उन्नत भारत अभियान
राष्ट्रीय समन्वय संस्थान
भारतीय प्रौद्योगिकी संस्थान दिल्ली
हौज़ खास, नई दिल्ली-११००१६

UNNAT BHARAT ABHIYAN
NATIONAL COORDINATING INSTITUTE
INDIAN INSTITUTE OF TECHNOLOGY DELHI
Hauz Khas, New Delhi - 110016
Website : http://unnat.iitd.ac.in

Prof. Virendra K. Vijay
National Coordinator, UBA
Professor CRDT, IITD

Tel. : +91-11-2659 1121/1157 (O)
Fax : +91-11-2659 1121
Email : unnatbharatabhiyaniitd@gmail.com
vkvijay@rdat.iitd.ac.in

Dear Sir/Madam,

Congratulations to all the Participating Institutions (PIs) selected under Unnat Bharat Abhiyan, a flagship program of Ministry of Human Resource Development (MHRD) Government of India through a challenge mode application. The Mission of Unnat Bharat Abhiyan is to enable participating higher educational institutions to work with the people of rural India in identifying development challenges and evolving appropriate solutions for accelerating sustainable growth. It also aims to create a virtuous cycle between society and an inclusive academic system by providing knowledge and practices for emerging professions and to upgrade the capabilities of both the public and the private sectors in responding to the development needs of rural India.

As per the programme, educational institutions is primarily to develop linkage with selective rural clusters (preferably of five villages), to get involved in the planning process and to promote the requisite S&T interventions to improvise and expedite the developmental efforts in those clusters. The approach is a departure from the grant oriented method and would see the participation and commitment of faculty and students in this endeavour.

We shall be processing release of Rs. 10000/- per village under the UBA program. The funds are mainly meant for assistance for awareness, Gram Panchayat Development Plan (GPDP) study, need assessment, and contingency expenditure. There are provision of Rs 1.0 lakh for technological intervention/ solution and Rs 0.50/- lakh for customization of a technological solution under the program. Which you can avail of afterwards by submitting proposals with ratification of the Gramsabha. A two-way channel between PIs and National Coordinating Institute (NCI) as well as Subject Expert Groups (SEGs) for project proposal submission and evaluation has been developed and functional on UBA portal. You can use your login credential for uploading proposals on UBA website '**FINANCIAL AIDS**'. The login credentials are same as your registration login credentials.

You are also requested to keep IIT Delhi, the National Coordinating Institute updated about your activities so that the same can be uploaded on the website of UBA.

Regards and best wishes for your institution for contributing to India's development.

With regards

Your Sincerely,

Prof. Virendra K Vijay
National Coordinator,
Unnat Bharat Abhiyan

सत्यमेव जयते

स्वच्छ भारत
एक कदम स्वच्छता की ओर

सूचना का अधिकार

भारत सरकार
मानव संसाधन विकास मंत्रालय
उच्चतर शिक्षा विभाग
शास्त्री भवन
नई दिल्ली - 110 115
GOVERNMENT OF INDIA
MINISTRY OF HUMAN RESOURCE DEVELOPMENT
DEPARTMENT OF HIGHER EDUCATION
SHASTRI BHAVAN
NEW DELHI-110 115

Dr N Saravana Kumar, IAS
Joint Secretary (ICC/P)
Tel.: +91-11-23071486
Fax: +91-11-23071487
E-mail: saravana.kumar@gov.in

D.O. No.5-1/2016-UBA **Dated: 20th July, 2018**

Dear District Collector,

As you may be aware, UNNAT BHARAT ABHIYAAN is a flagship programme initiated by Government of India with the objective to engage reputed Higher Educational Institutions (both central and state; public and private) to understand and work in rural areas. As of now, 750 reputed institutions have been selected on a challenge mode. With the intention of enriching rural India, these selected Institutions are expected to customise the available technologies or develop new technologies as per the local needs and also to improve the implementation of existing government programmes.

The details of the selected Higher Educational Institute(s) in your district, along with the selected 5 villages and also the contact details of Project Coordinator of the said institute(s) are attached herewith.

I request you to facilitate the works of the selected Institute(s) in the identified villages, through following interventions:

1. Facilitate meeting of Project Coordinator with all concerned stakeholders like Gram Panchayats, BDOs, District Development Authority etc.

2. Your guidance to the selected Institute(s), with regard to the needs of the district/ selected villages;

3. Mobilisation of funds from district administration or other sources to the Institute, if possible, in accordance with the activities under UBA.

4. Time to Time review under your leadership.

In this regard Secretary, Higher Education has also requested for facilitation vide D.O. No 5-1/2016-UBA dated 16-4-2018.

IIT, Delhi is the National Coordinating Institute for the implementation of Unnat Bharat Abhiyan. For any clarification, your office may contact IIT Delhi (unnatbharatabhiyaniitd@gmail.com) / 011-26591157/26596451 or the undersigned.

Thanking you,

Yours sincerely,

(**N Saravana Kumar**)

Enclosed: As above

Copy To :- Secretary, Higher Education of all States/UT's.

शिक्षा का अधिकार
सर्व शिक्षा अभियान
सब पढ़ें सब बढ़ें

S. J. P. N. Trust's
Hirasugar Institute of Technology,
Nidasoshi - 591 236
Dist. : Belagavi. Karnataka.

"INCULCATING VALUES, PROMOTING PROSPERITY"
(Affiliated to Visvesvaraya Technological University, Belagavi.and Approved by All India Council for Technical Education, New Delhi.)

Accredited at "A" Grade by NAAC
Programs Accredited by NBA : CSE, ECE, EEE & ME.

Prof. S. C. Kamate Ph.D.
Principal

Ref. : HIT/NDS/UBA/2020-21/80 Date : 08/07/2020

To,
District Collector
Belgaum
Karnataka State

Sub: Identification of villages under the UBA Program.

Dear Sir,

Ministry of Human Resources Development (MHRD),Government of India has launched the national program called Unnat Bharat Abhiyan (UBA), with the vision to involve professional and higher educational institutions in the development process of rural areas in the country to achieve sustainable development and better quality of life. Indian Institute of Technology, Hauz Khas, New Delhi has been designated to be the National Coordinating Institute by the Ministry.

Our Institution **Hirasugar Institute of Technology, Nidasoshi** and AISHE Code C-1409 has agreed to participate in UBA as a Participating Institute (PI). Dr. S.N.Topannavar, Associate Professor, Mechanical Engineering Department, Mobile No. 9482440235, E-mail: sntopannavar.mech@hsit.ac.in has been duly authorized in this regard from our side to carry on the activities of UBA in our organization as Project Coordinator.

Under the UBA program every Participating Institute is to adopt a cluster of five villages in consultation with the District Collector. This is to bring to your kind notice that we have proposed the following villages in the Belgaum District.

1. Nidasoshi
2. Ammanagi
3. Boragal
4. Kesti
5. Hattarawat

In view of the above the Project Coordinator may contact your officer for the purpose. We request you to please help and cooperate in the matter.

With regards,

Your Sincerely,

Hirasugar Institute of Technology Nidasoshi Pin-591236 Dt. Belgaum

8/7/20.

Dr. S.C.Kamate
Principal

Copy to UBA IIT Delhi

MANDATE FORM/ AGREEMENT

ELECTRONIC CLEARING SERVICE (CREDIT CLEARING)/ REAL TIME GROSS
SETTLEMENT (RTGS) FACILITY FOR RECEVING PAYMENTS

Details of Account Holder(Institutional only not personal)

Name of Account(Designation/Institution Name)	The Principal and Chairman Hirasugar Institute of Technology
Institute AISHE Code	C-1409
Type of Institute	Technical
Complete Contact Address	At/Post:Nidasoshi Tal:Hukkeri Dist:Belagavi PIN:591236
Contact No.	9535666217
Email	principal@hsit.ac.in

Bank Account Details(Institutional only not personal)

Bank name	State Bank of India
Complete Address	(01727) Sankeshwar Post Box No.15, Sankeshwar, Gokak Road Hukkeri Taluka Sankeshwar Dist:Belagavi Karnataka-591313
Whether branch is computerized	Yes
Branch's RTGS CODE	SBIN0001727
Branch's IFSC CODE	SBIN0001727
If this branch NEFT enable	Yes
Type of Bank Account	Current
Complete bank Account no.	31868488488
MICR Code of Bank	591002533
PAN Card Number	AACTS0452Q
TIN/TAN Number	BLRH02273F

Declaration

I hereby declare that the particulars given above are correct and complete. If the transaction is delayed or not effected at all for reasons of incomplete or incorrect information I would not hold the user Institution responsible. I have read the option invitation letter and agree to discharge responsibility expected of me as a particular under the Scheme. The Utilization Certificate for the funds received shall be submitted as when required.

08/07/2020

Seal/Signature of UBA Coordinator of PI

(Dr. S. N. Topannavar)

Certified that the particulars furnished above are correct as per records.

8/7/20.

PRINCIPAL
Jssugar Institute of Technology
NIDASOSHI - 591 236.

Jssugar Institute of Technology Nidasoshi Pin-591236 Dist. Belgaum

Seal/Signature of Authorized Person of Institute

MANDATE FORM/ AGREEMENT

ELECTRONIC CLEARING SERVICE (CREDIT CLEARING)/ REAL TIME GROSS
SETTLEMENT (RTGS) FACILITY FOR RECEVING PAYMENTS

Details of Account Holder(Institutional only not personal)

Name of Account(Designation/Institution Name)	The Principal and Chairman Hirasugar Institute of Technology
Institute AISHE Code	C-1409
Type of Institute	Technical
Complete Contact Address	At/Post:Nidasoshi Tal:Hukkeri Dist:Belagavi PIN:591236
Contact No.	9535666217
Email	principal@hsit.ac.in

Bank Account Details(Institutional only not personal)

Bank name	State Bank of India
Complete Address	(01727) Sankeshwar Post Box No.15, Sankeshwar, Gokak Road Hukkeri Taluka Sankeshwar Dist:Belagavi Karnataka-591313
Whether branch is computerized	Yes
Branch's RTGS CODE	SBIN0001727
Branch's IFSC CODE	SBIN0001727
If this branch NEFT enable	Yes
Type of Bank Account	Current
Complete bank Account no.	31868488488
MICR Code of Bank	591002533
PAN Card Number	AACTS0452Q
TIN/TAN Number	BLRH02273F

Declaration

I hereby declare that the particulars given above are correct and complete. If the transaction is delayed or not effected at all for reasons of incomplete or incorrect information I would not hold the user Institution responsible. I have read the option invitation letter and agree to discharge responsibility expected of me as a particular under the Scheme. The Utilization Certificate for the funds received shall be submitted as when required.

08/07/2020

Seal/Signature of UBA Coordinator of PI

(Dr. S. N. Topannavar)

Certified that the particulars furnished above are correct as per records.

8/7/20.

PRINCIPAL
Jssugar Institute of Technology
NIDASOSHI - 591 236.

Jssugar Institute of Technology Nidasoshi Pin-591236 Dist. Belgaum

Seal/Signature of Authorized Person of Institute

S.N Topannavar <sntopannavar.mech@hsit.ac.in>

Seed Money Fund Transfer Details

3 messages

Unnat Bharat Abhiyan <unnatbharatabhiyaniitd@gmail.com> Tue, Apr 13, 2021 at 4:49 PM
To: Virendra kumar Vijay <vkvijay14@gmail.com>, Vivek Kumar <vivekk@rdat.iitd.ac.in>, Priyanka Kaushal <priyankak@rdat.iitd.ac.in>, Virendra Kumar Vijay <vkvijay@rdat.iitd.ac.in>
Cc: meeta bolia <meeta.uba@gmail.com>, manishdsp009@gmail.com
Bcc: sntopannavar.mech@hsit.ac.in

Dear Sir/Madam,

Namaskar!

With Due Respect,

Your fund has been released please find the attached document for UTR detail.

For any query feel free to contact me.

With Regards,

Manish Kumar
Jr. Project Assistant(Tech)
Unnat Bharat Abhiyan(UBA)
Contact Number:9650050887

On behalf of

Prof. Virendra K Vijay
National Coordinator - Unnat Bharat Abhiyan
IREDA Chair Professor
Centre for Rural Development and Technology,
Indian Institute of Technology Delhi
Hauz Khas, New Delhi - 110016
Phone: +91-11-26591157, 26596351
Email: unnatbharatabhiyaniitd@gmail.com,
vkvijay@rdat.iitd.ac.in
Website: http://unnatbharatabhiyan.gov.in

GEN21560.xls
18K

Principal HIT, Nidasoshi(Belagavi) <principal@hsit.ac.in> Wed, Apr 14, 2021 at 11:27 AM
To: "S.N Topannavar" <sntopannavar.mech@hsit.ac.in>

With Regards
Dr. S. C. Kamate
Principal
Hirasugar Institute of Technology
NIDASOSHI - 591236
Belgaum Dist, Karnataka, INDIA
Cell: 9480849331; Phone: 08333-278887; Fax: 08333-278886
[Quoted text hidden]

GEN21560.xls

18K

S.N Topannavar <sntopannavar.mech@hsit.ac.in> Wed, Apr 14, 2021 at 4:30 PM
To: "Principal HIT, Nidasoshi(Belagavi)" <principal@hsit.ac.in>

Respected sir,
I have initiated related activities in discussion with Mr.Manish Kumar.
[Quoted text hidden]

IRD IIT Delhi

IIT CAMPUS,HAUZ KHAS

PAYMENT ADVICE

To

THE PRINCIPAL AND CHAIRMAN HIRASUGAR INSTITUTE OF TECHNOLOGY

Dear Sir/Madam,

Details of the transactions initiated through SBI CMP in favour of you are

PAYMENT_INVOICE_FIELDS	VALUES
JOURNAL_NUMBER	218444850
AMOUNT	50,000.00
DATE	30-03-2021
LINKAGE_FIELD	
AMOUNT	50000
TAX DEDUCTED	
PROJECT NO	
OUT REF NO	
DATE	
GROSS AMOUNT	50000
TOWARDS	PAYMENT TO PARTICIPATE INSTITUTES WORKING UNDER UBA VIDE GEN21560
BANK NAME	SBI
ACCOUNT NO	31868488488
IFSC CODE	SBIN0001727

Your Bank Account No: 31868488488

Your Bank IFSC Code: SBIN0001727

Please acknowledge receipt of the payment

For IRD IIT Delhi

Authorised Signatory

This is Computer generated advice and does not require any Signature

Unnat Bharat Abhiyan (UBA)-Village and Baseline Household Survey

(Ref: Volunteer Participation through Google form, Awareness Program and constituted STT)

- With reference to the above Survey Teams for 5 adopted villages have been constituted to complete UBA-Village Survey and UBA-Baseline Household Survey.

List of Staff Members for the village Nidasoshi

S.N.	Name	Designation	Department	Mobile Number	Signature
1	Mahantesh Tanodi	Assistant Professor & Convenor	ME	9611998812	
2	S.I.Ittannavar	Assistant Professor & Convenor	ECE	9964299498	
3	Rajendra S Bardol	Instructor & Convenor	EEE	8277010328	
4	Maheshwar A Hipparagi	Assistant Professor	ME	7411507405	
5	Sujata Huddar	Assistant Professor	EEE	9742066852	
6	M.M.Shivashimpi	Assistant professor	ME	9742197173	
7	Mohan Futane	Assistant Professor	ME	9164105035	
8	Sunita Malaj	Assistant Professor	ECE	8073529095	
9	Manjunath S Hanagadakar	Associate Professor	1st Year	8310768223	
10	Ravindra Patil	Assistant Professor	CSE	9845455422	
11	Keshav Negalur	Assistant professor	EE	7619165884	
12	Shivanand Hirekodi	Assistant Professor	EEE	8073543248	
13	K.B. Manwade	Associate professor	CSE	8412968254	
14	Amit Nesti	Assistant Professor	EEE	9606703174	
15	Pratima Khot	Assistant Professor	ECE	9964019501	
16	Mohan A. Gholap	Assistant Professor	CSE	8660535525	
17	Aruna Anil Daptardar	Assistant Professor	CSE	9620851002	
18	Annappa R Bhiste	Instructor	CSE	9538170337	
19	Anand K Badakar	Assistant Programmer	CSE	9980283608	
20	Manojkumar Chitale	Assistant professor	CSE	9480787474	
21	N.K.Honnagoudar	Assistant Professor	CSE	9449495302	

List of Staff Members for the village Ammanagi

S.N.	Name	Designation	Department	Mobile Number	Signature
1	K. M. Akkoli	Associate Professor & Convener	ME	9739114856	
2	Shivanand V Manjaragi	Assistant Professor & Convener	CSE	9986658309	
3	V.G.Badiger	Forman & Convener	ME	9739114857	
4	G.B.Dodagoudar	Instructor & Convener	1st Year	9886361216	
5	Darshan N Inamdar	Assistant professor	ME	9591208980	
6	Nyamatulla M Patel	T & P Officer	CSE	9739619661	
7	Virupakshi M Bhumannavar	Assistant Professor	1st Year	9448526988	
8	Chandrakant R Belavi	Assistant Professor	CSE	7829241219	

9	Mahesh Huddar	Assistant Professor	CSE	7411043272	
10	Mahesh Yenagimath	Assistant Professor	EEE	9341449466	

List of Staff Members for the village Borgal

S.N.	Name	Designation	Department	Mobile Number	Signature
1	S.A.Goudadi	Assistant Professor & Convener	ME	9448876682	
2	M.G.Huddar	Assistant Professor & Convener	CSE	7411043272	
3	Pramod Desai	Forman & Convener	ECE	9620024724	
4	Chetan Jodatti	Instructor	T & P	9535421165	
5.	A. R. Zinage	Asst. Prof	EEE	8073512609	

List of Staff Members for the village Hattarwat

S.N.	Name	Designation	Department	Mobile Number	Signature
1	S.B.Sarwadi	Physical Director & Convener	Sports	9739109383	
2	Ashok Bennoli	Instructor & Convener	CSE	7829847451	

List of Staff Members for the village Kesti

S.N.	Name	Designation	Department	Mobile Number	Signature
1	D. B. Madihalli	Assistant Professor & Convener	ECE	9902854324	
2	G.S.Solabannavar	Librarian & Convener	Other	7204183589	
3	Pramod Murari	Assistant Professor	EEE	9739733021	
4	Sujata S. Kamate	Assistant Professor	ECE	9008696825	
5	Dattatray M Kumbhar	Assistant professor	ECE	7353545488	
6.	O. B. Heddurshett	Asst. Prof.	EEE	9448420509	

Dist:Belgaum. Hirasugar Institute of Technology NIDASOSHI Pin-591236

PRINCIPAL
Hirasugar Institute of Technology
Nidasoshi- 591 236

List of Student Volunteers for all 5 Adopted Villages

S.N.	Name	USN	Sem	Mobile	Native	Signature
1.	Mahantesh Hiremath	2HN19ME407	VI	7026797668	Ilkal	
2.	Vivekananda C Kambi	2HN18ME048	VI	7406124053	Mamadapur	
3.	Nikita M. Hattarki	2HN19EC013	IV	7558606474	Daddi	
4.	Priyanka Dattawade	2HN19EC014	IV	9972036805	Mekhali	
5.	Maruti A Magadum	2HN19EC011	IV	9986095368	Madamakkanal	
6.	Sharanabasapp M Chalikar	2HN19CS038	IV	8088505552	Bhairamadagi	
7.	Prasad Hiremath	2HN19CS027	IV	9448163822	Belgaum	
8.	Nagadarshan Kopparad	2HN19EE009	IV	7259290709	Ilkal	
9.	Sohail Yargatti	2hn17me050	VI	7996227934	Belgaum	
10.	Apoorva Magadum	2HN19EC003	IV	9632562486	Hukkeri	
11.	Divya Karigar	2HN19EC005	IV	8310452546	Sankeshwar	
12.	Aishwarya Gundoli	2HN18CS001	VIII	7259550923	Sunadholi	
13.	Suraj S Drakshe	2HN19EE012	IV	9513794305	Hirekodi	
14.	Rutuja Shetti	2HN19EC019	IV	8431728625	Raibag	
15.	Laxmi Bedage	2HN19EC010	IV	9740832840	Yadurwadi	
16.	Kallappa Ningappa Chikodi	2HN19EC009	IV	7619154326	Donwad	
17.	Nivedita L Udapudi	2HN19CS020	IV	8073723423	Gokak	
18.	Ajinkaykumar Sambhaji Bhosale	2HN18ME005	VI	6360103570	Nipani	
19.	Anupriya B Mugalkhod	2HN20CS400	IV	9148364195	Terdal	
20.	Nihal Siraj Shaikh	2HN19CS037	IV	9307937437	Miraj	
21.	Pradeep Raghannavar	2HN19CS023	IV	8431640988	Junnur	
22.	Vineet Gandolli	2HN19CS048	IV	8951612633	Gokak	
23.	Sneha S Hirekodi	2HN19CS040	IV	9606783195	Kanagala	
24.	Kartik Kumbar	2HN19CS015	IV	6364328002	Chikodi	
25.	Rohit Mali	2HN19CS030	IV	7406462547	Mangasuli	
26.	Solapure Amrut Basavaraj	2HN19CS042	IV	7620836378	Nilagi	
27.	Ashwini Maled	2HN18CS005	IV	8105762541	Lokapur	
28.	Harfa I Mujawar	2HN19CS014	IV	8105561244	Gokak	
29.	Sahana Naik	2HN19CS031	IV	9731518120	Radderahatti	
30.	Soumya Kadam	2HN19CS043	IV	9380204414	Athani,	
31.	Amruta Gudimani	2HN19CS005	IV	8722913597	Hirekodi,	
32.	Padma Borannvar	2HN19CS021	IV	8105158323	Bellad bagewadi	
33.	Akshata K M	2HN19CS004	IV	6361736284	Janawad	
34.	Keerti C Chajagoud	2HN19CS016	IV	8660163381	Karoshi	
35.	Muzammil Patel	2HN19CS019	IV	7204947143	Bijapur	
36.	Suprita Sindhur	2HN19CS045	IV	9743634531	Kakamari	
37.	Akshay Salagare	2HN19EC001	IV	7026375395	Nilaji	
38.	Ganesh Managuli	2HN19EC006	IV	8073373098	Nagarmunnoli	

39.	Ramakrshna K. Magadum	2HN18ME031	VIII	9844519754	Kamatanur	
40.	Ramesh Manjaragi	2HN20ME403	IV	6362315826	Ammanagi	
41.	Hasansab S. Yaragatti	2HN18ME013	VIII	9380648988	Gokak	
42.	Sudharani B Kurani	2HN18CS037	VI	7676839549	Teerth	
43.	Ashwathraj Nerli	2HN19CS007	IV	9902535217	Chikodi	
44.	Seema Tugadalli	2HN19CS036	IV	9663234355	Mugalkhod	
45.	Pranav Gaddi	2HN19CS026	IV	8861909177	Sankeshwar	
46.	Sunil Sutar	2HN20CS403	IV	9535164295	Sankeshwar	
47.	Sneha Shitole	2HN19CS039	IV	9535554899	Borgaon	
48.	Swati Patil	2HN18CS039	VI	9611870374	Hukeri	
49.	Daneshwari J Sultanpure	2HN19CS011	IV	7899707537	Sankeshwar	
50.	Meenaxi Baad	2HN20CS401	IV	7090513882	Nidasoshi	
51.	Sneha Patil	2HN19CS400	VI	9071654955	Sankeshwar	
52.	Tehamim.M.Rehamanbhai	2HN19EE013	IV	8971095318	Chikodi	
53.	Sneha V Ganachari	2HN19CS041	IV	7996010238	Hukkeri	
54.	Smita Manoli	2HN18CS033	VI	8971885532	Nidasoshi	
55.	Vishakha Vijay Nesari	2HN18CS045	VI	7019631053	Sankeshwar	
56.	Rajat Naganur	2HN18EE015	VI	6361907448	Bailhongal	
57.	Chinna Yashawant	2HN18EE005	VI	8867487798	Borgal	
58.	Shashidhar Gurav	2HN19ME010	IV	7337853480	Borgal	
59.	Shivaprasad Ammnagi	2HN18ME036	VI	7022403970	Nandagao (savalagi)	
60.	Chetan Karigar	2HN16ME017	VI	8073789383	Chikodi	
61.	Mahadev Rama Gulli	2HN19ME007	IV	9686755257	Bidrewadi,	
62.	Vimarsha Pujari	2hn20ec044	II	8217664206		
63.	Swati Kupati	2HN20EC041	II	7483898619	Hattargi	
64.	Sushmita Tanodi	2HN20EC040	II	7204944241	Nidasoshi	
65.	Nayana Patil	2HN20CV002	II	7411013397		
66.	Sneha Sadalagi	2HN20EC038	II	6360136267	Hebbal	
67.	Shravana Bastwadi	2HN20EC033	II	6361231755	Kochari	
68.	Gouri Mathapati	2HN20EC010	II	7483554619	Ammanagi	
69.	Sapna Naik	2HN20EC031	II	7019411717	Beniwad	
70.	Nilambari Arakeri	2HN20ec019	II	8904021345		
71.	Aishwarya Dudaganvi	2HN20ec004	II	9529879633	Konkanuri	
72.	Samrudhi Kulkarni	2HN20EC029	II	9740984467	Nipani	
73.	Poornima Shindhe	2HN20EC023	II	7975748665	Shedbal	
74.	Neha Bhujagoudar	2HN20EC018	II	8951603108	Shedbal	
75.	Priyanka Gharagude	2HN20EC025	II	7676376867	Jainapur	
76.	Madhuja Khot	2HN20EC014	II	8792682039	Borgaonwadi	
77.	Komal Chavan	2HN20EC012	II	9741945017	Yadur	
78.	Saraswati Baldoal	2HN20EC032	II	9591492134	Gokak	

79.	Arati Bugadikatti	2HN20EC007	II	8867043539	Ingali	Arati
80.	Neelambika Govindapuramath	2HN20EC017	II	7022017720	Mudhol	
81.	Ashwini Patil	2HN20EC008	II	8867446947	Belgavi	
82.	Tejashri Patil	2HN20EC042	II	7975123008	Bhivashi	
83.	Shweta Mangasole	2HN20EC036	II	8880875484	Shamanewadi	
84.	Shrutika Dhang	2HN20EC035	II	8277303726	Ugar. Kh	
85.	Sanika Patil	2HN20EC030	II	988059561	Shiradwad	
86.	Sneha Belagali	2HN20EC037	II	7892380575	Yadur	
87.	Shruti Magadum	2HN20EC034	II	7338240933	Kesti	
88.	Sneha Munnoli	2HN20EC039	II	9591353167	Kesti	
89.	Veena Magadum	2HN20EC043	II	7975788522	Nasalapur	
90.	Jyoti Benawadi	2HN20ee007	II	9591553515	Nagnur km.	
91.	Rashmi Malagoudnavar	2HN20ee013	II	9964188688	Yallimunoli	
92.	Saniya Choudhari	2HN20ee014	II	8073773604	Hukkeri	
93.	Swati Padipatil	2HN20EE018	II	9353981399		
94.	Simran Attar	2HN20EE016	II	8147059773	Kaguad	
95.	Saraswati Bolabala	2HN20EC032	II	9591492134	Gokak	
96.	Nikita Hattaski	2HN19EC013	II	7558606474	Daddi	
97.	Sneha Sadalagi	2HN20EC038	II	6360136267	Hubbal	
98.	Shravan Bastawadi	2HN20EC033	II	6361231755	kachari	
99.	Kallappa Chikodi	2HN19EC007	IV	7619154326	Donwad	
100.	Maruti Magadum	2HN19EC011	IV	9986095368	[illegible]	
101.	Ganesh Managuli	2HN19EC006	IV	8073373098	Nagarmunnoli	
102.	Rohit Mali	2HN19CS030	IV	7406462547	mangsuli	
103.	Gouri Mathapati	2HN20EC010	II	7483554619	Ammanagi	
104.	Sushank Hawaldar	2HN18EE023		7483124693		
105.	Akhilesh Patil	2HN18EE001		9449127367		
106.	Ashwat Karadigudd	2HN18EE003		7760406281		
107.	Sanjay Mannikeri	2HN18EE019		7204688187		
108.	Sourabh Sannakki	2HN19EE403	IV	7349377508		
109.	Shashikant Ninganagoudar	2HN18EE021		9606509925		
110.	Naeenkumar Gokanvi	2HN19EE401	IV	8095424048		
111.	Rajat Naganur	2HN18EE015		6361907448		
112.	Nikhil Nandigon	2HN18ME020	VII	6361913612	Jamakhandi	
113.	Akash B V	2HN18ME006				
114.	Ganesh Managanvi					
115.	Rohit Mali					
116.	Archana Mgulli	2HN19ME003	IV			
117.	Ayesha Sayyad	2HN18ME001				
118.	Shweta Manyare	2HN20EC036	II	8880875484	Shamnewadi	

119.	Shrutika Dhang	2HN20EC035	II	8277303726	Ugar. Kh	
120.	Tejashri Patil	2HN20EC042	II	7975123008	Bhivashi	
121.	Madhuja Khot	2HN20EC014	II	8792682039	Borgaonwadi	
122.	Sneha Belagali	2HN20EC037	II	7892380575	Yadera	
123.	Sanika Munnoli	2HN20EC030	II	9880594561	Shirdawad	
124.	Sneha Munnoli	2HN20EC039	II	9591353167	Kesti	
125.	Shruti Magadum	2HN20EC034	II	7338240933	Kesti	
126	Nikhil Ushettanavar	2HN18ME021	VII	7996168131	Chikodi	

The above staff And student volunteers are requested to conduct & complete House-hold & Village Surveys 1st and 2nd week of September 2021 in the all 5 adopted villages in the UBA-prescribed format. All are also requested to submit the Analysis, Summary, Attendance and Special observations/recommendations for holistic development of respective village in consultation with key persons of the respective village in the prescribed format.

24/08/2021

Dr.S.N.Topannavar
UBA-Coordinator of PI

Hirasugar Institute of Technology NIDASOSHI. PIN-591236. Dist:Belgaum.

Dr.S.C.Kamate
Principal

PRINCIPAL
Hirasugar Institute of Technology
Nidasoshi- 591 236

ಗ್ರಾಮ ಪಂಚಾಯತ, ಕಾರ್ಯಾಲಯ,

ತಾಲೂಕಾ : ಹುಕ್ಕೇರಿ, **ನಿಡಸೋಸಿ.** ಜಿಲ್ಲೆ : ಬೆಳಗಾವಿ

OFFICE OF GRAM PANCHAYAT NIDASOSHI

Tal.Hukkeri Dist:Belagavi.-591236 (Karnataka)

Ref. No. G.P.N:ND.25:2021-22 *Date :* 16/02/2022

Appreciation Certificate

With reference to the UBA Meeting No.:HSIT/NDS/UBA-meeting-03/2021-22, Dated : 4th Feb. 2022, We are very much thankful to participating institute (PI) Hirasugar Institute of Technology, Nidasoshi for adopting our village Nidasoshi under Prime Minister Flagship program Unnat Bharat Abhyan. This is to certify that institute has been conducted collaborative village and household surveys of our village on 3rd-9th, September 2021 successfully.

We express our gratitude to the institute for considering our recommendations and findings of survey reports in the technology proposals of Subject Expert Groups (SEGs). We are happy to continue the same cooperation and coordination in future for the technology intervention of the institute for holistic development of our village.

PANCHAYAT DEVELOPMENT OFFICER
Gram Panchayat, NIDASOSHI
Tq Hukkeri Dt:Belagavi

ಕರ್ನಾಟಕ ಸರ್ಕಾರ

ಜಿಲ್ಲಾ ಪಂಚಾಯತ ಬೆಳಗಾವಿ

ಗ್ರಾಮ ಪಂಚಾಯತ ಕಾರ್ಯಾಲಯ ಕೇಸ್ತಿ

ತಾ: ಹುಕ್ಕೇರಿ 591236 ಜಿ: ಬೆಳಗಾವಿ

Office Of Gram Panchayat Kesti

Tq-Hukkeri 591236 Di-Belgaum

Ref. No: GPK/2021.22 Date: 18/02/2022

Appreciation Certificate

With reference to the UBA Meeting No.:HSIT/NDS/UBA-meeting-03/2021-22, Dated : 4th Feb. 2022, We are very much thankful to participating institute (PI) Hirasugar Institute of Technology, Nidasoshi for adopting our village Kesti under Prime Minister Flagship program Unnat Bharat Abhyan. This is to certify that institute has been conducted collaborative village and household surveys of our village on 3rd-9th, September 2021 successfully.

We express our gratitude to the institute for considering our recommendations and findings of survey reports in the technology proposals of Subject Expert Groups (SEGs). We are happy to continue the same cooperation and coordination in future for the technology intervention of the institute for holistic development of our village.

PANCHAYAT DEVELOPMENT OFFICER
Gram Panchayat, KESTI
Tal Hukkeri Dist:Belgaum

ಗ್ರಾಮ ಪಂಚಾಯತ ಕಾರ್ಯಾಲಯ ಹತ್ತರವಾಟ

ತಾ: ಚಿಕ್ಕೋಡಿ, ಜಿ: ಬೆಳಗಾವಿ.

ಗ್ರಾ.ಪಂ.ಹ/ವಿವ/9/2021–22 ದಿನಾಂಕ:– 19 FEB 2022

Appreciation Certificate

With reference to the UBA Meeting No.:HSIT/NDS/UBA-meeting-03/2021-22, Dated : 4th Feb. 2022, We are very much thankful to participating institute (PI) Hirasugar Institute of Technology, Nidasoshi for adopting our village Nidasoshi/ Ammanagi/ Borgal/Kesti/Hattarwatunder Prime Minister Flagship program Unnat Bharat Abhyan. This is to certify that institute has been conducted collaborative village and household surveys of our village on 3rd-9th, September 2021 successfully.

We express our gratitude to the institute for considering our recommendations and findings of survey reports in the technology proposals of Subject Expert Groups (SEGs). We are happy to continue the same cooperation and coordination in future for the technology intervention of the institute for holistic development of our village.

ಪಂಚಾಯತ ಅಭಿವೃದ್ಧಿ ಅಧಿಕಾರಿಗಳು
ಗ್ರಾಮ ಪಂಚಾಯತ, ಹತ್ತರವಾಟ.

Unnat Bharat Abhiyan

Volunteers' Participation in Village and Household Survey Conducted during 3rd – 9th September 2021

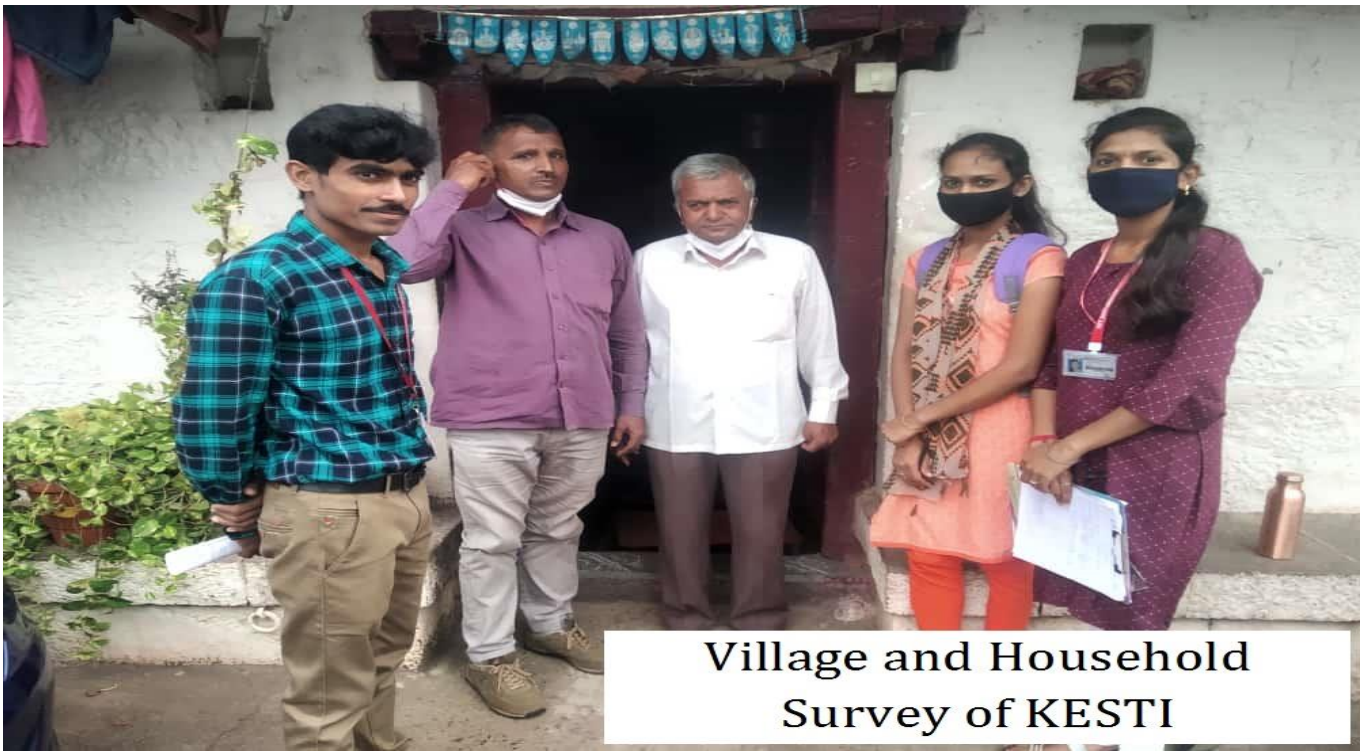
Adopted Village: Nidasoshi


HIRASUGAR INSTITUTE OF TECHNOLOGY, NIDASOSHI.
"UNNAT BHARAT ABHIYAN"
"ಉನ್ನತ ಭಾರತ ಅಭಿಯಾನ"
REDMI NOTE 8
AI QUAD CAMERA
Village and Household Survey of NIDASOSHI


S.J.P.N TRUST'S H.I.T NIDASOSHI
Village and Household Survey of NIDASOSHI

Adopted Village: Ammanagi

Adopted Village: Kesti



Adopted Village: Borgal

Adopted Village: Hattarwat

Applied for :	Technology Development
Name of the College/ Institution :	Hirasugar Institute of Technology, Nidasohsi
UBA Coordinator Name :	Dr.S.N.Topannavar
UBA Coordinator mail id :	sntopannavar.mech@hsit.ac.in
UBA Coordinator Contact No :	9482440235
State :	Taluka: Hukkeri Dist: Belagavi Karnataka PIN:591236

PROJECT TITLE: ADVANCED COMMUNITY SOLAR DRYER FOR AGRO PRODUCTS

Objectives:

- To eliminate the unwanted and unpredictable food spoilage of the agri products.
- To study the characteristics and performance of the solar dryer system with continuous feeding & outlet mechanism.
- To develop a solar dryer system for quality ensured products.
- To Design & Develop low cost & Product based Automated (Ardunio Controlled) Solar Cabinet Dryer for the welfare of Farmers & Food Processing Industries.
- To achieve favourable temperature for various agro-products with different wetness with the help of effective Solar Tracking system.

Justification for the project:

i) Problem Statement:

To study and develop a solar dryer in which the grains are dried continuously by circulating heated air from the solar air heater with the help of manual solar tracking system. The problem of low, medium & large scale processor could be alleviated, if the solar dryer is designed and constructed with the consideration of overcoming the limitation of direct & indirect type of solar dryer. So therefore, this work will be based on importance of a solar dryer which is reliable and economically viable, adoptive design. The controlled drying of the various agro products with the help of the Ardunio controlled parameters. The project will help the farmers to enhance their economy and drying problems of various agro products.

ii) Priority Needs:

1. The prime priority to the farmer for drying of grains, as they will receive benefit of this.
2. The Second Priority To Food Processing Industries To Increases The Food Quality.

iii) Proposed approach/Technical Intervention/customization:

- Visited to farm and had conversation with farmers about what problems they are facing.
- And we pointed to main problem which they were facing that was drying of grains.
- We can to know about how farmers dry they grains. They use to dry the grains on road side.
- And then we listed the problems which they were facing Problems like: unpredictable food spoilage, more time consumption & unwanted thing mixing with grains.

iv) Brief plan of activities and implementation timeline:

Project starts from March, 2022 : .

Month	Weeks	Tasks Completed
March	2 weeks	To figure out the problem of drying of grains
March	2 weeks	Materials Selection & modelling
April	3weeks	Design Thinking
April-May	4 weeks	Fabrication Work
May-June	5 weeks	Experimentation with Raw materials & Agro-Products

June-July	4 weeks	Analysis, Results & Discussion
August	2 weeks	Conclusion

Methodology, Materials and Financial Resources:

Methodology:

The stepwise methodology to complete our Project is as below.

Step 01: Literature Survey
Step 02: Defining problem statement of the Project (Title)
Step 03: With the help scope defining objective
Step 04: Materials selection and Modelling
Step 05: Design Thinking
Step 06: Fabrication work
Step 07: Experimentation with raw material & Agro-Products
Step 08: Result & Discussion
Step 09: Analysis & Recommendation
Step 10: Conclusion

Materials:

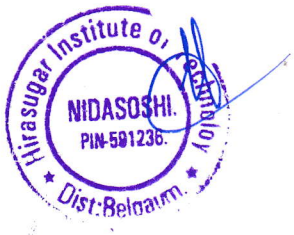
Fiber Glass Body, Solar Panel, Blower, Absorber Plate, Orifice meter, Glass Cover, Arduino UNO, Temperature Sensor(DHT11),Trays, Metal Beams For Body Fabrication & Fibre glass For Solar Air Heater.

Financial Resources:

Budget	Amount in Rs.
a) Materials, Design and Development of Fiber glass body, Solar Panel, Blower, Absorber Plate, Orifice meter, Glass cover, Arduino UNO, Temperature Sensor(DHT11), Trays, Metal Beams For Body Fabrication, Fiber glass For Solar Air Heater.	70000.00
b) Fabrication Labor Charge	8000.00
c) Travelling Expenses & Running cost	20000.00
d) Site preparation cost	10000.00
e) Miscellaneous	10000.00
Total cost of the Technology in Rs.	118000.00

Outcome of the Project:

The expected outcomes of our project are as below:



- Ardunio Controlled agro-product based drying.
- Affordable Cost agro-product Solar based Dryer.
- Increased farmer income by quality product.
- Automated & Product based controlled Drying.
- Quality ensured Products Portable & Movable Farmer Friendly Dryer.

Proposal in Online Format

Applied for :	Technology Development
Name of the College/ Institution :	Hirasugar Institute of Technology, Nidasohsi
UBA Coordinator Name :	Dr.S.N.Topannavar
UBA Coordinator mail id :	sntopannavar.mech@hsit.ac.in
UBA Coordinator Contact No :	9482440235
State :	Taluka: Hukkeri Dist: Belagavi Karnataka PIN:591236
SEG Name:	Expert Group (SEG) of IIT Delhi, Rural Energy Systems

<table>
<tr><td>RCI:</td><td>IIT Bombay</td></tr>
<tr><td>AISHE Code of the College:</td><td>C-1409</td></tr>
<tr><td>Adopted Villages are:</td><td>Nidasoshi, Ammanagi, Kesti, Borgal & Hattarwat</td></tr>
<tr><td>Title:</td><td>ADVANCED COMMUNITY SOLAR DRYER FOR AGRO PRODUCTS</td></tr>
<tr><td>Village where it is to be implemented:</td><td>Nidasoshi</td></tr>
<tr><td>Why this technology is required (Objective of the project maximum 200 word):</td><td>➢ To eliminate the unwanted and unpredictable food spoilage of the agro products.
➢ To study the characteristics and performance of the solar dryer system with continuous feeding & outlet mechanism.
➢ To develop a solar dryer system for quality ensured products.
➢ To Design & Develop low cost & Product based Automated (Ardunio_Controlled) Solar Cabinet Dryer for the welfare of Farmers & Food Processing Industries.
➢ To achieve favorable temperature for various agro-products with different wetness with the help of effective Solar Tracking system.</td></tr>
<tr><td>Total Cost of the Product/Technology:</td><td>
<table>
<tr><th>Budget</th><th>Amount</th></tr>
<tr><td>a) Materials, Design and Development of Fiber glass body, Solar Panel, Blower, Absorber Plate, Orifice meter, Glass cover, Arduino UNO, Temperature Sensor(DHT11), Trays, Metal Beams For Body Fabrication, Fibre glass For Solar Air Heater.</td><td>70000.00</td></tr>
<tr><td>b) Fabrication Labor Charge</td><td>8000.00</td></tr>
<tr><td>c) Travelling Expenses & Running cost</td><td>20000.00</td></tr>
<tr><td>d) Site preparation cost</td><td>10000.00</td></tr>
<tr><td>e) Miscellaneous</td><td>10000.00</td></tr>
<tr><td>Total Cost of the Technology</td><td>118000.00</td></tr>
</table>
</td></tr>
<tr><td>Fund raised from:</td><td>NA</td></tr>
<tr><td>Describe your role as PI at various stage of the project (max 500 words):</td><td>The role of PI is to identify the needs of the village people by carrying out the survey in adopted villages. Based on the need analysis of village people, technically feasible and economically viable system design is proposed for technological development and implementation through procurement of materials and accessories. After designing, testing of the proposed system is done.
For smooth and safe operation of the system, necessary awareness with all information related to the project is provided to the beneficiary.

1. Design and Development Stage: Suitable Human resource mobilization and laboratory supports
2. Implementation Stage: Coordination between Gram Panchayat & SEG Members
3. Outcome Analysis Stage: Suitable human resource</td></tr>
</table>

Hirasugar Institute of Technology NIDASOSHI. PIN-591236. Dist:Belgaum.

	mobilization
Process of execution of the project:	The stepwise methodology to complete our Project is as below. Step 01: Literature Survey Step 02: Defining problem statement of the Project(Title) Step 03: With the help scope defining objective Step 04: Materials selection and Modelling Step 05: Design Thinking Step 06: Fabrication work Step 07: Experimentation with raw material & Agro-Products Step 08: Result & Discussion Step 09: Analysis & Recommendation Step 10: Conclusion
Who are the beneficiaries (ST, SC, OBC, Tribal etc.) and potential impact of technology on the beneficiary and village :	Farmers having less farming land. The socio economic development of village farmers.
Duration of Project:	06 Months
Role of stake holders in maintaining sustainability after the project duration (please mention point wise role of participating stake holders):	1) Solar system related maintenance work 2) Acquiring skills to operate automated system 3) Suggesting to institute level SEGs for further improvement in design and development 4) Addressing the grievances of the farmers and resolving 5) Scaling of the project
Execution of the project along with role of all participating stakeholders (write point wise max 500 words) :	i) Problem Statement: To study and develop a solar dryer in which the grains are dried continuously by circulating heated air from the solar air heater with the help of manual solar tracking system. The problem of low, medium & large scale processor could be alleviated, if the solar dryer is designed and constructed with the consideration of overcoming the limitation of direct & indirect type of solar dryer. So therefore, this work will be based on importance of a solar dryer which is reliable and economically viable, adoptive design. The controlled drying of the various agro products with the help of the Ardunio controlled parameters. The project will help the farmers to enhance their economy and drying problems of various agro products. ii) Priority Needs: 1. The prime priority to the farmer for drying of grains, as they will receive benefit of this. 2. The Second Priority To Food Processing Industries To Increases The Food Quality. ii) Proposed approach/Technical Intervention/customization: ➢ Visited to farm and had conversation with farmers about what problems they are facing. ➢ And we pointed to main problem which they were facing that was drying of grains. ➢ We can to know about how farmers dry they grains. They

	use to dry the grains on road side. ➢ And then we listed the problems which they were facing Problems like: unpredictable food spoilage, more time consumption & unwanted thing mixing with grains.
Impact of this work on learning of students/ teachers:	Resolving the farmers' problems related to their agro products. Using of advanced technology to enhance the value of the agro products. Technology intervention in the agriculture.
Role of PI after completion of the project duration.	1) Scaling of the project to reach all need people of the adopted villages 2) Preparing DPR to the district level 3) Automation for feeding and outlet mechanism to increase productivity 4) Steps to increase the performance and efficiency of the project 5) Design and development towards increasing the quality of the agro products for exporting. 6) Steps towards to add relevant values to the agro products.
Enter Name and Contact details of students involved in this project:	1. AMIT.P.THORAT E-mail: amitandthorat19@gmail.com Mobile No.:7337722814 2.SHWETA.M. KUMBAR Email id:shwetakumbar1999@gmail.com Mobile No.: 8296654234 3. AJINKAYKUMAR.S.BHOSALE Email id: bhosaleajinkya41@gmail.com Mobile No.: 6360103570 4. SHRIDHAR.B.MUDIGOUD Emailid:shridharmudigoud1198@gmail.com Mobile No.: 8105443562
Enter Name and Contact details of peoples those will be involved in this project (From UBA connected / adopted village):	1. Dr.M.M.Shivasimpi (Mobile no.:9742197173) 2. Prof,M,I,Tanodi (Mobile no.:9611998812) 3. Dr.K.M.Akkoli (Mobile no.:9739114856) 4. Prof.D.N.Inamdar (Mobile no.:9591208980)

Dr. S.N.Topannavar
Principal Investigator

Dr.S.N.Topannavar
UBA Program Coordinator

Hirasugar Institute of Technology NIDASOSHI PIN-591236. Dist:Belgaum.

Applied for :	Technology Development
Name of the College/ Institution :	Hirasugar Institute of Technology, Nidasohsi
UBA Coordinator Name :	Dr.S.N.Topannavar
UBA Coordinator mail id :	sntopannavar.mech@hsit.ac.in
UBA Coordinator Contact No :	9482440235
State :	Karnataka, Dist: Belagavi Block: Hukkeri
SEG Name:	Expert Group (SEG) of IIT Kharagpur & GSIT Indore
RCI:	IIT Bombay
AISHE Code of the College:	C-1409
Adopted Villages are:	Nidasoshi, Ammanagi, Kesti, Borgal & Hattarwat
Title:	LAKE CLEANING MACHINE
Village where it is to be implemented:	Ammanagi
Why this technology is required (Objective of the project maximum 200 word):	In India water pollution is increasing day by day so this is becoming serious problem for rivers, ponds, lakes etc. These lakes or rivers etc mainly consist of impurities like waste water debris, plastics, garbage on floating water surface. Many species consume plastic debris as food by mistakenly while feeding or swimming. Once ingested, this debris can damage their digestive tract and interfere with an animal's ability to feed, leading to starvation or other negative health effects. Polluted water also causes many skin diseases to human kind. So that to reduce the water pollution we are trying to make lake cleaning machine. "Lake Cleaning Machine" a device which involves the collecting the waste debris from water surface through remote controller.
Total Cost of the Product/Technology:	Rs.1,00,000/-
Fund raised from:	Not Applicable
Describe your role as PI at various stage of the project (max 500 words):	The role of PI is to identify the needs of the village people by carrying out the survey in adopted villages. Based on the need analysis of village people, technically feasible and economically viable system design is proposed for technological development and implementation through procurement of materials and accessories. After designing, testing of the proposed system is done. For smooth and safe operation of the system, necessary awareness with all information related to the project is provided to the beneficiary.
Process of execution of the project:	A survey regarding the needs of the beneficiary villages is carried out with the help of the students. Collected survey information is analysed and a proposal is prepared based on the needs. A detailed schedule of implementation is prepared. The detailed proposal with all necessary information is submitted for approval.

	If the submitted proposal is approved and sanctioned, then all the materials will be procured through a proper process of quotation, comparison and placing order. After receiving all the required materials necessary structure is built, all the required components are assembled and then tested for its proper operation. The beneficiaries will be given awareness about its operation and maintenance. Necessary technical support will be provided as per the need.
Who are the beneficiaries (ST, SC, OBC, Tribal etc.) and potential impact of technology on the beneficiary and village :	Society
Duration of Project:	**6 Months**
Role of stake holders in maintaining sustainability after the project duration (please mention point wise role of participating stake holders):	1) Routine maintenance of the system 2) Safety checks on regular basis.
Execution of the project along with role of all participating stakeholders (write point wise max 500 words) :	Survey, Need analysis, Material listing, Purchasing, Designing and Testing
Impact of this work on learning of students/ teachers:	Students/ teachers will be able to plan, schedule and implement the project in a team.
Role of PI after completion of the project duration.	The role of PI is to identify the needs of the village people by carrying out survey in adopted villages. Based on the need analysis of village people, technically feasible and economically viable system design is proposed for technological development and implementation through procurement of materials and accessories. After successful installation, testing of the proposed system is done. For smooth and safe operation of the system, necessary awareness with all information related to the project is provided to the beneficiary.
Enter Name and Contact details of students involved in this project:	Mr.Kunal Mane, Mob: 9108753392, Mr.Vaibhav Mugale, Mob:7406041431 Akhilesh Patil, Mob: 9449127367, Ashwat Karadigud, Mob: 7760406281, Akash Tukare, Mob: 8867737591
Enter Name and Contact details of peoples those will be involved in this project (From UBA connected / adopted village):	Prof. K. B. Negalur, Mobile:7619165884 Prof. S. S Birade, Mobile: 9945105480 Prof. S. G. Huddar, Mobile: 9742066852 Mr. R. S. Bardol Mob: 8277010328, Mr. V. M. Mutalik, Mobile:7338327184 Mr. S. B. Beelur, Mobile: 8105974422

Principal Investigator
Prof. K. B. Negalur

12/2/22
HOD
Dr. B. V. Madiggond
BE,ME,Ph.D
Prof. & Head
Dept. of Electrical & Electronics Engg.
HIT NIDASOSHI-591 236

UBA Coordinator
Dr.S.N. Topannavar

UNNATA BHARAT ABHIYAN

Project Proposal

2021-2022

Applied For:	TECHNOLOGY CUSTOMIZATION
Name of college/institute:	Hirasugar Institute Of Technology, Nidasoshi
UBA co-ordinator name:	Dr. S. N. Topannavar
UBA co-ordinator email:	sntopannavar.mech@hsit.ac.in
UBA co-ordinator contact no.:	9482440235
State:	Karnataka
District:	Belagavi
Block:	Nidasoshi- 591236
SEG Name:	Rural Energy Systems(IIT-Delhi)
Select RCI:	IIT-Bombay
AISHE code of college:	C-1409
Title Of the Technology:	"SAURA CHULA, Solar Powered GSM Based Multipurpose Wireless Smart cooking/Water Heating Device"

<table>
<tr><td>Village where it is to be adopted:</td><td>Nidasoshi, Ammanagi, Kesti, Borgal & Hattarwat</td></tr>
<tr><td>Why this technology required(Objective of the project):</td><td>Alternate source of energy is always a green approach of energy consumption, in the time of crises of energy and global warming. Use of solar energy for cooking as well as water heating is better solution, but still not established as user friendliness and economic aspect. Food is the basic need of human being. Food can be cooked with conventional fuels like wood, cow- dung, kerosene, Liquid Petroleum Gas (LPG) and electricity. Solar cooker is clean and eco-friendly energy device for cooking.</td></tr>
<tr><td>Total cost of the product/technology:</td><td><table>
<tr><td>Materials / Consumables</td><td>Labor</td><td>Travel</td><td>Miscellaneous</td></tr>
<tr><td>35,000</td><td>8000</td><td>3000</td><td>4000</td></tr>
</table></td></tr>
<tr><td>Funds raised from:</td><td>NA</td></tr>
<tr><td>Details of the funds raised from any other agencies apart from above mentioned:</td><td>NA</td></tr>
<tr><td>Describe your role as PI at various stages of project:</td><td>Take the survey at villages. Implementation and development of project according to the requirements. Take the feedback from the peoples.</td></tr>
</table>

Process of execution of the project:	Continuous monitoring of project at Household. Providing support after installation.
Who are the benificiaries(ST,SC, OBC)and potential impact of the technology on the beneficiary & village:	01. Now a days the LPG cylinder rate is becoming too high, so that we want to reduce a minimum usage of LPG cylinder. 02. Implementation of this project will reduces air pollution. 03. Solar water heating systems are very high in cost, so that poor people's can't be use. 04. Voluntary migration can also improve food security both for migrants and the families left behind, particularly in rural areas.
Duration of the project:	8 Months
Role of stakeholders in maintaining sustainability after the project duration:	Department /Institute will provide support and monitor adopted villages on regular basis and solve the problems related to this project.
Execution of the project along with role of all participating stakeholders:	Department/Institute is providing necessary laboratory support.

Impact of this work on learning of students /teachers:	It will enhance the technical skill, which include Adriano concept. It is also enhance the soft skill.
Role of PI after completion of the project duration:	Continuous monitoring of project.
Enter name & contact details involved in this project:	1. **Name:** TEJU NINGANURE **USN No.:** 2HN18EC032 **Email id:** tejuninganure73529@gmail.com **Mobile No:** 7406397758 2. **Name:** SNEHAL KAGI **USN No.:** 2HN19EC400 **Email id:** snehalkagi8@gmail.com **Mobile No.:** 7019424868 3. **Name:** SUDHA NAGANURI **USN No.:** 2HN19EC401 **Email id:**naganurisudha@gmail.com **Mobile No.:** 8884945697 4. **Name:** TANUJA KHARSHINGE **USN No.:** 2HN19EC402 **Email id:** tanuja.kharshinge9@gmail.com **Mobile No.:** 7090101643

Enter Name & contact details of peoples those will be involved in this project (From UBA connected / adopted):	**Prof. Sachin. S. Patil** **Mobile:** 9480422508 Sachinpatil.ece@gmail.com	**Prof. D. B. Madihalli** **Mobile:** 9902854324 dbmadhihalli@hsit.ac.in

Name and sign of Team Members:

Name	Sign
Teju Ninganure	
Snehal Kagi	
Sudha Naganuri	
Tanuja Kharshinge	

Principal Investigator
Prof. Sachin S. Patil

Prof. D. B. Madihalli

HOD
Dr. S. B. Akkole

HOD
Electronics & Commn. Engg. Dept.
HSIT NIDASOSHI

UBA Coordinator
Dr. S. N. Topannavar

Applied for :	Technology Customisation
Name of the College/ Institution :	Hirasugar Institute of Technology, Nidasohsi
UBA Coordinator Name :	Dr.S.N.Topannavar
UBA Coordinator mail id :	sntopannavar.mech@hsit.ac.in
UBA Coordinator Contact No :	9482440235
State :	Karnataka, Dist: Belagavi Block: Hukkeri
SEG Name:	Expert Group (SEG) of IIT Delhi, Rural Energy Systems
RCI:	IIT Bombay
AISHE Code of the College:	C-1409
Adopted Villages are:	Nidasoshi, Ammanagi, Kesti, Borgal & Hattarwat
Title:	Solar Multipurpose Portable Emergency Lamp
Village where it is to be implemented:	Nidasoshi, Ammanagi, Kesti, Borgal & Hattarwat 2 units at every adopted village
Why this technology is required (Objective of the project maximum 200 word):	Need for light during power cut is essential for leading life of any one. The life of the farmer is always engaged with cleaning of land, growing of crops, spraying of pesticide to protect the crop and harvesting. Recently, there are many developments in the pesticide sprayer which is automated and helping the farmer in spraying of pesticides. This sprayer works on electricity i.e. energy is stored in battery. The battery of pesticide sprayer is required to be charged from the supply mains. However, power cut is quite common in rural areas. To address this problem of power cut renewable energy source is used to charge the battery.
Total Cost of the Product/Technology:	Rs.50000.00/-
Fund raised from:	Not applicable
Describe your role as PI at various stage of the project (max 500 words):	The role of PI is to identify the needs of the beneficiary. Then site survey is carried out in adopted villages for the implementation of the project. Based on the need analysis of beneficiary, technically feasible and economically viable system design is proposed for technological development and implementation through procuring of materials and accessories. After successful installation, testing of the proposed system is done. For smooth and safe operation of the system, necessary awareness with all information related to the project is provided to the beneficiary.
Process of execution of the project:	A survey regarding the needs of the beneficiary villages is carried out with the help of the students. Collected survey information is analysed and a proposal is prepared based on the needs. A detailed schedule of implementation is prepared. The detailed proposal with all necessary information is submitted for approval. If the submitted proposal is approved and sanctioned,

	then all the materials will be procured through a proper process of quotation, comparison and placing order. After receiving all the required materials necessary structure is built, all the required components are assembled and then tested for its proper operation. The beneficiaries will be given awareness about its operation and maintenance. Necessary technical support will be provided as per the need.
Who are the beneficiaries (ST, SC, OBC, Tribal etc.) and potential impact of technology on the beneficiary and village :	OBC
Duration of Project:	**8 Weeks**
Role of stake holders in maintaining sustainability after the project duration (please mention point wise role of participating stake holders):	1) Routine maintenance of the installed system 2) Cleaning of the solar panels 3) Safety checks on regular basis.
Execution of the project along with role of all participating stakeholders (write point wise max 500 words) :	Survey, need analysis, material listing, purchasing, installing, and testing
Impact of this work on learning of students/ teachers:	Students/ teachers will be able to plan, schedule and implement the project in a team.
Role of PI after completion of the project duration.	The role of PI is to identify the needs of the beneficiaries and by carrying out survey in adopted villages. Based on the need analysis of beneficiaries, technically feasible and economically viable system design is proposed for technological development and implementation through procurement of materials and accessories. After successful installation, testing of the proposed system is done. For smooth and safe operation of the system, necessary awareness with all information related to the project is provided to the beneficiaries.
Enter Name and Contact details of students involved in this project:	Mr.Kunal Mane Mob: 9108753392, Nagadarshan Kopparad Mob: 7259290709, Akhilesh Patil Mob: 9449127367, Ashwat Karadigud Mob: 7760406281, Naveenkumar Gokanvi Mob:8095424048
Enter Name and Contact details of peoples those will be involved in this project (From UBA connected / adopted village):	Dr.B.V.Madiggond Mob: 9343454993, Prof.S.D.Hirekodi Mob: 9480849338, Prof.M.P.Yenagimath Mob:9341449466, Mr.R.S.Bardol Mob: 8277010328, Mr.S.B.Beelur Mob: 8105974422, Mr.B.S.Sooji Mob:9480849343, Mr.A.A.Patil Mob:9449498248, Mr.S.N.Biranagaddi Mob:7219803176

Principal Investigator
Dr. B.V.Madiggond

HOD

UBA Coordinator
Dr.S.N. Topannavar

Dr. B. V. Madiggond
BE,ME,Ph.D.
Prof. & Head
Dept. of Electrical & Electronics Engg.
HIT NIDASOSHI-591 236

Applied for :	Technology Development
Name of the College/ Institution :	Hirasugar Institute of Technology, Nidasohsi
UBA Coordinator Name :	Dr.S.N.Topannavar
UBA Coordinator mail id :	sntopannavar.mech@hsit.ac.in
UBA Coordinator Contact No :	9482440235
State :	Karnataka, Dist: Belagavi Block: Hukkeri
SEG Name:	Expert Group (SEG) of IIT Delhi, Rural Energy Systems
RCI:	IIT Bombay
AISHE Code of the College:	C-1409
Adopted Villages are:	Nidasoshi, Ammanagi, Kesti, Borgal & Hattarwat
Title:	Solar water pump for Irrigation
Village where it is to be implemented:	Nidasoshi
Why this technology is required (Objective of the project maximum 200 word):	Rural income largely depends on agriculture, especially farmers growing vegetables, flowers suffer due to power cuts. At present 3 phase power availability is only for few hours in rural areas usually, after midnight. This problem is addressed in our proposal, wherein the power supply is available during day time for irrigation purpose helping farmers to schedule their other activities such as sowing, spraying, harvesting etc. In the evening they are sorting and packing their crops. Early morning they are busy with marketing of vegetables/ flowers etc. Hence, it is feasible to irrigate during day by utilizing solar energy.
Total Cost of the Product/Technology:	Site Preparation: 5000/- Equipment/Machinery cost: 95,000/- Running cost/Manpower cost Electricity cost: -Nil-
Fund raised from:	Not Applicable
Describe your role as PI at various stage of the project (max 500 words):	The role of PI is to identify the needs of the farmer and by carrying out survey in adopted villages. Based on the need analysis of farmers, technically feasible and economically viable system design is proposed for technological development and implementation through procurement of materials and accessories. After successful installation, testing of the proposed system is done. For smooth and safe operation of the system, necessary awareness with all information related to the project is provided to the beneficiary.
Process of execution of the project:	A survey regarding the needs of the beneficiary villages is carried out with the help of the students. Collected survey information is analysed and a proposal is prepared based on the needs. A detailed schedule of implementation is prepared. The detailed proposal with all necessary information is submitted for approval. If the submitted proposal is approved and sanctioned, then all the materials will be procured through a proper process of quotation, comparison and placing order. After receiving all the required materials necessary structure is

	built, all the required components are assembled and then tested for its proper operation. The beneficiaries will be given awareness about its operation and maintenance. Necessary technical support will be provided as per the need.
Who are the beneficiaries (ST, SC, OBC, Tribal etc.) and potential impact of technology on the beneficiary and village :	OBC
Duration of Project:	**8 Weeks**
Role of stake holders in maintaining sustainability after the project duration (please mention point wise role of participating stake holders):	1) Routine maintenance of the installed system 2) Cleaning of the solar panels 3) Safety checks on regular basis.
Execution of the project along with role of all participating stakeholders (write point wise max 500 words) :	Survey, need analysis, material listing, purchasing, installing, and testing
Impact of this work on learning of students/ teachers:	Students/ teachers will be able to plan, schedule and implement the project in a team.
Role of PI after completion of the project duration.	The role of PI is to identify the needs of the farmer and by carrying out survey in adopted villages. Based on the need analysis of farmers, technically feasible and economically viable system design is proposed for technological development and implementation through procurement of materials and accessories. After successful installation, testing of the proposed system is done. For smooth and safe operation of the system, necessary awareness with all information related to the project is provided to the beneficiary.
Enter Name and Contact details of students involved in this project:	Mr.Kunal Mane Mob: 9108753392, Nagadarshan Kopparad Mob: 7259290709, Akhilesh Patil Mob: 9449127367, Ashwat Karadigud Mob: 7760406281, Naveenkumar Gokanvi Mob:8095424048
Enter Name and Contact details of peoples those will be involved in this project (From UBA connected / adopted village):	Dr.B.V.Madiggond Mob: 9343454993, Prof.S.D.Hirekodi Mob: 9480849338, Prof.M.P.Yenagimath Mob: 9341449466, Mr.R.S.Bardol Mob: 8277010328, Mr.S.B.Beelur Mob: 8105974422, Mr.B.S.Sooji Mob:9480849343, Mr.A.A.Patil Mob:9449498248, Mr.S.N.Biranagaddi Mob:7219803176

Principal Investigator
Dr. B.V.Madiggond

HOD
Dr. B. V. Madiggond
BE,ME,Ph
Prof. & Head
Dept. of Electrical & Electronics Engg
HIT NIDASOSHI-591 236

UBA Coordinator
Dr.S.N. Topannavar

Unnat Bharat Abhiyan Project Proposal

Applied For:	Technology Development
Name of College/Institution:	Hirasugar Institute of Technology, Nidasoshi
Coordinator Name:	Dr. S. N. Topannavar
UBA Coordinator Email:	sntopannavar.mech@hsit.ac.in
UBA Coordinator Contact No:	9482440235
State:	Karnataka
District:	Belagavi
Select your SEG Name:	Ethos in Technical Education IIT Bombay
Select your RCI:	Select IIT Bombay
AISHE Code of the College:	C-1409
Title of the technology:	Artificial Intelligence based Android application to automatically Detect Plant Leaf Disease
Village where it is to be implemented:	Nidasoshi, Ammanagi, Kesti, Borgal & Hattarwat

Why this technology required (Objective of the project maximum 200 word):

The external appearance is the most important quality character of agriculture. This outer appearance greatly affects the sale value and consumer behavior in buying any product. Therefore, the inspection of quality and grading system is essential in agriculture field to cultivate good healthy plants. Agriculture industry can go through a major production and economic losses which is caused by the plant diseases. This disease management is a challenging task. Usually, the diseases or its symptoms such as colored spots or streaks can be seen on the leaves or on the stem of the plants. In plants, most of the leaf diseases are caused by fungi, bacteria, and viruses. The disease caused due to these organisms is characterized by different visual symptoms that could be observed in the leaves or stem of a plant. Usually, these symptoms are detected manually. Automatic detection of various diseases can be detected with the help of machine learning and

image processing. A crucial role is played by the machine learning and image processing in detection of plant disease since it provides best results and reduces the human efforts.

Total cost of the product/technology:

Site preparation cost: 15000/-

Equipment/ Machinery cost: 15000/-

Running cost, Manpower cost, Electricity cost, etc.: 10000/-

Miscellaneous expense: 10000/-

Details of the funds raised from any other agencies apart from above-mentioned:

Not Applicable

Describe your role as PI at various stage of the project (Max 500 words):

Following are the list of roles and responsibilities of PI:

1. Collection of data set by visiting the farmers of adopted village.
2. Labeling the data set by considering the view of farmers and expert persons.
3. Data preprocessing to remove the redundancy, missing values, and errors.
4. Building an AI model to automatically detect the plant leaf disease.
5. Validating the model from the farmers and expert persons.
6. Deploying the validated model on cloud platform.

Process of execution of the project

The methodology followed in the proposed project is,

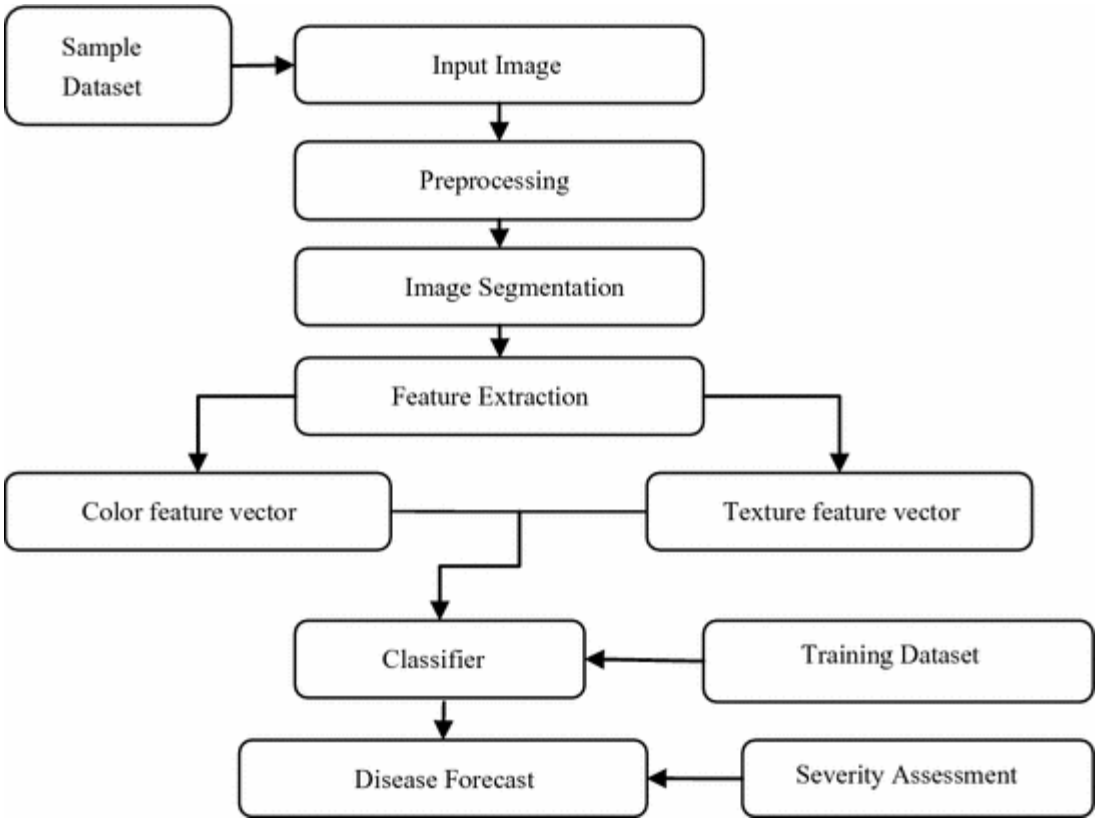
Training and validating the model:

1. Collection of data set by visiting the farmers of adopted village.
2. Labeling the data set by considering the view of farmers and expert persons.
3. Data preprocessing to remove the redundancy, missing values, and errors.
4. Extract the features from the dataset.
5. Building an AI model to automatically detect the plant leaf disease.

6. Deploying the validated model on cloud platform.

Use of model in real world:

1. The new input image is given as an input to the validated model.
2. The model classifies the image based on the features of the new image.



Who are the beneficiaries (ST, SC, OBC, Tribal, etc.) and potential impact of the technology on the beneficiary & village

The farmers of the adopted village are the beneficiaries of the proposed project. The proposed AI based android project automatically detects the plant leaf disease which in turn reduces the human efforts and increases the productivity.

Role of stakeholders in maintaining sustainability after the project duration (please mention point wise role of participating stakeholders)

Stakeholders can add new diseases as and when detected in the farm to improve the efficiency of the proposed project.

Execution of the project along with role of all participating stakeholders (write point wise maximum 500 words):

Initially with the help of stakeholders and expert persons data set will be collected. The dataset will be divided into different classes of disease. The data set will be used to build the model. Performance of the model is evaluated with help of stakeholders and expert persons. Finally, the evaluated model will be deployed into cloud environment.

Impact of this work on learning of students/teachers:

The students will learn

1. The process of data acquisition required for machine learning and artificial intelligence-based projects.
2. The process of data preprocessing
3. How to build AI based model and validating the model from different stake holders.
4. Deploying the model on cloud environment

Role of PI after completion of the project duration:

Collecting the new diseases detected in the farm from the stakeholders and updating the model to incorporate the new diseases. Also, tune the model to improve the overall accuracy of the system.

Enter Name and Contact details of students involved in this project:

Kashim Jakati – 9620295085

Aishwarya Gundoli – 7259550923

Mohammedakram Mujawar – 6364359803

Shruti Khot – 8722372755

Shruti Khot – 8722372755

Enter Name and Contact details of peoples those will be involved in this project (Form UBA connected / adopted village):

Dr. Mahesh Huddar

Prof. C. R. Belavi

Prof. N. M. Patel

Project Coordinator:

Dr. Mahesh Huddar

Associate Professor, Computer Science and Engineering

Hirasugar Institute of Technology, Nidasoshi

E-Mail: mghuddar.cse@hsit.ac.in

Prof. S. V. Majaragi

HOD

Computer Science & Engg.
HIT, Nidasoshi.

UNNAT BHARAT ABHIYAN
Project proposal
2021-2022

Applied For	TECHNOLOGY DEVELOPMENT			
Name Of the College/Institution	Hirasugar Institute of Technology, Nidasoshi			
Coordinator Name	Dr. S. N. Topannavar			
UBA Coordinator Email	sntopannavar.mech@hsit.ac.in			
UBA Coordinator Contact No	9482440235			
State	Karanataka			
District	Belagavi			
Block				
Select your SEG Name	Rural Energy systems (IIT-Delhi)			
Select your RCI	IIT-Bombay			
AISHE Code of the College	C-1409			
Title of the technology	Smart Motor for Agriculture			
Village where it is to be implemented	Nidasoshi, Ammanagi, Kesti, Borgal & Hattarwat			
Why this technology required (Objective of the project maximum 200 word)	Objectives of the project is to: 1. Develop a GSM based cost effective solution that will provide remote access of motor through mobile Application 2. Develop low-cost water pump dry run protection for which insufficient water conditions inside an underground tank can be sensed and thus preventing any possibility of motor dry running 3. Incorporate soil moisture sensor into the irrigation system aid in scheduling water supply and distribution much more efficiently. Such gauges help to enhance irrigation for optimum plant growth. 4. Design user friendly android application using open-source platform. 5. Incorporate power line status indictor in mobile application to notify former about power-cut schedule.			
Total cost of the product/technology	Site preparation cost	Equipment/ Machinery cost	Running cost, Manpower cost, Electricity cost, etc.	Miscellaneous expense
	10,000/-	75,000/-	5,000/-	10,000/-
Funds raised from	Not applicable			
Details of the funds raised from any other agencies apart from above-mentioned:	Not applicable			
Who are the beneficiaries (ST, SC, OBC, Tribal, etc.) And potential impact of the technology on the beneficiary &	1. System reduces the burden on farmer for going to the farm field in order to check the water level in well for turning motor on/off. 2. Farmers are able to utilize highly detailed analytics to accelerate			

village.	productivity and gain from crops in the future.
Duration of Project	12 months
Role of stakeholders in maintaining sustainability after the project duration (please mention point wise role of participating stakeholders)	Department /Institute willprovide support and monitor adopted villages on regular basis and resolve the issues related to project at field.
Execution of the project along with role of all participating stakeholders (write point wise maximum 500 words):	Department /Institute is providing necessary laboratory support and testing procedure to be observed in extreme conditions in actual field.
Impact of this work on learning of students/teachers	Will enhance technical skill which include understanding of microcontroller concept, working of dry run protection, power devices, relay control mechanism, sensors and their response and programming analogy. It also helps to enhance soft skill.
Role of PI after completion of the project duration	Continuous monitoring of project at field, providing support after installation, resolve the issues after due discussion with farmers.
Enter Name and Contact details of students involved in this project	Not applicable
Enter Name and Contact details of peoples those will be involved in this project (Form UBA connected / adopted village)	Dr. R.R. Maggavi Mobile:9480275583 rrmaggavi.ece@hsit.ac.in Prof. D.B. Madihalli Mobile:9902854324 dbmadihalli@hsit.ac.in

Principal Investigator

10/02/22

Dr. R.R. Maggavi
Prof. D.B. Madihalli

HOD

Dr. S. B. Akole

HOD
Electronics & Commn. Engg. Dept.
HSIT NIDASOSHI

UBA Coordinator

10/02/2022

Dr. S. N. Topannavar

Proposal By: Hirasugar Institute of Technology, Nidasoshi ()

Project Title: Smart System for Crop Prediction & Fertilizer Suggestion.

Project Objectives: The main objective of the project is

1. To develop a smart system for crop prediction and fertilizer suggestion using machine learning and IoT.
2. To develop an IOT based system which measures the collective data from the farm by monitoring the Rainfall, PH, NPK values, Temperature and Humidity.
3. To develop an intelligent crop suggestion system for farmers which utilizes the collective data from the farm related to weather and Soil to suggest the suitable crop for farmers using Machine Learning approach.
4. To Train a machine learning model using supervised learning approach capable of suggesting crops to farmers using the live dataset collected from the sensor data placed in farm.
5. To develop a software application which can be used by the farmers to check for the most suitable crops in that soil.
6. To Develop an Android application for farmers which will give updates regarding the soil NPK content and the fertilizers to be used for low NPK content. This will help farmers to test the soil by themselves without going to soil testing centers.
7. To make the entire system solar powered.

Project Justification:

i) Problem Statement: The majority of farmers do not conduct soil testing and use the same agricultural cultivation methods and patterns, resulting in lower yields. There are currently no systems in place to track and analyze the data from farms itself in terms of temperature, humidity, and other key factors. A system is required that recommends different crops to farmers and warns them about replenishment.

ii) Priority Needs: The only priority is given to the Farmers, to ultimately increase their yield and hence, the income.

iii) Proposed Approach / Technical Intervention / Customization:

Due to the challenges that farmers experience, we are motivated to design a smart system based on IoT and machine learning that can provide farmers with in-field soil testing and planting suggestions, resulting in greater agricultural yields. This inspires us to create a system that can monitor data from the farm using various metrics, such as soil NPK values, and provide recommendations to the farmer on the best crops to produce in his farm based on the soil nutritional content and environmental parameters. An android application for remote parameter monitoring is also being developed, which will be used by farmers to display various farm parameters via IoT.

Brief Plan of Activities and Implementation Timeline:

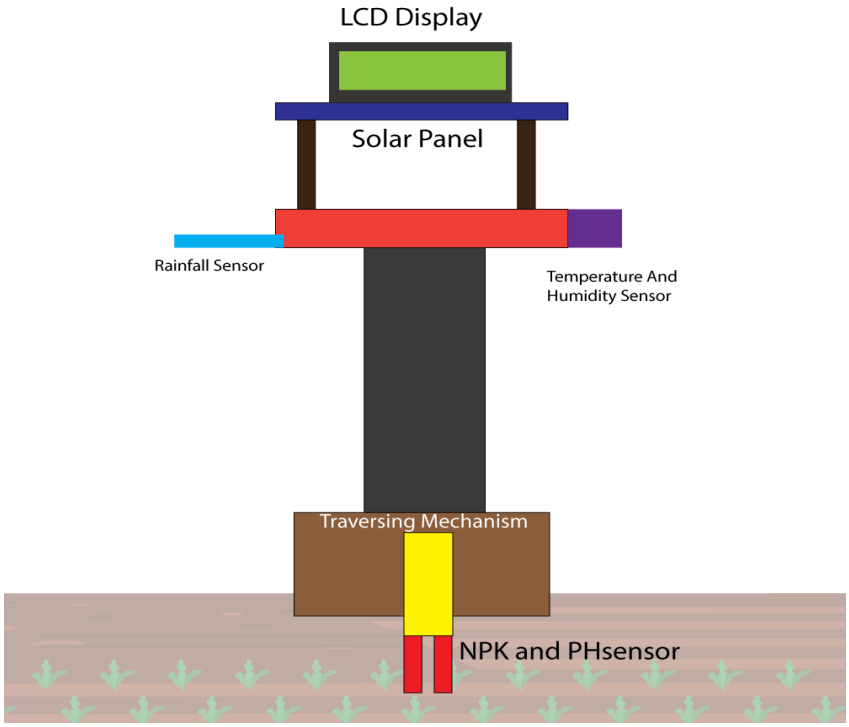
S.no	Timeline	Plan Of Activities
1.	March(1st &2nd week)	Literature review and Material survey.
2.	March(3rd&4th week)	Development of IOT protocol.
3.	April & May (Entire 2 months)	Development of different parameter system and data collection for testing.
4.	June(1st,2nd&3rd weeks)	Design of Hardware and PCB fabrication.
5.	June (4th week) & July (1st week)	Software, Android App and Web Application development.
6.	July(2nd,3rd&4th weeks)	Programming and Optimization.

- **Timeline For Work:** 5 Months

Methodology, Materials and Financial Resources:

As shown in the conceptual diagram the system consists of the smart system for crop prediction and fertilizer suggestion using machine learning and IOT. The proposed project consists of **two parts**, the smart device to be installed in the farms and the IOT portal to notify the farmers. Smart device monitors the NPK content of the soil to analyze the nutritional content and the fertilizer requirement. Sensor interfaced to the controller detects if the soil requires fertilizer and what type of the fertilizer. Data set obtained is used to train a machine learning model which can be used for crop prediction. The IOT based system consist of an android application which can

be used by farmers for monitoring the different parameters in the farm and also for visualizing the suggestions from the machine learning based system. The entire system is solar powered making it green eco-friendly and cost efficient to operate or afford for farmers.



- References used for adopting the methodology:
  i. Jejurkar Siddhi, S.S. Bhosale Meghna, D. N. Wavhal, "Crop Predication and Diseases Detection Using Machine Learning", International Journal of Scientific Research in Computer Science Engineering and Information Technology (2019).
  ii. Kumar, Y. Jeevan Nagendra, V. Spandana, V. S. Vaishnavi, K. Neha, and R. R. Devi, "Supervised Machine learning Approach for Crop Yield Prediction in Agriculture Sector", International Conference on Communication and Electronics Systems (ICCES), IEEE (2020).
  iii. Archana Gupta, Dharmil Nagda, Pratiksha Nikhare, Atharva Sandbhor, "Smart Crop Prediction using IoT and Machine Learning", International Research Journal of Engineering and Technology (IRJET) (2021).

- Materials/ Equipment Required:
  Hardware:
  - Raspberry PI SBC
  - NPK sensor

- pH sensor
- LCD display
- Temperature Sensor
- Humidity Sensor
- Rainfall Sensor
- Buzzer
- DC motors
- CP2102 USB Serial Module
- L298N motor Driver
- Solar panel
- Charge controller
- Battery
- An Android Device with Android 5+ operating system
- A system with following specifications
    - 4 GB RAM (8 GB recommended)
    - Core i3/i5 processor
    - At least 3 GB of free disk Space
    - Operating system Windows/Mac/UBUNTU
    - 1280 x 800 minimum screen resolution

SOFTWARE:

- Thonny IDE
- Android Studio
- WAMP Server
- Serial Monitor

Budget Details:

S.No.	Resources	Amount
1.	**Materials and Consumables**	**80,000**
2.	**Travel and Labour**	**15,500**
3.	**Miscellaneous**	**5,500**
	Total:	**1,01,000**

- **Outcomes/ Impact of the Project:**

1. The system can help farmers automatically detect the nutritional content of the soil.
2. The system is internet controlled, hence no limitation of working range as it can be visualized from any part of the world.
3. There is no need for farmers to take the soil to soil testing centres as entire testing happens in the farm itself.
4. Fertilizer intimation system alerts the farmers with type of fertilizer to be given from time to time.
5. The system can be used ML based model for crop suggestion which suggests farmers with the best suitable crops for the field which can deliver maximum produce.
6. System is scalable as is uses machine learning.
7. The sensor nodes give all the live data to the farmer using internet.
8. System is solar powered hence cost free and easy to operate.
   Thus, leading to a higher yield to the farmers.

Funding From Any Other Sources: NA