





## SCITECH CSR INNOVATION, INCUBATION & INCLUSION FOR EMPOWERMENT



# SCIENCE AND TECHNOLOGY INNOVATION PARK

AN INITIATIVE OF DEPT. OF SCIENCE & TECHNOLOGY GOVERNMENT OF INDIA

#### ABOUT **SCITECH PARK**

An autonomous Institute established by the NSTEDB, National Science and Technology Entrepreneurship Development Board of Department of Science and Technology, Government of India within the campus of Savitribai Phule Pune University

A Center of Excellence of Ministry of Urban Development, Government of India for delivering e-Governance solutions to ULB's

**Secretariat for the Maharashtra State Innovation Council** 

A bridge between Industry, Academia and R & D - works in the area of knowledge management

"a mission to convert knowledge into wealth"

#### ABOUT **SCITECH PARK**

Host Institution | Savitribai Phule Pune University

Year of Establishment | 1986

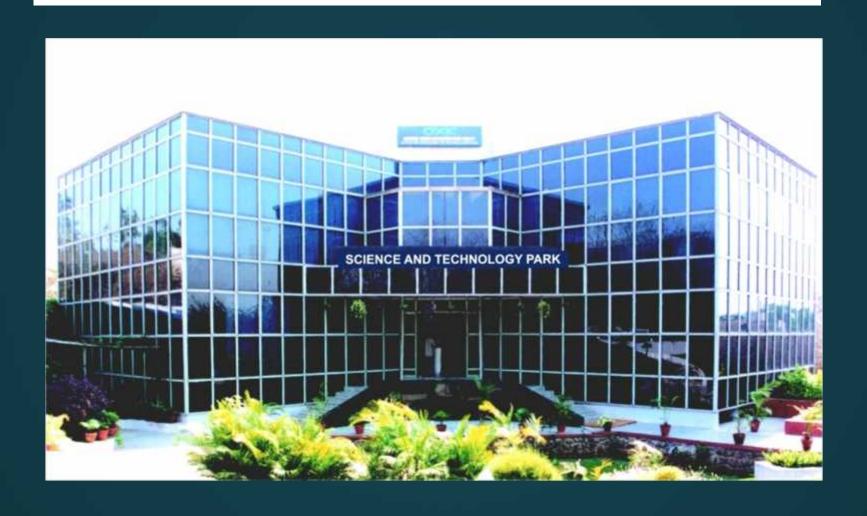
Registered as a Society under Bombay Public Trust Act, 1950

"Not for Profit" Organization

**Services fully exempted from Service Tax** 

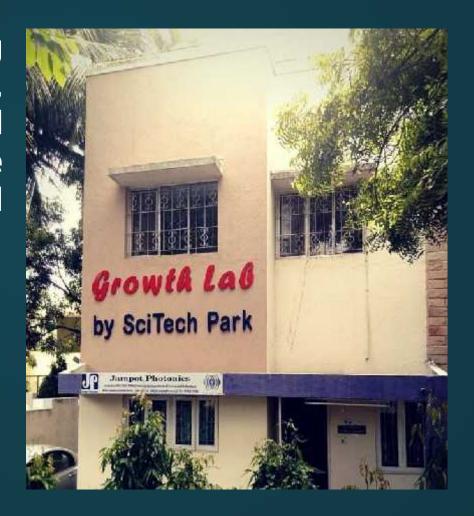
Gazette of India February 2014 – Company's Act 2013-Payments to Scitech Park are admissible as CSR deductions in Annual Company Committed Expenditure towards CSR

## SCITECH PARK FACILITY IN PUNE



## TECHNOLOGY BUSINESS INCUBATOR

Centre for experimenting on growth of individuals, enterprises, cities and villages, enabled by the tools of Science and Technology



### **CSR IN ACTION**

## Scitech follows a two pronged approach

- 1. For designing and implementing Socially Relevant Projects and Programs driven by technology that qualify as a CSR action
- 2. Successfully Manage Technology Business Incubation through Innovation and Adaption of Technologies (Stand up/Start up/Early funding/SEED funding/ Mentoring/skill development/Business Plan/First customer)
- 3. Both (1) and (2) complement each other

#### **MISSION**

Aim at 'converting knowledge into wealth' and in turn convert job seekers to job creators through entrepreneurship development under the innovation through incubation program

"Convert knowledge into wealth"

## DOMAINS OF CSR



Solar LED Lighting Solutions for School Children & Households in Remote Tribal Villages



Provision of Clean, Safe Drinking Water at Door Step through Ultra Filtration Membrane based Technologies



Integrated Village Development using Innovative Technologies



Skill Training on New Emerging
Technologies to 600 trainees from backward
& remote regions of Maharashtra

## DOMAINS OF CSR



Initiative to protect and conserve major breeding site for avifauna linked to Ujani Wetland since 2004



Rural Technology Based Skill Development Center at Lanja, District Ratnagiri



Promoting Digital School through Scitech Tirubaa EduProjector @ Zilla Parishad Schools



Technology based Skill & Entrepreneurship
Development Center for Physically
Challenged Children

## INCUBATION AT PARK

Sr. No.	Focus Area	Incubatees
A.	Open Source & Open Platform Technology	10
B.	Renewable Energy and Clean Technology	20
C.	Pharmacy and Biotechnology	7
D.	Mobile Computing	6
E.	Project Management	2
F.	Data Centers	7
G.	Social Incubation	3
H.	Information Technology/ IT Enabled Services	12
I.	Education	3
J.	Agri and Food Processing Technology	1
K.	Remote Sensing & GIS services	1
L.	Electronics and Telecommunication	1
M.	Cyber Security	3
N.	Health	1
	TOTAL	77

Govt. of India – DST parks funds with Scitech Park for managing innovation linked incubation through SEED funding.

### COMMITMENT IN ACTION SUSTAINABILITY

- Health Hygiene and Sanitation
- Education, Training and Skill Development, Capacity Building
- Malnutrition Control and Eradication
- Safe Clean and Affordable Drinking Water
- DNA based Diagnostics for early detection of cervical cancer and cardio vascular diseases
- Social & Rural Business Incubation for seamless integration of Marginalized Sections of Society
- Biodiversity, Wetlands and Wildlife conservation
- Renewable and Alternate Energy based Solutions
- Energy Efficient and Eco friendly Buildings and Lighting solutions

Scitech Park offers Innovative Technology based Products and Solutions developed within its incubation program

#### TECHNOLOGIES THAT ELEVATE LIVES

#### A. Affordable Safe Drinking Water

Jaldoot – Safe drinking water at doorstep of rural and urban poor Centralized Ultra filtration Unit for clean safe drinking water with higher capacity Water ATM

#### **B.** Healthcare

Early diagnosis for prevention of cervical cancer Genetical test for prevention of cardio vascular disease Malnutrition Control & Eradication

#### C. Renewable and Alternate energies for energy requirements

Solar LED Lamps
Solar Pumping
Biomass Pelleting Machine/Smokeless Stove
Solar Street Lights

#### **D.** Digital Schools

Low cost, low band width virtual classroom Scitech Tirubaa Edu Projector, virtual classroom, digital library

#### **E. Biodiversity Conservation**

**Wetland Conservation Initiative** 

#### **ENSURING INCLUSIVENESS**

- A. Incubating New Emerging Technology Skills
- B. Skill Training and Technology Business Incubator for Physically Challenged Children
- C. Rural Technology- Demonstration, Dissemination, Skill Training and Business Incubation Centre

# AFFORDABLE SAFE DRINKING WATER

**GLIMPSES** 

# CLEAN SAFE DRINKING WATER THROUGH ULTRA FILTRATION MEMBRANE TECHNOLOGY







Scitech Park through its Business Incubation Programme had come up with a very efficient membrane based ultra filtration technique to provide safe drinking water in rural areas of India. This is the first indigenously developed UF membrane in NABL accredited laboratory with Indian and US patents and licensed from CSIR/NCL/NIV, Govt. of India for removal of viruses such as Hepatitis "A & E", E-coli contamination etc. which makes the system totally cost effective, highly efficient and low maintenance.

# CLEAN SAFE DRINKING WATER THROUGH ULTRA FILTRATION MEMBRANE TECHNOLOGY

# Using this technique Scitech Park has come up with the following solutions:

Cabinet Type Centralized Filtration Units with/without coin vending machines.

Scitech Jaldoot – a mobile unit with a filtration system mounted on it for door to door delivery of drinking water anywhere in India. This has high impact on local employability through skill development and entrepreneurship driven business model.

Domestic water filtration units for smaller capacities like individual houses, hospitals, hotels, schools etc.



# CLEAN SAFE DRINKING WATER THROUGH ULTRA FILTRATION MEMBRANE TECHNOLOGY

# Scitech Park had implemented projects using this technique in the following locations:

Centralized Water Filtration Unit of capacity 2000LPH with coin vending machine installed at Sudumbre Village, Maval Taluka, District Pune. This system is catering to a population of approx.3000-4000 villagers.

Scitech Jaldoot Vehicles – 2 in number at remote tribal villages namely Dolhara and Sakhari in Mokhada Taluka of Palghar District. The villages had a population of approximately 1200-1400 each. Local drivers were identified and trained to operate and maintain the vehicles on both the villages on a daily basis with an average of almost 4000 litres of water being distributed in both the villages.

12 water filtration units were installed in KEM Hospitals, Pune in Doctors' Quarters. Operation Theatre. CCU, ICU, Neonatal Intensive Care Unit, Labor Room etc.





#### INSTALLATION OF WATER ATM MACHINE AT KEM HOSPITALS, PUNE

Scitech Park has installed Membrane based Water ATM Machine at KEM Hospitals, Pune on 15<sup>th</sup> March, 2016.

The unique 250 LPH capacity Water ATM Machine is based on UFRO membrane Technology which has been indigenously developed in India.

It has been implemented with an aim to empower women as entrepreneurs with a sustainable business model and also to provide safe clean drinking water to numerous people visiting hospital everyday at a very affordable







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## Scitech Jaldoot – Launched on 24<sup>th</sup> August, 2016 at Mokhada, Palghar District, Maharashtra

Science and Technology Park, Pune launched 'Scitech Jaldoot' on Wednesday, 24<sup>th</sup> August, 2016 at Vitthal Dada Patil Samaj Mandir, Sainagar, Mokhada Tehsil, Palghar District, Maharashtra. The event was graced by Shri. Vishnuji Savara, Hon'ble Cabinet Minister for Tribal Development, Maharashtra State as the Chief Guest.

Science and Technology Park distributed **6 Scitech Jaldoot Vehicles** to 6 remote tribal villages of Mokhada Tehsil namely **Dhamanshet**, **Koldyacha Pada**, **Nilmati**, **Gonde Khurd**, **Palsunde and Pawar Pada** which would be distributing clean safe drinking water at doorstep to **almost 4500 villagers** daily where there is no provision of filtered drinking water. This initiative was funded by ECGC Ltd. Mumbai under their CSR Programme.









**HEALTHCARE** 

**GLIMPSES** 



DNA BASED DIAGNOSTICS FOR EARLY DETECTION OF CERVICAL CANCER IN WOMEN

### CERVICAL CANCER PREVENTION

It is estimated that about 200 women die everyday in India due to onset of cervical cancer.

Scitech Park in association with KEM Hospital Research Centre (KEMHRC) Pune has started the activity of DNA based diagnostics for early detection of cervical cancer in women.

KEMHRC is recognized research centre by Department of Science and Industrial Research (DSIR) Govt. of India.

#### CERVICAL CANCER PREVENTION

The project beneficiaries would be approx 2500-3000 women from Vadu Budruk in Shirur Tehsil of Pune District (about 50 Kms from Pune city along the Nagar road), who would be made aware about cervical cancer which is the only form of cancer that is preventable.

They would be trained to spread awareness among other women which is a crucial way to keep a check on the high mortality of women due to cervical cancer.

Out of them; 300 women would be shortlisted and actual Digene HPV test would be conducted on them.

#### THE **TECHNOLOGY**

#### **HYBRID CAPTURE TECHNOLOGY** THE DIGENE HPV DNA TEST

- US-FDA approved & CE marked in Europe.
  Detects 13 High-risk Oncogenic HPV Types.
  Has 99.7% Negative Predictive value.
  96% sensitive in detecting Pre-cancers (CIN 2/CIN 3).
- •Cost effective.

#### IF TEST RESULT IS NEGATIVE

- Negligible risk of cancer with a 99.7% certainty
  Reduce screening interval to once in every 3 to 5 years

#### IF TEST RESULT IS POSITIVE

- Increased risk of progression due to HPV.
  Immediate follow-up is essential with another test in 12 months.

## MALNUTRITION ELIMINATION











Cost effective localized manufacturing of Soya Milk to eliminate malnutrition

# RENEWABLE & ALTERNATIVE ENERGY

**GLIMPSES** 

## RENEWABLE ENERGY: SOLAR LED LAMPS

#### TECHNICAL SPECIFICATION: SOLAR POWERED LED LANTERN

•SOLAR PANEL 6V 5Wp With 5Mtr Cable

•BATTERY Li-Ion 4.2V Battery

•LED LAMP 24 LED

•BACKUP TIME 6 to 7 Hrs.

•CHARGING TIME 6 - 8Hrs.

•PROTECTION Low Battery, Short Circuit



#### TECHNICAL SPECIFICATION: SOLAR MOBILE LAMP

•WATTAGE 1.5 W LED (0.5 W x 3 Nos. )

•LED ANGLE 120 Degree.

•BATTERY 3.6 V 1800 mAh Li-On.

•BACKUP TIME 3 hrs.

•DIMENSION 155 x 50 x 45 MM. •SOLAR PANEL 2 Wp / 6 V. (optional)

•CHARGING TIME 1 DAY



## RENEWABLE ENERGY: SOLAR LED LAMPS

#### TECHNICAL SPECIFICATION: SOLAR HOME LIGHTING

•SOLAR PANEL 6V 5Wp With 5Mtr Cable

••BATTERY 6V 4.5 Ah.

••LED LAMP 3W x 2 With 3.5 Mtr Cable Each

••BACKUP TIME 2.5 to 5 Hrs

•• CHARGING TIME 8Hrs.

••PROTECTION Low Battery, Short Circuit
••FEATURES Mobile Charging Facility



# Scitech Surya Solar LED Home Lights — Launched on 2<sup>nd</sup>August, 2016 at Bhimashankar Wildlife Sanctuary, Maharashtra

Science and Technology Park, Pune launched 'Scitech Surya' Solar LED Home Lights on Tuesday, 2<sup>nd</sup> August, 2016 at Gram Paristhitiki Samiti, Bhimashankar - Nisarg Point. The event was graced by Shri. Sunil Limaye, IFS (Chief Conservator of Forests, Wildlife, Pune) as the Chief Guest. The event was attended by forest officers and the beneficiaries from Nigdale, Pimpergane, Kondhval, Sakeri, Patan and Velholi villages from Bhimashankar Wildlife Sanctuary.

Science and Technology Park distributed 248 Scitech Surya (Solar LED Home lights) to tribal families residing in the remote hamlets inside the Bhimashankar Wildlife Sanctuary where there is no grid connectivity. This initiative was funded by New India Assurance Company Ltd. Mumbai under their CSR Programme. The lamps had been designed and manufactured in association with our incubatee company GetMy Solutions Pvt. Ltd.



# Distribution of Scitech Surya Solar LED Lamp-Launched on 12th August, 2016 at Palghar District

'Scitech Surya' Solar LED Lamp distribution to tribal school children was launched on Friday, 12<sup>th</sup> August, 2016 at Khodala High School, Khodala of Mokhada Tehsil, Palghar District, Maharashtra at the hands of Shri. Vishnuji Savara, Hon'ble Cabinet Minister for Tribal Development, Maharashtra State.

The programme was financially supported by The New India Assurance Company Limited, Mumbai under their CSR initiative. During this programme Solar LED lamps specially designed and manufactured by one of the incubatee companies of Scitech Park, GetMy Solutions Pvt. Ltd. were distributed to 1010 tribal children of the Zila Parishad high schools and Ashramshalas from Khodala, Suryamal, Wakadpada, Adoshi and Poshera villages in Mokhada Taluka of Palghar District, Maharashtra.







# RENEWABLE ENERGY: **BIOMASS PELLETING MACHINE**

#### **PELLET MACHINE -** 70 KG/HOUR CAPACITY

Motor – 15Hp (Compton/Hindustan/any other suitable brand available)

Starter

**Gear Box** 

**Main Machine** 

Roller assembly with horizontal shaft

Flat die

Hopper

#### **RAW MATERIAL MIXER - 35 KG BATCH SIZE**

Main machine

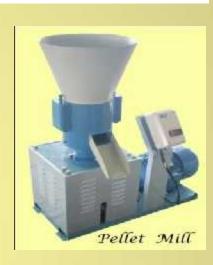
2 Hp Motor

Starter switch

Small gear set

#### TRANSPORTATION, TAXES, EXCISE EXTRA AS APPLICABLE

The machine proposed herewith is for use of saw dust, other biomass can also be used but it has to be dried and powdered using a grinder which will cost extra.





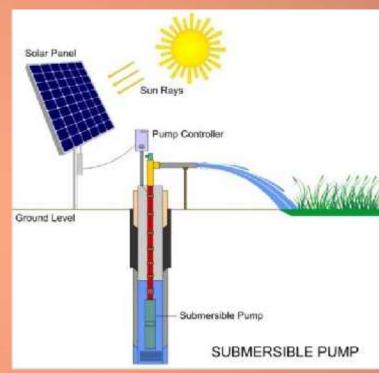
## ALTERNATE ENERGY: SOLAR PUMPING

#### **FEATURES:**

- No Battery, No Starter
- Use existing Motors
- 20 years life
- One Time Investment
- Auto/Manual Operation
- Range 1HP to 50HP AC Motors
- Submersible

#### **APPLICATIONS:**

- Agriculture and Forestry Irrigation
- Water Supply of Islands
- Wastewater Treatment
- Municipal & City Centre Squares
- Parks
- Resorts & Hotels
- Landscapes
- Fountain Systems
- Desert Control







EDUCATION & DIGITAL SCHOOLS

**GLIMPSES** 

#### **EDUCATION**

Scitech Park acts as implementing and monitoring agency for training and capacity building programmes in education

**Environment** Education Programme(Already completed for PCMC Schools and Dehu Road Cantonment Board Schools)

GIS training at e gov installations for improved change management

**Virtual Classroom set up** 

Peer review agency for IL&FS 100 skills program

**MGNREGS** schemes







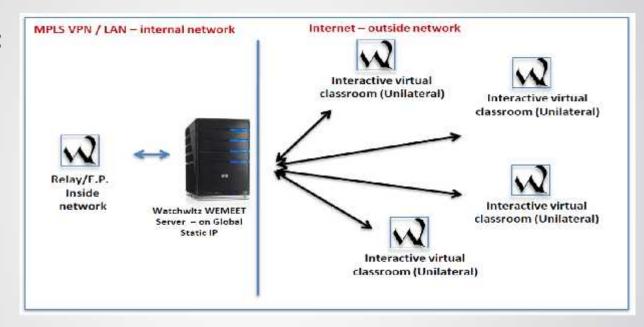
# LOW COST, LOW BANDWIDTH VIRTUAL CLASSROOM

#### **REQUIREMENTS:**

Normal wired broadband Internet connection of 512 Kbps.

LCD projector

Uninterrupted Electricity



Can be used for Education and Skill Training at any location that has minimum 256 kbps wired broadband for two-way communication

VIRTUAL REPLICA OF STANDARD CLASSROOM

# LOW COST, LOW BANDWIDTH VIRTUAL CLASSROOM

#### **Salient Features:**

Network Independent: System runs seamlessly on a simple shared wired broadband connection to the best networks

Astronomically Expandable: System can connect up to 50 classrooms with each classroom having a strength of up to 300

Price Advantage: Systems price is generally about half the Video Conferencing devices.

Perfect For Any Kind Of Education: Although, system is with an inherent delay of a second or two, its well accepted and appreciated above the other video conferencing systems.

Connect rooms with strength up to 300 participants in a room, which basically covers everything from a regular classroom to an auditorium.

If you consider every student in a standard classroom model, as an auditorium connected in the virtual classroom, we can effectively connect up to 100 such auditoriums.

Allows system to work on a good simple broadband connection, which was required in the Indian scenario as broadband is universally available even in rural areas.

## SCITECH TIRUBAA EDU PROJECTOR

### **SALIENT FEATURES: (MINI)**

- · Compact, easy to use, almost zero maintenance
- TI DLP Projection Technology + Osram Led Lamp Up To 50000 Hours Life
- Highly Bright Led Light Source, Super Bright Technology 3500 Peak Lumens
- Multiple Video Formats: MPEG2, MPEG4, MP4, RMVB/VOB
- · Highly Bright, Efficient Optical Engine System, Dust Proof
- Can Decode & Play 1080P/720P HD Video Through USB-Stick & SD Card
- Portable Size Around 135\*130\*50mm
- Solar Power Connectivity for Rural Areas optional (cost extra)

### **SALIENT FEATURES: (SUPER)**

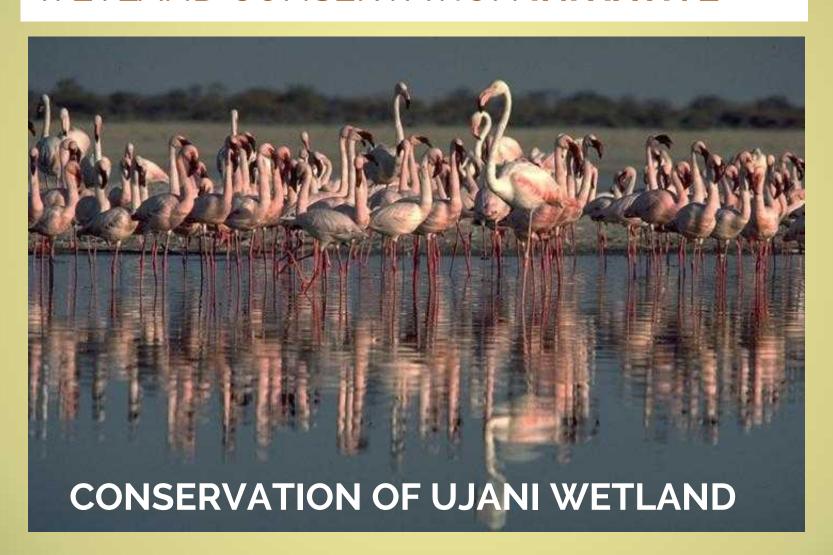
- Compact Easy to Use, Almost Zero Maintenance
- TI DLP Projection Technology + Osram Led Lamp Up To 50000 Hours Life
- · Highly Bright Led Light Source,
- Super Bright Technology Led 4000 Peak Lumens
- Blue Ray, 3D viewing of content
- Multiple Video Formats: MPEG2, MPEG4, MP4, RMVB/VOB
- Highly Bright, Efficient Optical Engine System, Dust Proof
- Can Decode & Play 1080P/720P HD Video through USB-Stick & SD Card
- Portable Size Around 135\*130\*50mm
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BIODIVERSITY CONSERVATION

## WETLAND CONSERVATION INITIATIVE



INCUBATING NEW EMERGING TECHNOLOGY SKILLS

### SKILL DEVELOPMENT AREA: RENEWABLE ENERGY

Solar and Wind Energy based Appliances and their maintenance for Rural Application

Biomass based Cooking Fuel and Energy Efficient **Cooking Stoves- Manufacturing and Maintenance** 

Training in the backward & remote regions of the Ahmednagar District of Maharashtra

More than 600 trained in renewable energy skills

female trainees male trainees

On completion of training, SHG started assembling their own LED products like torches and lamps

Participated in local exhibitions & got good response

First order received in 4-5 months of 700 LED lamps worth Rs. 14 lacs which was completed in 3 months for Forest Dept., Govt. of Maharashtra through Gram Panchayat













**SPECIAL BATCHES** 

tribal women trainees

differently abled 2 student trainees

SKILL TRAINING AND TECHNOLOGY BUSINESS INCUBATOR FOR PHYSICALLY CHALLENGED CHILDREN

# APANG KALYANKARI SANSTHA, **WANOWRIE** (PUNE)

A state of the art incubation facility for handicapped children to provide them with livelihood options after they finish high school.

Scitech Park, Pune would raise funds for the skill development and training activities and all other expenses that would be carried out in this centre.

The infrastructure development work required for the Technology Business Incubator had already been completed at Apang Kalyankari Sanstha, Wanowrie, Pune.

Scitech Park had conducted Three Training Programs for Physically Challenged Students on Assembly of LED Torches and Solar powered

LED Lamps – 19 students (Mobile Repair and Maintenance students) and 40 students (Computer Hardware Repair and Maintenance).













RURAL TECHNOLOGY: DEMONSTRATION, DISSEMINATION, SKILL TRAINING & BUSINESS INCUBATION CENTRE

## LANJA, **RATNAGIRI DISTRICT**

Scitech Park has initiated Rural Technology based Skill Training and Business Incubation Centre to promote grassroot technologies at

Lanja in Ratnagiri District and proposes to establish similar such facilities in several major districts of Maharashtra.

This Skill Training Centre admeasuring 2100sq.ft. would be used exclusively for demonstration, dissemination, skill training, education, entrepreneurship development, business incubation and employment

generation for the local youths of Ratnagiri district.

The first project under this is called "Taji Bhaji Majhi Bhaji" where a Green House Facility had been set up for promoting community farming for the local people.









SKILL TRAINING AND ENTREPRENEURSHIP DEVELOPMENT CENTRE, SANGAMNER

## Sangamner, Ahmednagar District, Maharashtra





Scitech Park has set up technology demonstration and skills and entrepreneurship development centre at Sangamner for New Emerging Technologies that would be used for technology dissemination to accelerate employment generation in hinterland areas and marginalized sections of society

Safe Clean Drinking Water Jaldoot

Solar PV

**Solar lamp** 

Wind

**Solar Wind** 

**Energy saving device** 

**Solar Thermal** 

**Solar Cooking community and domestic** 

Solar Water heater

Biomass Energy, domestic & community cook stoves

**Biomass Pelletiser** 

**Soft Skills** 

**In-plant Training** 

## **THANK YOU**



# SCIENCE AND TECHNOLOGY INNOVATION PARK PUNE