing operations. The other important raw material used across our business is chemicals and additives. Data related to packaging materials will be provided in the future.

Raw Material Consumption (Tonnes/year)							
Raw Material	2013-14	2014-15	2015-16				
Resin	2,02,786	1,79,639	1,85,598				
Chemicals and Additives	19,821	17,369	17,175				
Vegetables	96,264	1,34,982	1,35,594				
Fruits	1,51,154	1,61,700	1,74,527				



## Water Management

Our global leadership in the efficiency of water use not only reflects the water

A snapshot of HDPE, PVC Piping and Fittings used for efficient water supply

saving technologies that we provide to our customers, but is also an integral part of the water management systems at our manufacturing operations and watershed projects within and surrounding the boundaries of our manufacturing facilities.

The major sources of water withdrawal include surface and groundwater in India operations; however, municipal water is also used as and when required in the food processing units at Jalgaon and Chittoor. Overseas manufacturing operations are dependent on groundwater and municipal water supply for their water requirements. Surface water is used as a source in the Food Park and Agri Park in Jalgaon, and the Plastic and Agri Park in Udumalpet.

We have commissioned state-of-the-art technology in all our manufacturing facilities – be it food processing, manufacturing of micro irrigation and piping products, or the production of various tissue culture plantlets. Our manufacturing operations use water efficiently and units are equipped with recycling and reuse arrangements. Reuse of treated water and rainwater harvesting are the two important measures of water conservation on the premises. The 'Water Recycled' graph depicts the total water conserved by Jain Irrigation, within the scope of implementation of water management systems following international standard ISO 14046 and the boundary of the current sustainability report.





#### Water Consumption and Recycling

		India Operations	Overseas Operations			
Year	Water Consumed (m <sup>3</sup> )	Water Recycled (m <sup>3</sup> )	% Water Recycled	Water Consumed (m <sup>3</sup> )	Water Recycled (m <sup>3</sup> )	% Water Recycled
2015-16	16,13,448	7,44,287	46.13	81,590	46,860	57
2014-15	15,58,918	7,15,216	45.88	2,25,720	48,750	21
2013-14	11,79,261	6,50,469	55.16	1,25,000	48,750	39

Rainwater Harvested (m <sup>3</sup> )					
2013-14 2014-15 2015-16					
35,74,952	36,24,448	33,91,595			

Note: Only limited to operations in India (includes estimated water savings by Kantai Dam and newly developed Bhaunchi Shrushti in additional 500 acre adjacent to Jain Valley)

JISL has already adopted rainwater harvesting for water conservation. Rainwater harvesting is done from the factory open area, as well as from building rooftops, and the same is used for recharging wells through suitable rainwater harvesting structures. All our facilities are zero liquid-discharge plants with state-of-the-art technology, and hence there was no waste water discharge from any of our plants during the reporting period. The treated effluent is used for gardening and agricultural purposes on our own land.

## Water Conservation at JISL

#### Within Boundaries:

In addition, we initiated the implementation of the Alliance for Water Stewardship (AWS) standard in the Kantai Watershed (a micro-watershed of the Girna River in Jalgaon). The area covered under the AWS comprises 16 villages and our Jalgaon establishments (Jain Hills, Jain Valley, Takarkheda, and Plastic Park), with an approximate drainage of 21,000 acres. In order to improve the efficiency of water use and initiate source-based water consumption monitoring in the future, we also conducted water audits at all the major facilities, and ensured that all major water supplies for operations are metered and a proper data monitoring mechanism is in place.

#### **Beyond Boundaries:**

Our micro irrigation products are uniquely designed to ensure maximum water saving. We have been estimating the water saved through the use of micro irrigation products in our downstream supply chains; the life cycle impact of our MIS products on water savings till the reporting period is tabulated below:

Water Saved by Micro Irrigation Products						
Activity	Savings per annum	Total Savings				
Drip Irrigation Systems	70% to 95%	41,900 billion litres				
Sprinkler Irrigation Systems	50% to 70%	7,740 billion litres				
Total	-	49,640 billion litres				



Bhau and Mr. Ajit Jain discussing capsicum cultivation in the polyhouse.





A panoramic view, of Kantai check dam, one-of-its-kind PPP-based water conservation project in Maharashtra.

## Integrated Irrigation Solutions : Our "Resource to Root" Approach Towards Water Management

Following JISL's sustainable model of Drip Irrigation, farmers are saving more than 50% water and improving their farm water management. But a gap was still present, as the water conveyance and distribution efficiency in the canal system was not adequately addressed. Jain Integrated Irrigation Solution (JIIS) was formed to take a revolutionary step by focusing on the issue of water conveyance. JIIS provides mechanisms which can be adopted in canal command areas to increase water use efficiency. This approach can help save water up to 85%, as against the 40% which is saved by conventional means!

This is based on the concept of bringing the water from "Resource to Root", which includes lifting the water from the reservoir, creating a pipe distribution network, and ensuring optimum utilisation of water on the farm using advanced irrigation and automation systems. For the projects we have already started working on, our Integrated Irrigation Solution, involves a gamut of services like conceptualisation of the project, survey, design, supply of materials, installation, commissioning, after-sale service, Operation and maintenance, and training of farmers. The components of such an integrated solution are the development of the water source, head work, conveyance system, DISNET, on-farm irrigation system, pumping system, and automation. In such projects, water is normally distributed under pressure through closed conduits, which results in uniform and equitable distribution thus making the projects socially acceptable and comprehensive.

Such solutions deliver very high efficiency overall. These water savings benefit not only the farmer, by increasing his yield and reducing his input costs, but also address the issue of land acquisition as, to execute this model, land acquisition is not essential. Such outcomes make these projects economically viable, eco-friendly, lead to an increase in the agricultural share, and contribute to the sustainable development of the nation.

#### Legend



To understand the field application of this system, it is necessary to understand the efficiency of different irrigation methods: Drip - 90%, Sprinkler - 75%, and Flow - 60%. For a PVC / PE piped network, the conveyance efficiency is assumed to be 99%. If the water conveyance is through only canals open and on-farm application through flow, then the maximum achievable efficiency of Model-5 would be only 34% (Please refer to the diagram). In case an open canal is partially converted into a piped network, the overall efficiency Models 2 to 4 would be between 39% and 77%, depending on the on-field irrigation method chosen. However, if the pipes are chosen for water conveyance and Drip Irrigation is chosen as the on-farm irrigation system, the overall irrigation efficiency will be the highest, at 89%, making the JIIS model highly sustainable and impactful.

#### **Conclusion :**

- 1) If the water conveyance is through only open canals and on farm application through flow, then the maximum achievable efficiency of **Model-5** would be only 34%.
- In case open canal are partially converted into piped network the overall efficiencies <u>Model- 2 to 4</u> would be between 39% and 77% depending on the on-field Irrigation method chosen.
- 3) If the pipes are chosen for water conveyance & Drip Irrigation is chosen as the on-farm irrigation system, the overall irrigation efficiency will be the highest at 89%, hence this model Jain Integrated Irrigation Solution "From Resource to Root" is highly recommended.



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#### More Crop Per Drop®

## Sustainable Products and JISLthe Key to Smart Cities

With more than half the Indian population projected to live in urban cities by 2030, 'Smart Cities' are the need of the hour, as they emphasise factors which improve quality of life by enabling local development and harnessing technology as a means to create smart outcomes. With a significant increase in global energy consumption, the concept of Smart Cities stands tall as it takes into consideration long-term scalability of housing, accessibility, sustainable development, transport systems, and growth.

As infrastructure plays a very significant role in any project, this is where JISL pitches in. Our quality products provide a complete solution for infrastructure, water, and energy management in a Smart City. We provide end-to-end solutions of plastic piping systems for agriculture and plumbing applications, including PVC (polyvinyl chloride) and PE (polyethylene) piping systems for applications such as water supply, city gas distribution, cable ducting, effluent treatment plants, and other industrial systems.

We have recently sealed a deal worth INR 2844.3 mn under the Atal Mission for Rejuvenation and Urban Transformation (AMRUT) scheme for executing water supply projects in Karnataka (Bijapur and Bagalkot), taking responsibility for



project design and execution over 24-36 months, and operation and maintenance for 60 months. In addition, we will also provide piping expertise and solutions to cater to Smart Cities and AMRUT cities. We have already commissioned water supply projects in four major cities in Karnataka—Hubli, Dharwad, Belgaum, and Gulbarga—and are in the process of executing similar projects in different states of India.

There is large-scale acceptance of our products because we swear by superior quality and modern technology. Products offered by JIIS can be executed in all climates and topographical conditions. With the use of our products, water efficiency can be achieved up to 85% and energy savings up to 40%, resulting in huge cost savings. At JISL, we work on products with the aim of achieving sustainability and longevity, and we guarantee that JIIS is the only sustainable solution which can help in achieving water and energy efficiency, and allow us to progress on the path of resource conservation.



## Energy Management



BEE National Energy Conservation Award received in September 2014

Continued economic progress, coupled with business sustainability, is a challenge due to the depletion of natural resources; this has consequent impacts on long-term energy security. Energy productivity and energy efficiency are the key focus areas across operations at Jain Irrigation. In addition, JISL also constantly endeavours to create a positive environmental footprint.

In addition to generating green energy, we are deeply committed to implement various measures to conserve energy throughout our business operations. An energy audit is a regular exercise at all the manufacturing units across India, be it food production

facilities, plastic operations, or the green energy product division. Energy audits help us to identify various opportunities for energy conservation. All major facilities have implemented an energy management system in accordance with international standard ISO 50001: 2011. Some of the significant energy-saving measures adopted in the manufacturing units of plastic operations have saved substantial electricity.

#### Energy Saving in Plastic Manufacturing Units in Jalgaon

Location	Significant energy-saving measures taken	Annual Specific Energy (kWh/kg) reduction				
Location Si	Significant energy-saving measures taken	2013-14	2014-15	2015-16		
Plastic Operations	<ul> <li>Variable Frequency Drive' (VFD) installation at:</li> <li>PVC pipe plant for conveying PVC resin and PVC Compound</li> <li>PVC pipe plant in screw compressor</li> <li>Sprinkler Pipe Plant in screw compressor</li> <li>Injection moulding at utility pump</li> <li>Installation of anti-drafting unit at drip line plant</li> <li>Higher efficiency pumps installed at injection moulding facility</li> <li>14 new energy-efficient Injection Moulding machines were purchased for cPVC fittings, with servo motor with latest technology.</li> </ul>	4%	-7%	2%		

## Generating Green Energy

Our progressive investment in the renewable energy sector through the installation of state-of-the-art 1.6 MW biogas and 8.5 MW solar power plants highlights our commitment to manufacturing products with minimal environment impact. Our sources of renewable energy generation are tabulated here. Green energy generated from solar and biogas sources have met 3.33 % of the total energy demand of our India operations during the reporting period FY 2013-16. The electricity generated from the biogas plant located at the Food Park in Jalgaon has met 18% of the total electricity demand at the Food Park and Energy Park. In addition, the 355 TR waste heat recovery system (associated with the biogas plant) has saved 12,469 MWh of electricity during the current reporting period.

Green Energy Generation Statistics							
Source	2013-14	2014-15	2015-16				
Green Electricity Generated from 13.2 MW Wind Project (MWh)*	12,711.02	-	-				
Green Electricity Generated from 8.5 MW Solar Project (MWh)	13,210.70	13,529.2	13,529.2				
Green Electricity Generated from 1.67 MW biogas Project (MWh)	6,534.90	2,313.79	2,313.79				
Green Electricity Generated from Solar Tracker Systems (MWh)	122.49	122.49	756.13				

Green Energy Generation (GJ)



The biogas plant at the Cascade unit generated 32,054 MJ, 23,952 MJ, and 25,855 MJ of green electricity, which forms 31%, 18%, and 21% of the total indirect energy consumption at our overseas plants during the years 2013-14, 2014-15, and 2015-16, respectively. The total green energy generated across our India operations was 59,757 GJ during 2015-16.

\* The project was sold to other party in 2013.

## Fuel Consumption

Energy requirement for heating (steam generation) and chilling processes are one of the major fuel consuming operations across our operations. Fossil fuels, viz. coal, diesel, and LPG, contribute to direct energy consumption in Indian manufacturing operations, whereas motor gasoline and LNG continue to be the primary sources of direct energy in overseas plants. The fuel consumed across our India operations is tabulated below. The data for overseas operations is incomplete, as we do not have it reported across all global operations. However, we intend to monitor fuel consumption across our overseas and India operations and the same will be reported in the next cycle. Our Cascade plant in USA has been using biogas as fuel for energy generation, which contributes significantly to our green energy generation drive.

#### **Fuel Consumption Statistics**

India Operations					Overseas	<b>Operations (Par</b>	tial Data)
Year	Diesel (Litres)	LPG (KG)	Acetylene (M <sup>3</sup> )	Coal (MT)	Gasoline (Litres)	LNG (MBTU)	Biogas (MBTU)
2013-14	23,25,248	1,47,402	3,163	50,055	2,14,619	1,09,227.3	30,381.75
2014-15	20,91,613	1,21,961	3,536	66,875	2,17,881	1,14,268.4	22,702.05
2015-16	18,27,673	1,07,920	4,311	70,539	58,564	3,54,902.0	24,506.04

## Energy Consumption

The major source of energy consumption at JISL India, as well as our overseas plants, is through indirect energy, i.e. from purchased electricity. Out of the total energy consumption at India and overseas operations, electricity met 29% and 6% demand, respectively, in 2013-14; 27% and 7% demand, respectively, in 2014-15; and 24% and 6% demand, respectively, in 2015-16.



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A panoramic view of 8.5 mw solar energy generation project at Jain Green Energy Park, Jain Valley, Jalgaon.

## Other Energy Conservation Measures

Besides the above, there have been several smaller initiatives to conserve energy in every possible way at JISL. Some of these include:

#### Food Park

• Installation of new energy efficient chilling plants. • Installation of LED lighting. • Optimisation of de-humidifier and water usage.

In the tissue culture plant, lab scale experiments have been successfully conducted to replace electric energy with chemical energy during the incubation and growth of banana plants, which will save a minimum of 50% of our electric energy in the future.

Installation of 185 HP of solar-based irrigation pumps at Jain Height Farm to reduce conventional electricity consumption.

#### **Energy Park**

- Overall, street lights and lighting in the plants have been changed from CFL to LED.
- Traditional welding machines were replaced with energy-efficient welding machines to save energy in the solar water heater production plant.
- Automation with temperature controller in cooling towers.
- Installation of automatic ON-OFF system with thermocouples for four Air Handling Units (AHUs).

### Emissions

We understand that various air pollutants generated during the manufacturing process have adverse effects on climate, ecosystems, habitats, agriculture, and human health. Hence, monitoring and minimising various air emissions throughout the process are an integral part of our overall environment management system. We regularly monitor air emissions like ambient air quality parameters, point source emissions, noise levels, greenhouse gases, etc. across our operations in India and overseas.

Details of Air Emissions Monitoring Parameters						
Type of Air Emissions         Ambient Air Quality Parameters		Point Source Emissions / Stack Emissions	Ambient Noise Level			
Parameters monitored	PM <sub>10</sub> , PM <sub>2.5</sub> , SO <sub>2</sub> , NO <sub>X</sub> , CO, Ozone	TPM, SO <sub>2</sub> , NO <sub>X</sub> CO, HC	LAeq (hourly) daytime and night-time			

Air Emission Statistics 2013-16									
Region	•			All Food Energy and Agri Operations in India (Kg/Yr)			Overseas Operations (Yearly average µg/m <sup>3</sup> )		
Year	2013-14	2014-15	2015-16	2013-14	2014-15	2015-16	2013-14	2014-15	2015-16
• NOX	43	114	162	6557	3425	2558	0.3	0.35	0.36
• SOX	80	78	157	26034	20703	30667	0.2	0.2	0.3
Persistent Organic Pollutants (POP)	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
Volatile Organic Compounds (VOC)	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
Hazardous Air Pollutants (HAP)	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
Particulate Matter (PM)	59	53	53	13847	6002	10219	6	6.5	7.25
• Other standard categories of air emissions identified in relevant regulations	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil

## Ozone Depleting Substances

JISL has developed and implemented an ozone depleting substance (ODS) phase-out plan as per the new rules, comprising the following:

- All new equipment to be free from chlorofluorocarbons (CFC), halons and Methyl Chloroform (MCF).
- Replacement of all existing equipment using ODS well before the phase-out stipulation.

As part of the ODS phase-out plan, JISL has initiated the process of substituting R22 gas with other environment-friendly alternatives like R404, R407, and R410. The table below shows the quantity of ODS used across our operations. Use of minimal quantities of OSD has resulted in negligible quantities of ODS emissions during the reporting period.

ODS Gas		India Operations		Overseas Operations		
ODS Gas	2013-14	2014-15	2015-16	2013-14	2014-15	2015-16
Freon R-22 (kg)	1,091.7	1,870.4	1,751	Nil	Nil	Nil
Methyl Bromide (kg)	Nil	Nil	Nil	Nil	Nil	Nil

## Greenhouse Gas Emission Scenario



JISL is the first organisation in the irrigation sector to be certified for ISO 14064-3, related to carbon footprint accounting

We have continued monitoring Greenhouse Gas (GHG) emissions across the Jalgaon plants during the reporting period,

as per the Energy and GHG Management Systems implemented under ISO 50001:2011 and ISO 14064:2006. Additionally, the boundary of GHG emissions accounting has been extended beyond the Jalgaon facilities to all our plants in india during the reporting period. The corporate GHG Inventory of 2013-15 and 2015-16 periods has been prepared according to ISO 14064:2006. The major GHG emissions happen in our plants in India, with higher contribution of indirect emissions from purchased electricity, whereas direct emissions from overseas are higher than the indirect emissions. The implementation of the Energy and GHG management system has helped us identify gaps in our energy efficiency and establish energy management programmes.

#### GHG Emission from India Operations (tCO,e)



#### GHG Emission from Overseas Operations (tCO,e)



## Reducing our GHG Emissions

At JISL, it is our constant endeavour to reduce our GHG emissions through various measures like green energy generation, creation of a carbon sink, etc. The latest corporate carbon footprint accounting report concludes that carbon sinks created by JISL during 2013-16 have helped mitigating greenhouse gases from the atmosphere equivalent to 10% of overall GHG emissions across our India facilities. The table below outlines the green energy projects implemented by Jain Irrigation and the associated emission reductions during the reporting period.

Source	2013-15	2015-16
Emission Reductions from 13.2 MW Wind Project (t- $CO_2eq$ )	12,076	-
Emission Reductions from 8.5 MW Solar Project (t-CO <sub>2</sub> eq)	25,880	13,183
Emission Reductions from 1.67 MW biogas Project (t-CO2eq)	8,564	3,578
Emission Reductions Solar Trackers / Solar Water Heaters	1,462	937
Emission Reductions Biogas Generation at Cascade (t-CO <sub>2</sub> eq)	3,058	1,412

The scope-wise GHG emissions and overall GHG emission reductions are tabulated here. GHG emission as per scope 3 were monitored in FY 2015-16.

Greenhouse Gases (GHG) Emission Statistics 2013-16							
	Scope-1 & Scope-2				% GHG Reduction		
Year	Scope -1 Emissions (tCO <sub>2</sub> -eq)	Scope-2 Emissions (tCO <sub>2</sub> -eq)	Total GHG Emissions (tCO <sub>2</sub> -eq)	GHG Removal by Sinks (tCO <sub>2</sub> - eq)	GHG Reduction by Green Energy (tCO <sub>2</sub> -eq)	Total GHG Emission Reductions and Removals (tCO₂-eq)	
2012-13 (Base Year)	89,189	1,25,429	2,14,618	4,926	16,794	21,720	10%
2013-14	1,06,629	1,47,728	2,54,357	8,043	19,842	27,885	11%
2014-15	1,21,012	1,69,239	2,90,251	7,630	16,064	23,694	8%
2015-16	1,27,872	1,72,046	2,99,918	12,153	17,698	29,851	10%

Greenhouse Gases (GHG) Emission Statistics 2013-16							
	SCOPE-3						
Year			Business Travel (Category-6)	Employee Commuting (Category-7)	Total GHG Emissions Scope-3 (Categories 1,4,6 and 7) (tCO <sub>2</sub> -eq)		
2012-13 (Base Year)				3,948	3,948		
2013-14	Scope-3 emiss	sions were counted for o	4,525	4,525			
2014-15			4,337	4,337			
2015-16	2,13,791	728	2,125	5,579	2,22,223		



Bumper capsicum harvest in polyhouse, installed by precisim farming systems division of Jain irrigation.



View inside state-of-the-art solar based primary hardening chamber at Tissue Culture Park. Plants produced here are carbon positive.



Solar panels installed in the R&D fields at recently developed Bhaunchi Shrushti campus of 500 acres area in Jalgaon.

## Using Resources Responsibly : Green Energy and Climate Change Mitigation

Being an environmentally-concerned organisation, Jain Irrigation is committed to protecting the environment from the impacts of climate change. JISL is among the very few organisations in the country that have incorporated GHG accounting and mitigation actions in their management systems, and had it certified by a third party. FY 2015-16 was the fourth year of our carbon accounting and certification. We account and report on our complete Scope-1 and Scope-2 GHG emissions and removals, and selective Scope-3 emissions.

We have implemented and registered renewable energy and energy efficiency projects to generate green energy and mitigate climate change. Some of these projects are also registered under the Clean Development Mechanism (CDM) of the United Nations Convention on Climate Change (UNFCCC). By the end of FY 2015-16, the company had verified 38,637 Certified Emission Reductions (CDM carbon credits) and 3,620 Voluntary Carbon Credits. All our registered CDM projects have the potential to generate 30,000+ carbon credits per annum. Out of the registered CDM projects, solar and biogas-based power generation projects are also registered under the Renewable Energy Certificate (REC) Scheme.

We were asked to submit data for the FTSE Low Carbon Economy (LCE) Index during FY 2015. The analysis results showed that more than 50% of our product groups are contributing to a low carbon economy. We have estimated the energy savings and corresponding GHG emission reductions in our downstream supply chains due to MIS products.



Jain Rainport System for better groundnut productivity.



Jain Drip - a versatile tool to augment crop production in Maize.

#### Energy Saved by Micro Irrigation Products

Activity	Total Savings
Drip Irrigation Systems	7588 GWh
Sprinkler Irrigation Systems	1399 GWh
Total Energy Saved	8987 GWh
Total GHG Emissions Reduced	8.1 million tonnes of CO <sub>2</sub> Equivalent

\* GWh (Giga Watt-hours)



Jain Impact Sprinkler - a promising technology to enhance farm yields.

## Waste Management

Waste management is an integral part of our environmental management process. We try to maintain efficient waste management practices in order to have a clean and safe environment. All the wastes generated by our premises were within the given limits of the CPCB, SPCB, and IFC standards during the reporting period. Waste management has been practised as per statutory requirements, including waste segregation and storage at site. We do not transport, import, or





Production of high quality organic manure 'BioSamrudhi' from food processing and agriculture waste.

export any hazardous wastes as specified under the Basel Convention. A brief description of the waste management initiatives undertaken by JISL in India and abroad are mentioned here. We are planning to initiate a detailed waste characterisation across our operations to monitor and report on the waste generation scenario in the future.

#### a) India

The hazardous wastes generated during plastic and food processing and solar PV and appliance manufacturing comprise used oil, oil-soaked cotton, paint-soaked cotton, used batteries, empty chemical containers, waste chemicals, and solvents. The hazardous wastes are sent to an authorised vendor for safe disposal. The non-hazardous wastes included fruit and vegetable peels, plastic bags, plastic scrap, metal scrap, paper bags, and empty barrels. The recyclable waste was disposed of through authorised recyclers.

#### b) Overseas

Most overseas plants produce hazardous wastes in liquid form (waste oil and lubricants). Solid hazardous wastes include oil debris and waste oil. At Jain Irrigation Inc., Florida, rechargeable batteries are recycled at local hardware stores. The company is working with a contractor for recycling other materials too.

- 100% utilisation of biodegradable waste generated from the food processing plant in Jalgaon in the waste-toenergy project.
- R&D work is completed on extraction of butter from mango waste kernel, which has a demand in confectionery segment, replacing vegetable oil.
- 11%-12% of plastic waste was recycled during the manufacturing process of piping and drip irrigation product.

#### Responsible waste management through Waste Pack

Sleaford Quality Foods Limited – JISL's subsidiary in the UK which is involved in the food ingredients business – is a member of the Waste Pack - The Producer Responsibility Obligations (Packaging Waste) - Regulations. The regulation is derived from an EU directive (94/62/EC) on packaging waste, which imposes requirements on all member states to institute measures for increasing the volume of packaging waste.

Waste Generation* and Disposal Statistics							
Type of Waste	Unit of Measurement	Quantum Generated		Quantum Generated		ated	Disposal Method
Hazardous Waste		FY 13-14	FY 14-15	FY 15-16			
Chemical containers	MT	2.23	3.39	4.76	Disposed through (sent to) SPCB		
Oil Soaked Filters and Cotton	MT	2.32	1.66	2.64	recognized hazardous waste		
Used Oil	kilo litres	24.20	16.86	27.11	disposal facility and as per the Hazardous and Other wastes (Management and Transboundary Movement) Rules 2016		
Non-Hazardous Waste		FY 13-14	FY 14-15	FY 15-16			
Paper and Paper Products	MT	208.97	201.70	179.33	Almost entire quantity sold to recyclers		
Plastic and Plastic Scrap	MT	488.00	461.45	489.83	Entire quantity sold to recyclers		
Empty Bags	Nos.	420000	398261	462618	Entire quantity sold to recyclers		
Organic Waste	MT	64904.355	41024.93	21602.76	Entire quantity consumed in Composting within facility		

#### \* Indian operations.

#### Significant Spills

There were no significant spillages inside or outside the organisation premises during the reporting period.



Panaromic view of Onion Processing Plant at Food Park, Jalgaon – world's second largest onion dehydration facility.



Fruit Processing Plant at Food Park, Jalgaon — world's largest mango processing facility.

## Biodiversity and Ecosystem Protection

**Biodiversity Conservation @ JISL:** Conservation of biodiversity has been an integral part of Jain Irrigation's principles since its inception. In 1988, we had taken our first step by starting soil conservation and watershed development practices at Jain Hills

With consistent efforts by JISL, more than 600 acres of once completely barren land is now home to more than 150 plant species and more than 170 notified animal species in Jain Hills, in the Jalgaon area.

and Jain Valley, our headquarters location in Jalgaon. Our afforestation programme has helped in creating a suitable habitat for local birds, reptiles, amphibians, and many other creatures because of the greenery and availability of water in percolation tanks. These small, man-made ecosystems helped seed dispersal, germination, and improved the survival rate of the plants. Thus, we continuously work towards the preservation and enhancement of biodiversity and the ecosystem of our surrounding areas, through direct and indirect positive impacts. We also take the utmost care to implement state-of-the-art pollution control technologies to avoid any negative impacts on biodiversity.

IUCN-listed Species near Jain Agri Park Area				
Species	IUCN status			
Black-headed Ibis and Oriental White Ibis ( <i>Threskiornis melanocephalus</i> ) migratory birds in India	Near Threatened			
Common Pochard (Aythya ferina) migratory bird in India	Vulnerable			
There are no IUCN Red list species found near any of our operations.				

**Business and Biodiversity:** Conservation and protection of biodiversity has always been at the centre of the environment management system at Jain Irrigation. None of our operations are in or adjacent to protected areas or areas of high biodiversity value outside the protected areas. We have three major manufacturing establishments now in the micro watershed of Jain Hills and Jain Valley, namely Jain Agri Park,



Biodiversity Conservation Action Plan

Jain Food Park, and Jain Energy Park. However, none of the manufacturing operations interfere with the fauna of the watershed area. Additionally, a habitat-based approach is adopted in conserving the natural territories of the animal species.

**Integrated Management Policy:** We have a comprehensive integrated management policy, with biodiversity embedded across various dimensions of quality, environment, health and safety, etc. A Biodiversity Conservation Action Program at Jain Hills and Jain Valley have also been implemented. Key tasks undertaken as per the plan are shown in the figure above.

Biodiversity Training and Capacity Building: As part of our orientation programme, every senior and middle management

level associate undergoes an approximately half-day session on the aspects of biodiversity and ecosystem goods and services. In addition to this basic training, specific sessions are organised for all level of associates from time to time. From 2014 to 2016, a total of 418 senior level management and 27 middle management associates have been trained regarding biodiversity. Apart from this, various workshops and training programmes are undertaken for the JISL associates and the community regarding biodiversity conservation and protection.



Biodiversity training organised by Court for Bio-organisation at Jain Hills.

**Partnerships for Protection and Conservation of Biodiversity:** Jain Irrigation has collaborated with various organisations at the local, national, and international levels to conserve biodiversity. We have also been part of UN conventions—the Rio+20

Summit (Rio de Janeiro) and Biodiversity Summit (Hyderabad).

Some of our activities in this context have been:

- Distribution of saplings to residents of Jalgaon on World Environment Day. Approximately 21,000 saplings were distributed during FY 2015-16.
- Awareness campaign on biodiversity conservation
- Supporting the activities undertaken by FALI (Future Agriculture Leaders of India)
- Supporting educational activities for promoting modern agricultural practices, conducting conferences, etc.
- Supporting film festivals and awareness campaigns in the city for encouraging good agricultural practices.

# Local<br/>Engagement• School of Environment, Jalgaon<br/>• Court for Bio-organization, Jalgaon<br/>• Vasundhara Film Festival<br/>• Gandhi Research Foundation<br/>• Bhavaral and Kantabai Jain FoundationNational<br/>Engagement• CII (Through IBBI Initiative)<br/>• NABARD (Through Watershed Project)International<br/>Engagement• Alliance for Water Stewardship

Sr. N.	Site	Number of Notified Fauna Species	Number of Notified Flora Species	Number of Trees
1	Jain Agri Park, Jalgaon			
2	Jain Food Park, Jalgaon	184	150	146523
3	Jain Energy Park, Jalgaon			
4	Jain Tissue Culture Park, Jalgaon	50	15	3350
5	Jain Plastic Park, Jalgaon	20	11	15616
6	Jain Food Park, Chittoor Unit-1		29	803
7	Jain Food Park, Chittoor Unit-2		25	899
8	Jain Food Park, Vadodara		15	273
9	Jain Plastic Park, Udumalpet	TBA*	19	165218
10	Jain Plastic Park, Hyderabad		9	635
11	Jain Plastic Park, Alwar		39	3362
12	Jain Plastic Park, Bhavnagar		9	403

#### Details of biodiversity mapping at Indian Operations:

\* To be accounted



Jain's EHS team and pollution control board officials participating in plant distribution programm Environment Day.

Future agriculture leaders of India (FALI) participants at GRF.



Mr. Ashok Jain, Mr. Suresh Khanapurkar, Mr. Kishor Rithe, Ms. Smita Wagh and Raju Nannaware fecilitated "Green Journalist' during Vasundhara Festival - 2015.



## Using Resources to Preserve Resources Enhancing Biodiversity at Jain Hills

"Do something not for money or prestige, but to make a real difference in the lives of your fellow men, as well as birds, animals, and plants". This inspiring lesson was given to our Founder Chairman by his mother. The idea is manifested today through the biodiversity restoration work at Jain Hills. We realised this only when we started conducting an ecological assessment by recording the data. It was quite exhilarating to know that 150 varieties of flora and 184 of fauna are flourishing in this area. 102 bird species, including 17 migratory ones, are found here. We had planted 500,000 plants, out of which about 120,000 are thriving well. 'Biodiversity' was the last thing on our minds when we planted these trees. Most of these are mangoes, chosen from the horticultural point of view, and easy and fast-growing Neem on the slopes to prevent soil erosion on the hillsides.

Now, we are consciously and resolutely working on preserving and increasing the biodiversity of this land. Our team of biodiversity experts studies the biodiversity in this climatic zone and collects seeds of native species. The formulation of a seed bank is helping us today in developing native nursery saplings. Similarly, the several 'JeevanDayeeni's' that we have installed at various locations to feed birds with grain and water is attracting a large number of birds. We are trying to develop dense, verdant tree cover on the hills by enriching the hilltops with cow-dung manure and mulch, and planting local varieties of trees and shrubs. Even if these nutrients flow down the slopes in the rainy season, it helps the growth of grass and undergrowth on the hillsides, which prevents erosion of soil and promotes water absorption into the soil, consequently facilitating the growth of more trees.

## Expenditure on Environmental Protection

The total environmental protection expenditure across India operations was INR 13,21,14,529 during the reporting period FY 2013-16. The year-wise expenditure details are tabulated here:

Environmental Protection Expenditure						
Operations         Currency Unit         2013-14         2014-15         2015-16						
India Operations	INR	3,54,76,713	4,94,80,827	4,71,56,989		
Overseas Operations*	USD	-	76,076	253,053		

\*Data from only 50% plants (comparatively large manufacturing units) is presented here. From the next reporting period, data from 100% alloverseas manufacturing operations will be included.

#### Biodiversity: Flora at Jain Hills (Numbers)



**Biodiversity: Fauna at Jain Hills (Numbers)** 









Common grey langur (Semnopthecus entellus) at Jain Hills.





White naped flameback woodpecker (Chrysocolaptes festivus) and Alexandrin parakeet (Psittacula eupatria) clicked at Neem Valley and random locations of green cover at Jain Hills.



Tiny grass blue butterfly (Zizula hylax) one of the smallest butterflies of the country found abundantly at Jain Hills and Jain Valley landscapes.



An aerial view of Jain Sagar - Percolation tank having rainwater storage capacity of 12 million litres and the surrounding afforested areas.



Oriental white Ibis (*Threskiornis melanocephalus*) an IUCN near threatened species spotted at Jain Sagar in Jain Hills.



Plantations near Biotech R&D are home to the Asian palm civet (Paradoxurus nermaphrodites).



A tiger (*Panthera tigris*) beating the summer heat in a water source created by Jain Solar Pumps in Nagzira forest in Gondia District of Maharashtra.

Re-invigorating Stakeholder Relationships

In line with our corporate philosophy and Mission Statement, social conscience is at the centre of all our operations. In the words of our Founder Chairman Padma Shri Dr. Bhavarlal H. Jain, "If life is a gift from God, then a successful business is a gift from society. It is our firm belief that no successful business can ever remain vibrant for long if it ignores the needs of society and the environment". Consequently, as per the theme of our sustainability projects, "Creating Shared Value More Than Responsibility", corporate social responsibility does not merely remain a matter of an obligation to be fulfilled or an account to be presented to society. We firmly believe that we are indebted to society for our existence, survival, and success. Our approach towards creating shared value for all our stakeholders is highlighted here in this section.

## Good Governance

At JISL, we uphold good governance practices which we believe are the foundation of a sustainable and responsible company. Encompassing our corporate philosophy of "Leave this world better than you found it", our corporate governance structure ensures that we meet our objectives through the application of best management practices and compliance with rules and regulations, while enhancing stakeholders' value and discharging our social responsibilities. It emphasises our core values of integrity, transparency, and quality, by laying down a framework that assigns this responsibility and authority to the Board of Directors, its committees, and the executives and senior management. It also ensures the adoption and monitoring of corporate strategies, goals, and procedures in place to comply with our legal and ethical responsibilities. Additionally, we are in compliance with the requirements of the revised guidelines of corporate governance stipulated under Clause 49, provisions of the Companies Act, 2013, and SEBI LODR 2015. A comprehensive code of conduct, applicable to Directors, officers, and associates further bolsters our pursuit of excellence in corporate governance. We have formulated and implemented policies for various management systems, adhering to national and international standards. We conduct our business in line with the requirements of the business responsibility principles as stated under the National Voluntary Guidelines (NVGs).



A team where the leaders have ability to take responsibility determines the highest level of good governance. The top governing body, the Board Members of Jain Irrigation during a Board Meeting in 2015.

## Ensuring Company Compliances

We understand that compliance with applicable laws and regulations is vital for the overall performance of any organisation. Ensuring compliance helps reduce financial risks that may occur, either directly through fines or indirectly through impacts on the company's reputation. There were no cases of significant fines and non-monetary sanctions for non-compliance with applicable laws and regulations during the reporting period, across our operations.

a) Capital Market Compliance: There were no cases of non-compliance during the year with any stock exchanges where the shares of the company are listed, SEBI regulations, or any other statutory body, nor any cases of penalties imposed by them for any non-compliance related to capital market compliances during the last three years.

**b)** Compliance under Companies Act: There were no cases of non-compliance with the applicable provisions of the Companies Act, 2013, nor any cases of penalties imposed by the Department of Corporate Affairs, Registrar of Companies, or any other statutory body for any non-compliance related to the Company Law provisions during the last three years.

## Upholding Human Rights

The very foundation of our 'Responsible Business' model is respect for human dignity. We have a comprehensive set of HR practices (as part of the HR Manual) that is guided by international human rights principles, and encompasses the universal declaration of human rights, the ILO'S declaration on fundamental principles and rights at work, and the United Nations' guiding principles on business and human rights. The human rights manual and procedures therein applies to all manufacturing

operations in India. Similarly, overseas plants have their own set of HR procedures, as per the applicable laws of their respective countries and international standards. We are committed to identifying, preventing, and mitigating adverse human rights impacts, resulting from or caused by our business activities, before or if they occur, through human rights due diligence and mitigation process. Our formal Human Rights Policy was finalised at the end of the reporting period. We do not endorse any form of forced, compulsory, or child labour, directly or through our supply chain vendors. Till now we were only doing informal screening of our suppliers on human rights issue, whereas we did not identify any

JISL's Human Rights Policy includes:

- Stakeholder Engagement
- Valuing Diversity
- Freedom of Association and Collective Bargaining
- Safe and Healthy Workplace
- Workplace Security
- Prevention of Child or Forced Labour and Human Trafficking
- Work Hours, Wages, and Benefits
- Guidance and Reporting for Associates

operations or suppliers being at significant risk for child labour and forced or compulsory labour. However, we will include it in our formal screening procedures in next reporting cycles.

As on April 2016, there was no clause on human rights in any of the significant investment agreements / contracts. We will include a specific clause on human rights from the next reporting cycle. We will start the training of various departments on



GRF team interacting with the community in Dhanora village near Jalgaon.

human rights from the next reporting cycle. During this reporting period, no security personnel underwent the human rights training. None of our operations have been subjected to human rights reviews or impact assessment during the reporting period. During the reporting period, there were no reported instances of human rights violations and there were no cases of grievances about human rights impacts filed through formal grievance redressal mechanisms. None of our operations have indigenous people in the vicinity, and there was no case of incidents of violations involving the rights of indigenous peoples during the reporting period. There were no operations/suppliers identified for whom the right to exercise freedom or association and collective bargaining was violated or at significant risk during the reporting period. Our human rights policy states collective bargaining opportunity for all permanent and contractual associates.

## Prohibiting Workplace Sexual Harassment

The company has already adopted and put in place a policy on Prevention, Prohibition, and Redressal of Sexual Harassment at the workplace, according to the provisions of the Sexual Harassment of Women at Workplace (Prevention, Prohibition, and Redressal) Act, 2013, and the rules thereunder. All associates are treated in a dignified manner and the company maintains a work atmosphere free of sexual harassment, whether physical, verbal, or psychological. During the reporting period, there were no reported cases of sexual harassment.

## Ethical and Transparent Business Practices

In line with the core value of our corporate philosophy of 'creating shared value', we acknowledge our responsibilities towards the entire spectrum of our stakeholders; thus, we are committed to maintaining the highest levels of transparency, integrity, accountability, and good management practices in our business strategy, operations, and culture. This is vividly reflected through our organisation's governance structure, with the stakeholder at the top. We are guided by a code of Business Conduct and Ethics, with strong emphasis on home grown beliefs and value systems where each and every JISL associates has the responsibility of ensuring the highest possible standards of ethical, moral, and legal business conduct, in the company's best interests at all times.

## Whistle blower Policy

The company has adopted a Whistle blower Policy to provide a mechanism for all associates to report their concerns about suspected fraud or a violation of the company's ethics policy or code of conduct. The policy provides associate with direct access to the Chairman of the Audit Committee; it is affirmed that no associate of the company has been denied access to the Audit Committee. The Company Secretary is the Compliance Officer for the purpose of this policy.

# Favouring Anti-bribery and Anti-corruption

As a responsible corporate citizen, we encourage all our associates to conduct all dealings within an ethical framework to ensure corruption-free business operations. We are committed to our code of conduct and we comply with the applicable laws and regulations in all the countries where we operate, including all anti-bribery and corruption regulations. No incidents of bribery or corruption were identified in the reporting period. Our internal audit committee, under the Integrated Management System (IMS), ensures that no such incidents happen by following a set of procedures. There were no reported cases of anti-competitive behaviour, anti-trust, and monopoly practices during the reporting period.



The front view of Bhaunche Udyan (Bhau's Garden) being developed to support and promote art, health, fitness and yoga at the centre of Jalgaon city.



Walking tracks inside Udyan.



Art Gallery at Bhaunche Udyan.





Play ground for kids is main attraction at Bhunche Udyan.



Amphitheatre for cultural program





From the boundless cosmic Universe there came to this earth one small spark, that came and vanished in the due course of time. He was Bhavarlal Jain, our beloved Bhau.

"This beautiful world, of rich green colours is my wealth, my work and most importantly my duty!" he said, and true to his word, he spent his entire life in servitude to his beautiful muse our earth.

Every sapling that he planted, grew tall and spoke to him. Every drop of water that he saved, thanked him and blessed him. And every smile that he saw on the face of a grateful farmer was his just reward!

His bond with the earth and with his green creations was so strong that he chose to be amidst them when he was about to go for his second heart surgery. He bid them farewell, lest he not return to see them again. He went there as if to extract a promise from his beloved land that whether he was there or not, Water

would be there. Sustainable agriculture would be there; Sources of renewable energy would be there; Rural development models would be there; his dream University would be there to train generations of agronomists, scientists and most of all, his spirit would be there!

All efforts would continue to make our earth rich. As energy from the Sun would make the plants flourish, so would the plants in turn nurture and sustain mankind! And so on and on, this place will be born and re-born, again and again. With God's grace we name this blessed land -

#### Bhaunchi Srushti

#### Dedicated to Bhavarlalji Hiralalji Jain On his 80th Birth Anniversary, 12th December, 2016



from The cosmos is where all souls, celestial bodies and spirits like saints, Rishi-Munis and Teerthankars, Nakshatras and Navgrahas reside. Souls come to this earth with a purpose for a limited period of time. Thereafter they return to their original habitat. One such soul was Bhavarlal Jain – our beloved Bhau. A compassionate caring soul who not just loved nature, but worshipped it.

The air, water, greenery, amidst all nature was where he spent his life. Having his humble roots in the rural hinterland, uplifting the lives of farmers with modern technology was his constant endeavour.

We dedicate to this soul, a re-creation of this cosmic garden of trees and flowers. Its inspiration comes from the cosmos and mythological sources like the seven Saptarshis and fifty three spiritual trees. These trees are divinity personified. They emanate positive vibrations, have therapeutic value and provide all means to sustain human life on this earth.

A total of two hundred and sixty seven different trees blessed by holy spirits will make this A Watika (a home) for Bhau's spirit.

#### Bhaunchi Watika

Dedicated to Bhavarlalji Hiralalji Jain On his 80th Birth Anniversary, 12th December, 2016

## Engaging Continuously with Shareholders

As part of transparent business practices, we engage and interact with our shareholders on a continuous basis. Our shareholder engagement mechanisms facilitate transparent, accurate, and timely communication between our investors and shareholders, and the company. We not only communicate our operational and financial performance and results at regular intervals (quarterly and annual reports), but have also established a practice of obtaining continuous shareholder feedback. Shareholders can submit suggestions and feedback through our website, as well as via e-mail, apart from formal forums such as the annual general meetings and quarterly investor conferences. Our management also attends investor conferences held by different associations, within India as well as abroad, to communicate our strategy and address shareholder concerns. During the reporting period, our Board has not received any critical concerns. We publish our results in leading Marathi newspapers and Indian financial newspapers, in addition to simultaneously posting it on our website (www.jains.com). Further, the website also has a dedicated section called 'Investor Relations', where shareholders' information is available. Shareholders can also submit their feedback online on our website through the SHAREHOLDER'S FEEDBACK FORM.

## Redressing Stakeholder Grievances

Our grievance redressal system ensures that all grievances are addressed in the minimum time possible and provide maximum satisfaction. We have a Shareholders Grievances Committee, which was renamed the 'Stakeholders' Relationship Committee' (SRC) by the Board on August 11, 2014. The SRC is primarily responsible for the review of all matters connected with the company's transfer of securities and redressal of shareholders'/investors'/security holders' complaints. The Company Secretary is the secretary and convener of this committee. Investors can file grievances online through the INVESTOR GRIEVANCES form on our website. During FY 2015-16, management had satisfactorily resolved 100% of stakeholder complaints received. There were no cases of grievances about impacts on society filed through formal grievance redressal mechanisms during the reporting period.



Board of Directors taking shareholders' questions during 28th Annual General Meeting at Jain Plastic Park, Jalgaon


Bhau addressing to villagers during the inauguration of one of Jain Irrigation's dealer's shop at Wakod.



Jain's dealer felicitating Bhau and a delegation of Jain Irrigation at Kodaikanal in Tamil Nadu.

# Nurturing our Human Resources

We believe that our employees are the most important asset of our company. An employee is more than just a worker at JISL; we call them 'associates'. We believe in a positive investment in our workforce for their overall development and the company's growth. Following through on our responsibility towards our associates, we are committed to enhancing their capacities and equipping them to hold responsible positions in our organisation. The values we impart are again aligned to our concept of shared value with all our stakeholders, and we train our associates to use the same at all levels of project implementation. Ours being a multi-domain organisation with world-class facilities, our workforce comprises the best calibre from all disciplines. Although working with such varied talents is a challenge, we work to retain the best of industry practices in terms of human rights, ethics, and transparency. From the perspective of human resource management, our current focus is on retaining the best talent and providing them with excellent training to develop their skills, whilst continuing with our focus on enhanced associates engagement.



A show of solidarity – an assenbly of Jain Indian team with our Founder Chairman, senior associates and directors of the board at Jain Plastic Park, Jalgaon (2014)

Country-wise Perman	ent Associates FY 2015-16
India	9,188
US	442
UK	123
Switzerland	92
Ireland	49
Israel and Others	406

#### Manpower Strength

JISL employs more than 10,000 associates all over the world. We report our workforce statistics with respect to our India and overseas operations:

- 1. Within India operations: Our India operations had an average workforce strength close to 8,900 associates over the past three years. Most of our workforce is in the age group of 30-50 years. The contractual workforce of our Indian operations stands at an average of 3000 associates for the three years.
- 2. Overseas operations: The total workforce of the company outside India (overseas plants) is 1,440 as on March 31, 2016, comprising 1,112 permanent and 328 contractual employees.



# Talent Acquisition and Retention

As part of our non-discriminatory policy, JISL inducts associates from all walks of life to ensure a cosmopolitan culture within our organisation. Recruitment is an ongoing process throughout the year, in search of the right people at the right place. This includes on-campus selections for engineering graduates and post graduates from IITs, and Agricultural Universities and colleges from all over the country. Sometimes, walk-in interviews also help to get good people at short notice. The recruitment is done on the basis of merit, potential ability, compatibility with the organisational culture, and fit with the son-of-the-soil empathy. Employee hires and turnover statistics for FY 2015-16, 2014-15, and 2013-14 for our India operations is shown in the graphs here. Genderwise and age-wise new associate hires and turnover statistics for the India operations are also tabulated. The overall employee turnover in our overseas operations during 2014-15 and 2015-16 were 18% (includes only 50% of the overseas operations) and 15%, respectively.

#### Overseas Associates (Gender-wise) Statistics 2015-2016 :



#### Associate Hires and Turnover: (India)



Total New Joinees

Total Turnover

Overseas Workforce Statistics FY 2015-2016 : **Employment Type** 



#### Associate Hires and Turnover Rates (India)



Year		Nev	lia Operatio		Turnover (India Operations)							
	< <b>30</b> y	30 years 30-50 years		>50 years		<30 years		30-50 years		>50 years		
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
2015-16	646	26	206	12	13	-	423	34	304	7	89	1
2014-15	1,071	26	480	42	29	1	462	23	301	9	69	1
2013-14	865	33	248	8	17		393	28	256	13	32	-

Year		New Hires Rate (India Operations)						Turnover Rate (India Operations)				
	<30 y	30 years 30-50 years		>50 <u>y</u>	>50 years <30		30 years 30-5		0 years		>50 years	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
2015-16	0.234	0.366	0.038	0.074	0.017	0	0.153	0.479	0.056	0.043	0.115	0.083
2014-15	0.358	0.306	0.092	0.28	0.036	0.1	0.154	0.271	0.057	0.06	0.086	0.1
2013-14	0.314	0.379	0.052	0.073	0.028	0	0.143	0.322	0.054	0.119	0.052	0

# Associate Benefits

All our associates are provided with ample benefits. Details of various other benefits provided to associates include:

**Provident Fund:** Contribution towards the Provident Fund for associates is made to the regulatory authorities, where the company has no further obligations. Such benefits are classified as Defined Contribution Schemes, as the company does not carry any further obligations apart from the contributions made on a monthly basis.

**Gratuity:** The company provides for gratuity, a defined benefit plan (the "Gratuity Plan") covering eligible associates in accordance with the Payment of Gratuity Act, 1972. The Gratuity Plan provides a lump sum payment to vested associates at retirement, death, incapacitation, or termination of employment, of an amount based on the respective associates salary and tenure of employment. The company's liability is actuarially determined (using the Projected Unit Credit method) at the end of each year. The fair value of the plan assets of the trust, administered by the company, is deducted from the gross obligation. Actuarial losses / gains are recognised in the Statement of Profit and Loss in the year in which they arise.

**Compensated Absences:** Accumulated compensated absences, which are expected to be availed or encashed within 12 months from the end of the year, are treated as short-term associate benefits, whereas accumulated compensated absences, which are expected to be availed or encashed beyond 12 months from the end of the year, are treated as other long-term associate benefits. The company's liability is actuarially determined (using the Projected Unit Credit method) at the end of each year. Actuarial losses / gains are recognised in the Statement of Profit and Loss in the year in which they arise.

**Termination Benefits:** Termination benefits in the nature of voluntary retirement benefits are recognised in the Statement of Profit and Loss as and when they are incurred.

Refer to the Table here for details of associate benefit expenses during the reporting period.

Associates Benefit Expenses (INR million)									
Particulars	2013-14	2014-15	2015-16						
Salary and Wages	5,718.28	6,200.35	6,201.23						
Benefits and Contribution	423.02	458.01	482.59						

#### **Remuneration and Compensation**

	Remuneratio	n Policy
S. N.	Category	Ratio of Basic Salary Women: Men
1	Senior Management	0.97
2	Middle Management	1.00
3	Lower Management	1.00

Ratios of highest paid individual to the median annual total compensation of all associates (combined for India & Overseas)									
Parameter	Unit	2013-14	2014-15	2015-16					
Annual total compensation of highest-paid individual to the median annual total compensation	Ratio	1: 0.03	1 : 0.03	1 : 0.03					
Percentage increase in annual total compensation of highest- paid individual to the median percentage increase in annual total compensation	Ratio	1 : 0.74							
Ratios of standard entry level wage by gender	Ratio	1:1	1:1	1:1					

Associates are compensated for their services with adequate salary as per the industry rates. The company has put in place the Remuneration Policy for Executive Directors, Independent Directors, and KMPs, pursuant to provisions of the Companies Act 2013, and Clause 49 of the Listing Agreement. The ratio of basic salary between women and men is provided as per their position. The salary structure contains the maximum possible benefits, such as Social Insurance Cover, Provident Fund membership, and Special Contribution to Superannuation Fund by the company, along with all other statutory entitlements such as gratuity, bonus, and leave entitlement. For non-unionised associates, under normal circumstances, we revise the pay scales on a bi-annual basis.

# Performance Review

A performance review is carried out for associates at our India and overseas facilities. All our associates (i.e. 100%), irrespective of gender and category, get a performance review every two years (except new joinees). During the reporting period, the review was done during FY 2013-14. On the basis of these reviews, associates are rewarded with promotions, increments, and incentives.

# Equal Opportunity

Guided by our HR policy the company stands committed to equal opportunities for employment without regard to candidate's race, caste, sex, religion, colour, nationality, minor disability, etc. The entry level wages are provided as per the Minimum Wages Act and the entry level

Parameter	Unit	2013-14	2014-15	2015-16
Associates entitled to parental leave	Number	7	9	6
Associates returned after parental leave	Number	6	9	6
Associates employed still employed for 12 months after their return	Number	7	7	4
Return to work rate	%	86	100	100
Retention Rate	%	100	78	67

wages are the same for male and female associates. There is no gender differentiation for entry level minimum wages. The entry level wages (minimum wages) are different across the different states in India. Based on the industry and market situation, and its relevance to us, we do take corrective actions and revise compensations at intervals, as per national and international standards, and thus ensure social and economic security for our associates in a sustainable manner.

There was no incident of discrimination reported during FY-13 to FY16, neither in Indian nor in overseas operations. All the associates are equally entitled for associate benefits, this implies to the entitlement of parental leaves as well. The data on parental leave is provided in above table. All those who availed parental leave returned to work in reporting period. Only female associates applied for parental leave; no male associates applied for leave during reporting period. Our open door policy and suggestion box makes it possible for associates to share their suggestions with the senior management.

# Labour Relations

Excellent relationships enabling peace and harmony to prevail amongst all the establishments across the country is achieved by the organisation, in the context of around 5,469 bargainable workforces, although they are not connected with any trade union. It is a symbol of the highest level of trust and loyalty towards the organisation, as evinced by the associates. The consideration issues are always dealt with on merit basis, if any. Our HR Policy is founded on strong belief in a) merit-based opportunity, b) wide exposure, and c) fair compensation; the same principle is applied even to the bargainable staff. Our agreement with the Labour Union at the Chittoor plant is in effect; at present, a renewal is under negotiation. During any operational change, a minimum notice period of one month is intimated to the workforce. No significant labour issues were experienced during the last three years. No grievance was reported through any formal grievance mechanism.

There is no presence of any trade unions in most of our establishments, except two unions in one of the plants located at Chittoor, in Andhra Pradesh, where very few (51+18 = 69) associates are members of any trade union. The union agreement has been in place for the last 10.5 years.



## Capacity-building

We believe that training and development programmes are an essential part of human resource development, delivering benefits to both associate and the employer. We explore opportunities to enhance the skill sets of our associates through various internal and external training programmes. Deserving associates are provided with specific international trainings; this, in turn, helps us to implement new technology as well in our R&D activities. For details of the various trainings, please refer to the training statistics tables provided here.

Training Hours Overseas (2015-16)								
Senior Management	Middle Management	Floor Management						
555	862	927						
International Training Statistics* (India Operations)								
Year of International Training	No. of Associates	Man-Hours						
2014-2015	31	2,864						
2013-2014	17	2,128						

\* International training data indicates the number of associates sent out of India for training purpose and corresponding man-hours. In 2015-16 no batch was sent for international training. However, it continued again in 2016-17 which will be reported in next sustainability report.

	In-house Training Statistics (India Operations)										
	Cadre	Female	Male	Total	Total						
Year	Row Labels	No. of Associates	Man-Hours	No. of Associates	Man-Hours	No. of Associates	Man-Hours				
2015-16	Floor Management	38	286.00	9,544	33,767.00	9,582	34,053.00				
	Middle Management	178	1,710.50	4,064	24,411.75	4,242	26,122.25				
	Senior Management	21	132.00	949	6,144.75	970	6,276.75				
	Grand Total	237	2,129	14,557	64,324	14,794	66,452.00				
2014-15	Floor Management	73	200.00	8,808	29,008.55	8,881	29,208.55				
	Middle Management	262	2,616.00	4,581	38,262.40	4,843	40,878.40				
	Senior Management	11	31.50	608	6,900.50	619	6,932.00				
	Grand Total	346	2,848	13,997	74,171	14,343	77,018.95				
2013-14	Floor Management	33	74.25	8,949	28,326.30	8,982	28,400.55				
	Middle Management	184	1,891.25	4,816	32,243.20	5,000	34,134.45				
	Senior Management	13	40.00	651	4,474.50	664	4,514.50				
	Grand Total	230	2,006	14,416	65,044	14,646	67,049.50				

Every year we send a group of selected associates (including engineers and agronomists) for technical training in our Israel micro irrigation facility. During the year 2015-16, in spite of our associates we sent a group of our dealers for their technical capacity building.

External Training Statistics (India Operations)											
	Cadre	Female	Male	Total	Total						
Year	Row Labels	Row Labels No. of Associates		No. of Associates	Man Hours	No. of Associates	Man Hours				
2015-16	Floor Management			13	154	13	154				
	Middle Management	1	14	31	637	32	651				
	Senior Management			34	427	34	427				
	Grand Total	1	14	78	1,218	79	1,232				
2014-15	Floor Management			7	119	7	119				
	Middle Management	10	98	95	1,365	105	1,463				
	Senior Management	1	14	99	1,680	100	1,694				
	Grand Total	11	112	201	3,164	212	3,276				
2013-14	Floor Management			9	168	9	168				
	Middle Management	10	210	135	2,548	145	2,758				
	Senior Management	1	21	120	1,617	121	1,638				
	Grand Total	11	231	264	4,333	275	4,564				

# Enhancing Skills for the Future

As part of our social responsibility, we invest our efforts in extending training and education in agricultural practices to the general public. As part of the course curriculum, the Agricultural Universities have made it compulsory for "Agricultural Engineering" students to have a 16-week period of industrial training. The company has taken this opportunity to train these students for one month on the premises, and the remaining three months on-the-job in agriculture. Thus, the students are exposed to the survey, design, installation, and maintenance of MIS and field operations. This training gives them real experience and, those who proved themselves during training are absorbed by the company in employment on successful completion of training.



Senior agronomist imparting training on modern irrigation techniques in sugarcane to a delegation of farmers at FAO certified training centre Gurukul at Jain Hills, Jalgaon

	Agricultural Engineers' Training Statistics											
Year	Training Details	No. of Programes	No. of Associates	Duration (Hours)	No. of Programes	No. of Students	Duration (Hours)	Total				
2015-16	Engineer Training	11	93	19,344	4	143	29,744	49,088				
	Engineer Field Training (3 months)					117	46,800	46,800				
	Total	11	93	19,344	4	260	76,544	95,888				
2014-15	Engineer Training	11	147	30,576	6	205	42,640	73,216				
	Engineer Field Training (3 months)					92	32,656	32,656				
	Total	11	147	30,576	6	297	75,296	1,05,872				
2013-14	Engineer Training	11	171	35,568	7	178	37,024	72,592				
	Engineer Field Training (3 months)					54	41,800	41,800				
	Total	11	171	35,568	7	232	78,824	1,14,392				

# Health and Safety

The health and safety of all our associates across all our operations is very important for the overall growth of our organisation. In line with our corporate philosophy guideline to "Secure safety and health of associates and other assets", we have implemented a Quality, Environment, Occupational Health and Safety IMS, with certifications, and the same is maintained with continual improvement at all locations, i.e. the Jalgaon, Chittoor, Hyderabad, Udumalpet, Alwar, Bhavnagar and Vadodara plants.

Various safety measures taken across our operations are:

- Fire hydrant systems at Plastic Park, Jalgaon and Hyderabad have been made fully operational, covering the entire plastics manufacturing facilities. Fire hydrant system installation work is in progress at the Udumalpet plant; it is expected to be operational during the next financial year.
- Smoke detection and alarm system is installed to cover the entire administration building and HR office building at Plastic Park, Jalgaon.
- Software modification done in all Polo, Sprint, and Armor series machines for auto tripping.
- Mechanical jam bar safety is provided in bigger size Injection Moulding machines.
- In the PE pipe plant, safety alarm and safety indicators are installed on raw material day bins for early warning of rise in temperature in raw material feeding section.



- In the socketing machine, pipe movement is automated to avoid manual operation in the SWR Pipe plant.
- Safety guards are provided for the operating switches of multi-station butt fusion welding machine in sprinkler, and toe guards are provided for the platforms of the raw material conveying system in the drip line.
- Provision of speed breakers at the road crossings near the drip line plant and provision of side guards on tuskers carrying raw material/coils has helped in safe transportation.
- Pictorial safety work instructions are displayed in the local dialect on shop floors for easy understanding by associates.

All our operations comply with statutory guidelines for occupational health and safety throughout India. We also provide safety trainings to our associates to create awareness and minimise accidents. The percentage of the total workforce represented in formal joint management–worker health and safety committees that help monitor and advise on occupational health and safety programmes remained approximately 7-8% during the reporting period. No worker was involved in occupational activities that have a high incidence or high risk of specific diseases. There was no incidence of high risk of occupation-related disease in India during the reporting period. The safety statistics of major India operations is summarised in the table here. Overseas plants abide by their rule of land and law. As most locations are in developed countries, the strict law, including the health, safety, and insurance measures, is very up-to date and better monitored at regular intervals. We will report the safety statistics of all our operations, including our overseas facilities, in the next reporting cycle.

			Safety	Statistics d	uring the	Reporting	Period			
Year	Payroll / Contractor	Gender Occupational disease rate (ODR)	Type of Injury (FA: First Aid Injury Injury rate LTI: Lost time Injury)		ate (IR)	Occupational disease rate	Lost days rate	Absentee	Work- related	
Tear			FA (First Aid Injury	LTI (Lost time Injury)	FR	SR	(ODR)	(LDR)- Man-days Lost	rate (AR)	Fatalities
2015-16	Payroll	Male	123	8	1.1	13.3		93.2		
	Contractor		35	1	0.3	12.1	Nil	42		Nil
	Total		158	9	0.8	12.7		135.2		
	Payroll		97	5	0.9	2.4		12.3		Nil
2014-15	Contractor	Male	41	2	0.8	0.8	Nil	2		
	Total		138	7	0.8	2.1		14.3		
	Payroll		95	6	1.1	3.3		17		
2013-14	Contractor	Male	42	1	0.4	0.4	Nil	1		Nil
	Total		137	7	0.9	2.9	]	18		

Occupational Health Clinic Activities – 2013-14 and 2014-15					
ACTIVITY	FREQUENCY				
Daily OPD, First-aid treatment for all associates	Daily				
Medical Check-up for all associates by certifying surgeon	Yearly				
Special health check-up for senior executives	Yearly				
Regular follow-up of senior executives and special cases	Routine				
Blood pressure and BSL estimation of all associates	Yearly				
Disease-wise special yoga and pranayam classes	Routine				
Regular blood donation camps are arranged	Twice a year				
Lectures on safety awareness in plants	Routine				
Pre-employment health check-up for new associates	Routine				
Security and vehicle driver associate's fitness test	Yearly				
Emergency Ambulance service for road accidents	Routine				
First-aid training arranged for each plant	Once in three years				
Emergency tablets and kit for heart attack distributed to managers	Routine				
Helping associates to avail Mediclaim facility	Routine				

# Associate Welfare

Various HR initiatives have been adopted by the company to bring about the feeling of the "organisation as a large family under one roof", not only for the associates but their family members as well, in a systematic manner.

**Awareness and Treatment for Infertility :** Infertility is an issue which is not addressed properly because of lack of guidance and shyness of the people suffering from it. Many people give up and abandon the hope due to shyness and / or improper guidance. The company identifies such associates and provides them with proper counselling and treatment.

**Education and Training :** JISL provides free coaching classes to the children of its associates (between grades seven and 10) through the "Vidyarthi Utkarsh Abhiyan" scheme. Along with the academic curriculum, the overall personality development of these children has been a thrust area. During the reporting period, a total of 214 children of our associates were benefited through a 10-day residential "Personality Development Camp" organized at Anubhuti International School. Educational scholarship for the children of our associates continued during the reporting cycle. The scholarships are provided to needy students on merit basis, as well as to students coming from low income groups, even though not meritorious, to encourage them to study further. During the reporting period, we selected two institutes, namely GTTI, Coimbatore and IGTR, Aurangabad, for giving high skill training to the children of our associates.

**Family Trips :** To make a family proud of the role their family member is playing in the progress of the company, visits by associates' family members are conducted to all company locations in Jalgaon. Such visits give them information about the importance of the job. They are also given information about the unique work culture at the organisation, i.e. "Work is Life". A total of 421 visits have been organised during the reporting period, with a total of 17,701 visitors.

**Other Initiatives :** We have also tied up with a department store for providing groceries and daily use items to the associates on credit. The company has made one multi-purpose hall with a capacity of 500 persons in Jalgaon City available to their associates and their immediate family members for marriage and other family functions, at a nominal charge.



'Pola' festival celebrations at Badi Handa Hall, Gurukul, Jain Hills — Bhau and Jain family members greeting the farmers of Jain R&D fields and presenting them traditional gifts.



Family orientation visits are one of the important activities at Jain Irrigation. During one such visit the family members of associates' gathered in front of Gandhiji's statue at GRF for a group photo.



Prof. Tushar Chandwadkar interacting with associates' children during a Potential Development Camp at Anubhuti Residential School.



Associates' family visiting Jain Agri Park at Jain Hills.



Dr. Bhavna Jain head of 'Kantai Netralay' addressing the medical officers of various primary health centres of Jalgaon district about early detection of refractive errors and referral linkages.

# $\langle / \bigcirc \rangle$

We understand how crucial meeting customer demands are to sustain a business. With today's changing scenario, while the customers still place importance on timely delivery, price, and quality of products, there is an increased expectation of the social and environmental performance of the organisation, and its products and services. Our products and services not only meet global standards related to product quality, customer health, and safety, but also reflect our efforts to manufacture products with minimal environmental and social impact. While all our manufactured products meet national and international regulatory requirements, we moderate our energy consumption and greenhouse gas and carbon dioxide emissions through our MIS and green energy products. Our foods division, both facilities and brands, are in compliance with mandates set by major global food certifying agencies, licensing authorities, and their legal/customer requirements. Additionally, being members of Sedex (Supplier Ethical Data Exchange), our food processing plants undergo SMETA (Sedex Members Ethical Trade Audit) checks by third party auditors to verify our compliances with their labour, health and safety, and environmental standards, and business ethics. The food products themselves, across all sites, are certified by independent third party audits compliant with Global Food Safety Management Standards (GMA- SAFE). Taking it a step further, we also have processes in place to ensure proper product labelling, with labels displaying storage and handling instructions. In addition, we also share the MSDS of the products with the customers, when requested. There were no incidents of non-compliance with regulations and voluntary codes concerning the following during the reporting period:

- Health and safety impacts of products and services during their lifecycle
  Product and service information and labelling
- Marketing communications, including advertising, promotion, and sponsorship

At JISL, we do not sell any banned or disputed products. No fines or sanctions were imposed for non-compliance with laws and regulations with respect to the provision and use of our products and services in the reporting period .

Our commitment to quality is unflinching and all our operations/ actions are guided by our Quality Policy, that stands on the five pillars of:

Total Commitment to Customer Satisfaction
 Protection and

#### **QUALITY FIRST**

- All Indian food plants are certified for BRC (global standard for food safety)
- All Indian plants are ISO 14001 and OHSAS 18001-certified
- All indian plants are kosher and halal-certified
- Jalgaon and Vadodara plants are ISO 50001-certified
- Fruit processing plants at Jalgaon and Chittoor are SGF-certified

Advancement of Environment • Market Leadership • Strive for Quality Excellence • Sustainable Development of Stakeholders We are determined to improve our productivity and focus continuously on innovation and upgradation of our products/services and people. In order to assure the desired quality throughout our business, we comply with various global quality standards with respect to management systems, EHS, food safety, etc.

## / Assurance

As a critical element of customer satisfaction, constant and regular customer engagement helps bridge the gap between our services and actual customer satisfaction levels. To this effect, we have established a practice of obtaining work completion certificates from customers and measuring results on a customer satisfaction index. There is also regular and active participation in customer audits conducted across our facilities, major among them being the Hindustan Coca-Cola Beverages Pvt. Ltd., Nestle, Alcatel, McCormick, and Unilever. The customer satisfaction index, represented as a percentage of satisfied customers

for onion and fruit plants, is tabulated here. We strictly maintain 'no disclosure' agreements with our customers to protect their data. There were no substantiated complaints regarding breaches of customer privacy and loss of customer data during the reporting period.

Customer Satisfaction Index				
Year	MIS & Piping Systems	Dehydrated Onions	Processed Fruits	
2013-14	72%	77.5%	85.42%	
2014-15	88%	84.2%	86.99%	
2015-16	91%	82%	85.53%	



#### Product Labelling

We provide contents' information on all our products as per applicable national and international standards. Food products in particular demand detailed information e.g. licence no., contents' details of the product, manufacturing facility address etc. All these details are very well provided with the products. However, specific indicators like sourcing information and disposal method of the products are largely not applicable for most of our products. In case of containers of products wherever it is required container disposal information is provided.

Specific labelling requirement	Hi-tech agri-inputs (MIS, Tissue Culture)	Piping Systems	Food Products	Renewable Energy Products
Sourcing of component	No	No	No	No
Content, environmentally harmful substances	No	No	Yes	No
Safe use of Product	Yes	Yes	Yes	Yes
Disposal of product	No	No	Yes	Yes



#### Global Quality Standards

- BRC (British Retail Consortium)
- Onion & Vegetable Dehydration Unit-Jalgaon & Vadodara
- Fruit Processing Unit, Jalgaon, Chittoor Units 1 & 2











#### SGF (SURE-GLOBAL-FAIR) • Fruit Processing Unit, Jalgaon & Chittoor Unit 2

- HALAL (Halal India Pvt. Ltd., Chennai)
- Onion & Vegetable Dehydration Unit, Jalgaon & Vadodara
- Fruit Processing Unit, Jalgaon, Chittoor Units 1&2

HALAL (Majelis Ulama Indonesia, LPPOM)

Onion & Vegetable Dehydration Unit, JalgaonFruit Processing Unit, Jalgaon

ISO 9001 : 2015

Sheet Division

Pipe Division

Global G.A.P.

Aariculture Division

(Quality Management System)

Tissue Culture Division 
 PFS Division



MIS Division

Solar Division



Intertek



#### ISO 14001 : 2015 (Environment Management System) & OHSAS 18001 : 2007 (Occupational Health & Safety Management System) • All India Plastic & Food Operations

ISO 50001 : 2011 (Energy Management System) & ISO 14064 : 2006 (GHG Management System) • All India Plastic & Food Operations

#### KOSHER

- Onion & Vegetable Dehydration Unit, Jalgaon & Vadodara
- Fruit Processing Unit, Jalgaon & Chittoor Unit 1&2

#### RSPO Certificate

- Onion & Vegetable Dehydration Unit, Jalgaon & Vadodara
  - Organic Certificate
  - Fruit Processing Unit, Jalgaon

SEDEX Membership • Food Park, Jalgaon & Vadodara

### Mapping JISL's Product Range w the Sustainable Developmer nt Ga

#### **JISL Product : Micro Irrigation Systems** (Drip and Sprinkler Irrigation)

- Increases water and energy efficiency
- · Improves productivity of smallholder farmers Helps local farmers through best-in-class
- technology transfer
- · Partnership and overseas acquisitions

#### JISL Product : Pipes-Water Supply Solutions (PE & PVC)

- Used in agricultural water supply, drinking water supply and sanitation
- · Last longer compared to DI, CI and cement pipes and hence supports the low carbon economy
- Collaborated with international organisations in this area
- · Increased water conveyance efficiency via piped supply in irrigation network below main canal

#### **High-tech Agriculture Extension and R&D**

- Trained, educated and helped farmers to cultivate crops for ensuring better yield (Onion contract farming model & )
- UNNATI project for ultra-high density mango plantation in partnership with Hindustan Coca-Cola Private Limited

#### **Renewable Energy** (Solar Water Heating, Solar PV, Biogas)

- Improved overall organizational sustainability
- · Reduced impact of climate change on the market
- Collaborated with other stakeholders for biogas power project and the solar power project

SDG 1	No Poverty
SDG 9	Industry, Innovation and
	Infrastructure
SDG 10	Reduced Inequalities
SDG 12	Responsible Consumption
	and Production
SDG 17	Partnerships for the Goals

SDG 9	Industry, Innovation and Infrastructure
SDG 12	Responsible Consumption and Production
SDG 13	Climate Action
SDG 17	Partnerships for the Goals





SDG 9	Industry, Innovation and
SDG 17	Infrastructure Partnerships for the Goals

SDG 11 : Sustainable Cities and

SDG 13 : Climate Action





# From the Cradle to the Grave : JISL Pilots Life Cycle Assessment of its Products

Manufactured products usually have an impact on the environment throughout their life. As an environmentally-conscious company, we wanted to quantitatively analyse the environmental impact of our products throughout their life cycle. A life cycle assessment (LCA) is associated with measuring the impact across all the stages of a product's life–from raw material extraction through material processing, manufacture, distribution, use, repair and maintenance, and disposal or recycling. At every stage, as there are inputs in the form of resources and outputs (apart from products), which have various impacts on the environment and human health, Jain Irrigation undertook an LCA study of its products.



Two LCAs have been undertaken by JISL during the reporting period, which are as follows:

1.LCA-based environmental footprint comparison of HDPE, Ductile Iron, and Mild Steel pipes

The Solidworks Sustainability module was used for the analysis, based on the selected functional units, including carbon footprint, total energy consumed, water eutrophication, and air acidification. A comparative analysis showed the following result:

Product Name	Carbon Footprint (kg-CO <sub>2</sub> e)	Total Energy Consumed (MJ)	Air Acidification (kg SO <sub>2</sub> e)	Water Eutrophication (kg PO₄ e)
HDPE Pipe	180	4400	0.91	0.091
Ductile Iron Pipe	410	4800	3.5	023
MS Pipe	420	5000	3.4	0.202

The study helped us conclude that the HDPE pipe is the most environmentally-friendly product as compared to Ductile Iron and Mild Steel pipes because:

- HDPE pipe has the lowest overall environmental footprint during its complete life cycle
- DI and MS both have almost 2.5 times more carbon footprint than the HDPE pipe

• HDPE pipe has a service life of more than 100 years, whereas DI and MS pipes have service lives of 30-35 years; HDPE pipe has less impact on environment over 100 years than DI and MS pipes have over 30 years.

2. LCA for Determining the Water-Energy-Nexus for Drip Irrigated and Micro Propagated Banana Cultivation

In this study, the LCA from tissue culture sampling of 1 kg of banana has been studied. The sample was collected for two stages, namely tissue culture sampling and bananas grown in the field. The stage of bananas grown in the field was studied, comparing the flood and drip irrigation used. Water and carbon footprint was calculated for both the stages. It was found that water used by banana saplings is 1.99 litres in it life cycle up to dispatch of the plantlet to farmers field while in traditional method of planting, farmer has to irrigate the farm and water consumed per sapling is 122 litres which is 60 times more.

### Responsible Procurement



Yield of Tissue Culture Banana of Jain Irrigation in farmer's fields.

Suppliers are essential to JISL's value chain, not only to sustain our business growth but also meet our social obligations to the environment and the local community within which the organisation operates. With this in mind, we intend to instill supplier



Raw fruit reciving at world's largest mango porocessing facility of JISL at Jalgaon.

responsibility towards not only their economic and product performance, but their sustainability performance as well, thereby reinforcing our sustainability agenda by reducing the negative impacts of our supply chain and focusing on sustainable practices. Regarding "local" suppliers, we are working on supply chain management for onion and mango farmers who supply us with raw material. "Local" refers to suppliers who are within a 300 km radius of our operations. All our suppliers comply with the local laws and regulations with reference to labour practices. Big suppliers like Reliance and Haldia Petrochemical have their own practices

#### Supplier Audits for Food Processing Division

- Conduct on-site supplier evaluation against JISL's policies and expectations
- Assessing strengths of supplier sustainability management system

#### **Local Sourcing**

- Encourage purchase of raw materials from local suppliers to boost local economy
- Raw material purchased locally

#### **Sustainable Sourcing**

 Instilling JAIN GAP (Good Agricultural Practices) and SAC (Sustainable Agriculture Code) through contractual farming initiatives

in place, which is evident from their sustainability reports. Though our organisation's policies do not extend to our suppliers or contractors, from time to time, we conduct compliance audits/evaluations to ensure an on-site compliance of the supplier's performance against our policies and expectations. We are proactive in promptly addressing shareholder and investor issues and concerns. As on April 2016, none of our suppliers were screened using human rights criteria. We are working towards including this clause in the supplier selection criteria. There were no suppliers with negative environmental impacts in the supply chain identified / reported during the reporting period. Also, we have not received any complaints from our contractors and suppliers during FY 2013-16.

# Redefining Indian Agriculture with JAIN GAP and SAC



A JAINGAP certified onion contract farmer, using personal health and safety equipments on field.

As the production of our raw materials is often not in our direct control, it becomes crucial to implement a purchase policy. Although our contract farming initiatives provide farmers with high-yield seeds, MIS equipment, agronomy advice, and a buy back arrangement (minimum support price or market price, whichever is higher), they are required to meet our requirements of the Sustainable Raw Material Purchase policy. For this, in association with the International Finance Corporation (IFC), we have developed the

JAIN GAP standards for our farmer suppliers, who supply fruits for processing. It helps the company meet its buyers' concerns without significantly increasing costs for low-income farmers. We work with farmers to educate them about and promote sustainable farming practices through our JAIN GAP and SAC initiatives. These initiatives have positively promoted food traceability and safety, worker welfare and sanitation, and environmental conservation through biodiversity and natural resources protection. One such example elucidated below is the purchase of raw material (onions) through JAIN GAP / contract farming during the reporting period:

Year	Total Raw Material (Onions) Purchased (MT)	Raw Material (Onions) Purchased under JAINGAP /Contract Farming (MT)	% of Raw Material (Onions) obtained from JAIN GAP / Contract Farming
2013-14	1,00,693	46,787	46%
2014-15	1,33,658	44,074	33%
2015-16	1,31,176	57,581	44%

# The Transformation of Resources from the Orange Fields to your Juice Boxes

With an aim to boost the food processing industry in India, we, along with our subsidiary - Jain Farm Fresh Foods Ltd. (Food Division of JISL converted into a new subsidiary company), joined hands with the Government of Maharashtra and Hindustan

Coca-Cola Beverages Pvt. Ltd. (HCCBPL) for coming up with the Project "Orange Unnati", which kicked off by signing an MoU between all the parties. The project intends to provide the farmers with the technical know-how to adopt sustainable practices to achieve improved yields. This will be done by extension services and capacity building to ensure high quality produce and state-of-theart processing and pulping facilities. This tripartite agreement has followed after the successful project "Mango Unnati", wherein mango farmers were facilitated in growing and processing high quality mango produce for products such as Maaza and the Minute Maid range.

Objectives of this project are:

 To help farmers of the Vidarbha region (Maharashtra) to grow new and profitable varieties of sweet orange and give them assured marketability with the help of buy back of fruits



- To initiate cultivation and processing of imported varieties of citrus fruits in India with the help of farmers in Indian conditions
- To utilise citrus fruits from the project for the manufacture, sale, and export of fruit juice, primarily to the Coca-Cola system in India and overseas

Under Project "Orange Unnati", a juice manufacturing facility would be set up in the Vidarbha region. Paramount importance would be given to support the local farmers in adopting the Ultra High Density Plantation (UHDP) technique to boost orange yield. A 10,000 acre ultra-high density (UHD) orange plantation will be developed over a period of 10 years for new sweet orange varieties. Further, support will be provided by setting up an orange nursery to educate the farmers by field demonstration. A new concept of Unnati training bus will be implemented which will provide free training on citrus cultivation to the local farmers, using effective communication aids. The Unnati bus aims to train 50,000 farmers in Good Agriculture Practices (Jain GAP) over the span of 10 years.

GLOBALGAP is an internationally recognised set of farm standards dedicated to "good agricultural practices" or GAP. At JISL, we train farmers and help them adapt to GLOBALGAP norms and get the certification, which helps them sell their produce to global buyers. Currently, farms of around 3,000 farmers, who are providing us with mangoes, bananas, and onions, have been GLOBALGAP-certified. The project aims to benefit 15,000 local farmers with an average land holding of

2 acres each. The Unnati extension team will also be providing free agronomical support to the farmers. The farmers will be assured of their product market as our subsidiary Jain Farm Fresh will buy back the fruits from the farmers at predetermined rates for further processing, thereby making it a win-win situation for all.





Chief Minister of Maharashtra Devendra Fadnavis at ground breaking ceremony of project Orange Unnati at Morshi in Amaravati district, Maharashtra.



Unnati mobile training centre.



Mr. Anil Jain and Chief Minister during visit of project unnati site at Morshi.



Local farmers gathered during ground breaking ceremony.



CM testing the sweet orange.

# Upliftment of the Community

On the demise of Bhau – as per his wish

• A total of 45 villages have been selected to receive accessibility to pure drinking water at 5 paisa / litre.

• The development of an agriculture university is underway to promote agriculture and benefit the farmers with the best technical knowledge.

Co-existence within the parameters of socio-cultural sustainability is of prime importance for us here at JISL. To ensure that our activities have a positive impact on the lives of the people living in close proximity with our operations, and society broadly, we engage with the surrounding and local community. The community is integral to our business and is like an extended part of the JISL family.

# Corporate Social Responsibility

Outline of CSR Policy: At Jain Irrigation, CSR is not merely a matter of an obligation to be fulfilled or an account to be presented to society. We firmly believe that we are indebted to society for our existence, survival, and success. We have experienced that we have an invisible bond with society;this bond inevitably leads us to a natural relationship of empathy. It impels the corporation to understand and appreciate social issues and problems. It results in our being part and parcel of



Inauguration of Kantai Netralay, a joint eye care unit established in collaboration with Poona Blind Men Association.

society's progression through the process of inclusive growth. We continually search for innovative ways and means of creating a bridge between the corporation's objectives and social priorities. In order to leverage the demographic dividend of our country, the company's CSR efforts shall focus on health, education, environment, and employability interventions for relevant target groups, ensuring diversity, and giving preference to the needy and deserving communities inhabiting urban India. Together, this



Associates participating in blood donation camp at Jain Plastic Park, Jalgaon.

relationship results in the harmonious co-existence of a symbiotically sustainable business, society, and environment. This philosophy is born from our Mission Statement, formulated 25 years ago – "Leave this world better than you found it". CSR is fundamental to our values and integral to our business approach. While

conducting ethical business, we stand steadfast in maintaining our responsibilities to the communities

and the environment. We have always invested in ventures aimed at the development of the agricultural sector and empowerment of the farmers. Additionally, we have pioneered a wide range of philanthropic initiatives for the holistic development of our neighbouring communities. In light of the requirements under the Companies Act 2013, the company formed a three-member



Dr. Bhavana Jain and team of doctors performing surgery at Kantai Netralay's modern operation theatre.

committee, chaired by Mr. B. H. Jain, with Mr. D. R. Mehta and Mrs. Radhika Pereira being the other two members. The committee drafted the policy on the company's CSR activities, which was approved in the first meeting of the committee on August 11, 2014.



Gandhi Vichar Sanskar Pariksha (GVSP) - Children reflecting on ethics of non-violence at Vinoba Bhave Vidyalaya, Kurdavadi, Tuljapur Maharashtra.



Hands on expoerience for school children on Amber Charkha at GRF Khadi training centre.



Value education session for children by GRF experts at Jalke village, Jalgaon.



GRF team taking total sanitation project meeting at Gram Mahasabha at Dhanora village, Jalgaon



Exposure visit to 'Lok Biradari Prakalp' of Mr. Prakash Amte at Hemalkasa, Gadchiroli district Maharashtra.

We have a comprehensive CSR policy with defined CSR Programmes/Projects. We carry out the CSR activities as per our CSR Policy on our own and through our associated foundations, namely Bhavarlal and Kantabai Jain Multipurpose Foundation (BKJMF) and Gandhi Research Foundation. We spent more than 2.5% of the average net profit of the last three years (equalling INR 1,05,74,745) on our CSR projects during FY 2015-16. Some of the key initiatives which have already been started for the improvement of village sanitation and watershed development during FY 2015-16 are the 'community toilet project', '100% village sanitation project', and 'people initiative for rural development through Joint Liability Groups (JLGs)'.

**Rural Development:** Rural development is one of our prime CSR foci, as enshrined in our Articles of Association. We undertake need-based interventions as well as activities with prospective plans. The thrust of our rural development projects encompasses the promotion of preventive health care and sanitation, and making safe drinking water available to the local people. In the past, we have also undertaken the development of specified villages as a well-planned CSR activity. However, there have been a few initiatives during the reporting cycle. GRF has completed the participatory rural appraisal of the six nearby villages of Jain Irrigation in Jalgaon, and the current expenditure under this head has been on activities in and around the Jalgaon facilities.

**Nature Conservation and Environmental Protection:** Ensuring environmental sustainability through natural resource conservation and environmental protection is congruent with our business as well as our CSR goals. We continuously seek opportunities to invest our efforts and capital to ingrain the concepts of environmental sustainability amongst the farming community and the neighbourhood.

**Promoting Education:** We believe education is the birthright of every individual and hence, we extend our conviction by making it one of the focus areas of our CSR efforts. Our major expenditure in this segment is towards the Anubhuti English Medium School, which provides free education to the underprivileged children of society at large. We make efforts to select needy students, i.e. children who have lost their parents or children whose parents find it difficult to earn a living. We pay several visits to their households and select the deprived children after a rigorous process of interviews.



Dental camp at Domgaon, during the annual 10 days padyatra organised by GRF.





Amber Charkha demonstration to villagers by GRF team during padyatra.



Inauguration of renovated community toile at Mohadi village, Jalgaon.



Children enjoying nutritious sancks at Anubhuti English Medium School.



Canal de-silting work done with people participation at Jalke village under watershed project of GRF.

# Smart Cities Need Smart Buildings: Traditional Wisdom Meets Technology for Sustainability



The 7th GRIHA regional conference was held at the Gandhi Research Foundation, Jain Hills on December 4 and 5, 2015. The theme of the conference was 'Smart Cities', which focused on providing knowledge about sustainable buildings. The objectives of the conference were as follows:

- ✓ Provide knowledge regarding smart technology solutions for building services and infrastructure
- Discuss policy intervention and implementation mechanism to achieve the goals of creating a platform for making Jalgaon a 'Smart City'



Mr. Rajan Kop, Director, town planning, Jalgaon, Ms. Rubal Agrawal, DM, Jalgaon, Mr. Sanjay Kapadnis, Commissionor, JMC, Architect Shirish Barve, Mr. Bharat Amalkar and Mr. Ashok Jain inaugurating 7th GRIHA Regional Conference at Jain Hills.

The guest of honour was Mr. Rajan Kope, Director—Town Planning Department, Maharashtra. The conference saw a large gathering of professionals, such as consultants in the building industry and urban planning, service providers looking for a venture in the emerging sustainability market, urban and environmental planners, real estate developers, policy makers, etc. The conference was a platform for dialogue between the various stakeholders determined to make their city sustainable through smart and integrated solutions.



Mr. Atul Jain speaking at GRIHA Regional Conference. The panel on dias includes minister of water resources GoM among others.

## Resources for the World -JAL JAN JODO

We organised a national conference on "Water and Food Security for All" on December 19 and 20, 2014 at the Gandhi Teerth, Gandhi Research Foundation, Jain Hills. The conference was aimed at successfully adding value on the issue of water and food security. This solution oriented conference also targeted the creation of an ongoing action-oriented platform focusing on the betterment of the nation by proactive contribution. The conference saw participation from of delegates from various backgrounds, including

policy-makers working on water and food security, practitioners of water management, innovators / technology providers, NGOs working in the area of water, people working on river rejuvenation, water professionals and irrigation engineers, and educationists and scientists.



Participants from national NGOs visiting future hi-tech agri technologies at Tissue Culture Park and PPP based Kantai Dam project at Jalgaon.



Mr. Rajendra Singh Rana-Jalpurush of India, Dr. Bhavarlal Jain, Mr. Madhavarao Chitale, Ms. Radhaben Bhat and Dr. M. S. Subbarao inaugurating National Conference on Water and Food Security for all at Jain Hills.



# A Call for Sustainability – FALI and the Future of Agriculture

Future Agriculture Leaders of India (FALI) is a unique, transformative educational programme which has been designed for high school students. The programme aims at making agriculture an exciting area of learning with growth opportunities in modern agriculture, agro-enterprise, and agribusiness, and puts impetus on basic technical knowhow, interactive learning, laboratory work, and enterprise development in agriculture among the students.

Having a distinct approach to learning, the programme believes in learning by doing. We focus on interactive learning and group problem-solving rather than lectures. Our students initiate practical exercises, where they develop small businesses which include the use of



the greenhouse and drip irrigation systems supplied by Jain Irrigation. Moreover, our students also get the chance to meet and interact with the leading fruit exporters, service companies, and modern farmers when they visit their farms to see the best / modern practices in agriculture being implemented.

The future generation of our country is resistant towards taking up agriculture as a mainstream area of education and employment as they see it as a discouraging activity due to the unfavourable experience of the Indian farmers. In an attempt to change the perspective of students and parents, we launched the FALI.

**The way forward:** After the successful completion of stage-1, in the current stages 2 and 3, many companies are being joined by the core anchor companies, namely Godrej Agrovet, UPL, and Mahindra. In 2015-16, FALI expanded its reach from 250 students of grades eight and nine in the pilot round to 1,500 students of grades eight and nine across 18 schools, with an exponential expansion planned in 2016-17. Being a one-of-a-kind programme running in India, we anticipate that FALI will become a national institution by 2020, with a separate legal structure by 2017.





The Particiapants of Future Agriculture Leaders of India (FALI) programm's first convention in group photo at Jain Hills with Dr. Bhavarlal Jain, Nancy Berry and senior officials of agri and food sector in April 2015.



Mr. Ashok Jain giving away awards to FALI participants.



Participants having visits to 'Future Farming Techniques' demonstration centre at Tissue Culture Park and R&D fields at Jain Hills.



**Promotion of Sports :** We understand that sports and sportsmanship have the power to nurture our children and contribute to their holistic development. We promote both the nationally recognised sports and Olympic sports; these include a range of indoor and outdoor games. Our Jain Sports Academy, which functions under the BKJMF trust, is responsible for coordinating and handling all activities related to sports. Most of our spending goes towards the coaching fees and payment made to budding sportsmen and their coaches. Our expenditure on sports has touched 1.37 million in FY 2014-15. Besides this, there are



The winners of 'Times Shield Cricket Trophy' from Jain Sports Academy, Jalgaon.

many other CSR activities undertaken by the BKJMF and GRF independently throughout the calendar year. Currently, most of our activities are concentrated in and around Jalgaon, but we have plans to expand our endeavours to other locations, such as Chittoor, Baroda, Udumalpeth, Hyderabad, Alwar, and Bhavnagar, in alpha order.



'World's Women Day-2015' was celebrated with football match, organised by Bahinabai Chaudhari Memorial Trust and Jain Sports Academy.

# CSR Expenditure

As CSR is one of our core business activities, a lot of impetus is put on CSR investments. These initiatives are essentially aimed at improving the lives of the people affected within and outside the organisation. During FY 2015-16, we spent more than 2.5 % of the average net profit of the last three years, equalling INR 1,05,74,745 on our CSR projects .



World Junior Chess Championship organised by Maharashtra Chess Association and supported by Jain Irrigation Systems Ltd. at Hotel Hayatt in Pune, September 2014.

# Project Mango UNNATI : Innovation in Cultivation to Support the Farmers

Project Unnati was set to be a key milestone in the large-scale adoption of the ultra-high density farming practice leveraging drip irrigation, to support farmers. The project is a result of our partnership with Coca-Cola India and the farmers, to demonstrate and enable the adoption of Ultra-High Density Plantation (UHDP) practices for mangoes. The project encouraged sustainable, modern agricultural practices and helped double mango yields, thereby increasing the farmers' incomes. The objectives of the project were:

- To demonstrate innovative methods of cultivation which lead to higher productivity, lower operating cost, and increased utilisation of inputs, including water and nutrients
- 2. To raise farmers' incomes and alleviate poverty
- 3. To the extent possible, de-risk traditional farming by augmenting commercial viability
- To improve agricultural, economic, social and environmental sustainability by promoting Good Agricultural Practices (JAIN GAP).

The project was launched in September 2011 in the Chittoor district of Andhra Pradesh, with a participation of 212 farmers across 156 villages. The project saw a



Mr. T. Krishna Kumar, CEO of HCCBPL and Mr. Anil Jain inaugurating the project Maha UNNATI at, Jain Agri Park at Udumalpet.

significant representation of women, who comprised 41.5% of the farmers engaged in the project.



Ultra high density mango pantation at demonstratin farms at Udumalpet, Tamilnadu.



Farmer showing first year produce from UHDP Mango plants, promoted under project Mango Unnati.

Seeing the success of this project, the second phase was launched in May 2013 and was called "Maha Unnati". Launched on a larger scale, this project was set up in major mango-growing areas of Andhra Pradesh, Tamil Nadu, and Karnataka, within a radius of 200-250 km from Chittoor. This project has been signed for a period of 10 years between Jain Irrigation and Hindustan Coca-Cola Beverages Pvt. Ltd. The objectives of this project are to:

- 1. Increase area under UHDP and enhance productivity at least by two or three times
- 2. Increase productivity of traditional orchards by helping farmers adapt improved practices, e.g. MIS and fertigation, rejuvenation, top working, and JAIN GAP
- 3. Establish mechanism to buy back the fruits
- 4. Establish social, economic, and environmental sustainability

With the project duration of 10 years, the project targets to reach out to 69,254 farmers for cultivation of mango across 1,25,491 acres of land. The project aims at providing financial assistance of INR 21,684/acre/farmer for planting material, pit digging,

and MIS, in addition to promoting other improved practices to enhance the productivity of traditional orchards' sustainably and providing free agronomic guidance, field trainings, and JAIN GAP accessories to the farmer taking up UHDP. As on March 2016, a total of 90 farmers have been a part of the project and 273.5 acres of land have been utilised for the production of mango in the states mentioned above.

With a successful first phase, Project Maha Unnati is a revolutionary step in making the farmers independent by assisting them in taking up mango cultivation and thereby improve their livelihood.



Increasing farmer's income by increasing the productivity in mango orchards is the major objective of Mango UNNATI Project.

# Awards & Accolades to Jain Irrigation

Awards Instituted by Jain Irrigation & Bhavarlal and Kantabai Jain Foundation

# Awards & Accolades to Jain Irrigation

Year	Name of Award/Recognition	Instituted by	Purpose of Award
2012	National Energy Conservation	Bureau of Energy Efficiency	In appreciation of their efforts in Energy Conservation in the
& 2013	Award 2012 & 2013	(Ministry of Power, Government of India)	Food Processing Section for the year 2012
2013	Adhavaryu	Indian Agriculture & Food Processing Industry	For the betterment of Food Science and Technology in India, both Academic and Industrial
2013	PLEXCONCIL Award	PLEXCONCIL	Top Exporter of PVC Foam Board/Sheet
2013	PLEXCONCIL Award	PLEXCONCIL	Top Exporter of Pipes & Hoses of Plastics
2013	PLEXCONCIL Award	PLEXCONCIL	Top Exporter of Drip Irrigation Systems
2013	CNBC Asia's India Corporate Social Responsibility Award	Omkar Realtors and Developers Pvt. Ltd.	For its outstanding contribution to society
2013	Quality Brand Award 2013-15	National Education & Human Resource Development Organisation	Outstanding achievements, performances in their respective field.
2013	Star Performer-2012-2013	EEPC India (Formerly Engineering Export Promotion Council)	Star Performer award 2012-13 in the product group of other agricultural, forestry machinery and parts large enterprise
2014	ICAR - Excellence Award	Indian Council of Agricultural Research, New Delhi, Gol	For his Innovative Contributions to Indian Agriculture
2014	Global CSR Excellence & Leadership Award (in the category "Accounting for Climate Change")	ABP News	JISL's work with products such as drip and solar which reduce the impact of climate change was a major aspect that was taken into consideration. JISL has registered five CDM (Carbon Credits) projects with UNFCCC even though the carbon market is not showing signs of improvement. JISL's efforts are constant in working towards a low carbon economy.
2014	Suryadatta Lifetime Achievement Award	Suryadatta Group of Institutes, Pune	"Lifetime achievement award for outstanding contribution to society."
2014	Agriculture Summit - 2014 Award of Honour	Government of Punjab	For outstanding contribution in Agriculture Development
2014	CNN-IBN-Infosys Innovating for a Better Tomorrow	CNN-IBN & Infosys	For their significant business and social impact. Serving as role models, these innovations have changed the course of India's progress.
2014	FT/IFC Transformational Business Award	Financial Times, London & International Finance Corporation (World Bank Group)	Achievement in inclusive Business (Special Commendation)
2014	FICCI Chemicals and Petrochemicals Award	Federation of Indian Chambers of Commerce and Industry (FICCI)	For Distinguished Contribution to Chemicals & Petrochemicals Industry
2014	FICCI Chemicals and Petrochemicals Award	Federation of Indian Chambers of Commerce and Industry (FICCI)	For the Most Environment-Friendly Company in Petrochemicals
2014	Sourya Urja Puraskar	Solar Energy Forum of India (SEFI) & Renewable Energy Promotion Association (REPA)	For India's Most Integrated Company in De-Centralized Solar & Solar Water Pumping Systems
2014	Honorary Fellowship	The Horticultural Society of India, New Delhi (Gol) & Tamil Nadu Agricultural University, Coimbatore	Lifetime Achievement Award for Significant Contribution in Micro Irrigation and Micro Propagation
2014	Lokmat Corporate Excellence Award	Lokmat Newspaper	For industries that have contributed significantly towards the success and economic development of Maharashtra State.
2014	ASM's-CSR Excellence Award	ASM Group of Institutes, Pune	For its work in rural developoment, use of solar energy and community development
2014	APEDA Export Award 2011-2012	Agricultural & Processed Food Products Export Development Authority, Government of India	Significant Contributions in Quality & Exports of Agriculture & Processed Food Products
2014	APEDA Export Award 2012-2013	Agricultural & Processed Food Products Export Development Authority, Government of India	Significant Contributions in Quality & Exports of Agriculture & Processed Food Products
2014	Cll National Award for Food Safety	Confederation of Indian Industries (CII)	Commendation certificate for significant achievement in food safety. (Onion & Vegetable Dehydration Unit)
2014	Thomson Reuters India Innovation Award		Jain Irrigation Systems Ltd. Is among the top 100 Indian innovator companies and research organizations for the year 2014
2015	Best Innovation Award	Central Board of Irrigation and Power (CBIP)	For Best Innovation in Manufacturing and Servicing in Water Resources
2014	PLEXCONCIL Award	PLEXCONCIL-2013-14	Top Exporter of PVC Foam Board/Sheet
2014	PLEXCONCIL Award	PLEXCONCIL-2013-14	Top Exporter of Pipes & Hoses of Plastic

2015 2015	PLEXCONCIL Award	PLEXCONCIL-2013-14	
2015			Top Exporter of Drip Irrigationn Systems
	Safety Award	Directorate of Industrial Safety & Health, GoM and Mutual Aid Response Group	Best Mock Drill performance in heavy Industry unit
2015	FIIB Leadership in Sustainability Award	Fortune Institute of International Business	For his lasting contributions in Sustainable Development of India
2013	The Desal Prize	Swedish International Development Cooperation Agency, the Ministry of Foreign Affairs of the Kingdom of The Netherlands	Jain Irrigation Systems Ltd. in partnership with Massachusetts Institute of Technology (MIT), USA has developed a path-breaking solar PV based water purification technology. This new technology is based on Electro- dialysis-Reversal principle. The environment friendly system is powered by solar PV. It desalinates the brackish water into drinking quality water with least regeneration or wastage. Jain Irrigation and MIT has bagged prestigious Desal prize for this technology. USAID chose five finalists among 68 projects from 29 countries.
	TEMA-CMAI National Telecom Manufacturing Awards	Bharat Sanchar Nigam Limited, Bangalore	Best Telecom Equipment (HDPE Telecom Ducts) Manufacturer
2015	Make in India Awards for Excellence		In the IT Biotechnology Category for recognizing contribution in enabling India become a leading Global Economy.
2015	Fortune's-Change the World list of 51 companies	Fortune Magazine	"In first ever Fortune 'Change The World' list of 2015, Jain Irrigation the only Company from India, ranks 7th among 51 companies of the world" (A listing of 51 companies that have addressed the world's biggest social & environmental problems).
2015	Agriculture Leadership Award	Agriculture Today, New Delhi	Innovative products and solutions to empower farmers.
2015	PLEXCONCIL Award	PLEXCONCIL-2014-15	Top Exporter of PVC Foam Board/Sheet
2015	PLEXCONCIL Award	PLEXCONCIL-2014-15	Top Exporter of Pipes & Hoses of Plastic
2015	PLEXCONCIL Award	PLEXCONCIL-2014-15	Top Exporter of Drip Irrigationn Systems
2015	Porter Prize	Institute for Competitiveness Porter Prize	Porter Prize on Creating Shared Value: High impact organisation that has created economic success by redefining markets, products, way of doing business, creating collaborative efforts and in turn creating societal and economic progress.
2016	IAA Olive Crown Green Crusader Award	International Advertising Association (IAA)	"For his great contribution to the production, promotion and propagation of drip irrigation. For pioneering the concept of micro irrigation in India. For his significant R&D into wasteland development. Soil and and Water Conservation, for the knowledge he has disseminated through the many books he authored, and Anubhuti, the green school he set up. For making the country proud with his achievements and awards. For being hailed globally as the Water Conserver of India. For making agriculture "a profession with a future.""
I	Akhil Bhartiya Khandesh Kohinoor Puraskar	Khandesh Ahirani Kasturi Sahitya Sanskrutik Kala Manch, Pune	For contributions to Development of Litrature, Culture, Agriculture, Education & Industry of Khandesh.
2016	Sahyadri Navratna Sanman Sohala-2016 - Vaibhav Ratna	DD Sahyadri, Mumbai	In the 15th Sahyadri Navratna Sohla, Sahyadri Channel honours you with the Vaibhav Ratna Award in front of its innumerable viewers! Whole Maharashtra is proud of your great achivements in the industrial sector. Sahyadri Channel Salutes your achievements as staggeringly precipitous as the mountains of Sahyadri.
	COSIDICI National Award for Outstanding Entrepreneurs 2016	Council of State Industrial Development & Investment Corporations of India	For outstanding entrepreneurship for his unit Jain Irrigation Systems Ltd. Assisted by SICOM Ltd. At the COSIDICI National Award function held at Jammu
2016	Award for Recognition at Water for Food Global Conference	Robert B. Daugherty Water for Food Institute at the University of Nebraska	Champion of Agricultural Water Management Devoted to Gandhian Principles Pioneer in High-Productivity Irrigation
2016	Lifetime Achievement Award	Indian Society of Alliums; National Research Centre for Onion & Garlic; National Horticultural Research and Development Foundation; Bejo Sheetal Bio-Science Foundation, Jalna	In the field of onion and garlic research which has helped enhance productivity and quality in the country
	Uttar Maharashtra Ratngaurav Puraskar	Maharashtra Tourisam Development Corporation	Born in Khandesh and the desirable men-women Ratna



India Business Leader Award-2013



Adhavaryu Award-2013



Global CSR Excellence & Leadership Award (In the category "Accounting for Climate Change")-2014



Adarsha Vyapari Uttam Purskar-2013



APEDA Gold Export Award-2011-2012 & 2012-2013



National Export Excellence Award for Star Performer-2012-13



CII National Award for Food Safety-2014



CNN-IBN-Infosys Innovating for a Better Tomorrow-2014



Lokmat Corporate Excellence Award-2014



FT/IFC Transformational Business Award-2014



Suryadatta National Award-2014



ASM's-CSR Excellence Award-2014



Sourya Urja Puraskar-2014



Honorary Fellowship-2014



Excellence Award and Scroll of Honour-2014



Plexconcil Award-2014



Agriculture Leadership Award-2015



FIIB Leadership in Sustainability Award-2015



Best Innovation Award-2015

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Safety Award-2015

TEMA-CMAI National Telecom Manufacturing Award-2015




Dharti Aba Birsa Munda Award-2016



Award for pioneering contribution to concept of 'Water for Food' recognition at Water for Food Global Conference - 2016 in USA (This award given to Mr. Bhavarlal Jain was received post-humously by Mr. Anil Jain)

Make in India Awards for Excellence-2015



Sahyadri Navratna Sanman Sohala-Vaibhav Ratna-2016



IAA Olive Crown Green Crusader Award-2016 (This award given to Mr. Bhavarlal Jain was received posthumously by Mr. Abhedya Jain)



COSIDICI National Award for Outstanding Entrepreneurs-2016



Akhil Bhartiya Khandesh Kohinoor Purskar-2016

# Awards Instituted by Jain Irrigation & BKJF

## Agriculture Productivity and Adoption of Modern Technology

Sr. No.	Name of the Award	Initiated in Year	Number of Awards	Amount (₹)/Citation
1	Padmashree Appasaheb Pawar Modern Technology Award	2002	7	2,00,000/-
2	Jain Nedungadu Krushi Abhiyantriki Award	2001	15	10,000/-*
3	Jain - INCID Drip Irrigation Award	2003	7	51,000/-
4	Jain - INCID Agriculture Irrigation Award	2002	5	51,000/-
5	Gaurai : Modern Technology in Banana Award	2001	31	10,000/-
6	Tamil Nadu Agriculture University-'B. Tech (Horticulture) Award	2007	8	10,000/-
7	Banana Lifetime Achievement Award	2001	9	1,00,000/-
8	'Kantai' Jain White Onion Production Technology	2001	4	11,000/-
9	Late Hiralal Jain Pomegranate Hi-tech Award	2016	5	51,000/-

## Education

10	Gaurai Gold Medal ( Biotech PG Course North Maharashtra University, Jalgaon)	2002	13	Gold Medal
11	Hira Gold Medal (NMU, Jalgaon)	2002	12	Gold Medal
12	Kantabai Gold Medal (NMU, Jalgaon)	2008	8	Gold Medal
13	Khashaba Jadhav Gold Medal (Sports, NMU)	2011	7	Gold Medal
14	MPAUT Udaipur	2010	7	Gold Medal
15	Hiralal Jain Scholarship	1999	4	50,000/-
16	Hiralal Talent Search Scholarship	2000	98	25,000/- and books

### Literature and Art

17	Poetess Bahinabai Award for Best writer amongst women. (Marathi)	1991	13	51,000/-
18	Balkavi Thombare Award for best poet (Marathi)	2007	4	51,000/-
19	N. D. Mahanor : Best writer award (Marathi)	1992	12	51,000/-
20	Loknete Yashwantrao Chavan Literary Award	2007	9	11,000/-
21	Natwarya Lotu Bhau Patil best Drama Award	2006	10	11,000/-
22	Godavari Gaurav Art Award	2002	8	2,00,000/-*

### Social Service

23	Jamnaben Kutmutiya Lok Sevak Puraskar	1994	23	51,000/-
24	Maa-Baba Award (Couple working for social upliftment as per Nayee-talim as suggested by Mahatma Gandhi)	2013	4	31,000/-

\* Annual interest on this amount is given with award.



Padmashri Appasaheb Pawar Modern Technology Award-2014 (Jain Irrigation Systems Ltd. & Bhavarlal & Kantabai Jain Multipurpose Foundation): Bestowed every alternate year (since 2002) to the farmer devoting his whole life for using Modern Irrigation Techniques, and resulting in record breaking yields. Shri Vijay Ingle (Patil) receiving the award from Shri. Devendra Fadnavis, Chief Minister of Maharashtra.

Keli Jeevan Dhyeyapurti Puraskar — 2015 (Bhavarlal & Kantabai Jain Multipurpose Foundation): Bestowed every year since 2000 to the farmer devoting his whole life for Banana Cultivation with Modern Technique. and Gaurabai Keli Navatantra Puraskar — 2015 (Bhavarlal & Kantabai Jain Multipurpose Foundation): Awarded every year since 2001 to the devoted farmer, who has used sound planting methods involving Micro Propagation and Micro Irrigation Techniques, resulting in a record breaking yield.





Jain-INCID Agri Irrigation Award — 2015 (Bhavarlal & Kantabai Jain Multipurpose Foundation): Conferred every alternate year (since 2001) on person/institute/company for using Micro Irrigation System in an innovative manner. Dr. T. B. S. Rajput receiving the award from Uma Bharti, Union Minister of Water Resources.



Jain-INCID Micro Irrigation Award — 2015 (Bhavarlal & Kantabai Jain Multipurpose Foundation): Conferred every alternate year (since 2003) on farmer/farmer group for using Micro Irrigation System effectively. An associate of Dr. K. Yalla Reddy receiving the award on his behalf from Uma Bharti, Union Minister of Water Resources.



Tamil Nadu Agriculture University - 'B. Tech. (Horticulture) Award' — 2014 (Jain Irrigation Systems Ltd): Conferred every year (since 2007) to the candidate securing first rank in the final examination of Agricultural Engineering. Madhubala R. receiving the award.



Ma Baba Award — 2014 (Gandhi Research Foundation): Ma Baba Award of ₹ 31000/- given to the couple dedicating their life, for the cause of humanity by propagating novel educational theories based on 'Nayee Talim' (every year since 2013). Binduben & Partheshbhai Pandya receiving the award from Arun Dave and Nisha Jain.



**Godavari Gaurav Chitrashilpa Puraskar** — **2014** (Kusumagraj **Pratisthan & Bhavarlal and Kantabai Jain Multipurpose Foundation):** The award symbolizes gratitude to great artistes'. Suhas Bahulkar receiving the award from Dr. Jabbar Patel.



Jamnaben Kutmutiya Lok Sevak Puraskar — 2014 (Bhavarlal & Kantabai Jain Multipurpose Foundation): Bestowed every year since 1994 on a person, leading a life as per Gandhian Philosophy and Sarvodaya Practices. Avinash Kakade receiving the award from Chandrakant Wankhede, a prominent farmers' leader.



Loknete Yashwantrao Chavan Literature Award — 2014 (Bhavarlal and Kantabai Jain Multipurpose Foundation): Presented every year since 2007 to an outstanding writer in Marathi Literature. Ramchandra Nalavade receiving the award from Padma Shri N. D. Mahanor. and Natvarya Lotubhau Patil Natya Puraskar — 2014 (Bhavarlal and Kantabai Jain Multipurpose Foundation): Presented every year since 2006 to the outstanding playwright in Marathi. Vaman Kendre receiving the award from Padma Shri N. D. Mahanor.



# GRIG4 INDEX 'in accordance' Comprehensive Option General Standard Disclosures (GSD)

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G4-9	Scale of the organisation: Workforce, Operations, Revenues, and Production	41, 48, 71-72	156-158	
G4-10	Workforce by Type, Gender, and Region	109-110	156-158	Reported partially for overseas facilities
G4-11	Percentage of total employees covered by collective bargaining agreements	100-101	156-158	
G4-12	Describe the organisation's supply chain	120-122	156-158	
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G4-14	Report whether and how the precautionary approach or principle is addressed by the organisation (sustainability approach)			We do risk assessment but data on linkages with precautionary principales is not available
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Disclosure	Description	Page No.	External Assurance	Remarks / Data Adequacy/ Omission (if any)
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G4-52	Process for determining remuneration	111	156-158	
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G4-54	Ratio of the annual total compensation for the organisation's highest-paid individual to the median annual total compensation for all employees	111	156-158	
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## Specific Standard Disclosures (SSD)

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#### ASPECT: ECONOMIC PERFORMANCE

Specific Standard Disclosure	Description	Page No.	External Assurance	Remarks / Data Adequacy/ Omission (if any)
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G4-EC4	Financial assistance received from government; client to confirm	71-73	156-158	
ASPECT: MAI	RKET PRESENCE			
G4-EC5	Ratios of standard entry level wage by gender	111	156-158	
G4-EC6	Proportion of senior management hired from the local community at significant locations of operation			Appropreiate data was not available for reporting
Aspect: INDIF	RECT ECONOMIC IMPACTS			
G4-EC7	Development and impact of infrastructure investments and services supported	73	156-158	
G4-EC8	Significant indirect economic impacts, including the extent of impacts	73	156-158	
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G4-EC9	Proportion of spending on local suppliers at significant locations of operation	122-123	156-158	
CATEGORY: B	ENVIRONMENT			
ASPECT: MAT	TERIALS			
G4-DMA	Disclosure on Management Approach	76	156-158	
G4-EN1	Materials used by weight or volume	77	156-158	
G4-EN2	Percentage of materials used that are recycled input materials	77	156-158	
ASPECT: ENE	ERGY			
G4-DMA	Disclosure on Management Approach	84, 86	156-158	
G4-EN3	Energy consumption within the organisation	85	156-158	
G4-EN4	Energy consumption outside the organisation	121-122	156-158	Pilot scale LCA is being conducted. We plan to report this in next reporting cycle.
G4-EN5	Energy intensity			Complete data is not available for this indicator, we plan to report this in upcomming year's
G4-EN6	Reduction of energy consumption	84	156-158	
G4-EN7	Reductions in energy requirements of products and services	84	156-158	
ASPECT: WAT	rer de la companya de			
G4-DMA	Disclosure on Management Approach	77-78, 131	156-158	
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G4-EN9	Water sources significantly affected by withdrawal of water	78	156-158	
G4-EN10	Percentage and total volume of water recycled and reused	78-79	156-158	
ASPECT: BIO	DIVERSITY			
G4-DMA	Disclosure on Management Approach	94-98	156-158	
G4-EN11	Operational sites owned, leased, managed in, or adjacent to protected areas, and areas of high biodiversity value outside protected areas	94-98	156-158	Only limited to Indian operations for all products groups
G4-EN12	Significant impacts on biodiversity	94-98	156-158	
G4-EN13	Habitats protected or restored	94-98	156-158	
G4-EN14	Total number of IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk	94-98	156-158	

Specific Standard Disclosure	Description	Page No.	External Assurance	Remarks / Data Adequacy/ Omission (if any)
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G4-EN16	Energy indirect greenhouse gas (GHG) emissions (Scope 2)	87-89	156-158	
G4-EN17	Other indirect greenhouse gas (GHG) emissions (Scope 3)	89	156-158	Partially reported
G4-EN18	Greenhouse gas (GHG) emissions intensity	87-89, 122	156-158	
G4-EN19	Reduction of greenhouse gas (GHG) emissions	84, 89, 91	156-158	
G4-EN20	Emissions of ozone-depleting substances (ODS)	87	156-158	
G4-EN21	NOX, SOX, and other significant air emissions	86	156-158	
	LUENTS AND WASTE	00	100 100	1
G4-DMA	Disclosure on Management Approach	92	156-158	
G4-EN22	Total water discharge by quality and destination	78	156-158	
G4-EN23	Total weight of waste by type and disposal method	93	156-158	
G4-EN23	Total number and volume of significant spills	93	156-158	
G4-EINZ4	· · · ·	93	100-100	
G4-EN25	Weight of transported, imported, exported, or treated waste, deemed hazardous under the terms of the Basel Convention 2 Annex I, II, III, and VIII, and percentage of transported waste shipped internationally	92-93	156-158	
G4-EN26	Water bodies and related habitats significantly affected by the organisation's discharge of water and runoff	78	156-158	
ASPECT: PRO	DDUCTS AND SERVICES			
G4-DMA	Disclosure on Management Approach	49, 82-83, 120-122	156-158	
G4-EN27	Mitigation of environmental impacts of products and services	49, 82, 120- 123	156-158	
G4-EN28	Percentage of products sold and their packaging materials that are reclaimed by category			Not reported
ASPECT: COI	MPLIANCE			
G4-DMA	Disclosure on Management Approach	76, 100	156-158	
G4-EN29	Environmental Fines	100		
ASPECT: TRA	ANSPORT			·
G4-DMA	Disclosure on Management Approach			Not applicable directly
G4-EN30	Significant environmental impacts of transportation (DUST)			Not applicable directly
ASPECT: OVE		1		
G4-DMA	Disclosure on Management Approach	74-76, 80-83	156-158	
G4-EN31	Total environmental protection expenditures by investment type	96	156-158	
ASPECT: SUF	PPLIER'S ENVIRONMENTAL ASSESSMENT			
G4-DMA	Disclosure on Management Approach	123	156-158	
G4-EN32	Percentage of new suppliers that were screened using environmental criteria			Complete information was not aviable Not reported.
G4-EN33	Significant actual and potential negative environmental impacts in the supply chain and actions taken	123	156-158	
ASPECT: EN	VIRONMENTAL GRIEVANCE MECHANISMS			
G4-DMA	Disclosure on Management Approach	76	156-158	
G4-EN34	Environmental Grievances and their redressal	76	156-158	
CATEGORY: S	1			
	DRY: LABOUR PRACTICES & DECENT WORK			
ASPECT: EMI				
G4-DMA		112	156-158	
	Disclosure on Management Approach	112	156-158	
			1.00-1.00	
G4-LA1	Employee hires and turnover rates by age, gender and region Benefits provided to full-time employees	108-112	156-158	

Specific Standard Disclosure	Description	Page No.	External Assurance	Remarks / Data Adequacy/ Omission (if any)
ASPECT: LAE	BOUR / MANAGEMENT RELATIONS			
G4-DMA	Disclosure on Management Approach	112	156-158	
G4-LA4	Minimum notice period regarding operational changes	112	156-158	
ASPECT: OCO	CUPATIONAL HEALTH AND SAFETY			
G4-DMA	Disclosure on Management Approach	114	156-158	
GA-LA5	Percentage of total workforce represented in formal joint management–worker health and safety committees that help monitor and advise on occupational health and safety programmes	115	156-158	
G4-LA6	Type of injury and rates of injury, occupational diseases, lost days and absenteeism, and total number of work-related fatalities, by region and by gender	115	156-158	
G4-LA7	Workers with high incidence or high risk of occupational diseases	115	156-158	
G4-LA8	Health and safety topics in formal agreements with trade unions	115	156-158	
ASPECT: TRA	INING AND EDUCATION			
G4-DMA	Disclosure on Management Approach	112	156-158	
G4-LA9	Average hours of training per year per employee by gender and type	112-114	156-158	
G4-LA10	Programmes for skills management and lifelong learning	112-114	156-158	
G4-LA11	Percentage of employees receiving regular performance and career development reviews, by gender and by employee category	111	156-158	
ASPECT: DIV	ERISTY AND EQUAL OPPORTUNITY		1	
G4-LA12	Composition of governance bodies and breakdown of employees per employee category according to gender, age group, minority group membership, and other indicators of diversity	108-109, 112	156-158	
ASPECT: EQU	JAL REMUNERATION FOR WOMEN AND MEN		1	
G4-DMA	Disclosure on Management Approach	110	156-158	
G4-LA13	Ratio of basic salary and remuneration of women to men	111	156-158	
ASPECT: SUF	PPLIER'S ASSESSMENT FOR LABOUR PRACTICES			
G4-DMA	Disclosure on Management Approach	122	156-158	
G4-LA14	Percentage of new suppliers screened using labour practices	123	156-158	
G4-LA15	Significant actual and potential negative impacts for labour practices in the supply chain and actions taken	122-124	156-158	
ASPECT: LAE	BOUR PRACTICES GRIEVANCE MECHANISMS			
G4-DMA	Disclosure on Management Approach	100, 112	156-158	
G4-LA16	Number of grievances about labour practices filed, addressed, and resolved through formal grievance mechanisms	106-107, 112	156-158	
CATEGORY: S	SOCIAL			
SUB CATEGO	RY: HUMAN RIGHTS			
ASPECT: INV	ESTMENT			
G4-DMA	Disclosure on Management Approach	100, 112	156-158	
G4-HR1	Total number and percentage of significant investment agreements and contracts that include human rights clauses or that underwent human rights screening	100	156-158	
G4-HR2	Total hours of employee training on human rights policies	100	156-158	To be started systematically from next reporting cycle.
ASPECT: NO	N-DISCRIMINATION			
G4-DMA	Disclosure on Management Approach	112	156-158	
G4-HR3	Total number of incidents of discrimination and corrective actions	112	156-158	
ASPECT: ECC	DNOMIC PERFORMANCE			
G4-DMA	Disclosure on Management Approach	100	156-158	
G4-HR4	Operations and suppliers identified in which the right to exercise freedom of association and collective bargaining may be violated or at significant risk, and measures taken to support these rights	100	156-158	

Specific Standard Disclosure	Description	Page No.	External Assurance	Remarks / Data Adequacy/ Omission (if any)
ASPECT: CHI	LD LABOUR			-
G4-DMA	Disclosure on Management Approach	100	156-158	
G4-HR5	Operations and suppliers identified as having significant risk for incidents of child labour, and measures taken	100	156-158	
ASPECT: FOF	RCED OR COMPULSORY LABOUR			-
G4-DMA	Disclosure on Management Approach	100	156-158	
G4-HR6	Operations and suppliers identified as having significant risk for incidents of forced or compulsory labour, and measures taken	100	156-158	
ASPECT : SE	CURITY PRACTICES		,	-
G4-DMA	Disclosure on Management Approach			Not applicable/relevant
G4-HR7	Percentage of security personnel trained in the organisation's human rights policies or procedures that are relevant to operations			Not applicable/relevant
ASPECT: IND	IGENOUS RIGHTS			1
G4-DMA	Disclosure on Management Approach			Not applicable/relevant
G4-HR8	Total number of incidents of violations involving rights of indigenous peoples and actions taken			Not applicable/relevant
ASPECT: ASS				
G4-DMA	Disclosure on Management Approach	100	156-158	
G4-HR9	Total number and percentage of operations that have been subject to human rights reviews or impact assessments	100	156-158	
ASPECT: SUF	PPLIER'S HUMAN RIGHT ASSESSMENT		1	1
G4-DMA	Disclosure on Management Approach			
G4-HR10	Percentage of new suppliers screened using human rights criteria			We assess suppliers for various parameters as per integrated
G4-HR11	Significant actual and potential negative human rights impacts in the supply chain and actions taken			management systems but information on human rights assessment is not avialable for reporting period.
ASPECT: HU	MAN RIGHTS GRIEVANCE MECHANISMS		I	avialable for reporting period.
G4-DMA	Disclosure on Management Approach	100	156-158	
G4-HR12	Number of grievances about human rights impacts filed, addressed, and resolved through formal grievance mechanisms			No grievances received during reporting period.
SUB CATEGO	DRY: SOCIETY			
	CAL COMMUNITIES			<u> </u>
G4-DMA	Disclosure on Management Approach	106, 126	156-158	
G4-SO1	Percentage of operations with implemented local community engagement, impact assessments, and development programmes	126-136	156-158	
G4-SO2	Operations with significant actual or potential negative impacts on local communities	126	156-158	
ASPECT: ANT	I-CORRUPTION			<u> </u>
G4-DMA	Disclosure on Management Approach	101	156-158	
		101	100 100	
G4-SO3	Total number and percentage of operations assessed for risks related to corruption and the significant risks identified			Not reported.
G4-SO3 G4-SO4	Total number and percentage of operations assessed for risks related to corruption and the significant risks identified Communication and training on anti-corruption policies and procedures	101	156-158	Not reported.
G4-SO4	related to corruption and the significant risks identified Communication and training on anti-corruption policies and procedures	101	156-158 156-158	Not reported.
G4-SO4 G4-SO5	related to corruption and the significant risks identified Communication and training on anti-corruption policies and procedures Confirmed incidents of corruption and action taken			Not reported.
G4-SO4 G4-SO5 ASPECT: PUE	related to corruption and the significant risks identified Communication and training on anti-corruption policies and procedures Confirmed incidents of corruption and action taken <b>BLIC POLICY</b>		156-158	Not reported.
G4-SO4 G4-SO5 <b>ASPECT: PUE</b> G4-DMA	related to corruption and the significant risks identified Communication and training on anti-corruption policies and procedures Confirmed incidents of corruption and action taken	101		Not reported.
G4-SO4 G4-SO5 <b>ASPECT: PUE</b> G4-DMA G4-SO6	related to corruption and the significant risks identified Communication and training on anti-corruption policies and procedures Confirmed incidents of corruption and action taken <b>BLIC POLICY</b> Disclosure on Management Approach Total value of political contributions by country and recipient /	101 71	156-158	Not reported.
G4-SO4 G4-SO5 <b>ASPECT: PUE</b> G4-DMA G4-SO6 <b>ASPECT: ANT</b>	related to corruption and the significant risks identified Communication and training on anti-corruption policies and procedures Confirmed incidents of corruption and action taken BLIC POLICY Disclosure on Management Approach Total value of political contributions by country and recipient / beneficiary	101 71	156-158	Not reported.
G4-SO4 G4-SO5 <b>ASPECT: PUE</b> G4-DMA G4-SO6	related to corruption and the significant risks identified Communication and training on anti-corruption policies and procedures Confirmed incidents of corruption and action taken <b>BLIC POLICY</b> Disclosure on Management Approach Total value of political contributions by country and recipient / beneficiary <b>FI-COMPETITIVE BEHAVIOUR</b> Disclosure on Management Approach Total number of legal actions for anti-competitive behaviour, anti-	101 71 71	156-158 156-158 156-158	Not reported.
G4-SO4 G4-SO5 ASPECT: PUE G4-DMA G4-SO6 ASPECT: ANT G4-DMA G4-SO7	related to corruption and the significant risks identified Communication and training on anti-corruption policies and procedures Confirmed incidents of corruption and action taken BLIC POLICY Disclosure on Management Approach Total value of political contributions by country and recipient / beneficiary TI-COMPETITIVE BEHAVIOUR Disclosure on Management Approach Total number of legal actions for anti-competitive behaviour, anti- trust, and monopoly practices and their outcomes	101 71 71 101	156-158 156-158 156-158 156-158	Not reported.
G4-SO4 G4-SO5 <b>ASPECT: PUE</b> G4-DMA G4-SO6 <b>ASPECT: ANT</b> G4-DMA	related to corruption and the significant risks identified Communication and training on anti-corruption policies and procedures Confirmed incidents of corruption and action taken BLIC POLICY Disclosure on Management Approach Total value of political contributions by country and recipient / beneficiary TI-COMPETITIVE BEHAVIOUR Disclosure on Management Approach Total number of legal actions for anti-competitive behaviour, anti- trust, and monopoly practices and their outcomes	101 71 71 101	156-158 156-158 156-158 156-158	Not reported.

Specific Standard Disclosure	Description	Page No.	External Assurance	Remarks / Data Adequacy/ Omission (if any)
ASPECT: SUI	PPLIER ASSESSMENT FOR IMPACTS ON SOCIETY			<u> </u>
G4-DMA	Disclosure on Management Approach	122	156-158	
G4-SO9	Percentage of new suppliers screened for impacts on society			We will study and report this indicator in next reporting cycle.
G4-SO10	Significant actual and potential negative impacts on society in the supply chain and actions taken			We will study and report this indicator in next reporting cycle.
ASPECT: GR	IEVANCE MECHANISMS FOR IMPACTS ON SOCIETY			
G4-DMA	Disclosure on Management Approach	106	156-158	
G4-SO11	Number of grievances about impacts on society filed, addressed, and resolved through formal grievance mechanisms	106	156-158	
CATEGORY:	SOCIAL			
SUB CATEGO	DRY: PRODUCT RESPONSIBILITY			
ASPECT: CU	STOMER HEALTH AND SAFETY			
G4-DMA	Disclosure on Management Approach	118, 123	156-158	
G4-PR1	Percentage of significant product and service categories for which health and safety impacts are assessed for improvement	118-119	156-158	
G4-PR2	Total number of incidents of non-compliance with regulations and voluntary codes concerning the health and safety impacts of products and services during their life cycle, by type of outcomes	118	156-158	
ASPECT: PRO	ODUCT AND SERVICE LABELLING		1	
G4-DMA	Disclosure on Management Approach	119	156-158	
G4-PR3	Type of product and service information required by the organisation's procedures for product and service information and labelling, and percentage of significant product and service categories subject to such information requirements	119	156-158	
G4-PR4	Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labelling, by type of outcomes	119	156-158	
G4-PR5	Results of surveys measuring customer satisfaction	119	156-158	
ASPECT: MA	RKETING COMMUNICATIONS			
G4-PR6	Sale of banned or disputed products	118	156-158	
G4-PR7	Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship, by types of outcomes	118-119	156-158	
ASPECT: CU	STOMER PRIVACY			
G4-PR8	Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data	118-119	156-158	
ASPECT: CO	MPLIANCE			
G4-PR9	Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services	118-119	156-158	

# Sustainability Assurance Service Independent Assurance Statement

#### Introduction and objectives of work

**BUREAU VERITAS (India) Pvt Ltd.** has been engaged by **Jain Irrigation Systems Ltd. (JISL)** to conduct an independent assurance of its **Sustainability Report 2013-16.** This Assurance Statement applies to the related information included within the scope of work described below.

This information and its presentation in the **Sustainability Report 2013-16** are the sole responsibility of the management of Jain Irrigation. Bureau Veritas was not involved in the drafting of the Report. Our sole responsibility was to provide independent assurance on its content.

#### Scope of work

The assurance process was conducted in line with the requirements of the Assurance Standard AA1000AS (2008) Type 2 assurance. The scope of work for this assurance included:

- Data and information included in Sustainability Report 2013-16 for the reporting period 1st April 2013 to 31st March 2016;
- Appropriateness and robustness of underlying reporting systems and processes, used to collect, analyse and review the information reported;
- Evaluation of the Report against the main principles of the AA1000 Assurance Standard (2008)1
- Inclusivity
- Materiality
- Responsiveness
- Evaluation of the Report against the principles of Accuracy, Accessibility, Balance, Clarity, Comparability, Reliability, Timeliness and Stakeholder Inclusiveness, as defined in the GRI Sustainability Reporting Guidelines G4;

The level of assurance has been applied as "Type 2 Moderate" for all sections of the report.

#### Methodology

As part of its independent assurance, Bureau Veritas undertook the following activities:

- 1. Visit to the manufacturing location of JISL at Jalgaon from 3rd Nov 2015 to 6th Nov 2015 and interviews with relevant personnel of JISL including the heads of various departmental functions
- 2. Review of documentary evidence produced by JISL from time to time and also during the meeting with JISL at BV's office in Mumbai on 28th October 2016;
- 3. Audit of performance data, on a sampling basis
- 4. Review of JISL data and information systems for collection, aggregation, analysis and review;
- 5. Review of stakeholder engagement activities conducted by JISL through records maintained.
- 6. Direct interviews with a few stakeholders
- 7. Interviews conducted telephonically with the Heads of JISL overseas units in USA, UK, Ireland and Israel on 7th April 2017

Our work was conducted against Bureau Veritas' standard procedures and guidelines for external Assurance of Sustainability Reports, based on current best practice in independent assurance.

The work was planned and carried out to provide "**Type 2 Moderate**" level of assurance and we believe it provides an appropriate basis for our conclusions.

<sup>1</sup> Published by AccountAbility: The Institute of Social and Ethical Accountability http://www.accountability.org.uk



#### **Our findings**

On the basis of our methodology and the activities described above, it is our opinion that:

- Nothing has come to our attention to indicate that the reviewed statements within the scope of our verification are inaccurate and the information included therein is not fairly stated;
- The Report provides a fair representation of JISL's activities over the reporting period;
- The information is presented in a clear, understandable and accessible manner, and allows readers to form a balanced opinion over JISL's performance and status during the reporting period of 3 years from 1<sup>st</sup> April 2013 to 31<sup>st</sup> March 2016;
- The Report properly reflects the organisation's alignment to and implementation of the AA1000 Assurance Standard (2008) principles of Inclusivity, Materiality and Responsiveness in its operations. Further detail is provided below;
- JISL has processes in place for consulting and engaging with its key stakeholders in a structured and systematic manner
- It is our opinion that JISL has established appropriate systems for the collection, aggregation and analysis of relevant data such as Environmental, Health & Safety, Human Resource, Labour, Social & Community welfare as well as Product, Customer and Investor related data.

#### Inclusivity

JISL has developed and put in place processes for engaging with key stakeholders including external and internal stakeholders, investors, government officials and local community representatives. It has undertaken stakeholder engagement activities from time to time to understand stakeholder views on Customer satisfaction, Employee welfare, Supply Chain, Community Welfare and Environment.

#### Materiality

The Report addresses the range of environmental, social and economic issues of concern that JISL has identified as being of highest material importance. The identification of material issues has considered both internal assessments of risks and opportunities to the business, as well as stakeholders' views and concerns. The material issues were identified by a process of stakeholder engagement and interaction.

#### Responsiveness

JISL is responding to those issues it has identified as material and demonstrates this in its policies, objectives, indicators and performance targets. The reported information can be used by the organisation and its stakeholders as a reasonable basis for their opinions and decision-making. The company has taken various initiatives towards making environmentally friendly products and the reduction of waste through recycling and usage minimisation. It has also given priority to occupational health and safety at work and community and local development activities.

#### Specified Sustainability Performance Data

Performance data within the report continues to be gathered through a variety of data systems and processes. Though the data as presented in the report could be regarded as reliable, we recommend JISL that they continue to review the data carefully, gathering inputs against the key performance indicator stated in the report to ensure that performance against these metrics can be consistently and regularly reviewed and continues to provide accurate and reliable information.

#### Evaluation against Global Reporting Initiative (GRI) G4 Sustainability Reporting Guidelines

Bureau Veritas undertook an evaluation of **JISL Sustainability Report 2013-16** against the G4 Sustainability Reporting Guidelines. This included cross checking the GRI index table against all the reference documents to provide an opinion on the self-declared GRI reporting option.

Based on our work, it is our opinion that the **Sustainability Report 2013-16** has been prepared in accordance with the GRI Reporting Framework including appropriate consideration of the Reporting Principles and necessary indicators to meet the requirements of **GRI G4** Reporting Option "**In accordance- Comprehensive**" and the adherence to the principles is **good**.

#### Best practices and observations

- Management of risks related to farming, seasonality and market conditions
- Consultative approach with stakeholders, especially from the farming and agriculture community
- Entered into partnership with the Government of Maharashtra in the construction of Kantai dam across the river Girna with a 50% water withdrawal commitment
- Execution of integrated irrigation projects with a coverage of more than 12000 hectare area
- Emphasis on the generation of green energy
- Re-cultivation of more than 600 acres of barren land with 150 plant species at Jain Hills and 170 notified animal species
- Many CSR initiatives undertaken in rural development, promotion of education and sports, environmental sustainability, drinking water facilities for villages and promotion of modern agricultural techniques through the FALI (Future Agricultural Leaders of India) project

#### Limitations and Exclusions

Excluded from the scope of our work is any assurance of information relating to:

- Activities outside the defined assurance period stated hereinabove;
- Positional statements (expressions of opinion, belief, aim or future intention) by JISL and statements of future commitment;
- Our assurance does not extend to the activities and operations of JISL outside the reporting boundary .

This independent statement should not be relied upon to detect all errors, omissions or misstatements that may exist within the Report.

#### Statement of independence, impartiality and competence

Bureau Veritas is an independent professional services company that specialises in Quality, Health, Safety, and Social and Environmental management with almost 180 years history in providing independent assurance services, and an annual turnover in 2016 in excess of Euros 4.55 billion.

Bureau Veritas has implemented a Code of Ethics across the business to maintain high ethical standards among staff in their day to day business activities. We are particularly vigilant in the prevention of conflicts of interest.

No member of the assurance team has a business relationship with JISL, its Directors or Managers beyond that required of this assignment. We have conducted this verification independently, and there has been no conflict of interest.

The assurance team has extensive experience in conducting assurance over environmental, social, ethical and health and safety information, systems and processes and has over 5 years combined experience in this field and an excellent understanding of Bureau Veritas standard methodology for the Assurance of Sustainability Reports.

#### Bureau Veritas (India) Pvt. Ltd.

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Date : 03-November-2017



**Rupam Baruah** Assurance Technical Reviewer General Manager (East Region)

## Abbreviations

ASSOCHAM	Associated Chambers of Commerce and Industry of India
BRC	British Retail Consortium
CDM	Clean Development Mechanism
CERs	Carbon Emission Reductions
CII	Confederation of Indian Industries
CSR	Corporate Social Responsibility
CSV	Creating Shared Value
ESP	Enterprise Solution for Poverty
FDA	Food and Drug Administration
FSMS	Food Safety Management System
GAP	Good Agricultural Practices
GHG	Greenhouse Gas
GLOBAL GAP	Global Good Agricultural Practices
GMA	Grocery Manufacturers Association
GOI	Government of India
GRI	Global Reporting Initiative
GRIHA	Green Rating for Integrated Habitat Assessment
HDPE	High-Density Polyethylene
IFC	International Finance Corporation
IQF	Individual Quick Freezing
IRRI	International Rice Research Institute
JISL	Jain Irrigation Systems Limited
LDPE	Low-Density Polyethylene
LEDs	Light Emitting Diode
MIS	Micro Irrigation System
MNRE	Ministry of New and Renewable Energy
MSEDCL	Maharashtra State Electricity Distribution Co. Ltd.
NABARD	National Bank for Agriculture and Rural Development
NBFC	Non-Banking Financial Corporation
PE	Polyethylene
ppm	parts per million
PVC	Polyvinyl chloride
REC	Renewable Energy Certificates
SAC	Sustainable Agriculture Code
SEBI	Securities and Exchange Board of India
SGF	Sure-Global-Fair
SIS	Sprinkler Irrigation System
SMETA	Sedex Members Ethical Trade Audit
t-CO <sub>2</sub> e	Tonnes of carbon dioxide equivalent
UHDP	Ultra High Density Plantation
USDA	U. S. Department of Agriculture
VFDs	Varibale Frequency Drive
WBCSD	World Business Council for Sustainable Development



International Women's Meet on Nonviolence and Peace at Gandhi Research Foundation: Participants from 23 Countries with Justice Chandrashekhar Dharmadhikari and Mr. Ashok Jain.